

# A REVIEW ON NURSING & MIDWIFERY PRACTICE- IN PHARMACY & NURSING

## Abstract

The future of pharmacy and nursing promises an amazing assortment of revolutionary developments that will revolutionize healthcare delivery and patient outcomes. The integration of cutting-edge technologies like artificial intelligence (AI) and robots is one noticeable trend. Through futuristic trends that will influence the future of healthcare, nursing and midwifery practices, as well as the discipline of pharmacy, are prepared to undergo as to noshing modifications. Evidence-based Care: In nursing and midwifery practice, the methods employed revolve around providing high-quality, patient-centered care throughout various stages of life, Plans for Personalized Care, Interprofessional Cooperation, Health Education and Promotion, Medication Administration and Treatments, Patient Advocacy, etc. are found in this profession. The grail of this review is to provide the knowledge for the futuristic trends in Pharmacy and Nursing.

**Keywords:** Artificial intelligence, patient care, health education, medication, community care.

## Authors

### **Arun Kumar Sharma**

Department of Pharmacology  
ISF College of Pharmacy  
Moga, Punjab, India.

### **Jyoti**

MBBS  
Maharaja Agrasen Medical College  
Agroha, Hisar, Haryana, India.

### **Lovekesh Singh**

Department of Pharmacology  
ISF College of Pharmacy  
Moga, Punjab, India.  
keshlv6@gmail.com

### **Komal**

Research Scholar  
Department of Pharmaceutics  
ISF College of Pharmacy  
Moga, Punjab, India.

## **I. FUTURISTIC TRENDS IN PHARMACY & NURSING**

The future of pharmacy and nursing promises an amazing assortment of revolutionary developments that will revolutionize healthcare delivery and patient outcomes. The integration of cutting-edge technologies like artificial intelligence (AI) and robots is one noticeable trend. AI-powered platforms will streamline drug discovery processes, resulting in the production of novel pharmaceuticals and personalized treatments customized to each patient's unique genetic composition and medical history(1). Additionally, robotic automation will improve medicine distribution, lowering errors and increasing efficiency in hospital and retail pharmacy environments(2).

Telemedicine and remote patient monitoring are expected to play an important part in the future of healthcare, allowing chemists and nurses to deliver care outside of typical clinical settings. Patients will have better access to medical services, enabling at-home real-time consultations, medication management, and health monitoring. Better patient compliance and care continuity, especially for those living in distant or underserved areas, will result from this trend(3).

The development of nanotechnology will also pave the way for novel medicine delivery and therapeutic approaches. Nanoparticles and nanoscale drug carriers will allow for more targeted and precise pharmaceutical administration, decreasing side effects and improving therapeutic efficacy. This discovery will revolutionize the formulation and delivery of medications, resulting in more potent therapies for a variety of illnesses(4).

The future will also see the incorporation of genetics into pharmaceutical and nursing practices. The study of pharmacogenomics, or how a person's genetic makeup affects how they respond to pharmaceuticals, will become a crucial part of prescribing and administering medication. Nurses and chemists will have access to patients' DNA profiles, allowing for personalized treatment programs that maximize medicine effectiveness while minimizing bad responses(5).

Finally, advances in virtual reality (VR) and augmented reality (AR) will revolutionize medical training and patient education. Immersive and realistic simulations will aid nursing students and chemists by giving them hands-on experience to acquire crucial skills. Patients will also receive detailed information about their medications and treatments via interactive AR-based educational materials, allowing them to take an active role in their healthcare journey(6).

In conclusion, there is a tone of cutting-edge developments embracing technology, precision medicine, and patient-centered care in the pharmacy and nursing fields of the future. These advancements will increase the skills of healthcare professionals while also improving patient outcomes and the general effectiveness, accessibility, and personalization of the healthcare system(7).

