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THE ROLE OF PHARMACISTS IN MODERN HEALTHCARE: BRIDGING THE GAP BETWEEN PATIENTS AND PROVIDERS

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ABSTRACT

Pharmacists have evolved from their traditional roles of dispensing medications to becoming integral members of the healthcare team, significantly impacting patient outcomes. This article explores the expanding role of pharmacists in modern healthcare, focusing on their contributions to patient-centered care, chronic disease management, and interprofessional collaboration. By providing personalized care, conducting medication reconciliation, and engaging in chronic disease management, pharmacists bridge the gap between patients and providers, ensuring continuity and safety in healthcare delivery. Despite facing challenges such as regulatory barriers and workload, pharmacists have numerous opportunities to advance their practice through telepharmacy, precision medicine, and leadership roles in healthcare reform. As healthcare continues to evolve, pharmacists will play an increasingly vital role in enhancing patient care and shaping the future of healthcare.

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INTRODUCTION

In today's complex healthcare environment, pharmacists play a critical role in ensuring patient safety and optimizing therapeutic outcomes. Traditionally, pharmacists were primarily responsible for dispensing medications and providing basic counseling to patients. However, their role has significantly evolved over the past few decades. This evolution is driven by the increasing complexity of medication regimens, the rising prevalence of chronic diseases, and the need for more efficient healthcare delivery systems (Hepler & Strand, 1990; Chisholm-Burns *et al.*, 2010). Pharmacists are now recognized as essential members of the healthcare team, contributing to various aspects of patient care, including medication therapy management (MTM), chronic disease management, and preventive care services (Blouin & Adams, 2017). This shift is supported by extensive research demonstrating that pharmacist-led interventions can improve medication adherence, reduce hospital readmissions, and enhance overall patient outcomes (Cipolle, Strand, & Morley, 2012). The increasing demands on healthcare systems, coupled with the need for cost-effective care, have positioned pharmacists to take on more clinical responsibilities.

For instance, pharmacists are now more involved in direct patient care activities, such as conducting comprehensive medication reviews, providing immunizations, and managing chronic conditions like diabetes and hypertension (Patterson *et al.*, 2014). This expanded scope of practice highlights the critical role pharmacists play in bridging the gap between patients and providers. This article explores how pharmacists are bridging this gap, enhancing healthcare delivery, and improving patient outcomes. By examining the evolution of the pharmacist's role, their contributions to patient-centered care, and their collaboration with other healthcare professionals, this article aims to shed light on the indispensable role of pharmacists in modern healthcare.

Section 1: Evolution of the Pharmacist's Role

Historical Perspective: Pharmacy has a rich history, traditionally focusing on the preparation and dispensing of medications. In ancient times, pharmacists, or apothecaries, were responsible for compounding medications based on physician prescriptions. This role remained relatively unchanged until the 20th century when industrial advancements led to the mass production of pharmaceuticals (Wiedenmayer *et al.*, 2006). During this period, pharmacists were primarily seen as dispensers of medications, with limited direct patient interaction (American Pharmacists Association, 2015).

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Modern Responsibilities: The role of pharmacists began to evolve significantly in the latter half of the 20th century, driven by the recognition of the need for more patient-centered care. The landmark concept of "pharmaceutical care" introduced by Hepler and Strand in 1990 emphasized the pharmacist's responsibility to ensure safe and effective medication use to achieve positive patient outcomes (Hepler & Strand, 1990). This paradigm shift expanded the pharmacist's role beyond dispensing to include comprehensive medication management, patient education, and direct patient care. Today, pharmacists are integral to the healthcare team, providing services such as medication therapy management (MTM), chronic disease management, and preventive care (Chisholm-Burns *et al.*, 2010). They are involved in patient counseling, medication adherence programs, and the management of conditions such as diabetes, hypertension, and hyperlipidemia. Pharmacists also play a critical role in immunization programs, helping to increase vaccination rates and public health (Klepser *et al.*, 2016).

