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TRAINING INDIAN MEDICAL GRADUATES (IMG): EXPERIENCE OF AN ANAESTHESIOLOGIST

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ABSTRACT

Presently in India various issues related to education in medical profession need to be addressed. This article describes experience of a faculty in anaesthesiology, with regards to challenges, difficulties, teaching modalities new concepts given by MCI and suggestions to improve outcome of imparting knowledge to younger generation qualifying in medical sciences for treating patients as professionals and specialists in future.

KEYWORDS: Indian medical graduate, medical education, teaching technology, competency based medical education (CBME), Attitude Ethics-Communication (AET-COM) module, curriculum implementation support program (CISP).

INTRODUCTION

Meeting the requirement of Indian Medical graduates and post graduates in field of medicine proportionate to a total population of 136.49 crores is a challenge in our country.[a] There is a clear scarcity of government medical colleges in India. It has 235 government medical colleges having 30,455 MBBS seats and eleven All India Institute of Medical Sciences (AIIMS) having approximately 900 MBBS seats.[1]

It is not only that more number of medical colleges are required to train students for medical graduation but the quality of trained doctors ready to practice medicine is of crucial importance. This requirement and scarcity has encouraged development of medical institutions in private sector under the supervised guidance of Medical Council of India. Now the selection criteria is uniform through National Eligibility and Entrance Test (NEET UG, since 2013)[1] which gives chance to eligible candidates to study in private medical colleges who could not get admission in government medical college. For imparting best education and training to Indian medical graduate (IMG) experienced faculty, interest of students, sufficient number of patients having different diseases for desirable clinical exposure, thoughtfully planned good infrastructure, human resources and positive attitude of everyone concerned is mandatory.

Challenges and difficulties: while selection of students

To become a medical graduate requires firm determination and promise to oneself of being a lifelong learner. Medical profession demands mental and physical grinding throughout life in acquiring cognitive and psychomotor skills to achieve a reasonable level of competence even at the cost of sacrificing needs, enjoyments and other interests in personal life.

Most of the times it is found that selection of a student's career depends upon parent's choice ignoring the above mentioned fact with negligible attention to the candidate's interest. At times even the caliber is neither assessed nor understood properly. A student even being meritorious, some times does not get a chance to study the course he is the most interested in.

For selection in MBBS through a tough entrance test, aspirants have to score in subjects of physics, chemistry and biology which form the basis of factual knowledge but their capabilities of communication skills, leadership, aptitude and humanistic approach which form the personality of a doctor as a professional person are not considered. Truly speaking medical profession is a long term endeavour of life which requires formal qualification and prolonged training to render service with internal interest and motivation along with above mentioned qualities in a doctor.[2]

Concerned authorities are taking interest and trying to solve these problems by making various amendments in this regard.

Various issues on internal interest of students and faculty

Students concerns

Once after so much of strenuous efforts and cut throat competition a candidate gets a seat in medical college, may it be govt. or private sector, he feels that all his dreams have turned to reality. But very soon he realizes that he has to toil himself during the course and thereafter for entrance in post graduation with limited teaching and learning facilities in most of the institutions. Very bright students feel depressed because of limitation of post graduate seats. Less meritorious but capable of paying huge fee in renowned private institutions demoralize those students leading to lack of interest in some of them during graduation.

To take a seat for post graduation they are bound to score high in competitive exams for which practical training during internship is neglected as they focus more on theory to appear once again in competitive exams.

Government authorities, management in private sector and faculty are equally responsible for lack of interest in students during the course of study. If students regularly get healthy teaching and learning environment with relevance for acquiring competence, they feel enthusiastic about learning.

Faculty concerns

Disproportion in faculty number and candidates along with lack of adequate number of full-time, regular and experienced faculty in some institutions causes irregularity in teaching schedules. Apart from this in private sector there is no clear concept regarding academic and financial progress of efficient faculty which effects them in the form of less, discriminate, irregular and delayed payments. At the top of this there is no job security. Poor working conditions and work facilities provided to efficient faculty results in their demotivation. Requirement of sufficient flow of patients having various diseases for teaching students is not fulfilled and reduced partly due to the above mentioned factors.

Creation of interest in students for learning:

Teaching anaesthesiology to IMG starts in later part of study period and to most of them it appears boring. As a faculty this is a great challenge to me and I stand up to the challenge to create interest in students for the medical profession and Anaesthesiology.

To create interest one has to work hard in finding cause of lacking internal interest, cultivate interest in the medical profession by realising how important this profession is in terms of alleviating sufferings of people in society.

For creating interest in anaesthesiology

- Narrate its history: patients requiring surgery were drugged with alcohol, the level of consciousness was reduced by pressing over internal carotid arteries to decrease blood flow to brain.

- Show them fascinating progress in all surgical fields, as we see it today, due to continuous progress in knowledge and skills to provide safe anaesthesia care because of tremendous development in field of anaesthesiology.

- Critically ill patients are managed in critical care settings due to advancements in monitoring and modern anaesthesia care technologies.