## **II. NURSING & MIDWIFERY PRACTICE**

Through futuristic trends that will influence the future of healthcare, nursing and midwifery practices, as well as the discipline of pharmacy, are prepared to undergo

astounding modifications. Artificial intelligence and robotics will revolutionise pharmacy practices by speeding drug discovery and development while also improving medicine dispensing operations with enhanced accuracy and efficiency(8). Furthermore, the incorporation of telemedicine and remote patient monitoring would allow nurses and chemists to deliver care outside of traditional locations, ensuring better patient access and continuity of healthcare services(8).

With the use of AI-powered systems for diagnosis and treatment planning, nurses and midwives will be able to provide patients with more individualized and precise care as a result of these developments, which will enhance patient outcomes(9).

Expectant mothers and patients in far-off locations will be able to receive vital prenatal counseling and postpartum support thanks to telemedicine. Aside from that, virtual reality and augmented reality will transform medical education by giving nursing and midwifery students immersive simulations to hone crucial skills(10).

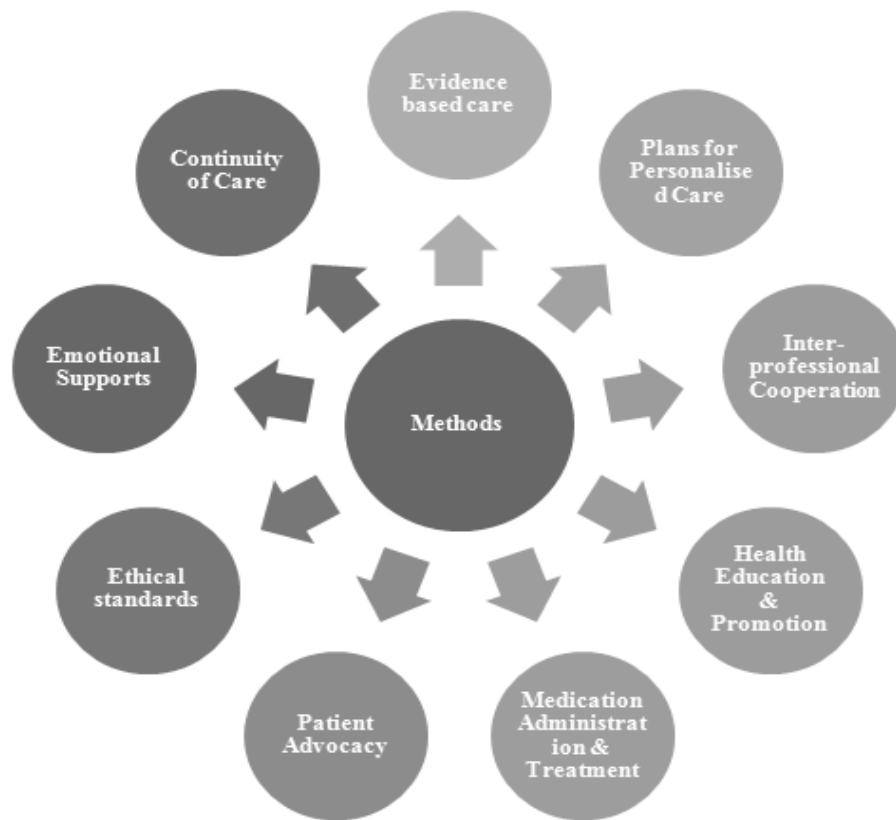
Additionally, the adoption of genomics in nursing and pharmacy will open the way for pharmacogenomics, which will enable the customization of prescription regimens for specific patients based on their genetic profiles(11).

This method will not only maximize therapeutic effectiveness but also reduce adverse responses, resulting in safer and more efficient therapies. With genetic screening permitting early detection of potential difficulties during pregnancy and childbirth, midwifery practices will additionally profit from genomics(5).

As nanotechnology improves, both pharmacy and midwifery will see innovations in drug administration and prenatal care. Nanoparticles and nanoscale drug carriers will enable targeted medication administration, resulting in enhanced treatment outcomes with fewer adverse effects. Nanotechnology may improve prenatal diagnoses and monitoring for midwives, offering significant insights into fetal development and mother health(12).

