

Global Trends on Curriculum Models in Undergraduate Medical Education: A Comparative Analysis and Strategic Adaptations for Competency-based Medical Education in Nepal

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ABSTRACT

This narrative review article has done a comparative analytical study of various curriculum models used in the international medical education of undergraduate program to suggest strategic improvements for competency-based system of Nepal. Many curriculum models have been developed which are based on factors like organizational structure, learning/instructional methodology, learning and educational outcomes, relevance with their needs, autonomy of learners and modern emerging educational trends in medical education. Thus, these models help guide how knowledge, skills, attitudes, and professional competencies are incorporated into and cultivated among medical students globally. This article primarily focuses on leading global models in medical education, including the outcome-based and integrated curricula of the UK and the United States, Germany's structured clinical rotation model, and Cuba's integration of community-based service into medical education. Thus, this comparison exposes many practical paths for Nepal for adaptation and improvement in the medical education through innovative curriculum. These include stronger systems-based integration with spiral curricula, competency-based assessment using Entrustable Professional Activities, expanded community-based learning, structured experiential learning, more elective opportunities, strengthened research training, and incorporation of interprofessional education. Thus, these adaptations can better equip future doctors to address Nepal's most pressing health challenges.



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INTRODUCTION

A curriculum is defined as a structured and time-bound plan of educational experiences, developed to achieve specific learning outcomes.¹ The frameworks used to shape such plans are curriculum models, which provide the necessary theoretical foundations and practical tools for program development and implementation.² In medical education, institutions select these models through a deliberate process, guided by their institutional vision, mission, and the requisite regulatory standards.²

Different curriculum models have emerged based on organizational structure, instructional methodology, educational outcomes, contextual relevance, learner autonomy, and emerging

educational trends. These models guide how knowledge, skills, attitudes, and professional competencies are developed among medical students.

Although Nepal has adopted an integrated competency-based medical curriculum, challenges remain in areas such as competency progression, curriculum integration, clinical exposure, and contextual community-oriented learning. This integrative review aimed to compare the global undergraduate medical curriculum models and identify adaptable strategies to further strengthen Nepal's competency-based medical education system.

METHODOLOGY

A narrative review was conducted to explore curriculum models and reforms in undergraduate medical education. Peer-reviewed literature from medical education and educational psychology was searched using multiple electronic databases and journal archives, including MEDLINE/PubMed, EMBASE, Google Scholar, Scopus etc. In addition, official medical council documents, accreditation standards, and university curriculum documents were reviewed. In this article, we included related articles published between the year of 2000 and 2025. The main key search terms or words were “medical curriculum”, “competency based medical education”, “integrated curriculum”, “spiral curriculum”, “undergraduate medical curriculum”, “reform in medical education” and relevant country specific keys. The reference articles were included based on the relevance to undergraduate medical education of different countries. Further criteria of inclusion were articles on medical curriculum reform, competency based medical education, integration strategies in medical education and contemporary medical curriculum models. This article also reviewed various relevant country wise policy documents to identify additional sources for in depth knowledge.

LITERATURE REVIEW

Models Based on Organizational Structure

A. Discipline-Based Curriculum (Flexnerian Model)

Flexnerian model based on Flexner Report of 1910. It is basically disciplined based curriculum model which focus medical education into separate disciplines in traditional way such as anatomy, physiology, biochemistry, pathology and pharmacology during preclinical years followed by later clinical rotations during medical training. It is considered as teacher centered model which focus on mainly strong foundational scientific knowledge of individual subjects. This type of curriculum model are widely applied in medical education across globe including Indian medical curriculum. Main strength of this model is strong foundations of knowledge of discipline but it creates fragmentation among the disciplines due to lack of integration.³

