

AN EXPERIENCE OF WEB BASED CLINICAL TEACHING IN FAMILY MEDICINE AT COLLEGE OF MEDICINE IN OMAN, DURING COVID-19 OUT BREAK

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Received date: 20 March 2020

Revised date: 10 April 2020

Accepted date: 30 April 2020

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ABSTRACT

The ideal clinical teaching and learning is done in patient care but because of COVID-19 pandemic outbreak all clinical and class room teaching is suspended now. Online teaching is an acceptable mode of teaching, online medical teaching is entirely a different story but converting face-to-face teaching into the online mode in this unique situation has allowed each of us to use our ingenuity in planning the road that lies ahead. The teaching methods used in outpatient clinics are different from those used in wards, outpatient clinics in primary care offer more diverse and effective educational opportunities. Medical students in clinical years need effective and conducive learning environment to motivate and facilitates in depth learning, where they can express their opinion, questioning, evaluating own and peer performance with maximum hands on practice (doing). Ambulatory care gives a better opportunity for medical students to acquire appropriate medical knowledge with diversity of cases. There is a serious and disruptive change to medical education worldwide in this pandemic and the use of technology has been rapidly and innovatively used in an attempt to maintain teaching and learning. The aim of this article is to provide guidance how to conduct effective clinical teaching on line and make plan for assessment under current pandemic conditions.

KEYWORDS: COVID-19 pandemic, clinical teaching, assessment, medical students, Family Medicine, Oman.

BACKGROUND/INTRODUCTION

Engaging students on webinar clinical teaching sessions is a challenging job. Literature has supported E learning in medical education however, there is very limited information regarding clinical teaching in this context. Mainly E learning is used around the world comprises adaptive tutorials, audiovisual clips and virtual models. This mode of learning encourages students to exert greater control over their learning and allowing them flexibility over content and pace of learning. E learning also supports knowledge structuring in clinical context, developing clinical reasoning skills and self-directed learning with self-motivation. Clinical assessment requires tasks that assess cognitive, psychomotor and communication skills also assessing professionalism attributes.

Medical College Dean had taken the prompt decision for on line teaching in the first week of March 2020. All pre medical, pre-clinical and clinical departments met with their faculty and then with administration to establish on

line teaching logistics. This happened within few days of discussion and looking at the feasibility of training and executing the plan. A highly proficient IT department at medical college helped us in training how to use Webinar for teaching and students interaction.

Process of Teaching on Webinar in Family Medicine

Family Medicine department made the Webinar learning schedule for clinical students in year 7 and 6. Total number of students in Family Medicine year 7(19) and year 6(16). IT department has done 2 orientation sessions for faculty to train them how to become an organizer/facilitator on webinar e learning and one on line session for students' orientation.

First two weeks of the rotation was already done in primary care then as health advice by Ministry of Health and Government of Oman all classes were suspended in first week of March 2020.

We have already handed over the syllabus, orientation schedule, learning objectives with clinical presentation

list to be learnt during the rotation. Every day schedule included clinical scenario based interactive session for 2 hours followed by student led tutorial. The students participating sites log onto the designated website by using their IDs and passwords through email.

Clinical scenario based session facilitated by faculty of Family Medicine, making scenario from the clinical presentation list managing the whole consultation process and patient approach in primary care including relevant history taking, focused and relevant examination and how to manage the problem in primary care. These comprises of relevant and comprehensive clinical scenarios to actively engage students in problem-solving exercises that emphasize critical analysis. The assessment is done by faculty how student asks relevant and focused questions that reflect a logical order, evaluate red flag sign, look for a sign/examination finding and correlates the physical exam with those from the interview to approach a diagnosis. After diagnosis the student discuss the management strategy in primary care. Although there is no patient and student interaction but still students were feeling themselves in a simulation model led to critical analysis of the case and discussion with feedback. Different kind of questions asked and students able to use their knowledge of the subject matter, to reflect and correct conceptual errors, and to exercise critical thinking. Hiding the answers until all had responded encouraged participation of all students.

