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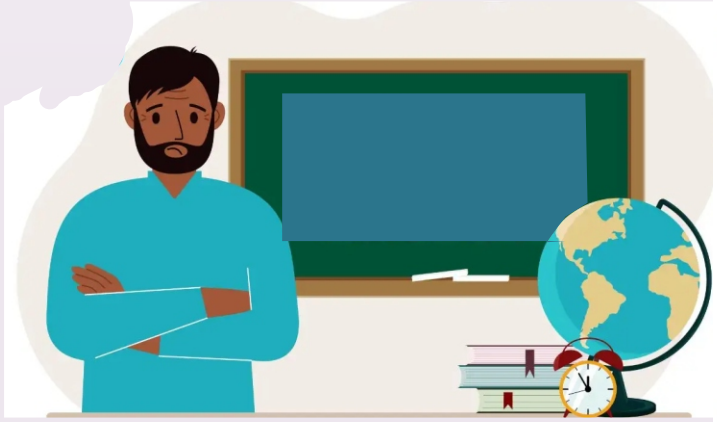
REFLECTIONS

Challenges experienced in Implementation of CBME



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Editorial

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Challenges Faced in Implementing Competency-Based Medical Education (CBME)

Competency-Based Medical Education (CBME) approach aims to improve the quality of medical education and better prepare students for clinical practice but the transition can face several obstacles. Some of the challenges in implementation of CBME could be

1. Faculty Training

Educators must shift from being traditional lecturers to mentors and assessors of competencies. This transition requires comprehensive training in new teaching methods, assessment techniques, and providing feedback. However, many institutions struggle with limited resources for faculty development and resistance to change from educators accustomed to traditional methods.

2. Assessment Methods

Assessing competencies in CBME is more complex than in traditional education. It involves multiple assessment tools, including direct observation, portfolios, simulations, and workplace-based assessments. Reliable and valid assessments have to not only accurately measure student competencies, but must also ensure consistency and fairness in assessments across different educators and settings.

3. Resource Constraints

Implementing CBME requires significant resources, including time, financial investment, and infrastructure.

4. Cultural and Organizational Resistance

Transitioning to CBME often faces resistance from faculty, students, and administrators who are accustomed to traditional educational models. Overcoming this resistance requires effective change in management strategies, clear communication of the benefits of CBME, and involving all stakeholders in the implementation process.

5. Student Adaptation

Students may find it challenging to adapt to CBME's self-directed and competency-focused learning approach. They are required to take more responsibility for their learning, actively seek feedback, and demonstrate their competencies continuously. Providing adequate support and guidance is essential to help students transition smoothly to this new learning model.

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Editorial

6. Quality Assurance

Ensuring the quality and consistency of CBME across different institutions is a significant challenge. It requires robust accreditation standards, regular monitoring, and continuous improvement processes. Institutions must also balance the flexibility of CBME with the need for standardization to ensure all students meet the required competencies.

7. Long-Term Outcomes

Evaluating the long-term outcomes of CBME is challenging, as it involves tracking graduates' performance in the workplace and their impact on patient care. Establishing systems to collect and analyze this data requires collaboration with healthcare organizations and may take years to yield meaningful results.

In conclusion, while CBME has the potential to improve medical education and better prepare students for clinical practice, its implementation is with plenty of challenges. Addressing these obstacles requires a concentrated effort from educators, administrators, and policymakers to ensure a smooth transition and the success of CBME programs.

As the first batch of students of CBME curriculum have now become interns, the effect of the change which was implemented should be discernable. Teachers from pre, para and clinical subjects were requested to pen down their experiences in the challenges they faced in implementing CBME. Their insights would be valuable to identify issues like faculty training, adaptation to newer Teaching-learning methods, designing effective assessments and ensuring hat students meet required competencies. Understanding their challenges would ensure smoother transitions, better resource allocation, and, effective faculty development, ultimately contributing to successful implementation of CBME throughout the entire Medical Education Programme.

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CBME system will provide educational continuity from undergraduate trainees to practicing physicians and will be advantageous to trainees and supervisors. However, advances in implementing CBME curricula in the predefined time-based paradigms have been hindered by many implementation challenges, including those associated with the assessment of competency, accreditation/regulation, and logistical considerations.

The stakeholder's visions must align with the needs of the healthcare system and the population it serves. Leadership for this type of project should come from various levels of an organization. Since CBME has been implemented by the erstwhile MCI in 2019, providing appropriate support and education regarding competency based education is imperative. At N.K.P.Save Institute of Medical Sciences & Research Centre and Lata Mangeshkar Hospital, Nagpur, the management has encouraged increasing the level of awareness, participation in Faculty Development Programmes, enhancing infrastructure needed, establishment of a good Skills Lab etc. We are aware that active involvement of all the stakeholders is vital for successful total implementation of this comprehensive educational experience.

CBME ensures quality healthcare by creating doctors with specific skills tailored to serve the medical needs of the community. CBME, by underpinning professionalism, communication skills and health advocacy will narrow the gap between doctors and patients. Addition of foundation course at the beginning itself, emphasizes the importance of soft skills and empathy toward patients. AETCOM module is a most welcome addition into the new curriculum which facilitates better social behaviour and communication with patients.

But operationalisation of CBME is a herculean task and its implementation poses numerous challenges. These challenges if not addressed properly will have negative implications on students' learning environment.

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A number of obstacles prevent Competency-Based Medical Education (CBME) from being widely adopted in medical institutions. The opposition to change on the part of both teachers and students is a major obstacle. Many medical schools have firmly embedded traditional teaching approaches, like time-based curricula, which makes the shift to a competency-based model challenging. While students might not be accustomed to self-directed learning and the focus on clinical skills, educators might not have the necessary expertise or knowledge to evaluate competencies in an efficient manner.

The resource-intensive nature of CBME presents another difficulty. It necessitates large investments in infrastructure, assessment instruments, and teacher development. Institutions may find it difficult to provide the support required for the successful implementation of CBME due to a lack of resources and staff. Furthermore, it is difficult to develop meaningful and trustworthy evaluation instruments that accurately gauge competencies in a variety of clinical settings. Because CBME is customized, it is necessary to monitor and assess each student's development, which can be burdensome for both teachers and students.