B. Integrated Curriculum

This type of curricular model was introduced to overcome the shortcoming of Flexnerian curricular model. In this model, basic sciences were integrated with clinical sciences both horizontally and vertically across different phases during medical training of students. Most common approach used for this type of model is Systems based curricula. This was widely adopted in various medical schools of the USA and UK because of improvement of contextual learning, clinical relevance and better retention of knowledge due to integration. Further, Brauer and Ferguson mentioned that this type of integrated curricula increases the meaningful learning and interdisciplinary understanding in better way.⁴ Similarly, Dubin also focussed that innovative integrated

curricular model helps to prepare medical students as lifelong learner and better patient-centered care provider in future. But, this model has shortcomings like need of faculty preparedness and development, better coordination among all stakeholders and alignment of assessment and curricular contents.⁵

C. Spiral Curriculum

This model is suggested by Jerome Bruner. The main thing of this model is revisiting the topics frequently with more complex and depth of knowledge over different phases and time. In medical education, learners are introduced to basic concepts early and revisit them later in clinical contexts. The University of Calgary medical program is a notable example. Harden and Stamper explained that the spiral curriculum promotes reinforcement, progressive competence, and better integration of learning experiences. Despite its advantages, the spiral curriculum may face challenges such as repetition of content, difficulty in ensuring progressive complexity, and demands for strong curriculum coordination.^{6,7}

Models Based on Instructional Methodology

A. Content-Based Curriculum

a) Traditional Model

The traditional content-based approach is teacher-centered, where lectures remain the major instructional strategy. Students are passive recipients of information, and assessment often emphasizes recall of factual knowledge.⁸

b) Current Learner-Centered Models

Modern content-based curricula increasingly incorporate learner-centered approaches that encourage active participation, self-directed learning, and critical thinking. Educational technologies and innovative teaching strategies are frequently integrated into instruction.⁸

B. Process-Based Curriculum

a) Problem-Based Learning (PBL)

Problem-Based Learning is a student-centered instructional strategy first developed at McMaster University in Canada and later adopted by Maastricht University in the Netherlands. Learning begins with clinical problems that stimulate inquiry, discussion, and self-directed learning. PBL develops critical thinking, teamwork, communication skills, and lifelong learning habits. The study conducted by Norman and Schmidt concluded that PBL improves the problem solving skills and comprehensive and analytical skill in medical students.⁹

b) Hybrid Problem Based Learning (hPBL)

In hybrid PBL model, traditional lectures were added with PBL sessions. It balances the structured content delivery with active learning methods in better way in medical schools. This flexible model have been adopted by various medical schools across the

globe. The study conducted by Salari et al. concluded that hybrid PBL is effective to improve cognitive skills while balancing the curricular structure, content and feasibility during delivery.¹⁰

c) Project-Based Learning (PjBL)

In project Based Learning, the main focus area is experiential learning through various projects, research activities and collaborative academic tasks during learning process. Thus, students were actively engage in real world problems solving skills during their training. This model is mostly applied in westerns countries for improving the skills of creativity, teamwork and real world application of learned knowledge.¹⁰

Models Based on Educational Output

A. Outcome-Based Education (OBE)

Outcome-Based Education focuses on clearly defined learning outcomes that students must achieve by the end of the educational program. Curriculum design, teaching methods, and assessments are aligned with desired outcomes. OBE emphasizes accountability, learner achievement, and measurable competencies.¹

B. Competency-Based Medical Education (CBME)

Competency-Based Medical Education is an advancement of OBE that emphasizes demonstration of competencies required for clinical practice. CBME focuses on skills, professionalism, communication, ethics, and patient care rather than time-based training alone. Many countries, including India and Bangladesh, have adopted CBME frameworks in undergraduate medical education. This model promotes learner-centered progression and workplace-based assessment.¹

Models Based on Contextual Relevance

A. Experiential Curriculum

Experiential learning emphasizes “learning by doing” through clinical clerkships, internships, bedside teaching, and simulation-based education. Students gain hands-on experience and practical skills in authentic healthcare settings.²

B. Community-Oriented Medical Education (COME)

COME focuses on addressing community health needs through exposure to public health, preventive medicine, and primary healthcare services. Many medical schools globally incorporate community-oriented activities into their curricula.²

