



# INNOVATION: NURSE PRACTITIONER IN MIDWIFERY (NPM) THE FUTURE OF INDIAN NURSING

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## Abstract

Nursing innovation is a fundamental source of progress for health care systems around the world. According to a report by ICN (2009), innovation in nursing applications is extremely important for improving health, preventing diseases, describing and avoiding risk factors, developing healthy life standard attitudes because innovation helps updated knowledge, method and services be invented and discovered by the institutions. Innovation starts with a good idea, but it is much more than that. It also refers to the process of turning that good idea into something that can be used, something that is implementable and achievable, and hopefully, will bring about better health promotion, disease prevention and better patient care [4]. Considering the necessity for trained human resources to give quality care to 30 million pregnancies each year in India and at a similar time recognizing the challenges earlier, Government of India has proposed an alternate model of service provision for strengthening reproductive, maternal and neonatal health services by nurse practitioners in midwifery through Midwife Led Care Units (MLCUs). The 'Guidelines on Midwifery Services in India' set transformative change must be at the center of midwifery education. The 'Midwifery Services Initiative' aims to create a new cadre of midwives titled "Nurse Practitioner in Midwifery" (NPM) who are skilled in accordance with ICM competencies, knowledgeable and capable of providing compassionate women centered, reproductive, maternal and new-born health services (RMNCH) and to develop an enabling environment for integration of this cadre into the general public health system so as to achieve the SDGs for maternal and new-born health (MoHFW, 2018). The Nurse Practitioner in Midwifery (NPM) will be responsible for promotion of health of women throughout their life cycle, with special focus on women during their childbearing years and their new-born's. She will be responsible for providing respectful maternity care during preconception, pregnancy, childbirth, and post-natal period including the care of new born. Introduction of NPM will help to strengthen our health work force, and will go a long way in addressing the country's core need of strengthening human resources for health, and it will empower the nurse practitioner in midwifery as leaders, in tandem with the global movement of role expansion and empowerment of nurse midwives.

**Keywords:** India, Innovation, Nurse Practitioner in Midwifery, Midwifery

## Introduction

The coronavirus pandemic shown a light on the innovative work nurses were regularly doing at the bedside of patient to improve the health of patients and families instantaneously as the pandemic took hold [1]. Advances in technology and clinical research are making it possible for us to experience an entirely new healthcare system that provides more individualized and accessible care [2]. As nurses, we experience the progress of innovation each day, and we feel its impact on our work as we use "smart" patient-care devices and electronically

document in our patient care [3]. Nursing innovation has become an incredible facet of our profession. There are so many exciting ways it has changed and transformed nursing practice. Technology has made a tremendous impact on how nurses perform their jobs, manage tasks on-the-go, and continue to provide quality care. From better, more accurate patient monitors that give nurses 24/7 information on a patient's health status, to analytics tools that use data to provide insights for earlier intervention, technology has evolved to give nurses a more comprehensive view of the patients' health. And while nurses have always been mobile, new technologies

keep nurses connected to the patient, regardless of where they are in the hospital.

Nursing innovation is a fundamental source of progress for health care systems around the world. According to a report by ICN (2009), innovation in nursing applications is extremely important for improving health, preventing diseases, describing and avoiding risk factors, developing healthy life standard attitudes, and qualifying the care and treatment methods; because innovation helps updated knowledge, method and services be invented and discovered by the institutions. Innovation starts with a good idea, but it is much more than that. It also refers to the process of turning that good idea into something that can be used, something that is implementable and achievable, and hopefully, will bring about better health promotion, disease prevention and better patient care [4].

### Innovations

Some of the innovations are already changing how nurses do their jobs. And for some, the full potential of impact is still on the horizon. Few innovations which came as a breakthrough and changed the way the nurse's function is mentioned below.

**1. Interoperability:** Although the development and implementation of the Electronic Health Record (EHR) revolutionized the healthcare industry, there's an even loftier goal afoot: to create a system where useful data can be communicated and exchanged from one system to another. Take the patient who's on vacation in some part of the world and comes to the ED for chest pain. What if the nurse can access a health record, view patient history, comorbidities, allergies and medications instantaneously? That is what the IT world calls interoperability. Although there are many challenges in implementing this kind of interoperable system, great efforts have been put forth to move towards that goal.

**2. Real time locating systems:** Real time locating systems (RTLS) have the capability to reduce the amount of time nurses and other healthcare providers spend searching for equipment and supplies by making them easily trackable.

