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Review article

Current Dilemmas in Medical Education in India

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A B S T R A C T

Medical education in India has undergone a rapid transition in recent years. Some of the developments have brought up issues which need deliberation. Since the viewpoints and needs of the stakeholders are dynamic, it is important to discuss the various aspects critically and with an open mind.

Keywords: Dilemmas, Medical Education, India

Introduction

Our country's medical science and health services have rapidly evolved and expanded in the last century. Comparatively, the changes in medical education have been slow over the years. However, the recent adoption of the Competency-Based Medical Education (CBME) curriculum has brought about a much-needed rationalization. The new curriculum is intended to bring about the transition from content-based to outcome-based technologies.

Many dilemmas need to be discussed and debated since the demands on the medical education system are changing with our country's social and economic development.[1] Some of these are addressed below. We do not have a definite or rigid opinion about each aspect. This article aims to raise some of these issues so that we continue to pay attention to them.

Do We Need to Increase the Number of Medical Colleges?

During Independence, India had only 29 medical colleges with just 1000 undergraduate seats annually. The number of colleges gradually increased to 100 in 1971 and 140 in 1970. The 'liberalization' of medical education saw a rapid increase of colleges and seats in the 90s onwards, to 381 medical colleges with 45,000 MBBS seats in 2015.

In 2022, the numbers have increased to 703 medical colleges and 1 lakh MBBS seats yearly (Figure 1).

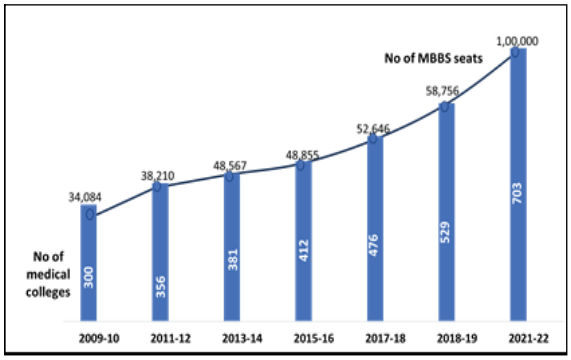

Figure 1.Number of Medical Colleges and MBBS Seats in India from 2009 to 2022

The government of India had announced the establishment of hospitals and medical colleges in every district through the Public-private partnership (PPP) model in the union budget 2020. This decision will result in an increase in the number of medical colleges in the next few years.

The justification for this rapid expansion was that the doctor-population ratio in India is inadequate compared to the World Health Organisation (WHO) recommendation. However, in December 2022, the government informed parliament that India's doctor-patient ratio currently stands at 1:834, better than the WHO-prescribed norm of one doctor per 1,000 people.

Even if it is claimed that the actual doctor-population ratio is lower than required, it must be realized that the geographical distribution of medical colleges worldwide does not mirror the regional population.[2] The main problem in India lies in the maldistribution of doctors and services among rural and urban areas. While 67% of the population resides in rural areas, the distribution of doctors is reversed. A study in Odisha revealed that only 17% of final-year government college students and 9% of private college students showed willingness to work in rural areas in the long run.[3] How the urban-rural discrepancy can be corrected is what needs a total re-think of the strategies.

Also, there is an unequal distribution of medical colleges and, consequently, the number of doctors in different states. Karnataka, Maharashtra, and Tamil Nadu have 35% of the total medical colleges in the country. An exploratory study found that while the national average density of medical colleges was 4.08 per 10 million population, there is a wide range of density in provinces from 0 (Nagaland and other areas) to 72.12 (Puducherry).[4] There is one doctor for every 503 people in Karnataka, compared to 2540 people in Telangana.

The disparity in the level of education imparted in different medical colleges also needs to be bridged. Simply increasing the 'production' of doctors will not solve the matter. The effect of this expansion in colleges and their capacity will need careful consideration since it will increase the number of medical graduates beyond the required numbers, apart from the disastrous outcome of compromising on the quality of education. As far back as 1910, Flexner, in a landmark report on medical education in the United States and Canada, noted that "…the country needs fewer and better doctors; and that the way to get them better is to produce fewer".[5]

Should We Allow 200/ 250 MBBS Seats in Any Medical College?

To increase the number of graduates, we need to create more medical colleges and/ or increase the seats in each college. Setting up a new college is costly compared to other disciplines since NMC mandates elaborate norms regarding land, infrastructure, faculty, staff, facilities, and a well-equipped hospital with high occupancy. Filling faculty posts in all departments with competent, motivated teachers is challenging. It is not easy to offset expenses through student fees, which are strictly regulated.

