

Medical Education in India- a Perspective

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I. Introduction

The need for reorienting medical education to the health care needs of the country is a worldwide phenomenon¹. Many medical colleges around the world and in India fall short of delivering a curriculum that is responsive to the health care needs of the community². This has triggered debates and discussion about the medical education system in India resulting in recommendations for curricular reforms, which are need-based and directed towards meeting the health care needs of the country^{3,4}

What are the goals that need to be achieved through reorientation ?

- Goal.1. Standardize the learning outcomes and general competencies and provide options for customizing the learning process, providing opportunities for experiences in research, policy making, education, etc., reflecting the broad role played by physicians.
- Goal.2. In practice, physicians must constantly integrate all aspects of their knowledge, skills and values. They should acquire skills to educate, advocate, innovate, investigate and manage teams.
- Goal.3. Medical schools and teaching hospitals should support the engagement of all physicians-in-training in inquiry, discovery and systems innovation.
- Goal 4. Development of professional values, actions, and aspirations should be the backbone of medical education.

Some of the areas where reforms have been carried are Curricular Strategies; Teaching and Learning; Student Assessment; Faculty Development; Medical Education Research; and Developing Health Professions Education as a Recognized Field.

Curriculum strategies

Over the years medical school curricula is overloaded with information with disregard to its application for the health care needs of the society. Many recommendations have been made in the past to make the curriculum more responsive to the needs of the society⁵⁻⁶.

The Medical Council of India in the recent vision 2015 document recommended curricular reforms for undergraduate which include foundation course, integration, early clinical exposure, student doctor method of clinical training, electives, skill development and training, secondary hospital exposure⁷⁻⁸. Many medical colleges in India have already introduced curriculum innovations in the undergraduate curriculum such as foundation course⁹⁻¹⁰, integration and early clinical exposure¹¹⁻¹³

The Medical Council of India in its Vision 2015 document had recommended a curricular shift of the curriculum from traditional to competency based for the undergraduate medical students, with introduction of a core curriculum consisting of ethics, professionalism, modern teaching learning technology, good clinical practices, research methodology and communication skills⁹⁻¹⁰. In spite of the recent trends in the curricular strategies, the curriculum is still not responsive to the needs of the country. It is important that the curriculum incorporates principles of social accountability of medical education. To ensure this happens accreditation of medical colleges should be based on it.¹¹⁻¹³

Teaching and Learning

The hallmark emphasis of medical education in traditional India has been the one to one teaching and attention, which the student received from the teacher. However, over the years the primary mode of teaching and learning has been through didactic lectures. Studies have shown that interactive teaching styles and small group discussions are more popular and allow better knowledge retention than didactic lectures¹⁴. The recent shift has been towards interactive lectures and case based discussions in large and small groups. The basic course in medical education technologies for medical teachers, a Medical Council of India initiative, has implemented sessions on how to introduce interactivity in lectures and small group discussions in addition to other teaching learning techniques and assessment methods¹⁵.

The Medical Council of India in its Vision 2015 document has proposed a greater emphasis on self directed learning for medical undergraduates⁹⁻¹⁰. Problem-Based Learning (PBL) is recognized as a teaching learning method which enhances integration of learning, self directed learning providing relevance and context to the subject¹⁶⁻¹⁸. It is mandatory that Teaching and Learning be aligned to the learning objectives for the medical curriculum, which should be developed based on the health needs of the community.

Student Assessment

Assessment plays an important role in helping learners identify their own learning needs¹⁹ and serves as a tool for student motivation, retention and transfer of learning²⁰. Student assessment methods in medical colleges in India are traditional with essays, short notes, short structured answers and multiple choice questions⁵. Evidences for validity such as assessment are to be aligned to the learning objectives, representative sampling of performance done, written blueprint derived before assessment is implemented, students are familiar with the assessment format, quality control of scores, variety of assessment methods used, uniform test and procedure for all and explicit criteria in judging successful performance²²

Some newer assessment methods such as Mini Clinical Evaluation Exercise have been tried by some medical colleges. Other forms of assessment such as Objective Structured Clinical Examination (OSCE) and Objective Structured Practical Examination (OSPE) is being used by many colleges for formative assessment. Some universities such as the Tamil Nadu Dr MGR University has made OSCE/OSPE mandatory in the university examination for the undergraduate medical students. In 1997 the Medical Council of India regulations on Graduate Medical Education introduced Internal Assessment which is a continuous assessment method²³. It is both formative (purpose is to improve) and summative (portion of the marks is used for the final university examinations) in nature. However, it has many limitations in its implementation such as assessment is limited to the end of the course and practical skills as well as soft skills such as communication skills, ethics and interpersonal skills are not adequately and uniformly assessed.²⁴ The internal assessment are recommended to test wide range of competencies, improving evidences for validity and for promotion of learning²⁴.

It is well known that assessment drives learning. As far as the student is concerned assessment is the curriculum. However, one of the challenges is that assessment is not aligned to the learning objectives. The Medical Council of India outlines a syllabus for teaching undergraduate medical students²⁵. However there are no well stated learning objectives. Many institutions have formatted their own individualized learning objectives in various disciplines and hence it is not uniform and standardized across all the medical colleges in India. The outcome is that the teacher, students and the examiner are not clear about the learning objectives in a particular subject which is a big hurdle in aligning assessment to learning objectives and thus limits the purpose of assessment. It is recommended to review the undergraduate curriculum and develop well stated learning objectives in alignment with the health needs which should be then informed to the students, teachers and the examiners.

