

Need of Evolution in MCI Teacher's Training Programs: Faculty Perceptions of a Tertiary Care Medical College in India

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ABSTRACT

BACKGROUND

Medical Council of India has mandated the CISP (Curriculum Implementation Support Program) training of every medical faculty. However, due to time constraints and limited sessions of CISP programs, there is a section of faculties which has been trained only in the basic or the revised basic course but yet to be trained in the CISP workshop as well as there are faculties who have been trained in CISP after a long gap of MCI basic/revised basic course workshop (BCW/RBCW). In view of these variedly distributed faculty programs, this study was conducted with an intent to document the perceptions of medical faculties regarding these programs by analysing their views and challenges faced in implementation of CBME to search a novel solution to improve the scheduling and proforma of faculty development programs.

METHODS

A pre validated questionnaire consisting of components of CISP and BCW/RBCW was emailed to the teaching faculties of IQ City Medical College via google forms. Consenting faculties responded. Their results were analysed by inbuilt google statistics and was cross verified with SPSS 20.0.

RESULTS

The results show that among those who participated in the study, 28.2% faculties with CISP training are better suited to implement the new curriculum having a better knowledge and perception of CBME. Those faculties who have been trained only in 43.6% BCW/RBCW lack uniformity in knowledge and perception about CBME and there are ambiguities in their perceptions about CBME with mixed results. The substantial number of faculties not trained in any of the teachers training (28.2%) program completely lacked the perception about the modern modalities of teaching learning as well as competency based curriculum and its implementational techniques.

CONCLUSIONS

In view of the above results, a new combined (3 day) program may be suggested combining the content of both RBCW and CISP programs for training of new medical faculties.

KEYWORDS

New MCI Teachers Training Program, CISP RBCW Combined Program, CBME, Indian Medical Graduate, Faculty Perceptions, Competency

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BACKGROUND

Medical education in India is going through a radical change at present with the implementation of competency-based medical education (CBME) curriculum, which is an outcome-based approach focusing on production of a competent Indian Medical Graduate (IMG).¹ The salient features of the new competency based curriculum are the “competencies”. A competency can be defined as “the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in daily practice for the benefit of the individual and community being served.”² Hence the revised MCI Undergraduate competency based medical education (CBME) curriculum differs drastically from the traditional curriculum. With respect to this MCI has mandated the CISP training of all medical faculties.³ The prompt implementation of the competency-based curriculum, have exposed all the faculties to the latest curriculum. MCI initially prioritized the CISP program for head of the departments and senior faculties only. However, due to time constraints and limited sessions of CISP programs, there are major a section of faculties who have been trained only in the basic course workshop (BCW) or the revised basic course workshop (RBCW) but yet to be trained in the CISP workshop.⁴ There are faculties who have been trained in CISP after a long gap of MCI basic/revised basic course workshop. In addition, a major chunk of young faculties are yet to be trained in any form of teachers training program. In view of these variedly distributed faculty programs, this study was conducted which recorded the perceptions of medical faculties regarding these programs, analyzed their views and challenges faced in implementation of CBME. With rise in the number of undergraduate medical colleges and more and more number of new and fresh medical faculties being appointed as medical teachers a search of a novel solution to the widely distribute different teacher’s training program is necessary which will help the facilitators to produce competent Indian Medical Graduate in future.

METHODS

This study was carried out in IQ City Medical College as a cross-sectional questionnaire-based study. The institutional ethics committee approval and the consent of the dean were taken. A questionnaire which was pre validated by institutional ethics and research committee consisting of components of CISP and BCW/RBCW was administered online in the form of a Google form. All faculties were sent the form through e-mail. Consenting faculty filled the form online. Responses were received from 78 faculty members. The questionnaire comprised of three sections. The questionnaire had three sections. The first section used a Likert scale based questionnaire focused on their perceptions regarding various aspects of competency based medical curriculum. It was followed by single response type multiple choice questions to test their awareness regarding the

changes in the CBME curriculum. The last section had open-ended questions to know about their opinions regarding various teacher training programs as well as the challenges in implementation of CBME and their suggestions to make it successful. The responses were analyzed by an inbuilt Google Statistics available with Google forms. The quantitative data was further statistically cross verified with SPSS 20.0 software. On applying Kolmogorov–Smirnov test, the p value was found to be significant; therefore, the distribution was skewed. Thus, central tendency and dispersion of data were expressed in median and inter-quartile range (IQR) respectively. The qualitative data from the open-ended question were thematically analyzed.