Increasing the capacity of a college is fraught with the danger of diluting the standard of education.

The competency-based curriculum of NMC demands a focus on hands-on learning, small group discussion, focus on attitudes, ethical approach, and communication skills, and a robust formative and summative assessment system. Given the existing resources and strength of faculty, how quality can be maintained with a large number of students is difficult to reconcile. The NMC has now set a limit of 150 seats for any new medical college to be set up. This decision could also be made retrospectively applicable to the existing colleges in which more than 150 seats have been permitted.

Do We Need More Generalists or Specialists/ Superspecialists?

As per the data released by the Ministry of Health and Family Welfare, the total number of postgraduate medical seats in government, private, and deemed/ central universities in India for the academic year 2023-24 is 45337, which is less than half the seats for graduation. This implies that a majority of the doctors are generalists. The overwhelming health problems in the country are related to nutritional deficiencies, infections, infectious diseases, and complications of non-communicable diseases, most of which are preventable and need basic interventions. Managing such issues requires basic health facilities and a generalist. At the same time, an individual doctor always wants to specialize in a suitable clinical discipline and not remain a mere MBBS doctor with little prospects of career progression. Advances in technology and digitization, artificial intelligence, and machine learning will affect healthcare practice in the future. Modern medical graduates need to be taught some of these tools to utilize them for better patient services.

The choice between opting to be a generalist or a specialist is quite a dilemma for all the stakeholders. In a survey of fresh medical students of both public and private colleges in Madhya Pradesh, most of the students (91%) wished to pursue a specialization after their graduation. They intended to work in urban areas (64%).[6] A happy medium needs to be found.

Should We Allow Flexibility in the Curriculum or Keep it Strictly Uniform in All Colleges?

The current Competency-Based Medical Education (CBME) curriculum is highly structured with a rigid time schedule

and detailed teaching-learning methods and assessments, allowing hardly any innovation or experimentation. This is undoubtedly aimed at uniformity and standardization among medical colleges nationwide, which has been a major concern in the past.[7] It is hoped that it is meticulously carried out in all places.

Since the end product is to be assessed through a nationwide test, one wonders why flexibility, innovation, and experimentation are not permitted in the process and methods. Many excellent colleges have highly motivated and skilled faculty and administrators possessing innovative and progressive ideas.

Several models of medical education already exist in the world, including Problem Based Learning which blurs the compartmentalized and strictly discipline-based medical education imparted in India. Although there is an attempt at vertical and horizontal integration in the CBME curriculum, the structure of the course and the assessment pattern do not allow the complete adoption of comprehensive problem-based learning. One wonders if a few excellent medical colleges could be permitted to adopt their own curricular structure.

We keep talking about learner-oriented, problem-based, community-centered, and integrated education, but our rigid curriculum restricts this methodology's scope. The very structure of the course, dividing it into discipline-based 1st, 2nd, and 3rd 'Professionals' with corresponding subject-wise examinations, rules out complete integration.

An alternative pattern of curriculum having an initial period covering basic concepts of each discipline, followed by organ-based or system-based modules incorporating common clinical problems comprehensively dealing with related aspects of various specialties, would permit better integration. The assessment would also need to be adapted accordingly. Are we ready for this drastically different curricular approach?

Should We Involve Specialists Outside Medical Colleges to Teach Medical Students?

Gone are the days when academics, research, and advanced clinical techniques and facilities were exclusively in the domain of medical colleges. Today, many brilliant doctors go for other options and excel in their field of medical practice. They conduct research, publish scientific papers, and give excellent presentations at conferences and CME programs. Why should we not utilize their skills and experience for medical education? Involvement in teaching undergraduate and postgraduate students through guest lectures, clinical classes, resource sharing, and research participation can fruitfully supplement teaching imparted by full-time faculty.

Is the Relatively New Competency-Based Curriculum Serving its Purpose?

The necessity of curricular reform in response to the current needs of society has been a subject of ongoing debate for a long. A curriculum must address the biological, psychological, social, and cultural aspects of medicine, with an opportunity to develop leadership, teamwork, and communication skills among the students.[8] An AETCOM (attitude, ethics, and communication) module has been introduced for the foundation course. This is a step in the right direction since it emphasizes the importance of soft skills right from the beginning. While the CBME curriculum aims at very relevant goals, it is too early to say whether it is producing an Indian Medical Graduate possessing the desired qualities. The previous system, too, produced outstanding clinicians who have excelled in their chosen fields. Only time will tell whether the new curriculum will contribute to producing better doctors.

