medical education and training: implications for india

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The Curriculum

Unlike other countries in the World, MCI regulates a centralized curriculum for the undergraduate and post-graduate courses. In the US and UK, deciding the medical curriculum is the prerogative of the Universities. Medicine has a vast and comparatively wider array of subjects to be studied. These subjects have both clinical and non-clinical distinctions.

In undergraduate studies, the students are exposed different subjects, which are divided based on the hours of lectures, case studies and practical hours. The sole dependence of the undergraduate students rest on their respective professors, who remain busy practitioners burdened with administrative duties. This makes it very difficult for the students to get their queries and doubts cleared. The non-clinical departments like Anatomy, Physiology, Biochemistry, Pharmacology and Microbiology, where theory is emphasised, are being slowly phased out in the West; replaced by elements of genetics and molecular biology but nearly 1480 course hours have been dedicated by the MCI for the practicals in such subjects. Is it worth it? This uneven and insufficient cocktail of subject-exposure deprives the students of both clinical and research expertise. The undergraduate students are rarely posted to emergency wards and therefore lack the knowledge of how to deal with critical care. Many argue that there should be a proper interface between the teaching module by balancing patient contact and associated classroom teaching. Learning the diagnostic and interventional techniques can be brought about only by the contact with the patient and in-ward studies. The teaching and interpretation of further diagnostic measures like Case study, Report study, Therapeutic learning, history taking skills and short listing of differential diagnostic measures can be carried out in class rooms. In the situation where there is lack of facilities and resources it has been seen that peer-assisted learning provides a tangible solution to the problem of clinical teaching skills to a very large group of students: Indeed, it is a norm worldwide. This can work quite well in the medical colleges in small cities with comparatively less busy work environment but can prove fatal in the present day case scenario wherein the senior medical students are insufficiently and poorly trained. The undergraduate students should be posed with questions based on the cognitive skills and problem solving exercises from the case studies. Perhaps, age old memory based MCQs should be replaced.

The emphasis on problem based teaching, case based questionnaire, clinical-rounds, distinction in class room and in-ward based teaching and developing a centralized promoting examination could prove to be a vital checkpoint for the eligibility and accuracy of the medical graduates. As quoted by Sircar: When an ill-trained MBBS doctor begins his independent private practice, he poses a greater hazard to the patient than the ailment he purports to alleviate.

Some of the deficits in skilled human resources can be overcome by astute planning and by way of integration of nursing services with the medical curriculum. It is almost a requirement in a resource starved country like India that the semi skilled individuals are trained in primary health care and mobilized for health care, especially for rural health care. The deficiency of medical health workers can be met by upgrading the training and standards of paramedical and nursing care. The nursing community worldwide, is fairly experienced and well equipped with various medical procedures like deliveries, midwifery, vaccinations, first aid, primary infections like cough, cold and fever and can perform small interventional surgeries like removing foreign bodies from the eye and nose etc. They can act as full-fledged doctors and take care of the ground level requirements and ailments of the medical field at the primary level. This is very well elucidated by the example of Norwegian nurses running a hospital successfully.

The gaps in teaching because of the time and staff bound discrepancies can be tackled by the intervention of IT in medicine. Training programs and classroom based courses could be launched through internet portals, as already followed in the west. Such a model has been developed by Prof Rakesh Biswas and widely known as the user driven health care system developed at Bhopal's People Medical College. Diplomas involving Telemedicine, Teleradiology, and other paramedical courses could be encouraged as much as courses on Translational medicine as discussed below.

There needs to be re-organization of fee structure in medical colleges. The imposing of heavy Fee-structure on private colleges and relatively stringent regulations have not been matched by fees in Govt Institutes that are purely funded by national tax collected from various states. Like the West, a medical graduate student could be encouraged to pay up for the undergraduate fees and repay it at a flexible rate of interest once he/she begins to earn. The in-service internship mandating service in the villages and remote areas by Ministry of health and family welfare is an admirable step in this direction. This will not only encourage the optimal utilization of tax payer's spending in healthcare but also retain the health workers in the country who begin to write ECFMG tests soon after being trained from national resources.

Mobility between medical and research fields

As elucidated earlier, both undergraduate and post graduate students lack the complete knowledge about the pathophysiology of ailments and this leads to incompetence and lack of innovation in diagnosis and therapeutics, thus impacting sustained enthusiasm in treatment of patients. Opportunities for both MBBS and MD/MS students should be provided to pursue core biomedical research. Both clinical and non-clinical residents should look forward to research as a new frontier for translating knowledge for better affordable healthcare. Likewise, non-clinical researchers i.e. PhD trained personnel, pursuing core scientific research, should exhibit equal enthusiasm in pursuing MD under a two year hospital training under innovative "to be launched PhD MD programs" and advance knowledge for utilization in health care delivery or translational research. Of course this will require bold changes in policy. Tailor made jobs should be simultaneously implemented in research or medical institutions at the faculty level such that these uniquely trained individuals could be recruited after completion of their courses.

Encouragement of medical Entrepreneurship

Innovation is the key to deliver affordable healthcare products in any developing country, including India. Entrepreneurship has a major role to play in medical education in India. Innovations combined with entrepreneurial strategies can bring about a radical reform in reviving the economics of medical education. New healthcare products could be generated as per the needs of the country which should be cost effective and consumer friendly unlike the international and multinational brands. There is an urgent need to include training in innovations in medical entrepreneurship. This can be achieved by chalking out a vibrant program developed with collaboration of technology incubators from different disciplines with the help of industrial tie ups.

Human resource management

The biomedical engineers and lawyers are exposed to labor-management or resource-management at some stage or the other. The knowledge of medical professionals is limited by the exposure to manage patients on an individual basis without much exposure in professional management. There is generally no lateral advancement of knowledge among medical graduates for the administrative acumen applicable to medical education and training. The Department Heads in general need to manage the paramedical staff, medical staff, healthcare and diagnostic duties based on adhoc experiences rather than a structured module.

In already resource starving situations, the lack of vision of deployment of skilled resources in optimizing OPD productivity requires the statutory bodies to review inadequate allocation for human resources for patient care. The above problems can be sorted out and optimized by involvement of educationists, professional managers, physicians and social activists. An assurance of the quality in management of medical institutions can be achieved by the audits of the performance of health care workers. Recently, Times of India published an interesting analysis of working hours of senior physicians in National Medical Institutes, arguing that majority of faculty at such institutes has considerable time for innovation and research, owing to a few OPD hours as per week, due to rotation duties coupled with innumerable vacations, conferences etc. An annual audit of deployment of healthcare workers should be implemented either centrally or by an institution which should govern the smooth running of the hospital based on patient feedback.

Re-organization of medical education managers

Keeping into view the drawbacks in the current managerial system in the publically managed medical education systems, there is an urgent need for re-organizing the panel. The medical education managers and the board need to be re-organized. The panel should constitute members from different spheres rather than medicine alone. A medical institution is a site with plethora of activities with different elements of society working hand in hand. Hence, a proper reconstitution of the statutory body is urgently required. The people form different spheres who constitute the panel, with qualifications as diverse as MD, PhD, Judiciary, Law and civil society have now been incorporated in the newly reconstituted MCI.

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