- *So the professional role of an anaesthesiologist is vital*--starting from surgical anaesthesia in operating room fetching all surgical branches, to critical care which includes medical, surgical, neurological, neonatal, respiratory and trauma medicine.

- Pain management medicine for acute and chronic cases has been evolved with progressive development in different modalities for treating pain.

Thus an anaesthesiologist provides indispensable services to patients as perioperative physician.

Efficient faculty should learn teaching and learning technologies

- To know a thing and perform accordingly is entirely different than to make anyone else know, understand and perform with confidence and success. Knowledge should be transmitted to the younger generation to acquire even better skills.

- Teachings in medical institutions were based on didactic lectures addressing large number of candidates. Demonstrations, ward clinics and performance of procedures under supervision were carried out in practical classes. As there are advancements in medical science leading to tremendous increase in bulk of knowledge and material for teaching and learning, only classroom lectures and demonstrations are not sufficient to impart cognitive and psychomotor capabilities. We have to adopt various methods and technologies in order to make students understand in more practical way in lesser time frame so that they don't have to mug up the literature.

- Basically any faculty in any subject is a doctor and have never been trained formally as a teacher, guide or facilitator. Therefore each faculty has developed his own way of teaching. To overcome this difficulty, training faculty in the field of medical education is the basic need in present time. So as directed by MCI faculty should be made more aware of recent teaching and learning modalities with

technologies along with assessment protocols by undergoing MET (medical education technologies), AET-COM workshop CISP and CBME module.

- Attending the above mentioned workshops has helped me modifying my own personality as a facilitator and has developed a feeling of a leader and guide to extract work from subordinates according to their capabilities and at the same time giving them opportunity to learn from each other to improve the performance in giving better results in patient care requiring services of anaesthesiologists.

- Basic life support concept and management of patient in trauma should clearly be understood and practiced by IMG. Anaesthesiologist plays vital role in management of such emergencies so integration of anaesthesiology as a subject in medical education should be much earlier than now. I am happy that one step has already been taken by MCI in this regard by starting foundation course of one month duration at admission in MBBS in which basic life support concepts are given by anaesthesiologists for three hours.

Goals to be achieved by teaching

- According **to MCI** we have to frame goals of teaching: which should be specific, measurable, attainable, relevant and time bound, considering different **domains of learning i.e. knowledge, skill, attitude and communication.**

- **CBME module:** Competency based medical education focuses on outcomes where its **components** include knowledge, skill, attitude and communication. Each patient has different physiological, medical, nutritional, surgical and psychological requirement and a medical graduate must be able to understand and apply his facts based knowledge of medical literature to each and every patient by using his analytical and problem solving capabilities. As advised by MCI competency based undergraduate curriculum for the Indian medical graduate first year batch has started from August 2019.

- **AET-COM Module: (Attitude, ethics and communication)** An Indian medical graduate should possess requisite knowledge, skills, attitudes, values and responsiveness, so that he or she may function appropriately and effectively as a physician of first contact of the community[3]

A. Modalities in teaching technology[4]

1. Face to face learning

a. Chalk and black board,
b. Flip charts, pictorials,
c. Overhead projectors and slides,
d. Power point presentations.
e. Videos and films.

2. On line learning

a. Computer assisted learning (CAL)
b. Webinars. A very efficient way of disseminating knowledge.

B. Teaching and learning in medicine(TLM)[4]

Scope of TLM includes all levels of medical education, from premedical to postgraduate and continuing medical education.[5,6,7]

- For class room teachings: Large group didactic teachings/Small and large group discussions/Flip chart/Pictorials/Overhead projector and slides/Power point presentations are utilized.

- Bedside teachings for pre anaesthetic evaluation

- Field rounds for providing safe anaesthesia care to patients undergoing surgery in camps.

- Hospital rounds showing pre-anaesthesia care (PAC) – acute and chronic pain management units in outpatient department, operation suits including superspeciality anaesthesia units for cardiac-neurological - hepatobiliary – urological and organ transplant surgeries, post anaesthesia care units (PACU), critical care settings, radio diagnosis units for computed tomography (CT), digital subtraction angiography(DSA) and magnetic resonance imaging (MRI), requiring anaesthesia care under special circumstances are considered.

- Students projects help them in learning specific aspects of the subject.

- Self directed learning/e-learning.

- Demonstration/observation/assistance/performance(DOAP) module helps in formative and summative assessment of the candidate.

Planning of teaching schedule

For teaching anaesthesiology to IMG- from the very beginning a point is made to give clear concept and revision of anatomy, physiology, pharmacology, internal medicine, other clinical subjects and basic sciences (physics and chemistry) with understanding of patient's requirement for providing safe anaesthesia care. The teaching sessions require to be more interactive leading to more involvement of each and every student. They are asked to give feedback of what they know and think about the topic related facts from their previous knowledge. In my teachings they are free to ask questions at the end of each session and motivated for self directed study. Contents of the teaching material is designed in such a way that it has continuous flow of relevant facts.

