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Case Report

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Current Medical Education -A Bird's Eye View

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Abstract

India has a rich tradition of imparting education in Medicine since the ancient times; which has evolved over the years. As the years progressed several reforms in medical education have been made until recently the Competency Based Medical Curriculum (CBME) has been introduced in the medical colleges in India. Although CBME has been the framework of medical education in Western countries such as Canada, US, UK it has been adopted from 2019-20 onwards in India. This curriculum of Medical Education has goals to create "Indian Medical Graduate" (IMG) with a set of roles expected to be fulfilled in the form of achieved "competencies" with inclusion of qualities such as clinician, life-long learner, communicator, leader and medical professional. There are certain challenges outlined for the implementation of CBME. However, there are also guidelines in the form of various Teaching -Learning Methods (TLM) and appropriate Evaluation or Assessment Methods to be adopted. The types of TLM outlined are Integrated Method, Self -Directed Learning (SDL), Case Based Learning, Small Group Discussion, Flip Classroom Model, Mentor -Mentee System etc. in this paper. Assessment or Evaluation methods strongly support the backbone of the curriculum. Either Formative or Subjective Methods of Assessment can be adopted to monitor the TLM. The types of Assessment which can be applied are also reviewed. Although the scope and impact of CBME are immense but it faces the test of time in future. The current medical education is time-based, outcome -based, involves structured learning, time-flexible and learner -centric approach is utilized.

Keywords: Competencies, Medical Education, Teaching-Learning Methods, Assessment

1. Introduction

India has a rich tradition in terms of education during the past civilizations. The blending of natural sciences and medicine was an integral part of the education even during the ancient times; when traditionally pupils were inducted by the "Gurukul system" by the Gurus. Especially the origin of the Indian system of Medicine known as "Ayurveda" played a vital role in the practice of medicine which is being utilized till date. As civilizations developed in India the existence of several residential universities like Takshashila and Nalanda in North India and Kottakal Arya Veda Shala in South India in different phases of the history of India; ensured that there is well organized institutionalized training in all aspects of medicine both in theory and practice (1).

As time advanced Western Medicine was introduced into the country India which due to the need of medical professionals as well as increasing demand led to an institution established as Calcutta Medical College in the year 1835 although the initial aim of studying Western or modern Medicine was to train apprentices with basic qualifications to help the army medical personnels. Later post -Indian mutiny in 1857, various universities were established and developed in major cities of Calcutta, Bombay and Madras. It is only thereafter in India that Medical Education received attention of several other universities to provide training and granting qualifications such as Licentiate in Medicines and Surgery (the L.M.S) and the Bachelor of Medicine and Master of Surgery to practice medicine providing impetus to medical education in India (1).

As the years progressed and several reforms in medical education over the several decades in India finally Medical Council of India(MCI) was constituted as an apex organization for deciding and setting the standards of medical education in the country (2). Thereafter, in the year 2019, the National Medical commission act put forward in the Parliament led to the constitution of a body the National Medical Commission (NMC) which was enforced by a

gazette notification dated 24th September 2020.Hence , it became the aim of the NMC to govern the medical education, provide highly qualified medical professionals as well as improve access to as well as standards of the health-care settings in the nation (3).

The NMC introduced and implemented the competency Based Medical Education (CBME) curriculum in the medical colleges; with the intention to facilitate the training program for Indian medical Graduates (IMGs) post-MBBS course throughout India. The outstanding features of CBME being learner-centric and result-oriented approach in order to develop requisite knowledge, attitude, skill, values at the end of the MBBS course a clinician/ physician of first contact with national and international level competencies shall be produced (4). The attributes of an Indian Medical Graduate (IMG) ultimately aimed to be attained by the CBME are envisioned as a competent doctor with qualities of clinician, leader, communicator, medical professional and life-long learner (3).