Finally, instructor and student burnout may result from CBME's emphasis on ongoing assessment. Maintaining involvement and lowering stress levels require that the tests be fair and of significant impact.

In order to successfully integrate CBME into medical education, stakeholders including educators, administrators, and policy makers must work together to address these challenges. This issue of reflectons tries to analyse this perspective of the stake holders.

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Challenges in implementing CBME

We started implementing the meticulously planned CBME for our MBBS students in 2019. Teachers were trained through CISP. The guidelines were circulated in advance and all were instructed to make their Academic Schedules for the year. This was indeed challenging and committees were formed specifically for I MBBS and also for II MBBS. It required a lot of focus and many hours for the teachers to make their Academic Schedules and timetables with vertical, horizontal integration etc. The first batch of students who joined in the latter half of 2019 started their course. Unfortunately, COVID hit in 2020 and then classes became online- this was a huge challenge especially to conduct practical's online and then take exams online. The same scene continued for this batch and the subsequent COVID batches. Google classrooms were the norm.

The challenges of online classes and exams were faced by students and teachers with net connectivity being vital. Once that phase was over and classes resumed offline the teachers were relieved. Students had to adjust and switch back to attending classes and so the real test for CBME came in 2022.

The biggest advantage of CBME for the teachers is that the academic schedule has to be made before a batch entered and also displayed on the website, which forces us to be organised.

Aligning lectures with practicals can sometimes be problematic. Formative Exam dates are planned ahead which is a good thing

Challenges are mainly for student attendance at times, in spite of all efforts. Formative exams are taken just for the students exam eligibility- a change from before when the internal assessment exams were given weightage in the summative exam mark sheet- this was a good judgement of the students performance over the whole year. Larger student batches also means more time for theory paper corrections- this can be difficult to complete within given timeframes, especially when teachers have to balance clinical work with corrections.

Although the CBME curriculum has been implemented in spite of a lot of problems, the end result can be assessed only when these batches step out into their future careers.

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Challenges in implementation of CBME

National Medical commission New Delhi introduced Competency Based Medical Education (CBME) in 2019 across all medical colleges of India and it has brought major changes in medical education . CBME aims to shift medical training towards developing specific competencies, focusing on outcome-based learning rather than traditional time-based curriculum.

Goal is to produce a competent Indian Medical Graduate who is capable of serving as a physician of first contact &being globally relevant simultaneously. It aims around seven roles of an IMG .Apart from being clinician IMG should be equipped with soft skills, clinical skills, empathy , ethics, attitude and professionalism.

CBME is outcome based, student centric and is woven around the subject specific competencies from the core subjects ,integrated teaching , innovative teaching learning, multi faceted assessment methods and also has an explicit part of addressing professionalism , attitude and ethics in the form a module AETCOM .

CBME has brought many changes in the curriculum. It has been adopted and implemented by all the medical colleges across India amidst number of challenges like crunch of trained faculty, tight curricular schedule , poor infrastructure, rigid mind set of the faculty.The worst was CBME and COVID pandemic came hand in hand together in its inception year 2019.

Some major challenges witnessed by all the institutes for effective implementation of CBME are:

COVID Pandemic

The year of inception of CBME faced the major challenge of COVID Pandemic and, due to the unprecedented lockdown the whole TL process got shifted to ONLINE Platform. This was the major challenge as the medical faculty had never ever used ONLINE Teaching Learning but this challenge got converted into opportunity. Majority of the faculty got trained for using ONLINE platform which has received acceptance till date.

Faculty Crunch

One of the biggest challenge for the implementation of CBME was shortage of trained faculty. NMC New Delhi and all medical colleges rolled out a FDP for its implementation . The faculty is being trained about the new concepts of CBME right from the concept of competencies , new Teaching Learning and assessment methods , AETCOM module etc

But still the major challenge is that many colleges suffer from faculty crunch for integral part of CBME curriculum like small group teaching learning and assessment methods in all phases. A good number of faculty is also required for the certification of competencies as envisaged in the CBME curriculum.

Inertia about CBME

CBME holds many challenges, ranging from the content itself, the inertia surrounding its implementation and the actual implementation as it is a sudden and drastic shift from traditional to competency based curriculum.

Time constraints

This is always a major challenge as the process of admission to MBBS course always has many issues and hence the same course content has to be delivered in the stipulated time whatever it comes to be and it keeps on changing every year.

Team work

Many inclusions of CBME need a good and cohesive team work amongst the faculty from all phases. ECE needs a dedicated and integrated team of faculty from basic sciences and clinical departments. Alignment and integration in the form of block teaching also calls for a strong team of faculty.

Foundation Course :

In the launching year of 2019 it was of 15 hours spread over a period of 1 month , now reduced to 80 hours in 2 weeks. The major challenge here was crunch of faculty to teach soft skills, computer skills etc.

Alignment & Integration

One of the inclusions of CBME is alignment and integration of competencies amongst different phases to make learning more relevant. To make it even more so, block teaching is recommended. This needs a strong integrated team of teachers from all phases.

Early Clinical Exposure (ECE)

ECE is a very useful initiative which helps the students to integrate the concepts of basic sciences and relate them with the clinical scenarios. ECE helps the students to apply the knowledge learnt in basic sciences and understand the concepts in depth. Again for the smooth implementation of ECE a good team work between the teachers of all phases is a must. Also teachers from the clinical departments are required to use their experience in teaching phase I students.

AETCOM

AETCOM module improves soft skills of the learners and awareness about the importance of good communication and ethics. It will prevent professional malpractices and litigations in medical practice. It is expected from the faculty that they share their own experiences regarding good communication skills and ethics so that the learners understand the attributes of AETCOM module in a better manner. Here the biggest challenge is lack of resource material to teach and assess the students on AETCOM.

New Assessment Methods

CBME incorporates many new assessment methods which are objective in nature. But the faculty members face challenges in conduct of Objective structured clinical examination/Objective structured practical examination (OSCE/OSPE) and many more new methods . One of the important challenges is that it demands multiple assessors, varied assessment tools, and robust rating systems, each requiring meticulous training for evaluators. Faculty also find difficulty in providing adequate feedback to the students which is expected after formative assessments.

