

## Evaluating Clinical Competency in Psychiatry Trainees

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The express purpose of a clinical performance assessment is to clearly evaluate whether certain skills have been mastered. It is absolutely imperative that our psychiatry trainees have excellent clinical skills and are very clinically competent. Traditional assessment of physician clinical competency is based on evaluations by clinical faculty in the patient care setting. The reliability of this form of assessment is limited because the nature of the clinical environment is often uncontrolled, because of the lack of standardization among observers and infrequent direct sampling of clinical skills (Table 1). According to Jones et al.<sup>[1]</sup> clinical assessment techniques should measure a student's ability to gather information (data) by interview and physical examination, to process this information, and to make decisions based on the information obtained by such means.

Too often, current methods of clinical evaluation measure the final product of student interaction with patients rather than assessing the building blocks of those skills.<sup>[1]</sup> Also, during clinical rotations, residents at different institutions are likely to encounter diverse patient populations in a variety of settings, with a wide spectrum of disease presentations.<sup>[2]</sup> There is evidence of the lack of consistency or standardization of clinical experiences within single disciplines.<sup>[3]</sup> Dauphinee<sup>[4]</sup> suggests that the diversity of clinical exposure during a resident's education is a clear indicator that a graduate's clinical competency is also likely to vary. According to Barrows et al.,<sup>[5]</sup> use of the objective

structured clinical examination (OSCE) as part of a comprehensive performance-based evaluation process is a realistic expectation.

The OSCE was first described by Harden et al. in 1975.<sup>[6]</sup> During the years, use of this type of examination to evaluate clinical skills of medical students and residents has grown and has emerged as one of the state-of-the-art methods of evaluation used in medical schools and other specialty residency programs throughout the United States.

The OSCE is comprised of several "stations" in which examinees perform a variety of clinical tasks.<sup>[7]</sup> Such stations could involve several methods of testing but usually include the use of "standardized patients" (SPs). SPs are lay persons without an illness (simulated patient) or someone with a chronic stable illness (real patient), who have been trained to play the role of patient. Tamblyn et al.<sup>[8]</sup> and Vu et al.<sup>[9]</sup> showed that the accuracy of SP's presentation of history, physical examination findings, and affect has been, on the average, approximately 90%. The trainee performs discrete clinical tasks, while being observed and graded using a checklist and measured by a predetermined standard.

The Department of Physical Medicine and Rehabilitation at UMDNJ—New Jersey Medical School, has been developing its annual OSCE examination since 1992. The OSCE examination stations can evaluate a number of different skills as noted in Table 2.

**Table 1 How Accurate are Faculty Evaluations of Clinical Competency?**

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- Evaluators may vary considerably in their abilities to discern strengths and weaknesses in residents.
  - Evaluators may apply different standards when judging a resident's performance (variability among faculty evaluators). Too harsh or too lenient.
  - Evaluators may be positively or negatively influenced in their assessments of residents because of expectations or biases.
  - Residents performance may vary considerably from patient to patient and from encounter to encounter.
  - Accurate assessment of a resident's clinical competence requires multiple approaches.
  - Halo-effect—must delineate the degree and source of observer variability.
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**Table 2 Components of Clinical Competence That Can Be Tested**

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- Detailed and relevant history
  - Physical Examination
  - Identify the patient problem and reach a diagnosis (differential diagnosis)
  - Identify the appropriate investigations
  - Interpret results of investigations
  - Management, including patient education
  - Procedure Modules
  - Communication
  - Ethics/Professionalism
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Our main focus was to create a psychiatry-based test specifically designed to determine resident competency levels relative to history-taking and physical examination skills as well as proficiency levels with respect to communication abilities involving aspects of both physical medicine and rehabilitation.

In addition, interstations were developed to test competency in

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prescription—writing as well as X-ray and electrodiagnostic medicine interpretation (Table 3).