C. Community-Based Medical Education (COBME)

Community-Based Medical Education places students in rural and community healthcare settings for learning. Examples include Rural Clinical Schools in Australia and the Family Adoption Programme in India. COBME strengthens social accountability and understanding of community health problems.²

Models Based on Learner Autonomy

A. Compulsory (Core) Curriculum

The core curriculum consists of essential subjects and competencies that all medical students must complete. It ensures standardization of medical knowledge and professional competence worldwide.¹¹

B. Choice-Based (Elective) Curriculum

Elective curricula provide flexibility for students to pursue individual interests, research, or specialized areas. Choice-Based Credit Systems support autonomy and motivation among learners. Kusrkar and Croiset noted that electives enhance autonomous motivation and learner engagement.¹¹

Emerging Curriculum Models

A. Interprofessional Education (IPE)

Interprofessional Education involves students from medicine, nursing, pharmacy and other health professions learning together to foster collaborative practice and teamwork. Further, it enhances the skills of communication, patient safety and holistic interdisciplinary understanding in medical students.¹²

B. Z-Model of Integration

In Z-model of integration, vertical integration in medical education is core concept. Here basic sciences and clinical sciences are overlap gradually all through the medical curriculum. For example, as students advances in higher academic years, the clinical exposure also increases with decrease in isolated basic sciences. Thus, this model of integration increases the skills of contextual learning and clinical reasoning in students.¹³

Design and implementation of any medical curriculum are directed by specific curriculum models which act as foundation of blueprints for its success. Thus, this article intend to compare the curricular models used in the Nepalese undergraduate medical education with the curricular models used in other ten countries across the various continent of world. This helps to identify gaps and opportunities which further helps to develop various strategic recommendations and plans for better implementation and outcomes in Nepalese contexts.

Curriculum Models in Undergraduate Medical Education: Country-Specific Implementations

1. NEPAL: In context of Nepal medical education of undergraduate has been changed from a traditional and disciplined-based model to a more integrated and competency based curriculum Model prescribed by central regulatory body, Medical Education Commission. Thus, modern approach focus mainly on what Nepalese medical graduates should be able to perform in real clinical and community settings. It requires greater emphasis on early clinical exposure, community based learning, skills of professionalism, and communication skills in them.¹⁴ Some medical institutes such as B.P. Koirala Institute

of Health Sciences (BPKIHS) and Patan Academy of Health Sciences (PAHS) have chosen integrated model teaching, problem based learning model and longitudinal community postings for better alignment of training with national health needs. Thus, these curriculum reforms plan to prepare a doctors who are clinically competent, socially accountable and responsive to the communities needs where they serve.¹⁵

2. INDIA: Current undergraduate medical education in India based on blended curriculum model. These integrating approaches has been regulated by National Medical Commission of India. There is shift from traditional discipline based curricular model to integrating model that is better horizontal and vertical integration of basic, clinical and community exposure.^{16,17} Although in India, the framework has more content-based but there is a significant improvement toward learner centered learning due to inclusion of process based elements in curriculum.¹⁶ It focus mainly around Competency Based framework to develop defined graduate outcomes for the Indian Medical Graduate as per need.¹⁶⁻¹⁸ In India, Experiential learning is focus through simulation and clinical settings. The medical curriculum of India also included Community Based and Community Oriented models to address community health needs along with the student autonomy through two dedicated elective blocks for flexibility.¹⁶

