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Review Article

# Evolving role of State Health Sciences Universities in India under the Centralized MBBS curriculum: A policy document review

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## Abstract

India's undergraduate medical education system has undergone a significant structural change in its governance and regulatory framework since the introduction of National Medical Commission's [NMC] Competency-Based Medical Education [CBME] curriculum in the year 2019. CBME is aimed to standardize medical education across the country by detailing learning outcomes, teaching schedules, and assessment formats. Before CBME Implementation, state health universities had freedom to design and implement their curricula. A document review-based exploration is carried out to understand extent and nature of the role played by State Health Universities [SHSUs] in interpreting and contextualizing the NMC framework. The themes identified were curriculum autonomy, regional contextualization, faculty engagement and development, assessment regulations, and feedback mechanisms. The paper explores how State Health Universities [SHSUs] can reconsider their role and responsibilities in light of CBME implementation.

**Keywords:** Competency-Based Medical Education (CBME) curriculum, National medical council, Undergraduate curriculum, Health university

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## 1. Introduction

Historic reform in the field of medical education has been affected by the Union Government with the constitution of the National Medical Commission (NMC), along with four Autonomous Boards. With this, the decades-old institution of the Medical Council of India (MCI) stands abolished. Along with NMC, the four Autonomous Boards of UG and PG Medical Education Boards, Medical Assessment and Rating Board, and Ethics and Medical Registration Board have also been constituted to help the NMC in day-to-day functioning.[1] With the establishment of the National Medical Commission (NMC), India's undergraduate medical education system has undergone a significant structural change in its governance and regulatory framework.

The NMC's Competency-Based Medical Education (CBME) curriculum, introduced in 2019, aimed to standardize medical education across the country by detailing learning outcomes, teaching schedules, and assessment formats, thereby aligning medical training with global standards.[2] Designed to standardize medical training across the country, CBME emphasizes learner-centered education, skill acquisition and outcome-based assessment. It has been revised from time to time and impact of these revised CBME guidelines on MBBS student assessments is expected to be significant, as continuous assessment and competency-based evaluations replace traditional exam-focused approaches. While curriculum design and policy direction are centralized through the NMC, State Health Sciences Universities (SHSUs) continue to serve as affiliating and examining bodies for a large number of medical colleges across states.

Before CBME Implementation, it has been repeatedly emphasized upon need-based curriculum, and all universities have been granted full freedom to design and implement their curricula without interference from the said body.[3] Considering today's scenario, centralized policy-making

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through NMC may have limited academic autonomy of SHSUs. On the other hand, some state-level bodies are still central to implementation including academic calendars, examination conduct, and contextual adaptation. It is at this juncture that we must critically examine how SHSUs can move beyond their regulatory role into one that actively addresses capacity building, faculty development, assessment innovation, and integration of context within the national framework. The extent and nature of the role played by SHSUs in interpreting and contextualizing the NMC framework remains underexplored. This study is an attempt to fill this gap through a document review-based exploration of how SHSUs have adapted, adopted, or influenced the implementation of the centralized CBME curriculum.

## 2. Methodology

A document review methodology was adopted to analyse the repositioning of State Health Sciences Universities (SHSUs) in the context of a centralized MBBS curriculum.

## 3. Data Sources

The review included the following categories of documents:

1. **National Medical Commission (NMC) publications:** Competency-Based Curriculum for the MBBS program (2019), Assessment Module (2023), and related implementation guidelines[2,4]
2. **Legacy Medical Council of India (MCI) documents**, including Vision 2015.[5]
3. **Academic publications** focusing on the implementation of Competency-Based Medical Education (CBME), faculty adaptation, and institutional responses[6,7]
4. **Publicly available policy briefs, reports, and guidelines** issued by selected SHSUs

## 4. Selection Criteria

Documents were included if they were:

1. Published between 2008 and 2025.
2. Directly related to undergraduate medical education in India.
3. Relevant to the functioning or regulatory role of SHSUs.

## 5. Analytical Framework

A **deductive thematic analysis** was undertaken. The framework consisted of five pre-defined categories derived from existing literature and regulatory guidelines:

1. Curricular autonomy
2. Regional Contextualization
3. Faculty engagement, development and teacher–student ratio
4. Assessment regulations
5. Feedback mechanism

Each document was systematically reviewed, coded, and synthesized under these categories to enable comparison across regulatory and institutional perspectives.

## 6. Results and Discussion

This article employs an analysis of documents published on the official website of the various universities and National Medical Commission. An attempt was made to compare government versus deemed universities.