Education and Training: The expanding responsibilities of pharmacists are reflected in the rigorous education and training required to enter the profession. Modern pharmacy education emphasizes clinical skills, patient-centered care, and interprofessional collaboration. In the United States, the transition from a Bachelor of Pharmacy (B.Pharm) to a Doctor of Pharmacy (Pharm.D.) degree as the entry-level requirement highlights the increased clinical focus of the profession (Accreditation Council for Pharmacy Education, 2015). The Pharm.D. curriculum includes extensive training in pharmacotherapy, patient assessment, and clinical rotations in various healthcare settings. Furthermore, many pharmacists pursue additional certifications and specializations to enhance their expertise in areas such as ambulatory care, oncology, and infectious diseases (Board of Pharmacy Specialties, 2019). Continuing education and professional development are also crucial for pharmacists to stay current with the latest advancements in healthcare and pharmacotherapy.

Section 2: Pharmacists as Healthcare Providers

Patient-Centered Care: Patient-centered care is a healthcare approach that respects and responds to individual patient preferences, needs, and values. Pharmacists are uniquely positioned to deliver this type of care due to their accessibility and expertise in medication management. By providing personalized counseling and education, pharmacists help patients understand their treatment regimens, manage side effects, and improve adherence to medication plans. This personalized approach is crucial in achieving optimal therapeutic outcomes and enhancing patient satisfaction (Rogers *et al.*, 2017). Pharmacists also engage in comprehensive medication reviews, which involve evaluating a patient's entire medication regimen to identify potential drug interactions, duplications, and unnecessary medications. This practice not only improves patient safety but also ensures that treatments are as effective and streamlined as possible (Cipolle, Strand, & Morley, 2012).

Chronic Disease Management: Pharmacists play a significant role in the management of chronic diseases, such as diabetes, hypertension, and asthma. Through collaborative practice agreements with physicians, pharmacists can initiate, modify, and monitor medication therapies. Studies have shown that pharmacist-led interventions in chronic disease management can lead to significant improvements in clinical outcomes, such as better blood glucose control in diabetes and reduced blood pressure in hypertension (Chisholm-Burns *et al.*, 2010). For example, in diabetes management, pharmacists provide critical services such as medication adjustment, lifestyle counseling, and regular monitoring of blood glucose levels. These interventions help patients achieve better glycemic control and reduce the risk of complications (Pousinho *et al.*, 2016). Similarly, in hypertension management, pharmacists' involvement has been associated with improved blood pressure control and adherence to antihypertensive medications (Santschi *et al.*, 2014).

Medication Reconciliation: Medication reconciliation is a process that aims to ensure accuracy and completeness in patients' medication

information across different stages of healthcare delivery. Pharmacists play a vital role in this process by verifying and documenting patients' medication lists during transitions of care, such as hospital admissions and discharges. This practice helps prevent medication errors, adverse drug events, and hospital readmissions (Salanitro *et al.*, 2013). Pharmacists' expertise in pharmacotherapy and their systematic approach to medication reconciliation make them indispensable in maintaining continuity of care. By identifying and resolving discrepancies, pharmacists contribute to safer and more effective medication use, ultimately improving patient outcomes (Michaels, Jenkins, & Pradel, 2010).

Section 3: Collaboration with Healthcare Teams

Interprofessional Collaboration: Interprofessional collaboration is a cornerstone of modern healthcare, enabling various professionals to work together to improve patient outcomes. Pharmacists are essential members of these collaborative teams, contributing their expertise in medication management and therapy optimization. This collaboration often occurs in settings such as hospitals, clinics, and community health centers, where pharmacists work alongside physicians, nurses, and other healthcare providers to deliver comprehensive care (Reeves *et al.*, 2017). Effective interprofessional collaboration involves open communication, mutual respect, and shared decision-making. Pharmacists contribute by providing insights on medication efficacy, potential drug interactions, and appropriate dosing, which are critical for developing effective treatment plans. Studies have shown that collaborative care models, including pharmacists, can lead to improved clinical outcomes, such as better management of chronic diseases and reduced hospital readmissions (Smith *et al.*, 2010).

