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Review

Developing a Competency-based Medical Education: An Overview

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ABSTRACT

The Medical Council of India has outlined the fundamental skills needed by an Indian medical graduate and created a competency-based module on a doctor's attitudes and interpersonal abilities. Globally, competency-based medical education (CBME) is gaining ground. A competency-based approach is becoming increasingly popular, which would represent a paradigm change from the existing traditional approach to medical education. The logic for CBME and its specific components—competency, entrustable professional activity, and milestones—will be covered in this article. To implement CBME successfully, one must take into account the approach taken, the difficulties encountered, and the constraints.

KEYWORDS: Competency, Entrustable professional activity, Milestones, Medical education, Attitudes

INTRODUCTION

The needs of patients and healthcare systems are changing drastically. The purpose of CBME is to produce doctors who can address those needs and enhance patient care. Physicians need to be increasingly skilled in a variety of areas outside the conventional focus on learning and using knowledge, including communication, professionalism, teamwork, and patient-cantered care, in order to offer the best possible treatment. CBME is well positioned to equip physicians for this brave new world of healthcare by concentrating on learner outcomes and the competencies needed for practice[1].

BACKGROUND

Competency-based Medical Education and its Rationale

CBME is an evidence-based intervention that draws on a variety of medical education-related and unrelated theories and methodologies. The purpose of providing medical education is to prepare graduates to effectively meet the societal health needs. The current system of medical education is built on a time- and subject-based curriculum. The majority of evaluations are summative and offer minimal room for feedback. The evaluation techniques and teaching-learning activities place a greater emphasis on knowledge than on attitude and skills[2]. Graduates may therefore possess great knowledge but may be lacking in the

fundamental clinical abilities needed in practice. Additionally, they could be lacking in soft skills like professionalism, ethics, and communication in the doctor-patient interaction.

To address these issues, competency-based medical education (CBME) has been proposed and attempted. The definition of competence is "the ability to do something successfully and efficiently," and CBME is a strategy to guarantee that graduates acquire the competences necessary to meet the patients' demands in society. It promises increased responsibility, flexibility, and learner-centeredness while downplaying the importance of time-based training[3]. This indicates that instruction, learning, and evaluation will centre on the growth of competencies and continue until the desired competency is attained. The training would continue until the standard of desired proficiency was reached, not for a set amount of time. Feedback would be incorporated into the training process and assessments would be frequent and formative in character. Additionally, every student would be evaluated. Furthermore, each student would be assessed by a measurable standard which is objective and independent of the performance of other students. Thus, it is an approach in which the focus of teaching–learning and assessment is on real-life medical practice.

The Components of Competency-based Medical Education:

(1) Competency

(2) Entrustable Professional Activity

(3) Milestones

Competency

The ability of a health practitioner to integrate information, skills, values, and ability is referred to as competency. To address healthcare difficulties, CBME places an emphasis on domains other than medical knowledge and clinical abilities, such as communication, professionalism, and a focus on health systems. It includes a number of elements, including knowledge, skills, values, and attitudes. A person who can do this is regarded as competent[4]. Competency is the application of competencies in a real-world environment. A medical graduate's fundamental competences are established by the curriculum and are relevant to the setting in which he or she will eventually practice medicine. Six broad competency domains, such as patient care, medical knowledge, practice-based learning and improvement,

Additionally, competency-based learning has been recommended for implementation in all medical institutions by the Medical Council of India (MCI). It would entail developing and putting into practice a curriculum that would put a strong emphasis on the desired and observable skill in practical settings[5].

Entrustable Professional Activity

The relationship between CBME theory and practice is facilitated by entrustable professional activity (EPA). EPAs are the units of professional practice that make up the daily work of clinicians. They might be thought of as the obligations or duties involved with patient care. These jobs can be modest or substantial[6]. EPAs have observable, quantifiable processes and results. They call for a variety of skills that are integrative and holistic in character. The activities that the professional must perform can describe a large portion of any medical specialty. At the end of training, it is crucial for medical education that these tasks may be carried out safely. As a result, the ability to complete these should be the main emphasis of learners' assessments.

Milestones

A competency is developed gradually and piecemeal. These actions have been classified as milestones. There are five such steps or milestones in the Dreyfus model of schooling. A novice, an advanced beginner, a competent, a proficient, and an expert are among them[7]. These levels would increase to five levels in the supervisor's eyes. The learner just pays attention to the EPA at the beginning stage. The student completes the EPA at Levels 2 and 3 under direct, proactive supervision and indirect supervision, respectively. When a student reaches Level 4, they are prepared for unsupervised, independent practice and are granted the "statement of awarded responsibility." The student reaches the fifth level when they are prepared to help other students complete the EPA[8].

CBME thus encompasses the core competencies or the attributes required of a graduate to excel in his/her profession, the EPAs that together constitute the work role of the graduate in his/her practice, and a logical trajectory of professional development in the form of milestones.

