

Executive Summary

Redefining India's health service delivery paradigm: From 'paramedics' to 'allied health professionals'

In the past decade, a fundamental shift has occurred in healthcare delivery, largely due to advances in science and technology. There is now more recognition, than at any time in the past, that health service delivery is no longer just a prerogative of physicians and nurses. It is now a team effort, drawing upon the expertise of both clinicians and non-clinicians. These professionals or health-service providers have been historically identified as 'paramedical staff' or paraprofessionals or health technicians.

Better appreciation and utilization of the whole range of skills possessed by these paraprofessionals-- collectively termed as Allied Health Professionals (AHPs)—is the key to health-sector reforms in India, especially given the shortage of doctors and nurses in semi-urban and rural areas of the country.

As the Indian government sets about reforming the public health sector and making universal health coverage a reality in India, the availability of qualified human resources for health has emerged as a significant challenge facing the healthcare delivery mechanism. There is an urgent need for the Indian government to plug policy gaps and ensure generation of adequate and effective human resources for health to provide quality care at primary, secondary and tertiary levels of health delivery in the country. There is a huge

dearth of trained technologists/technicians in the system; advancement in technology in recent times demands trained individuals who can provide reliable results in conjunction with patient safety.

Globally, the incidence of non-communicable diseases (NCD) is steadily increasing and in India, the heavy disease burden and the lack of access to healthcare will see the public health system face an NCD epidemic in the coming years. Public health facilities in India are unprepared as there are not enough specialists – clinicians and non-clinicians – to serve the entire country. The government is planning huge allocations for NCDs and for upgrading primary health centres with a focus on training personnel at this level to deal with future epidemics such as NCDs. Technicians, technologists and therapists will thus be required in huge numbers in the coming years.

A major problem is an overall human resource shortage, which leaves gaps within the existing infrastructure and services, both within and outside the public sector. The types of human resource crunch faced across the country vary due to factors like acute shortages, imbalances arising out of geographical distribution and low productivity amongst hired staff. Acute shortage is commonly aggravated by a skewed distribution within the country and movement of health workers from rural to urban areas, from public to private (for-profit and not-for-

profit), or to jobs outside the health sector. Contributing factors include insufficient investment in pre-service training, migration, work overload, inadequate growth opportunities and work environment issues (infrastructure, technical and safety, amongst others).

India, currently, has the world's greatest burden of maternal, newborn and child deaths. In 2008 alone, India lost 68,000 mothers and 1.8 million children under the age of five to maternal and child morbidity.⁽³⁾ Thus, in addition to the tribal population, mothers, infants and children constitute the majority of the underserved. There are other vulnerable populations in India as well, such as the elderly and the disabled who do not have ready access to healthcare services.

According to the most recent figures reported in the World Health Statistics 2011, the density of doctors in India is 6 for a population of 10,000, while that of nurses and midwives is 13 per 10,000 population. India has a doctor to population ratio of 0.5: 1000 in comparison to 0.3 in Thailand, 0.4 in Sri Lanka, 1.6 in China, 5.4 in the UK, and 5.5 in the United States of America. A recent study undertaken by the Public Health Foundation of India (PHFI) for the Ministry of Health and Family Welfare (MoHFW) has indicated a supply-demand gap of about 65 lakh allied health professionals, when demand was calculated using basic international norms.

These Human Resources for Health (HRH) shortfalls have resulted in the uneven distribution of all cadres of health workers,

medical and nursing colleges, nursing and ANM (Auxiliary Nurse and Midwife) schools, and allied health institutions across the states with wide disparity in the quality of education. The uneven distribution of professional colleges and schools has led to a severe health system imbalance across the states, both in the production capacity and in the quality of education and training, leading to poor health outcomes.

The public health system in India suffers from weak stewardship and oversight, HR shortages, weak HR management and ineffective service delivery. Doctors, nurses and allied health providers are in short supply for the populations they serve. The ratio is often skewed, resulting in fewer health providers in rural areas (especially in primary health centre settings), inefficient secondary services in smaller towns and a high concentration of tertiary health care services in urban cities. The skill mix, autonomy and funding of the medical bureaucracy at the district level need to be augmented, and initiatives for health need to be coordinated with efforts to address social determinants of health.

Many committees and experts have highlighted the importance of paramedics (allied health) in healthcare delivery in the past,¹ including the National Knowledge Commission, which placed more importance in producing more AHPs over doctors, despite the acknowledged scarcity of the latter:

“the opinion of 72 experts in the country over 40 years’ there is no need to increase the number of doctors but instead improve the

quality and orientation of service provision towards better meeting the health needs of the people' and that, 'there is a dire need to focus on increasing the quantum and quality of human resources for nursing and paramedical/ allied health services.'

