

Opinion Article

A multidimensional approach to new competency-based medical curriculum in physiology

Hasmukh Dahyabhai Shah¹, Minal Patel¹

¹Department of Physiology, Pramukhswami Medical College, Karamsad, Gujarat, India.

*Corresponding author:

Hasmukh Dahyabhai Shah,
Department of Physiology,
Pramukhswami Medical
College, Gokal Nagar,
Karamsad - 388 325,
Gujarat, India.

drhasmukhshah0505@gmail.com

Received : 15 March 2020
Accepted : 05 September 2020
Published : 25 January 2021

DOI

10.25259/IJPP_270_2020

Quick Response Code:



'Regulation on Graduate Medical Education (Amendment, 2019)' has been notified by Government of India on 6 November 2019 in the Gazette of India.^[1] The new regulation is applicable to the MBBS course, starting from academic year 2019 to 2020 onwards to create an 'Indian Medical Graduate (IMG)'.^[1] Since the past one decade, more than 10 regional centres and more than 10 nodal centres are training medical faculties for various basic and advance courses in medical education. In the past 10 years, all centres have trained approximately 40,000 medical faculties for basic course and few of these centres have also trained for advance course in medical education.^[2] Regular training of medical faculties by trained resource faculties is need of the hour to make them the best professionals.^[3] Faculty training and development is considered one of the key factors for effective implementation of curricular reforms.^[3] During the past 10 years, faculty training and their professional development were done effectively by resource faculties of nodal and regional centres. Medical education unit of various institutions works well for creating proper work culture at institute level and for involving medical faculties in new medical education technologies and curriculum renewal.^[2] Members of Curriculum Committee of Medical College are working very well under the guidance of Dean for successful implementation of competency-based curriculum. Aims, objective, principles, planning and preparing future road map of new competency-based medical education (CBME) curriculum are very well delivered to medical faculties by Curriculum Implementation Support Programme.^[1,4]

Competency-based medical curriculum in India has been introduced after detailed framework on National Health Polices, Health for All and all other Global and National Health Care issues.^[1,4] The new CBME curriculum has been introduced after two decades of old curriculum (1997) with total 23 subjects. Now, the first professional phase is of total 13 months duration and 1 month is devoted for the foundation course before the first professional phase. Foundation course is introduced with aims and objective to orient newly admitted medical students to health scenarios, health economics, environmental issues, community health issues, sociology and demographics, biohazards and infection control, basic life support and few other elements also.^[1,4] Sports and extracurricular activities are the part of foundation programme and also a part of the first professional phase. Attitude, Ethics and Communication (AETCOM) Module is scheduled from foundation course to the entire MBBS span.^[1,4] In the new CBME curriculum, human behaviour, ethics and communication skills are given due weightage and regular learning of these softer skills is now a part of the new curriculum. An approach to communicate medical knowledge to community has been adopted by AETCOM module. Incorporation of English Language Proficiency Program for vernacular medium students was already functional since the past few years.^[5] Foundation course element can be addressed as per local needs of particular

This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-Share Alike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

©2020 Published by Scientific Scholar on behalf of Indian Journal of Physiology and Pharmacology

region incorporating humanities issues. Foundation course is considered as a stepping stone for new medical students.

Physiology as a subject forms the basis of medicine. Medicine cannot be taught without knowledge of physiology. Learning of physiology through clinical relevance and animal experimentation is practiced since long time in India. Early clinical exposure (ECE) module has been introduced in CBME curriculum. ECE module boosts up the spirit of Physiologists of India. During the 1st professional year, students are very eager to learn clinical diseases and are much interested to behave as real clinicians. ECE module provides fuel to the burning desire of the younger medical students to be an exceptional clinician. ECE module can be taught either by hospital visit or in classroom by case scenarios. A case of hypertension can be taught by real patient or 'Case Based Learning Module' as per the set-up of institute. Clinical examinations and procedures can be taught at Physiology Laboratory on Mannequins'. ECE module is a welcome step that provides insight to the new medical students. ECE module provides one of the best platforms for integration of basic medical science subjects with medicine. Medical physiologists are experts in clinical research and clinical teaching. Research articles published in various physiology journals prove their role as outstanding clinical physiologists and their contribution to the community.^[6,7] Medical physiologists can contribute as clinical physiologists and aid to deal with clinical problems. Many physiology departments of Medical Colleges in India are rendering clinical services since the past few decades. Another very unique feature of ECE module is the visit of medical students to Community Health Centres during foundation course and also during the first professional phase.

