



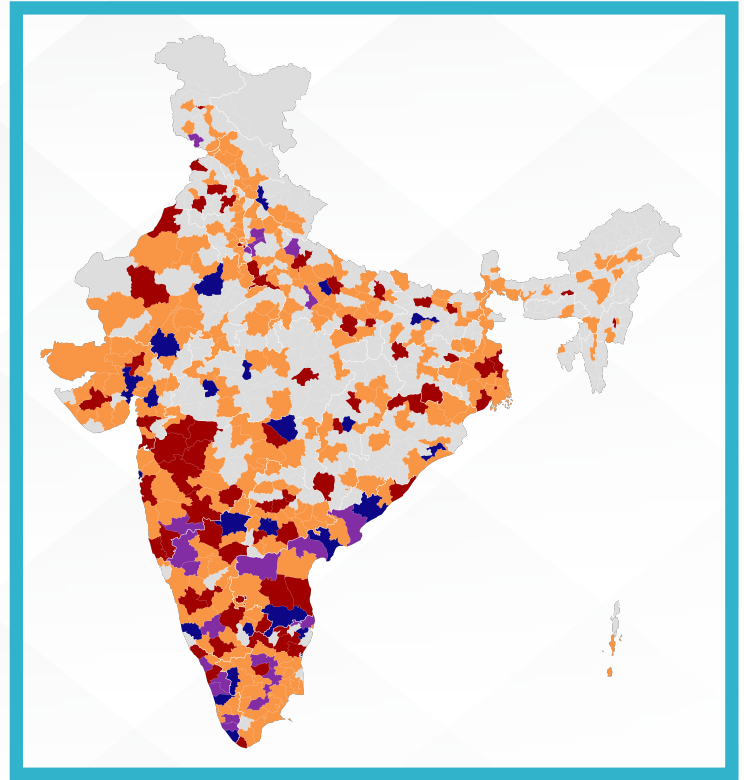
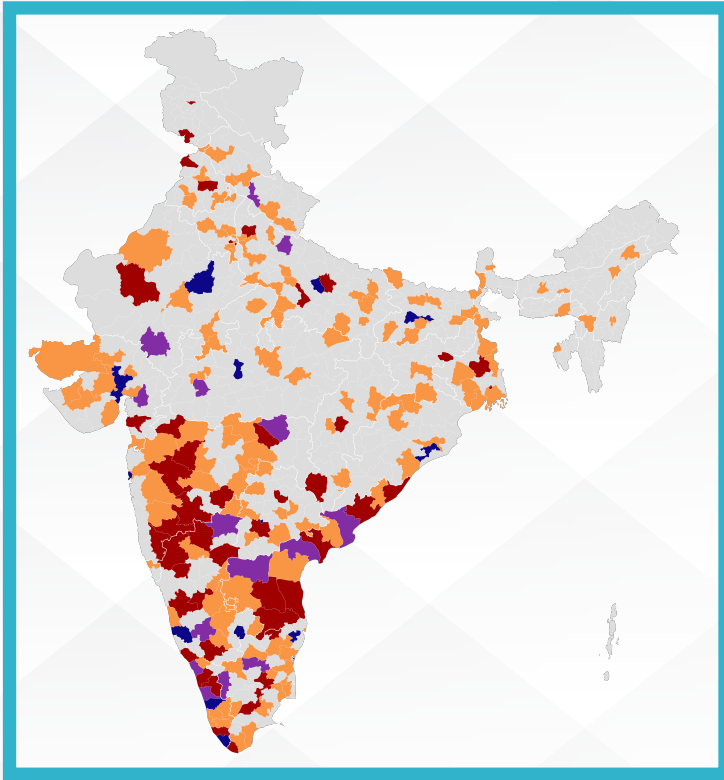
Ministry of Health & Family Welfare
Government of India



REFORM, PERFORM, TRANSFORM

**Governance Reforms in Medical Education
(2014-2022)**

The changing face of Medical Education



No. of Medical College (Per District)	No. of Districts		
	Pre-2014	2022	%
1	143	256	79%
2	46	70	52%
3	15	23	53%
≥4	18	30	67%

of Medical Colleges per District



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Reforms in Medical Education

- Transparency
- Professionalism
- Accountability
- Availability
- Distribution
- Merit based
- Affordability
- Quality

BACKGROUND

Health workforce (HRH) is the most critical asset for health systems worldwide and in the post-pandemic era, is increasingly being recognized as a priority pillar to ensure equitable health coverage, locally, nationally and globally. India's mandate for Universal healthcare relies heavily on an adequate and effective health workforce providing care at primary, secondary, and tertiary levels in the public and private sectors across the country. Access to quality care in every corner of rural India necessitates ongoing review and steps to ensure equitable distribution and availability of the health workforce. A strong medical education system that can create an adequate number of qualified and competent medical professionals underpins the availability of a competent health workforce.

Regulatory reforms brought in the sector of Medical Education over the last seven years have transformed this sector, bringing in transparency, meritocracy and expansion. India is well on the path of becoming a leader in health care delivery.

THE SITUATION IN 2014

While India had a limited number of 387 medical colleges in 2014, the system was riddled with far too many problems. The overarching regulatory body of the medical colleges, the Medical Council of India (MCI) had become 'a high entry barrier'. This had led to paucity in the number of medical colleges and number of seats, both at the undergraduate and the postgraduate levels, across the country. This was compounded by structural and functional challenges faced by the regulator while making decisions regarding medical education. Other factors included disconnect between education and health service delivery, high cost of education, underutilization of existing resources, and multiplicity of entrance examinations for medical seats, among others.

