

# Introduction to Early Clinical Exposure as a Learning Tool in the 1<sup>st</sup> Year Medical Students

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## Abstract

**Objective:** As medical education moves to new curricular models, including competency based education with defined objectives, benchmarks and outcomes and more standardized approaches, it is important to understand and set objectives for early clinical exposure.

**Method:** The study was conducted in MGM Medical College, Jamshedpur in October, 2019. 50 students participated with their consent. The department faculty was sensitized to ECE, and the feedback questionnaire was approved by them.

**Result:** ECE is associated with better co-relation clinically (52%), building concept (26%), making subject interesting(48%), retention (26%) and interactive (26%).

**Conclusion:** It can be summarized that teaching physiology in clinical context is the need of the hour.

**Key words:** Chronic kidney disease, Early clinical exposure, Medical Council of India

## INTRODUCTION

The Medical Council of India's (MCIs) Vision-2015 document envisages coordinated interdepartmental efforts to provide early clinical exposure (ECE) and to develop communication skills among students during the 1<sup>st</sup> year of Bachelor of Medicine, Bachelor of Surgery Course.<sup>[1]</sup>

ECE helps students to better their understanding of a particular topic, makes teaching more relevant improve their retention power, and helps them to relate clinical conditions to basic sciences.<sup>[2]</sup>

It is also seen that the students find ECE valuable it helps them remember the subjects better and helps them integrate their knowledge.<sup>[3]</sup>

It can be summarized that teaching physiology in clinical context is the need of the hour.

ECE can be done by any one of the following methods:

1. Taking the students to hospital or to a live patient
2. By discussing case histories, laboratory reports, photographs, X-rays, or any other clinical material
3. Taking the students to community visits.<sup>[4]</sup>

## Objectives

The objectives of the study were as follows:

1. To integrate knowledge of physiology with patient care system.
2. To study the knowledge difference after ECE
3. To study the perception and attitude of students regarding ECE.

## MATERIALS AND METHODS

The 1<sup>st</sup> year MBBS students were sensitized to ECE by taking a lecture. The meaning of ECE, the purpose, and the methods of conducting ECE were explained to the students.

A didactic lecture on renal system was scheduled. At the end of lectures, second session of ECE (2 h duration) was conducted as follows:

- A case of chronic kidney disease (CKD) (Stage V) with fluid overload and anemia was selected. After

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consulting the clinicians in medicine department, case history, finding, and investigation reports of the patients were collected. (Pt. identity not revealed). Videos from YouTube were downloaded

- Video from YouTube was shown which contained patient's story
- The case history and findings of the patient collected from medicine department was presented to the students. Case history, including chief complaints, H/o present and past illness, and personal history was discussed
- New terms such as hematuria and pyuria were explained
- Findings from general examination and systematic examination were discussed
- Renal function test was discussed. Abnormal values with normal values were compared. Ultrasound diagnosis of CKD was conveyed
- Video showing pathophysiology of kidney disease was shown
- Video on stages of kidney disease was also shown
- Management involving lifestyle modification, dietary changes, drugs, and renal replacement therapy was explained.

After the session, students feedback was taken by a questionnaire. The questionnaire consisted of students perception and feedback on ECE sessions.

### Statistical Analysis

Student's perception of ECE was recorded by taking feedback on 10 closed-ended items on Likert scale and two open-ended questions. Closed-ended questions were analyzed by the options chosen and with percentages, whereas open-ended questions were analyzed by screwing and extracting themes.

### OBSERVATION AND RESULTS

The feedback of participating students was taken by a questionnaire on 10 items on 5-point Likert scale after the ECE session. These 5 points were:

1. Strongly disagree
2. Disagree
3. Neither agree or disagree
4. Agree
5. Strongly agree.

The questionnaire consisted of 10 closed-ended questions and two open-ended questions.

### DISCUSSION

Analysis of the open feedback [Table 1] showed that the program had significant impact on the building concept (26%), retention of topic (36%), interactive (26%), and correlating physiology to clinical (52%).<sup>[5]</sup>

**Table 1: Students feedback (on 5-Point Likert scale serial number 10) with statistical analysis**

Items	Strongly disagree	Disagree, n (%)	Neither agree not disagree, n (%)	Agree, n (%)	Strongly agree, n (%)
ECE is more interesting method of teaching-learning compared to traditional lecture	0	0	5 (10)	28 (56)	17 (34)
ECE has increased my attention in class	0	2 (4)	8 (16)	26 (52)	14(28)
ECE motivated me to read more about the topic	0	1 (2)	12 (24)	28(56)	9 (18)
ECE helped me to understand the topic better	0	0	10 (20)	29 (58)	11 (22)
ECE has helped me in better retention of the topic	0	0	7 (14)	28 (56)	15 (30)
ECE helped me in correlating physiology with clinical case	0	0	5 (10)	28 (56)	17 (34)
ECE made me understand the importance of learning physiology	0	0	4(8)	24(48)	22 (44)
ECE should be incorporated as a teaching-learning method along with regular lectures for other topics in physiology for undergraduates	0	0	3 (6)	26 (52)	21 (42)
ECE should be incorporated as a teaching-learning method along with regular lectures in other basic science subjects for undergraduates	0	0	6 (12)	24 (48)	20 (40)
ECE should be made a part of curriculum in basic sciences for future batches of MBBS students.	0	0	6(12)	18 (36)	26(52)
Top points/suggestions					
Enlist three good points about ECE as method of teaching-learning					
Helps to correlate physiology to clinical				26 (52%)	
Interesting				24 (48%)	
Retention				18 (36%)	
Build concept				13 (26%)	
Interactive				13 (26%)	
Please give three suggestions for improving ECE					
Hospital visits				25 (50%)	
More sessions				16 (32%)	
More videos				6 (12%)	

Data shown as number of students (percentage). ECE: Early clinical exposure

In an Indian setting, as ours patients are not a limiting factor for learning. For skill learning which is an integral part of clinical teaching-learning in medical education, we had an encouraging experience. The perception gathered from students reinforced the affirmative nature of ECE, which provide holistic learning to them.<sup>[6]</sup>

As suggested by students, ECE should be made part of other systems. Because of logistic difficulty, there was no actual patient contact. About 50% of students were in favor of actual patient contact. These could be considered as limitations of the study. The questionnaire was not pre-validated – another limitation of the study.

## CONCLUSION

ECE sessions were introduced to the 1<sup>st</sup> year MBBS student. Medical students received it positively. ECE is an effective method to supplement the traditional teaching. MCI has introduced ECE in the new curriculum of admission batch 2019. ECE will help bridge the gap between preclinical and clinical subjects and making learning more interesting. Early clinical experience may be associated with better academic performance,<sup>[7]</sup> career interest in relevant specialties,<sup>[8]</sup> improvement in the “shock of practice” as students transition into clinical setting<sup>[9]</sup> and greater comfort entering clerkships.<sup>[10]</sup>

Value of ECE can be explained in one line by Benjamin Franklin’s words of wisdom: “Tell me and I forget, teach me and I may remember, involve me and I learn.”<sup>[11]</sup>

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