Globally, there is mounting evidence that healthcare as a composite whole can only be improved if human resources for nursing and allied health services are developed, nurtured and enhanced in a systematic and planned manner. In India, there is a significant lack of standardization across medical education in general and in teaching advances in skills and technologies that emerged in the past decade, in particular.

In the case of AHPs, since the nomenclature for different categories of health professionals varies in different countries, there is a considerable lack of clarity as to what constitutes a paramedical, paraprofessional or allied health service. For example, the term used for a person engaged in diagnosis and consultation regarding management and intervention of speech disorders differs in different countries. Australia uses the term 'speech pathologist' whereas the United States calls him or her a 'speech language pathologist' and in the United Kingdom, he or she is known simply as a 'speech and language therapist'.

AHPs are woven into the fabric of public health in India. They are in the vanguard of creating a service based on people 'being healthy' rather than a service based on 'fixing ill-health'. There is ample international evidence suggesting that empowered AHPs can be the leaders of change, playing critical

role in improving the reach of health services in underserved areas.

With a vast variety of allied health professions already present and with newer categories coming on board each day, India too, faces a similar challenge as different states have been using different definitions to describe this ever-growing field.

The breadth and scope of the allied health practice encompasses the following:

- The age span of human development from neonate to old age;
- Working with individuals with complex and challenging problems resulting from multi-system illnesses;
- Working towards health promotion and injury prevention, and the assessment, management and evaluation of interventions;
- Working in a broad range of settings from a patient's home to acute, primary and critical care settings; and
- Having an understanding of the healthcare issues associated with diverse cultures within society.

The importance of these professionals has been explained with an example by K.S. Reddy, Dean of the Jawaharlal Institute of Post-Graduate Medical Education and Research (JIPMER), Puducherry. He noted that, 'during the process of cardiac surgery, the functions of the heart are taken over by a machine. The person who handles this machine literally holds the life of the person. Any mistake can be life-threatening. This is why we now insist on trained staff to handle such machines.'

With advancements in technology over the past few decades, the quality of medical care has vastly improved across the world. This has thrown up fresh challenges for the medical field. Today, there is an urgent need for competent people who can handle highly sophisticated medical machinery with competence. In fact, diagnosis has become so dependent on technology that the role of allied health staff has become vital in delivering successful treatment.

There appears to be an increasing “health–illness–medicine” complex in the society wherein people seek medical solutions to various problems which are not medical in nature and consider them as illnesses.

Functions that were once the domain of parents, clergy, teachers, judges and social workers are now seen as medical functions.

As American physician and educator, Leon Kass, points out, “...all kinds of problems now roll to the doctor’s door, from sagging anatomies to suicides, from unwanted childlessness to unwanted pregnancy, from marital difficulties to learning difficulties, from genetic counselling to drug addiction, from laziness to crime...?”

Several factors have contributed to the uneven power balance between doctors and AHPs. Medical dominance coupled with what is called “Medicalisation” is considered to be a major reason.

Medicalisation, has not only broadened the scope of medicine but also raised its status. It reinforces the image of medical practitioners as being omniscient and omnipotent and impels societies to allocate continually

growing proportions of gross domestic product to their preferred healthcare services.

Closely linked with medicalisation is medical dominance; they reinforce each other.

According to American academician and sociologist, Professor Eliot Freidson, medical dominance has at least three components:

- Trust, faith and confidence by the public in the medical profession;
- A position of authority based on exclusive command over a body of specialised knowledge; and
- Dominance in the division of labour, that is, control over other health professions.

To these may be added the privilege of self-regulation, whereby the profession regulates the behaviour of its members and monopolises decision-making and the use of resources.

Medical dominance of healthcare has traditionally been the organising principle in the healthcare delivery system. Medical power is manifested through the professional autonomy of doctors, their pivotal role in the economics of the health services, their dominance over allied health occupational groups, administrative influence and the collective influence of medical associations. The clear hierarchy of occupations established through the growth of hospital medicine is attributed as a major contributor to the dominance of medicine in the division of labour.

Thus, high medical domination has been instrumental in lowering the status of AHPs

in the eyes of people and is one of the reasons for the low morale and self-esteem among AHPs which needs to be addressed immediately if they were to contribute meaningfully to the well-being of people.