"Game changer reforms of transformational nature are therefore the need of the hour and they need to be carried out urgently and immediately. Because, if revamping of the regulatory structure is delayed any further on any grounds including political expediency, it will be too late, with the result that our medical education system will fall into a bottomless pit and the country will have to suffer great social, political and financial costs."

**-Department related Parliamentary Standing Committee
(92nd Report)**

THE JOURNEY OF REFORMS



The last few years have recorded several developments and reforms in the medical education sector in India. With the ever-increasing demand for health workforce, the work of this Government has led to an increased focus on

educational standards for healthcare professional education, an increase in the number of medical colleges, a model curriculum for then unregulated professions and importantly, transformative regulatory reforms such as the National Medical Commission Act, 2019 and including the most recent passage of the National Commission for Allied and Healthcare Professions Act (NCAHP) 2021 for more than 50 types of allied and healthcare professions. These reforms have been acknowledged by global agencies and International Government bodies as very positive and progressive steps towards ensuring quality and patient safety.

The increasing demand and pressure on the medical education system have led to a paradigm shift from input-based to outcome-based approaches and reforms. The erstwhile regulatory body namely the Medical Council of India (MCI) has been replaced by a stronger avatar, the National Medical Commission (NMC) which is expected to rework and implement regulations that are more relevant and aligned with changing times, developments and growth in the field of medical sciences and education. There has been a rapid increase in the number of both Government and private medical Institutions and a corresponding increase in the number of undergraduate (UG) and post-graduate (PG) seats due to enabling Government policies and schemes.

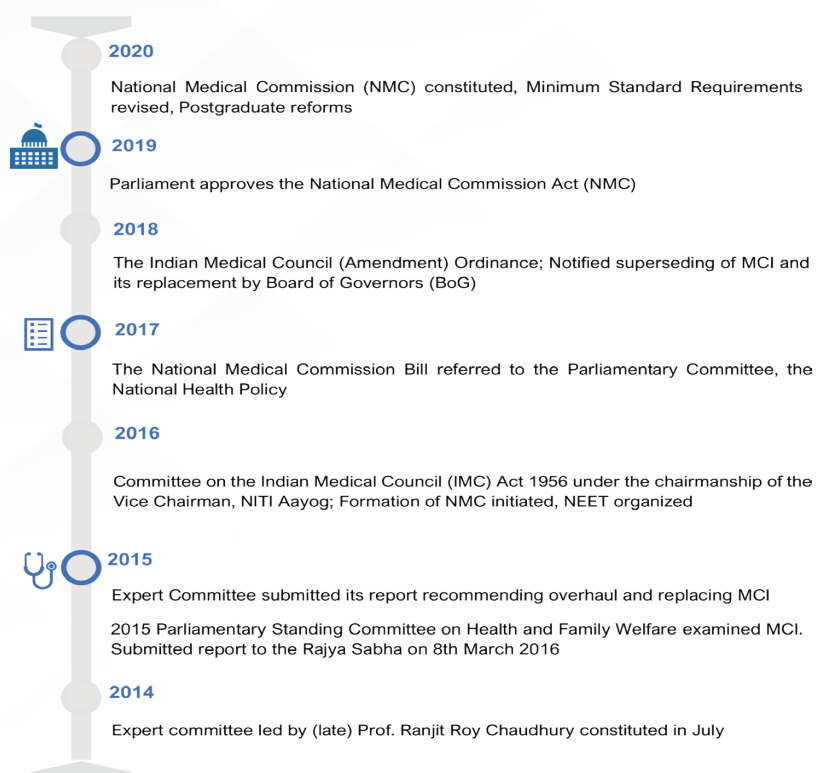
The governance reforms in medical education have opened up multiple alternatives for improving access, quality and equity in the provision of a trained and competent health workforce.

INSTITUTIONAL REFORM: NATIONAL MEDICAL COMMISSION

Reform initiatives in the last seven years included a radical structural change that saw the erstwhile Medical Council of India (MCI) being replaced by the National Medical Commission, a leaner and more empowered regulatory body. This was achieved by the passage of the National Medical Commission Act in August 2019, which came into force on 25th September 2020. Regulators of the highest standards of professional integrity, experience, and excellence have been selected and placed at the helm to steer the reforms in the field of medical education. Under the aegis of NMC, four independent and autonomous boards have been instituted giving shape to several reforms in the medical education field, including but not limited to the conduct of a common exit exam NEXT, standards for Community Health Providers as per the Act, among others.

Besides streamlining all the existing regulations, the conduct of a common exit exam NEXT, prescription of fee guidelines, setting the standards for Community Health Providers and rating of medical colleges are some of the important tasks which NMC has already initiated.

Transition from Medical Council India (MCI) to National Medical Commission (NMC)



It is envisaged that NMC will make medical education in India quality-oriented, competency-based, equitable, affordable and at par with the best in the world.

National Medical Commission

National Medical Commission has been established to:

- (1) Improve access to quality and affordable medical education
- (2) Ensure availability of adequate and high-quality medical professionals in all parts of the country
- (3) Promote equitable and universal healthcare that encourages a community health perspective and makes services of medical professionals accessible to all
- (4) Encourage medical professionals to adopt the latest medical research in their work and to contribute to research
- (5) Objectively assess medical institutions periodically in a transparent manner
- (6) Maintain a medical register of doctors for India
- (7) Enforce high ethical standards in all aspects of medical services
- (8) Ensure an effective grievance redressal mechanism

