



## Opinion Article

# Competency-based medical education: Trials, tribulations and ‘light at the end of the tunnel’

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The Medical Council of India (MCI) has coined the term ‘Indian Medical Graduate’ (IMG), whose training involves various interventions to achieve the national goal of ‘health for all,’ at the end of his/her training programme. Therefore, the prevalent curriculum available for undergraduate medical training had to be revamped so that the emerging IMG would be able to take care of the patients from a preventive, promotive, curative, palliative and holistic point of view. This involved modifying the curriculum by elaborating the necessary competencies the student must be taught/learnt, the various teaching-learning strategies to be adopted and specifying the ways to assess the outcomes. To this end, the MCI spent over 4 years by forming the MCI Reconciliation Board which came out with a document called competency-based undergraduate curriculum.<sup>[1]</sup>

This is a clear departure from the earlier regulations for Graduate Medical Education, 1997, and resulted in the ‘Regulations on Graduate Medical Education (Amendment), 2019’ notified in the Official Gazette, and being applicable to batches admitted in MBBS course from academic year 2019–2020 onwards. The main emphasis of these regulations is on competency-based learning, which envisages to design and implement the medical education curriculum so that there is acquisition of a desired and observable ability in real-life situations in the IMG at the time of graduation. To achieve this, the MCI has enunciated global competencies as well as subject-specific competencies that have to be achieved.<sup>[2]</sup>

A commonly cited criticism of the earlier knowledge-based medical education was the fact that the curriculum could mass-produce doctors who confidently prepare for entrance examinations focusing on superspecialisation, but this was done at the cost of acquiring practical/analytical skills and the competency to handle real-life situations in the primary care set-up. The ushering in of competency-based curricula was often negated by citing the presence of many competent doctors practicing in the country with excellent clinical repertoire, who are the products of the earlier system. However, it has to be emphasised that the earlier knowledge-based or discipline-based education system more often than not left the acquisition of the desired skills to the student’s desire. We had no certifiable method to attest and validate whether the student graduating in the final year is capable of handling the common conditions faced by a practitioner in the country which was supposed to be the outcome envisaged for medical education. With the advent of competency-based education (CBE), every graduate passing the examination has to compulsorily be well versed with the competencies laid out by the MCI in terms of knowledge, practical/clinical skills and communication, as the relevant skills have to be certified.

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Competency is defined as ‘an important skill that is needed to do a job,<sup>[3]</sup> or as ‘possession of sufficient knowledge or skill.’<sup>[4]</sup> Therefore, competency-based medical education (CBME) provides clear goals to the students, and prevents them from meandering in the darkness, and thereby bolsters the motivation in them.

While the idea of incorporation of CBME in training schedule of the proposed IMG is laudable, we should not lose sight of the fact that similar exercises in other parts of the world took over three decades for it to fructify (i.e., from the drawing board to actual implementation). The main reasons ascribed for this lag period were the fact that though a lot of thought process went into describing the various competencies required, very little effort was put in delineating the benchmarks for these competencies, as well as ways in which the achievement of these would be evaluated.<sup>[5]</sup>

The central and crucial aspect of CBE is to analyse the occupational roles and convert these into definite outcomes, which can be assessed in a clearly demonstrable fashion in the trainees. Identifying the competencies which can truly cover the entire gamut of the roles of a particular occupation is a gargantuan task and may never be complete in the proper sense. The consequences of such an ill-prepared/ill-conceived competencies could result in demotivation and a lot of burden on the administration among other negative outcomes.<sup>[6]</sup>

But all is not lost, since following certain principles could result in a successful implementation of CBE. These include proper selection of competencies which are appropriate as well as strong, keeping in mind the fact that the pace at which students learn would be different and also the system should be supportive of this aspect, required learning resources are readily available and also be reusable and finally an assessment methodology which is robustly reliable.<sup>[7]</sup>

The key to successful implementation of CBE seems to be the way in which students would be evaluated, because everything else like teaching strategies as well as learning patterns tend to adapt accordingly.<sup>[8]</sup>

Some of the lacunae or difficulties noticed so far as the implementation of CBME while imparting physiology education for the current batch is as follows: Regarding certification of skills, keeping in mind that physiology is the preclinical subject with the maximum number of certifiable skills (i.e., 13), there is lack of clarity regarding the nitty-gritties of certification of these skills. Another aspect with respect to the various competencies is that there are some aberrations – like absence of certain competencies that is, ‘missing competencies’ (e.g., regulation of respiration), overlapping of competencies, etc. All these have to be ironed out pretty soon, so as to achieve the stated goals of CBME.

With the rolling out of the new CBME, attention should also be put into the faculty requirements of various subjects (appropriate

increase would be helpful in delivering and adequate quality control of skill acquisition) and also a semblance of concordance should be brought between the infrastructure/equipment requirements in various subjects for CBME and those that are present in the ‘Minimum requirements’ prescribed by the MCI. Keeping in sight the current trend of digital India, emphasis on using digital instruments should be the norm.

Hence, it is the fervent hope of the teaching community in the field of medical education that CBME should not end up merely on paper, and it should be implemented in full letter and spirit.

#### Declaration of patient consent

Patient’s consent not required as patients identity is not disclosed or compromised.

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#### Conflicts of interest

There are no conflicts of interest.

#### REFERENCES

1. Medical Council of India. Competency Based Undergraduate Curriculum for the Indian Medical Graduate. New Delhi: Medical Council of India; 2018. p. 1-263.
2. The Gazette of India. Extraordinary Part III-Section 4. Available from: <https://www.mciindia.org/activitiwebclient/open/getdocument?path=/documents/public/portal/gazette/GME-06.11.2019.pdf>. [Last accessed on 2019 Nov 06].
3. Competency. Meaning in the Cambridge English Dictionary; 2020. Available from: <https://www.dictionary.cambridge.org/dictionary/english/competency>. [Last accessed on 2020 Feb 15].
4. Merriam-Webster. Competency. Available from: <https://www.merriam-webster.com/dictionary>. [Last accessed on 2020 Feb 01].
5. Carraccio C, Wolfsthal SD, Englander R, Ferentz K, Martin C. Shifting paradigms: From Flexner to competencies. *Acad Med* 2002;77:361-7.
6. Leung WC. Competency based medical training: Review. *BMJ* 2002;325:693-6.
7. Johnstone SM, Soares L. Principles for developing competency-based education programs. *Change Mag High Learn* 2014;46:12-9.
8. Smith SR, Dollase R. AMEE Guide No. 14: Outcome-based education: Part 2-planning, implementing and evaluating a competency-based curriculum. *Med Teach* 1999;21:15-22.

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