CBME curriculum involves a paradigm-shift from teaching centric approach of the Traditional Methods of Medical Education in India to a learner-centric, educative methods with systematic interdisciplinary integrated teaching -learning rather than just the fundamental & basis of each faculty of medicine-based curriculum. Previously in Traditional Methods of Medical Education the focus was to gain knowledge to solve real-life scenarios within hospital or community facilitated as well as enabled by Problem Based Learning (PBL). But the contemporariness of CBME ensures Entrust able Professional Activities (EPA) entwines observable and measurable objectives of the various competencies to be gained based on the various subjects to be taught in the respective phases of the MBBS course with a holistic approach. CBME is at par with the Dreyfus Model which explains the transition across five attainable milestones as -a novice, advanced beginner, competent, proficient and an expert (6).

CBME has entered the lexicon of Medical Education globally and has focused upon “Competencies” which are unit of medical educational planning which is subject -based and in various frameworks of countries such a Canada, US, UK and is now the basis of training in the Western countries as well as in our country India (7).

Competency Based Medical Education (CBME)

In order to deliver high quality and consistency in the health -care delivery services; it is necessary to improve the training of the health -care professionals. With the goal to achieve and maintain the competencies during the training of students that are the future clinicians; it is necessary to give utmost importance to the assessment program to which has a critical role. The assessment program to which has a critical role.th assessment provides quantity and quality in terms of feedback to the learners and medical college teachers. These assessment aids in establishing the achievement milestones and in continuance of professional development (8).

The highlights of Competency Based Medical Education (CBME) include subject -wise competencies, early clinical exposure, alignment and integration of learning, electives, Foundation Course, attitudes, ethics and communication, skill acquisition and certificates, revision of teaching -learning formats as well as multifaceted assessments (9). Competency Based Medical Education is an outcome-based approach to design, implement, assess and evaluate medical education by using an organized framework of competencies. It relies on accountability, flexibility and is learner-centric (10).

The regulations on graduate medical education (1997) through a gazette notification, brought the introduction of CBME curriculum for MBBS courses in the academic year 2019-20 onwards in India. This has goals to create “Indian Medical Graduate” (IMG) with ability to practice holistic medicine, develop scientific skills, ethics, professionalism to enable “health for all” which is the health right of all citizens. The set of roles expected to be fulfilled by IMG include being a clinician, lifelong -learner, leader, professional as well as a good communicator. Whereas, the teaching faculty have to play the role of a catalyst so as to facilitate the transition, understanding, adopting and implementing the requisites of CBME (11).

Unlike the traditional curriculum which focused on knowledge acquired by based on the systems and disciplines was time -bound and included summative evaluation. Whereas CBME emphasizes on the acquirement of skills, knowledge and behavioral facts and even provides standards and frameworks for measuring the performance. Comparatively the CBME is outcome-oriented and provides definition to acquirement of necessary skills for health -care of patients. It provides for longitudinal care, early clinical exposure and skill acquisition, skill laboratories provide a simulated and guided environment for the same. There are 412 topics for 2949 outcomes to be mastered.
These are to be achieved during the various phases over the time-frame in years of subject -wise academics in the current organization of specialties of medicine utilizing an integrated teaching -learning method (12).

In the CBME modules certain competencies were “must know” and these need to be certified by the faculty. The teaching -learning methods adopted were demonstrate, observe, assist and perform that is DOAP which means demonstration, observation, assistance and performance for g. measurement of blood pressure taught in Physiology subject in phase I with respect to the topic cardiovascular system (CVS); which is taught with horizontal alignment as well as vertical integration in all the phases of MBBS. In the clinical skills assessed measurement of the blood pressure is considered to be a gold diagnostic standard for the measurement of hypertension, which is a common pathology pertaining to the CVS. As compared to traditional method to greater emphasis is laid on to accomplish the certifiable competencies successfully which is necessary prior to summarize assessment in CBME in phase I of MBBS (13).

Implementation of CBME curriculum was a challenge for the medical faculties across India with the available resources, insufficient staff to student ratio and lesser administrative support. CBME curriculum greatly focuses on the acquisition of knowledge, skills and attitude to become a competent clinician. To achieve these the medical students must have expected level of defined competencies and faculty also need sensitization through Faculty Development Program (FDP) (14).

