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Entrustable Professional Activities (EPAs) as a Measure for General Surgery Resident Evaluation

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IMPORTANCE Surgical training is going through a continuous process of evolution and instead of relying on subjective methods of evaluation and cognitive assessments, we are gradually shifting toward competency-based modes of assessment. Entrustable Professional Activities (EPAs) are rapidly complementing and replacing other means of assessment in order to declare a surgeon competent. American Board of Surgery and Intercollegiate Board in the UK have laid down a path for such a process and would likely become the main tool for surgical skill assessment in the future. College of Physicians and Surgeons is in process and can definitely follow the principles and plans to augment their surgical resident assessment for enhancing the quality of assessment.

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Editorial

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For many years, the assessment criteria being used for assessment and evaluation of the trainees and residents of general surgery rotation is "time-based" rather than an actual demonstration of the competency of the candidates. The methods of testing like self-assessment, exam performance, mentor assessment, and patient outcome have shown variable results. The General Surgery Residents are allowed to sit for the American Board of Surgery licensing exam based on surgical case volume, the time they spend in training and little weightage is paid to anything else, especially when it comes to assessing the competency of the residents[1]. With time, in order to address the evolving surgical training environment, there is a need to shift towards new methods of assessing the competency of surgical trainees to hand over the tasks to them that they are able to perform independently depending on the level of their abilities. Especially with the onset of Covid-19, it was made evident that competency-based assessment is necessary for the appropriate determination of the trainees' readiness to enter the certification process and patient care independently. One such component of clinical assessment of the competency-based resident evaluation is the use of Entrustable Professional Activities (EPAs).

EPAs are "a unit of professional practice that can be fully entrusted to a trainee as soon as he has demonstrated the necessary competence to execute this activity unsupervised". EPAs incorporate several cognitive and behavioral factors that are critical for surgical care that is not being tested by the current model of resident assessment[2]. Each EPA is a synthesis of multiple competency domains (e.g., medical knowledge, communication skills, and professionalism) and requires the integration of knowledge, skills, and attitudes. They provide an approach to assessing tasks that may require multiple milestones and otherwise, might not be assessable. When a general surgery resident has achieved an adequate number of EPAs, they would be deemed competent enough for further specialty training or independent practice.

One of the major advantages of using EPAs is that it was achievable in any context, relies on frequent micro-assessments instead of less meaningful and time-consuming end rotation evaluations, and teaches the trainees skills of implementation and improvisation required in the uncertainties of clinical practice.

The American Board of Surgery will launch its EPA program for general surgery residents in July 2023 and the residents will be assessed on the basis of EPAs. For this purpose, a pilot study was carried out in 2018 with 5 pilot index EPAs and they were tested across 28 different surgical residency programs from 2018-2020[1]. After the pilot study showed fruitful results, a whole suite of 19 EPAs was defined that represented the core elements of general surgery practice. The general surgery residents will be evaluated against these 19 EPAs that would define the level of their abilities

to perform the tasks. The ABS has established several councils and working groups that are tasked with the development and implementation of the EPA initiative and under their supervision, the following EPAs are being implemented for the General Surgery Training:

1. RLQ pain/Appendicitis
2. Benign or malignant breast disease
3. Benign or malignant colon disease
4. Gallbladder disease
5. Inguinal hernia
6. Abdominal wall hernia
7. Acute abdomen
8. Benign anorectal disease
9. Small bowel obstruction
10. Thyroid and parathyroid disease
11. Dialysis access
12. Soft tissue infection
13. Cutaneous and subcutaneous neoplasms
14. Severe acute or necrotizing pancreatitis
15. Perioperative care of the critically ill surgery patient
16. Flexible GI Endoscopy
17. Evaluation/initial management of a trauma patient
18. Significant comorbid disease
19. Provide general surgery consultation[1]

After defining the EPAs, the next step was to define a framework for demonstrating competence for a discrete general surgery consultation. Another study was performed and six critical steps, six performance traits, and five red flag behaviors were defined, against which the residents of the General Surgery programs would be tested[3]. The red flag behaviors would have a negative effect on the trustability of a resident for that consultation. In order to keep bias to the minimum and to involve and capture the preferences of different specialties, 23 teaching faculty were recruited from a range of surgical specialties. Cognitive task analysis and semi-structured interviews were used. The steps of a surgical consult were defined and furthermore, the assessment criteria based on the steps, traits, and negative impact of the red flag behavior were established. The steps in a surgical consult were defined as:

1) Receiving information,
2) bedside evaluation,
3) obtaining additional information,
4) decision making,
5) communication,
6) Documentation[3].

Following is the list of some red-flag behaviors:

1) Failure to recognize patient acuity,
2) lying/deception,
3) missing critical details of the evaluation, workup, or presentation,
4) refusing to see the consult,
5) rudeness/disrespect3.

A similar competency-based training system is being implemented in the United Kingdom as well to cater to the needs of the developing surgical training resident programs.

Now, in reference to Pakistan, there is an urgent need to implement the competency-based assessment criteria for the General Surgery residents so that our trainees can be judged on the basis of their competency and their ability to handle the patients rather than on basis of systems that have shown variable results, are time-taking and less efficient. It helped us improve the Health Education System and our resident training programs in an effective manner and will improve patient care. The residents getting into specialty training and independent practice after passing through better and improved assessment criteria will have a deeper and more practical approach to patient care and will be able to provide better consultations.

Recommendations:

• Faculty development initiatives should be designed to make the faculty familiar with the concept of EPAs and their uses for workplace-based assessment.
• The EPA should be included in the curriculum to improve the standard of the products of General Surgery Resident Training.
• Further research should be done for mapping these selected EPAs with the pertinent competencies.
• A system assessing the residents based on their competency using the already defined EPAs should be implemented.

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