Short Communication

Roadmap for the Development and Implementation of Entrustable Professional Activities to Enable Effective Clinical Training

Abstract

In the field of clinical training, entrustable professional activities (EPAs) generally deal with those activities that health-care professionals will be encountering in their routine practice, and thus exposure to these activities prepares them for their future clinical practice. Workplace-based assessment tools have been used to assess the progress of medical students across these defined EPAs. The act of development of EPAs essentially requires the adoption of a systematic process to identify and define the core tasks and responsibilities that medical students must be able to perform independently in a specific specialty. The process of integration of EPAs into the medical school curriculum essentially requires systematic planning and implementation to ensure that students get an adequate number of opportunities to develop and demonstrate the desired competencies. In conclusion, EPAs provide an excellent framework for transforming medical education by preparing medical students to be ready for the complexities of health-care delivery.

Keywords: *Curriculum, entrustable professional activities, workplace-based assessment*

Saurabh RamBihariLal Shrivastava[1,2], Shubhada Gade[3], Sunita Vagha[4]

[1]Deputy Director (Research and Development), Off Campus, Datta Meghe Institute of Higher Education and Research, [2]Department of Community Medicine, Datta Meghe Medical College, Datta Meghe Institute of Higher Education and Research, Wanadongri, Nagpur, Maharashtra, India, [3]Department of Physiology, Datta Meghe Medical College, Datta Meghe Institute of Higher Education and Research, Wanadongri, Nagpur, Maharashtra, India, [4]Department of Pathology, Jawaharlal Nehru Medical College, Datta Meghe Institute of Higher Education and Research, Sawangi (M), Wardha, Maharashtra, India

Submitted : 05-Apr-2024
Revised : 22-Jul-2024
Accepted : 05-Aug-2024
Published : 24-Dec-2024

Address for correspondence:
Dr. Saurabh RamBihariLal Shrivastava, MD, FAIMER, MHPE (Indonesia), PGDHHM, DHRM, FCS, ACME, M.Phil. (HPE), MAMS, Professor, Department of Community Medicine, Datta Meghe Medical College, Off-campus Centre of Datta Meghe Institute of Higher Education and Research, Hingna Road, Wanadongri, Nagpur - 441 110, Maharashtra, India.
E-mail: drshrishri2008@gmail.com

Access this article online

Website: https://journals.lww.com/cocd

DOI: 10.4103/ccd.ccd_148_24

Quick Response Code:

Introduction

Entrustable professional activities (EPAs) refer to specific activities within a particular area of clinical practice that can be entrusted to a learner after they have demonstrated the requisite knowledge and skills.[1] With reference to competency-based medical education, EPAs deal with defining and assessing competencies of medical students essential for successful medical practice.[2] EPAs provide a framework to define, assess, and advance the competence of medical students about their clinical practice. In other words, these activities play a defining role in maintaining an alignment between curriculum and professional practice, thereby preparing medical student for a successful career in health care.[2,3]

Role of Entrustable Professional Activities in Assessing Student Readiness

EPAs generally deal with those activities that health-care professionals will be encountering in their routine practice, and thus exposure to these activities prepares them for their future clinical practice.[1,3] Workplace-based assessment (WPBA) tools have been used to assess the progress of medical students across these defined EPAs.[4] Depending on the performance of medical students in these activities, teachers can make evidence-driven decisions regarding the readiness of students to perform the task independently.[5] Upon the assessment of these EPAs, the teachers can identify the learning gaps, wherein students will need additional support to become ready for their future clinical practice. In fact, it also gives a platform for teachers and students to prepare a shared action plan to bridge the learning gaps.[4,5]

Assessment of students in these defined EPAs enables comprehensive assessment of learners.[4] Moreover, as individual students are assessed for their performance, we can provide individual feedback, which becomes a platform for bringing about improvement in them over a period of time.[6,7] In continuation, EPAs advocate progressive assessment, wherein students are assessed periodically to monitor their abilities to perform increasingly complex tasks.[8] Further, EPAs play a vital role in augmenting self-awareness and promoting self-reflection among medical students, as they think about their readiness to perform specific tasks.[9] In other words, students

How to cite this article: Shrivastava SR, Gade S, Vagha S. Roadmap for the development and implementation of entrustable professional activities to enable effective clinical training. Contemp Clin Dent 2024;15:289-91.

become accountable, as they know what is expected of them and what is their current position.[9,10]