Challenges of CBME Curriculum and its Implementation

All the recognized medical institutions were supported and coordinated to implement the CBME through nodal and regional centers of the Medical Education Units (MEUs). Report of the implementation are also generated with the goal to excel in implementation and achievements of individual recognized institutions throughout India. With regards to achievement of the goals of CBME is dependent on effective and definitive strategies. The most cited challenges being i) sensitization and involvement of all stakeholders ii) co-ordination amongst the MEUS iii) requirement of trained faculties iv) active student participation v) lack of efforts to sensitize the learners about the newer roles and responsibilities expected of them. Although CBME implementation involved quantum in terms of decision making and sensitization of the faculty members as well as the other stakeholders of medical institutions (15).

The CBME curriculum aims to overcome the drawbacks or pitfalls of the traditional methods in Medical Education. Didactic lectures in teaching learning (TL) have been discouraged but places the teacher in the role of a facilitator, planner, guide or performance assessor. This challenges the medical school teachers to abandon traditional methods and adopt newer and effective methodologies such as Small Group Discussion (SGD), Demonstrate, Observe, Assist and Perform (DOAP), Self-Directed Learning (SDL) as some teaching -learning methods. This necessitated the training of faculty of medical colleges throughout India under the Curriculum Implementation Support Program. The challenge is in the practical implementation of the newer components of CBME of Graduate Medical Regulations (GMER) 2019 such as Foundation Course, Early Clinical Exposure, AETCOM, Self-Directed Learning, Elective Posting, Problem Based Learning, Basic Research, Integrated Teaching, Reflection and metacognition; especially when there is dearth of faculty, time and clinical posting requirements in the peak hours of hospital scenarios (2).

This requires that faculty development programs (FDP) must be conducted frequently so as to ensure the training and upgradation of teaching skills and management of the medical school teachers, medical school teachers -to – students' ratio must be improved, infrastructure and resources to facilitate the medical education should be sufficient and adequate as well as time management of the academic calendar is very important (14).

There are several advantages which can be cited for the various stakeholders. Students shall receive mentorship and immense attention as the curriculum is learner-centric. The focus is entirely on the students so as to develop the competencies which will empower them in the cognitive, psychomotor and affective domain. However as far as the medical school teachers are concerned, they will serve as "guide by the side" rather than a "sage on the stage". The tremendous benefactor is the society in general, as the patients will receive improvised health care services, facilities and settings from clinicians and physicians with good communication skills and social behavior and etiquettes (14).

Salient Teaching -Learning Methods (TLM) in Competency Based Medical Education (CBME)

To replace traditional method of Medical Education and so as to meet the global requirements the competency Based Medical Education is a newer shift in the faculty of Medicine wherein it is an integrated as well as outcome-based education. It provides proficient learning in which assessment is an important aspect of CBME. At intervals in the curriculum formative assessments are conducted along with an integrated model of teaching with horizontal and vertical alignment, competencies chalked out separately for theory and practical for each subject in various phases of MBBS course as well as the evaluation methods suitable thereof (16).

Globally, Competency Based Medical Education (CBME) form of teaching and learning originated in late 1990s in United States and Canada. This later gained importance to be implemented by health professionals' education in different parts of the world. The core emphasis is given on the observation and standardization of outcomes of learning as well as the flexibility in attainment of the learning outcome or competence. Since 2009, there are efforts taken in order to promote the understanding of CBME and accelerate its outreach and implementation by the International Competency -Based Medical Education (ICBME) Collaborators (17).

CBME has aims to attain communication, skills ethics, professionalism as well as social interaction of doctor -patient relationship to the extent that greater accountability, responsibility, flexibility and learner -centric curriculum is achieved. However, it means that several Teaching -Learning Methods (TLMs) should be designed, adopted and implemented so that the desired outcome-based competencies are obtained. These teaching-learning modalities should focus on the real -life practices (18).