3. UNITED KINGDOM (UK): In the UK, the undergraduate medical curriculum is based on several curriculum models. The predominant model is an Organ System Based and Integrated model framework. In this model, basic sciences are taught with context of clinical problems, scenario and systems (Such as a "Cardiovascular" module). It overcomes traditional departmental fragmentations to create a coherent and clinically relevant applied knowledge as prescribed by their national regulatory bodies.¹⁹ The concepts of integration is also supported by a Spiral design of model because core concepts are revisited with increasing depth and clinical difficulty level across the years of study of medical students.²⁰ Further, a Hybrid Problem Based curricular model approach is also common which included the elements of Problem Based Learning (PBL), Case Based Learning (CBL), and Team Based Learning (TBL) to gain skills of self-directed learning, teamwork and critical thinking in students.²⁰ The entire curriculum of UK is considered as Outcomes Based which is designed backward from the GMC's "Outcomes for Graduates" for aligning teaching and assessment with proposed competencies as per need.²¹ In their curriculum, Experiential learning is important concept which can be achieved by an Experiential and Community Based model framework which includes early clinical exposure from Year 1 of training and workplace based learning and assessment in both community and hospital settings during their training.²⁰ Further, structured clerkships and the standardized two year UK Foundation Programme helps to provides a supervised transition to practice using continous competency assessment of medical students.²² Finally, their curriculum also includes important Choice Based elements such as Student Selected Components (SSCs) and two summer electives which helps to develop the career

path of students by seeding specialty interests or research in students.²⁰ Although, a research thesis/projects are mandatory in the core MBChB curriculum but many programmes do offer an introduced BSc year with a substantial research dissertation/projects in their training.²³

4. GERMANY: The national regulatory bodies prescribe the national framework of German undergraduate medical education. It has two main curricular pathways. First one is traditional "Discipline Based model (Regelstudiengang)" and second one is innovative "Organ-System Based & Integrated with Problem-Based and Competency-Based principles (Modellstudiengang)".²⁴⁻²⁶ Both models are shaped by national graduate Competency-Based objectives written in their curriculum. But, a Hybrid Problem-Based approach is common which uses PBL and CBL to varying degrees in their curriculum.²⁴ They also have a strong focus Experiential Learning principles through mandatory clerkships and a highly structured educational focused final practical year (Praktisches Jahr, PJ) for better graduate outcome.^{24,27} Further, their curriculum also have Community Oriented elements such as outpatient clerkships etc.¹³ The student choice is also included through an electives during the PJ.²⁷ Along with this, the for a doctoral thesis (Doktorarbeit) for the Dr. med. degree there is need of a significant parallel Research component for many students during their training.²⁸

5. UNITED STATES OF AMERICA (USA): In the USA, Undergraduate medical education has comprehensive integrative curriculum model which mainly focus on Organ-System Based and Integration. In their medical schools, basic sciences are coherently taught specific organ systems along with opportunity of a Spiral Curriculum design.²⁹ This is done because their curriculum are guided by an Outcome and Competency Based philosophy of medical education. For these purpose, the curriculum design and assessment are mapped to defined various competencies and Entrustable Professional Activities (EPAs) in their curriculum.^{30,31} They have introduced a Hybrid Problem Based approach in medical education by incorporating principles of both Problem Based Learning (PBL) and Team Based Learning (TBL) to develop skills of critical thinking and teamwork in medical students.³² The principles of Experiential Learning are also included through simulation based learning and structured clerkships. The innovative models like Longitudinal Integrated Clerkships (LICs) are getting popular because of their continuity of care approach during training of medical students.^{33,34} Another important aspects in their curriculum are Community Based and Community Oriented models which helps to address national social determinants of health and health equity in a holistic way.^{35,36} Students have opportunity to have a dedicated Choice-Based electives modules/periods for career exploration for their future.³⁷ The research thesis/projects are not mandatory across the medical schools of the USA but structured instruction in scientific research methodology is incorporated so that students may pursue scholarly activities or combined MD/PhD degrees for their personal growth.³⁸ In the last, the concepts of Interprofessional Education (IPE) is integrated in their curriculum so that they can prepare future competent physicians for collaborative practice as their national needs.¹²