Finally, a healthcare revolution is predicted by the confluence of forward-looking trends in the practice of pharmacy, nursing, and midwifery. Technology will enable healthcare providers to provide personalized, precise, and accessible care to patients in a variety of contexts, improving patient outcomes and overall well-being(13). These advancements mark a paradigm shift towards a more effective and patient-centered healthcare system, ushering in a new era of medical excellence and compassion(13).

### III.METHODS EMPLOYED IN NURSING AND MIDWIFERY PRACTICE



- 1. Evidence-based Care:** In nursing and midwifery practice, the methods employed revolve around providing high-quality, patient-centered care throughout various stages of life. A prominent and essential method is evidence-based care, which forms the foundation of clinical decision-making and interventions. This approach involves integrating the best available research evidence with the expertise of healthcare professionals and considering the unique preferences and circumstances of each patient(14). Nurses and midwives conduct thorough assessments, taking into account not only the physical health of individuals but also their emotional, psychological, and social well-being. Based on these assessments, personalized care plans are developed to address specific healthcare needs and goals. Interdisciplinary collaboration plays a vital role, in fostering effective communication and teamwork among healthcare providers to ensure coordinated and comprehensive care(14).

Furthermore, health education and promotion are emphasized, empowering patients with knowledge about their conditions, self-care practices, and preventive measures. Patient advocacy is a cornerstone of nursing and midwifery practice, as these healthcare professionals stand as champions for their patients' rights, dignity, and autonomy(15). By upholding ethical standards and providing emotional support, nurses and midwives establish trusting relationships with patients and their families, fostering a sense of continuity of care and enhancing overall patient outcomes. This patient-centered and evidence-based approach ensures that nursing and midwifery practice remains at the forefront of delivering compassionate, efficient, and effective healthcare services(16).

- 2. Plans for Personalised Care:** In the realm of nursing and midwifery practice, a variety of methods are employed to deliver exceptional patient care and support. One fundamental aspect is the development and implementation of personalized care plans. These plans are meticulously crafted based on comprehensive assessments of patients, taking into consideration not only their medical conditions but also their individual preferences, values, and unique circumstances(17). Through effective communication and collaboration with patients and their families, nurses and midwives gather essential information to tailor care approaches that align with the specific needs and goals of each individual. Personalized care plans encompass a holistic view of the patient, addressing not just physical health but also emotional, psychological, and social well-being(18).

This patient-centered approach fosters a strong sense of trust and rapport between healthcare providers and patients, leading to improved treatment outcomes and overall satisfaction with the care received. By consistently adhering to these personalized care plans, nursing and midwifery practitioners uphold the highest standards of healthcare delivery, ensuring that patients receive the best possible support on their unique healthcare journeys(19).

- 3. Interprofessional Cooperation:** In nursing and midwifery practice, a combination of effective methods is utilized to provide comprehensive and patient-centered care, and one crucial aspect is interprofessional cooperation. Both nursing and midwifery professions require collaboration with various healthcare team members to deliver holistic and coordinated services. Interprofessional cooperation involves fostering open communication, mutual respect and shared decision-making among healthcare providers from different disciplines, such as physicians, pharmacists, therapists, and social workers. By working collaboratively, these professionals bring together their diverse expertise, knowledge, and skills to address complex healthcare needs and challenges(20).

This teamwork ensures that patients receive well-rounded care, with all aspects of their physical, emotional, and psychological well-being taken into account. Interprofessional cooperation also enhances the continuity of care, as healthcare providers can seamlessly exchange information and coordinate treatment plans, resulting in better patient outcomes and improved healthcare efficiency. By embracing this collaborative approach, nursing and midwifery practices strengthen the foundation of patient care, fostering a cohesive and supportive healthcare environment that benefits both the practitioners and the individuals they serve(21).