Many objective assessments need a good infrastructure, resources and more number of faculty to create an effective environment to make the assessment valid and reliable and also to give feedback .

Self Directed Learning (SDL)

One of the roles of an IMG as envisaged in CBME is that of a lifelong learner and Self Directed Learning is said to be mother repository of Life Long Learning.

For an effective implementation of SDL or to put students in the self directed mode, an institute must have good number of resources in the form of a well stocked library including its e-version, a resourceful museum and a high quality simulation lab where student can visit and gain knowledge and learn skills at their own will .

Simulation Lab

It needs lot of funds and space which many institutes are yet to develop.

Despite all the challenges medical colleges are taking huge efforts in the form of capacity building, upgrading infrastructure and motivating and helping the faculty to adapt the change.

Conclusion

CBME has a long way to go in India. There are number of challenges but all the challenges can be converted into opportunities for the strengthening of CBME, so that, competent IMG will be given to the society .

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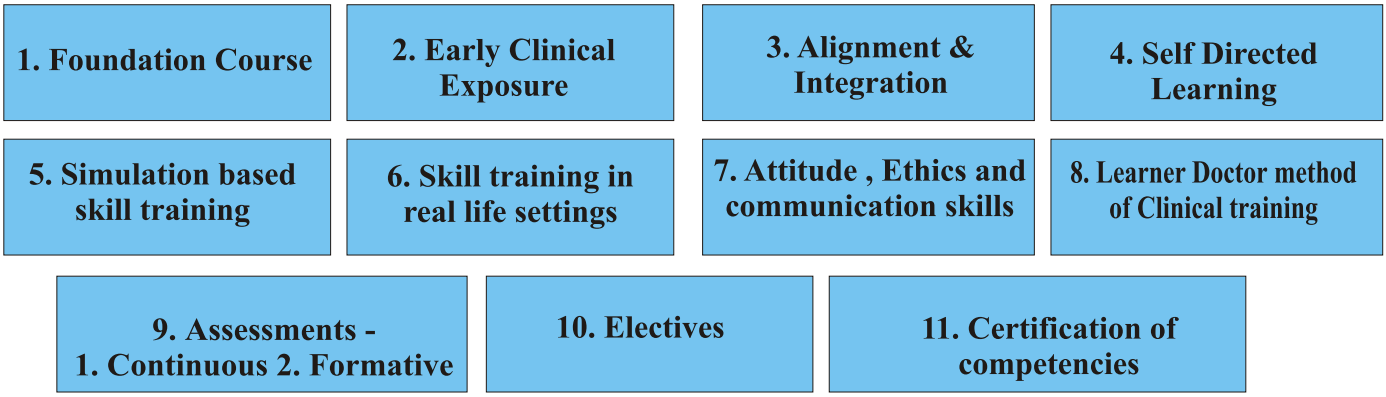
Implementation of Competency based Medical Education : Challenges faced & Lessons learned

Introduction : Competency-Based Medical Education (CBME), introduced in 2019 in India,[1] 1has reached its fifth year of implementation, marking a significant milestone in medical education reform. Over these years, various measures, including guidelines, Curriculum Implementation Support Programs (CISP I, II, and III), and FAQs issued by the National Medical Commission (NMC), have aimed to provide clarity and support for its effective adoption across the country. The release of revised guidelines by the Undergraduate Medical Education Board (UGMEB) in 2024 reflects the continuous evolution of CBME to align with contemporary educational needs. [2]

CBME's primary focus on shifting from **"what needs to be taught"** to **" what needs to be learned"** represents a transformative change in medical education, however, the implementation of this approach has encountered significant challenges, primarily due to the need for a mindset shift among various stakeholders, including educators, administrators, and students. Graduate attributes, goals, roles, generic and specific competencies, TL methods and assessment tools are already explicitly elaborated in the curriculum prescribed by NMC. Major reforms suggested in CBME are as depicted in Fig 1 [3]



The implementation of CBME revolves around Universal educational principles that transcend geographical and cultural contexts. These principles ensure a learner-centric, outcome-oriented approach with the following key principles to guide the effective implementation of CBME:

1. Defined Competencies: Clearly articulated competencies to be achieved within and beyond the classroom.
2. Aligned Teaching, Learning, and Assessment Strategies: Systematic integration of teaching and assessment methods to directly address the defined competencies.
3. Relevant, Updated, and Engaging Learning Resources: Ensuring that learning materials are updated, contextually relevant, and designed to actively engage students in the learning process.
4. Skill Training with Experiential Learning Opportunities: Emphasizing hands-on experiences, such as simulations, clinical rotations, and community-based learning, to bridge the gap between theory and practice.
5. Instructional Delivery Tailored to Learner Needs: Adapting teaching methods to accommodate diverse learning styles, paces, and preferences, promoting inclusivity and effectiveness.
6. Learner Participation in Academic Transactions: Actively involving students in the learning process.
7. Dynamic Learner Support Mechanisms: Establishing robust systems to provide academic, emotional, and professional support, ensuring student's holistic development.

labs, and e-learning platforms, to support competency-based learning. Development andavailability of tailored,outcome-focused learning materials have supported the educational shift, aligning resources with CBME's objectives. Several faculty development programs have equipped educators with the knowledge and skills required to deliver CBME effectively. Inspite of these encouraging facts, the inconsistency and disparity in CBME still lurks at large amongst medical schools. There is absence or inadequate simulation lab which makes it impossible to provide a safe learning environnt to practice clinical skills. There is lack of uniformity in how competencies are taught and assessed, with some institutions excelling while others struggling to meet baseline standards. The shift to focus on learner needs is unevenly adopted, with some institutions still following traditional, teacher-cantered approaches. Effective learner support systems, such as mentorship programs, are not uniformly available across schools. Competency-based assessments demand a shift from traditional examination methods to continuous and formative evaluations, however, many schools lack a robust mechanism toensure consistency. Rather than focussing on competencies , incorporating various learning domains and disciplines , the subject specific boundaries still exist, thereby defying the CBME principles in totality. The competencies addressed in the AETCOM module are an integral part of clinical skills, however, it is taught as a separate module. 'Professionalism', as one of the roles of IMG remains largely unaddressed in the entire curriculum except a few competencies finding place in AETCOM module.