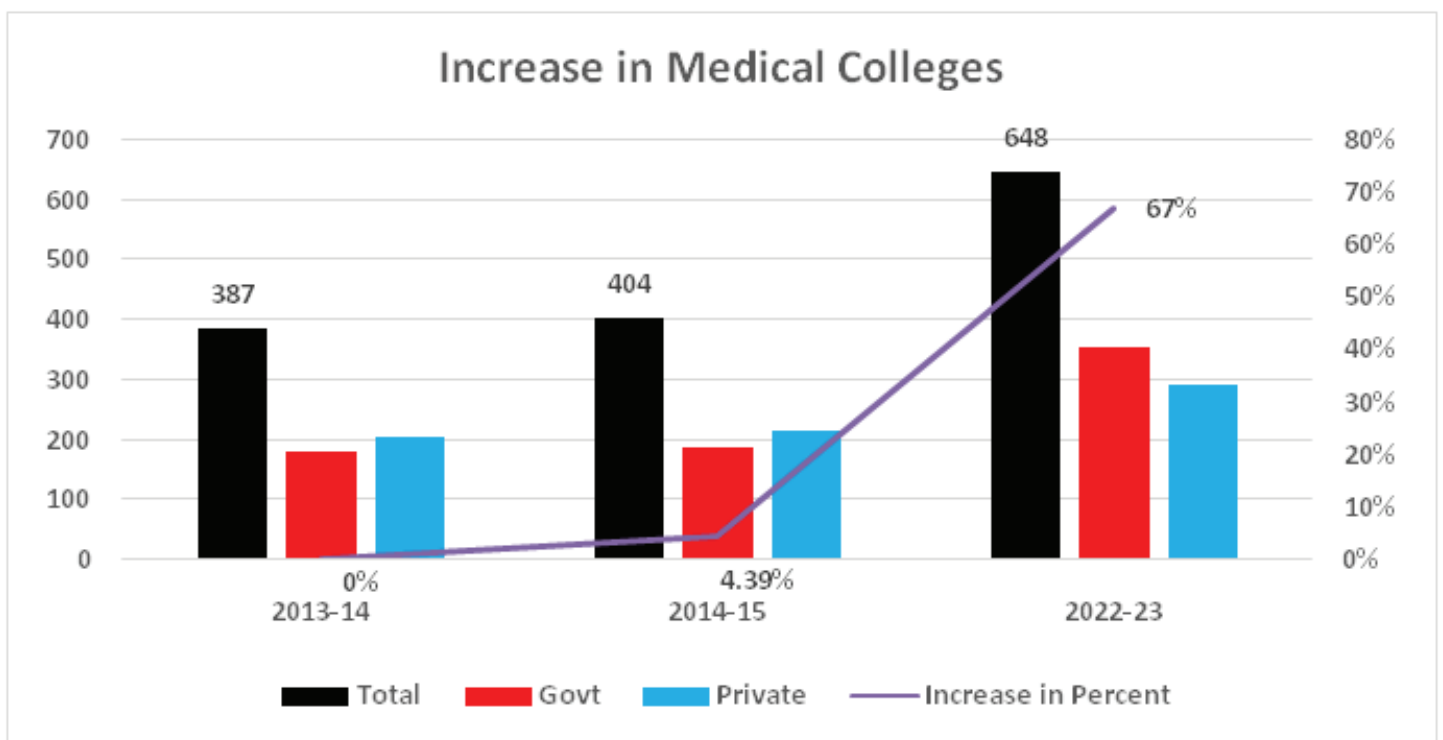
ENSURING AVAILABILITY OF DOCTORS AND SPECIALISTS: INCREASE IN NUMBER OF MEDICAL COLLEGES

Globally, there has been a constant drive for improving the doctor population ratio to ensure better access to healthcare services. As of the year 2021, India has **13.01 lakh registered** allopathic doctors (**estimated active stock of 10.41 lakh- 80%**) and **5.65 lakh AYUSH doctors (total active 15.80 lakh doctors)** leading to a combined doctor population ratio of **1:834** which is better than the OECD region average of **1 per 1000**.

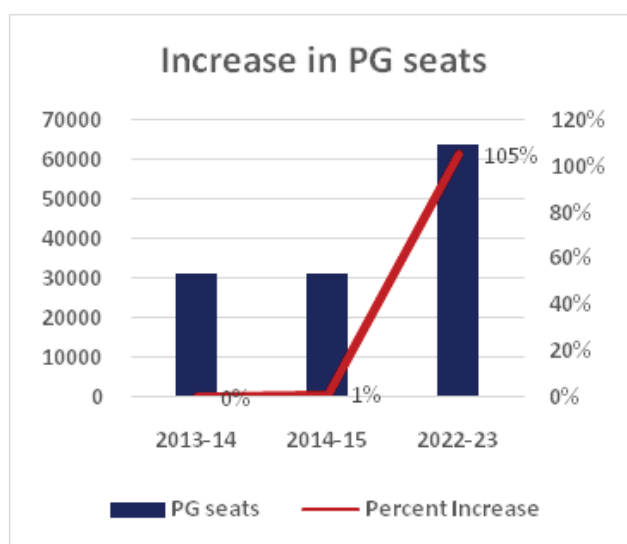
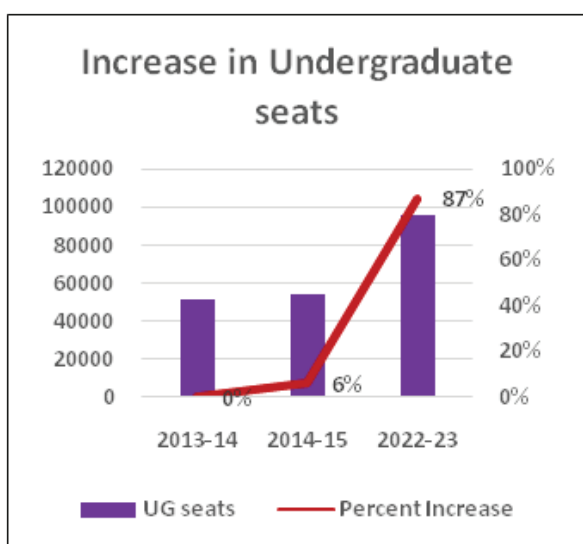
India's medical education system has expanded multi-fold with more focus and investments towards professional education and quality service delivery. This is also envisioned to address the accessibility issues in underserved areas.