**3. "Intelligent" medical devices:** Smart pumps are one thing. But the use of intelligent infusion systems is a whole new ballgame. Imagine a PCA pump that is dialled into capnography and respiration rates, noting respiratory depression in a patient in its earliest stages. The implications for patient safety would be notable.

**4. Robotics and Artificial Intelligence:** Robotics and artificial intelligence (AI) are impacting how nurses and practitioners deliver healthcare. Robotics have been employed across many areas of nursing and healthcare. In some clinics, "friendly" hospital robots have helped to assist stressed nurses. In surgical situations, robotic surgical and nursing technologies, such as the da Vinci Surgical System, have led to better patient outcomes. Plus, AI is helping healthcare professionals to better sort through patient data and improve the accuracy of diagnoses. For example, AI can help analyse large data sets and determine if a particular condition is a result of a person's own health or may be due to larger factors, such as a high number of recent outbreaks of disease in a given community or trends of poor dietary habits in certain populations. Beyond being marvellous pieces of technology and innovation, robotics and AI in nursing enable a range of other benefits. They can assist in the delivery of healthcare services such as providing tools and guidance in surgery help to make recovery efforts more comfortable and successful, and potentially improve preventive care outcomes [5],[6].

**5. Wearables:** Wearables are a valuable piece of nursing technology that can assist in determining if a person is experiencing a negative health issue before it grows into something that isn't as easily manageable. This leads to fewer healthcare visits by patients and less time and effort spent by practitioners that could be used on individuals who require immediate attention [7].

### Disruptive Innovation

The concept of 'disruptive innovation', which was originally coined by Clayton Christensen et al in 1995, has particularly permeated into academic and clinical healthcare dialect in recent years [8]. It is defined as "an innovation that creates a new market by applying a different set of values, which ultimately overtakes an existing market" [9]. It is a "process by which a product or service takes root initially in simple applications at the bottom of a market and then relentlessly moves up market, eventually displacing established competitors." Non-healthcare related examples of disruptive innovations include the introduction of word processing software and video on-demand services such as Netflix (replacing DVD rental services). In health care, examples are plentiful: balloon angioplasty, which eliminated the need for many cardiac bypass surgeries; the delivery by nurse practitioners of primary care services that were previously provided exclusively by physicians; and the

formation of health care clinics within retail establishments. Each of these innovations initially met the needs of only a subset of consumers but was soon more widely accepted and adopted [10].

But the premise of disruptive innovation isn't about the technology itself, rather it's about applying that technology in a simpler, more radical way to either create a new product or a new environment for using the product that didn't previously exist. As applied to healthcare, disruptive innovation can be a fundamental mechanism through which we can build a higher quality, more convenient, and lower cost healthcare system [11]. Disruptive innovations in healthcare can influence a new system that provides a continuum of care focused on each individual patient's needs, rather than focusing primarily on complex disorders and urgent health crises. Because of advances in diagnostic and therapeutic technologies, NPs and physician assistants can competently diagnose and treat disorders that would have previously required a physician. Accurate new tests and detailed protocols allow these clinicians to diagnose conditions as simple as strep infections and as serious as diabetes [12].

### **Nurse Practitioner in Midwifery (NPM)**

Considering the necessity for trained human resources to give quality care to 30 million pregnancies each year in India and at a similar time recognizing the challenges earlier, Government of India has proposed an alternate model of service provision for strengthening reproductive, maternal and neonatal health services by nurse practitioners in midwifery through Midwife Led Care Units (MLCUs). Quality maternity care provided by midwives through the MLCUs is significant to the current transformation. The recognition that quality of care will not only save lives but also will provide a positive experience of childbirth implies that the change required must be transformative. This will require making fundamental change to the way services are delivered, and also the culture of care provided to women. The 'Guidelines on Midwifery Services in India' set transformative change must be at the center of midwifery education. The 'Midwifery Services Initiative' aims to create a new cadre of midwives titled "Nurse Practitioner in Midwifery" (NPM) who are skilled in accordance with ICM competencies, knowledgeable and capable of providing compassionate women centered, reproductive, maternal and new-born health services (RMNCH) and to develop an enabling environment for integration of this cadre into the general public health system so as to

achieve the SDGs for maternal and new-born health (MoHFW, 2018).

