

ARE OUR CLINICAL SCIENTISTS GETTING THEIR DUE?



Several findings and reports, including those from the Parliament's Standing Committee and NITI Aayog, have consistently criticized the way the Medical Council of India (MCI) managed medical education in India. The MCI was tasked with the "maintenance of uniform standards of medical education," a responsibility in which it failed miserably. With a few exceptions, the current standards of medical education are abysmal. It is no surprise that, despite having more than 700 medical colleges, none of them ranks among the global top 100. Despite the replacement of the MCI by the NMC, the overall quality of medical education has shown little improvement, aside from the implementation of the Competency-Based Medical Education (CBME) curriculum and recognition by the World Federation for Medical Education (WFME).

Healthcare is not solely about medical education or the creation of doctors; it has other components that also require the government's attention. Just like the council for medical education, there are separate councils for dentistry, nursing, pharmacy, and traditional Indian medicine. However, several branches of healthcare, such as physiotherapy, optometry, laboratory technology, and imaging technology, lack any such councils. While some states have their own paramedical councils, the central government has established the 'Allied and Healthcare Professional's Central Council' through legislation enacted in March 2021. However, the body remains in a dysfunctional state, lacking full-time members and effective implementation. Although health is a state subject, it is the government's responsibility to ensure high standards and good quality across all aspects of healthcare. The central government has passed the Clinical Establishments Act (CEA) to regulate institutions offering healthcare, but its implementation is subject to adoption by individual states.

The roles & struggles of the clinical scientists in teaching profession:

Amid the confusion surrounding medical education and clinical establishments, one vital component of healthcare—clinical scientists—has been largely ignored. There is little public awareness about them, and several misconceptions persist. These professionals hold a Medical Master of Science (M.Sc) degree, obtained from medical colleges and awarded by health universities under the faculty of medicine. Along with other medical courses, Medical M.Sc courses are listed in the first schedule of the Indian Medical Council Act, 1956. Many of these clinical scientists also hold Ph.D. degrees in medical specialties.

Due to the critical shortage of teachers in the non-clinical subjects of the MBBS course, Medical M.Sc postgraduate courses were opened to non-doctors. Graduates with a bachelor's qualification in any branch of life sciences (including B.Sc, BAMS, B.V.Sc, BDS, etc.) could enroll in these three-year courses. At one point, more than 90 medical colleges in India offered these courses, many of which have since discontinued them. The MCI, which once granted permission for these courses to be conducted in medical colleges, has ceased this practice. Enrollment of Medical M.Sc graduates in the MCI's register had also stopped, essentially causing the MCI to wash its hands of this course. With no regulatory oversight, responsibility fell to the universities, leading to variations in the conduct of these courses. However, in principle, the curriculum and syllabus for Medical M.Sc courses in pre-clinical subjects (Anatomy, Biochemistry, and Physiology) and para-clinical subjects (Pharmacology, Microbiology) are largely similar to those of MD degrees in the same fields.

The two courses often run in parallel within the same department, using the same set of teachers, laboratories, and resources. Like their MD counterparts, Medical M.Sc students also participate in seminars, journal presentations, dissertations, and case discussions during their training. The first year of these courses covers a similar syllabus to the first year of MBBS, allowing students from non-medical backgrounds to grasp the basic structure and function of the human body. Depending on the institution, they are also exposed to central diagnostic laboratories, hospitals, and teaching methods. In diagnostic specialties like Biochemistry and Microbiology, principles of disease processes, diagnostic methods, laboratory testing procedures, quality control, and report interpretation form an integral part of the syllabus. Students of these courses follow a similar examination pattern to MD students and are evaluated by professors from medical colleges. Graduates with Medical M.Sc degrees are qualified to serve as teachers in non-clinical subjects, consultants in diagnostic laboratories, and scientists in research institutions.

Following the recommendations of the 1961 Health Survey and Planning Committee report, chaired by Dr. A.L. Mudaliar, clinical scientists with Medical M.Sc degrees were appointed as teachers in five non-clinical subjects. According to the MCI's Teachers' Eligibility and Qualification (TEQ) guidelines, these "non-medical" professionals can be appointed for up to 30% of the faculty positions in medical colleges (50% in Biochemistry). With a Ph.D. in their specialty, they can be promoted to the rank of Professor. Until 1998, these non-medical teachers could be appointed as Heads of Department (HODs), but this is no longer allowed.

In the past 5-10 years, there has been a rise in the number of MBBS graduates pursuing MD degrees in non-clinical subjects, increasing competition for teaching positions. With the MCI reducing the teacher-student ratio, job opportunities have diminished drastically. Non-medical teachers, who upheld education for decades, are now deemed unnecessary and unfit. Aggressive lobbying has led the MCI to propose reducing the intake of non-medical teachers to 15% (25% in Biochemistry) and then phasing them out completely after three years. This has alarmed non-medical teachers, as such changes would not only limit opportunities for

current students but also jeopardize those already in service. Once their eligibility is revoked, it could become easier to harass or even terminate them.

After the NMC replaced the MCI, it was expected to uphold the existing Teachers' Eligibility and Qualifications, as outlined in its draft regulations. However, under pressure from 'non-clinical doctors' and their associations, the NMC made a U-turn, reducing the permissible percentage of 'non-medical' teachers. In Biochemistry, the percentage was reduced from 50% to 15%, in Physiology and Anatomy from 30% to 15%, and in Pharmacology and Microbiology from 30% to 0%.

