

Changing Trends in Medical Education: Current Challenges and Future Perspectives

CHANGING TRENDS IN MEDICAL EDUCATION

Currently medical education is facing multiple challenges. We are observing rapid changes in healthcare needs of the society in recent times which demands modulation in our medical education system. Competency-based medical education (CBME) is an answer to this as in CBME the whole focus is towards outcome based approach and is more suitable for today's societal needs.

Other major changes in medical education include emphasis on usage of technologies and student centric approach in day-to-day learning. Interprofessional education is need of hour where integrated approach involving students of diverse discipline in solving patient related issues need to be understood (Fig. 1.1).

These aspects of changes in medical education are discussed in greater detail in the following paragraphs.

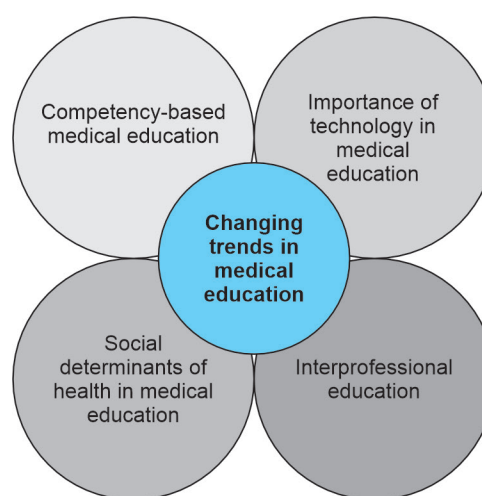


Fig. 1.1: Changing trends in medical education

a. Competency-based Medical Education

In GMER 2019, CBME curriculum was proposed by MCI (recently revised by NMC in Sep 2024) which focuses on society need and accordingly modulation in medical education system is proposed which is based on acquiring specific skills and knowledge.

b. Importance of Technology in Medical Education

In addition to traditional teaching techniques like class room lectures and real patients bedside teaching, recently we have observed the importance of online learning, usage of simulations in medical education.

Future trends in medical education include blended learning, more student-centered learning, curricula mediated by various technologies and more use of online learning

resources and assessments. The digital transformation is expected to offer medical students with the opportunities for technology-enhanced learning and the learning environment that promotes lifelong learning.

However, there are several challenges for this digital transformation, which include faculty development on online teaching skills, creation and sharing of online resources, and effective design and implementation of online assessments.

c. Social Determinants of Health in Medical Education

It is important to emphasize upon the social factors that determine the health and these factors must be addressed in medical education. We need to prepare doctors who play meaningful role in the community and provide healthcare facilities which cater the need of the community. Current educational strategy is mostly didactic, fragmented which is not providing integrated approach to commonly encountered health issues. To train healthcare students about value based care it is important to adapt to medical education curricula which is training the next generation healthcare providers in such a fashion that their expertise meet the need and expectation of the society.

d. Interprofessional Education

Healthcare approach is often multidisciplinary and interprofessional, hence it is important that next generation healthcare professionals are trained in a multidisciplinary fashion where students of diverse courses are taught in an integrated fashion.

CURRENT CHALLENGES IN MEDICAL EDUCATION

Medical education is facing lot of challenges due to advancements in science and technology as well as societal change. The curriculum is increasingly out of synch with new needs in teaching content and medical practice.

Curriculum, faculty and students are three important dimensions in any educational program. Unfortunately current medical education is facing challenges in all these three dimensions which are addressed in the following paragraphs (Fig. 1.2).

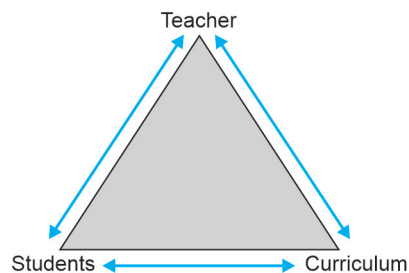


Fig. 1.2: Current challenges in medical education

a. Challenges in Curricular Aspects

To meet the expanding healthcare demand and to simultaneously accommodate rapidly advancing technologies, field of medical education need to undergo dynamic transformation. This demands significant changes in health professional education and making it more student centric and community need based.

