Content available at: https://www.ipinnovative.com/open-access-journals

Indian Journal of Forensic and Community Medicine

Journal homepage: https://www.ijfcm.org/

Editorial

Shaping future healers: The impact and implementation of Early Clinical Exposure in medical education

Shiv Kumar Yadav[1]*, **A R Piyush**[2], **Yashendra Sethi**[3]

[1]*Dept. of Community Medicine, Government Doon Medical College, Dehradun, Uttarakhand, India*
[2]*Dept. of Pathology, Government Doon Medical College, Dehradun, Uttarakhand, India*
[3]*PearResearch, Dehradun, Uttarakhand, India*

ARTICLE INFO

Article history:
Received 02-03-2024
Accepted 16-03-2024
Available online 04-04-2024

"Every lesson anchored in real-world clinical application sparks enthusiasm in both teacher and student, fuelling a lasting motivation to learn."

Early Clinical Exposure (ECE) emerged as a novel component within the framework of Competency-Based Medical Education (CBME), as outlined by the Graduate Medical Education Regulation of 2019. This initiative became integral to the MBBS curriculum starting from the 2019 cohort onwards. The primary objectives underlying the incorporation of Early Clinical Exposure for first-year medical students encompass the facilitation of their ability to discern the significance of basic sciences in the realms of diagnosis, patient care, and treatment. Moreover, it serves to furnish a contextual framework that enriches students' comprehension of basic scientific principles by directly associating them with the experiential narratives of patients.[1,2]

ECE sessions serve as a multifaceted source of motivation for medical students, fostering academic fortitude, honing clinical and communication skills, and instilling confidence within them. Scientifically, ECE epitomizes a model of vertical integration, bridging the domains of preclinical and clinical subjects. This integration pattern not only reinforces theoretical knowledge with practical application but also cultivates a holistic understanding of medical concepts by aligning academic learning with real-world clinical experiences.[2]

ECE serves as a pivotal motivation tool for learning within medical education, emphasizing the significance of attitude, ethics, and professionalism in nurturing the doctor-patient relationship from the very initial level of training. Furthermore, it facilitates an appreciation for the socio-cultural dimensions of diseases through the incorporation of humanities studies. This initiative is indispensable for providing a clinical orientation and practical application to topics traditionally confined within closed classroom settings. By bridging the gap between theoretical knowledge and clinical practice, ECE fosters a comprehensive understanding of medical concepts while imbuing students with the essential qualities and insights required for compassionate and effective patient care.

1. Student's Experience

Students surprisingly showed a strong preference for ECE and expressed a desire for more sessions. They felt it added value to their education and improved their engagement. They were happy with clinical exposure and requested more clinical cases. Most students believed ECE helped them connect Phase I subjects with clinical application, showing keen interest in the initiative. This highlights the

* *Corresponding author*.
E-mail address: docshivkumaryadav@gmail.com (S. K. Yadav).

https://doi.org/10.18231/j.ijfcm.2024.001

importance of ECE in integrating theory with real-world practice, enhancing the learning experience.

2. Faculty Experience

ECE introduces medical students to patient care early in their education, nurturing crucial skills like clinical acumen and effective communication. It not only enhances academic performance but also instils confidence in students, contributing to their overall development. The incorporation of ECE into the curriculum should be customized to suit different clinical settings, utilizing resources like logbooks, textbooks, and modern technologies to optimize the learning experience.

Early Clinical Exposure predominantly involves the presentation of relevant clinical scenarios, engaging case-based discussions, and the utilization of images and videos. This approach effectively enhances the learning experience and cultivates students' interest in the subject matter. Integrating Early Clinical Exposure into the undergraduate curriculum presents an invaluable opportunity to instill within students a sense of commitment to patient care and empathy. Exposing students to clinical aspects early on, alongside their regular clinical postings, proves highly beneficial.

The consensus among faculty members is that early exposure to patients and their families profoundly influences the professional and personal development of students. This exposure acts as a catalyst for enhanced learning and fosters the development of essential clinical skills. ECE sessions often incorporate case scenarios, videos, images, and occasional hospital visits, providing students with the opportunity to begin honing clinical skills early in their education. This includes practicing patient interaction, history taking, conducting physical examinations, and mastering basic medical procedures.