Lessons Learned :

Article by Rajiv et al. 4 states that we have primarily relied on providing the knowledge, skills, and regulatory approaches for CBME implementation. We need to think about working on the attitudinal aspect as well and provide the opportunity for the teachers to bring their apprehensions and related issues out in the open. This may hold the key for future. More and more collaboration amongst medical schools to share infrastructure and learning resources, expertise and best practices may play a significant role in bringing uniformity in training and inculcation of desired competencies as a first contact physician. The learners must be primarily made aware of the desirable Competencies and efforts must be directed to make the entire TL process as integrated as possible. Blurring the subject boundaries require considerable efforts on part of the teacher.To assess the seven roles of IMG, in the real sense, we need to embrace the qualitative assessment methods and appreciate their value in competency-based education. 5 Various workplace-based assessments, using narratives and descriptive evaluation, giving grades instead of marks, Introducing e portfolios for continuous assessments, competency based question bank and test paper blueprints can be desirable step forward in that direction. It is important to realise that unless we assess a competency holistically rather than in bits and pieces, we are not actually implementing CBME.

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Experience during CBME implementation

CBME rests on outcome-based learning and flexibility in learning time required for a student to achieve a pre-determined level of competency, thereby allowing students to progress at their own pace, based on their mastery on the core competencies. Introduced in Medical Colleges in India in 2019, it was like a complete overhaul of the traditional teaching learning process going on in these institutes to which the teachers were tuned over the years.

As a senior faculty member and HOD of a clinical department in a government medical college in central India, I have encountered difficulties in effective implementation of the CBME program

 CBME is based on Outcome-Based Learning: Defined clear, measurable outcomes for medical graduates are given in the respective subject specific books which are issued from the NMC and MUHS from time to time which are ready made but some of the outcomes are not direct and can be achieved after multiple intermediate outcomes and require contributions of more than one department.

CBME encompasses Competency Framework. Developing competencies that encompass knowledge, skills, attitudes, and values are well spelt in the learning objectives which are integrated and are to be assessed. In this respect, though the competencies are defined, all facilitators are not trained and not accustomed to the method by which they can be achieved and assessed. It is a tedious job as compared to the traditional way.

 Assessment: Implementing continuous, formative assessments to guide learning and provide feedback is a difficult task. The learners are not available at the same time for assessment due to reasons like the sickness (physical and mental), home issues, extended self declared vacations(common bunks), university exams (if they have not passed in the previous attempts), Diwali and Ganesh festivals, gatherings and the most important, the PG entrance test coaching classes which are happening on Saturdays and Sundays. Students are influenced by their senior batch students and they tend to bunk classes and the scheduled assessments.

 Assessment can only be conducted during the working hours of the office which gives a limited time for the assessors. Considering all the above issues, the assessment of a competency may clash with some other subject learning activity.

 There are still some medical students who belong to the traditional pattern batches who appear for the university examination with the current CBME pattern batches, As the scheme of assessment and mark distribution is different, the assessors have to be very careful while conducting exams for such mixed batches.

 CBME allows Flexibility: Allowing students to progress at their own pace based on their mastery of competencies i.e. learner driven time frame is expected. This is a disadvantage for the teachers, as the teachers are not doing teaching and assessment only. They are care givers (24×7 in some of the subjects), PG teachers, administrators, assessors for theory and practical papers for the internal assessments, prelims and the university examinations for UG and PG, PhD Courses as well as other courses of the university. Hence "Certification" of the competency takes a very long time.

 The MCQ are replaced by the scenario based MCQs "Vignettes". These MCQs are difficult and time consuming to construct and validate.

 Even now the faculty does not have the clear concepts about integration and alignment, and as of now, the whole faculty of the colleges is not trained. The concepts of CBME are not clear to the newly appointed teachers, hence many resist the change, even many of the senior teachers are believers of the traditional system. Similarly, implementation of the ATECOM module competencies and their certification is difficult.

 In many teaching institutes there is frequent change in the faculty especially when the new medical colleges are being sanctioned, so the department loses a trained faculty member if the faculty gets transferred (as in govt. Service) or resigns (to join elsewhere). This has put immense strain on the already stretched departmental strengths.

 The colleges which are old do not have the infrastructures to conduct a small group teaching in the departments. 8 to 9 teaching rooms with modern amenities which will have capacity of 25 students for conducting small group teaching are not available at the time in any of the departments. This needs upgradationthe infrastructure of the available buildings.
 The colleges do not have advance skill labs.
 There is difficulty in the implementation of mentor mentee programme, the mentees do not come to the teacher despite repeated phone calls which is reality.

These are some of the hurdles which we have faced during implementation of CBME. It will be a long drawn process till and if it can be implemented in totality. The first faltering steps taken in that direction will result in confident firm ones only with time, more facilities and training.

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Difficulties experienced in implementation of CBME in UG curriculum

Competency based Medical education (CBME) is an educational approach that focuses on developing specific competencies in medical students rather than simply completing a predefined duration of training. It has shifted focus from knowledge based medical training to CBME to meet national goal of "Health for All" by producing trained doctors who would be able to provide holistic care, develop scientific temperament & will practice as ethical medical practitioners. CBME was introduced in India by NMC (National Medical Commission) in 2019. It was good concept.

In this new curriculum different aspects were considered like foundation course, electives, integrated learning & early clinical exposure. These have several advantages. But with the current staffing of Medical Colleges, many challenges are being faced while implementation of CBME. Following are some of them which are faced by almost all medical institutions in India

1.Lack of adequate faculty

Most medical colleges have more than 150 students. For CBME, faculty number has to be increased to really ascertain that students have attained the various competencies. With the younger doctors not showing interest in becoming medical faculties, the job is left to the available fewer than required faculty members. The opening of additional medical colleges by the government has also contributed to the difficult situation of staffing of the various departments. Implementation of CBME as it should be would be a near impossible task in this scenario.