Development of Entrustable Professional Activities

The act of development of EPAs essentially requires the adoption of a systematic process to identify and define the core tasks and responsibilities that medical students must be able to perform independently in a specific specialty (for instance, public health).[11-14] This begins with carrying out a comprehensive need assessment to earmark specific competencies that are a must for effective public health practice.[11] It should be followed up with the engagement of different stakeholders (namely, public health educators, policymakers, community medicine specialists, and representatives from the community), in terms of obtaining their input and feedback on essential tasks that a public health professional should be able to perform.[11,12] Subsequently, we must carry out a task analysis by dividing the broader competencies into smaller and executable tasks.[11,13] This should be followed up by involving a panel of experts to review and refine the identified tasks and arrive at a consensus on the essential EPAs for public health professionals.[15,16]

After following these steps, a set of EPAs appropriate for public health experts should be drafted that are specific, measurable, and representative of essential public health practice.[11,17] These drafted EPAs should be circulated for review and validation among other stakeholders, and experts should be asked to comment regarding their clarity and relevance.[15,18] Subsequently, we have to perform the pilot run of these EPAs to ascertain any operational constraints, including the lessons learned. The feedback from pilot testing should be incorporated to finalize the EPAs and then implement the same in the public health students.[12-14] This completes the development procedure and is followed by formulating an implementation plan to enable the assessment of students in different settings by different observers.[19] As educators, we must monitor the implementation process and evaluate their effectiveness in assessing the readiness of students in public health practice.[11,19]

Integrating Entrustable Professional Activities into the Medical Curriculum

The process of integration of EPAs into the medical school curriculum essentially requires systematic planning and implementation to ensure that students get an adequate number of opportunities to develop and demonstrate the desired competencies.[19,20] The most important aspect is to perform curriculum mapping, wherein we map EPAs to specific learning objectives, competencies, and reasonable milestones to ensure that they are covered throughout the duration of curriculum of individual subject specialty.[20-22] This mapping should also define when a specific EPA will be assessed, the periodicity of assessment, using which assessment method, the settings of assessment (namely, outpatient, ward, emergency room, and community), and the potential assessor.[20-22] The important thing is that learning experiences should be given in authentic settings or those settings that mimic real-world exposure, which will prepare students for their future clinical practice.[2-4]

Faculty development is a crucial aspect in ensuring successful implementation of EPAs in any setting, to empower them to effectively teach, assess, and provide feedback to students about their performance.[6,7] The planned workshop and sessions should target the scope-need-significance of EPAs, methods for EPAs assessment (WPBAs or Objective structured clinical examination [OSCE]), and approaches to deliver effective constructive feedback.[6,7,23] Once students are assessed for the decided EPAs using relevant WPBA tools or OSCE depending on the nature of EPAs, teachers must provide feedback to students about their performance, including the areas for improvement.[7,23,24] In addition, students should be encouraged to reflect upon the entire experience and this act will make them self-aware.[9] There is always a scope to explore the possibility of interdisciplinary collaboration and integration of technology, as these will make the assessment process comprehensive.[25,26] The employment of the above measures will ensure the effective integration of EPAs into the curriculum and will play a defining role in producing competent medical graduates.[19-25]

Conclusion

EPAs provide an excellent framework for transforming medical education by preparing medical students to be ready for the complexities of health-care delivery. Considering the role of EPAs in medical training, there is an immense need to adopt a systematic process to develop and implement them in medical institutions to facilitate learning and benefit students.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. Ten Cate O, Chen HC, Hoff RG, Peters H, Bok H, van der Schaaf M. Curriculum development for the workplace using Entrustable professional activities (EPAs): AMEE Guide No. 99. Med Teach 2015;37:983-1002.
2. Ross M. Entrustable professional activities. Clin Teach 2015;12:223-5.
3. Werho DK, DeWitt AG, Owens ST, McBride ME, van Schaik S, Roth SJ. Establishing entrustable professional activities in pediatric cardiac critical care. Pediatr Crit Care Med 2022;23:54-9.
4. Rodgers V, Tripathi J, Lockeman K, Helou M, Lee C, Ryan MS. Implementation of a workplace-based assessment system to