6. CHINA: In China, medical education system has been evolved from significant curricular reform. Their curricular model has been shifted from a historically Discipline Based model to organ-system modules with greater integration of basic and clinical medical sciences.³⁹⁻⁴¹ This change is due to inclusion of Problem Based and Case Based Learning methods in their curriculum.^{41,42} They are also shifting towards modern Competency Based Medical Education (CBME) which align their curriculum with well-defined graduate outcomes.⁴³ The principles of Experiential Learning are incorporated along with early clinical exposure, simulation based learning and a structured, supervised and extensive internship which provides strong practical training in medical education.^{41,44} In their curriculum, Community Based learning elements are being introduced but still the clinical focus remains predominantly in hospital setting.⁴⁴ In China, students have opportunity for a Choice Based component in form of electives in clinical and non-clinical disciplines.⁴⁵ Medical students have to experience some scholarly work such as a full research thesis/projects with supervision only in extended combined degree programs.⁴⁶ The uniqueness of their curriculum is due to formal Interprofessional integration of their Traditional Chinese Medicine (TCM) principles with the mainstream medical curriculum for holistic education.⁴⁷

7. JAPAN: Undergraduate medical education in Japan is guided by a structured, integrated curriculum model. Encouraged by regulatory bodies like the Medical Council of Japan (MCC), the Integrated Curriculum combines basic and clinical sciences through organ-system modules.^{48,49} This is increasingly supported by Problem-Based Learning (PBL) and small group discussions in the pre-clinical years to develop clinical reasoning.⁴⁸ The system is fundamentally Competency-Based, aligned with the standards of the MCC and the Japan Accreditation Council for Medical Education (JACME) to ensure defined learning outcomes.⁵⁰⁻⁵¹ Experiential Learning forms the core of clinical training through mandatory, supervised clerkships.^{48,49,52} While the curriculum includes Community-Based perspectives in public health and social medicine, this component is generally less emphasized than hospital-based training.⁴⁹ Finally, the requirement for a Graduate Research project or thesis varies by institution, with some universities incorporating a dedicated research period.⁵²

8. AUSTRALIA: Australian undergraduate medical education follows a structured model centred on an Integrated Curriculum that combines basic and clinical sciences through organ-system or case-based modules, reinforced by a Spiral revisiting of core themes.⁵³⁻⁵⁵ This is underpinned by widespread use of Problem-Based and Case-Based Learning to develop clinical reasoning.⁵⁶ The entire program is Competency-Based, explicitly aligned with the Australian Medical Council's graduate outcome statements. Experiential Learning is emphasized via early clinical contact, simulation, and extensive placements.^{55,57} There is a strong Community-Based focus, including mandated training in Indigenous health and cultural safety.^{54,55,57} The curriculum incorporates Choice-Based elective terms for specialization.⁵⁵ A formal research thesis is uncommon,

but a scholarly Research component, such as a project or critical appraisal, is typically required.⁵⁷

9. RUSSIA: Russian undergraduate medical education follows a traditionally discipline-based curriculum, particularly in the early years.⁵⁸⁻⁶¹ Driven by national framework updates, there is a movement toward greater horizontal and vertical integration, structured around an inherent spiral model where basic sciences are revisited in clinical contexts. The curriculum increasingly incorporates competency-based elements^{59,61} and emphasizes experiential learning, primarily through integrated hospital-based Praktika that complement a strong theoretical foundation.^{61,62} The requirement for a graduate research thesis varies, with some programs mandating a "Final Qualifying Work" ranging from a research project to an analytical review.⁶²

10. UNITED ARAB EMIRATES (UAE): Undergraduate medical education in the United Arab Emirates is structured around a contemporary, integrated model. The curriculum is fundamentally Integrated, organizing instruction around organ systems where basic and clinical sciences are taught cohesively, and is reinforced by a Spiral design that revisits core concepts with increasing complexity.⁶³⁻⁶⁵ It is explicitly Competency-Based, designed around predefined graduate outcomes^{63,64} and heavily utilizes Problem-Based Learning (PBL) to develop critical thinking and self-directed learning skills.^{65,66} A strong emphasis is placed on Experiential Learning through early clinical exposure, simulation, and hands-on rotations.^{63,67} The curriculum incorporates Community-Based elements focused on public health and local population needs and later in higher academic years medical students are also provided with opportunity of Choice-Based electives modules for future career exploration in subspecialty.⁶⁴ Along with above special features, some medical schools are also mandate structured mentored research thesis/projects for medical students which will cultivate seed of skills of scholarly activities in them.^{64,65,67}