**Table 3 Potential Interstations**

•Radiologic interpretation
•Electrodiagnostic interpretation
•Prescription writing
-Modalities
-Therapeutic exercise
-Prosthetics
-Orthotics
•Gait Tapes
•Dysarthria Tapes
•Others

We have now added portions to each case to reflect the six core physician competencies that were jointly developed by the Accreditation Council for Graduate Medical Education (ACGME) and the American Board of Medical Specialties (ABMS). These six core competencies are: medical knowledge; patient care; interpersonal and communication skills;

professionalism; practice-based learning and improvement; and systems based practice.

Single stations may be designed to assess one, two or multiple skills. The station length is usually five minutes for interpretation of a set of data, 15 minutes for a focused history or physical or 20—30 minutes for a complete patient encounter, which could include patient counseling and prescription writing. The literature reports the use of as few as nine and as many as 20 or more, but there is a general consensus that the validity increases as the number of stations increases.<sup>14—16</sup> Class size and the length of test stations also affect accuracy. A candidate's performance is rated by a faculty observer using a checklist for assessment of proper history-taking, physical examination and patient interview skills or by a combination of a faculty observer and/or patient-rating scales. A typical case presentation and standardized grading sheet is exhibited in Table 4.

**Table 4 OSCE Sample Task**

**Background:**

Patient is a 40 year-old secretary with right hand numbness. She claims numbness has progressively worsened over the past two years and is worsened after typing for prolonged periods of time. She claims that, upon awakening, she must shake her hand to decrease numbness. Reflexes are normal. Strength of elbow and shoulder remain normal.

**Principal Task:**

Do not take more history

1.Perform focused exam of hand.

2.Write a therapeutic plan (Interstation exercise).

**Total time:**15 minutes. Task I, 10 minutes. Task II, 5 minutes.

**Case evaluation objectives as well as physical examination performance criteria and grading system of the case**

(A)Done Correctly	(B)Attempted-Done Incorrectly	(C)Not Attempted	Physical Examination(50%)
			Evaluated Sensation:
			Distal thumb
			Thenar Eminence
			Ulnar distribution
			Evaluated strength
			Abductor pollicis brevis
			First dorsal interosseus
			PreformedPhalen's/ Tinel's or Carpal compression

A,C—History only; B—Physical exam, gray area

There is no standard for minimum training requirements for SPs. The amount of training depends upon the complexity of the case and whether the SP will be only a patient or a patient and also an evaluator. It may take a few hours for a simple case or as many as 20 plus hours for a patient/evaluator. Finally, overall cost, which includes set-up, administrative cost, SP training and participation fees, number of stations, and faculty support, can be very expensive and is reported to vary from \$150 to \$550 per student per day.<sup>[7]</sup> We pay our SPs \$20 per hour and this includes training. Ultimately, the cost is dependent upon the length of the examination and the complexity of the station. Availability of facilities is also an important factor in the set-up of examinations of this magnitude. A multi-station examination would require a facility that is large enough to provide individual spaces and privacy for each station, and the examinees to go from one to another quickly and efficiently. Our faculty has 12 separate examination rooms with audio and visual

recording capability in each room. Most, if not all, American medical schools should have space that meets these criteria. Thus, the OSCE is a very labor-intensive examination that requires commitment from faculty.

We have been performing annual OSCE for 16 years. The examination has advanced and matured. The reader can find out more information about these tests by checking the Kessler Foundation Research Center web site: <http://www.hhkfdn.org>. You can download the "Resident Orientation Manual" that prepares the trainee for the examinations. We use a nine station OSCE with 15 minutes for the designated tasks and five minutes for the faculty member and SP feedback. We use videotapes in two of the stations. We give these videotapes to the residents for self evaluation.

