



**Formalizing
Allied Healthcare
Workforce In India**

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Current Context and Starting Point

Health care delivery is no longer just a purview of doctors and nurses. A multi-specialty or a single specialty hospital, nursing home, polyclinic or a clinic can deliver quality health care only on the backbone of a variety of health care professionals. These professionals manage a wide variety of roles – from lab technicians to physiotherapists to emergency support personnel. Various technicians working in clinical and non-clinical areas helping doctors and nursing constitute the allied health care workforce. In western countries, the Allied health care professionals (AHPs) play an essential role across the value chain of health care service delivery. In the United States, for example, AHPs comprise 60% of total health care professionals.

The Government of India defines allied healthcare professionals as associates, technicians or technologists trained to perform any technical and practical task in supporting the diagnosis and treatment of illness, disease, injury or impairment, and support implementation of any health care and referral plan, as per the recommendation of a medical, nursing or any other health professional who has the requisite qualifications.

The Government of India (GoI) in 2018 divided health care professionals into 15 categories (Refer to Exhibit 1). These 15 categories are further sub-divided into 53 sub-categories (Refer to Appendix 1 and 2).



Exhibit 1: Categories of Allied health professionals recognized by GoI

Given the growing importance of allied healthcare workforce in overall healthcare delivery, India needs to review and drive transformation in this sector holistically. We continue to face a challenge in terms of the quality of AHP.

Expert says that the hospital spends more than 60 days of basic skilling and training of new students before they can be deployed. This basic skilling and training add to the cost of health care delivery. A significant driver for this is the lack of formalization of this workforce in India. Countries like

Thailand, United Kingdom, United States of America and Singapore, have setup central governing bodies to oversee, accredit and license allied health care colleges and professionals. Now the Lok Sabha has passed the National Commission for Allied and Healthcare Professionals Bill, 2020. Once the Bill formalizes, there will be a Central Council for these professions and corresponding State Allied and Healthcare Councils.

The capacity of AHP in India will have to be ramped up. A report commissioned by Ministry of Health and Family Welfare (MOHFW) indicates the demand for AHPs in India is ~4,700,000 (four million, seven hundred thousand) (excluding rehabilitative professionals), while availability is in the range of ~8,00,000-1,100,000.

In this paper, we will deep-dive into both topics (quality of education and capacity constraints) and understand key challenges and drivers for change.

Need for formalization of Allied health care profession

A study of global benchmarks indicates that AHP in countries like United Kingdom, Thailand and Singapore have been in government focus for some years and have been brought under formal government supervision and licensing.

Health and Care Professions Council (HCPC) is a government body in the United Kingdom that regulates accreditation and professional standards. It has standard 4-5 year courses that students must complete in addition to undergo apprenticeships depending on their specialization. Further, all graduates must register with the HCPC to practice in any hospital or laboratory setting. (Refer to Exhibit 2).

