Coordination between different cadres in improving the quality of primary health care in hospitals

Hamza Abkar Aswni¹, Hanan Ahmad Al Alawi², Najla Ahmed Kotbi³, Taghreed Jaylan Allus⁴, Leena Sami Mimesh⁵, Mohammed Nasser Mohammed Aljohani⁶, Badriah Marzouk Alrasheedy⁷, Ashwaq Ali Alharbi⁸, Hanan Nasser Alrashidi⁹, Saeed Ahmed Saeed Alzahrani¹⁰, Ghazi Awadh Allah Eidhah Althobaiti¹¹, Rana Abualqasim Mohamed Kudam¹², Mohammed Adel Alminee¹³, Hussein Ali Hassan Jaafari¹⁴, Ahmed Abdulrahman A Almazrui¹⁵, Khulud Khalid Abdulhaq¹⁶

- 1. Health Services & Hospital Administration, King Abdulaziz Hospital-Jeddah
- 2. Health Services & Hospital Administration, King Abdulaziz Hospital-Jeddah
- 3. Health Services & Hospital Administration, King Abdulaziz Hospital-Jeddah
- 4. Specialist Phlebotomy, King Abdulaziz Hospital Jeddah
- 5. patient care technician, king Abdulaziz hospital in Jeddah
- 6. Specialist-Nursing, Althagher hospital in jeddah
- 7. Nursing midwife, South Fayziyah Health Center, Ministry of Health, Al-Qassim
- 8. Nursing Technician, Maternity and Children's Hospital Buraidah
- 9. Specialist nursing, Primary Health Care Center, East Al Fayziyah District, Buraidah
- 10. General dentist, Primary healthcare of hada alsham Makkah
- 11. Umm aldoom general hospital, Technician Nursing
- 12. Home health care, Althager hospital
- 13. Doctor General Practice, Althager hospital
- 14. Specialization: Pharmacy Technician, Department of Health Center Affairs in the Western Sector
- 15. Hospital Management Specialist
- 16. Nursing technician, Al-Hindawiyah PHC

Abstract

The quality of primary health care (PHC) in hospitals is significantly influenced by the coordination between different healthcare cadres. Effective interprofessional collaboration among nurses, pharmacists, midwives, dentists, health administrators, and phlebotomy specialists enhances patient safety, optimizes resource utilization, and reduces medical errors. This study examines the role of interdisciplinary coordination in improving PHC by highlighting the contributions of various healthcare professionals. The literature underscores the benefits of team-based care models in improving clinical outcomes and patient satisfaction. However, challenges such as role ambiguity, professional hierarchies, and lack of standardized protocols hinder effective coordination. Addressing these barriers through policy interventions, structured communication, and professional training can enhance healthcare delivery. Strengthening interdisciplinary collaboration will ultimately contribute to a more efficient and patient-centered healthcare system.

Keywords: Coordination, improving outcomes, quality of primary health care, hospitals

Introduction

The quality of primary health care (PHC) in hospitals is a critical determinant of overall patient outcomes and healthcare system efficiency. Effective coordination between different healthcare cadres plays a vital role in ensuring comprehensive, patient-centered care. Collaboration among professionals such as nurses, pharmacists, midwives, dentists, health administrators, and phlebotomy specialists enhances service delivery, reduces medical errors, and optimizes resource utilization [1].

The need for coordination of health care is a global issue, driven by increasing fragmentation across the health care system [2]. Poor coordination negatively impacts the

quality-of-care patients receive, access to care, and quality of life. Health care providers are also affected by system fragmentation due to duplication of services, conflicting information from providers, and costs incurred due to delays in care [3]. This study explores the significance of interdisciplinary coordination in PHC settings and how each specialization contributes to improving healthcare quality.

Literature Review

Effective interprofessional collaboration has been widely acknowledged as a cornerstone of quality healthcare. Studies indicate that team-based care models improve patient safety, enhance satisfaction, and lead to better clinical outcomes [4]. Care coordination ensures people-centered care, covering discrete healthcare events experienced by people as coherent and interconnected over time, consistent with their health needs and preferences, bringing and meeting health needs and ensuring integrated care [5].

The integration of different health professionals within PHC settings ensures that care delivery is holistic and efficient. Several frameworks, such as the WHO's Integrated People-Centered Health Services model, emphasize the necessity of cross-disciplinary coordination for sustainable health improvements. Research further highlights that structured communication, shared decision-making, and defined roles contribute to seamless healthcare delivery and reduced hospitalizations. However, challenges such as role ambiguity, lack of standardized protocols, and professional hierarchies hinder effective coordination, necessitating policy interventions and training programs.