The path to significant curricular reform is difficult because of a variety of factors, including deeply entrenched values, the natural resistance to change.

Curriculum designer have communicated the need of clinical reasoning, and problem-solving approach over the in-depth learning of many of the basic science subjects which are more of the theoretical importance. Strong emphasis is placed on integrating basic science courses and providing clinical experiences early in the curriculum under the

heading of ECE (early clinical exposure) which certainly is the newer challenge in integrated curricula. The main purpose of vertical and horizontal integration which is being emphasized in the newer curricula is to break the barrier between basic and clinical subjects and make the medical education more relevant for problem-solving approach.

b. Challenges Towards Faculty Aspects

In spite of rapid changes in the medical education in recent years, it is very unfortunate to notice that faculty members are very reluctant to change their mindset and are not much in favor of shifting from traditional teaching methods to newer technologies in medical education. The reason for this behavior is mostly due to their comfort in their traditional teaching style and as per their statement “the lack of time and resources.” Fulfilling multiple demanding professional and personal roles are other challenges which act as a barrier for improvement in medical education.

c. Challenges Towards Student Aspects

Present students carry very different traits, for example, they generally have low confidence and they are reluctant to put hard work in their educational journey. Student in present era faces the challenge of information overload and many a times get confused by availability of multiple resources of learning (Fig. 1.3). It is often seen that many of them are dependent on online platforms for crisp information on the topic without approaching the topic in a more systematic and conceptual manner. Many of the medical students are opting for elective perusal online of previously recorded lectures and the use of various study aids while minimizing direct classroom interaction with professors.

They are reluctant to read standard textbooks on the subject, rather they rely on readily available notes which give them the material just enough to pass the exam (Fig. 1.4).



Fig. 1.3: Today's student is confused with information and cognitive overload



Fig. 1.4: Student studying at online platform

In conclusion, it is stated that in spite of current challenges in medical education, the pace of required steps being taken to convert traditional teaching to learner centric teaching has been very slow and need of rapid transformation need to be stressed upon. Being medical educationist, I strongly believe that it is the time for us to take the responsibility of bring out changes in such a fashion as to train healthcare professionals who are future ready and meet the global healthcare expectation. We need to prepare a platform where healthcare professionals are not only well-prepared and competent but also innovative, resilient, and ready to tackle the world's most pressing health challenges with vision and excellence.

FUTURE PERSPECTIVES

a. Need of a Standardized Curriculum

Efforts to standardize medical curricula globally are essential for ensuring consistency and quality in medical education. By aligning educational standards, we can produce graduates with comparable competencies and skills, regardless of their geographic location. This harmonization is crucial for facilitating global mobility of healthcare professionals and ensuring high standards of patient care worldwide.

Standardized curricula also enhance the ability of medical professionals to collaborate across borders, share best practices, and contribute to international healthcare initiatives. By adopting common educational frameworks, we can better prepare students for the challenges of global health.

b. Fostering International Partnerships

Collaborative partnerships with international institutions are becoming increasingly prevalent. These alliances allow us to share resources, expertise, and best practices, fostering innovation and improving educational outcomes. Joint programs and exchanges provide students with diverse learning experiences, enhancing their understanding of global health issues.

International partnerships also enable faculty development and research collaborations, further enriching the academic environment. By working together, we can address common challenges, develop innovative solutions, and contribute to the global advancement of medical education (Fig. 1.5).

International rotations and exchange programs expose students to different healthcare systems, cultural practices, and medical conditions. These experiences broaden their perspective, improve cultural competence, and enhance their ability to work in multicultural environments.

c. Telemedicine

Telemedicine has emerged as a critical component of medical training. The COVID-19 pandemic highlighted the importance of remote healthcare delivery, and we have adapted our medical education accordingly. Training in telemedicine equips students with the skills needed to provide effective care in a digital age, ensuring they are proficient in virtual consultations, remote monitoring, and telehealth technologies (Fig. 1.6).