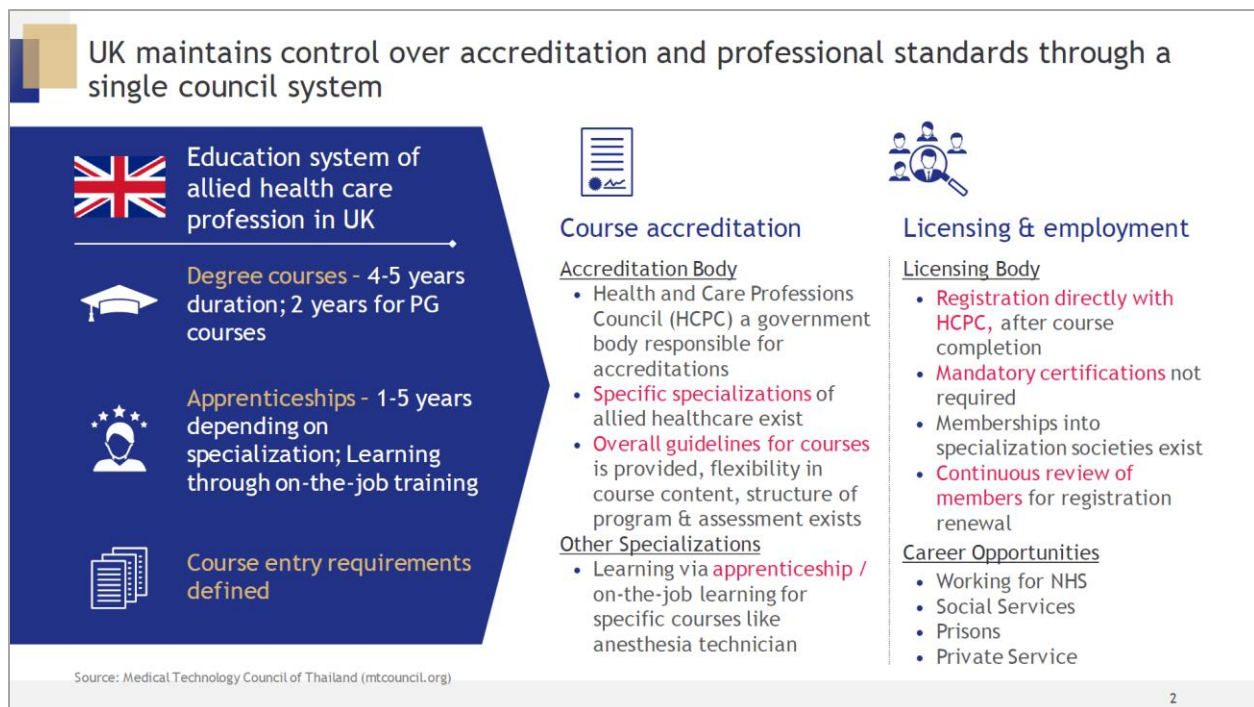


Exhibit 2: Council system in the UK

Similarly, Thailand has set up a Medical Technology Council, which serves as an accreditation body for colleges. It is also responsible for standardizing and updating course content every five years. Professionals must register with the Medical Technology Council of Thailand to work in Thailand (Refer to Exhibit 3).

Thailand has a single council system for educational and professional standards

Education system of allied health care profession in Thailand

- Degree courses - 4 years duration; 2 years for PG courses
- Doctorate courses - 2-4 years depending on depending on research
- Course entry requirements defined

Course accreditation

Accreditation Body

- Medical Technology Council of Thailand responsible for accreditation of all colleges
- Colleges have **standardized** government defined **course content** and program structure across all colleges
- Course curriculum is **revised** every 5 years
- Accreditations** of colleges is **reviewed** every 5 years

Licensing & employment

Licensing Body

- Professionals register with Medical Technology Council**
- Most associations related to mainstream branches such as endocrinology, gynecology, pediatrics etc.

Attractive career opportunities

- Public health systems
- Private Sector
- Research

Source: Medical Technology Council of Thailand (mtcouncil.org)

Exhibit 3: Council system in Thailand

Singapore had brought the profession under regulation through the Allied Health Professions Act, 2011, which created the Allied Health Professions Council (AHPC) in Singapore. The Allied Health Professions Council (AHPC) is a professional board under the Ministry of Health which governs and regulates the professional conduct and ethics of registered AHP under the Act. The AHPC's functions include the registration and issuing of practicing certificates to registered AHP, the setting of standards for training, conduct and practice; as well as to maintain the Register of Allied Health Professionals in Singapore. (Refer to Exhibit 4).

Ministry of health Singapore regulates education and professional conduct and ethics of Allied health care professionals

Education system of allied health care profession in Singapore

- Diploma course specified for certain professionals
- Degree courses - 2 year degree courses defined for certain professionals
- Course entry requirements defined
- Scholarships and award available for merit students

Course accreditation

Accreditation Body

- Allied Health Professions Council (AHPC) is a body under the Ministry of Health
- Accredits programmes for allied health care professionals
- Defines curriculums for allied health care professionals

Licensing & employment

Licensing Body

- Maintains the **Register** of Allied Health care professionals
- Registers and issues **practicing certificates** to registered allied health professionals
- Conducts standardized **trainings**
- Regulates the standards of practice, competence, conduct and ethics of workers

Career Opportunities

- Public health care sector
- Community and social service sector
- Private organizations

Source: Medical Technology Council of Thailand (mtcouncil.org)

Exhibit 4: Council system in Singapore

In India as well, there has been significant progress in formalizing the allied healthcare workforce. Government of India has tabled the National Commission for Allied and Healthcare Professionals Bill, 2020 in Rajya Sabha after it was passed in the Lok Sabha on 24th March 2021. The bill aims to regulate allied healthcare professions as they are a critical part of the medical profession. Individual states such as Andhra Pradesh, Rajasthan and Maharashtra have set up state paramedical councils to regulate AHP and colleges.