Role of Specializations in Enhancing PHC Quality

Primary health care (PHC) is targeted to ensure the highest possible level of health and well-being and their equitable distribution by concentrating on the public needs for a sustainable healthy life without any financial burden on patients [6]. The roles of all care givers are:

1. Nursing:

Nurses are the backbone of primary healthcare, providing direct patient care, health education, and disease prevention strategies. Their role in patient advocacy, medication administration, and chronic disease management significantly impacts health outcomes. Nursing-led interventions, such as triage and case management, have been linked to reduced hospital admissions and improved patient compliance [7].

Nurses also play a crucial role in care coordination, ensuring seamless communication between healthcare providers and facilitating comprehensive treatment plans. Their involvement in telehealth and mobile health (mHealth) initiatives has expanded access to care, especially in remote and underserved areas [8]. In public health, nurses contribute to epidemiological surveillance, vaccination campaigns, and health promotion programs, directly influencing community well-being. Their expertise in emergency and disaster response ensures rapid, effective interventions during crises, minimizing morbidity and mortality.

Moreover, nursing leadership is essential in shaping healthcare policies and improving quality standards. Advanced practice nurses (APNs), including nurse practitioners and clinical nurse specialists, enhance healthcare delivery by providing specialized care, prescribing medications, and managing complex cases. Ongoing continuing education and professional development are key to equipping nurses with updated knowledge and skills, ensuring evidence-based practice and high-quality patient care [9].

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2. Pharmacy:

Pharmacists contribute to PHC by ensuring medication safety, optimizing drug therapy, and providing patient counseling. Their role in medication reconciliation minimizes adverse drug reactions and enhances therapeutic effectiveness. Pharmacist-led medication therapy management (MTM) programs have demonstrated improvements in patient adherence and overall treatment efficacy [10].

Over the past 50 years, the role of pharmacists has evolved along with the health care needs of our population. In addition to dispensing medications and ensuring patient safety, today's pharmacists are taking a larger role as medical counselors, educators and advocates. They are an integral part of the health care team and are among the most trusted and accessible health care professionals [11].

3. Midwifery:

Midwives play a crucial role in maternal and newborn health, ensuring safe deliveries and postpartum care. Their role encompasses providing comprehensive prenatal care, including routine screenings, health assessments, and educational support to expectant mothers. Their expertise in antenatal care, breastfeeding support, and family planning services directly improves maternal and infant health indicators. Collaborative models integrating midwives into PHC teams have been shown to enhance maternal outcomes and reduce neonatal complications [12].

4. Dentistry:

Oral health is a vital component of overall well-being yet often overlooked in PHC settings. Dentists contribute by diagnosing and managing oral diseases, which can have systemic implications, such as cardiovascular conditions linked to periodontal infections. Integrating dental services within PHC improves early detection of oral health issues and prevents complications [13].

5. Health Administration:

Health administrators ensure the efficient functioning of healthcare facilities by overseeing policy implementation, resource allocation, and workforce management. Their role in strategic planning, quality assurance, and patient safety initiatives supports the seamless integration of different healthcare cadres. Effective administrative policies foster an environment conducive to interprofessional collaboration.

In today's healthcare landscape, healthcare administrators are integral to the smooth operation of medical facilities and the delivery of quality patient care. These professionals are at the heart of hospital management, tasked with overseeing daily operations, managing budgets, and ensuring compliance with healthcare regulations [8].

Healthcare administrators bridge the gap between clinical staff and organizational policies, making strategic decisions that shape patient outcomes and staff well-being. Their work ensures that healthcare providers can focus primarily on patient care, making them indispensable in the quest to maintain and enhance healthcare standards [14].

6. Phlebotomy Specialist:

Phlebotomy specialists are responsible for accurate and safe blood specimen collection, a critical component of diagnostic procedures. The duty of care in a phlebotomy setting refers to the responsibility of healthcare professionals to provide safe and quality care to patients during the blood collection process.

Proper specimen handling reduces diagnostic errors and ensures timely medical interventions. Coordinating phlebotomy services with nursing and laboratory departments enhances workflow efficiency and patient comfort [15].

Conclusion

Interdisciplinary coordination among healthcare professionals is fundamental to improving the quality of primary healthcare in hospitals. Each cadre plays a distinct yet interconnected role in ensuring comprehensive, patient-centered care. Nurses, pharmacists, midwives, dentists, health administrators, and phlebotomy specialists contribute to various aspects of healthcare delivery, from direct patient care to administrative efficiency. Effective collaboration reduces hospitalizations, enhances patient satisfaction, and improves health outcomes. However, challenges such as fragmented communication, undefined roles, and systemic inefficiencies must be addressed through policy reforms, training programs, and technological advancements. By fostering a culture of teamwork and integrated care, healthcare systems can achieve higher efficiency, better patient experiences, and overall improved health outcomes.

