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Authors

C, Heitz
Prusakowski, M

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60 Using Simulation to Assess Clinical Skills in the Emergency Medicine Clerkship

Heitz C, Prusakowski M/Virginia Tech Carilion, Roanoke, VA

Introduction: Shift evaluations and multiple choice question (MCQ) exams are frequently used to assess students. Evidence of their reliability and validity as evaluations of clinical skill is weak. Forms of clinical skill assessment include oral boards-style cases and OSCEs. Simulation assessments using global scales and checklists can reliably evaluate learner behavior and skills.

Educational Objectives: To develop an assessment tool to more accurately evaluate medical students' clinical skills during the required EM clerkship.

Curricular Design: We developed a dual-format assessment tool including a yes/no checklist and a global rating scale (GRS) of the student's approach to a simulated patient. The checklist was developed from Level 1 EM Milestones behaviors that the authors deemed most appropriate for assessment by simulation. In addition, some L2 behaviors were included to allow for identification of high performers. The GRS was developed using a Likert scale to assess performance in the areas of information gathering, physical exam, diagnostic testing, patient assessment, patient management and pharmacology. Students each performed the same 3 standardized simulation cases: altered mental status, chest pain, and shortness of breath.

The tool underwent modification after initial use on 10 students. Checklist items were changed from unacceptable/good/excellent to yes/no/NA scoring, items not easily evaluated during simulation were removed, and the GRS Pharmacology section was added. Some GRS anchors were modified to better define expectations based on EM Milestones (Figure 1).

Action/Objective	Yes	Notes	Milestone	Information Gathering	History inefficient and unfocused (comprehensive)	History focused but incomplete, disorganized, lack of history impacted patient care	All pertinent info gathered only with prompting	History focused, included pertinent +/-, performed at a medically appropriate time
Recognizes abnormal vital signs Performs a primary assessment on a potentially critically ill or injured patient			PC1 (L1)		1	2	3	4
Perform a reliable, comprehensive history and physical exam Perform a focused history and physical exam which reliably addresses the chief complain and urgent patient issues			PC2 (L1)	Did not appear to perform a primary survey	1	2	3	4
Determines necessity and urgency of diagnostic studies Prioritizes essential testing			PC3 (L1)	Ordered too many or too few initial diagnostic tests; no focused to testing	1	2	3	4
Orders appropriate diagnostic studies using decision rules as appropriate Asks for drug allergies			PC3 (L2)	Did not accurately recognize patient acuity or changes in condition	1	2	3	4
Recognizes when a therapeutic intervention is indicated as part of a patient management plan Constructs a list of potential diagnoses based on chief complaint and initial assessment			PC6 (L1)	Did not attempt a therapeutic plan	1	2	3	4
Constructs a list of potential diagnoses based on the greatest likelihood of occurrence Constructs a list of potential diagnoses with the greatest potential for morbidity and mortality Establishes rapport with patients Listens effectively to patients Elicits patients reasons for seeking health care Communicates pertinent information to colleagues			PC4 (L1)	Dangerous treatments	1	2	3	4
			PC4 (L2)					
			PC4 (L2)					
			CS1 (L1)	Average				
			CS1 (L1)					
			CS2 (L2)					
			CS2 (L2)					

Figure 1.

Impact/Effectiveness: MCQ exams and shift evaluations do not completely evaluate students- clinical skills. We have developed an assessment tool for clinical performance on standardized simulation cases in the EM clerkship. Future efforts will determine inter-rater reliability of the assessment tool and compare performance to shift evaluations and standardized written examination scores.