In a move towards ensuring internship be a useful educational experience, the Medical Council of India in its Vision 2015 document has recommended acquisition and certification of essential skills at the end of internship to ensure uniformity of basic level of competencies across the country and uniform standards for the Indian Medical Graduate. For the post graduate students, it has also recommended continuous formal structured assessment, skill based training with development of skill centres and maintenance of log book which would be a day to day account of the educational activities of the post graduate duly assessed by the teacher.⁹⁻¹⁰ Some of these recommendations are already in practice in medical colleges but need to be uniformly implemented across all the medical colleges.

Faculty Development

Faculty development is well recognized globally as being critical for successful implementation of curricular reforms²⁶⁻²⁹. The establishment of the National Teachers Training Centres (NTTC) as early as 1974 was the first formal structured program in faculty development.²⁹ However, these programs were not adequate to meet the educational needs of India, which has the highest number of medical colleges in the world (almost 300 medical colleges) and thus a large number of medical teachers. The NTTC programs were initially supported by the WHO grants and fizzled out once the grants stopped. Only the JIPMER Pondicherry program still conducts the national training program for the medical teachers annually.

The Foundation for Advancement of International Medical Education and Research supports faculty development in India through a two-year fellowship program in medical education offered by its three Regional Institutes in India.³⁰ The Maharashtra University of Health Sciences has established the Department of Medical Education in 2007, which conducts basic course, advanced courses and other thematic workshops in medical education for the faculty of all the health professional colleges affiliated to it³¹. The Medical Council of India recommended in 1997 for medical colleges to establish medical education units with the purpose of training teachers, conduct research in medical education and serve as a resource centre for

continuing medical education^{25,33}. The medical education units were duly established subsequently but most of them are non-functional today. The Medical Council of India initiative in 2009 recognized Medical Education Units of some medical colleges as Regional centers (RC) for national faculty development, which has picked up momentum with increase to 16 Regional centers today. The RC conduct faculty development programs as three days basic course in medical education for the colleges allocated to them with the purpose of sensitizing and providing the faculty with some knowledge and skills in the principles of teaching and learning, assessment and curriculum reforms¹⁷. In the recent meeting of the conveners of the Regional centre at MCI Delhi, recommendations have been made for conducting advanced courses in medical education. These initiatives should now be taken to the next step of using faculty development programs to help and support medical colleges to implement educational innovations and reforms aligned to the health needs of the country.

Medical education research

Medical education research include research in any area of medical education such as teaching and learning, students assessment, curriculum development, faculty development, evaluation research etc. Even though it is not as well established as the basic science or clinical research, educational research is being actively carried out globally³²⁻³³.

As early as 1997, the Medical Council of India had recommended establishing medical education units. One of the purposes of the MEU was to carry out educational research^{25,33}. However, in India this has been a grossly overlooked entity. Educational research output in India is few in number, generally done in isolation with limited application and follow up. Faculty doing advanced courses, fellowships, masters and PhD in medical education do research projects/ thesis³⁴⁻³⁸. Over the past few years this number is slowly increasing but is still a drop in ocean compared to the large number of faculty and the needs in India. The number of educational projects done by faculty is increasing over the years as was reflected in the posters presented at the third national conference in health professions education in 2011.³⁹

The way forward is to set up systems of educational research, practice collaborative educational research, establish frameworks for scientifically conducted rigorous evaluation research and implement them. The data generated will tell us whether the current and proposed educational reforms are useful in our setting. Educational research will guide us in the right path to implementing reforms in medical education to meet the healthcare needs. However, faculty have to be supported in terms of funding and other resources to carry out useful, meaningful, scientifically rigorous educational research.

Developing health professions education as a recognized field

The word medical education has been expanded to health professions education globally to encompass all the health professionals. Various health professionals in many allied fields cannot work in isolation. They have to work as a team to provide health care. In many countries across the world health professions education is recognized as a field. Faculty are recognized and promoted based on the educational research activities, publications and other forms of scholarship in education³⁹⁻⁴¹. The recommendations made at NCHPE 2011, has been collated as the concluding statement of NCHPE 2011³⁹⁻⁴¹.

II. Conclusion

The need of the hour is a socially accountable medical education in India directed towards linking it with the health care needs of the country. The recent competency based medical education has got guidelines that seem to integrate and initiate changes in medical education and train faculty in implementing the recommendations given by the National Medical Education Board, an authority which has replaced in MCI.⁴²

Competency-based medical education (CBME) relies on the attainment of observable abilities by the students in a time-independent but learner-centered manner. The emphasis is on outcomes; in other words performance and practice of Medicine.

Assessments are aligned to workplace-based assessments including direct observations and daily logs.

Our system of medical education was rooted in British Medical Education system. It took years to change that age old system of medical education to CMBE. But CMBE also seem to rely on Medical education tools and directives developed by western system of medical education. Indian medical student is a unique learner rooted in our culture and tradition. Therefore, change in medical education is required but it needs to focus on the needs and requirement of Indian Patient's welfare. In the name of integration we seem to overlook the importance of basic medical sciences. Basic Medical sciences are the foundation stone of Medical education which train the student to have a very good knowledge base to focus on other components like knows what, knows how and does domains of learning.

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