In many countries, notably the United States, the United Kingdom, Canada and Australia, policy rationalisations by their governments have facilitated the release of AHPs from medical dominance. The Pew Health Professions Commission report (1995), titled *‘Critical Challenges: Revitalizing the Health Professions for the Twenty-first Century’* observed: ‘the needs of the integrated systems will not be met simply by hiring [new] public health professionals [but by] substantial and ongoing retraining of nurses, physicians, allied health personnel, and managers . . . [who are] required to apply the skills in new contexts.’ The report calls for creative and risk-accepting leadership in providing training and education, a ‘renaissance’ in educating public health professionals. Training and retraining for public health should be based on competencies, that is, the focus should be on what people should be able to do, rather than what they should know.

Professor Donald M. Berwick, President and Chief Executive Officer, Institute for Health Care Improvement, and Clinical Professor of Paediatrics and Health Care Policy, Harvard Medical School in the Foreword of the book *Managing and Leading in the Allied Health Professions*, makes a strong case for de-medicalisation and eliminating medical dominance when he raises and answers several pertinent questions as follows.

- ‘Allied to what?’: ‘...the continual

pursuit to relieve suffering for those we serve.’

- ‘In what way “professional”?’: ‘In the willingness to subordinate self-interest and prior assumptions to the pursuit of continual improvement in our effectiveness as a team, and to redraw the boundaries in the status quo.’
- ‘Why “health” and not “healthcare”?’: ‘To broaden the base of our capacity to serve.’
- ‘Are physicians, too, “allied health professionals”?’: ‘Of course. Why would you even bother to ask? We are all on the same team.’

Effective delivery of healthcare services depends largely on the nature of education, training and appropriate orientation towards community health of all categories of medical and health personnel, and their capacity to function as an integrated team. For instance in the UK, more than 84,000 AHPs, with a range of skills and expertise, play key roles within the National Health Service, working autonomously, in multi-professional teams in various settings. Though some of them may have a PhD and use the title ‘Dr’ (for example, psychologists), they are not medically qualified. All of them are first-contact practitioners and work across a wide range of locations and sectors within acute, primary and community care. Australia’s health system is managed not just by their doctors and nurses, but also by the 90,000 university-trained, autonomous AHPs vital to the system.

The recent modernisation of healthcare has initiated a team-based healthcare delivery

model (Baker, et. al., 2006; Wagner, 2004). Medical teams are usually ‘action teams’ due to their dynamic work conditions, wherein teamwork and collaboration are the pre-requisites for optimum results. The process of teamwork is inherently interdisciplinary, requiring a division of labour among the medical, nursing and allied health fraternity. Poor teamwork skills have been found to contribute to negative patient-care incidents.

Not only is this team approach important for safe patient outcomes, it is also critical for efficient, cost-effective operations. Let’s take a case in point at the William Harvey Hospital, East Kent Hospitals of the NHS Trust, where an accident and emergency assessment team is made up of an occupational therapist, a physiotherapist and a care manager. The team provides a full functional and social care assessment for frail elderly patients who arrive at the Accident and Emergency department in Ashford. The team’s immediate care package often allows patients to return home immediately to more appropriate care, with the support of an occupational therapist. The impact of the team’s work has been to free up 12 extra acute beds – the equivalent of 4,500 acute bed-days per year. The service is also far quicker; the team can often see patients within two hours, whereas earlier it often took more than two days.

‘The team believes that ‘patients have benefited because the decision-making is better and faster. We can now see the whole picture; our care is much more holistic. As a team we have the most appropriate skills to make the best decisions on whether a patient can go home safely or should be admitted to hospital.’

Currently, due to the absence of a central regulatory authority for allied health professionals and courses in India, they are divided into smaller groups, appearing to be ‘regulated’ by independent professional bodies at national and state levels. For instance, the rules or norms of professional practice vary from extremely professional and well-organised groups such as physiotherapists, optometrists and speech and audiology professionals to diffused groups such as operating room technicians and radiation therapists.

For the allied health cadre to grow in the healthcare system, these professional associations need to be bound by a common authority that will help the AHPs to flourish as a family rather than different classes within the community of the healthcare system. The role of regulating both the profession and professionals cannot be an optional path but rather a condition for participation in the profession.

It is therefore necessary to regulate these professions by setting up councils on the lines of the councils for pharmacy, nursing and other professions.

In 2007, the government of India proposed setting up separate councils for medical laboratory technicians, radiology technicians, and physiotherapists/occupational therapists. These councils would be responsible, *inter alia*, for the maintenance of uniform standards of education in the respective disciplines and the registration of qualified personnel to practice the profession.