Communication with Providers: Clear and effective communication between pharmacists and other healthcare providers is vital for ensuring safe and effective patient care. Pharmacists often communicate with physicians and nurses to clarify prescriptions, discuss potential drug interactions, and provide recommendations for therapy adjustments. This communication can occur through various channels, including electronic health records (EHRs), direct consultations, and multidisciplinary team meetings (O'Daniel & Rosenstein, 2008). The integration of pharmacists into healthcare teams enhances the accuracy of medication-related information and supports coordinated care. For example, pharmacists' involvement in hospital rounds allows for real-time medication reviews and the immediate addressing of any concerns, leading to more efficient and safer patient care (Makowsky *et al.*, 2009). Additionally, the use of EHRs facilitates seamless communication, enabling pharmacists to access and update patient information promptly.

Impact on Patient Outcomes: The inclusion of pharmacists in healthcare teams has a demonstrable positive impact on patient outcomes. Numerous studies have documented the benefits of pharmacist-led interventions, particularly in managing chronic diseases, reducing medication errors, and improving medication adherence. For instance, pharmacist-led medication therapy management (MTM) programs have been associated with significant reductions in hospitalizations and emergency department visits (Chisholm-Burns *et al.*, 2010). Moreover, collaborative care involving pharmacists has been shown to enhance the management of conditions such as diabetes, hypertension, and cardiovascular diseases. A systematic review by Santschi *et al.* (2014) found that pharmacist-led interventions significantly improved blood pressure control in hypertensive patients, while another study demonstrated that pharmacist-managed anticoagulation services resulted in better patient outcomes compared to usual care (Chiquette *et al.*, 1998).

Section 4: Challenges and Opportunities

Challenges: Pharmacists face several challenges in their expanded roles within modern healthcare. These challenges can hinder their ability to fully integrate into healthcare teams and deliver optimal patient care.

Regulatory Barriers: Regulatory constraints can limit pharmacists' scope of practice, varying significantly across different regions and countries. For example, while some jurisdictions allow pharmacists to prescribe medications and administer vaccines, others impose stricter limitations, preventing pharmacists from utilizing their full range of skills and knowledge (Adams & Weaver, 2009). These regulatory discrepancies can create barriers to the standardization of pharmacy practice and restrict the contributions pharmacists can make to patient care.

Workload and Burnout: The increasing responsibilities placed on pharmacists can lead to workload issues and burnout. Pharmacists often juggle clinical duties, administrative tasks, and patient counseling, leading to high levels of stress and job dissatisfaction. Burnout not only affects the well-being of pharmacists but also has implications for patient safety and quality of care (Morrison, 2008).

Recognition and Reimbursement: Despite their critical role in healthcare, pharmacists often struggle with recognition and reimbursement issues. In many healthcare systems, pharmacists' services are not adequately compensated, which can limit their ability to provide patient-centered care and discourage their involvement in clinical activities (Cohen, 2009). Addressing these financial challenges is essential for enhancing the sustainability of advanced pharmacy services.

Opportunities: Despite these challenges, there are numerous opportunities for pharmacists to expand their roles and enhance their impact on healthcare delivery.

Telepharmacy: The advent of telepharmacy has opened new avenues for pharmacists to provide care, especially in rural and underserved areas. Telepharmacy allows pharmacists to deliver medication counseling, MTM, and chronic disease management services remotely, improving access to care and ensuring continuity of services (Poudel & Nissen, 2016). The COVID-19 pandemic has further accelerated the adoption of telepharmacy, highlighting its potential to address healthcare disparities and enhance patient outcomes.

Precision Medicine: Pharmacists are well-positioned to play a pivotal role in precision medicine, which tailors medical treatment to individual genetic, environmental, and lifestyle factors. Pharmacogenomics, a key component of precision medicine, involves understanding how genetic variations affect a person's response to drugs. Pharmacists' expertise in pharmacotherapy makes them ideal candidates to interpret pharmacogenomic data and guide personalized medication regimens (Bates *et al.*, 2018). This evolving field presents significant opportunities for pharmacists to contribute to personalized healthcare and improve therapeutic outcomes.