Integrated Teaching – Learning Method

Traditionally various subjects are learnt in Medical Education by theoretical, practical, clinical exposure and tutorials classes which are taught separately or subject wise with no synchronization. It was expected that learners will later re-capitulate and bridge the gaps of knowledge, skill and behavioral domains of medical education during the academic years of program. But as per the new CBME the Integrated Teaching Learning Method involves the culmination of two or more disciplines or subjects in terms of concepts or methods to explain a competency. The word "integration" means co-ordination between the various subjects taught during the various academic phases of the MBBS course in order to bridge the gap in knowledge for association and understanding the subjects in

depth. This involves regular updating and learning process which contributes the goal of CBME for a medical student to become a lifelong learner. When there is teaching -learning coordination occurring between subjects of the same academic year whether clinical or basic sciences it is Horizontal Integration. Whereas Vertical Integration involves co-ordination and co-operation between the foundational basic sciences and the clinical subjects. Thereby the boundaries created by the traditional method of medical education in the form of pre, para and clinical subjects divide is nullified forever. Spiral or combination of Horizontal and Vertical Integration ensures alignment of subjects in the particular academic calendar as well as the other subjects in the various phases of curriculum's ascent. Hence there is an enhanced connectivity between the subjects, removal of all the barriers in teaching-learning process. Thus, facilitating the retention of concepts, improves skills, imbibe ethics and develop attitude by the medical students (19).

Self-Directed Learning (SDL)

This method of teaching-learning involves the learners to initially identify the objective, goals, resources for learning, implement and evaluate themselves the learning outcome. Hence increasing the knowledge and skill are achieved with upgradation of responsibility, accountability, confidence of the medical professional striving to achieve them. The advantages of Self-Directed learning (SDL) are learner control, self -regulated learning techniques adopted reflection and interaction of social as well as physical environment. But the assessment of SDL can be quite challenging since the affective domains are to be assessed such as problem- solving, collaboration, communication, self-awareness, innovation and professionalism which involves usage of Self-Directed Learning Readiness Scale or the Oddi continuing Learning Inventory. However, these scales measure the readiness of self-direction rather than the competency or learning outcome. Medical school teachers generally use performance tasks, portfolios, behavioral checklists, anecdotal records, self or peer assessments to assess the SDL (20).

Simulation Based Training (SBT)

Usually utilized to practice the clinical skills in medical education when it is rather complex and costly to re-create difficult clinical scenarios in real life but a requisite for training, surgical procedures, patient management and diagnostic assistance in health-care settings. Permits the learners to develop hands-on -experience, build memory and develop expertise in a controlled environment. It also develops team -work and fosters co-ordination as well as promotes communication when facing emergency situations as well as efficiency in unexpected events in clinical scenarios. This is a recent teaching -learning method which is gaining acceptance and popularity but will advance as technology improves to play a significant role in medical education (21).

Case Study or Case Based Learning

Case Study is an in depth or detailed study of a person or a group with a related phenomenon. They portray real-life situations. This technique facilitates open -ended discussions especially on clinical scenarios (18). Case Based Learning are utilized when clinical scenarios are to be explained in terms of patient history, etiology, signs, symptoms, laboratory findings, diagnosis, treatment, monitoring and prognosis. The aptitude to solve clinical problems is provided to learners which also aids to cultivate team -work, peer -interaction as well as guidance in inquiry -based approach within groups they are replaced in to improve clinical skills and practice -based behavior. Further Multiple-choice Questions format can be used to assess the effectiveness of CBL. But instructors should prepare themselves thoroughly prior to such sessions. They should pose as only facilitators promoting only guidance in small group sessions with active engagement of learners to tackle the clinical problems on the basis of the cast study presented in the form of a real -life situation (22).