RESULTS

Out of 120 Faculty members only 78 responded to the email. Out of them 22 attended CISP workshop, 34 attended BCW and/or RBCW and 22 had no form of teacher’s training. This is represented in figure 1.

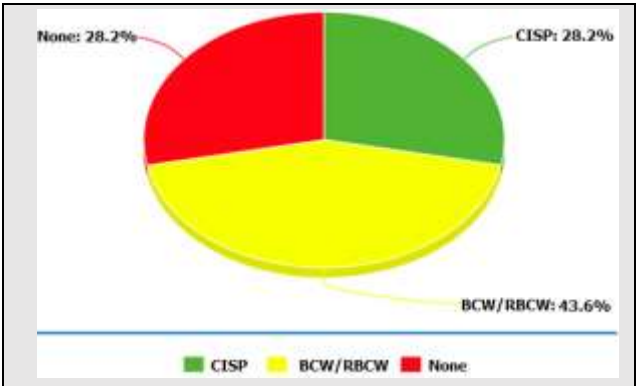


Figure 1. Status of Teacher's Training Undergone by Faculty Members

Questions/Items	Study Group	Median	Interquartile Range
1. How would you rate your knowledge of Competency Based Medical Education (CBME) in a scale of 5?	CISP	4.5	1
	BCW/RBCW	3	0.5
	No Training	2	1
2. How would you rate your self-confidence regarding implementation of CBME practices.	CISP	4	1
	BCW/RBCW	3	2
	No Training	2	1
3. How would you like to rate your ability to work collaboratively with faculties of other pre, para and clinical departments	CISP	4	2
	BCW/RBCW	2	1
	No Training	2	0.5
4. Early clinical exposure will improve the teaching learning abilities of the students.	CISP	4	1
	BCW/RBCW	3.5	1.5
	No Training	2	1
5. Self-directed learning will improve the teaching learning abilities of the students	CISP	4	1
	BCW/RBCW	3	2
	No Training	1.5	0.5
6. Formative assessment should be given more weightage than summative assessment.	CISP	5	0.5
	BCW/RBCW	4	1.5
	No Training	2	0.5
7. Extra-curricular activities among the students should be an essential part of foundation course as well as the entire curriculum	CISP	3	2
	BCW/RBCW	3	2
	No Training	3	1
8. Inclusion of Elective subjects are essential for better learning experience of IMGs	CISP	3.5	1.5
	BCW/RBCW	2	1
	No Training	2	1

Table 1. Comparative Statistics of Faculty Groups Based on Their Responses to the Questionnaire

The study compared the responses of faculties under three groups. CISP Trained (Group A), BCW/RBCW (Group B) and No Training (Group C). On applying Kolmogorov–Smirnov test, the p value was found to be significant; therefore, the distribution was skewed. Thus, central tendency and dispersion of data were expressed in median and inter-quartile range (IQR) respectively. The first section was a Likert scale-based questionnaire to assess the perceptions of the faculties regarding various aspects of CBME. The results from these questions have been shown in Table 1 showing the medians and interquartile range of each observations.

The table which represents the responses of the three different groups shows that in self-assessment about the knowledge of CBME, the faculties of Group A are ahead compared to Group B. Group A faculties felt “confident” compared to group B who were “neutral”, when they were asked about implementing CBME curriculum. It is to be noted that the group with no training seemed to have “not adequate” knowledge and were also “not confident” regarding implementation of CBME. The CISP training also improved the ability of the faculties to collaborate with other departments compared to those who only did basic teachers training workshop or the faculties who are yet to be trained in any MCI teacher’s training programs.

Regarding the role of early clinical exposure and self-directed learning for better teaching learning experience, the observation was very interesting as faculties from both the groups “agreed” that these are beneficial for better learning experience of the students. The medians and interquartile range of both the groups are not far apart in this regard and shown in table 1. However, the untrained faculties “disagreed” regarding the beneficial role of these aspects for IMGs. The same can be commented about the role of formative assessment as well. Faculties from both the group A and group B, “strongly agreed” and “agreed” respectively they are aware that Formative assessment plays a vital role in assessment which is a change in the new curriculum. However the untrained faculties “disagreed” regarding the same.