The National Initiative for Allied Health Sciences was set up in 2012 to focus on challenges in the sector and define initiatives to address them. A bill to put regulatory structures in place for Allied and Healthcare professionals has been passed by Lok Sabha and is currently due in Rajya Sabha (Refer to Exhibit 5).

The Ministry of Health launched a portal in 2018 to track and record AHP across the country.

India has taken significant steps to formalize Allied Healthcare workforce

Council at State level	Course guidelines & live register at central level	Legalization
<ul style="list-style-type: none"> • State Paramedical Council(s) set up by Andhra Pradesh, Rajasthan and Maharashtra for: <ul style="list-style-type: none"> - Registration of allied healthcare staff - Formalization of education standards, course duration and guidelines - Registration of training institutions and enforcement of education standards 	<ul style="list-style-type: none"> • Formation of National Initiative for Allied Health Sciences (NIAHS) in 2012 • Establishment of Allied Sciences Division in MoHFW • Creation of detailed curriculum guidelines for select courses (dialysis technician, optometry etc.) • Launch of Allied and Healthcare Professionals' database portal in 2018 	<ul style="list-style-type: none"> • National Commission for Allied and Healthcare Professionals Bill, 2020 introduced <ul style="list-style-type: none"> - Provisions for setting up regulatory commissions and councils at central and state levels - Provision to maintain national register of all AHPs - Regulating and guiding the allied health educational institutions • Currently passed by Lok Sabha

Source: MoHFW Website, AAPMB Website, PRS India

Exhibit 5: Steps taken to formalize the Allied health care workforce

Government of India has taken the right steps in the direction of formalization of this workforce and introduction of right quality control by introducing the NCAHP bill. Once the formalizes, there will be a Central Council for these professions and corresponding State Allied and Healthcare Councils. At par with global benchmarks, there will now be a nodal agency responsible for designing coursework, standardizing nomenclature of existing courses, defining essential qualifications for faculty and designing upgrade programs for teachers and students.

Currently there is a wide variation within the courses in terms of curriculum content and types of training offered. The problems are persistent even among prominent government and private colleges.

An analysis covering large government and private colleges showcases the wide variations in the quality of infrastructure, processes and faculty across institutes. Separate infrastructure for allied

health courses – laboratory, medical set up, and exclusive educators are not present in most colleges. Currently, in some colleges, training is done by the respective department medical professionals. For example – the department of cardiology is training AHPs related to cardiology. A live register containing details of allied health care professionals’ AHP students and alumni is also not present, hampering government to track demand-supply gaps accurately. The intake capacity is undefined in some colleges, and a dedicated placement cell is missing in most of them. Simulation-based laboratories and models are an essential component in competency-based training courses. Simulators are missing in most of the colleges. As a result, assessment based on skill is also not done in most colleges (Refer to exhibit 6).

The quality of the faculty also remains a challenge. Minimum qualifications for faculty are not well-defined. Faculty’s assessment of teaching capability is not done, and there is a lack of a programme to develop faculty in most colleges (Refer to exhibit 6).

Situational analysis of allied health education system						
S. No. Components	Central govt. college in Chandigarh	Central govt. college in Delhi	State govt. college in Mumbai	Private college in Delhi	Private college in Delhi	Private college in Udupi
Infrastructure						
Attachment with hospital/skills lab	✓	✓	✓	✓	✓	✓
1 Separate infrastructure for allied health courses	✗	✗	✗	✓	✓	✓
Separate demo lab	✓	✗	✓	✓	✓	✓
Live registers	✗	✗	✗	✗	✗	✗
Process						
Defined admission criteria	✓	✓	✓	✓	–	✓
Defined intake capacity	–	✓	✓	✗	–	✓
2 Use of simulators	✗	✗	✗	✗	–	✓
Standardized training duration (internship)	✓	✓	✓	✓	✓	✓
Skills assessment	–	✗	–	✗	–	✓
Dedicated placement cell	–	–	–	–	–	✗
Faculty						
Defined qualification for faculty	–	✓	✗	✓	–	✓
Dedicated faculty (AH specialists)	✓	✗	✗	✓	✓	✓
3 Common faculty (medical)	✓	✓	✓	✓	–	✓
Assessment of teaching competence	✗	✗	✗	✗	✓	✓
Defined guidelines for promotion (AH faculty)	✗	✗	✓	✗	✗	✓
Faculty development programme	✗	✓	✓	✗	✗	✓

