Preamble

Curricular courses of medical education in India have been introduced in India before independence. In post-independence period, the whole arena of medical education was streamlined with the establishment of Medical Council of India. The philosophy of the ‘Social welfare state’ helped budding of a huge number of government medical colleges in different states; some from the central government economic support and others from the state levels; some even received the prestige of autonomous institute. In the second half of the last century, entry of private investors in the health care industry and medical education system changed the scenario radically with mushrooming of tertiary level medical care centers and medical colleges.

Where We Stand as of Now

Medical Council of India currently (2014) fully recognizes 381 Medical Institutes, with a total capacity to train 50,078 Indian medical graduates per year. In the postgraduate level, there are different shades of training across the country with varying numbers of medical institutes catering different courses, namely Super Specialty Courses: 51; Ph.D. Courses: 45; Postgraduate Diploma Courses: 61; Postgraduate degree courses: 78; Others: 21, leading to a total seats of 24,918. With addition of postgraduate DNB seats of three thousand plus per year makes the capacity to train 28,000 plus postgraduate per year including so called super-specialties under the regulatory bodies of MCI and NBE.\[1-5\]

Apart from exclusive government medical colleges nearly half are under the control of private managements. A growing debate has cropped up among straightforward academicians and experts of medical education regarding the dilution of the teaching standard even in the age-old prestigious medical institutions as they are also suffering from shortages of faculty and/or updated infrastructures in the era of rapid proliferation. The question on the floor is - how much they are ‘learning by default’ compared to how much our medical students should ‘actively learn’. Further there are also scores of unanswered questions cluttering in health care parlance regarding the disparity or gap in learning of Indian medical graduates including uneven distribution of resources across national arena; in all probability this discrepancies are escalating day by day [or not]. Further those aspiring students, who wish to go abroad, need a transcript of hours of teaching spent on the topics also gets diluted with unnecessary burden of old-fashioned unrevised courses and curriculum. For example, outmoded practical trainings like ‘manual estimation of hemoglobin’ in physiology

Abstract

Medical science has eventually metamorphosed from ‘Knowledge based’ to ‘Skill based’ applied social science. So, the age-old traditional courses and curriculums in Indian medical education need a overhauling with radical modifications. With a paradigm shift, we have to take into account not only the help of scientific feedback from the teachers and students but also from all the stakeholders of health care delivery system.

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or ‘manual preparation of ORS/mixtures’ in Pharmacology etc. can be easily replaced by interactive applied health care ‘Problem based’ discussions of anemia or dehydration with case scenarios. The medical graduates of today will never ever need to be skilled on these components to be future competent health care providers. Further, discontinued diagnostic tests/criteria as well as historical list [including banned and removed from pharmacopeia] of drug molecules should not clutter the precious limited training period; instead they should be exposed to the updated practical investigations for that level with sufficient time span for their learning; examples are unending in the MCI-regulated undergraduate and postgraduate courses and curriculums.

Further, mandatory internship training period has become a hoax instead of streamlined training program to the ladder of learning curve for their hands-on-training. The budding doctors of today have to sincerely learn the science and art of patient management during internship under the able guidance of the erudite faculty. Even where there is some training conducted during internship, it is limited to using the cheap labor force to age-old method of sample collections [by syringe and spirit-cotton without optimum protection gears], routine dressing, supportive hospital activities, etc. [that can be easily be carried out by technical and dedicated staffs in any health care institution]. We propose to the goodness of the faculty to be good enough to consider the interns as professional colleagues to develop all the skills necessary to be an independent contributor of health care delivery as soon as they get the license from regulatory body.

**Teaching Versus Teaching-Learning**

There is a saying in the academic parlance ‘We can drag a horse up to the river, but drinking of water is the responsibility of the horse’. In the mirror image, we can quote Noble laureate Tagore that success of a teacher is to ignite the spirit of learning in the minds of students instead of being suppliers of tons of information. We have to inculcate courage among the students to actively learn far beyond the courses and curriculum [examination passing curtailed plan of action??!!], what the teacher told in the classroom settings or at bedside imbibing resources from the open world. Further, researchers from different parts of the world have provided us with the factual findings that learning in small group teachings in medical education is healthier, acceptable and effective than large group teachings in general [with brilliant exceptions of all times]. We will claim our success if we can impart inquisitiveness to our learners to continue eagerness to know more and more regarding the topic after the teaching-learning sessions are over.[6] We also have to help them learn that knowledge base as well as methods of teaching-learning usually become stale after every decade; so holistic updating is the eternal ‘mantra’ from undergraduate times till ‘we become picture on the wall’.