11. CUBA: In Cuba, undergraduate medical education has essence of integrated and community focused curricular models in their system. They have horizontal integration of basic sciences along with structured Spiral design model of curriculum. Further, a unique Biopsychosocial Approach which mainly focus on social and psychological aspects in their community along with biological disease.^{68,69} According to their national regulatory body, their model are Competency-Based which targets focussed and defined graduate skills and outcomes.⁷⁰ They also incorporated the core principles of Experiential Learning (Educación en el Trabajo) with proper and structured supervision.⁷¹ The base of Cuban medical education is Community Based Medical Education which are oriented with extensive training in community health centers and offices of family doctor to address specific local needs in health sectors.⁷⁰ The model inherently supports Interprofessional interaction within these settings.⁷¹ The curriculum includes Choice-Based electives in later years and integrates Research through student scientific activities, though a full thesis is not always mandatory.⁷²

Table 1. Comparative framework of undergraduate medical curriculum models across selected countries

Country	Dominant Curriculum Model	Key Distinctive Features
Nepal	Transition from discipline-based to Competency-Based Medical Education (CBME)	Focus on producing socially responsive graduates aligned with national health needs ^{14,15}
India	Blended curriculum model with CBME framework	Competency-driven curriculum with defined graduate outcomes ^{16–18}
United Kingdom	Integrated, organ-system based and outcome-based curriculum	Strong integration of outcomes, spiral learning, and supervised transition to practice ^{19–23}
Germany	Traditional discipline-based and innovative model curriculum pathways	Coexistence of traditional and modern competency-oriented pathways ^{24–28}
USA	Integrated competency-based curriculum	Strong competency mapping and interprofessional education emphasis ^{29–38}
China	Reforming from traditional discipline-based model toward integrated curriculum	Integration of Traditional Chinese Medicine principles within curriculum ^{39–47}
Japan	Integrated curriculum model	Structured curriculum with strong regulatory oversight ^{48–52}
Australia	Integrated spiral curriculum	Strong community orientation and cultural safety focus ^{53–57}
Russia	Traditional discipline-based curriculum with ongoing reforms	Balance between strong theoretical foundation and curricular modernization ^{58–62}
United Arab Emirates	Integrated competency-based curriculum	Adaptation of international curriculum models to local healthcare needs ^{63–67}
Cuba	Integrated biopsychosocial and community-oriented curriculum	Strongest emphasis on community-based medical education and primary care ^{68–72}

Potential Adaptations for Nepal's Medical Curriculum from International Models

The Medical Education Commission (MEC) competency framework provides the foundation for a nationally harmonised curricular model for undergraduate health professions education in Nepal. It shifts the curriculum from a predominantly time-based and content-driven approach to an outcome-based, integrated and competency-based model in which graduates are expected to demonstrate observable abilities that integrate knowledge, clinical skills, communication, professional values, ethics and appropriate attitudes in real practice settings. The framework emphasises that Nepalese undergraduate medical curricula should be aligned with national health needs, international standards and accreditation requirements, while promoting integration across basic, clinical, behavioural and community health sciences. Core graduate competencies include patient care, clinical reasoning, communication with patients and families, professionalism, ethical practice, teamwork, emergency care, referral decision-making, understanding of social and biological determinants of health, preventive and promotive health care, medico-legal responsibility and functioning within the health system. The framework also supports contemporary educational strategies such as student-centred learning, problem-based learning, early clinical exposure, community-based education, simulation-based skills training, electives and systematic curriculum planning. Competency development is expected to be assessed progressively using Miller's pyramid, moving students from "knows" and "knows how" to "shows how" and "performs," with greater emphasis on formative, criterion-referenced and workplace-based assessment rather than only summative examinations. Thus, the MEC framework offers a structured basis for designing a spiral, integrated and socially

accountable curriculum capable of producing competent, ethical and community-responsive medical graduates for Nepal.⁷³

To strengthen Nepal's ongoing curriculum reforms, selective integration of international educational practices offers valuable pathways for enhancement.