2.Faculty Training and Preparedness

Faculty members may need more training to learn new teaching methods and assessment strategies. They may also need to update themselves on new approaches and learn how to train students in soft skills, feedback, regular formative assessments etc.

Resistance to change from traditional teaching methods to a competency-driven approach has been an important hurdle in implementation of CBME. The reasons for this resistance on the part of faculties (especially clinicians) are due to overburden of work (patients care, emergency duties, camp duties, VIP visit duties, postgraduate teaching, teaching of Dental, Physiotherapy students & students doing short courses run by universities in different states). Keeping documentation of all exams like school pattern is time consuming and labor intensive.

3. Infra structure and Resource Constraints

CBME demands significant financial, human, and infrastructural resources, including simulation labs and technology for tracking competencies. Lack of adequate infrastructure is a major hurdle. Big updated Skills labs, good IT support, newer Teaching-learning aids and platforms are the need of the hour. These are not available at all institutes.

4. Students attendance

Student attendance in theory and practical classes is dwindling . Students' focus is on PG entrance exam classes. They stay away from lectures & clinics inspite of good counseling as they know that their success in their immediate goal of getting entrance in PG courses is not related to any psychomotor or affective domain skills.

5. Assessment Challenges

Developing valid, reliable, and objective assessment tools to evaluate competencies is difficult. Regular formative assessments and feedback mechanisms demand additional time and effort from faculty. Faculties cannot spare extra time from their other work load (Teaching& Clinical)

6. Standardizing assessments across institutions is also challenging. Competency tracking for individual students can be logistically overwhelming.

7. Student Diversity

Students have varying learning speeds and styles, and CBME requires personalized approaches, which are hard to implement on such a scale like 200 MBBS admissions.Students find the frequency of exams stressful & their schedule becomes hectic.

8.Integration Across Disciplines

CBME emphasizes integrated teaching (horizontal and vertical integration),but achieving this coordination among departments is proving to be difficult. Ensuring interdisciplinary collaboration is often met with administrative and practical challenges.

9. Frequent change in Guide lines: There is frequent change in CBME curriculum guidelines, leading to inconsistent adoption, confusion in faculties & students.

10.Monitoring and Accreditation

Ensuring compliance with CBME standards through regular monitoring and accreditation processes adds an additional layer of complexity.

Developing systems to track and document student progress over time can be technologically demanding.

11.Time Constraints

While CBME allows students to progress at their own pace, regulatory bodies often impose fixed timelines, conflicting with the principles of CBME.

Possible Solutions

1.Capacity Building:

Regular faculty development programs to be conducted at entry of candidate as faculty in job(at level of Senior resident Assistant professor).

2. CBME curriculum should be made less stringent. Faculties from concerned subjects should be involved in preparation of competancies. Some of the Competencies included in present curriculum are unrelated to that subject.& many of the important aspects are missing. So there is a need to restructure these competencies and the allotted time scale.

3. Students should be trained for ATECOM in their first year (foundation course) only

More emphasis to be given on emergency management & skill lab training& ward clinics

Conclusion

A qualitative and robust faculty development programe at a faster pace with increase in number of committed faculty members in each department, less stringent course, less number of assessment exams, making skill labs available in all medical colleges, maintaining Teacher & student ratio & restructuring of CBME will be sustainable approach towards continuation of CBME

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"From Chalkboards to Competencies: Insights and Obstacles on CBME from an Educator's Lens"

Introduction:

The introduction of Competency-Based Medical Education (CBME) marked a seismic shift in the Indian medical education landscape-a change long overdue to break free from the redundancy of the traditional system. Launched in 2019, CBME offers a transformative, outcome-driven framework designed to mould medical graduates with the core competencies essential to earn the title of "doctor."

What sets CBME apart is its incorporation of innovative pedagogical elements: horizontal and vertical integration, early clinical exposure, self-directed learning, foundation courses, and even the revolutionary use of "reflection" as a tool for formative assessment. But implementing such a paradigm shift is no small feat-it requires meticulous planning, structure, and flawless execution. Recognizing this, the then Medical Council of India (MCI) introduced CBME

through a phased, capacity-building approach. Faculty and student sensitization, curriculum restructuring, crafting Entrustable Professional Activities (EPAs), and upgrading teaching-learning infrastructure-such as mandatory skills labs and cutting-edge technological integration were key milestones in this rollout.

To support this evolution, comprehensive training programs like the CISP (Curriculum Implementation Support Program), RBCM (Revised Basic Medical Course), and AETCOM (Attitude, Ethics, and Communication Skills) were introduced. But here lies the million-dollar question: Has CBME achieved what it set out to accomplish?

Conversations-whether formal in academic literature or informal among educators-betray an undercurrent of scepticism about its efficacy and implementation.

Rather than dwelling solely on the challenges, let's unravel CBME's journey through the lens of a SWOC analysis. This approach provides an intriguing and balanced perspective, highlighting its strengths, weaknesses, opportunities, and challenges. Ready to dive in?

SWOC analysis of implementation of the CBME:

STRENGTHS:

1. Focus on teaching, training and assessment of practical skills.

CBME emphasizes skill-based learning, ensuring graduates are equipped with hands-on expertise relevant to their future clinical practice. This approach bridges the gap between theoretical knowledge and practical application, which was often a drawback in traditional curricula.

2. Designed on the societal needs in the Indian context.

CBME addresses the healthcare requirements of the Indian population, such as managing communicable diseases, rural healthcare challenges, and primary care. This societal alignment ensures that medical graduates are more prepared to meet the unique needs of the country.

3. It lead to revision in the curriculum – Long awaited.

The overhaul of the outdated medical curriculum was overdue. CBME introduces new subjects and competencies, such as professionalism, communication skills, and ethics, fostering a holistic approach to medical education.

4. Mandatory faculty training.

The mandate for faculty to undergo structured training has enhanced the preparedness and teaching quality of educators, making them better equipped to deliver the CBME framework.

5. Enhanced the role of MEU departments. MEUs now play a more significant role in curriculum planning, implementation, and faculty training. Their involvement has brought a structured approach to curriculum development and fostered innovation in teaching methodologies.

