

Role of nurse practitioners within health system in India: A case of untapped potential

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ABSTRACT

Nurses form the pillar of India's healthcare system representing 30.5% of the entire health workforce in India. Amidst a significant shortage in the provision of effective primary care, jeopardizing millions of Indians' access to basic healthcare services, especially the poorest, it is very evident that nurse practitioners are the need of the hour in India. The current scenario of nursing in India warrants policy reforms to facilitate nurses as valuable primary care providers. It also shows the path towards making the Health and Wellness Centre operational by creating a pivotal role for the cadre in such centres, and it will also be important for the nurse practitioner to have a public health leadership role in a country like India. With additional training and qualification and also recognition of nurse practitioners as essential healthcare providers, a complete quality healthcare could be provided. In this research paper we assess the need for nurse practitioners as primary contact providers; reflect on the global evidence on nurse practitioners linking to health outcomes, effective coverage and access to services. We also try to contemplate on the training needs, their role in home-based care and as enablers of the referral mechanism, their untapped potential, and a plan for evaluating their effectiveness. This policy research paper focuses to build an argument for a policy towards making nurse practitioners the first contact providers.

Keywords: First contact providers, health policy reform, health wellness centres, healthcare delivery, leadership, nurse practitioners

Introduction

Tracing the roots of nursing as an effective and compassionate profession dates back to Florence Nightingale, known as the "Lady with the Lamp". Nightingale's service for the promotion of healthcare to humanity provided firm footing to nursing as a profession of vital importance in the field of healthcare.^[1] Nurses form the pillar of India's healthcare system representing 30.5% of the entire health workforce in India.^[2] The

1978 Declaration of Alma-Ata emerged as a breakthrough of the twentieth century in the field of public health and recognized primary healthcare as an essential component for the attainment of Health for all.^[3]

India with an estimated population of 1.3 billion is facing an array of disease burden including lifestyle diseases, infectious and emerging diseases and also pandemics like Covid-19. Communicable diseases, maternal and nutritional deficiencies remain to be major causes of deaths, and non-communicable diseases and mental disorders are also escalating, thereby, challenging the quality of primary healthcare delivery.^[4] Inadequate availability, high underperformance, and poor-quality infrastructure and human resources contribute to the poor performance of the primary healthcare system.^[5]

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Rationale and its Linkage to Health Policy

According to the World Health Organization estimates, there is an alarmingly low level of trained health personnel in many of the developing countries and also the doctor population ratio in India is 1.34 doctors for 1,000 population as of 2017.^[6] The Ayushman Bharat Scheme launched by the Government of India (GOI) intended to address healthcare with two major components: Health and Wellness Centre (HWC) and National Health Protection Scheme (known as Pradhan Mantri Jan Arogya Yojana or PM-JAY) under its umbrella.^[7] Though the intent of the program to upgrade the health system is expected to achieve the goal of health for All, there is no evidence of a skilled health workforce in numbers for effective implementation. Considering the scale of importance, a skilled health workforce tops the pyramid of healthcare delivery systems.

With a low doctor-patient ratio, high absenteeism of medical doctors in health centres and inadequate distribution of health workers in rural India compared to urban areas, the healthcare delivery system is unable to effectively provide primary health-care.^[8] Provision of the first contact, patient fixated, ongoing care over time that meets the health-related necessities of people is the need of the hour. Role of nurses in primary healthcare comprises delivery of services, promotion of health, prevention of diseases, and care of sick across all ages, groups and communities.^[9] The WHO is celebrating 2020 as a year of appreciation for the contribution of nurses and their agenda of incorporating nursing leadership occupies a fundamental point in recognizing nurse practitioners.^[2]

The year 2030 is the target for all participant countries around the world for sustainable development goal achievement, and universal health coverage is one way to achieve these goals.^[7] With the rise in demand for health services, effective utilization of the workforce is vital to ensure high-quality cost-effective health service delivery.^[10] The annual growth rate globally for the nurse practitioner workforce is three to nine times greater compared to physicians, therefore, incorporation of nurse practitioners as the first contact point would stand feasible. The current scenario of nursing in India warrants policy reforms to facilitate nurses as valuable primary care provider. This policy research paper focuses to highlight and build an argument for a policy towards making nurse practitioners the first contact providers.