Competency- or competence-based medical curriculum denotes abilities to perform task professionally and expertise on it. Competency is certified by knowledge, skills and behaviour to make learner a professional. Epstein and Hundert in 2002 defined professional competencies as judicious use of knowledge and technical skills emotionally for well-being of community.^[8,9] Epstein documented that proper communication is one of the core components of professionalism. Learning of competencies and sub-competencies regularly in classroom and hospital setting is given priority rather than teaching in a stipulated time. Active participation of students is considered as one of the key tools of this new CBME curriculum. To make students more interactive, didactic lectures should not exceed one-third of the schedule and two-third of the time should be given to Interactive Learning like Group Discussion and Practical in Physiology. First time, in the New Curriculum, Medical knowledge and Communication skills along with Ethics have been considered as Core Professional Values. Implementation of CBME is a challenge with lower faculty strength in many Indian medical colleges but it can be dealt

with great enthusiasm by trained medical faculties of India. Professional approach of faculties along with guidelines given by Medical Council of India has helped a lot in overcoming this obstacle.

In my opinion, the renewed CBME curriculum amended by Government of India is heartily welcomed by Indian Medical Physiologists. The paradigm shift from traditional to new curriculum initially had witnessed some reluctance which was followed later on by overwhelming acceptance by medical faculties across the Nation. In this new curriculum, competencies are drafted showing level of various domains and levels of learning. Competencies were grouped into core and non-core as per the needs of community with suggested teaching-learning methods. Horizontal integration with Anatomy and Biochemistry and Vertical integration of competencies with other subjects were mentioned with due concern. The main attracting feature of competencies is the 'Suggested Assessment Method.' As we know assessment drives learning, so utmost weightage is given to various assessment methods. Success of CBME curriculum lies on assessment methods and periodicity of assessments. Medical students are ready to adopt assessment linked curriculum changes. Certification of each competency ignites the desire of learning in students. Regular assessment and immediate personalised feedback to assessment are key features of the new curriculum.^[10,11] Sandwich feedback is recommended immediately after each assessment. Circulation of model answer after each assessment works very well.

Humanities in medical education, a well-known accepted concept, are unique feature of this new curriculum. Humanities in medical education are considered to be a strong pillar of professionalism. Humanities help students to become empathic professional who follows all core values of being human. Attempt has been made in new curriculum to make previously hidden curriculum, explicit. Introduction of medical humanities early in medical curriculum can help to inculcate various attributes of humanities effectively in medical students, which may help in producing desired IMG leading to improvement in doctor-patient relationship. Inclusion of sports and physical activity as cocurricular activities will help to make them active. Role of physical activity and exposure to sunlight are very well documented by Scientists. Physical activity and daily regular exercises relieve stress and stabilise abnormal mood fluctuations. Inclusion of physical activity and sports in curriculum is a praiseworthy step.

An experienced professional medical faculty, who inspires students with his or her proficiency in teaching and assessing, provides supportive learning environment to medical students. Success of CBME lies in providing learning opportunities to medical students and professional work culture for students as well faculties. A successful curricular renewal programme is the one, which addresses its

shortcoming immediately, gives proper positive feedback to the critics and makes future road map to clear any hurdles, which may arise, in advance.

Declaration of patient consent

Patient's consent not required as patients identity is not disclosed or compromised.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. The Gazette of India. Available from: http://www.mciindia.org/documents/e_gazette_amendments. [Last accessed on 2019 Nov 06].
2. Agnihotri G. Competency based curriculum can introduce incompetency-a call for critical introspection to prevent reckless implementation. *Edorium J Anat Embryol* 2019;6:1-3.
3. Modi JN, Gupta P, Singh T. Competency-based medical education, entrustment and assessment. *Indian Pediatr* 2015;52:413-20.
4. Medical Council of India. Competency Based Undergraduate Curriculum for the Indian Medical Undergraduate. Available from: https://www.mciindia.org/CMS/wp-content/uploads/2019/10/Module_Competence_based_02.09.2019.pdf. [Last accessed on 2020 Mar 10].
5. Singh SK, Shah HD, Shaikh W, Verma V. English language proficiency program for first year medical undergraduate students of vernacular medium. *Indian J Physiol Pharmacol* 2019;63:345-9.
6. Deepak KK. Scope for research in clinical physiology. *Indian J Physiol Pharmacol* 1995;39:15-6.
7. Deepak KK. Declining experimental skills among physiologists. *Indian J Physiol Pharmacol* 2015;59:124.
8. Epstein RM, Hundert EM. Defining and assessing professional competence. *JAMA* 2002;287:226-35.
9. Frank JR, Snell LS, Cate OT, Holmboe ES, Carraccio C, Swing SR, *et al.* Competency-based medical education: Theory to practice. *Med Teach* 2010;32:638-45.
10. Shah H, Verma V, Saiyad S, Patel M. Role of immediate personalized verbal feedback to first year medical undergraduates during formative Physiology practical test. *Indian J Physiol Pharmacol* 2019;63:54-8.
11. Epstein ML, Lazarus AD, Calvano TB, Matthews KA, Hendel RA, Epstein BB, *et al.* Immediate feedback assessment technique promotes learning and corrects inaccurate first responses. *Psychol Rec* 2002;52:187-201.

How to cite this article: Shah HD, Patel M. A multidimensional approach to new competency-based medical curriculum in physiology. *Indian J Physiol Pharmacol* 2020;64(Suppl_1):S10-S2.