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Implementation of New Competency Based Medical Education in India – Are We Ready to (for) Change?

Mandar V. Ambike[1], Vijayakumar K[2], Raju R. Bokan[3], Arunprasad V. K[4], Vaishaly K. Bharambe[5]
[1,2,3,4,5] Symbiosis Medical College for Women, Symbiosis International (Deemed University), Pune, India
tutor.anatomy1@smcw.siu.edu.in[1,4]

Abstract

Background: New competency based curriculum(CBME) was introduced form 2019 for the medical students. This new attempt is the first step for the integrated curriculum. International universities changed from traditional to Integrated, Community oriented, Problem based curriculum long back. So this study is to find out how much change we have achieved in Medical education.

Methodology: Curriculum from different National and International Universities (Undergraduate MBBS curriculum – Gulf Medical University, Ajman, UAE, Kentucky Integrated curriculum, USA, MBChB Curriculum Phase 1 – University of Leicester, Course structure – Medical Science division – University of Oxford, UK,) were compared with this curriculum and Results were drawn.

Results: Most of the International curriculum reflect less didactic lectures and more small group teaching. Most of them emphasize on Community oriented, Problem base and Case based learning. Departmental compartments are very thin. And assessment is integrated.

Conclusion: Horizontal and Vertical Integration should be more aggressive and continuous. Teaching method should change from didactic, large group to Small group and Interactive sessions. Focus should Change from Subject centered to Problem centered. Adult learning principals should be adapted. Assessment pattern must be Integrated and more Objective in nature. Extensive Faculty development programs should be conducted.
Key words: Integration, CBME, Medical Education

Introduction

History for change in curriculum goes back to 1969 (Mc Master University, Canada) [1]. The need for change in curriculum surfaced because of explosion of knowledge, compartmentalization of subjects as well as lack of application and relevance [2, 3, 4, 5]. In India till now traditional curriculum follows, where retention was very less due to non-relevance. In the traditional curriculum, most of the time there is knowledge gathering without knowing its application [6]. Specialization and super-specialization in a particular subject made compartments more tight. There was no clinical exposure till phase II and almost no patient interaction till we became doctors. The skills like intramuscular or intravenous injection were not taught officially. Neither was communication skill for interacting with patients. Still due to large number of population (patients) available, the skills were learned by practice. The change in curriculum from traditional to Integrated occurred mostly in Canada, USA and

Europe. It was adopted in most of the countries. Focus was changed from subject based to Community Oriented Problem based learning (PBL). In India, we are changing our curriculum from tradition to Competency based medical education (CBME) for the first time. So this study is attempt to compare the Integrated curriculum form various national and International universities to find out the level of integration achieved by the new (CBME) curriculum implemented by Medical Council of India (MCI)[7].

Aims and Objectives –

1. To study the new Competency base curriculum implemented by MCI

2. To study Curriculum from International universities.

3. To compare Competency base curriculum to Integrated curriculum from national and International university

Material and Method –

Following curriculum were studied and compared to find out the pros and cons of Competency base curriculum

a. MCI –Competency based undergraduate curriculum for the Indian medical graduate

b. Undergraduate MBBS curriculum – Gulf Medical University, Ajman, UAE

c. Kentucky Integrated curriculum, USA

d. MBChB Curriculum Phase 1 – University of Leicester

e. Course structure – Medical Science division – University of Oxford, UK

f. MBBS Revised Curriculum Phase – I, JIPMER, Pondicherry

g. First year MBBS curriculum, BJ Medical College, Ahmadabad

h. B J Government Medical College, Pune. 1st MBBS curriculum/ Timetable

i. G S Medical College, Mumbai. MBBS/Phase-I/TimeTable-2019-20

The Points considered for comparing the curriculum –

1. The overall MBBS course structure was studied, as how it is divided in various phases. Like Phase I, Phase II and Phase III or Preclinical, Para clinical and Clinical

2. The Various courses offered at each level or Year like Organ System based or Subject based.

3. The level of Horizontal and Vertical integration in each phase or year.

4. The number of Didactic lectures and Small group teaching allotted in each course.

5. The number of Self-directed learning allotted in each course.

6. The assessment method.

Results –

Following are the differences found in CBME implemented in India and Integrated curriculum applied in International universities.

	CBME in India	**International Universities**
Teaching Learning Method	Didactic Lectures More Less Interaction	Small group teaching more More Interaction
	Teacher to Student. So Students role is passive	Facilitator to Student. So Students role is active.
	Subject centred – Anatomy, Physiology….	Learner/ Problem centred Problem/Case-Based Learning (PBL/CBL) Adult learning
	Self-Directed Learning – Few sessions	Self-Directed Learning – for every topic
	Early clinical exposure - Few	Early clinical exposure – continuous with the theme and organ- system
Integration	Horizontal – minimal, as teaching is subject oriented	Horizontal – full, as teaching is organ, system based

	Vertical – only few areas	Vertical – Maximum, as runs with the organ, system based PBL curriculum
	Lot of Repetition	Minimal Repetition
	No relevance, less retention	Relevant so more retention
Subject compartments	Still persists	Broken as there is - Summation + Sequencing+ Synchronisation + Team teaching
Assessment	Subject oriented Eg. Anatomy, Physiology etc	Integrated questions and not subject wise.
	Subjective – Essay type questions, Viva in Practical's	Objective – MCQs, EMQs, MEQs OSPE, OSCE
	Summative assessment carries 80% of the weightage	Continuous assessment carries 60% of the weightage

Discussion –

The new competency base curriculum designed for the undergraduate MBBS students in India is the first attempt made to change the traditional curriculum [7]. This change was long awaited and should be the start of bigger change in the undergraduate curriculum.