Social Media/Webinars, Podcasts and Vodcasts

Provides the electronic forums or e-learning resources which are powerful tools in aid for teaching -learning in medical education. Clinical scenarios, case and unusual findings as well as situations are shared to be discussed. It is also used to disseminate information from experts to learners situated in various wide geographical locations. Podcasts or Vodcasts are audio or visually enhanced broadcast that can be viewed by usage of internet on a computer or hand -held device. The ease of production and spread of information has proved to increase the usage and popularity. Webinars are to be planned with various resourced -persons involved at the same time disseminating information to learners. However, may prove to be teacher -centric with less interaction with the learners. There is also a word of caution while utilizing the social media regarding the code of conduct and ethics of professionalism (23).

Small Group -Discussion (SGD)

This teaching -learning method involves a face-to-face interaction between members of a small group (5 to 10 persons) and hence known as "Group Discussion". It is a learner-centric session planned with focus on the communication involved with the learner's self and between the learners. Efficacy of the group discussion can improve with problem-oriented learning and promoting debates and promoting. Re-shuffling of groups during small group discussion improves participation and maintains group dynamics during especially subjects' study which involves case studies and vivas. SGD improves the reflection and ability of the learners involved as well as their learning and retention effectively (24).

Flip Classroom Model

A video is posted pertaining to a topic of any subject concerned with medical education system egg zoom, google classroom etc. This facilitates teaching of related content of topic outside the classroom followed by active, collaborative discussions of the same topic with the classroom later (23). The role of the medical school teacher is that of a facilitator or mentor or guide whereas in this pedagogical approach there is reversal or "flip" of the core elements of traditional didactive teaching. The flip classroom approach makes it a learner -centric approach where the teacher assists with the clarification of concepts and learning strategies

addressed and discussed by the learners. Flip Classroom enables to achieve higher levels of cognitive learning, attitude of being a life-long learner as well are communication skills which are the goals of CBME. Two disadvantages of Flip- Classroom cited are primarily creation of effective pre-class material prior to the class and time management of the actual class in session in class. Secondly the face-to -face interaction in this TLM can pose a problem when dealing with medical students in numbers greater than 100 which is usually the case. Also, the dearth in the availability of number of faculty or facilitators availability can also affect smooth conduct of the class (25).

Mentor -Mentee System

It is a method in TLM wherein knowledge, skills and expertise are shared one to one, in groups or in peer -group learning. It is usually the experience from a senior experienced faculty that is shared so as to assist the less experienced with the advancement and face the dilemmas in their careers (1).

Problem Based Learning (PBL)

It is a pedagogical method in which patient's problems are discussed in the form of clinical scenarios to enable learners from their study aims and objectives. This facilitates problem -solving skills of the learners as well as increases cognitive skills based on or a buildup on basic and clinical subjects' knowledge. This method was first introduced in the late 1960s utilized globally since due to its learner-centric approach unlike traditional methods. This type of TLM occurs in small groups and depends on the group dynamics depending on active participation, adult oriented, learner-centric, collaborative, integrated and interdisciplinary approach in the clinical context of medical education. Disadvantages of PBL are it is time consuming, requires teaching aids and materials and infrastructure, insufficient design of PBL problems and motivation or initiative lacking amongst learners (17).

Role Play

This type of TLM is widely used in medical education and is based majorly to attain the communication skills as well as to apply it. The advantages of Role Play are it enhances understanding, trust, respect, honesty, empowerment and coordinative support as well as reflective thinking. It assists in gaining knowledge, attitudes and skills in a range of disciplines with the learners of different ages. This type of TLM teaches learners to emote communicate, empathize, maintain eye contact, verbal and non-verbal cues (18).

Evaluation or Assessment Methods in CBME

Assessment or evaluation Methods support strongly and are the backbone of any curriculum. Based on the best practices involved in teaching -learning method, the type of assessment method can be designed. To reduce the validity threats multiple types of evaluation or assessment maybe utilized. These should be more than objective type rather than subjective types. To test the expertise not competence to the ultimate goal of CBME hence incorporate both qualitative and quantitative evaluation while assessing non-cognitive skills (15).