WEAKNESSES:

1. Lack of trained educators.

A significant proportion of medical faculty are not adequately trained in CBME principles, creating challenges in its effective implementation.

2. Limited clarity in understanding the competencies. Both faculty and students often struggle with defining, interpreting, and assessing the required competencies, leading to inconsistencies in achieving learning outcomes.

3. No motivation/incentives for educators to implement changes. The lack of financial or professional incentives for educators to invest additional time and effort in adapting to the CBME model discourages its smooth adoption.

4. Complex in its implementation.

The layered structure of CBME, including longitudinal assessments, competency mapping, and multidisciplinary coordination, makes it challenging for institutions with limited resources and experience.

OPPORTUNITIES:

1. Faculty development.

CBME necessitates continuous faculty development, presenting an opportunity to create a well- trained teaching workforce capable of using innovative educational strategies.

2. Competent graduates at the end of the course.

The program aims to produce graduates who are better adapted to meet the demands of modern healthcare systems, increasing their employability and societal impact.

3. Implementation of newer teaching-learning methods.

The shift to CBME promotes active learning methods such as problem-based learning (PBL), case- based learning (CBL), and simulation-based education, which can transform medical education in India.

4. Advanced technological applications into TL methods.

CBME implementation encourages the integration of e-learning platforms, virtual reality simulations, and digital assessments, fostering a modernized and efficient teaching environment.

CHALLENGES:

1. Hugely deficient teaching workforce.

The shortage of medical educators capable of implementing CBME is a critical barrier, particularly in rural and peripheral institutions.

2. Increased budgets for technological applications and integration.

Procuring advanced simulation tools, learning management systems, and e-resources require significant financial investment, which is often unavailable in government and smaller private institutions.

3. Poorly motivated educators.

Faculty members often view CBME as an additional workload without tangible benefits, leading to low enthusiasm and engagement.

4. Limited teaching hours in time tables.

The current medical curriculum already faces time constraints, and integrating CBME competencies without sacrificing essential subjects poses a scheduling challenge.

5. Higher Demand for Teaching and Assessment Hours

CBME's focus on formative assessments, feedback, and skill development requires significantly more teaching and assessment time, increasing the burden on faculty.

6. Coordination among departments.

CBME emphasizes an integrated approach to teaching, which demands greater collaboration between departments. Coordinating such efforts can be logistically challenging in large institutions.

This article provides a comprehensive view of the author on CBME's potential and the hurdles it faces in implementation, emphasizing the need for strategic planning and resource allocation to overcome its weaknesses and challenges.

Disclaimer:

This article reflects the perspectives and insights of the author based on current trends and practices in the implementation of Competency-Based Medical Education (CBME) in India. While every effort has been made to ensure accuracy and relevance, the challenges and opportunities discussed may vary across institutions and regions. Readers are encouraged to adapt the information to their specific contexts and consult official guidelines and policies for CBME implementation.

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Challenges in Implementing Competency-based Medical Education in India Stakeholders' Perspective: A Mixed-method Analysis

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Abstract

Introduction:
Competency-based Medical Education (CBME) was introduced in the year 2019 in India. It has brought about major changes in medical education. The curriculum is learner centric, outcome based, focuses on the development of core competencies and professionalism. However, many institutions have faced challenges during the implementation of the CBME curriculum. This study was aimed at assessing the challenges faced by all the stakeholders (students, faculty, and administrators) of various medical institutions and gather their insights on proposed solutions.

Methodology:
This cross-sectional study was conducted over a period of 3 months, from October 1, 2023, to December 31, 2023. The study was conducted in 32 medical colleges across India. A total of 60 faculty of various disciplines, 32 administrators of the institutes, and 580 undergraduate medical students were included in the study. Perception of students and faculty was collected using a validated survey form. One-on-one interview was done for all the 32 administrators using a facilitator guide. A mixed-methods approach was used for quantitative and qualitative data collection and analysis.

Results:
Around 40 (66.6%) faculty opined that that deficiency of trained faculty was a significant challenge in implanting CBME curriculum. Twenty (33.3%) of the faculty felt that there is a lack of adequate infrastructure required for the implementation of CBME curriculum. Among the administrators surveyed, 12 (37.5%) felt that dwindling student attendance was a major challenge, whereas 10 (31.5%) felt that there was the lack of collaboration between universities, colleges, and regulatory authorities. Four hundred and twenty-five (73.2%) students opined that simulation-based training and 435 (75%) students opined that electives were very good initiatives by CBME curriculum. The students found the inclusion of Integrated teaching, Attitude, Ethics, and Communication Module, early clinical exposure, and Family Adoption Programme in the CBME curriculum helpful.

Conclusion:
CBME curriculum was largely accepted across all the medical colleges. The training of faculty and administrators was considered an important challenge which needs to be considered. Students opined that the newer curricular reforms enhanced their learning.

Strength of the study

1.Title: Though title mentions only challenges, good perceptions of the students about CBME are also mentioned.

2.Study background: CBME faces a multitude of challenges, ranging from the content itself to the inertia surrounding its implementation and the practical implementation.

3.Objectives: Challenges in implementation of CBME and their possible solutions have been studied.

4.Methodology: It is a questionnaire based study**.** Multi-centric cross-sectional study was conducted across 32 medical colleges in India**.**

Effort has been made to assess challenges faced by varied stakeholders like students, faculty members and administrators.

5. Results and Data Analysis: Data collected from 2 questionaires administered. The number of questions in the survey questionnaire was less to ensure that the participants could describe their experiences of implementing CBME curriculum in detail. Mixed method analysis has been done.

6. Discussion and Conclusions: CBME curriculum has a long way to go. Challenges faced and their possible solutions are listed. Dwindling student attendance and lack of motivation is a matter of concern. Shortage of trained faculty for smooth implementation of CBME and faculty training in understanding the intricacies of CBME curriculum, teaching-learning methodologies, assessments and feedback will also be required. CBME curriculum was thought by the students to enhance their learning. Foundation course and ECE was appreciated by the students but they felt the necessity for the sessions to be more interactive.