The advent of a nationally standardized MBBS curriculum has challenged their conventional authority, raising important questions regarding their relevance, adaptability, and scope of contribution in the evolving educational landscape. While some universities have adopted proactive measures such as faculty development programs, leadership training, and academic audits, others continue to adhere to minimum regulatory requirements. This document review-based study seeks to explore the extent of variation in current practices, identify opportunities for strengthening institutional contributions, and provide a perspective on the future role of SHSUs in sustaining quality and equity in Indian medical education. The majority of India's medical colleges are governed by State Health Sciences Universities (SHSUs), which are essential to the implementation of this centralized curriculum, but the establishment of the National Medical Commission (NMC) has sparked concerns about their independence, ability, and flexibility in a changing educational environment.

### *6.1. Curricular autonomy*

Curricular autonomy for SHSUs is essential to balance national uniformity along with local relevance. It fosters faculty ownership and ensures that the MBBS graduate is equipped to meet both global competencies and state-specific health system needs. It is observed that most government universities adhere to NMC guidelines, with little or no contextual modifications. Some government universities have attempted to develop structured curricular guidelines, such as a university-wide master timetable with fixed integrated activities, which affiliated institutes are required to follow.[8] This structured approach has also been extended to initiatives like the Family Adoption Programme and electives. The deemed universities' policies highlight their adherence to Competency-Based Medical Education (CBME) as mandated by the National Medical Commission.[9] Some exhibits a robust curriculum framework aligned with CanMEDS and ACGME standards, facilitated through its Centre for Health Professions Education and formative tools like portfolios and reflective logbooks, excels in infrastructure, ERP-based student tracking, and comprehensive postgraduate mentorship.[10] Another university demonstrates systematic curriculum revision and governance through its Board of Studies and Academic Council.[11]

### *6.2. Regional contextualization*

Historically, medical education in India was more decentralized, with state-level authorities having greater influence over curriculum which has allowed states to prioritize the training of doctors in areas relevant to their

local health priorities and could focus more on these areas in the curriculum. For instance, the once-common integration of public health issues like fluorosis in Rajasthan is now covered in environmental health, but no direct "fluorosis" keyword in the syllabus grid. Similarly, Regional disease and Surveillance training through Field visits and district-specific examples was possible by colleges earlier, is now standardized and generic across all regions of India.[12,13]

The NMC's 2019 CBME document provides over 2,900 mapped competencies, fixed teaching-learning hours per subject, and timelines that leave little room for local adaptation. Hence the centralized CBME framework, while promoting uniformity, limits this flexibility. SHUs must now align with NMC guidelines, which may not fully account for regional healthcare disparities. Several scholars have raised concerns that such centralization dilutes the contextual relevance of medical training.[14] Still some of the universities have already begun adapting to this role with introduction of orientation workshops and digital CBME handbooks to support affiliated colleges in translating NMC mandates into local contexts. This has been demonstrated by choosing regional electives under the CBME framework, demonstrating the feasibility of contextualization within limits.[15] Regional contextualization is also central to NEP 2020 and has direct relevance to healthcare education, which seeks to integrate allopathic medicine with AYUSH systems (Ayurveda, Yoga and Naturopathy, Unani, Siddha, and Homeopathy) to make students understand the broader healthcare practices, with State Health Universities playing a key role in designing curricula, fostering collaborative learning, and promoting inter-system dialogue.[16]

*6.3 Faculty engagement, development and teacher–student ratio*

The academic literature points to a decline in faculty ownership of the curriculum under the NMC regime. Faculty members in many institutions now see themselves as passive recipients rather than active contributors to curricular innovation.[7] The teaching Method was lecture-based, content-centric, with high faculty autonomy.[17] The teaching methods shifted partly to Student-centric (SDL, AETCOM, integrated), with reduced (standardized modules) autonomy and increased workload (logbooks, competencies, feedback).

The Medical Council of India, by the MCI Regulations on Graduate Medical Education, 1997, made it mandatory for all medical colleges to establish Medical Education Units (MEUs) or departments in order to enable faculty members to avail modern education technology for teaching. Ongoing FDPs like RBCW, AETCOM and CISP by NMC are adopted by all SHUs. In addition to this, the Capacity-building through CMEs, workshops and training programmes in medical education technology like Objective Structured Practical Examination (OSPE), Problem Based Learning and leadership training is evident across government and deemed universities, suggesting strong adherence to NMC guidelines.[18] However, government institutions maintain a trend of following or reaching minimum standard requirements with few exceptions, while some of the deemed universities are at advanced stages of implementation and faculty training. While relatively newer deemed university promotes multidisciplinary integration and NAAC preparedness through proactive IQAC-led faculty development and quality assurance workshops.[19,20,21] We observed that NAAC accreditation significantly influences quality enhancement, governance, and innovation in terms of value-added courses, a higher level of faculty development programmes, research, and rigor of student training.[22] Collectively, these universities showcase excellence in CBME implementation.