There have been concerted efforts over the last seven years to increase the number of medical colleges. At present, there are **648 medical colleges in the country**, of which 355 are Government and 293 are Private. **In the last eight years, a total addition of 261 medical colleges has been added**, leading to a **67 % increase in the establishment of medical colleges** with a whopping **96% increase in the number of Government Medical Colleges (GMC)** alone and a **42% increase in the private sector**, since 2014.

To bolster the number of colleges and seats several initiatives including Centrally Sponsored Schemes and Central Sector Scheme were implemented. A Centrally Sponsored Scheme was introduced in 2014 to provide central funding support for opening new medical colleges. Three phases of the Scheme have been approved to date under which 157 colleges have been sanctioned to reduce the urban/rural divide and address the regional imbalances. As of now, of these 157 medical colleges 93 have already become functional and 60 are expected to be functional in the next two years.



With greater investments in expanding GMCs, this Government has taken giant strides to ensure affordable professional education accessible to a larger population. With the increase in the number of colleges, a corresponding increase has also been recorded in the number of UG and PG seats over the years. In the last seven years, major investments have been made towards increasing the medical seats of which, a **87% increase has been recorded in UG (MBBS) seats with a total seat capacity of 96,077 to date**. Similarly, a **105% increase has been recorded for PG seats since 2014, accounting for a total of 63,842 PG seats to date across the country**.



With a vision to create 10000 MBBS seats in Government Medical Colleges (GMC), **58 colleges across 16 States** have been approved with an **increase of 3877 MBBS seats to date**. Similarly, **to increase PG seats: In phase I-72 medical colleges in 21 States/ UTs** have been approved with an increase of 4058 PG seats. To create 4000 PG seats in the GMCs, in phase II, a total of **47 colleges** have been approved with an increase of **2975 PG seats**.

Pradhan Mantri Swasthya Suraksha Yojana (PMSSY): The PMSSY is based on ensuring the three Es of Expand-Equity-Excellence. The scheme aims at correcting regional imbalances in the availability of affordable and reliable tertiary healthcare services and augmenting facilities for quality medical education in the under-served States.

The program targets establishment of AIIMS like institutions and the up-gradation of existing GMCs (by establishing super-speciality blocks) in a phased manner. 22 new AIIMS and projects for the up-gradation of 75 Government medical colleges were taken up under the scheme. MBBS (UG) classes have been started in 19 of the 22 new AIIMS adding 2037 MBBS seats so far. The upward trajectory of growth in terms of OPD services, IPD services and teaching-learning activities in these new AIIMS has been moving at a commendable pace.

The National Medical Commission has also initiated several reforms and relaxations to increase the PG seat capacity. These included amendments in Regulations such as rationalizing minimum requirements including the teacher-student ratio that facilitates the establishment of new medical colleges and enables a subsequent increase in PG seats, other developments include reforms in National Board of Examinations (NBE) to increase DNB courses and seats, encouraging State Governments to take up DNB courses and municipal corporations to initiate PG courses.

The positive impact of taking medical education to smaller cities and towns is expected to lead to better retention of doctors in rural and underserved areas. The efforts will make a vital contribution in achieving the goal of providing equitable health care and accessibility.

REFORM IN REGULATIONS

Besides the increase in the number of medical colleges, a number of regulatory reforms were undertaken to streamline the number of UG and PG seats. More than 50 crucial long-pending regulatory reforms were brought in the last seven years. These reforms are cross-cutting and have brought changes in key areas resulting in a higher number of seats being available today.

Ensuring Availability of Doctors and Specialists

Key Regulatory reforms

- Norms for setting up Medical College relaxed
- Consortium allowed to establish Medical College
- Permission for a lesser number of seats if criteria for a higher number of seats are not met
- Teacher: Student ratio norms relaxed in PG Regulation
- Equivalence of DNB with PG as faculty
- Mandatory to start PG in 3 years from MBBS recognition
- Permission to apply for PG earlier-at the time of 2nd renewal
- ICU beds to be counted as general beds
- Starting Super-specialty Department directly within the broad speciality

Minimum Standard Requirement: The most significant reform carried out recently by the NMC pertains to streamlining the entire regulations on Minimum Standards Requirement (MSR) for the establishment of medical colleges. The new Regulation applies to all new medical colleges proposing to be established and to the established medical colleges proposing to increase their annual MBBS intake from the academic year 2021-22. As per these new regulations, the quantum of land required for setting up a medical college and its affiliated teaching hospitals has been removed (all buildings are expected to conform to existing building bye-laws). Earlier the requirement was 20 acres for general areas and 10 acres for metropolitans and as a single parcel. As per new requirements, in tier 1 and 2 cities

and hilly and NE states the land could be in two parcels within a distance of 10 Kms. The new Regulations only define the minimum requirements of space for all

Land Requirement for Establishment of Medical College

	Earlier	New Standards
General	20 Acre	<ul style="list-style-type: none"> • No minimum land requirement prescribed • In tier 1 and 2 cities, Hilly and NE States, two parcels of land within 10 km distance • Sharing of teaching spaces by Departments • Minimum space requirements for functional areas (e.g. labs, library etc. rationalised) • All teaching spaces to be e-learning enabled
Class 'A' Cities with 25 lakh + population and NE / Hill States	20 Acre; can be in two parcels within 10 km distance; main parcel housing hospital, college etc cannot be less than 10 acre	
Metropolitan	10 Acre	

student-centric areas in the institution and the functional areas required. The standard provides for all available teaching spaces by all departments (compared to the inflexibility in the regulations earlier).