Limitations and Suggestions

1. The sampling is convenient sampling so there may be selection bias.
2. Small sample size.
3. Demographic and social factors of the study participants were not considered in the study. Hence their possible effect on student learning as well as challenges faced has not been analysed.

Kamlesh Motwani
2019 BATCH (INTERN)

Review of the Newly Introduced CBME Pattern in MBBS Curriculum

The Competency-Based Medical Education (CBME) pattern has significantly impacted the development of clinical skills, psychomotor skills, and communication skills in MBBS students. Here is a review from a student's perspective:

1. **Clinical Skills**

• **Structured Learning**: CBME emphasizes the development of specific clinical competencies that students need to master at various stages of their education. By focusing on hands-on learning in clinical settings, it allows students to practice and refine skills in real-life scenarios, rather than just in a classroom.

• **Early Exposure**: One of the major strengths of the CBME system is that it integrates clinical exposure early in the curriculum. Students engage in patient interactions, performing examinations, diagnostics, and treatments under supervision, which enhances practical learning.

• **Skill Development**: Clinical skills, such as history taking, physical examination, and clinical reasoning, are taught with a stepwise approach, allowing students to progressively build on their skills. With frequent assessments, students can see where they need to improve and receive feedback from clinicians and mentors.

• **Challenges**: Some students initially find the clinical environment overwhelming, as they are expected to apply theoretical knowledge in high-pressure situations.

2. Psychomotor Skills

• **Hands-On Training**: CBME stresses the development of psychomotor skills, which include procedural skills like suturing, taking blood samples, and administering injections. These skills are integral to a medical professional's work and are taught through supervised practice, with students expected to perform them under varying levels of supervision as they progress.

• **Simulation-based Learning**: Our Institute has simulation lab where students can practice and master psychomotor skills before applying them to real patients. This reduces the risks associated with initial attempts on live patients and boosts student confidence.

• **Feedback-Oriented**: Regular formative assessments of psychomotor skills allow students to receive immediate feedback and improve their technique. This continuous feedback loop is crucial for building competence in clinical procedures.

3. Communication Skills

• **Patient Interaction**: Communication skills are integral to effective healthcare, and CBME emphasizes the importance of interacting with patients in a respectful and empathetic manner. Students learn to gather patient histories, explain diagnoses, and counsel patients through real-world interactions and role-playing exercises.

• **Structured Training**: CBME includes training modules specifically dedicated to enhancing communication, such as breaking bad news, providing informed consent, and communicating within a healthcare team. This structured approach helps students gain confidence in communicating both verbally and non-verbally.

• **Feedback and Improvement**: Students receive feedback not only from faculty but also from peers, fostering a collaborative learning environment. Continuous assessments of communication skills help students become more proficient in their interactions with patients and colleagues.

• **Challenges**: Some students may find communication with patients challenging, particularly in stressful or complex situations. Overcoming language barriers, cultural differences, and managing difficult conversations requires time, and students may not always feel fully prepared for these challenges.

CBME has undoubtedly enhanced the development of clinical, psychomotor, and communication skills in MBBS curriculum by offering a structured, competency-based approach. The emphasis on practical exposure, hands-on learning, and continuous feedback helps us to hone these essential skills throughout our education. However, our college has high effectiveness of these methods due to many resources available, the level of faculty support, and the student's individual commitment to learning. Despite challenges, the overall approach helps students become more competent, confident, and well-rounded medical professionals, equipped to handle real-world clinical scenarios.

FACULTY DEVELOPMENT PROGRAM

1.15th February 2024: Faculty Development Program for "**Competent IMG: How you assess is what matters Higher level MCQs**". Total 28 faculty members were guided into the process of submission of higher level MCQs as per MUHS guidelines

2.13th, 14th& 15th February 2024: Basic Course in Medical Education (BCME) in Medical Education Technology for the Faculty of NKP Salve Institute of Medical Sciences& Research Centre and LataMangeshkar Hospital. 27 faculties participated in the interactive workshop.

3. 11th July 2024: Faculty Development Program for "Innovative Teaching Learning Methods in CBME"
Dr. Kalpana Date, Asso Prof, Microbiology; DrMeenal Kulkarni, Professor, Community Medicine and DrSharjeel Khan, Asso professor, Forensic Medicine and Toxicology gave excellent inputs on OSCE, SNAPPS and OMP. 68 faculties participated in this program.

2.PROGRAMS FOR RESIDENTS

1.25th January 2024 "EXPRESSIONS 2024" Interdepartmental College Level Power Point Presentation Competition. First Prize: Dr. SamruddhiHomkar Dept. of Anaesthesia, Second prize: Dr. Nabha Mahajan Dept. of Radiology, Third Prize: Dr. Farah Mariya Prakash Jiandani Dept. of Obgy

2.16th Feb 2024"EXPRESSIONS 2024" National Level Online Power Point Presentation Competition for Medical PG Students. TOPIC: Artificial Intelligence in Medical Postgraduate Training. 27 PG students from all over the country participated in this competition
-1st Prize- Dr. HarshadRaundal, Cooper General Hospital, Mumbai
-2nd Prize- DrSamruddhaHomkar, NKPSIMS & RC and LMH, Digdoh Hills Nagpur
- 3rd Prize- Dr. VaibhavChavhan, Swami RamanandTeerth Rural GMC, Ambejogai
Consolation Prize- Dr. AkshayBodke, B J Medical College, Pune

3. WORKSHOPS FOR UG STUDENTS

1. 24th July 2024: Personality Development Program for II MBBS Students Leadership Empowerment Attitude Development (LEAD). DrKalpana Date, Associate Professor Microbiology, national soft skill trainer was the lead faculty. 27 students attended this program and treasured the inputs given.

16th and 17th Jan 2024: Workshop on presentation skillsA two day workshop on presentation skills for MBBS students 2023 batch. All the students were told to present a five minute presentation and inputs were given at the end of the session.