- 4. Health Education and Promotion:** Health education and promotion are integral components of nursing and midwifery practice, and these professions employ various effective methods to empower patients and communities to make informed decisions about their health. Nurses and midwives play a crucial role in educating individuals about their medical conditions, preventive measures, and self-care practices. They communicate complex medical information clearly and understandably, ensuring that patients are equipped with the knowledge to actively participate in managing their health. Through one-on-one interactions and group sessions, healthcare professionals address specific health concerns, promote healthy lifestyle choices, and emphasize the importance of disease prevention(22). Additionally, nursing and midwifery practices extend beyond individual care, reaching out to communities to raise awareness about prevalent health

issues and preventive measures. By fostering health literacy and promoting healthy behaviors, nurses and midwives contribute significantly to improving overall public health outcomes, reducing the burden of preventable illnesses, and enhancing the well-being of individuals and communities they serve(22).

- 5. Medication Administration and Treatments:** In nursing and midwifery practice, medication administration and treatments are essential aspects of providing quality healthcare. Nurses and midwives utilize a systematic and meticulous approach to administer medications and carry out treatments safely and effectively. They adhere to established protocols, double-checking medication dosages and ensuring proper routes of administration. Through vigilant monitoring, these healthcare professionals assess patients for any adverse reactions or side effects and make necessary adjustments to treatment plans. Moreover, nurses play a critical role in educating patients about their medications, including proper usage, potential interactions, and potential side effects(23). In midwifery practice, medication administration may involve pain relief during childbirth or managing certain conditions during pregnancy. In both nursing and midwifery, treatments may include wound care, therapeutic interventions, and postpartum support, depending on the specific healthcare needs of patients. By prioritizing patient safety and precise treatment delivery, nursing and midwifery professionals contribute to better health outcomes and improved overall well-being for the individuals under their care(24).
- 6. Patient Advocacy:** Patient advocacy is a fundamental principle of nursing and midwifery practice, and it is upheld through various effective methods. Nurses and midwives act as staunch advocates for their patients, ensuring their voices are heard, their rights are respected, and their healthcare preferences are considered. They engage in open and empathetic communication, actively involving patients and their families in decision-making processes related to their care. By providing comprehensive information and support, healthcare professionals empower patients to make informed choices about their health and treatment options(16). Additionally, nurses and midwives actively address any concerns or challenges that patients may encounter in their healthcare journey, working tirelessly to resolve issues and provide solutions. They collaborate with interdisciplinary teams and community resources to ensure patients receive the necessary support and resources for their well-being. Through their unwavering commitment to patient advocacy, nursing, and midwifery practitioners foster a strong and trusting relationship with their patients, fostering a sense of partnership and compassion in the delivery of healthcare services(25).
- 7. Ethical Standards:** Ethical standards form the bedrock of nursing and midwifery practice, and these professions employ various methods to uphold the highest level of ethical conduct in patient care. Nurses and midwives adhere to established ethical principles, such as respect for autonomy, beneficence, non-maleficence, and justice, in all interactions with patients and their families. They prioritize patient confidentiality, ensuring that sensitive medical information remains private and secure(26). In challenging situations, healthcare professionals engage in ethical decision-making, considering the best interests of their patients while navigating complex ethical dilemmas. They strive to provide care that is free from discrimination and bias, treating all individuals with dignity, respect, and cultural sensitivity(27).

Additionally, nurses and midwives are committed to informed consent, ensuring that patients have a clear understanding of their treatment options and actively participate in decisions regarding their health. By upholding ethical standards, nursing and midwifery practitioners maintain the trust and confidence of their patients, fostering a compassionate and ethical healthcare environment that prioritizes the well-being and rights of those they serve(28).