The new standards also allow optimization and flexibility in utilizing available resources and harnessing modern educational technology tools to facilitate moving towards quality education, even when resources are relatively scarce. It also mandates all teaching spaces to be e-learning enabled and digitally linked to one another

As per NMC regulations, a well-equipped “Skill Laboratory” for training students is now essential and a Medical Education Unit for training medical teachers in educational pedagogy has been redefined.

Streamlining MSR

	Bed requirement (150 seats)	Faculty requirement (150 seats)	
		Faculty	Resident
Before '15	750	152	115
2015	650	132	85
2018	650	132	80
2020 (New Standards)	600	116	76

The space required for the Library and the number of books and journals have been rationalized and reduced. Student counseling services have been mandated, recognizing the increasing stress observed amongst medical students and residents in recent times.

Recognizing that a well-functioning hospital is at the core of medical training, the new regulations mandate the availability of a fully functional 300-bed multi-speciality hospital for at least two years at the time of application for establishing a new medical college (earlier regulations did not specify the period of functionality).

The beds required in the various departments of the teaching hospital have been rationalized to align with the annual student intake. In addition, as per the present provisions, teaching time to be spent in the clinical specialities and the minimum clinical material required for undergraduate medical training has resulted in about a 10% reduction in teaching bed needs compared to the earlier regulations. The human resources required as teaching faculty have also been rationalized. Over and above the minimum prescribed faculty norms, provision for “visiting faculty” has been provided to enhance the quality of training.

NATIONAL BOARD OF EXAMINATIONS

The National Board of Examinations in Medical Science (NBEMS) established in 1975, is an autonomous body of the Ministry of Health and Family Welfare for Examination and Accreditation. It accredits the hospitals (mainly private hospitals) for broad speciality and super speciality

courses that are equivalent to MD/MS or DM/M.Ch respectively. Further, the NMC Act has provided suo moto recognition to all courses run by NBEMS.

Many reforms have been undertaken by NBEMS including the creation of advanced Skill/Virtual learning centres, short term skill enhancement courses, accreditation reforms, and mentorship programs for students among others. The NBEMS has so far accredited 1209 hospitals with 12,648 seats, of which 65% are in the private sector.

There has been a massive increase in Postgraduate seats brought about by the NBE over the last few years by rationalizing the accreditation criteria. This can be seen as per the graphs below:

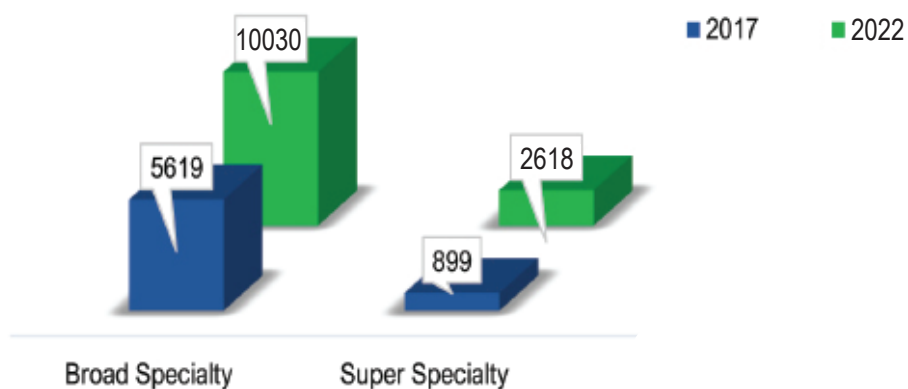
National Board of Examination

DNB (Broad Speciality)- 3 years

DNB (Post diploma)- 2 years

DNB (Super Speciality)-3 years

Fellowship NB – 2 years



Progress in NBE Courses (Number of PGs)

Government/ PSUs/ Defence Hospitals

415 Accredited Hospital



4185 Seats

Private Hospitals

794 Accredited Hospital



8463 Seats

NBE accredited hospitals and seats

ACCESS IN RURAL AND PERIPHERAL AREAS

Location of Medical Colleges: Equity in medical education and geographic balance in the availability of medical care is being addressed by locating new medical colleges in backward districts. Of the 157 new colleges that are being opened under the Centrally Sponsored Scheme, 40 are coming up in the Aspirational Districts. NMC has been mandated with looking at the overall HR requirements and will also examine the location of upcoming medical colleges. The NMC will also enable equitable distribution as well as sustainable running of the colleges including availability of adequate patients and faculty.

Diploma Courses by NBEMS: To meet the shortfall of specialists, the National Board of Examinations in Medical Science (NBEMS) has launched 2 years' PG Diplomas in eight disciplines which will increase seat capacity by 2000 seats per year. These disciplines have been carefully selected to cater to gaps in specialists at the secondary care level namely -Anesthesiology, Gynecology and Obstetrics, Pediatrics, ENT, Ophthalmology, Family Medicine, Tuberculosis and Chest Diseases and Radiodiagnosis.

The admission to these courses would be through NEET-Postgraduate and 50% of the seats will be reserved for in-service doctors. Further, DNB has also been recognized for appointment as faculty, to overcome faculty shortages and provide wider academic opportunities.

Family Medicine: The expansion of the PG, particularly under NBEMS, has focused on promoting family medicine as a specialized discipline. There are now both MD and Diploma courses offering specialization in this discipline. The post-graduate program in family medicine will produce specialist family physicians incorporating basic knowledge of Medicine, Surgery, Obstetrics and Gynecology.