In practical and demonstration classes, goal oriented interactions with students in a non hesitant free atmosphere to acquire certain competency is created. The

talks are problem centered and experience based with relevance to practice.

Teaching style: Is to change from merely didactic lectures to educational videos, pictorials, small group discussions, role plays and problem based skill acquiring approach so that topics are understood practically in more lively way. While teaching, multiple modes should be utilized with hands on after observation, assistance and performance on mannequins and later, on patients under supervision.

Communication skills with patient and attendants should be developed by showing them role plays and telling the importance of communication and documentation of communication on problem based teachings. Operation theater (O.T.) tableside manners and attitude to give best with empathy is also needed to be imparted. Later questions should be asked related to the topics covered to assess whether they could gather the exact gist of the topic. This assists in formative assessment of IMG.

For Practical teachings

Those scheduled for practical understanding of Anaesthesia care are to visit **pre-anaesthesia care units, operation theater, post-operative care settings, critical care units, pain clinics, MRI and radio diagnosis suits** to observe conduction of various procedures. Once a procedure is performed in front of students with full explanation and understanding, they ask many questions reflecting their interest in learning. In fact anaesthesiology is such a branch of medical science which can be learnt with full confidence only in an operation theatre, critical care settings and remote places to deliver special anaesthesia care.

Qualities of faculty: Teacher or facilitator

To attain above mentioned goals the educator or facilitator should be enthusiastic about the topic to be covered. Should have good talk delivery style, command on language and voice modulation. Presentation of perfect and informative slides, good questioning and motivating learners to answer questions creates comfortable teaching and learning atmosphere.

Face to face interaction of faculty and students has greater positive impact than e-learning.

Difficulties of faculty[8]

All the faculty in medical colleges are basically doctors and they have never been trained in teaching IMG. Their training in modern medical education and research aptitude is very much required to work as a facilitator for training medical students. Young medical professionals have other priorities and do not show much interest in acquiring teaching abilities. MCI is now organizing faculty development programs.

Exploration of students expectations and experience

- It is very important to be aware of students' expectation while teaching as they are examination oriented and want to learn and reproduce to secure good marks when assessment occurs.[9]
- Exploration of students experience and knowing about how they use their theoretical knowledge gained during didactic teachings practically is important. For preparation of teaching materials awareness regarding learners expectation and requirements would enable the facilitator in tailoring the contents of teaching according to needs.
- While teaching it should be clearly understood that students are examination driven. It is the duty of the facilitator to guide them according to importance of the topics in relation to securing high in examination and treating patients in future practice.
- Strategic sequential learning of different topics with provision of key points is very helpful in making students understand the contents.
- To facilitate learning the slides should be perfectly informative and reproducible for self revision at home.
- IMG has to prepare for competitive examinations for selection in post graduate courses so while teaching this should be kept in mind.

What makes students hesitant in answering?

Some of the students are not fluent in speech and feel whatever they will ask or speak is irrelevant. They should be motivated to continue thought process and try to express their views which should be welcomed and corrected if wrong. Students participation, interactions and engagement during teachings with curiosity development to learn more leads to active and self directed learning.

Students interest in learning by considering above mentioned points

When the students receive a good learning environment and techniques, they respond positively. Students' interest in learning becomes evident by improvement in attendance, punctuality, less talking and above all their positive gestures with eye to eye contact and involvement with participation in class room activity and better performance in formative assessment.

Recent amendments made in MBBS curriculum by MCI

Undergraduate medical education is revised by MCI which is implemented since August 2019 all over India so that IMG is able to recognize his duties to provide health for all. They should be highest in knowledge, attitude, skills and communications at global level. The amendments include:

1. **Foundation course:** for one month so that learners are oriented with requisite knowledge, communication, technical and language skills.

2. **Early clinical exposure:** They would learn to see the patient since first year. Acquire clinical and communication skills.

3. **Integrated teaching and learning:** horizontal and vertical integration of all disciplines will bridge the gaps between theory and practice.

4. **Skill development and learning:** A comprehensive and mandatory list of skill is planned.

5. **Electives:** This is to introduce the learners to know about other fields related to basic course, do projects, know about self directed learning, critical thinking and cultivate research abilities.

6. **Assesesment:** will be formative and summative from time to time.

CONCLUSION

MCI norms and objectives in field of medical education should be followed everywhere equally irrespective of govt. or private sector with understanding of requirements in present time. In the present scenario very fast development in private sector is taking place. Students and the society should not suffer because of difficulties and short comings at different levels. Addition of some topics related to patient simulation teachings to medical graduates in future is anticipated. By the end of this training an Indian medical graduate should be able to see his career as a professional taking care of patients in hospitals and clinics, pursuing post graduation, research scholar programs in medicine, or in hospital management and administration.

Some panel discussions can be scheduled to obtain views of visionary experts from different departments for improving teaching methodology. Views from the students may be gathered and considered.

And this is a long way to go. The most important thing : Positive participation of government, management and faculty towards students and patients is invaluable to soar high.

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