Source: National Initiative for Allied Health Sciences, MoHFW Study (https://niahs2014.weebly.com/uploads/5/8/7/4/5874527/niahs_report_compressed.pdf), BCG Analysis

Exhibit 6: Situational analysis of colleges

Courses are not in the ambit of universities and have evolved as the need increased. The implementation of guidelines created by MoHFW is not uniform. Most of these courses also lack mandatory residency program or internships. Most colleges offering coursework are also not associated with any hospital. It results in students lacking the necessary exposure to practical aspects of their profession. Currently, standards are created, and accreditation is undertaken by individual organizations (e.g. Central Council of Paramedical). This will get centralized once the new bill is passed.

Thus, in summary, formalization of allied healthcare workforce (as planned by the Government of India) through the setup of a central council responsible for setting and monitoring of the right standards for education, licensing and practicing of AHPs in India is of paramount importance.

Allied health care professionals supply and capacity in India

Studies from MOHFW and NSSO indicate that demand for allied health care worker is significantly higher than supply (Refer to Exhibit 7), with the disparity being observed in allied health care workforce availability across states (Refer to Exhibit 8). Assuming the demand for allied health care worker per 1,000 people to be consistent, India would need 60,00,000-70,00,000 AHP by the year 2024.

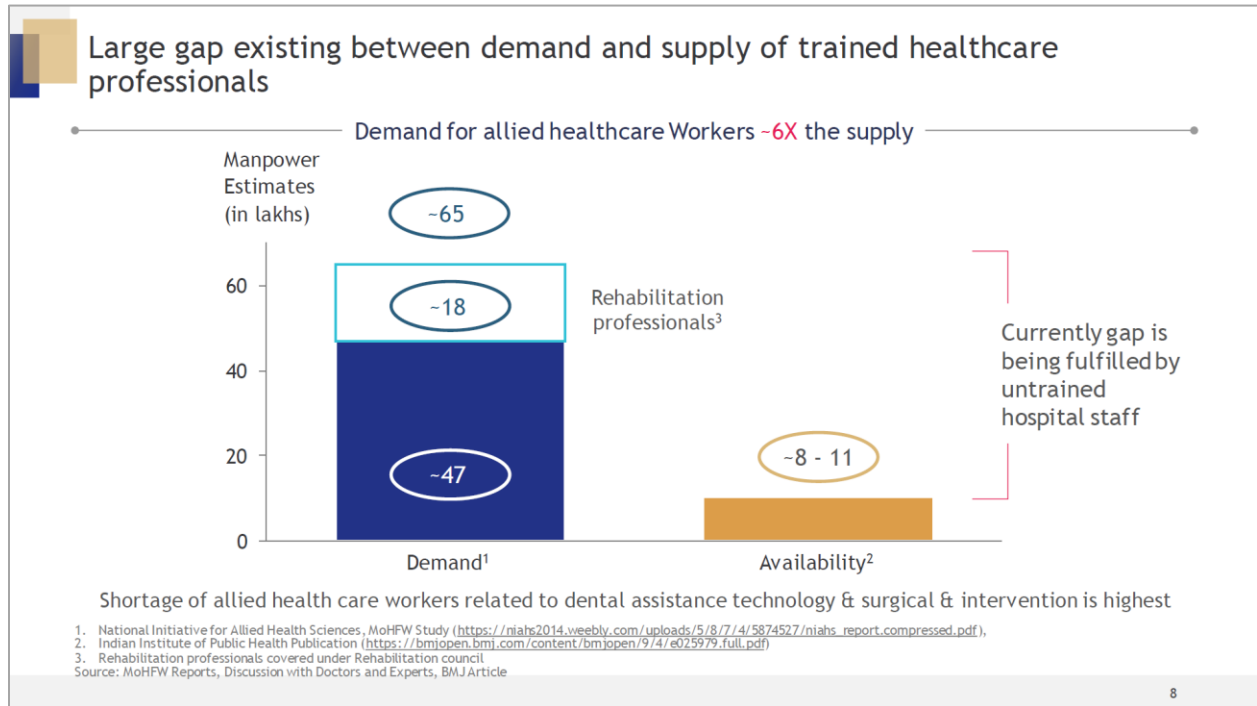


Exhibit 7: Demand supply gap of allied health care professionals

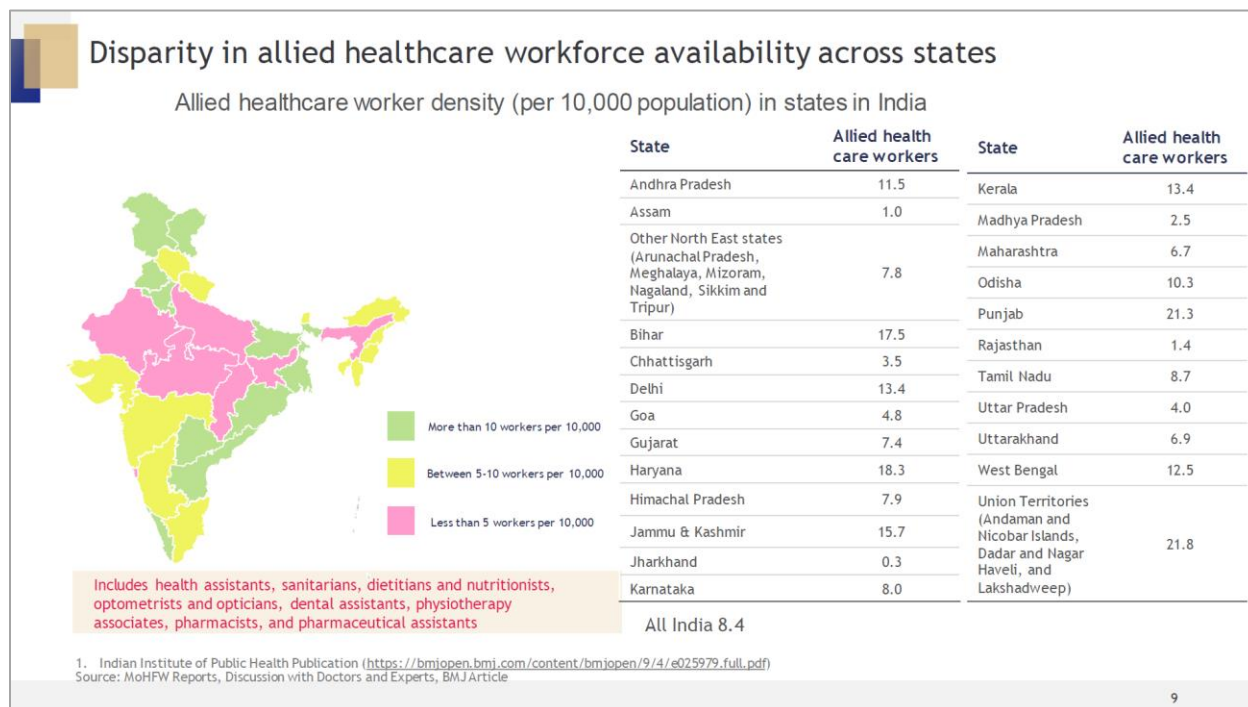


Exhibit 8: Disparity in allied health care workforce availability across states

Through further analysis of supply and capacity, the major challenge identified is inadequate college infrastructure.

Inadequate college infrastructure

India currently has ~1,40,000–1,80,000 allied healthcare seats. A comparison with Thailand and the United Kingdom suggests a serious deficiency in the number of seats per million population compared to these countries (Refer to Exhibit 9).