However when it comes to the opinion regarding the role of extracurricular activity in the new curriculum, there is substantial difference of opinion among the members of all the groups, but overall perception of both the groups are quite similar. It is evident from the similar medians and widely variable interquartile range of both the groups shown in table 1 that faculties from all the groups have a “neutral” standpoint regarding this. Inclusion of Electives is an area where majority of the members of CISP group “agrees” that they will provide a better learning experiences for the IMGs, compared to the other two groups who “disagree” regarding the same. In the subsequent MCQ Section we tested the knowledge of members of all the groups regarding the changes in the new curriculum. Table 2 details the questionnaire with the correct responses and the % of correct results scored by participants of both the groups.

Table 2 shows that the participants of CISP group (A) scored much higher than the participants of their fellow

group members (group B and C) in almost all aspects. However, it is to be noted that Group A and B had similar scores regarding AETCOM, which is well understandable as AETCOM is well covered in basic teacher’s training courses prior to CISP workshop.

Questions/Items	Correct Response	Study Group	% of Correct Response
9. The following is not a part of foundation course: a) Skills module b) Early Clinical Exposure c) Field visit to community health center d) Sports and Extracurricular activities e) Enhancement of Language/ Computer skills	b)	CISP BCW/RBCW No Training	90.90 70.5 36.36
10. The internal assessment system in CBME is a) Added in the total marks and helps in aggregate b) Not added in the total marks and only serves as a qualifier to appear in Prof Exam.	b)	CISP BCW/RBCW No Training	100 64.70 54.54
11. Elective subjects are a part of a) 1st Prof MBBS b) 2nd Prof MBBS c) 3rd Prof MBBS (I) d) 3rd Prof MBBS (II)	c)	CISP BCW/RBCW No Training	86.36 47.05 27.27
12. MCI limits didactic lectures to what fraction of the total teaching hours of a particular subject a) Half b) One third c) Two third	b)	CISP BCW/RBCW No Training	100 61.76 59.09
13. MCI Mandates Small Group teaching-learning methods to what fraction of the total teaching hours of a particular subject a) Half b) One third c) Two third	c)	CISP BCW/RBCW No Training	100 41.47 45.45
14. In the new curriculum viva marks is now added to practical instead of theory. a) True b) False	a)	CISP BCW/RBCW No Training	81.80 52.94 45.45
15. MCI mandates assessment of AETCOM by incorporating a compulsory question in theory a) True b) False	a)	CISP BCW/RBCW No Training	86.36 85.29 31.81
Table 2. Multiple Choice Questionnaire with Faculty Responses			

The last section of the study had an open-ended question where we asked whether MCI should unify RBCW and CISP as a single extended program for new untrained faculties. In this case the whole participants pool was considered not individual groups. 79% of the total participants supported the change whereas 21% were content with the existing system. The group who agreed to unify the programs into one consisted of 64 out of 7 faculties. Among them 20 belonged to Group A, 25 to Group B and 19 to Group C. Rest of the participants were of the opinion regarding not to unify the programs and they should be conducted as present existing schedules. Participants were

also asked to provide justifications to support their cause. As it was an open-ended question, there were many varied descriptive responses which have been thematically analysed and summarised in table 3.

Should MCI unify RBCW and CISP into a single program	
YES i.e. The two programs should be unified	NO i.e. The two programs should remain separated
Participant subclass	
CISP 90.9% of participants	CISP 9.1% of participants
RBCW 73.53% of participants	RBCW 26.47% of participants
No training 86.36% of participants	No training 13.64% of participants
Thematic analysis of responses	
Saves repeated travel expense	Better to have small but separate sessions for better attentiveness
Problem to get repeated leaves, Repeated information	Different purpose so should be kept separate
Overlapping of similar sessions	Clinicians not getting spared from duties for long stretch
Less number of CISP workshops by MCI	

Table 3. Thematic Analysis of the Open-Ended Question (Justification of Formation of a New Single Faculty Training Program)