Sample Question given on line for Discussion

1. A 51 year old known diabetic well controlled on Metformin 500mg BD presents for routine follow up. His BP today is 160/110 mmHg recorded thrice in Health Center. How you will approach to this patient and manage the problem in primary care.
2. A 23-year-old male presents with 3-day history of general malaise and low grade fever. Yesterday he developed a very painful ulceration of his mouth and gums. On examination his temperature is 37.4 C, pulse 84/ min and there is mandibular lymphadenopathy. Which one of the following is the most likely diagnosis?

- A: Lichen planus
- B: Bechet's disease
- C: Syphilis
- D: Herpes simplex virus infection
- E: Oral candidiasis

Students Participation and facilitation of the process

Special communication skills are also included in teaching; Breaking bad news, how to handle angry patient, smoking cessation skills, how to counsel HIV positive patient, Patient safety and Medical error counseling. There is a special training of how to answer short answer questions, MCQ and OSCE practice on line.

Tutorials are student led on pre identified topics given learning outcomes for each topic. Students present interactive power point presentation facilitated by faculty. During all discussion the faculty can mute or un mute the participants microphone to give chance to all to talk.

The unique features of Webinar is discussion mode as well as effective utilization of chat system helping students to write customize questions for facilitator, beneficial aspects are interacting and sharing problems with colleagues. They learn from various participants' opinions and questions, what others usually do (regarding diagnosis and treatment) in practice and what others might do in a given situation. They are also presented with the current standard evidence based practice. They compare their level of knowledge and practice to their virtual colleagues participating in the webinars.

A video of the slides shown on the computer screen and the voice of the speaker is heard from the personal computer. A chat system is incorporated into the system by which participants can ask questions and give comments during the session. The speaker answers them vocally. The participants enjoyed this type of learning by spontaneously interacting with other participants while the faculty role is crucial in eliciting, allowing and controlling interaction on webinars.

For facilitation techniques and uniformity in assessment all 5 faculty in Family Medicine meeting on line every week to discuss the progress and feedback.

Assessment

Online assessment can enable the delivery of many of the outcomes required, including continuous assessment, continuous feedback, and continuous learning. Given real time feedback students provided instant feedback on their progress, easily monitoring learners' progress. In online teaching and learning we had daily attendance for 2 sessions per day; Participation in discussion, Students'

Power point presentation and Assignments given by teaching faculty. Formative assessment with feedback after students' self-assessment is done for each session. Students felt comfortable for peer assessment as well. For clinical assessment they have given a simulation scenario after each session. All students are given scenarios including history taking, examination steps, management of a problem, communication skills.

There is no replacement of clinical examination assessment in clinical years as summative component so, the decision has been made by the clinical department that OSCE will be done when students are back in medical college for their end of year Final MD exam.

Students' Feedback

At the end of rotation a survey has been done asking students' perception and feedback on electronic questionnaire. Response rate was 88.5%. Only few students had previous experience of web learning. Students feedback is very encouraging, 90% agreed that case based scenarios were very useful, relevant and practical. Facilitation of the clinical session was very good and informative and had good opportunity to share knowledge. Critical thinking and motivation with self-assessment was unique phenomenon with adequate time for case based discussion. One third participants agreed that this was a good opportunity to share knowledge and to talk during discussion. Students felt that their participation and reflection were adequate however; webinar cannot be a replacement of real patient for independent learning and clinical competency.

CONCLUSION

In the webinars studied, the participants were comfortable, feeling that the learning was relevant because of their practicality. This modality facilitated interaction, active participation, and immediate feedback as well as it could allow students to acquire knowledge more effectively and training medical competences and development of critical thinking. This also resulted in enhancing their motivation and continued participation, clinical decision-making skills which are essential to providing high-quality patient care.

Ethical Consideration: Does not require ethical approval.

Take Home Message

- Webinar is a good alternate for clinical teaching
- This method facilitated active participation and simulation scenario to improve in depth learning and critical thinking.

Conflict of Interest: None.

Funding: None.

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