3. Implementation

In Phase 1 of the curriculum, it is imperative to identify topics within each subject and formulate a comprehensive lesson plan for the integration of ECE into the college curriculum. Effective implementation of ECE is delineated into two fundamental elements: Basic Science Correlation - which entails the application and correlation of basic science principles with patient care and Clinical Skills - encompassing proficiency in patient interviewing, doctor-patient communication, ethical considerations, professionalism, critical analysis, and self-directed learning. Each 3-hour session of Early Clinical Exposure can be structured as follows: Introduction to the module and instruction by preclinical faculty (30 minutes), Clinical experience in groups within diverse settings such as wards, outpatient departments, or classrooms with structured observation and checklist utilization (1 hour 30 minutes), Summary and conclusion emphasizing key learning points (30 minutes), and Reflection facilitated by guidance and monitoring to reinforce assimilated knowledge (30 minutes).[1]

ECE training can be broadly administered across three primary settings: Classroom, Hospital-based, and Community settings. In the classroom setting, minimal logistical effort is required. This educational strategy involves organizing patient cases, facilitating case scenario discussions, and reviewing clinical materials like patient case records, electrocardiograms, X-rays, computed tomography scans, and other investigative reports. Utilization of patient laboratory reports depicting both normal and abnormal parameters serves to enhance clinical correlation.[3–5]

ECE within hospital settings necessitates batch-wise organization with prior permissions and collaborations with clinical departments. Ideally, a dedicated team of faculty members from both preclinical and clinical departments should oversee this endeavour. Selecting clinical cases systematically, such as by organ system, and correlating them with classroom teachings enhances learning outcomes.[6,7] Visits to surgical wards and radiology departments can be integrated to expose students to basic anatomy and imaging interpretations. Comprehensive understanding of cases, including recognition of signs, symptoms, diagnosis, and theoretical underpinnings, should be emphasized. Beyond the didactic aspect, ECE can serve to acclimatize students to the clinical environment, fostering awareness of diverse case presentations, nurturing observational skills in doctor-patient interactions, and cultivating empathy towards patients.

Faculty members should prioritize fostering a positive attitude and enhancing student confidence within the framework of ECE. Establishing specific learning objectives forms the cornerstone of hospital-based ECE initiatives. CBME has demonstrated a positive impact on the mental well-being of undergraduate medical students through the integration of ECE. By bridging the gap between theoretical knowledge and clinical practice, ECE enriches learning experiences, providing students with practical insights, and deepening their understanding of medical concepts. This hands-on experience not only augments clinical competency but also nurtures a sense of fulfilment and motivation among students. Furthermore, the integration of ECE into the curriculum renders medical education more dynamic and engaging, thereby contributing to the holistic development of future healthcare professionals.[6]

Early Clinical Exposure in community settings is very interesting and the focus should be on training in Clinical dimensions and societal perspectives of Health & Disease, interaction with Community health workers, and understanding of community problems.[7,8] These sessions play a pivotal role in imparting knowledge of

Table 1: Addressing challenges in phase 1 teaching through Early Clinical Exposure: solutions and benefits

S.No	Challenges in Phase 1 Teaching	Solution with Early Clinical Exposure
1	Theoretical content is perceived as boring and monotonous.	Introduce practical real-life correlations during ECE sessions to underscore the relevance of theory to clinical practice, fostering a deeper appreciation and understanding.
2	Relevance of theoretical content is doubtful.	Provide early exposure to clinical scenarios to demonstrate the direct applicability of theory to the medical profession, solidifying its importance.
3	Instruction tends to be teacher-centric and passive.	Transition to a learner-centric approach in ECE, allowing students to actively engage with the material and take ownership of their learning.
4	Learning lacks active participation and student engagement.	Encourage active learning during ECE sessions through case-based discussions, hands-on activities, and interactive learning modules, fostering greater student involvement and engagement.
5	Limited stimulation for further enquiry and exploration.	Cultivate an environment in ECE that stimulates curiosity and inquiry, prompting students to delve deeper into topics of interest, thus fostering a culture of lifelong learning and exploration.
6	Lack of connection between theory and practice.	Bridge the gap between theory and practice by integrating practical demonstrations and clinical scenarios into ECE sessions, ensuring students understand how theoretical concepts apply in real- world clinical settings.
7	Limited exposure to real-world clinical environments hampers understanding.	Offer early exposure to clinical environments, allowing students to witness first-hand the dynamics of patient care and clinical practice, promoting better clinical knowledge and understanding.
8	Lack of interest and motivation due to theoretical nature of Phase 1 subjects.	Spark interest and enthusiasm by showcasing the practical relevance of Phase 1 subjects through early exposure to clinical scenarios and patient interactions, motivating students to become more practically equipped clinicians.