Community Health Providers: It is observed often professionals with higher qualifications opt to work in cities and urban settings, leaving a void in rural and peripheral areas. Also, at the primary and promotive healthcare level, many of the services may not require a full-time doctor and can be dealt with by other competent healthcare professionals. Looking at this, it has been considered appropriate that the skills and knowledge of persons with a background in medicine can be enhanced and their services be made available at the primary healthcare level. The NMC Act, therefore, provides for Community Health Providers (CHPs), who would be the health providers connected with the modern scientific medical profession having limited right to practice and prescribe medicine in primary and preventive care.

District Residency Scheme: A Scheme for three months of training for the second/third-year Postgraduate medical students at District Hospitals (DH) as an essential component of the postgraduate medical training Curriculum has been introduced. The Scheme will ensure that each district hospital will have additional 4-8 junior residents to support specialist care. This would help the students get exposure to the district health system with a large number of varied cases. This will also help in strengthening the district hospitals by giving an adequate number of helping hands by medical specialists.

MERITOCRACY: ONE COUNTRY, ONE EXAM

NEET: In 2016, a common entrance test- National Eligibility cum Entrance Test (NEET) was introduced, which ensured a 'one country, one examination, one merit' system and a common counseling system. This allowed students from anywhere in India an opportunity to study in any medical college in the country based on merit. They were also spared from appearing in multiple entrance tests and the related stress thereof.

National Exit Test (NEXT): To gauge the standards of competence and knowledge of students passing the MBBS exam NEXT has been proposed under the NMC Act. This will be a common final year MBBS exam which would not only serve as a licentiate exam for practice but also serve as an entrance exam for admission to Postgraduate in broad speciality medical courses. Further, the same exam will serve as a screening test for foreign medical graduates.

Common Counseling: Instead of the prevailing practice of separate counseling sessions for different medical colleges, common counseling at the central level and State level has been started since year 2016. This has ensured transparency in admissions. From 2021, the counseling of DNB (Broad Specialty) has been merged with MD/MS Counseling to further streamline admissions. NEET, NEXT and the common counseling have also been made applicable to Institutes of National Importance such as AllMS, New Delhi, JIPMER, Puducherry and PGI, Chandigarh through the NMC Act.

AFFORDABILITY

Regulation of Fee: Before the NMC Act, there was no legal mechanism to regulate the fee charged by private colleges. This led to instances of overcharging of fees by some private colleges, making them out of reach for poor meritorious students. Reforms have been taken to make medical education affordable for students. The National Medical Commission (NMC) Act has the provision to regulate fees and all other charges in 50% of the seats in private medical colleges and deemed universities. The guidelines in respect of fees for 50% seats in all colleges including Government, Private and Deemed Universities have been released by the NMC.

QUALITY: PROMOTING HIGH STANDARDS

Skill Lab: The new standards for the opening of medical colleges envisage a skill laboratory in every medical institution. Here students can practice and improve their skills in a safe environment, mitigating the limitations of learning on live patients. These skill labs will recreate the clinical environment and provide a much greater opportunity for learning through mannequins and computerized simulation. The standards released also specify the infrastructure requirements such as demonstration rooms, debriefing area, audio-visual and internet facilities for enabling e-learning and required staff, among others.

New competency-based curriculum: the 'Competency-based Undergraduate Curriculum for the Indian Medical Graduate' has been introduced. The curriculum has been changed after 21 years, the previous edition being that of 1997. This change will be a landmark reform for orienting medical education to competence-based learning. For the first time, 'Attitudinal and Communication' competencies have been added to the MBBS Curriculum. The importance of ethics and responsiveness to the needs of patients and families has been acknowledged. Also, a month-long foundation course for students from diverse backgrounds to help them cope with the stress, and to adapt to the English language has been added. Another new element is the introduction of elective subjects wherein now students can pick up subjects of their choice. Time has been allotted for self-directed learning and co-curricular activities.

Emergency Medicine Department: All the medical colleges will have an emergency medicine department from the academic year 2022-23 onwards as per the new standards of NMC. The department will have a casualty area, an intensive care unit, an operation theatre and trained staff. Other specific standards related to beds and decontamination and isolation areas have also been specified in the standards. This step will bring transformation in Emergency Medicine and the availability of trained human resources for critical care.

Rating of Medical Colleges by the Medical Rating and Assessment Board (MARB): One of the mandates of the MARB is to rate medical colleges based on performance parameters. This will enhance quality consciousness amongst colleges and improve student awareness of the best opportunities in medical education. A new element has been incorporated in the regulations outlining 'desirable' and 'aspirational' goals beyond the minimum requirements to stimulate medical colleges to try for excellence.

Task-Shifting: Task shifting essentially means the delegation of tasks or responsibilities from one level to another with adequately trained and experienced team members for maximum efficiency and utilization. This is required to alleviate the increased burden observed by several doctors and nurses during practice and efficiently manage the situation through the appropriate participation of similarly trained professionals in a multi-disciplinary team. Reorganization of the health workforce, ensuring optimum division of labour is thus achieved. The proposed National Nursing and Midwifery Commission Bill and the recently enacted National Commission for Allied and Healthcare Professions Act, both provide for defining the scope of practice of the concerned professionals as well as for task shifting.

Research and Development (R&D): Strengthening research is one of the mandates of NMC. New regulations have been brought in to make online Research Methodology courses compulsory for all post-graduates and all teachers. Further, the NMC will work towards promoting R&D in medical colleges by bringing in suitable regulations.