**Finishing the Huge Syllabus-Who’s Who**

If there is a will, there is a way. We can be creative enough. For example, announcing the topic of lecture of next session and asking the students to be prepared for interactive teaching-learning on regular basis. The didactic lectures should be bare minimum on consensus with the stakeholders instead of calculations of so-called paradigm of topics and teaching hours as practiced. Psychologists have already recommended that full concentration to imbibe knowledge is optimally half an hour for any session even for the captive and committed audience that is rarely followed in our medical education. Actually health care education should not have any boundary as top-down approach from regulatory bodies. Then on the scheduled day of class, the teacher will introduce the topic and ask the students for deliberation in the same duration of lecture period. A good many teachers, trained in medical education, are practicing those at personal levels. On student feedback, it has been summarized that newer interactive techniques are well-accepted; it also offers less burden on memory, repetitiveness, and fatigue of the teachers. Can anybody on earth oppose any innovative idea of teaching-learning if we sincerely practice and implement it for the benefit of the students? Students will be greatly benefitted if we increase the hours of their self-directed learning (of course under supervision). Our target from day one in the undergraduate training will be to make perfect doctors for Indian health scenario. Instead, we are teaching the students to make them set their targets for PASS/GRADUES/HONORS/DISTINCTIONS/PRIZES/MEDAL among other vague outcomes. A debate is on the floor regarding keeping or removing the minimum attendance as the eligibility criteria for summative examinations. Teachers should be confident that students will be lured by their intellectuality to attend classes instead of ‘ghost’ of ‘percentage of attendance’.

**Clinical Versus Non-clinical Subject**

All the subjects in the undergraduate medical courses and curriculums need to be directed to make good Indian doctors. The undergraduate subjects have been wrongly compartmentalized as pre-clinical, para-clinical and clinical. There is huge loss of manpower by not putting human resources of pre-clinical and para-clinical postgraduates, including a large number of faculty members to optimal clinical medicine practice in the medical institutes. For example ‘genetics clinic’ can easily be run by Anatomy Faculty; ‘Neuromuscular Clinic’ can easily be managed by Physiology Faculty; Clinical examination and initial evaluation of rape, homicide accused and victims as well as spectrum of injury cases can easily be managed by Forensic Faculty; Licit and illicit drug addicts, adverse drug reaction (ADR) and optimal pharmacological intervention by Pharmacology Faculty; Infectious disease and Immunization clinic by Microbiology and/or Community Medicine faculty; Inclusion of pathology faculty in all other teams of specialty clinic and operation theaters. The list is unending for proper use of expertise when we are in acute shortage of optimum number of experts. So
why some of the faculty is fenced within the boundaries of teaching [without using them unconnected for patient care] is not clear to any honest citizen of India. Usually than not, the memory of undergraduate students fades away regarding the anatomy-physiology-biochemistry of any organ when they actually face any organ-related disease and disorders in their clinical settings. So we need to rearrange all the subjects to be taught simultaneously during the whole undergraduate training period. Further we propose to the regulatory bodies to update the medical course and curriculum with adding together of newer generation of subjects like Family Medicine, Emergency Medicine, Injury science, Psychology, and components of First responder training of pre-hospital care, the science and art of Counseling and Empathy among others. The ‘subject-topics need to be divided among years’ rather than ‘artificially dividing years among the subjects’ [the former is commonly practiced in developed countries]. The ‘integrated teaching’ and ‘UNCLE’ implemented in many good medical institutes in India should be the compulsory lifeline of undergraduate teaching instead being fashionable and notional.

Shed Tribal Characters

Specializations have gifted us clannish character that only (in rare situations) people of brilliant exceptions from one specialty attend CME/Conference of other specialty. Even during teaching-learning too, teachers of one specialty do not bother to honestly weigh and balance ‘how much the student should know of their subject to be a good doctor’ at that particular level. Instead, they often break the barrier of undergraduate and postgraduate level considerations to communicate ‘How much I know’ without considering ‘How much learners need to know!’ The same is true during assessment too. Here lies the bitter truth of absence of self-actualization that we never think whether our students are benefitted from us or not; in fact many of us are scared to explore this ‘Line of Control’.