- 8. Emotional Support:** Emotional support is a vital aspect of nursing and midwifery practice, and healthcare professionals in these fields employ various methods to provide compassionate care to patients and their families. Nurses and midwives recognize the emotional challenges that patients may face during illness, pregnancy, childbirth, and other healthcare experiences. They demonstrate empathy, active listening, and genuine concern for the emotional well-being of those under their care. By creating a safe and supportive environment, healthcare providers encourage open communication and allow patients to express their fears, anxieties, and feelings(29). Offering a comforting presence and reassurance, nurses and midwives help alleviate emotional distress and foster a sense of trust and rapport with their patients. They also extend emotional support to families, recognizing that loved ones may also require understanding and compassion during times of medical uncertainty or significant life events. Through their unwavering emotional support, nursing and midwifery practitioners demonstrate their commitment to holistic patient care, addressing not only physical health but also the emotional needs of individuals and their families throughout their healthcare journeys(30).
- 9. Continuity of Care:** Continuity of care is a cornerstone of nursing and midwifery practice, and various methods are employed to ensure seamless and uninterrupted healthcare delivery to patients. Nurses and midwives prioritise building strong patient-provider relationships, striving to be consistent points of contact throughout the healthcare journey. They maintain detailed and comprehensive patient records, facilitating the exchange of essential medical information among healthcare teams to provide holistic care(31). This continuity extends beyond individual encounters, with nurses and midwives collaborating with other healthcare professionals to ensure coordinated and cohesive treatment plans. In midwifery practice, continuity of care is particularly emphasized, with midwives offering continuous support throughout pregnancy, childbirth, and the postpartum period. By fostering continuity of care, nursing, and midwifery practitioners enhance patient outcomes, improve patient satisfaction, and promote better health management, as patients benefit from ongoing support, familiarity, and personalized care that addresses their unique needs and preferences(32).

Evidence-based care, interdisciplinary teamwork, health promotion, patient advocacy, and a holistic approach are all used by nursing and midwifery practices to deliver thorough, kind, and patient-centered healthcare services at all phases of life(32).