References

- 1. Misra V, Sedig K, Dixon DR, Sibbald SL. Prioritizing coordination of primary health care. Can Fam Physician. 2020 Jun;66(6):399-403. Erratum in: Can Fam Physician. 2020 Aug;66(8):554. Erratum in: Can Fam Physician. 2020 Aug;66(8):554. PMID: 32532718; PMCID: PMC7292521.
- 2. Peterson K, Anderson J, Bourne D, Charns M, Gorrin SS, Hynes D, et al. Healthcare coordination theoretical frameworks: a systematic scoping review to increase their understanding and use in practice. J Gen Intern Med. 2019;34(Suppl 1):90–8. doi: 10.1007/s11606-019-04966-z.
- 3. Tricco AC, Antony J, Ivers NM, Ashoor HM, Khan PA, Blondal E, et al. Effectiveness of quality improvement strategies for coordination of care to reduce use of health care services: a systematic review and meta-analysis. CMAJ. 2014;186(15):E568–78. doi: 10.1503/cmaj.140289. Epub 2014 Sep 15.
- 4. World Health Organization. Continuity and coordination of care: a practice brief to support implementation of the WHO Framework on integrated people-centred health services. Geneva: WHO; 2018
- 5. Khatri, R., Endalamaw, A., Erku, D. *et al.* Continuity and care coordination of primary health care: a scoping review. *BMC Health Serv Res* **23**, 750 (2023). https://doi.org/10.1186/s12913-023-09718-8
- 6. Gaur KC, Sobhani M, Saxon LA. The Journal of mHealth. 2019. [April 20, 2021]. Retail healthcare update: Disrupting traditional care by focusing on patient needs. https://thejournalofmhealth.com/retail-healthcare-update-disrupting-traditional-care-by-focusing-on-patient-needs.
- 7. Emanuel EJ, Gudbranson E, Van Parys J, Gørtz M, Helgeland J, Skinner J. Comparing health outcomes of privileged US citizens with those of average residents of other developed countries. JAMA Internal Medicine. 2020;181(3):339–344. doi: 10.1001/jamainternmed.2020.7484.
- 8. Yao N, Mutter JB, Berry JD, Yamanaka T, Mohess DT, Cornwell T. In traditional Medicare, modest growth in the home care workforce largely driven by nurse practitioners. Health Affairs. 2021;40(3):478–486
- 9. Melariri H, Osoba TA, Williams MM, Melariri P. An assessment of nurses' participation in Health Promotion: a knowledge, perception, and practice perspective. J Prev Med Hyg. 2022 Apr 26;63(1):E27-E34. doi: 10.15167/2421-4248/jpmh2022.63.1.2209. PMID: 35647380; PMCID: PMC9121667.

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- White A, Fulda KG, Blythe R, Chui MA, Reeve E, Young R, Espinoza A, Hendrix N, Xiao Y. Defining and enhancing collaboration between community pharmacists and primary care providers to improve medication safety. Expert Opin Drug Saf. 2022 Nov;21(11):1357-1364. doi: 10.1080/14740338.2022.2147923. Epub 2022 Nov 21. PMID: 36377503; PMCID: PMC9850835.
- 11. Mohiuddin AK. The Excellence of Pharmacy Practice. Innov Pharm. 2020 Jan 28;11(1):10.24926/iip.v11i1.1662. doi: 10.24926/iip.v11i1.1662. Retraction in: Innov Pharm. 2020 Jan 28;11(1). doi: 10.24926/iip.v11i2.3944. PMID: 34017646: PMCID: PMC8132542.
- 12. Listl S, Galloway J, Mossey PA, Marcenes W. Global economic impact of dental diseases. *Journal of Dental Research*. 2015;94:1355–61
- 13. Oral Health in America: Advances and Challenges [Internet]. Bethesda (MD): National Institute of Dental and Craniofacial Research (US); 2021 Dec. Section 1, Effect of Oral Health on the Community, Overall Well-Being, and the Economy. Available from: https://www.ncbi.nlm.nih.gov/books/NBK578297/
- 14. https://www.ucumberlands.edu/blog/exploring-the-role-of-healthcare-administrators
- 15. WHO Guidelines on Drawing Blood: Best Practices in Phlebotomy. Geneva: World Health Organization; 2010. 2, Best practices in phlebotomy. Available from: https://www.ncbi.nlm.nih.gov/books/NBK138665/