Is the National Eligibility cum Entrance Test (NEET) the Best Way to Select Students for Admission?

Are we assessing the aptitude and the right attributes in the aspirants for becoming a doctor? Potential for developing qualities in terms of the domains of knowledge, skills, and attitudes needs to be identified right at the time of admission to the medical course. Some of these cannot be satisfactorily assessed in the current selection process. The vital aspects of good behavior, compassion, communication skills, and a sound personality are not touched in the existing admission criteria through NEET. The validity of the test is sacrificed at the altar of objectivity and feasibility. Merit is determined simply based on knowledge, mainly at the level of recall and, to some extent, understanding. We need to learn and adapt from the American system of determination of merit, which involves using elaborate tools to test soft areas of ability that can more closely predict the potential of functioning as a competent doctor in the future. However, implementing this on the massive scale that would be required in a heterogeneous country like India, as well as eliminating subjectivity and bias, would be a challenge.

During the graduate course, the government has proposed a common final year examination called the National Exit Test (NEXT), which will act as a licentiate examination to practice medicine and serve as the criteria for admission to postgraduate (PG) medical colleges. We need to work on this test more diligently since the education provided in the colleges will align with this examination's level and curriculum.

Are we Attracting the Best Students to the Medical Profession?

The social environment today, especially the rising incidence of violence and harassment of medical personnel, lack of trust, and deteriorating doctor-patient relationships, has dissuaded many youngsters from choosing medicine as a career. The tough and long course is demanding and

stressful, which many young students find unattractive. The lifestyle of a typical doctor, with little scope for enjoyment and relaxation, tends to put off modern kids who would rather have a comfortable, glamorous lifestyle. Much must be done to bring the best bright students to the medical field. Getting back the glory of the profession and safeguarding the legitimate interests of the doctors will go a long way in attracting the right youngsters.

Are We Able to Ensure a Good Career Path for Medical Graduates?

Inadequate planning has led to the present situation where, on the one hand, there are doctors trained in high technology medicine, which is lucrative, through treating the few patients with the ability to pay, while on the other hand, doctors are trying to deal with the basic needs of the majority of the population.[9] The latter group is largely dissatisfied because the salary structure, working conditions, facilities, housing, social interaction, general standard of living, and career prospects are far from satisfactory, especially in rural areas. The fate of a fresh MBBS graduate is often pathetic. Apart from 1 lakh MBBS graduates, 20000 Foreign Medical Graduates (FMGs) come to India annually. Even if only 16% clear the FMG exam, the number of new doctors is huge. The government, the largest employer, provides about 1750 vacancies every year for doctors to work in Primary Health Centres, and a similar number are employed yearly by various government agencies like Railways, Employees State Insurance (ESI), Public Sector Undertakings (PSUs), army and other institutions. This leaves most MBBS doctors looking for reasonable jobs every year.

Some graduates can join postgraduation, not necessarily in the subject of their choice. Still, even with the increase in PG seats, many MBBS doctors are unemployed or engaged in frustrating work. The backlog of unfilled PG seats is visible in the 1 lakh candidates appearing for the NEET PG entrance exam every year. Some of the unsuccessful PG aspirants do join some private hospitals as resident doctors for a short period, but this is hardly a career option.

Should We Try to Reduce Students' Stress Levels or Just Focus on Academics?

Researchers have been trying to understand the trends, causes, and solutions for the mental and physical hardship in the medical fraternity. Poor health and reduced life expectancy in doctors is a matter of great concern. Medical students must be prepared for the challenges they will likely face. The medical course itself is quite demanding and inherently stressful. Counseling, welfare policies, extracurricular activities, and recreational facilities need to be incorporated into the program. Serious thought needs to be given to reducing the academic load on the students. The subject's 'Must Know' component should be clearly defined, and several unnecessary portions of the curricular content could be done away with at the undergraduate level.

There are no ready answers to all these dilemmas. We must, however, remain open to ideas and suggestions to constantly strive to make the medical education system in our country as relevant, appropriate, need-based, and valid as possible.

Conflict of Interest: None

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