Integrating telemedicine into the curriculum prepares future healthcare professionals to deliver care in diverse settings, including rural and underprivileged areas. This trend not only expands access to healthcare but also enhances the flexibility and responsiveness of medical services.

d. Expanding Opportunities for Studying Abroad

Globalization has increased opportunities for medical students to study abroad and gain diverse clinical experiences. International rotations and exchange programs expose students to different healthcare systems, cultural practices, and medical conditions. These experiences broaden their perspective, improve cultural competence, and enhance their ability to work in multicultural environments (Fig. 1.7).

Studying abroad also fosters personal growth, resilience, and adaptability the qualities that are essential for successful medical practice. By immersing themselves in



Fig. 1.5: International partnership: These alliances allow us to share resources, expertise, and best practices, fostering innovation and improving educational outcomes



Fig. 1.6: Thanks to telemedicine, expert consultation is now within reach of the common man



Fig. 1.7: Global partnership for education

new environments, students develop a deeper understanding of global health challenges and learn to navigate complex healthcare landscapes.

e. Increased Focus on Research Opportunities

There is a growing emphasis on providing research opportunities for medical students. Engaging in research helps students develop critical thinking, problem-solving, and analytical skills. It also fosters a culture of inquiry and innovation, encouraging future healthcare professionals to contribute to medical advancements.

Research involvement enhances students' understanding of scientific methodologies, evidence-based practice, and the importance of continuous learning. By participating in research projects, students can explore their interests, contribute to knowledge generation, and prepare for academic or research-oriented careers (Fig. 1.8).

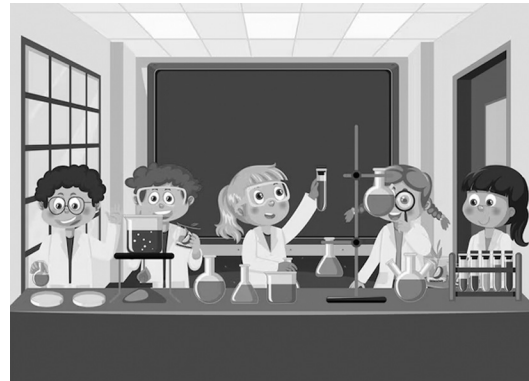


Fig. 1.8: Students involved in research activities

f. Harnessing Advanced Technology in Training

The use of advanced technology, such as artificial intelligence (AI) and robotics, is revolutionizing medical education. AI-driven platforms offer personalized learning experiences, adaptive assessments, and data-driven feedback, helping students identify areas for improvement and tailor their learning paths. Robotics provides hands-on training in surgical techniques, allowing students to practice procedures with precision and safety (Fig. 1.9).

Simulation technologies, including virtual reality (VR) and augmented reality (AR) offer immersive learning environments where students can practice clinical skills, visualize complex anatomical structures, and simulate patient interactions. These technologies enhance experiential learning, improve retention, and boost confidence.

Finally, author wish to summarize that as we stand on the cusp of a new era in healthcare, our commitment to these global trends in medical education will continue to shape the leaders of tomorrow. By embracing standardized curricula, fostering international partnerships, integrating telemedicine, expanding study abroad opportunities, emphasizing research, and leveraging advanced technology, we will be able to not just prepare our students for the future, we can empower them to lead it.

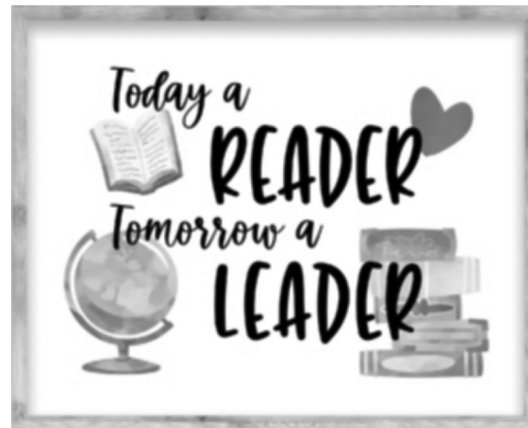


Fig. 1.9: Today's student tomorrow leader

FURTHER READING

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