DISCUSSION

Program Schedule (Day 1)			
Time	Session	Objectives	Duration
8:30	Registration	-	30 minutes
9:00	Inauguration & introduction	-	20 minutes
9:20	Ice breaking & Group Dynamics*	Understand and apply concepts of Group dynamics and team based functioning in teaching and learning	40 minutes
10:00	Principles of Adult learning, Learning process	Use principles of adult learning in the teaching learning process	30 minutes
10:30	System's Approach	Use the system's approach for Instructional design	45 minutes
11:15	Tea Break		15 minutes
11:30	Learning domains and Progression of learning	a. Classify and define learning domains b. Demonstrate a basic understanding of hierarchy of knowledge progression	30 minutes
12:00	Goals, roles and Competencies: CBME	a. Define Goals, Roles and Competencies and explain the Relationship between each other b. Elaborate the principles of Competency based learning	45 minutes
12:45	The IMG – Goals, roles and Competencies	Be sensitized to the goals, roles and global competencies as developed by the MCI	15 minutes
13:00	Lunch		45 minutes
13:45	Objectives – Writing Objectives – Developing Objectives from Competencies, linking Learning and assessment with Competencies*	a. Differentiate competencies from objectives b. Develop objectives from different competencies c. Explain the relationship between objectives, learning and assessment	90 minutes
14:45	Writing a lesson plan	Develop a lesson plan appropriate to the objectives and teaching learning method	45 minutes
15:30-16:30	Graduate Medical Education Regulations (GMER) 2019**	Time frame, training methods, integration, assessment, new additions like Foundation Course, ECE, AETCOM	60 mins
16:30	Tea Break & Closure		15 minutes

Teacher's Training Module Concept

9:00	Choosing a teaching method for Objectives & Competencies – Workshop*	Choose the appropriate teaching method for various Objectives and Competencies	90 minutes
10:30	Tea Break		15 minutes
10:45	Interactive & Innovative teaching methods including large Group (Demo), Small group (with demo) and appropriate use of media*	a. Use the principles of interactive learning in large group b. Use the principles of interactive learning in a small group c. Choose appropriate media for a given learning session	90 minutes
12:15	Introduction to assessment	a. Elaborate the principles and types of assessment	30 minutes
12:45	Assessment planning and quality assurance, Writing the correct essay question, short answer question*	a. Write an appropriate essay type question b. Write an appropriate short answer type question	45 minutes
13:00	Lunch		
14:00	MCQ*	Write an appropriate MCQ Concept, framework (using examples from competency table) including group activity & time table	30 minutes
14:30	Alignment and Integration**		60 minutes
15:30	Internal assessment and formative assessment	Develop a plan for Internal assessment and Formative assessment	30 minutes
16:00	Tea Break		15 minutes
16:15	Matching assessment to Competency, objectives and Choosing the right Assessment*	Choose the right assessment method for a given objective/competency and learning method	45 minutes
15:00	Assessment in CBME**	Principles as relevant to CBME, assessment methods	45 minutes
17:45	Feedback	Provide effective feedback to Students	15 minutes

Program Schedule (Day 2)

9:00	Discussion on AT-COM Module: Reflection and Narrative	a. Demonstrate the ability to use the AT-COM module for Basic Course in MET to be held b. Demonstrate the ability to write reflection & narrative on AT-COM Module c. Demonstrate readiness to launch AT-COM module in own college	60 minutes
10:00	Effective clinical and Practical skill teaching	a. Teach skills effectively b. Teaching skills at the workplace c. Use a skills lab effectively	60 minutes
11:00	Tea Break		15 minutes
11:15	Assessment of clinical and Practical skills	a. Assess skills effectively b. Assess skills at the workplace	60 minutes
12:15	Assessment of clinical and Practical skills*	c. Use a skills lab to assess competency d. Design a skills assessment station/OSCE	90 minutes
13:45	Lunch		45 minutes
14:15	Improving SDL through Technology	a. Promote self-directed learning in students b. Use technology to improve self-directed learning	30 minutes
14:45	Educational networking for Growth	a. Understand avenues for growth in education b. Create networks in education	45 minutes
15:30	Log book & Feedback**	Log book modules & formative feedback	45 minutes
16:15	Curricular governance including role of Universities**	Presentation & discussion	45 minutes
17:00	Valedictory & Closure		30 minutes

Program Schedule (Day 3)

*Highlighted sessions are those where group activities would be conducted

**CISP session additions

There has been a paradigm shift in medical education across India with introduction of Competency Based Medical Education. However, the effectiveness CBME to prepare the next generation of doctors to effectively to meet the health needs of the country it is yet to be seen. The medical

education unit along with faculty members across various medical colleges in India are putting in their whole-hearted efforts to make this successful. Various medical colleges have uploaded their of first-year MBBS timetable on their respective websites. Starting from First Prof MBBS, Medical council of India is rolling out the competency-based curriculum across all disciplines. CBME will help in the alignment of assessment with teaching-learning in actual workplace settings.^{5,6}