Aggrieved by this decision, the NMMTA filed appeals with both the NMC and the Ministry of Health and Family Welfare (MoHFW). With no resolution in sight, a writ petition was filed in the Delhi High Court. While the NMC rejected the appeal on technical grounds, the ministry directed the NMC to follow the MCI's 1998 TEQ guidelines until the trial's outcome. Initially, the NMC restored the permissible percentages for Anatomy, Biochemistry, and Physiology. However, after the NMMTA raised concerns with the ministry about the partial and selective implementation of the order, the NMC reverted to the full 1998 TEQ guidelines. However, this was stayed by the Delhi High Court following intervention by non-clinical doctors. Despite being listed 33 times since November 2020, the case remains unresolved.

These changes have left many 'non-medical' teachers jobless, unable to relocate to other colleges or regions, and facing non-renewal of contracts due to the new rules. The challenges they face seem unending. They are being unethically barred from participating in key training programs such as the Revised Basic Course Workshop in Medical Education Technologies (rBCW), the Attitude, Ethics, and Communication (AETCOM) module, and the Curriculum Implementation Support Program (CISP). Furthermore, by amending the Graduate Medical Education regulations, the NMC attempted to exclude them from serving as examiners. The NMC has also mandated that Ph.D. programs must be completed on-campus, despite the UGC recognizing part-time Ph.D.s. In addition, senior professors are being denied the opportunity to serve as Heads of Departments (HODs) under the NMC's regulations. These measures foster discrimination at the grassroots level.

The roles & struggles of the clinical scientists in the diagnostics:

For years, Medical M.Sc graduates in Biochemistry and Microbiology have worked as consultants in clinical diagnostic laboratories. In medical colleges, where they serve as Professors, they have trained MD students in laboratory diagnostics. These clinical scientists also work as biochemists or microbiologists in government laboratories. The National Accreditation Board for Testing and Calibration Laboratories (NABL), a leading accreditation agency, recognizes these degrees for roles in diagnostics, including signing laboratory reports.

Despite MCI's 2005 recognition of Medical M.Sc as a qualifying degree to sign laboratory reports, the council reversed its decision in 2017 due to pressure from lobbying groups. The

omission of Medical M.Sc from the diagnostic laboratory guidelines under the CEA has prompted clinical scientists to seek legal recourse. Thanks to their efforts in the courts and with the government, the NMMTA and like-minded associations have been able to restore the signatory rights in diagnostic laboratories through amendment in CEA guidelines. However, unresolved issues remain, including eligibility for laboratory director and infection control officer roles in hospitals.

The healthcare industry, including diagnostics, is largely dominated by medical professionals, leaving little room for clinical scientists to thrive. Despite the eligibility outlined in the CEA guidelines, many laboratories continue to unjustly deny signatory roles and positions as biochemists or microbiologists to qualified and skilled clinical scientists. As a result, some clinical scientists, in their desperation for employment, find themselves settling for smaller roles, including that of laboratory technicians.

The roles & struggles of the clinical scientists in the research:

Clinical scientists also have the option to work in research institutions, though opportunities are limited. Positions in quality control or as microbiologists in the pharmaceutical industry are also scarce. Genuine research is rare in most medical colleges; government institutions lack funding, and private ones are unwilling to invest. Research grants are few, highly competitive, and open to all. A career in research is almost non-existent in India.

As both Medical M.Sc. and MD postgraduates in these five non-clinical specialties compete for the same roles, fierce competition has led to lobbying by MD graduates to exclude Medical M.Sc. holders. In many research positions, preference has historically been given to medical candidates, with non-medical candidates only recently being considered for such roles. Additionally, non-medical candidates often face disparities in pay compared to their medical counterparts.

Advocacy on policy reforms: the government's role

While the government promotes the "Skill India" initiative, skilled clinical scientists are being denied opportunities in their specialized fields to accommodate one profession. The exclusion of this degree from the first schedule and the subsequent denial of opportunities have caused significant distress among the biomedical scientist community. There is no official record of the number of clinical scientists with Medical M.Sc degrees to date. Reintegrating this degree under the MCI (or the forthcoming NMC) would benefit them greatly. Including this degree in the Allied and Healthcare Professionals Council would be unjust, as the health ministry has clarified that Medical M.Sc courses do not fall under allied or paramedical health professions. Creating a council specifically for clinical scientists would be worthwhile, as it would not only regulate the course but also register those with Medical M.Sc/Ph.D degrees.

In many Western countries, non-clinical subjects in medical colleges are often taught by scientists without a medical degree. In the world's top ten medical colleges, non-medical teachers constitute up to 60% of the faculty in these subjects, highlighting that one does not need to be a doctor to teach non-clinical subjects. In most developed countries, MD courses are offered only in clinical subjects. In India, where the doctor-to-patient ratio is 1:1596, society needs more doctors to attend to patients rather than just teaching in colleges. Doctors who do not participate in direct healthcare represent a waste of professional resources. Organizations and associations, including the IMA, have made concerted efforts to portray Medical M.Sc graduates as unqualified. Phasing out non-medical teachers to accommodate medical teachers is both inappropriate and unethical.

India's contribution to research in basic medical sciences is inadequate. The government must formulate a policy to engage these scientists and provide the necessary funds and research infrastructure. It is time for policymakers in the government (health ministry and NITI Aayog) to form a committee to address the legitimate grievances of clinical scientists. The government must decide on the future of these courses and the scientists who pursue them.

To improve the quality of healthcare, medical education, and research, there must be a shift from a focus on academic qualifications to competence. Simply holding a specific degree does not guarantee competence, nor does its absence indicate incompetence. Policies must be based on training and certification. No single profession should claim a monopoly; society benefits when diverse fields collaborate, offering the best of all. It is time for the concerned ministries and departments to come together and resolve this issue. The need of the hour is inclusivity. The time has come to end policy paralysis and recognize our clinical scientists.



National M.Sc Medical Teachers' Association ® (NMMTA)
Delhi

www.medicalmsc.org