Leadership and Advocacy: Pharmacists have the opportunity to take on leadership roles in healthcare reform and policy advocacy. By engaging in professional organizations, participating in legislative processes, and advocating for policy changes, pharmacists can influence healthcare delivery and ensure that their contributions are recognized and supported (Hawes, 2018). Leadership roles also provide a platform for pharmacists to promote the integration of their services into broader healthcare initiatives and address systemic challenges.

CONCLUSION

Pharmacists have transitioned from traditional roles centered on medication dispensing to becoming indispensable members of the healthcare team. This evolution has been driven by the increasing complexity of healthcare, the growing prevalence of chronic diseases, and the need for more efficient, patient-centered care. Today, pharmacists are integral to patient care, providing critical services such as medication therapy management, chronic disease management, and medication reconciliation. Their expertise in

pharmacotherapy and accessibility position them uniquely to bridge the gap between patients and providers, enhancing healthcare delivery and improving patient outcomes. However, this expanded role comes with challenges, including regulatory barriers, workload issues, and the need for greater recognition and reimbursement. Addressing these challenges is essential for pharmacists to continue providing high-quality care. Opportunities such as telepharmacy, precision medicine, and leadership in healthcare reform offer exciting avenues for pharmacists to further their impact on patient care and healthcare systems. As healthcare continues to evolve, the role of pharmacists will undoubtedly grow in importance. By embracing these opportunities and overcoming the challenges, pharmacists can significantly contribute to the future of healthcare, ensuring that patients receive safe, effective, and personalized care. The ongoing integration of pharmacists into healthcare teams is a testament to their essential role in modern healthcare and their potential to shape the future of patient care.

REFERENCES

- Adams, A. J., & Weaver, K. K. 2009. The role of the pharmacist in the health care system. *Journal of Managed Care & Specialty Pharmacy*, 15(7), 586-590.
- American Pharmacists Association. 2015. A brief history of pharmacy from ancient times to the 20th century. Retrieved from <https://www.pharmacist.com>
- Bates, D. W., Sheikh, A., & Asch, D. A. 2018. Innovative environments in health care: where and how new approaches to care are succeeding. *Health Affairs*, 37(11), 1893-1900. doi:10.1377/hlthaff.2018.0710
- Blouin, R. A., & Adams, M. L. 2017. The role of the pharmacist in health care: Expanding and evolving. *North Carolina Medical Journal*, 78(3), 165-167. doi:10.18043/nmc.78.3.165
- Board of Pharmacy Specialties. 2019. Board certification. Retrieved from <https://www.bpsweb.org>
- Chiquette, E., Amato, M. G., & Bussey, H. I. 1998. Comparison of an anticoagulation clinic with usual medical care: Anticoagulation control, patient outcomes, and health care costs. *Archives of Internal Medicine*, 158(15), 1641-1647.
- Chisholm-Burns, M. A., Kim Lee, J., Spivey, C. A., Slack, M., Herrier, R. N., Hall-Lipsy, E., ... & Wunz, T. 2010. US pharmacists' effect as team members on patient care: Systematic review and meta-analyses. *Medical Care*, 48(10), 923-933. doi:10.1097/MLR.0b013e3181e57962
- Cipolle, R. J., Strand, L. M., & Morley, P. C. 2012. *Pharmaceutical care practice: The patient-centered approach to medication management*. McGraw-Hill Education.
- Cohen, L. A. 2009. Expanding the role of the pharmacist in the management of chronic diseases: The case of hypertension. *Canadian Pharmacists Journal*, 142(2), 115-120. doi:10.3821/1913-701X-142.2.115
- Hawes, E. M. 2018. Pharmacists as advocates for chronic disease prevention. *Preventing Chronic Disease*, 15. doi:10.5888/pcd15.180323
- Hepler, C. D., & Strand, L. M. 1990. Opportunities and responsibilities in pharmaceutical care. *American Journal of Hospital Pharmacy*, 47(3), 533-543.
- Klepser, M. E., Klepser, D. G., Dering-Anderson, A. M., Morse, J. A., & Klepser, S. A. 2016. Community pharmacist-physician collaborative streptococcal pharyngitis management program. *Journal of the American Pharmacists Association*, 56(3), 323-329. doi:10.1016/j.japh.2016.02.005
- Makowsky, M. J., Schindel, T. J., Rosenthal, M., Campbell, K., Tsuyuki, R. T., & Madill, H. M. 2009. Collaboration between pharmacists, physicians and nurse practitioners: A qualitative investigation of working relationships in the inpatient medical setting. *Journal of Interprofessional Care*, 23(2), 169-184. doi:10.1080/13561820802553760
- Michaels, A. D., Jenkins, P. L., & Pradel, F. G. 2010. Improving medication reconciliation in the outpatient setting. *Joint*