A representative of the MoHFW apprised the

Parliamentary Standing Committee on Health and Family Welfare about the circumstances that necessitated the firming up of a Bill to set up the new council. He pointed out the following problem areas, which require regulation at the earliest:

- Para-medical professions are not regulated;
- Entry-level qualifications are different at different levels;
- Level of knowledge and skills is not uniform, since the period of training differs from place to place and has no uniformity;
- Course curricula are not uniform;
- Fee structure and facilities in these institutions are not regulated; and
- Ethical standards are not uniform and are not being enforced.

The lack of planned courses and institutions, non-uniform nomenclature for the existing courses, diverse standards of practice and lack of qualified faculty pose a threat to the quality of education and skills of the AHP in India. Although there are professional associations for certain AHPs, for example, the Indian Optometric Association and the Indian Occupational Therapy Association, the fruitful engagement of these associations remains to be explored. Lack of definitive and uniform criteria for faculty regarding essential qualifications for their classification, nomenclature, entry (direct versus lateral) and the absence of faculty development programmes perpetuate the challenges pertaining to the quantity and quality of AHPs.

The availability of educational resources such as libraries, simulation centres and modern information technology tools at various centres is also variable. While established centres managed by large medical institutions offer a reasonable level of facilities, the educational resources are abysmal in stand-alone centres or smaller set-ups.

The Confederation of Indian Industry (CII) believes that ‘private partners can play a key role in capacity building and training through PPP modes to better utilise the infrastructure of government hospitals. The government can encourage private sector interest through initiatives such as provision of tax incentives, and permits to corporates to undertake healthcare for optimised use of resources. For example, a medical college with a 500-bed capacity could produce 150 students annually, instead of the 100 as per the current MCI norms.’ A CII policy paper points out that ‘capacity building and training initiatives by the government need sharpened focus not only for a quantitative increase in trained manpower but also for improving the effectiveness of existing methods in training’.

Extensive research by the PHFI team during the course of 12 months indicates the need for an overarching regulatory body for AHPs, excluding doctors, nurses, dentists and pharmacists. The PHFI team has recommended the establishment of national and regional institutes for allied health sciences, dedicated to nurturing and retaining talent in the allied health space. In the absence of a Council, this could be an interim multi-stakeholder body comprised of experts from different allied health professions, administrative leadership and even patients.

This body would be responsible for ensuring standardisation of education and putting in place quality control mechanisms for educational institutions, teaching methods, clinical protocols, workforce management and any other related issues.

Standards and acceptable terminologies for the various professionals encompassing allied health starting must be established; with the group being referred to as Allied Health Professionals or AHPs in lieu of 'paramedics'. A definition put forth by the PHFI team is thus: "Allied health professionals include individuals involved with the delivery of health or related services, with expertise in therapeutic, diagnostic, curative, preventive and rehabilitative interventions. They work in interdisciplinary health teams including physicians, nurses and public health officials to promote, protect, treat and/or manage a person's physical, mental, social, emotional and environmental health and holistic well-being"

In addition, it is critical to undertake a complete reorganisation of the various categories of AHPs based on educational levels and specialty qualifications to match international nomenclature and highlight their importance as vital team players in the healthcare delivery system. Standardised nomenclature is also recommended for AHPs as part of their career progression, so that promotional levels and associated pay grades may be normalised accordingly.

Courses should follow international standards so that they are widely accepted and receive worldwide recognition. Students passing out from colleges should be in great demand and

get good jobs. The educational methods should lead to a product that is worthy of recruitment; therefore, it is very important to keep abreast of knowledge and maintain good liaison with the industry. Course delivery, practical training and assessments should be standardised. Committees should be formed to look into all aspects and standardisation. Standardisation should incorporate the demonstration of learning as well.

Each institution conducting courses on allied health should analyse and keep a record of the student base. This should consist of key statistics and qualitative information such as demographics and the type of applicants for each course, the number that are selected, enrolled and those that ultimately graduate, and the number of drop-outs each year by specialty. This will help generate a better picture of the supply demand issues for the future. Strategies should be developed to create flexibility in course delivery through alternative delivery modes, multiple locations and timings. There is also a need to look at options for fast education especially for persons with experience but without adequate qualifications. Additionally, short term educational programmes need to be put in place for those who have a basic education such as a B.Sc. degree in any science subject and want to pursue a career in allied health sciences.