Teaching–Learning Methods in Competency-based Medical Education

The teaching-learning activities would require a change in structure and procedure because CBME is learner-cantered, enables flexibility in time, and focuses on all three domains of learning simultaneously. Teaching-learning activities would be more skill-based and involve more clinical, hands-on experience because they put a focus on results and prepare students for real-world professional practice. The first-year medical students would also have access to cases and patients and would receive a stethoscope at the start of their course, which would increase their motivation to pursue medicine9.

Being a lifelong learner is one of the MCI's expected qualities of an IMG. Therefore, there must be plenty of possibilities for kids to learn independently. They could become aware of their own weaknesses thanks to the built-in feedback mechanism10.

Assessment in Competency-based Medical Education

The accurate evaluation of competence is a significant obstacle to competency-based medical education (CBME) implementation. Due to the increased responsibility promised by CBME, a thorough and comprehensive examination is required. For the trainee, the results from the CBME formative assessments would be crucial. Other core CBME principles, such as active trainee involvement in learning and assessment, the establishment of an authentic environment for learning and assessment, the use of direct observation, and a focus on formative feedback, are in line with assessment for learning. Assessment of learning is consistent with the ongoing requirement to assess development in relation to specific objectives and standards that are referenced by criteria[11]. It must first be ongoing and frequent. This enables additional formative assessments to be conducted to direct the student's development. It must be criterion-based and from a developmental angle. As a result, a student would only be considered competent if and only when his performance met the minimal required quality of care. He would not be considered competent simply because he was better than the others. Third, the evaluation must be mostly work-based. Direct observation and evaluation of real clinical interactions would be a crucial part of CBME, even when early assessment and feedback can be obtained from simulation. Fourth, in terms of validity, reliability, acceptability, educational impact, and cost-effectiveness, the assessment tools themselves must adhere to a set of minimal requirements for quality.

Fifth, a more qualitative assessment technique needs to be included. Numbers, scores, and grades are not as relevant as expert judgments and feedback. Sixth, assessment should incorporate the collective expertise of the group, and the trainee himself should actively participate in the assessment process[12]. This indicates that more should be done with a variety of assessment techniques, including those used in the workplace, including mini-clinical evaluation exercises, direct observation, multisource feedback, and logbooks and portfolios used to keep track of clinical work.

The core of CBME would be work-based, formative assessments with feedback. Frequent assessments with detailed teacher comments are necessary to guide a student's growth in the appropriate direction. We should be ready for expert subjective evaluation because assessment may not always be objective. These have been proven to be trustworthy and give the student more meaning and direction than numerical scores[13]. In other words, we would have to give up our insistence on objectivity in assessment because the success of CBME will depend on the expert's subjective evaluations and feedback, which will have a significant educational influence.

Challenges in the Implementation of Competency-based Medical Education

Given that CBME is still a relatively new idea in India, stakeholders and faculty must be educated and trained to ensure that the CBME-based curriculum is implemented consistently throughout all medical schools in the nation. Understanding what competency actually is, how it differs from EPA, where milestones would fit in, how to incorporate "Knowledge, skill, attitude" components within, and what are "competency domains" as opposed to competencies, may be seen as a difficult undertaking. It would be challenging to implement a paradigm shift in our approaches for teaching, learning, and assessment. Finally, planning the logistics of execution, including acquiring extra infrastructure, materials, and labour, would be required. Time-based training is downplayed by CBME; however, managing a group of students whose growth is unevenly distributed can be difficult[14]. Another problem is determining whether we actually produce the qualified graduates that CBME promises to provide. Only when the IMG starts to independently practice his or her clinical competencies in real-world scenarios will it be possible to assess the real-world effectiveness of CBME in reaching this long-term aim. These difficulties account for the resistance and uncertainty that teachers, students, and educational authorities have toward CBME

CONCLUSION

The emphasis on results is one of CBME's strengths. Additionally, it acknowledges that every learner is different and progresses at their own rate. The "art" of medicine is now being taught with a broader focus that encompasses principles like professionalism, ethics, and effective communication. Because the assessments closely mirror what would be done in actual life scenarios, it promises more accountability[15].

It shouldn't result in yet another curriculum modification that doesn't genuinely address the issues with the current curriculum. The pupils may find it challenging to adjust to CBME because they are used to teacher-driven and time-based learning. There is a chance that they could miss important milestones in their quest to reach them.

There is a chance that students may quit striving for excellence in their goal of hitting predetermined milestones. The de-emphasis on time-based instruction could lead to an unorganized environment where students advance at their own pace. The doctor must be sensitive to the particular medical and psychosocial needs that each patient has. The doctor must be able to apply theory to practice in his or her own head and use analytical and problem-solving skills to act in the patient's best interests. In order to manage information and track progress toward competency, effective use of technology can also facilitate audits and transparency[16]. A dynamic environment that pays attention to the needs of the healthcare system and always seeks to improve is necessary for CBME.

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