

Employing case-based discussion as a teaching - learning and formative assessment tool: Scope, Challenges and Potential solutions

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Abstract: In the process of producing a competent medical graduate, case discussion plays an important role as it exposes the students to a wide range of clinical and ethical reasoning and dilemmas. An extensive search of all materials related to the topic was carried out in the PubMed search engine and a total of 9 articles were selected based upon the suitability with the current review objectives and analyzed. Case-based Discussion is a method of teaching-learning and assessment, which assesses the "Does" - highest level in the Miller's pyramid of skill acquisition and is developed on the lines of traditional case discussions. It can be used as a tool for formative assessment and has been acknowledged as a useful option by the assessors for the assessment of clinical reasoning, clinical judgement, professionalism, communication and recordkeeping skills. In conclusion, case-based discussion is an effective workplace-based assessment tool that has inherent benefits both for the teachers as well as the students. It is the need of the hour that all the medical colleges should implement the same within their set-up to enhance the learning amongst the medical students.

Keywords: Case Based Discussion, Medical education, Work Place Based Assessment.

Introduction

In the process of producing a competent medical graduate, case discussion plays an important role as it exposes the students to a wide range of clinical and ethical reasoning and dilemmas. These case discussions in the current set-up of medical education are generally carried out either in wards as a part of clinical posting or in outpatient departments. This interaction between a teacher and students is an opportunity for teaching, wherein a student presents a case, while the teacher critiques and explores the decision-making skills. The purpose of the current review was to explore the utility of case-based discussion as a tool in the process of teaching and assessing medical students.

Methods

An extensive search of all materials related to the topic was carried out in the PubMed search engine. Relevant research articles focusing on

case-based discussion in medical education published in the period 2008 to 2020 were included in the review. A total of 12 studies similar to current study objectives was identified initially, of which, 3 were excluded due to the unavailability of the complete version of the articles. Overall, 9 articles were selected based upon the suitability with the current review objectives and analyzed.

Keywords used in the search include case-based discussion and medical education. The collected information is presented under the following sub-headings, namely Scope of case-based discussion, Using the tool of case-based discussion, Challenges and potential solutions, Lessons from the field, Implications for practice and Implications for research.

Scope of Case-based Discussion:

Case-based Discussion (CbD) is a method of teaching-learning and assessment, which

assesses the "Does" - highest level in the Miller's pyramid of skill acquisition and is developed on the lines of traditional case discussions [1]. This method is a workplace-based assessment tool and aids in the assessment of skills, and also maintains content & context specificity. In this method, the interactions happen in a focused and one-to-one basis and efforts are taken to identify the strengths of the students and help the students to improve the areas in which betterment is required [1-2]. The discussion tends to last for 10-15 minutes, followed by a feedback of 5-10 minutes [3]. The method has been identified as the one which expedites the learning process, gives emphasis on providing constructive feedback and encourages the learners to reflect upon the entire process [1-3].

Using the tool of Case-based Discussion:

It can be used as a tool for formative assessment and has been acknowledged as a useful option by the assessors for the assessment of clinical reasoning, clinical judgement, professionalism, communication and recordkeeping skills [4]. In this method, preferably the student selects a case which has been recently seen and has some component of uncertainty or conflicts in decision making and thus scope for improving the knowledge [4-6].

The students submit the cases to the teachers and then teachers takes the call about the case which will be discussed, so that eventually students are benefitted the most. It is expected that the student brings the case notes and presents a summary of the case to the teacher and is assessed by the teacher through probing questions (like what is your diagnosis and why? How was the overall communication with the patient? What you would do differently to gain more insights, etc.) [3-5, 7].

Once the discussion is over, it is followed by specific feedback about what went well, what could have been done better and what all students can do to move forward in their learning [3]. The entire clinical interaction is documented in a structured format and provides inference about the level of performance of the students. It has been recommended that the student should only initiate the process as the onus of learning rests with them, and to derive maximum benefits they should be assessed by all the available faculty members at different periods of time [2-4, 6-7].

There is always the prospect of assessing the recording/documentation skills of the students as the case records are available.

Challenges and potential solutions

Even though CbD is a useful tool and has well documented evidence to support its utility, there are practical challenges pertaining to the time constraints, a smaller number of assessors, dedicated faculty members, selection of cases, the art of giving feedback, and the very fact that various levels of trainee need different types of assessment [4,5,8].

These challenges can be effectively tackled by conducting sensitization sessions for both teachers as well as students to make them understand about the tool, scope of feedback and the importance of reflecting on the entire process [2,4]. Further, a list of important and versatile cases can be made and discussed with students once they encounter such cases. The good thing about implementing CbD in medical colleges is that it is already happening across all the medical colleges and just that we need to structure it and support it with feedback and reflections. Moreover, as the students get an opportunity to regulate their own learning, the method has definite significance [3-5,8].

Lessons from the field:

In the Department of Community Medicine, at Shri Sathya Sai Medical College and Research Institute, a constituent unit of the Sri Balaji Vidyapeeth, Puducherry, the postgraduate students were exposed to case-based discussion. During the case presentation sessions, the performance of the students was assessed by the faculty members using a structured rubric of milestones. Constructive suggestions were given to the students to improve their performance, a shared action plan was developed and the students were also encouraged to reflect upon the entire experience. These assessments were carried out periodically to monitor the learning progression.

Implications for practice:

All the medical colleges should gradually introduce the tool of case-based discussion for

the sake of formative assessment, first for the postgraduates, primarily as their number is less in comparison to the undergraduate students. A standard format can be either adopted or we can even design the format for assessment and validate the same. It is always encouraged to develop rubrics of milestones, so that teachers can assess the performance of students in a uniform manner. The success of the initiative will depend on the capacity building, training of faculty members and the dedication of the staff towards the entire process.

Implications for research

There is a definite scope for exploring the scope of case-based discussion tool in the medical college settings. The students can be asked about

their experience with the tool and the pros and cons attributed to the same. At the same time, the utility of tool in terms of improving the performance of the students can also be assessed. Moreover, the entire program can be evaluated, so that corrective measures can be taken for the better acceptance [9].

Conclusion

In conclusion, case-based discussion is an effective workplace-based assessment tool that has inherent benefits both for the teachers as well as the students. It is the need of the hour that all the medical colleges should implement the same within their set-up to enhance the learning amongst the medical students.

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