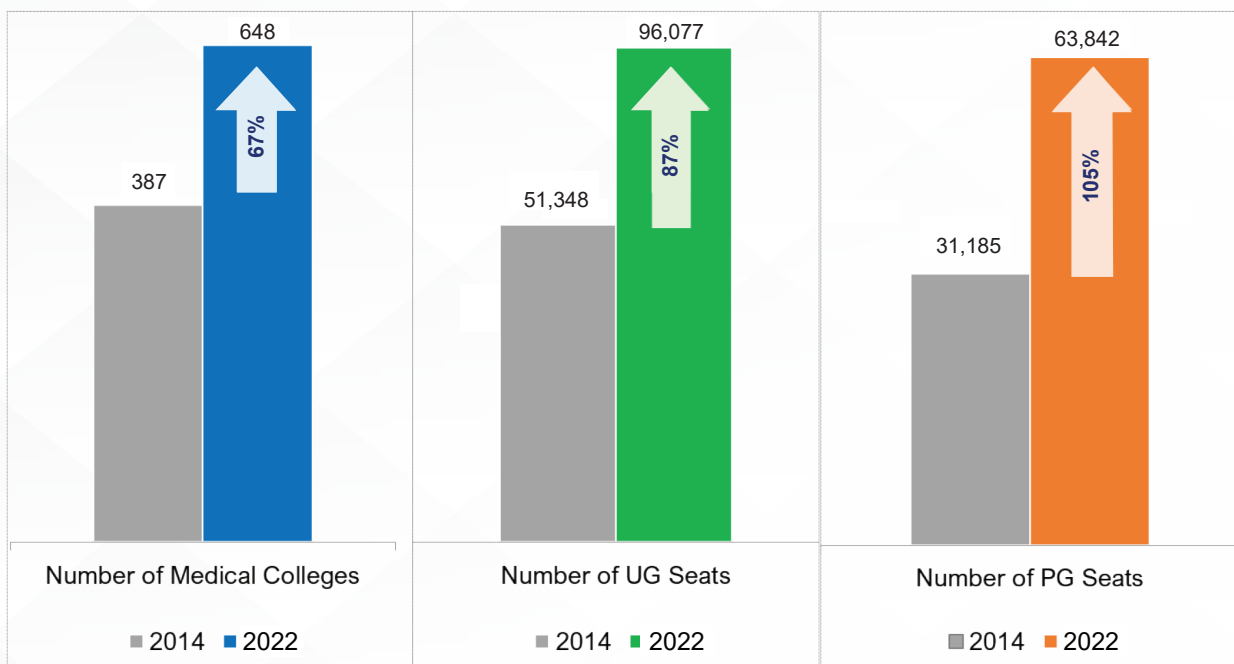
IMPACT AND OUTCOMES

The reforms and the new/ restructured schemes in Medical education undertaken in the last seven years have yielded extraordinary results. Steps taken have not only led to a significant increase in the number of colleges but also a huge increase in the number of seats at both undergraduate and postgraduate levels.

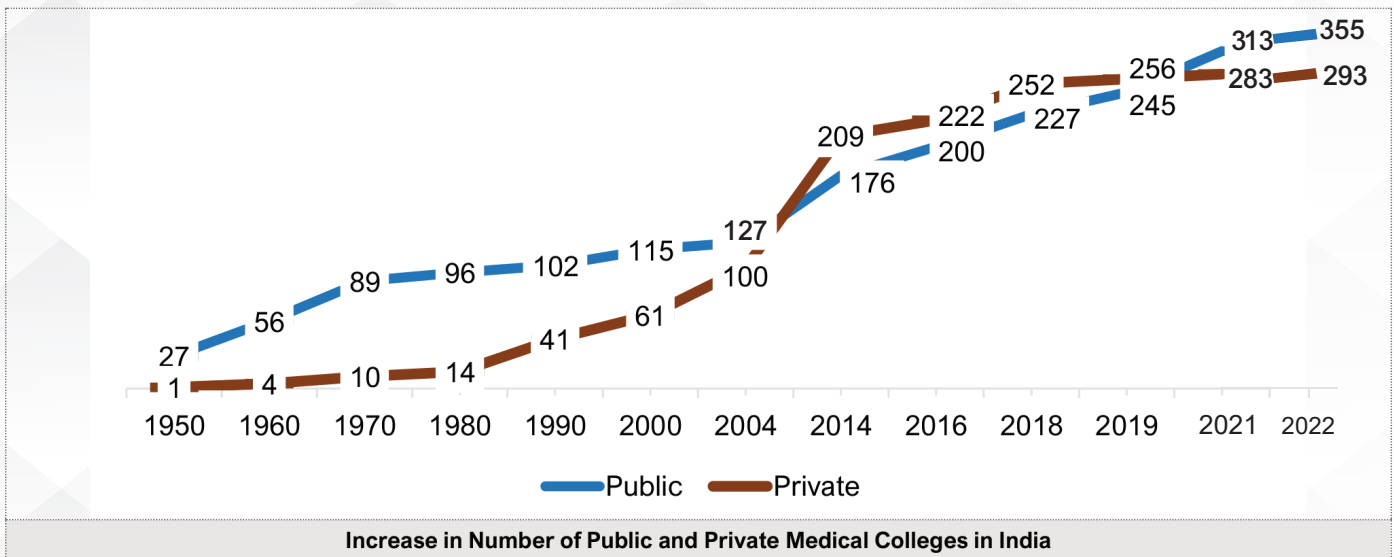
Against 387 medical colleges in 2014, at present, there are 648 medical colleges an increase of 67 % in seven years.