preventive medicine, elucidating the ethical dimensions of the doctor-patient relationship, and integrating behavioural and social sciences into real-time medical practices. They provide students with socio-clinical relevance and context, enhancing their understanding of community-level health challenges and equipping them with strategies for imparting health education at the grassroots level.[9,10]

In the assessment of ECE, formative assessment will play a pivotal role, with a focus on evaluating students' engagement and participation during the activities. These activities encompass a range of experiences, including case-based scenarios, live patient interactions, simulated patient encounters, and utilization of instructional videos. It is imperative to maintain a systematic record of these activities and assess them periodically to gauge students' progress. Furthermore, elements derived from ECE should be seamlessly integrated into both formative and summative assessments across relevant subjects. This ensures that the learning outcomes of ECE are effectively incorporated into the broader curriculum and contribute to students' overall academic development.

To facilitate the effective implementation of ECE sessions within the college setting, several key measures are essential. Interdepartmental coordination is crucial to align ECE activities with the objectives of different departments and ensure a cohesive educational experience for students. Regular faculty training through faculty development programs is essential to equip educators with the necessary skills and knowledge to facilitate ECE effectively.

Moreover, the genuine interest and commitment of the medical faculty are paramount in fostering a conducive learning environment for ECE. Finally, ensuring uniformity in ECE implementation through the development of comprehensive lesson plans under the guidance of the medical education unit is essential, particularly within the Indian context. These measures collectively contribute to the successful integration and execution of ECE, enhancing the educational experience and preparing students for future clinical practice.

References

1. Medical Council of India. Early Clinical Exposure for the Undergraduate Medical Education Training Program, 2019; 2019. Available from: https://www.nmc.org.in/wp-content/uploads/2020/08/Early_Clinical_Exposure-MBBS-07.08.2019.pdf.
2. Verma M. Early clinical exposure: new paradigm in Medical and Dental Education. *Contemp Clin Dent*. 2016;7(3):287–8.
3. Shah C. Early clinical exposure- Why and how? *J Educ Technol Health Sci*. 2004;p. 42–52.
4. Vyas R, Sathishkumar S. Recent trends in teaching and learning in physiology education early clinical exposure and integration. *Int J Basic Appl Physiol*. 2012;1(1):175–81.
5. Chari S, Gupta M, Gade S. The early clinical exposure experience motivates first-year MBBS students: A study. *Int J Edu Sci*. 2015;8:403–8.
6. Goel A, Sethi Y, Moinuddin A, Deepak D, Gupta P. Competency-based medical education (CBME) curriculum and its effect on prevalence of anxiety, depression and stress amongst medical undergraduates. *J Educ Health Promot*. 2022;11:380.
7. Sathishkumar S, Thomas N, Tharion E, Neelakantan N, Vyas R. Attitude of medical students towards Early Clinical Exposure in

learning endocrine physiology. *BMC Med Educ*. 2007;7:30.
8. Sawant SP, Rizvi S. Importance of early clinical exposure in learning anatomy. *Sch J App Med Sci*. 2015;3(2G):1035–8.
9. Diemers AD, Dolmans DH, Verwijnen MG, Heineman E, Scherpbier AJ. Students' opinions about the effects of pre-clinical patient contacts on their learning. *Adv Health Sci Educ Theory Pract*. 2008;13(5):633–47.
10. Jafarian-Amiri SR, Zabihi A, Qalehsari MQ. The challenges of supporting nursing students in clinical education. *J Educ Health Promot*. 2020;9:216.

Author biography

Shiv Kumar Yadav, Assistant Professor https://orcid.org/0000-0002-8615-817X

A R Piyush, Assistant Professor https://orcid.org/0000-0003-3895-4355

Yashendra Sethi, Co-founder https://orcid.org/0000-0003-0345-3876

Cite this article: Yadav SK, Piyush AR, Sethi Y. Shaping future healers: The impact and implementation of Early Clinical Exposure in medical education. *Indian J Forensic Community Med* 2024;11(1):1-4.