measure performance of the core Entrustable professional activities in the pediatric clerkship. Acad Pediatr 2021;21:564-8.
5. Fincke F, Prediger S, Schick K, Fürstenberg S, Spychala N, Berberat PO, *et al.* Entrustable professional activities and facets of competence in a simulated workplace-based assessment for advanced medical students. Med Teach 2020;42:1019-26.
6. Pelgrim EA, Kramer AW, Mokkink HG, van der Vleuten CP. The process of feedback in workplace-based assessment: Organisation, delivery, continuity. Med Educ 2012;46:604-12.
7. Hicks PJ, Margolis MJ, Carraccio CL, Clauser BE, Donnelly K, Fromme HB, *et al*. A novel workplace-based assessment for competency-based decisions and learner feedback. Med Teach 2018;40:1143-50.
8. Felicelli C, Gama A, Chornenkyy Y, Choy B, Blanco LZ Jr., Novo JE. From principles to practice: Implementation of Entrustable professional activities (EPAs) for surgical pathology residency education in a large academic hospital. Acad Pathol 2023;10:100097.
9. Jarrett JB, Berenbrok LA, Goliak KL, Meyer SM, Shaughnessy AF. Entrustable professional activities as a novel framework for pharmacy education. Am J Pharm Educ 2018;82:6256.
10. Al-Moteri M. Entrustable professional activities in nursing: A concept analysis. Int J Nurs Sci 2020;7:277-84.
11. Francischetti I, Holzhausen Y, Peters H. Entrustable professional activities for junior Brazilian medical students in community medicine. BMC Med Educ 2022;22:737.
12. Zhou W, Poh CL, Chan HL, Shorey S. Development of entrustable professional activities for advanced practice nurses education. Nurse Educ Today 2022;116:105462.
13. Cully JL, Schwartz SB, Quinonez R, Martini A, Klein M, Schumacher DJ. Development of entrustable professional activities for post-doctorate pediatric dentistry education. J Dent Educ 2023;87:6-17.
14. Zainuldin R, Tan HY. Development of entrustable professional activities for a physiotherapy undergraduate programme in Singapore. Physiotherapy 2021;112:64-71.
15. Huth K, Henry D, Cribb Fabersunne C, Coleman CL, Frank B, Schumacher D, *et al*. A multistakeholder approach to the development of entrustable professional activities in complex care. Acad Pediatr 2022;22:184-9.
16. Weissenbacher A, Bolz R, Stehr SN, Hempel G. Development and consensus of entrustable professional activities for final-year medical students in anaesthesiology. BMC Anesthesiol 2022;22:128.
17. Salisbury SK, Rush BR, Ilkiw JE, Matthew SM, Chaney KP, Molgaard LK, *et al.* Collaborative development of core entrustable professional activities for veterinary education. J Vet Med Educ 2020;47:607-18.
18. Gummesson C, Alm S, Cederborg A, Ekstedt M, Hellman J, Hjelmqvist H, *et al.* Entrustable professional activities (EPAs) for undergraduate medical education – Development and exploration of social validity. BMC Med Educ 2023;23:635.
19. Brasel KJ, Klingensmith ME, Englander R, Grambau M, Buyske J, Sarosi G, *et al.* Entrustable professional activities in general surgery: Development and implementation. J Surg Educ 2019;76:1174-86.
20. Hung EK, Jibson M, Sadhu J, Stewart C, Walker A, Wichser L, *et al.* Wresting with implementation: A step-by-step guide to implementing entrustable professional activities (EPAs) in psychiatry residency programs. Acad Psychiatry 2021;45:210-6.
21. Stahl CC, Collins E, Jung SA, Rosser AA, Kraut AS, Schnapp BH, *et al.* Implementation of entrustable professional activities into a general surgery residency. J Surg Educ 2020;77:739-48.
22. Chiang YH, Yu HC, Chung HC, Chen JW. Implementing an entrustable professional activities programmatic assessments for nurse practitioner training in emergency care: A pilot study. Nurse Educ Today 2022;115:105409.
23. Spies LA, Feutz K. Developing and implementing entrustable professional activities to prepare global nurses. J Transcult Nurs 2023;34:100-5.
24. Dent DL, Patnaik R, Atkinson A, Shomette JD, Mascitelli JR, Page-Ramsey SM, *et al.* Implementation of entrustable professional activities in multiple surgical residencies: A quality improvement approach. Am J Surg 2023;226:868-72.
25. Ten Cate O, Pool IA. The viability of interprofessional entrustable professional activities. Adv Health Sci Educ Theory Pract 2020;25:1255-62.
26. Dagnone D, Stockley D, Flynn L, Egan R, van Wylick R, McEwan L, *et al.* Delivering on the promise of competency based medical education – An institutional approach. Can Med Educ J 2019;10:e28-38.