The accompanying grid for our 2009 OSCE appears on Table 5.Over the three years of the resident's training, we have seen their physical examination skills, with respect to all major

**Table 5 OSCE 2009 Competency Grid of the Nine Stations**

#	STATION	TYPE OF TASK	COMPETENCIES ADDRESSED
1	Quality Improvement	Written short answers to scenario	<b>Interpersonal &amp; Communication Skills:</b> able to answer clearly and succinctly. <b>System-Based Practice:</b> demonstrated understanding of issues pertaining to cases and delivery of care with limitations imposed by third-party payer; able to describe stakeholders and consequences of actions from multiple viewpoints
2	Low back pain	Physical examination	<b>Patient Care:</b> able to correctly perform physical exam maneuvers. Interpersonal and communication skills; explained exam and encouraged interaction. <b>Professionalism:</b> demonstrated respect, compassion and sensitivity
3	Ankle pain	Physical examination	<b>Patient Care:</b> able to correctly perform physical exam maneuvers. Interpersonal and communication skills; explained exam and encouraged interaction. <b>Professionalism:</b> demonstrated respect, compassion and sensitivity
4	Prosthetics & Orthotics	Prescription writing	<b>Patient Care:</b> able to generate the most appropriate prescription. <b>Medical Knowledge:</b> has comprehensive understanding of complex problems of amputees and correct prosthetic components. <b>Interpersonal &amp; Communication Skills:</b> able to write complete prescription for prosthesis
5	Aphasia	Communication	<b>Patient Care:</b> demonstrated appropriate communication skills for patient with aphasia. <b>Interpersonal &amp; Communication Skills:</b> effective listening, established rapport, explained things clearly and answered questions. Used appropriate skills to clearly communicate, took time to ensure patient comprehension. <b>Professionalism:</b> demonstrated respect, compassion and sensitivity. <b>System-Based Practice:</b> understands vocational and social context patient is in, and addressed return to work issues.
6	Knee pain	Procedure: joint injection	<b>Patient Care:</b> able to correctly obtain informed consent and perform procedure. <b>Interpersonal &amp; Communication skills:</b> answered questions, explained injection clearly and encouraged interaction. <b>Professionalism:</b> demonstrated respect, compassion and sensitivity. <b>Practice-based learning and Improvement:</b> used feedback sensor on model to insure skill done correctly
7	Mild TBI	History	<b>Patient Care:</b> able to obtain pertinent history, knowledgeable about topic and gave correct information. <b>Interpersonal &amp; Communication Skills:</b> effective listening, established rapport and asked questions appropriately. <b>Professionalism:</b> demonstrated respect, compassion and sensitivity.
8	Family Conference	Communication	<b>Patient Care:</b> able to educate family about patient care issues. <b>Professionalism:</b> demonstrated respect, compassion and sensitivity. <b>System-based practice:</b> understands choices and able to help bring family to a consensus.
9	Myotonia	History and differential diagnosis	<b>Patient Care:</b> able to obtain pertinent history, knowledgeable about topic and gave correct information, correctly identified possible diagnoses. <b>Interpersonal &amp; Communication Skills:</b> effective listening, established rapport, explained things clearly and answered questions. <b>Professionalism:</b> demonstrated respect, compassion and sensitivity.

\* Medical knowledge is assessed in all scenarios, as understanding of condition is essential for correct performance.

joints, their procedural skill approach and techniques as well as assessing their communication skills and sampling professional issues. We have modified our didactic teaching and workshops where it appears that our instruction may be lacking. We have modified trainees clinical rotations, when we believe it is essential to improve the trainees skills.

The OSCE has been a valuable instrument in objectively evaluating our trainees clinical competency. In the future, we believe that we will add simulation stations. At the same time we test our trainees annually with the OSCE, we also administer a 70 question closed-book proctored multiple choice examination, a 60 question slide/audiovisual examination of gait pattern, abnormalities, EMG potentials, devise/orthotic and prosthetic recognition as well as a published peer reviewed article that they must read and evaluate by answering specific questions concerning the methodology, statistics and conclusions.

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