Formative Assessments: These are conducted on a continuous basis and on informal basis at intervals. These provide the learners information regarding the progress in their TLM and free of threat to students. Feedback may be provided by the concerned subject teachers so that learners understand and improve on the basis of knowledge or performance.

Summative Assessment: The prior idea must be provided about the prospective subjective e assessment so as to provide fair and distribution of weightage even before the course begins. The previous year's question papers practice may provide. Provide the details of the assessment method in print format for uniformity of information amongst the learners (26). The Assessment /Evaluation should be reliable, valid, practical and should have positive impact on the teaching -learning method utilized.

Types of Assessment

Self-Assessment: It is a method of self -regulation which is important in the process of continuous learning and performance of an aspiring physician. Self-Assessment requires that the learner not only works individually but evaluates his/her progress and performance. It is a valuable means f assessment provided the learner is provided with the "gold standard "criteria for comparing their own assessment reliably. The methods that can be utilized in Self-assessment are MCQs, MEQs, Essay, True/False, Performance exams like Portfolios, Student Log books, checklist, global ratings, video etc. (27).

Portfolios and Logbooks: It is a documentation of achievements of the learner based on reflections. The typical elements being "critical incidents" or events, a reflective journal or diary, tutorials, learning plans, clinical experiences, exam preparation materials, recorded consultations, audits, project works, critical reviews of articles etc. Portfolios can be utilized for formative and summative assessments but need to be written primarily. The issues of public and private viewership should be made explicit and clear beforehand. It will document the achievement of specific learning outcomes.

Logbooks are similar to Portfolios and are 3 types – procedural, operative and case -logs. These are valuable instruments for examiners toolkit. These are valuable instruments for examiners toolkit they assess critical thinking and self-assessment not measurable by other assessments. The portfolios validate the student's performance longitudinally over a period of time enhanced by assessment of various sources. It also exhibits the mastery of learning outcomes provided; they are documented effectively. Logbooks are considered as repetitive and boring. But assesses the completion and accomplishment of a learning outcome by reviewing the documented list of tasks in the logbooks. However, these assessment methods require staff time and resources (28).

Objective Structured Practical/Clinical Examinations (OSPE/OSCE): It is a recent and a multi-dimensional approach for assessing the practical skills in the clinical scenarios in Medical

Education. It is simultaneously also evaluating the communication skills along with the tasks which simulate real clinical scenarios between physician and patient to assess the clinical skills of the learners. It is known to be "objective type of assessment" since the examiners utilize a 'checklist' for assessing the students, "structured" since it is organized such that each student in the set of students observe the same problem and perform the task with a given time-span. Clinically as they represent real -life clinical scenarios. OSPE/OSCE include various work tables called stations assigned as 1,2,3,4,5 etc. Each station maybe assigned an equipment, mannequin, case file, case study etc. the student has to perform as per the procedure desired by the evaluator. The time is allotted for each station and requires careful and minute planning.

Advantages of OSPE /OSCE are each student is subjected to the same practical or clinical scenario, ethically approved, feedback can be taken from student, assess the clinical skills, cognitive as well as behavioral skills, pedagogical mode of assessment, facilitates demonstration of correct skills required in an "emergency" condition. Disadvantages of OSPE /OSCE are it is very expensive to prepare, time consuming, less interactive in the affective domain, sometimes the clinical scenarios simulated may not be existing in the real -life situation (29).

Mini-Clinical Evaluation Exercise (Mini CEX): The faculty member or evaluator directly observes the medical students during the encounters or real -life clinical scenarios to assess the medical student's clinical judgements, counseling skills, patient management organization, efficiency, professionalism, communication and ethical skills. However, the disadvantages cited is that the student tends to develop anxiety or exam fever. Mini –CEX log books can be maintained as offline or online versions as a proof of competency assessed maintained by the students as evaluated by faculty to standardize the curriculum as per regulatory agencies like National Medical Commission (NMC) (23).