The untapped potential of nurses and their envisaged roles in Health and Wellness Centres

The National Health Policy, 2017, envisioned strengthening the primary healthcare system through the Health and Wellness Centres establishment.^[9] A key addition to the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana was the incorporation of a mid-level health provider, either a Community Health Officer or an Ayurveda practitioner delivering public health and primary care services.^[7] The agenda behind the introduction of this new cadre is to augment the efficiency of HWCs, expand the choice of services for the community, improve access and enhance coverage

with a proportionate reduction in out-of-pocket expenditure.^[11] Further, improvement in clinical management, care coordination, dispensing of medications, developing public health activities, and reducing fragmentation of care and workload at secondary and tertiary care activities, also form the rationale behind the new strategic implementations.

Subsequently, similar recent initiatives include the National Medical Commission Bill approved by the Union Cabinet wherein mid-level practitioners will obtain limited license to practice specified medicines in primary and preventive healthcare settings and other settings under the guidance of a medical doctor. This amendment would pave way for a new era of nurse practitioners for the Indian healthcare system.^[12] In the year 2016, Shri J P Nadda, Union Minister of Health and Family Welfare, launched two innovative Nurse Practitioner Courses both in critical care and primary healthcare. These courses aim to enhance their responsibility and accountability for the provision of efficient care.^[13]

Global evidences on role of nurse practitioners

Expertise-mix transformations are receiving widespread interest in the health workforce to fill the gap concerning provider shortages, improvement in healthcare access and cost reduction.^[14] Evidence from systematic reviews estimates the clinical effectiveness and quality of care to be increased among nurses working in advanced roles in comparison to the physicians. Developed countries have consistently shown that task shifting by involving nurse practitioners in primary healthcare delivery has greater efficiency and positive health outcomes.^[14] Systematic reviews from the US, Russia and South Africa also report major findings in terms of higher patient satisfaction with nurse-led care compared to doctors, reduction in hospital admissions, and reduction in mortality.^[14] Likewise, other developed countries also report no significant differences in referrals, pharmaceutical prescriptions, tests and investigations ordered as compared to physician-led care. Nurse-led care lead to better secondary prevention outcomes among patients and a study conducted in the Netherlands and UK also showcase evidence of lower health service cost in comparison to the physician model.^[14]

Task shifting and task supplementation are two significant approaches in terms of nurse practitioner role advancement.^[15] Nurses deliver more information and counseling to patients than physicians, spend more time, and also provide holistic care leading to higher patient satisfaction.^[14,16] They also accomplished record management, identification of physical abnormalities, advised on self-care, interpreted X-rays accurately, and scored better on communication than doctors. Patients have reported higher satisfaction with care from a nurse practitioner; provide longer consultations and carry out more investigations than from a doctor, with no difference in health outcomes.^[16]

Consequently, nurses in advanced practice can enhance access to healthcare by strengthening the health workforce cadre. Synthesis of available evidence from countries like Australia,

Canada, New Zealand, UK, and the US report nurses to generate clinical outcomes as good as physicians in the emergency and critical settings as they did not have to be on rotation coverage similar to the physicians.^[17] Effective care management is a forte of nursing professionals that requires both interpersonal communication and cooperation.^[18] They tend to institute more subjective and tangible interactions than do general practitioners, thus, performing better care management^[19] Taking advantage of nurses in advanced healthcare settings proves to be beneficial for improving patient outcomes and improving working environment, and thereby, providing definitive roads for the career progression.^[2]

Training needs for nurse practitioners

The necessity for continuing education has been progressively acknowledged in nursing literature and the training needs have to be identified accurately.^[20] Systematic graded training and certification would help nurse practitioners equip themselves with knowledge and also enhance their skills. The primary healthcare team at the HWC would serve as the fulcrum for planning, delivery and monitoring of services. Under the newly envisaged Ayushman Bharat Program, the mid-level health providers would be trained in either Certificate Programme in Community health, managed and certified by IGNOU/ state universities, or have a B.Sc. degree in Community Health. Besides, an integrated course, retaining the central proficiencies would also be explored, combining theoretical and pragmatic constituents. This will further facilitate the candidates to use the learning-by-doing approach.^[11]