Medical Teachers are Not Born Teachers

In India, at all the levels of school education, to be eligible as teacher one has to complete teachers training; for being college teacher/researcher [except medical] clearing NET/SLET with grade is compulsory. In the medical education, after completion of postgraduation we all become teacher/researcher of medical institutes as if ‘We are all born as teacher/researcher’. In postgraduate courses and curriculums under MCI, there is mandatory teaching for undergraduate students. Yet, in the absence of implementation of dedicated interactive teaching-learning hours on medical education and research methods, nobody is going to be benefitted [even many thing may be on paper].

The miserable conditions of DNB courses on this issue need further elaboration. In DNB courses and curriculums, mandatory teaching hours are yet to be introduced. Still we welcome the decision of MCI to allow DNB postgraduates at par with MD/MS as undergraduate teaching qualifications. Now we appeal to National Board of Examination to include dedicated teaching-learning hours on medical education and research methods - in theory and practice. We look forward to both MCI and NBE to initiate our aforesaid suggestions in letter and spirit for better outcome of basic doctors. Further, under the recommendations of the University Grant Commission (UGC), many universities are going to introduce ‘student feedback’ that needs consideration.

What We Need: ‘Pin-Drop Silence’ or ‘Tiring Interaction’

We many senior teachers who were proud to verbalize after each lecture that there was always ‘pin-drop silence’ in their classes from the beginning to the end. Does this mean that students have always learnt from them? What is the evidence that the students were all attentive receptors; they may be doing or thinking/working on some unrelated topics. If a good number of the students have no question and interaction regarding the topic of the ‘just finished’ class, then teaching-learning remains a gray zone. Thus new world educational archetype is ushering with the novel philosophy, not to be ‘sage on the dais’, but to be ‘facilitators at the side of active learning’ from KG to PG.

We Need Skill-Based Competency Among Medical Graduates

In the regular schemes, we usually assess the knowledge of the students at the end of the courses as summative evaluation [of the learning] instead of adequate weightage in Formative assessment [for the learning]. But in the real life, an ailing patient does not need knowledge but want competency at the fingertip of the health care provider at all levels. Further, medical science is basically a social science; students need to learn according to their need and capability. Instead of the readymade approach, we have to think of a tailor-made approach as ‘off the track’ plan paying respect to individual capacity. Historically the inheritors are more intelligent and genius than their forefathers, that’s why the world is developing. In the same line of accepted wisdom, our teachers should be bold to have a dream that their students will cross them miles ahead in skill-based knowledge. That should also be the mission of all the teachers of the world to be considered the greatest visionaries of all times.

Necessary Topics in Undergraduate Training and the PG Waterloo

The goal of undergraduate training should be such that a graduate medical professional should be able to handle all the common and uncommon [if not rare] clinical cases of Indian context independently without referring to so-called specialists. For example, diabetes, hypertension, neuro-psychiatric problems, common surgeries [done on OPD basis]. There is growing
feeling among Indian medical graduates that the topics covered in their undergraduate training are nowhere near any form of ‘outcome based education’. They neither become good primary health care physicians nor get them sensitized or prepared for aspirants for the postgraduation screening tests. After graduating, the fresh graduates retrospectively discover that many topics have been taught by default in undergraduate courses, which is gross injustice and dilution of their expectation.

No National Policy on Human Resource in Health

MCI is providing official service for the nation to keep up its role as regulatory body for the ‘General Medical Education’ in our country. Yet responsibility of MCI is limited to be an outstanding ‘gate-keeper’ only. They cannot formulate any policy on the national human resource in health. They are not entrusted to formulate any suggestion on establishment of new medical colleges. For example, they can never recommend ‘How many medical colleges should be in any state/district/city?’, ‘How the prospective undergraduate medical entrance will be conducted to effectively proportional entry from each district in India as the ‘son of the soil’?’

Many innovative approaches have been already implemented in many universities/institutes like introduction of credit points for admission of needy students from remote and underprivileged areas. Improvisation is needed from the policy makers to make doctors from all the districts of the country for even distribution of health care providers at the primary level. Further, an ‘internal brain-drain’ of pervasive nature has swallowed the whole society where everyone has been allured to run after career and migrating from rural to urban, small town to cities, cities to metros, from low paying to high paying institutions. The rat race of becoming ‘Clinical PG’ has been capitalized by the private players to churn money by sky-high donations and unaccountable transfer of money as open secrets in an attempt for mercilessly butchering the dreams of meritorious students and the middle class.[7]

In the international arena ‘Generalists’ are already getting more weightage than the so-called ‘Specialists’ to the stakeholders. This is a silver lining among all the negative aspects in the medical education in India. We have to say ‘Jago teachers Jago.’

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