For each course, centres of excellence and globally recognised institutions should be identified along with hospitals with known good practices, which may become possible training sites. Those institutions willing to conduct courses or to become training sites should be incentivised by the government. It

is important to motivate both government and private institutions to conduct courses at various levels (diploma to post-graduate and doctoral) depending on their capacities, thus increasing the number of courses in various streams and the students for each course. However, if this is not possible, then they should be motivated to at least become clinical training sites rendering quality education to students.

All bottlenecks that may be related to regulatory or financial issues that prevent institutions and hospitals from serving as clinical sites for training should be identified and efforts should be made to minimise them. Solutions should be found for interactions between educationists and potential employers to assess the availability of clinical sites.

Quality improvement can be implemented by establishing partnerships with international institutions of excellence and PPPs to bring out the best in the profession. The standards developed at the centre and state levels should be in complete harmony with each other. Emphasis on research activities needs to be enhanced and the funding provided at regular intervals either by the centre, state or foreign direct investment, etc., which can be used for the development of the research centres.

Along with the applicability of the desired means to augment capacity, it is also essential to focus on quality education. The Government will need to develop a number of options to encourage flexibility in the allied health sciences' education without compromising on its quality. Improvement in infrastructure and availability of faculty is a challenge that needs to be addressed, and the

Government should provide relevant support.

There is a need to define a pathway of an upgraded lateral entry within the allied health educational universe, such as for a diploma holder to enter a degree programme. All avenues for each level of transition should be defined. With respect to public awareness, candidates should be well-versed with the difference in opting for any degree or diploma programme.

Robust Public Private Partnership (PPP) models need to be established for the training of faculty and ensuring that the required numbers of students graduate each year. Some incentive or financial support should be provided to start these courses. Strengthening community colleges in terms of proper committees and faculty, and following standards is essential. It is also necessary that recognition by the Union Ministry of Human Resources Development and the Directorate of Employment as well as training by the respective State governments be carried out so that the students from these colleges get national and regional acceptance.

The Path Forward

The national initiative for allied health sciences aims to go beyond prescribing basic project development and management norms. It hopes to convert academic arguments for strengthening allied health sciences into politically articulate policies that help in capacity building and value realization of allied health professionals in the healthcare delivery system.

Nine premier institutions (eight RIAHS and one NIAHS) will be the lead technical resources for education and training of students. Moreover, to provide education on such a scale assumed extensive collaboration between various stakeholders at the Centre, state and intra-state levels. The initiative may be introduced in a phased manner. Activities will include setting up National and Regional Institutes of Allied Health Sciences (NIAHS and RIAHS), establishing interim regulatory mechanisms in order to standardize curricula, training programmes and develop faculty across India in the allied health streams, while engaging a network of institutions, as indicated in Chapter 3. Thus, the implementation arrangements would also require the establishment of management structures at the national, state and institutional levels.

There is also a need to form a task force for curriculum development cells in existing universities, which will be affiliated with project institutions and spread best practices to non-project institutions. There is a need to establish industry–institute partnership promotion cells, along with sharing of best academic, administrative and governance practices through workshops and specific groups.

The NBAHS will be responsible for overall monitoring of allied health education and practice in the country, and its coordination with other Ministries/ Departments and the All India Council for Technical Education (AICTE). The Board will be supported by two committees under it; the National Allied Health Education Committee (NAHEC) and National Allied Health Evaluation and

Assessment Committee (NAHEAC) to ensure that standard and acceptable terminologies are used for the various professionals in allied health.

To conclude, Allied Health Professionals (AHPs) constitute a vital part of the health system delivery, both nationally and internationally. In the Indian context, however, their significance and role has been marginalised due to the prevalent culture of medical dominance and the lack of a statutory body to give prominence to their contributions and concerns.

Allied health workers are an untapped treasure, critical to fixing the gaping holes in India's health workforce, particularly the severe shortage of physicians and specialists. It would be a grave mistake to not utilise the capacities of this resource at a time when the government is bringing in critical reforms in public health and aiming to improve access to health by focussing on preventive, promotive, curative and rehabilitative needs of the population.

While the government is considering strategies to best utilize AHPs, the private sector has realised their potential and established several institutions and mechanisms to integrate these professions and professionals into the organised healthcare sector. However, the growing demand has resulted in the mushrooming of big and small institutions claiming to provide allied health education.

As the Ministry of Health and Family Welfare in India gets ready to undertake a facelift for the entire allied health workforce by

establishing national and regional institutes of excellence, the time is opportune for the government to study this provider group in detail; review existing inputs, processes and outputs; standardise institutions, educational

tools and methods; revisit career paths and progression; and re-introduce these professionals into the public system to reap much-awaited rewards in the form of improved health outcomes for the population.