To improve the quality of training, states shall also institutionalize the District Level Committee of Observers to monitor the ongoing training. These committees will have representation from Service providers of NGO-run hospitals/Nurse Training Colleges/Faculty of Multi Purpose Worker Training Centres/ Medical Colleges and Counsellors from program study centres. A strong mentorship program needs to be created including programs like ECHO (Extension for Community Healthcare Outcomes) for supporting the Mid Level Health Workers through handholding, troubleshooting, problem-solving, building technical competencies and supporting motivation. In primary health centres that are not envisioned to arrange for inpatient care, the prevailing nurses would receive integrated training in certificate courses for primary care.^[11]

Streamlining nursing education by upgrading the basic standard qualification for practice, enriching the curriculum, strengthening the teaching faculty, developing a knowledge base through evidence-based research will further strengthen the services to be delivered. In-service training needs to be employed in varied settings and regular continuing medical education programs need to be conducted to enhance knowledge and skills. Innovative training methods including multimedia approach, face-to-face counseling sessions, hands-on training, virtual learning and distance learning could be implemented for effective in-service training.^[21,22]

Enabling nurse practitioners as essential health providers

As per reports, approximately 27% of approved positions of doctors in Primary Health Centres and more than half of the sanctioned posts of specialists in Community Health Centres remain vacant.^[23] The National Survey of Nurse Practitioners conducted by the Health Resources and Services Administration (HRSA), listed out the array of the roles nurse practitioners could be instrumental in. They can act as essential healthcare providers in terms of counseling and educating patients and families, conducting physical examinations, obtaining medical histories, prescribing drugs, performing and interpreting lab tests, X-rays, ECGs, diagnosing, treating, and managing illnesses. These well-trained and qualified cadres could also be involved in the provision of preventive care including screening and immunizations, care coordination, making referrals, and also performing simple procedures.^[22]

Nurse practitioners acquire advanced level knowledge and expertise in nursing and apply it in diagnosing and providing therapeutic care to patients. They are competent enough to make admission and discharge from a healthcare facility and also contribute to research in the profession which helps in elevating the quality of care.^[22] They can take a public health leadership role in the public healthcare sector by taking lessons from developed countries that have successfully implemented nurse practitioners in advanced care.^[13] The acknowledgment of nurses in terms of their requisite capacity in healthcare delivery is vital.^[24]

Nurse practitioners in home-based care

Nurse practitioners have been emerging as a key resource in home-based care and have become the most recurrent benefactors of residential medical care.^[25] They can provide fast assessment and treatment when a patient has a change of condition on-site and can also treat the patient as needed.^[26] Studies establish that nurse practitioners offer a sustainable solution by providing cost-effective quality primary care, especially in underserved, vulnerable populations in a home-based care setting.^[27] During the current pandemic, where the hospitals are overburdened with patients and also with an inadequate health workforce, nurse practitioners can be pivotal for treating elderly patients and those with terminal and chronic illnesses in a home-based setting.^[28] To sustain patient well-being, decrease the risk for burnout and staff turnover as well as contribute to the sustainable development of healthcare delivery, the role of nurse practitioners is inevitable.^[29] Their understanding and proficiency have the prospective to deliver effective healthcare services.^[30]

Nurse practitioners as enablers of a functional referral system

The referral system plays a crucial part in the management of diseases in any healthcare system. The chief objective of this referral system is to make cost-effective utilization of healthcare and also to ensure better quality care. In a country like India with

a huge disparity in healthcare expenditure, the referral system protocols are not followed.^[31]

The Indian healthcare system is overburdened by population, lack of adequate workforce, and an ineffective referral system. This puts forth a huge toll on higher-level healthcare settings.^[31] Studies report that more than 50% of morbidity could have been treated at the PHC level, thereby, consuming resources that could have been effectively utilized for serious illnesses.^[32] A study by Kyusuk Chung *et al.*^[33] reported that primary care physicians with nurse practitioners were more likely to treat patients with multifaceted conditions without referring them to specialists; these findings put forth the significant contributions of nurse practitioners.

Plan for evaluating effectiveness

Before implementing the advanced role of nurse practitioners in the healthcare system or escalating an existing role, it is important to consider evaluation from the beginning. Identifying the essential service needs, collecting baseline data, and defining key roles would pave way for well-defined effectiveness evaluation.^[34] A unified data management system that collects information on nursing-sensitive indicators, structures, and procedures needs to be employed for robust monitoring and evaluation. The usage of quality measures specific to the setting can help showcase the ability of nurse practitioners in improving quality, safety and costs in healthcare.^[35] Even though nurse practitioners contribute to the primary health outcomes, they need to be recognized in the healthcare setting.

