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Impact of the New Competency-Based Medical Education (CBME) Curriculum on Medical Students in India

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Abstract

The introduction of Competency-Based Medical Education (CBME) by the National Medical Commission (NMC) represents a paradigm shift in undergraduate medical education in India. Driven by evolving global educational strategies, CBME seeks to produce graduates equipped with essential competencies encompassing knowledge, clinical skills, attitudes, ethics, and professionalism necessary for contemporary medical practice. Unlike the traditional time-based curriculum primarily centred on content delivery and summative examinations, CBME emphasizes defined outcomes, early clinical exposure, integrated learning, and continuous formative assessment. This article examines the impact of CBME on medical students in India, highlighting educational benefits, implementation challenges, effects on learning experiences and well-being, and future directions for curriculum optimization.

Introduction

Globally, medical education has transitioned toward competency-based frameworks that prioritize the attainment of clearly defined outcomes rather than mere completion of prescribed instructional periods. In India, the National Medical Commission implemented CBME for undergraduate medical students admitted from 2019 onward, aiming to develop the Indian Medical Graduate (IMG) capable of functioning effectively as a "physician of first contact." The curriculum intends to foster clinical competence, ethical reasoning, communication skills, professionalism, and community orientation. This approach represents a significant departure from traditional didactic, teacher-centred models toward learner-centric and practice-oriented training.

Core Features of the CBME Curriculum

The CBME curriculum introduces several structural and pedagogical reforms:

1. ***Early Clinical Exposure (ECE):*** Facilitates early interaction with clinical contexts, promoting integration between basic sciences and clinical practice.
2. ***Foundation Course:*** Provides orientation to professional expectations, communication skills, and institutional environment.
3. ***Integrated Teaching:*** Encourages horizontal and vertical integration to enhance conceptual understanding across disciplines.
4. ***Attitude, Ethics, and Communication (AETCOM):*** A longitudinal module focusing on professionalism, ethics, and interpersonal skills.
5. ***Electives and Skills-Based Learning:*** Allows students to explore specific interests while strengthening clinical competencies.
6. ***Continuous Formative Assessment:*** Promotes frequent feedback and competency tracking rather than sole reliance on summative evaluations.

Educational Impact on Medical Students
Enhanced Learning and Competency Development

CBME's competency-driven approach aligns medical training with real-world clinical expectations. Emerging studies among Indian medical students suggest several perceived benefits.

Students report improved relevance of learning through integrated teaching methods and early clinical exposure, which help contextualize theoretical knowledge within patient care scenarios. Structured modules such as AETCOM have been recognized for enhancing professional behaviour and ethical sensitivity. Additionally, simulation-based learning and elective postings contribute to greater clinical confidence and practical skill acquisition. Learner-centred strategies, including self-directed learning components, are increasingly appreciated for encouraging deeper understanding and reflective practice [1, 5].

Continuous formative assessment further supports learning by providing regular feedback, enabling students to identify gaps and progressively develop competencies rather than preparing exclusively for high-stakes examinations.

Mental Health and Academic Stress

The impact of CBME on student well-being remains an area of ongoing investigation. Comparative studies indicate that CBME may reduce moderate anxiety levels, potentially due to decreased emphasis on single summative examinations [6]. However, evidence regarding severe stress and depressive symptoms remains mixed.

While distributed assessments can mitigate exam-related pressure, the requirement for continuous performance, documentation, and competency achievement may introduce new stressors. These findings highlight the need for balanced assessment strategies and supportive academic environments [6].

- ***Challenges Experienced by Students:*** Despite its educational advantages, CBME implementation has introduced several challenges.
- ***Adaptation to New Assessment Methods:*** Students accustomed to traditional examination-oriented learning may initially struggle with continuous assessments, reflective exercises, and logbook documentation. The shift demands greater self-regulation and adaptability [2].
- ***Resource and Infrastructure Limitations:*** Variability in institutional resources presents a significant concern. Not all medical colleges possess adequate simulation facilities, structured skills laboratories, or faculty trained in competency-based pedagogy, leading to heterogeneous student experiences [2, 3].
- ***Variation in Implementation:*** Differences in interpretation and execution of CBME guidelines across institutions may result in inconsistent teaching quality, assessment practices, and learning opportunities [3].

- ***Faculty Transition and Student Adjustment:*** Successful CBME delivery requires faculty to adopt facilitative roles and interactive teaching strategies. Delays or inconsistencies in faculty adaptation can affect student engagement. Concurrently, students must embrace self-directed learning habits, which may be challenging without structured mentorship [2].

Student Perceptions and Feedback

Studies examining student perceptions demonstrate general acceptance of CBME reforms. Students frequently acknowledge benefits such as integrated learning, practical orientation, and communication skill development [1, 5]. However, concerns regarding increased workload, frequent assessments, and administrative requirements such as logbook maintenance are also reported.

These perceptions underscore the dual impact of CBME — enhanced educational relevance accompanied by operational and adjustment challenges [5].

Future Directions and Recommendations

Optimizing CBME outcomes necessitates continued refinement and systemic support:

- ***Faculty Development Programs:*** Strengthening educator training in competency-based teaching and assessment methodologies.
- ***Infrastructure Enhancement:*** Investment in simulation laboratories, digital learning platforms, and assessment tools.
- ***Standardization:*** Establishment of uniform national benchmarks for competencies and evaluation methods.
- ***Student Support Systems:*** Integration of mentorship and mental health support to mitigate emerging stressors.
- ***Continuous Feedback Mechanisms:*** Incorporating student feedback for iterative curriculum improvement.

Conclusion

The introduction of CBME in India signifies a transformative step toward modernizing medical education. While challenges related to implementation, adaptation, and resource disparities persist, evidence indicates that students recognize the educational value of early clinical exposure, skills-based training, and integrated learning. With sustained institutional support, faculty development, and curriculum standardization, CBME holds substantial promise for enhancing the competence and preparedness of future Indian medical graduates.

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