The NPM program is an 18-month residency program, which has 12 months of residency education and training followed by 6 months of intensive practicum/internship. This program mainly focuses on Competency based education and training facilitated by mastery and experiential learning centred around transformational and relationship-based teaching and learning integrating Council's/global educational and midwifery practice standards. The change in paradigm shift to women centered and respectful midwife led midwifery services is emphasized throughout the program recognizing their scope of practice. The curriculum comprises of theory and practicum (lab and clinical), offered in four course modules namely (i) Foundations to midwifery, (ii) Normal Pregnancy, birth, postpartum and care of new-born, (iii) Complex care of woman and care of compromised new-born. Besides the foundational training, the curriculum encompasses hands on skill training and orientation to the treatment protocols/national midwifery guidelines and drugs permitted to be used by NPMs relevant to midwifery practice. These courses focus on readying the student for their role as an autonomous midwife practitioner working in and advocating the new model of midwifery-led care in India

The Nurse Practitioner in Midwifery (NPM) will be responsible for promotion of health of women throughout their life cycle, with special focus on women during their childbearing years and their new-born's. She will be responsible for providing respectful maternity care during preconception, pregnancy, childbirth, and post-natal period including the care of new born. She will be responsible and answerable for her practice. The NPMs will practice independently and collaboratively with the doctors within the hospital and within the present peripheral health system consisting of skilled birth attendants, auxiliary nurse midwives, nurses, doctors and specialists. She can be posted in a facility where no obstetricians are available and provide midwifery care based on predetermined midwifery care protocols alongside treatment protocols and medicines permitted for use by NPMs. They will uphold recognized standards of midwifery practice, embrace, support the qualities and values of the midwifery practice, and be motivated, flexible and evidence-informed practitioners. They will be prepared to grow and advance through learning and continuing experience. The NPMs are equipped to work

within midwifery led care and continuity of care models in India, both within the newly formed midwife-led care units within public health facilities and/or integrated into primary health care within the community.

### **Nurse Practitioner in Midwifery (NPM); the disruptive innovation which will be the future of nursing in India**

Nearly 32,000 pregnant women each year still lose their lives during pregnancy, childbirth and the postnatal period each year. In addition, 5,90,000 new-borns die each year within the first month of life. The survival of women and new-borns is closely correlated with the care and a focus received during pregnancy and, most significantly, at the time of delivery. Delayed management of cases, lack of access to skilled care, is one among the main reasons for the deaths, particularly within the rural areas. Skilled and respectful care during childbirth is very important because many women and new-borns develop serious and hard to predict complications before, during or immediately after delivery.

Evidence shows that quality midwifery care, provided by midwives educated to international standards, reduces maternal and new born mortality and stillbirth rates by 83% and with 56 improved maternal and new born health outcomes. It is also evident that 87% services can be delivered by midwives educated to international standards. There also has been an increasing body of evidence globally that Midwife Led Care Units (MLCUs) can address maternal and neonatal mortality and morbidity by promoting quality and continuity of care through provision of women-centric care and promoting natural births. Where a model of Midwife Led Continuity of Care (MLCC) is introduced, this reduces preterm birth by 24%. Beyond survival, quality midwifery care improves breastfeeding rates and psychosocial outcomes, and reduces the use of unnecessary interventions, in

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particular caesarean sections and increases access to family planning (Lancet Series, 2014; UNFPA, 2014 & WHO 2017).

The increase of nurse practitioners in the primary care setting is often viewed as a “disruptive innovation” meant to challenge the status quo of a healthcare system apt for reform. The mere presence of nurse practitioners in the healthcare market is forcing change and innovation to occur. The process of redefining care boundaries and settings creates opportunities to improve care and decrease cost. Nurse practitioners in midwifery will play a key role in the reform process and will set transformative change in India’s Midwifery practices. As Christensen et al. have convincingly said, NPM’s have a significant disruptive potential to bring a reform in India’s reproductive, maternal and new-born health services (RMNCH). Because of the hybrid nature of their clinical roles, NPMs’ integration into the general public health system has the potential to trigger an important strengthening and redesign of delivery structures of reproductive, maternal and new born health services of rural India. Integration of NPM’s in midwifery practices will have a greater impact on the mother and child health services of India particularly in rural areas. NPM’s role in future will bring a complete transformation of existing midwifery services and a healthier and more viable reproductive, maternal and new-born health services will be established.

#### **Conclusion**

Introduction of NPM will help to strengthen our health work force, and will go a long way in addressing the country’s core need of strengthening human resources for health, and it will empower the nurse practitioner in midwifery as leaders, in tandem with the global movement of role expansion and empowerment of nurse midwives.

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