The Nursing Role Effectiveness Model (NREM) was developed to assess the contribution of nursing to quality care and outcomes.^[36] With the successful implementation of NREM in acute care settings, the model will be beneficial for assessing similar relationships in primary healthcare and also has the potential to identify nursing-specific outcomes, which can be collected and contributed to national health database initiative making the nursing profession more accountable.^[36] To further enhance the process, periodic evaluation must be performed by organizing practical sessions and structured exams. Licensure should be renewed through well-defined credit systems and the curriculum also needs to be updated at par with the international standards.^[22]

Career progression

Nurse practitioners deliver services at par with the physicians and tend to become more productive and experienced each year.^[22] Considering their vital role in the HWCs and as the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana advances, the mid-level health practitioners foresee an ambitious future trajectory and avenues for career progression. All the authoritative administrative positions in the healthcare delivery system at the Central and State levels are occupied by clinicians despite the availability of nursing administrators.^[24] Their integrated role in public health functions at a district and block level would be explored in the new ambitious program and their appropriateness in different settings would also be taken into account.^[11]

The GOI has also taken the first step on approving the policy for announcing a professional cadre of Nurse Practitioners in Midwifery (NPMs), who will improve the quality of maternity care. They will be selected from the prevailing pool of trained nurse-midwives and provide additional specialized clinical training and examination to achieve an NPM license regulated by the Indian Nursing Council (INC).^[37] Their job profile needs to be transformed from a sheer bedside care provider to highly trained and capable decision-makers.^[22] They should not rely only on the diagnostic and treatment sectors but should create unified healthcare decisions, as well as holistic care to the patients. The autonomy of work needs to be achieved to augment their quality of work. Nurse practitioners hold a well-regarded profile and have the advantage of detouring the broad and expensive restorative school training and internship as required for the physicians. These enable them to launch their career in a shorter time range.^[22] After the endorsement of National Health Policy 2015; the INC has put forward an agenda to initiate a Nurse Practitioner program in Critical Care. The prospects of a nurse practitioner include self-governing nurse practitioner-run clinics; governmental standards that agree to take nurse practitioners as primary care providers and their involvement in outreach, clinics, and industries to provide emergency care and also to treat a variety of episodic diseases. A complete quality healthcare will always be provided by a team of qualified professionals and not just by physicians, a fact to be remembered.^[22,24]

Conclusion

Amidst a significant shortage in the provision of effective primary care, jeopardizing millions of Indians' access to basic healthcare services, especially the poorest, it is very evident that nurse practitioners are the need of the hour in India. Their role in advanced practice could allay a significant portion of the shortage in the health workforce ratio, thereby, transforming their role as first contact providers. Taking lessons from well-established systems and evidences on the panoramic impacts of nurse practitioners in terms of cost-effectiveness, accessibility, holistic, and patient-centered approach; their role is very significant for a country like India. Capitalizing on nurses in advanced practice to increasing patient's access to healthcare services will be appealing and beneficial. India is currently at a stage wherein it will need to embark on several reform processes, primarily in the provision of healthcare delivery, post-pandemic scenarios. Health systems are currently hugely burdened and will require the involvement of nurse practitioners as the first point-of-care delivery personnel. This will require nurses to play an active role at the primary, secondary and tertiary levels of care within health systems.

They will also play an active role in the Ayushman Bharat program of the GOI with delineated roles at the HWCs while playing a pivotal role in the hospital-level insurance model of care. Updated training, acknowledgment of nurses, reduced referrals, and home care nursing are a few milestones for expanding the role of nurse practitioners in the healthcare delivery system across the country. The role of nurses in public health administration is also going

to take a major role, while the National Health Policy unfolds its features over time. The health sector will eventually experience clear-cut leadership emerging within the nursing personnel as their role in practicing gets deepened and strengthened. This policy paper recommends reskilling and prioritization of nurse practitioners in the Indian healthcare system and the healthcare community needs to be open to and decide to take nurse-led models of the delivery of care for the overall advancement of health indicators across the nation.

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There are no conflicts of interest.

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