In compliance with NMC, MSR guidelines are crucial for universities seeking affiliation or recognition for their medical colleges. The concept of competency based medical education is learner centered, focusing upon skill development and assessment in the form of skill performance. The implementation of the newer competency-based curriculum necessitates a higher teacher–student ratio to ensure effective teaching–learning processes.[23] However, most universities continue to rely on fulfilling only the minimum standard requirements of NMC, MSR regulations, rather than addressing the actual needs of curriculum delivery. This gap underscores the need for recruiting additional faculty to support skill-based training, small-group teaching and continuous assessment in line with CBME principles. State Health Universities are needed to play a proactive role in facilitating this transformation through resource allocation and faculty training. however, their efforts so far have been insufficient, highlighting the need for stronger commitment towards need based interventions.

*6.4. Assessment regulations*

Formative assessments are central to the implementation of CBME and should be designed with flexibility, allowing adjustments based on the specific needs and learning pace of each student cohort. Most government SHUs follow only the minimum prescribed guidelines of NMC for formative assessments.[24,25,15] However, a few have standardized the process by mandating a fixed number of formative assessments per year across all departments with pre-decided dates as per the academic calendar for a year ensuring uniformity among affiliated institutions and even providing centralized question banks at the university.[26]

Assessment and evaluation practices show significant heterogeneity. Some follow a balanced model of formative assessments integrating portfolios, tutorials, and periodic appraisals, which align closely with CBME principles. However, widespread adoption of workplace-based assessment tools such as OSCE/OSPE, mini-CEX, and DOPS remains limited.[10] In certain settings, quality assurance mechanisms such as IQAC reviews, project-based assessments, and feedback systems are used to ensure credibility and accountability. In others, evaluation is driven primarily by regulatory norms and audit requirements, which ensure compliance but may restrict innovation in competency-based assessment.

As the summative assessment framework is prescribed and standardized by the NMC, all universities have to adhere to it. While this ensures national standardization, it simultaneously limits ability of State Health Sciences Universities to exercise independent judgment in designing or adapting their own evaluation methods. Consequently, their role becomes limited to administrative conduct of examinations rather than academic innovation in assessment, thereby restricting opportunities to contextualize evaluation as per the local needs.

### *6.5. Feedback mechanism*

Feedback is crucial throughout this the process of curriculum implementation which can serve as an essential input for continuous curriculum refinement and policy adaptation. At present, feedback is largely treated as a procedural check for CBME implementation, rather than being utilized as a genuine quality assurance tool. Its potential role in identifying gaps, suggesting corrective measures for improvement in curriculum delivery remains underutilized. Feedback mechanism from universities to the NMC and faculty to university is deficient, without which insights regarding curriculum implementation, Faculty development, regional challenges, and institutional experiences are not adequately conveyed at the national level, which may limit the opportunities for evidence-based reframe of current policies of medical education.

## 7. Conclusion

Before the establishment of the NMC and the introduction of Competency-Based Medical Education (CBME) in 2019, SHSUs have adopted primary role of designing state-specific MBBS curricula, contextualizing syllabi to local needs, and scheduling assessment. Introduction of CBME has disrupted traditional role of SHUs as “curricular architects” to “curricular implementers” and centralized policy-making by the NMC has considerably curtailed the academic autonomy of SHSUs. In this context, there is an increasing acknowledgment that they can serve as key intermediaries between national policy and institutional realities, while the success of Competency-Based Medical Education (CBME) relies heavily on local execution and coordination. The NMC documents itself emphasize the need for state level alignment.

Hence, SHSUs need to reinvent themselves as the regulatory partner to ensure the alignment of national directives and institutional practices through academic calendar, assessment systems, faculty development and mechanisms for monitoring compliance, thus strengthening the accountability framework of the medical education governance system. They can promote innovation in medical education and encourage the adoption of best practices across institutions, and by using performance benchmarking and instituting quality assurance systems, SHSUs can ensure that medical colleges achieve not just the minimum standards but also the desired outcomes of CBME in practice, thus achieving uniformity in standards and reducing disparities across institutions.

## 8. Source of Funding

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## 9. Conflict of Interest

None.

## 10. Ethical Approval

Not applicable.

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