## REFERENCE

- [1] Davenport T, Kalakota R. The potential for artificial intelligence in healthcare. *Future healthcare journal*. 2019;6(2):94.
- [2] Bagattini ÂM, Borges JLA, Riera R, de Carvalho DCMF. Automation of a tertiary hospital pharmacy drug dispensing system in a lower-middle-income country: A case study and preliminary results. *Exploratory Research in Clinical and Social Pharmacy*. 2022;6:100151.
- [3] Haleem A, Javaid M, Singh RP, Suman R. Telemedicine for healthcare: Capabilities, features, barriers, and applications. *Sensors international*. 2021;2:100117.
- [4] Rizvi SA, Saleh AM. Applications of nanoparticle systems in drug delivery technology. *Saudi pharmaceutical journal*. 2018;26(1):64-70.
- [5] Oates J, Lopez D. Pharmacogenetics: an important part of drug development with a focus on its application. *International journal of biomedical investigation*. 2018;1(2).
- [6] Pottle J. Virtual reality and the transformation of medical education. *Future healthcare journal*. 2019;6(3):181.
- [7] Alotaibi YK, Federico F. The impact of health information technology on patient safety. *Saudi medical journal*. 2017;38(12):1173.
- [8] Raza MA, Aziz S, Noreen M, Saeed A, Anjum I, Ahmed M, et al. Artificial Intelligence (AI) in Pharmacy: An Overview of Innovations. *INNOVATIONS in pharmacy*. 2022;13(2).
- [9] Buchanan C, Howitt ML, Wilson R, Booth RG, Risling T, Bamford M. Predicted influences of artificial intelligence on the domains of nursing: scoping review. *JMIR nursing*. 2020;3(1):e23939.
- [10] Shang Z. A concept analysis on the use of artificial intelligence in nursing. *Cureus*. 2021;13(5).
- [11] Johnson KB, Wei WQ, Weeraratne D, Frisse ME, Misulis K, Rhee K, et al. Precision medicine, AI, and the future of personalized health care. *Clinical and translational science*. 2021;14(1):86-93.
- [12] Sim S, Wong NK. Nanotechnology and its use in imaging and drug delivery. *Biomedical reports*. 2021;14(5):1-9.
- [13] Booth RG, Strudwick G, McBride S, O'Connor S, López ALS. How the nursing profession should adapt for a digital future. *bmj*. 2021;373.
- [14] Majid S, Foo S, Luyt B, Zhang X, Theng Y-L, Chang Y-K, et al. Adopting evidence-based practice in clinical decision making: nurses' perceptions, knowledge, and barriers. *Journal of the Medical Library Association: JMLA*. 2011;99(3):229.
- [15] Kruk ME, Gage AD, Arsenault C, Jordan K, Leslie HH, Roder-DeWan S, et al. High-quality health systems in the Sustainable Development Goals era: time for a revolution. *The Lancet global health*. 2018;6(11):e1196-e252.
- [16] Nsiah C, Siakwa M, Ninnoni JP. Registered nurses' description of patient advocacy in the clinical setting. *Nursing Open*. 2019;6(3):1124-32.
- [17] Parreira P, Santos-Costa P, Neri M, Marques A, Queirós P, Salgueiro-Oliveira A. Work methods for nursing care delivery. *International Journal of Environmental Research and Public Health*. 2021;18(4):2088.
- [18] Toney-Butler TJ, Thayer JM. *Nursing process*. StatPearls [Internet]: StatPearls Publishing; 2022.
- [19] Byrne A-L, Baldwin A, Harvey C. Whose centre is it anyway? Defining person-centred care in nursing: An integrative review. *PLoS One*. 2020;15(3):e0229923.
- [20] Ho JM-C, Wong AY-L, Schoeb V, Chan AS-W, Tang PM-K, Wong FK-Y. Interprofessional team-based learning: a qualitative study on the experiences of nursing and physiotherapy students. *Frontiers in public health*. 2022;9:706346.
- [21] Rosen MA, DiazGranados D, Dietz AS, Benishek LE, Thompson D, Pronovost PJ, et al. Teamwork in healthcare: Key discoveries enabling safer, high-quality care. *American Psychologist*. 2018;73(4):433.
- [22] Melariri H, Osoba TA, Williams MM, Melariri P. An assessment of nurses' participation in Health Promotion: A knowledge, perception, and practice perspective. *Journal of Preventive Medicine and Hygiene*. 2022;63(1):E27.
- [23] Mardani A, Griffiths P, Vaismoradi M. The role of the nurse in the management of medicines during transitional care: a systematic review. *Journal of multidisciplinary healthcare*. 2020:1347-61.
- [24] Hanson A, Haddad LM. *Nursing rights of medication administration*. StatPearls [Internet]: StatPearls Publishing; 2021.
- [25] Flaubert JL, Le Menestrel S, Williams DR, Wakefield MK, National Academies of Sciences E, Medicine. *The Role of Nurses in Improving Health Care Access and Quality. The Future of Nursing 2020-2030: Charting a Path to Achieve Health Equity*: National Academies Press (US); 2021.
- [26] Haddad LM, Geiger RA. *Nursing ethical considerations*. 2018.



- [27] Varkey B. Principles of clinical ethics and their application to practice. *Medical Principles and Practice*. 2021;30(1):17-28.
- [28] Heinonen K. Strengthening antenatal care towards a salutogenic approach: a meta-ethnography. *International journal of environmental research and public health*. 2021;18(10):5168.
- [29] Jin Y, Wu Y, Li J. Midwife empathy and its association with the childbirth experience: a cross-sectional study. *BMC Pregnancy and Childbirth*. 2022;22(1):1-10.
- [30] Akyirem S, Salifu Y, Bayuo J, Duodu PA, Bossman IF, Abboah-Offei M. An integrative review of the use of the concept of reassurance in clinical practice. *Nursing Open*. 2022;9(3):1515-35.
- [31] McInnes RJ, Aitken-Arbuckle A, Lake S, Hollins Martin C, MacArthur J. Implementing continuity of midwife carer—just a friendly face? A realist evaluation. *BMC Health Services Research*. 2020;20:1-15.
- [32] Bradford BF, Wilson AN, Portela A, McConville F, Fernandez Turienzo C, Homer CS. Midwifery continuity of care: A scoping review of where, how, by whom and for whom? *PLOS Global Public Health*. 2022;2(10):e0000935.