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Mini Review

Role of early clinical exposure for clinical training among medical undergraduate students

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ABSTRACT

Early clinical exposure (ECE) is a teaching-learning method which leads to the clinical exposure of first year medical students and also aids them to interact with patients as early as the first year of medical curriculum. ECE sessions help the students to improve their academic strength, clinical, and communication skills thus making them more confident. ECE makes an overall impact on student's performance and enhances their confidence in the first phase of medical curriculum. Planning of ECE can be done in different settings with the use of resource materials such as logbook, textbooks, instruments, case sheets, and computers. The Medical Council of India in new educational reforms made ECE sessions compulsory from 2019 in undergraduate medical curriculum. This review highlights the different roles of student in ECE sessions, different ECE settings during its implementation in regular teaching.

1. Introduction

Early clinical exposure is a teaching learning method which fosters the exposure of medical students to the patients in the first phase of MBBS curriculum.[1] Early clinical exposure (ECE) motivates the students to improve their academic strength, clinical and communication skills thus making them more confident.[2,3] In the medical curriculum, ECE has a major impact on student performance and confidence during their under graduation period. The new competency based medical education curriculum implemented in 2019 has incorporated early clinical exposure to be a part of medical curriculum. ECE is a form of vertical integration between preclinical and clinical subjects.

2. Role of Student in Early Clinical Exposure

Student can play any of the roles in the setting of early clinical exposure. He can participate as a passive observer in an outpatient department, watching minor surgeries in OT, patient doctor interaction and counselling given to the patients. It is actual demonstration of medical or surgical procedures to improve memory retention and developing competency.

Student can be an active observer in simple clinical skills such as catheterization, pleural fluid tapping and intubation. Students can note the checklist of these procedures. Their active involvement increases the memory skills of the students. Students can assist the resident in performing procedures such as catheterization and intramuscular injection after carefully observing these procedures step by step.[4]

ECE sessions can be carried out as small group teaching, clinical bed side teaching, demonstration of procedures, case based learning etc. ECE sessions most often take place at outpatient departments, primary care settings, hospital wards with few programs taking place in the community.

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3. Merits of Early Clinical Exposure

The main goal of early clinical exposure is to integrate basic sciences with the clinical knowledge so that the students can also learn the clinical aspects of the subject along with the basic knowledge. It helps to learn the applied aspects of the subject so that students gain interest and better understanding of the subject.

ECE helps the students to develop the fundamental clinical skills with a moral attitude and active learning. It aids the students to overcome their stress and anxiety and helps to actively learn the subject with keen interest. It will lead to a positive attitude towards medical education and it helps them to achieve social and professional satisfaction.

ECE will expose the students to all the relevant clinical problems that can be learned with the applied aspects covered in the first phase of curriculum and tries to improve the better understanding of the subjects in depth. Planning of ECE can be done with either of the resources such as patients, standardized patients, log book, text book, instruments, case sheets and computers.[5,6]

4. Early Clinical Exposure – Setting

The setting used for early clinical exposure are broadly divided into three groups:

1. Classroom setting
2. Hospital-based setting
3. Community setting

4.1. Class Room Setting

The classroom setting is first basic form of ECE which can be arranged with minimum efforts. ECE can be used as an educational strategy in the following ways:

1. Direct arrangement of patients/ standardized patients to the classroom.
2. Case scenario discussion.
3. Discussion of patient case sheets, Electrocardiogram (ECG), X-rays, computed tomography scan (CT scan), other blood investigation reports.

It can be done in multiple small groups. Hence, all students can be actively involved. Students can be judged for their interest, active participation, understanding of the subject if planned in small group learning sessions and a self-assessment questionnaire can be given to the students. Feedback about the session can also be obtained. These settings can be arranged with the help of clinical teachers with their direct or indirect involvement.

Topics or cases can be chosen aligning and integrating with the topics covered under the current syllabus teaching in regular classes in Anatomy, Physiology and Biochemistry. When a patient is brought to a classroom setting, the patient should be handled in an ethical manner by obtaining consent for examination.

Teacher should explain the signs and symptoms of the disease, basic clinical examination skills, taught earlier in teaching. Thus, classroom setting is found to be the most convenient form of conducting an ECE session.[7]

5. Hospital Settings

The hospital setting is second and most important form of setting. It can be arranged batch-wise involving permission or collaboration with clinical departments after getting prior permission. Dedicated team of faculties can be formed from both the departments. A particular case can be selected and finalized before the visit. The cases should be discussed with students correlating and integrating their context with the topic taught earlier in the classroom and the students should be able to reflect it after the session.

In Physiology subject, cases can be taught covering all the systems such as cardiovascular system, respiratory system, abdomen, or endocrine system. Basic pathophysiology should be well integrated into teaching. That helps students increase their interest in basic sciences learning.

In Anatomy subject, surgical ward or radiology department visits can be arranged including cases related to basic anatomy. X-rays can be directly taught in the radiology department setting.

In Biochemistry subject, interpretation of lab investigation reports correlating with the cases can be done and ECE sessions on common topics such as Diabetes Mellitus, Myocardial infarction, Anaemia can be conducted and the students have to recall the subject learnt in theory classes earlier.[8]

The following can be emphasized during ECE sessions:

The students should be made to familiarize with the clinical environment, create awareness in presenting different types of cases, observe doctor–patient relationship, observe doctor–patient communications and patient empathy.

Students should be promoted to take notes and fill their logbooks. Students should be able to reflect the topics learnt by writing in their logbooks with their own views rather than theoretical views or copy-paste from other students.[9]

6. Community Settings

The community setting is third and very interesting setting in the student's point of view. The focus of community setting should be based on ECE visits covering the following points: Integration of basic sciences, clinical dimensions and societal perspectives, observation of community problems, patient empathy, observing primary care providers at work etc.

Regular periodical community visits can be planned and family adoption programme has become an important part of MBBS curriculum in the first phase itself.[9,10] Community setting sessions are very important in following viewpoint of students. It helps to learn preventive aspects of medicine, the ethical dimensions of doctor-patient relationship, behavioural and social sciences in real-time practices. It also helps to identify community level health issues and creates health awareness at the community level.[10]

7. Conclusion

In conclusion, the early clinical exposure helps the students to understand the clinical basis of all the medical disorders taught in the first phase of the curriculum and also to apply the basic concepts learnt in the first year subjects.

8. Source of Funding

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9. Conflicts of Interest

Nil.

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