360^0 Degree Evaluation: Is a multisource feedback system which has checklists for multiple prospective within the evaluators sphere of influence. Evaluators include peers, students, members of the clinical team, staff, administrative staff, patients, families can assess the trainees' habits, skills teamwork and interpersonal skills. It is used for formative assessment but not summative assessment. They have disadvantages of being time consuming and administratively demanding (27).

Written Examination: They are assessment of mainly the cognition, where there is open or multiple -choice questions. In open ended questions can be based on "context rich' or "context poor" which tests the knowledge in depth, clinical knowledge or just factual knowledge and not clinical based (30).

Essay: It evaluates the comprehension and ability of a medical student to express and present in written style in an effective manner. It indirectly measures attitudes. Values and opinions. Though easy to construct this type of question paper, they are time consuming to correct. There are even differences in marks allotted by different examiners; sometimes bias may exist on the part of the same examiner.

Long &Short Answer Questions (LAQs &SAQs): to provide long or short answers that are very precise to the questions. These can be constructed in a structured manner so as to facilitate the appropriate answers from medical students. Not suitable for testing complex learning outcomes.

Multiple choice Questions MCQs): It depends on the evaluator to set structured, good objective and complex stem. These questions are based on stimulus material which may be presented in the form of a clinical scenario, a diagram, graph, table of data, statement, or research report or photograph. It tests the student's ability to recall information, intelligence and simple recognition.

Extended Matching Questions (EMQs): Can be utilized for basic sciences and clinical subjects of medical education. It consists of four parts: a theme of related concepts, a list of options, a lead -in -statement and two or more item stems to direct the students. This however has computational advantages but may confuse and create complexity for the students (26).

Direct Observation of Procedural Skills (DOPS): It provides feedback for practical procedures which is based on a structured rating scale for the evaluation purpose. Hence, the knowledge, clinical skills, technical and communication skills can be assessed.

New assessment Tools - Google Forms: The learners can be evaluated on the basis of Google Forms http://forms.google.com). the students are scored automatically and in real time so results in efficient time management of evaluator. The learner has advantage to solve and immediately check the correct answers with the pre-entered explanations of the correct answers by the evaluator as per their comprehension which can be facilitated by learner at an asynchronous pace (31).

Conclusion

Scope of Competency Based Medical Education (CBME) is immense; although CBME has been introduced in early 21st century in our country, with the novel and noble intentions to produce competent medical graduates only if it is implemented effectively and executed to the core. It would be necessary to train all the faculties of the medical colleges throughout our country (32). This was undertaken effectively by the Curriculum Implementation Support Programs (CISP) undertaken over the previous years by the Nodal and Regional Medical Education Units throughout India.

Since it is essential that all the faculties in the medical colleges have compulsorily undergone the training in the CBME curriculum. This being necessary because only then all the goals of CBME shall be fulfilled. The main highlight of CBME being "

competent students become competent doctors" means that only through the various competencies attained throughout the various phases of the curriculum of MBBS that finally result in the Indian Medical Graduates (IMGs).The fate of the future physicians will be dependent on the knowledge, clinical skills and behavioral aspects attained during their training as undergraduates prior to their steps into the real-world in their own nation as well as the global scenario. The present medical education will also facilitate that the scenario of health-care settings as well as services rendered will change effectively in future to benefit.

The adoption of CBME also means that new Teaching -Learning Methods have been suggested to be made practical should be practiced and it is also essential to develop upon the Evaluation or Assessment tools too. When the medical faculties practically use the various Teaching Learning Methods (TLM) they should be appropriately sensitized to do so and even be able to apply the appropriate Evaluation or Assessment Tool suggested as per TLM applied.

This means for the current paradigm shift in medical education will require significant investments in teaching, infrastructure, evaluation and probably even the workforce in terms of competent medical college faculties and further increase in the number of medical colleges in our country. The current medical education is at present, in implementation stage hence for the total impact we have to still wait. However, the current medical education is time-based, outcome based, involves structured learning, with time flexible approach and learner -centric approach is adopted.

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