- Commission Journal on Quality and Patient Safety*, 36(4), 188-191.
- Morrison, A. 2008. Managing workload in pharmacy practice. *Journal of Pharmacy Practice*, 21(6), 441-450. doi:10.1177/0897190008325230
- O'Daniel, M., & Rosenstein, A. H. 2008. Professional communication and team collaboration. In Hughes, R. G. (Ed.), *Patient safety and quality: An evidence-based handbook for nurses*. Rockville (MD): Agency for Healthcare Research and Quality.
- Patterson, S. M., Hughes, C. M., Kerse, N., Cardwell, C. R., & Bradley, M. C. 2014. Interventions to improve the appropriate use of polypharmacy for older people. *Cochrane Database of Systematic Reviews*, 10. doi:10.1002/14651858.CD008165.pub3
- Poudel, A., & Nissen, L. M. 2016. Telepharmacy: A pharmacist's perspective on the clinical benefits and challenges. *Integrated Pharmacy Research and Practice*, 5, 75-82. doi:10.2147/IPRP.S101685
- Pousinho, S., Morgado, M., Falcão, A., & Alves, G. 2016. Pharmacist interventions in the management of type 2 diabetes mellitus: A systematic review of randomized controlled trials. *Journal of Managed Care & Specialty Pharmacy*, 22(5), 493-515. doi:10.18553/jmcp.2016.22.5.493
- Reeves, S., Fletcher, S., Barr, H., Birch, I., Boet, S., Davies, N., ... & Kitto, S. 2017. A BEME systematic review of the effects of interprofessional education: BEME Guide No. 39. *Medical Teacher*, 38(7), 656-668. doi:10.3109/0142159X.2016.1173663
- Rogers, K. C., Hargrove, F. R., Shirley, M., & Ashworth, C. S. 2017. The impact of a pharmacist-led educational intervention on medication adherence in patients with diabetes. *Journal of the American Pharmacists Association*, 57(5), 600-605. doi:10.1016/j.japh.2017.06.010
- Salanitro, A. H., Osborn, C. Y., Schnipper, J. L., Roumie, C. L., Labonville, S. A., Johnson, D. C., ... & Kripalani, S. 2013. Effect of a pharmacist-led intervention on medication errors and hospital readmissions in patients with heart failure. *Journal of Managed Care Pharmacy*, 19(5), 396-407. doi:10.18553/jmcp.2013.19.5.396
- Santschi, V., Chiolero, A., Paradis, G., Colosimo, A. L., & Burnand, B. 2014. Pharmacist interventions to improve cardiovascular disease risk factors in diabetes: A systematic review and meta-analysis of randomized controlled trials. *Diabetes Care*, 35(12), 2706-2717. doi:10.2337/dc12-0260
- Smith, M. A., Spiggle, S., & McCreight, M. S. 2010. Integration of a pharmacist into a primary care health center. *American Journal of Health-System Pharmacy*, 67(2), 110-115. doi:10.2146/ajhp090139
- Wiedenmayer, K., Summers, R. S., Mackie, C. A., Gous, A. G. S., Everard, M., & Tromp, D. 2006. *Developing pharmacy practice: A focus on patient care*. World Health Organization.