4.FOUNDATION COURSE for MBBS STUDENTS

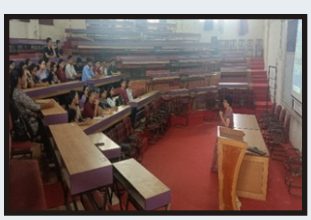
1.10th January 2024 Lecture on "Biomedical waste management" for first MBBS 2023 batch. Speaker: Dr. UjjwalaDehenkar, Assistant Prof, Department of Microbiology. 183 students were a part of this activity.

2.10th January 2024: Lecture on Skills training "Hand Hygiene" Dr. RashmiMahalle, Assistant Professor department of Microbiology for first MBBS 2023 batch.. 178 students participated in this training.

3.17th January 2024: Lets articulate in English: An enrichment program for First MBBS 2023 batch. All the 200 students were divided into groups of 10 under a teacher and told to speak briefly on the given topic.

4.15th Oct 2024:Lecture on "Mental Health and stress management" by Dr. Sushil Gawande Professor Department of Psychiatry. for 2024 MBBS batch 115students were a part of this activity.

5 .15th Oct 2024: Lecture on "Effective Interpersonal relationships" by Dr. Sujitha Reddy for 2024 MBBS batch 115students were a part of this activity.



6. 16th Oct 2024: Lecture on "Learning including self-directed learning"byDr. Madhur Gupta Professor & Head dept. of Biochemistry. for 2024 MBBS batch 125students were a part of this activity

7. 16th Oct 2024: Lecture onHistory of Medicine -Alternate health systems i.e. AYUSH in India. MrMudasir KhanMBBS student. for 2024 MBBS batch 125students were a part of this activity.

8. 16th Oct 2024: Lecture onImportance of research in medicine, DrAjeetSaoji Professor of Community medicine, for 2024 MBBS batch 125students were a part of this activity.

9. 17th Oct 2024: Lecture onBasic /cardiopulmonary/emergency life support lecture cum workshop Dr Anjali Bhure and Anesthesia department for 2024 MBBS batch 150 students were a part of this activity

10.17th Oct 2024: Lecture on Medical ethics, attitudes and professionalism, Dr.Shubhada Deshmukh Professor of dept. of Anaesthesiology for 2024 MBBS batch 150 students were a part of this activity

11. 18th Oct 2024: Lecture onUse of information technology, and artificial intelligence by DrSamruddhi Homkar. Department. of Anaesthesiology for 2024 MBBS batch 150 students were a part of this activity

12. 18th Oct 2024: Lecture on First-aid, Dr. D. Barick Professor dept of Orthopedics for 2024 MBBS batch 150 students were a part of this activity

13. 18th Oct 2024: Lecture on Communication with emphasis on clinico-laboratory communication by, Dr. Madhur Gupta Professor & Department of Biochemistry for 2024 MBBS batch 150 students were a part of this activity

14.19thOct 2024: Lecture on Language skillsby, Dr. Madhur Gupta Professor & Head, Department of Biochemistry for 2024 MBBS batch 150 students were a part of this activity

15. 19th Oct 2024: Lecture on Lifestyle modification in21st century-Diet, Physical activity, Positive Psychology byDr. Dr.BhavanaBhirud, Associate Professor Department of Physiologyfor 2024 MBBS batch 150 students were a part of this activity

5. MENTORSHIP PROGRAMS

"Anubandh"- Mentorship Program for UG's

1.12thJan 2024:Anubandh for First year 2023 batch MBBS Students

2.22nd Jan 3rd Feb 2024:First Session of Anubandh (Mentorship Program)
For 2022 batch: Second MBBS Students

3. 25th December to 31st December 2024First Session of Anubandh (Mentorship Program) For 2024 batch: Second MBBS Students. 66 teachers from all faculties were allotted as mentors for students of 24-25 batch

6. "GURUKOOL" - Mentorship Program for PG's

Ist January to 31st January 2024 Mentorshipfor Postgraduate Residents of all departments

7.OTHER PROGRAMS

1. 26th and 27th Dec 2024:Lecture conducted for Sensitisation to MOODLE LMS for First MBBS 2024 batch Dr. Sharjeel Khan, Associate Professor, MEU member introduced the concept, working and importance of this LMS to the students. The program was attended by the 173 students of first MBBS.

2. 20th May to 31st May 2024: Soft Skill Program for Non-Teaching Staff on Time Management and Productivity. 65 of the non-teaching staff participated in this interactive session. The trainer DrSujitha Reddy conducted the program

3. 1st June to 30th June 2024: Soft Skill Program for Non-Teaching Staff on Empathy & Emotional Intelligence. 80 of the non-teaching staff participated in this interactive session. The trainer Dr Sujitha Reddy conducted the program

4.1st July to 31st July 2024: Soft Skill Program for Non-Teaching Staff: The Key to Enhancing Emotional Intelligence. 95 of the non-teaching staff participated in this interactive session. The trainer Dr Sujitha Reddy conducted the program

5.1st August to 31st August 2024: Soft Skill Program for Non-Teaching Staff: Professionalism and work Ethics. 115 of the non-teaching staff participated in this interactive session. The trainers Dr. Sujitha Reddy conducted the program

6.6th September 2024:Guest lecture for faculties on "Art of Earning". Speaker: Dr. SushilPande, Prof and Head, department of DVL gave an impressive talk on different avenues for effective financial planning like budgeting, investing, retirement savings, debt management, insurance, and tax strategies including consulting experts to optimize wealth and secure financial health. 54 faculties attended the session.

7.1st to 30th September2024: Soft Skill Program for Non-Teaching Staff on Workplace Integrity and Conduct. 60 of the non-teaching staff participated in this interactive session. The trainer DrSujitha Reddy conducted the program

8.Academic activities

Activity	Total number held
CBL / PBL	45
OSCE / OSPE	52
Syndicate Seminars	68

9. Publications of MET

a) Journal of Education Technology & Health Sciences (JETHS)

3 Issues of 10th Volume were published in April, August and December 2024

b) Splash: A Quarterly campus News letter -3 Issues were published.

c)Reflections: Annual MET News Bulletin Volume 23 was released on August 15th 2024

N.K.P. Salve Institute of Medical Sciences & Research Centre and Lata Mangeshkar Hospital

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