In this regard, it is very important that all the faculties are well trained and completely oriented regarding CBME. MCI has mandated the Revised basic teacher's training course and teachers trained in Basic or Revised basic course are being trained in CISP (curriculum implementation support program). However due to time constraints not all the faculty members are being trained in CISP. Moreover, regional centres are allowing RBCW but not CISP in many Medical Colleges. In addition, previously MCI only allowed BCW/ RBCW training for Assistant Professors and other senior posts, which have created a huge pool of tutors and demonstrators, who are actively involved in teaching-learning without being exposed to the various aspects of innovative small group teachings, AETCOM as well as CBME. It is only in late 2019 that MCI has finally changed the eligibility criteria of RBCW to include tutors and demonstrators.

In this study it was clearly found that the faculties trained in CISP has got much better perceptions of the competency-based curriculum, they are more confident about CBME and are more comfortable in collaborating with other departments which is one of the key factor in the new curriculum. Regarding perceptions of new elements of the curriculum like early clinical exposure and self-directed learning, as expected the CISP groups are well oriented but, its interesting to find out that many non CISP trained faculties also agree that both of them are essential for improving the learning experience of the IMGs. Majority of the faculties trained in CISP, strongly agreed regarding the beneficial role of formative assessment as a new tool for assessing the IMGs in contrast to practices of the traditional curriculum. It is to be noted that majority of the faculty group trained only in BCW/RBCW also agreed to the same.

The perceptions of both the study groups matched when it came to the role of extracurricular activities in foundation course as well as the yearlong curriculum. They were mostly neutral to it. The CISP group was also neutral to the role of Electives in the new curriculum whereas majority of the faculty group yet to be trained in CISP disagreed to the fact whether electives will serve any good in the new curriculum.

Both the groups agreed regarding the current standard of AETCOM assessment in CBME but in general the overall awareness of recent changes in every aspect of CBME was less in the BCW/RBCW only group compared to CISP. The percentage of correct responses pertaining to foundation course component, internal assessment weightage changes, elective subjects timing, total weightage of lectures and small group discussions and the change in the way how viva marks are now contributing to the subject clearly exhibits the

need for CISP training in the faculty groups yet to be trained in CISP. When it comes to the faculties who lacked any form of training, their perception clearly reveals their lack of knowledge regarding various aspects of CBME which is quite understandable as both the RBCW and CISP incorporate many vital aspects of teaching learning and knowledge of new curriculum which is completely new with respect to the didactic and traditional curriculum in the background of which the last generation of faculties have been trained.

However faculties of both the groups (trained or not trained in CISP) have unanimously agreed that the two programs should be unified into a single program for the new faculties which will save them time and cost of repeated travel (in case they are visiting regional centres), save leaves as multiple sessions, and will be less boring and repetitive both the program features similar and overlapping sessions. This is more relevant as seeing the current scenario due to lack of observers from regional centre, the number of CISP workshops are very limited as there exists a huge pool of faculties who have been trained in BCW/RBCW but yet to be trained in CISP, who has major lacuna regarding their knowledge and perception of CBME. In the current scenario the overlapping/ repetitive sessions of CISP and RBCW are better for those who are undergoing CISP after a substantial gap. But for the faculties who are undergoing fresh training, the existing module of back to back RBCW and CISP is very repetitive. Hence a single unified 3 day program (concept module shown below) including best of both worlds can be formulated by MCI for the new and untrained faculties which will be cost effective and make them aware about the basics of competency based curriculum as the well as make them aware of best practices as a facilitator to improve the teaching learning environment and produce better Indian Medical Graduates.

CONCLUSIONS

Faculties with CISP training are better suited to implement the new curriculum having a better knowledge and perception of CBME compared to BCW/RBCW trained faculties who lack uniformity in the knowledge and perception about CBME having ambiguity in their perceptions about CBME with mixed results. In view of this, MCI should increase the number of CISP workshops. The inclusion of tutors and demonstrators for RBCW was a much needed initiative by MCI which should have been done long back. The index study suggests a new three day program with combined content of both RBCW and CISP programs for newly trained faculties.

However, one of the limitations of this study is that in the present day, all of the CISP modules are downloadable at MCI website and due to that many interested faculties who have not formally undergone CISP training are already aware of the CBME curriculum. Hence, few of the responses of the group who has not undergone CBME were comparable to CISP group in many areas.

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