Curriculum designing and making change in it is always based on three main factors – National goal, Community problems and International standards [2, 3, 4, 8]. For this curriculum designing becomes very important to achieve the desirable results in a medical graduate. If the national goal is "Health for all", then a curriculum should be designed to promote health and treat all the ill-health in the community. For that the inputs from the community plays a major role. So curriculum should be based on the services needed for the community. Ultimately the graduate must withstand the international standards, so that the he or she can serve anywhere in the world. In India Medical colleges are following the same old traditional curriculum for years together. From 2019 MCI changed the traditional curriculum to Competency base curriculum [5]. Many changes have suggested in the new curriculum. Most

of the international Medical universities are following Integrated, Organ system based curriculum.

In this study, the comparison between the new CBME curriculum and the curriculum offered in international universities was done. And we found out that we are still in a very initial stage.

In the new CBME curriculum, still the maximum weightage is given to large group didactic lecture, while most of the international university follow small group teaching [9, 10, 11, 12, 13, 14]. We still are having large group lecture sessions, where interaction is very minimal [15, 16, 17,18]. And so there is no realization of how much knowledge is grasped by the learner [19, 20, 21]. While in international universities, maximum sessions are small group teaching, so interaction is very high and the faculty can judge every individual. Also the teacher is a facilitator who guides the students to achieve their objectives.

Teaching learning method is again traditional subject oriented in CBME curriculum [3]. Most of the International universities follow Case based or Problem based learning (CBL, PBL) [9, 10, 11, 12, 13, 14]. Where the medical problem is presented to the students, from which they identify objectives to be learned and gather them through Self-directed learning (SDL)[22] .Net links provided to them and few resource sessions by the subject experts. In this process they learn from various subjects which will be helpful to tackle the medical problem and not just gathering knowledge from each subject. So the students play an active role in learning process. It also improves clinical reasoning and problem solving skills[23]. Which is again missing in CBME curriculum. If there is only Knowledge overload without relevance and application, it becomes a superficial learning and is forgotten very fast. If the connection is seen between the previous knowledge to the newer knowledge, then it is easy to adapt

Integration in International universities is Horizontal as well as vertical, and it is a continuous [24]. But in CBM curriculum, Horizontal integration is minimal and vertical is for only few selected topics. In India only JIPMER, Pondicherry MBBS curriculum shows proper horizontal integration [14]. If horizontal integration is lacking, then repetition is very high. Also the understanding is low. In international universities, the curriculum is organ-system based, so horizontal integration is complete and the students get structure, function and dysfunction of that organ-system at the same time, without any repetition. This increases understanding and retention.

And the most important part is assessment. CBME curriculum, the assessment is subject oriented. So how much we try to integrate, the students will always learn subject as separate entity. And also the maximum weightage is to summative assessment which makes it a memory test. And most of the questions are subjective in nature such as long and short answer. Almost all the International universities have integrated assessment, which directs the students learning on problems and not on subject. Maximum questions are objective in nature such as MCQs, MEQ, OSPE and OSCE, which creates a uniform and measurable assessment for everybody [8, 9, 10, 11, 12, 25]. Continuous assessment has a larger weightage than the summative one.

And last but not the least is we should treat the students like adults. Adults choose why, when and where to learn. They want to learn what they can relate to their previous knowledge and experience. They will like to learn on their own (Self-directed learning).So didactic lectures may not help. So motivating them to learn on their own will help [26, 27,28].

The positive part of the CBME curriculum is identification of competencies. That opens a new window for change in curriculum. Change is always resisted and most of the times big change fails. Few studies indicate that didactic lectures are better than integration, where they have attempted adding of subjects and not alignment [29]. Faculty development programme should have been conducted one or two years prior to the change in curriculum and it should have reached to the junior most faculties before the implementation [2, 30]. Because it is the faculty who is going to implement the curriculum and if the teaching faculty is convinced and trained then only implementation will be streamlined. So even there were many areas where integration was possible, but the implementation is lacking [15, 16, and 17].

Conclusion -

So this is the beginning of the change. But it's a long way to go from here. The change in curriculum is an on-going process, and it should be continuous process. [1]

1. Horizontal and Vertical Integration should be more aggressive and continuous

2. Teaching method should change from didactic, large group to Small group and Interactive sessions.

3. Focus should Change from Subject centered to Problem centered.

4. Adult learning principals should be adapted.

5. Assessment pattern must be Integrated and more Objective in nature.

Extensive Faculty development programs should be conducted.

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