Outcome of last 8 years

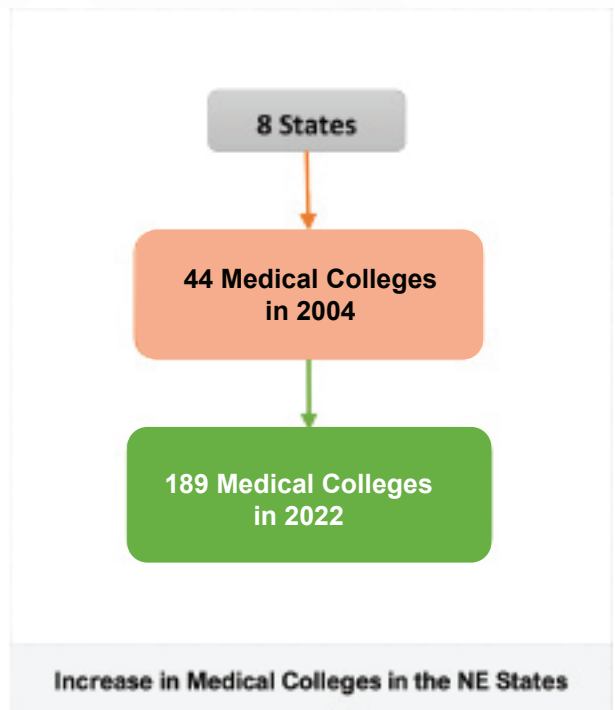
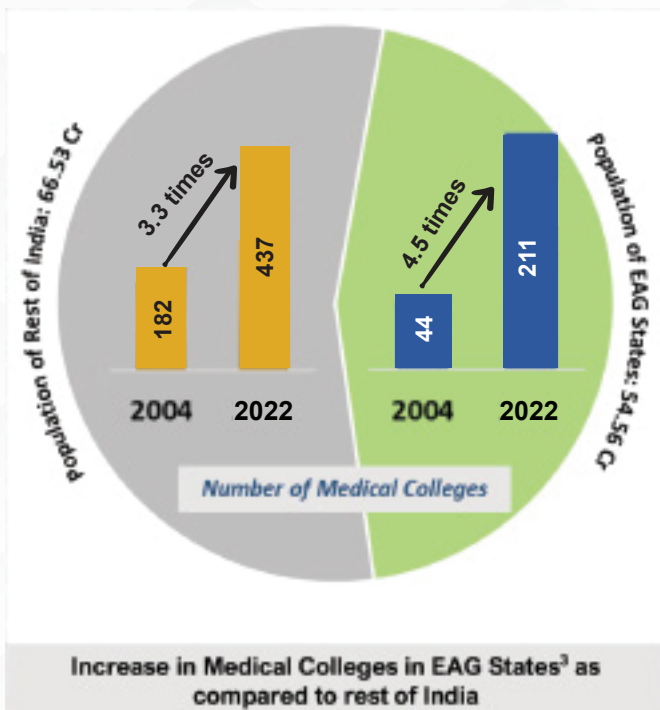
	2014	2022	Comments
Number of Medical Colleges	387	648	Increase of 67%
No. of UG Seats	51,348	96,077	Increase of 87%
No. of PG Seats	31,185	63,842	Increase of 105%



The reforms in last couple of years have witnessed unprecedented success and it is reflected in the huge increase in number of medical colleges and the transformation in Undergraduate and Postgraduate capacities



In the last 8 years, the location of the new medical colleges has been selected carefully to address regional equity issues.



*Empowered Action Group States (EAGS) include Bihar, Rajasthan, Jharkhand, Chattisgarh, Madhya Pradesh, Odisha, Uttar Pradesh and Uttarakhand

THE JOURNEY OF REFORMS CONTINUES

All these reforms in medical education will have a long term impact on primary, secondary and tertiary care in India. The key area in which reforms will continue is the quality of education. Towards this the NMC will ensure the effective implementation of a competence-based curriculum in all medical colleges, along with a focus on skill-based teaching. Incentives for the retention of faculty in peripheral and backward areas will be worked out. The participation of medical colleges in national health programmes will be enhanced by enriching their implementation. The reforms for the promotion of meritocracy and affordability of quality medical education will be strengthened by:

- Improving the quality of education and educational institutions to bring them at par with global standards
- Ensuring stringent licensing examination
- Enabling better deployment mechanisms and employment opportunities
- Developing a robust information system to enable evidence-based policy decisions
- Ensuring streamlined collaborative efforts by key stakeholders

Parallely, reforms are ongoing in the sectors of Nursing Education, Dental Education and Allied and Healthcare professions. A new National allied and Healthcare Professions Act 2021 has also been enacted. This shall enable the constitution of a National Commission and State Councils to regulate 56 diverse allied and healthcare professions. Similarly, on the lines of the NMC, the Dental Council of India and the Indian Nursing Council are also being reformed through new legislation. This will complete the gamut of reforms in all aspects of human resources for healthcare, focusing on improved and uniform standards, resulting in better healthcare delivery for the people at large.



It is evident that a lot of health and medical education reforms have been carried out successfully over past six years.

**- Narendra Modi
Prime Minister of India**

GLOSSARY

- AIIMS** - All India Institute of Medical Sciences
- OPD** - Out Patient Department
- IPD** - In Patient Department
- PG** - Post Graduate
- NBE** - National Board of Examination
- NMC** - National Medical Commission
- MCI** - Medical Council of India
- BoG** - Board of Governors
- DNB** - Diplomate of National Board
- NEXT** - National Exit Test
- MBBS** - Bachelor of Medicines and Bachelor of Surgery
- NEET** - National Eligibility cum Entrance Test
- EAGS** - Empowered Action Group States



सत्यमेव जयते

**Ministry of Health & Family Welfare
Government of India**