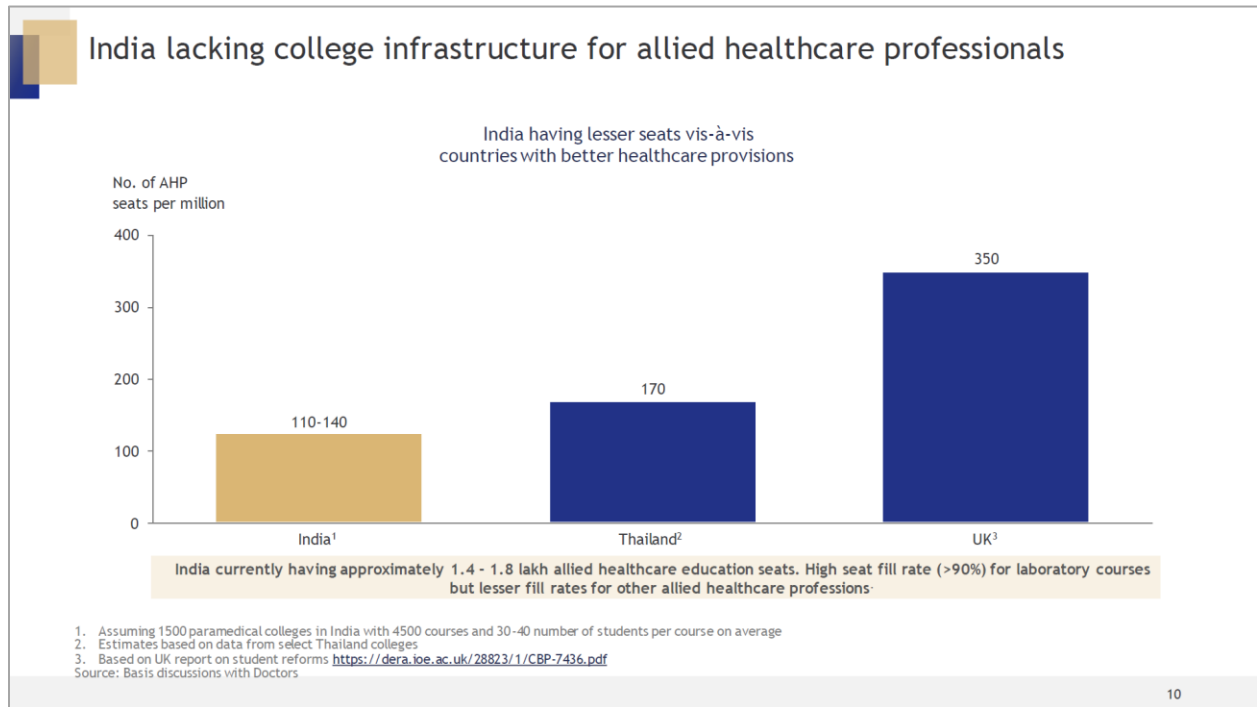


Exhibit 9: India's college infrastructure vis-a-vis other countries

In summary, we believe there are two areas of focus on to enhance the Allied Healthcare Workforce capacity and quality in India. Firstly, as now being done by the GOI, it is crucial to formalize this profession through the creation of a central council to oversee accreditation standards, curriculum definition and licensing in India. Secondly, the college infrastructure capacity will have to be augmented.

Path going forward

Delivery of health care is increasingly becoming complex with the growing burden of diseases and advances in science and technology. AHP help in prevention and diagnosis of diseases. Increased focus on allied health care can help in reducing the stress on doctors and nurses and reduce the total cost of health care delivery. To achieve this, we propose a two-pronged strategy focusing on formalizing the allied health care profession and augmenting capacity:

Formalize allied health care professionals

1. Expedite the rollout of The National Commission for Allied and Health Care professions 2020 which formalizes education and licensing for the workforce
 - a. Create standards for professional conduct
 - b. A full rollout of live registers of professionals
 - c. Set standards for colleges concerning human resource management, fee structures, curriculum guidelines etc.
 - d. Planning for growth of allied healthcare cadres and government advocacy
 - e. Establish specialization-based teams for the creation of standards and accreditation
 - f. Provide for common entry and exit examinations
2. Setup State-level Councils for the following roles:
 - a. Recognition of education and training institutions within a State
 - b. Registration of professionals within a state and licenses renewal
 - c. Standards enforcement through inspections
 - d. Grievance redressal for professionals, institutions at the local level
3. Accreditation for Health Sciences Colleges by National Assessment and Accreditation Council should be made mandatory for Allied Health Sciences Colleges in India.
 - a. Inclusion of the allied health care educational institutes and programs under NIRF ranking or establishing a ranking system to enhance the visibility of the allied health care professionals.

Augmentation of capacity

1. Address lack of college infrastructure
 - a. Encourage the private sector to build capacity by providing support in term accreditation, fast approvals and financial assistance like tax breaks etc. The government should also look for PPPs to build college infrastructure.
 - b. Conduct a thorough study of existing public sector capacity and identify measures to enhance AHP seats in existing colleges.
2. Increase the attractiveness of the profession
 - a. Conduct career counseling sessions for students of 11th and 12th standard to encourage enrollment in allied health services.
 - b. Recognize allied health care cadre in their prominent role in the functioning of hospitals through the formalization of norms related to the number of allied healthcare professionals required in a hospital, like it is for doctors and nurses.
 - c. Advocacy for services like nutritionists, dieticians etc. as better healthcare practices to stimulate demand for such services.
 - d. Provide coverage for allied healthcare services like medical testing, physiotherapy etc. in government schemes (with annual expense limits).

