

Competency based anesthesia education: A welcome step

Medical education is undergoing significant transformations around the globe with a paradigm shift in the teaching methodology. The need for reform in medical training was longstanding.^[1] A path correction was the need of the hour as many areas and disciplines were not getting their due weightage in medical education curricula. With the evolution of new knowledge and technology, practical training at the undergraduate level also lacked vital areas. In the time-based system, followed to date, teaching programs defined the number of lectures/demonstrations based on the length of time, assuming that students will develop the requisite competencies to practice after the specified amount of time.

The Medical Council of India (MCI) published a Competence-Based Curriculum (CBC) for Medical Graduates in 2018, and the same implemented for all admissions from the year 2019. The CBC document maps teaching-learning methodologies, and modes of assessment. It introduces problem-based teaching and attempts to integrate preclinical with clinical disciplines. There is an emphasis to eliminate the compartment concept of teaching medical disciplines by making the approach more interdisciplinary.^[2]

The principle driving CBC is that competence must be demonstrated and documented rather than assumed through time spent in a teaching program.^[1] The CBC clearly defines the teaching requirements for each stage of training and specifies the mode of evaluation. CBC assessment is more thorough and frequent. It enables early identification of the students' strengths/weaknesses and the implementation of remedial measures. Tailored learning is implemented to accelerate the learning and progression of new skills and knowledge. The CBC is designed to prepare students for independent practice and serve as a transition from learning to clinical practice, which was not looked into by the previous teaching model.

Anesthesiology was granted its due place in the MCI curriculum for the first time. The MCI curriculum prescribes the development of competency in 48 areas in the fields of Anesthesiology, Resuscitation, and Intensive Care.^[3] Every doctor should be well versed in procedural skills in the emergency and resuscitation domains, and the CBC aims to ensure these competencies. The CBC also focusses on developing skills in the perioperative care of surgical patients.

Setlur *et al.* present a survey comparing students' experiences undertaking training under the newly introduced undergraduate anesthesia CBC with that of students exposed to the time-based modules, followed earlier.^[4] This survey is indeed an outstanding effort to assess the acceptance of CBC by the students. This survey provides a unique opportunity to examine the response of students transiting from time-based education to CBC and explore the benefits offered by CBC. However, it does not reflect the real and long-term benefits of CBC, as it was conducted within a year of the implementation of the scheme. The CBC benefits may be more apparent later after rectification of the teething troubles of implementation, and once these students enter clinical practice. Competency assessment is the backbone of any CBC. Assessment and acceptance of competency assessment methods were not the objectives of this survey.

A potential limitation of the survey is that CBC is a mandated syllabus, and not consensus-driven. The survey results may have been influenced by the resistance of stragglers, while it may have been more readily accepted by early adopters, which could have widened the gap between the responses of the two groups.^[5] Transition to a new teaching model requires a well-organized plan that includes faculty and learner acceptance.^[6] It needs allocation of time to train faculty to be skilled assessors of students' knowledge and skills. Improved learner outcomes will be achieved once the faculty accepts the new paradigm.^[7]

The MCI has defined the methodology of structured competency-based assessment. The clinical/practical assessment is based on the Objective Structured Competency Evaluation (OSCE) tests. Practical examinations will not be tests of knowledge but will be application-oriented with Directly Observed Procedural Skills (DOPS) assessment.^[8] The National Board of Examinations (NBE) successfully introduced an OSCE-based assessment at the postgraduate level this year. OSCE-based assessment will now be the new norm in medical education. Its implementation at the undergraduate level exit examinations may be in the offing next.

Anesthesia is a skill-intensive discipline, with training focused on procedural skill development. The consequences of suboptimal skills are poor patient outcomes, including mortality. It is vital to ensure competence in anesthesia procedure skills. Surgical and anesthesia outcomes are very dependent on sound procedural skills.^[9,10] In anesthesia, procedural skill assessment was not given its due place and assessment was conducted for knowledge and judgment-based

skills. Students must be assessed for their procedural skills in the exit examinations. The Objective Structured Assessment of Technical Skills (OSATS), similar to an OSCE, was developed to assess procedural skills outside of the operating theater objectively. Candidates perform a series of standardized skills on bench models and are examined by experts' direct observation using both generic rating scales and task-specific checklists.^[11] OSATS are a reliable measure of technical skill and may be the key to assess procedural skill soon.^[12]

Mukul Chandra Kapoor


Max Smart Hospital, Saket, New Delhi, India

Address for correspondence: Dr. Mukul Chandra Kapoor,
Department of Anesthesiology, Max Smart Super-Specialty Hospital,
Mandir Marg, Press Enclave Road, Saket, New Delhi - 110 017, India.
E-mail: mukulanjali@gmail.com

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