A. Short Term Adaptations:

- 1. Stronger system-based integration and spiral design:** Adoption of rigorous organ-system-based and spiral curricula (UK, USA, Australia) so students revisit key concepts with increasing clinical complexity.^{19,30}
- 2. Enhanced competency-based progression:** Using Entrustable Professional Activities (EPAs) and programmatic assessment (UK, USA) to support true competency-based advancement without extending program duration.^{19,31}

B. Intermediate Term Adaptations:

- 1. Expansion of community-based learning:** Strengthening the rural/community postings (Cuba, Australia) to improve continuity of care and social accountability.^{57,71}
- 2. Contextualized community and primary care focus:** Aligning the curricular outcomes more closely with Nepal's rural health priorities and primary care needs (Cuba, Australia).^{56,71}
- 3. Focus on early and structured experiential learning:** Increasing the early clinical exposure along with introduction of structured longitudinal integrated clerkships approach with simulation learning and workplace based

learning and assessment across all academic years of students (USA, Germany, Japan).^{26,35,50}

4. **Enhancing greater learner autonomy through electives:** Introducing a structured elective modules and selective tracks (UAE, Australia, USA) in support to explore the career and personalized learning of students.^{32,54,67}

C. Long Term Adaptations:

1. **Focus on strengthening research and scholarly activities and skills:** Cultivating the supervised scholarly activities and projects and research literacy in students within the medical curriculum (Germany, Australia, UAE).^{25,56,67}
2. **Uplifting Interprofessional education (IPE):** By incorporating joint team based learning students of nursing, public health and allied health sciences (China, USA, Cuba) to improve graduates for collaborative practice skills during their training.^{33,47,71}

CONCLUSIONS

This narrative review provides the comprehensive comparative analysis of various undergraduate medical education curriculum models across eleven countries. Thus, it may provide valuable and actionable strategies which can help Nepal's ongoing educational reforms in medical education. It has been clearly revealed that Nepal has successfully transitioned from traditional discipline based curricular model to modern more integrated and competency based curricular models. Still, there are significant space for further improvement by implementing various strategic adoption of best international practices in medical education. Similar, globally the medical education demonstrates a clear paradigm shift from siloed and fragmented disciplinary approaches of curricular model toward more holistic, integrated curricular models. Leading medical education systems countries such as the UK, USA and Australia focussed on successful implementations of organ system based curricula, spiral learning designs models and strong competency based frameworks. Although Nepal's current reforms in medical education shows better alignment with these global trends mainly focus on early clinical exposure and community based learning for better graduate outcome, but several gaps and lacunae still remain such as poor implementation strategy, difference in structural integration and proper alignment with evolving healthcare needs of both national and international setting.

This article has proposed eight strategic recommendations which can be a comprehensive roadmap for advancing Nepal's medical education system for undergraduate course. These includes implementation of stronger system based integration with spiral curricular designs, adoption of Entrustable Professional Activities for competency based assessment, expansion of community based learning to address rural health needs, introduction of structured experiential learning elements in curriculum, provision of more elective opportunities for students, introduction and strengthening of research activities and components and incorporation of interprofessional education in their curriculum.

In conclusion, there is need of reforming Nepal's curriculum which can integrate these global innovations along with adherence to the country's unique healthcare context, resources and needs. This can be obtained by strategically adapting these elements from various international models. In future, Nepal can develop an appropriate hybrid system which can produce clinically competent and socially responsible medical graduates who can address the specific health challenges of Nepal and maintain the trust of public in medical education and service.

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