- e. Make lateral entry into other medical areas such as MBBS easy (through government scholarships etc.), for those who wish to switch careers.
- f. Highlight the role of allied health care workers and their criticality for healthcare services delivery by running ad-campaigns, TV and radio broadcasting, social media outreach etc.

Appendix

Allied & health care professionals in our country

Category	Allied & health care professional	
 Life Science Professional	<ul style="list-style-type: none"> • Biotechnologist • Biochemist (nonclinical) • Cell Geneticist • Microbiologist (non-clinical) • Molecular Biologist (non-clinical) 	<ul style="list-style-type: none"> • Molecular Geneticist • Environment Protection Officer • Ecologist • Biomedical Engineer • Medical Equipment Technologist • Occupational Health and Safety Officer (Inspector)
 Trauma and Burn Care Professional	<ul style="list-style-type: none"> • Burn Care Technologist • Emergency Medical Technologist (Paramedic) 	<ul style="list-style-type: none"> • Advance Care Paramedic
 Physiotherapy Professional	<ul style="list-style-type: none"> • Physiotherapist 	
 Nutrition Science Professional	<ul style="list-style-type: none"> • Dietician (including Clinical Dietician, Food Service Dietician) 	<ul style="list-style-type: none"> • Nutritionist (including Public Health Nutritionist, Sports Nutritionist)
 Ophthalmic Sciences Professional	<ul style="list-style-type: none"> • Optometrist 	<ul style="list-style-type: none"> • Ophthalmic Assistant
 Occupational Therapy Professional	<ul style="list-style-type: none"> • Occupational Therapist • Podiatrist 	<ul style="list-style-type: none"> • Movement Therapist (including Art, Dance and Movement Therapist or Recreational Therapist)
 Behavioural Health Sciences Professional	<ul style="list-style-type: none"> • Psychologist (Except Clinical Psychologist covered under RCI for PWD) • Behavioural Analyst • Human Immunodeficiency Virus (HIV) Counsellors or Family Planning Counsellors 	<ul style="list-style-type: none"> • Integrated Behavior Health Counsel • Health Educator including Disease Counsellors, Diabetes Educators, Lactation Consultants • Mental Health Support Workers
 Physician Associate or Physician Assistant Note	<ul style="list-style-type: none"> • Physician Associates and Assistants 	

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Allied & health care professionals in our country

Category	Allied & health care professional	
 Primary, Community and other Miscellaneous Care Professional	<ul style="list-style-type: none"> • Community Health Promoters 	
 Medical Radiology, Imaging and Therapeutic Technology Professional	<ul style="list-style-type: none"> • Medical Physicist • Radiology and Imaging Technologist (Diagnostic Medical Radiographer, Magnetic Resonance Imaging (MRI), Computed Tomography (CT), Mammographer, Diagnostic Medical Sonographers) 	<ul style="list-style-type: none"> • Radiotherapy Technologist • Dosimetrist • Electrocardiogram (ECG) Technologist or Echocardiogram (ECHO) Technologist • Nuclear Medicine Technologist
 Medical Laboratory Sciences Professional	<ul style="list-style-type: none"> • Cytotechnologist • Forensic Science Technologist • Histotechnologist 	<ul style="list-style-type: none"> • Hemato technologist • Medical Lab technologist
 Health and Information Management Professional	<ul style="list-style-type: none"> • Professional (including Medical Records Analyst) • Health Information Management Technologist 	<ul style="list-style-type: none"> • Clinical Coder • Medical Secretary and Medical Transcriptionist • Health Information Management
 Cardio-vascular, Neuroscience and Pulmonary Technology Professional	<ul style="list-style-type: none"> • Cardiovascular Technologists • Perfusionist • Respiratory Technologist 	<ul style="list-style-type: none"> • Electroencephalogram (EEG) or Electroneurodiagnostic (END) or Electromyography (EMG) Technologists or Neuro Lab Technologists or Sleep Lab Technologists
 Renal Technology Professional	<ul style="list-style-type: none"> • Dialysis Therapy Technologists or Urology Technologists 	
 Surgical and Anaesthesia-related Technology Professional	<ul style="list-style-type: none"> • Anaesthesia Assistants and Technologists • Operation Theatre 	<ul style="list-style-type: none"> • Technologists • Endoscopy and Laparoscopy Technologists

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