

Does an Objective Structured Clinical Examination Fit Your Assessment Toolbox?

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The Challenge

The objective structured clinical examination (OSCE) has substantial evidence for its validity in assessing learner performance at the “shows how” level in the Miller pyramid.¹ However, program directors may perceive the OSCE as a complex, resource- and time-intensive assessment.^{2,3}

What Is Known

An OSCE is a standardized, objective assessment that focuses on clinical skills, attitudes, and problem-solving abilities across cognitive, psychomotor, and affective skills domains.¹ Typically, learners interact with a simulator (eg, trained actor, mannequin) augmented with other elements of the medical workplace, ranging from a mock electronic health record or a consultant call to a team huddle. Learners move through each time-limited station and are assessed with a standardized scoring rubric,^{2,3} such as a checklist (analytical scoring) or a global rating scale.^{2,3} To maintain its validity and reliability evidence, OSCEs use standardized scoring rubrics with rater training and peer-review feedback.^{2,3}

Many OSCEs are used worldwide for both high-stakes summative assessment and formative learning in medical and interprofessional education.^{2,3} The OSCE development processes and case resources are available at little to no cost through peer-reviewed repositories, professional societies, and publications. See the TABLE, Steps in Considering an OSCE, for an example of this decision-making process.

How You Can Start TODAY

1. **Is an OSCE a good return on investment for me?**
Ask: “What can the OSCE assess that other approaches cannot?” Consider using OSCEs when a relatively safe setting is needed to allow learners to practice and obtain feedback on difficult, complex, or “rare but critical” situations.
2. **Utilize OSCE station repositories.** Adopt or adapt cases and stations from a peer-reviewed source *before* you write your own; they are more likely to be reliable and valid. Good sources include MedEdPORTAL (<http://www.mededportal.org>), the Association of Standardized Patient Educators

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Rip Out Action Items

Program directors should:

1. Determine whether an OSCE is the most effective approach to assess resident performance gaps.
2. Form an OSCE assessment team and outline roles, responsibilities, and an implementation timeline.
3. Seek to adapt existing OSCEs to meet needs and start with formative OSCE assessments.
4. Implement ongoing review to improve OSCE station reliability and validity.

(<http://www.aspeducators.org>), or OSCE experts’ YouTube videos (<http://www.youtube.com/user/TheOSCEstation>). If you are new to OSCEs, start with a formative, low-stakes OSCE.

3. **Institute an OSCE team and specify roles.** Form a team with content and OSCE expertise. Adapt or develop an OSCE blueprint (competencies needed versus station types) and an implementation timeline checklist. Finalize stations, including selection and training of station authors, assessors, and standardized patients, and OSCE logistics. Plan for monitoring, scoring, and trainee feedback.
4. **Train the assessors.** Train all assessors using standardized scoring rubrics to optimize reliability. Consider whether assessors can be mannequins (with data streams) or a trained actor, assessing both time and cost.

What You Can Do LONG TERM

1. **Conduct a needs analysis and a sustainability assessment.** Continuously identify assessment gaps appropriate for an OSCE. Ask your Clinical Competency Committee for input, and review program annual performance evaluations. As you gain experience, consider shifting from formative to summative OSCE stations. Keep your chair, faculty, and residents engaged in the process as case developers or assessors.
2. **Secure institutional buy-in and collaboration.** Get buy-in from your designated institutional official (DIO). Collaboratively design and implement multidisciplinary OSCE stations on common competencies to be used across multiple programs and learner groups.

TABLE

Steps in Considering an Objective Structured Clinical Examination (OSCE)

Question	Example: Family Medicine	Decision/Action
Is OSCE the best ROI assessment for you?	<ul style="list-style-type: none"> Data reveal FM interns lack specific obstetrical procedural competencies Taught via lectures and interactive videos 	OSCE is a safe setting to assess interns' skills, provide feedback, and identify remediation needs
Adopt or adapt existing OSCEs?	A web-based search finds suitable obstetrical OSCE cases	FM PD selects potential OSCE cases in consultation with OB-GYN PD
Who is on the OSCE team?	Ask experienced OSCE colleagues to join (check medical schools, professional societies, other)	Team led by associate FM PD, OSCE expert, FM chief resident, and OB-GYN faculty member
Planning decisions?	<ul style="list-style-type: none"> Formative versus high-stakes OSCE No. of stations (low stakes = fewer stations) and equipment availability Checklists and rating forms 	<ul style="list-style-type: none"> Formative, low-stakes OSCE 4 stations: use available simulators and tasks (interpret fetal heart rate strips) Adapt published checklists for each station
Who are assessors and what training do they need?	Identify who can objectively assess each OSCE station performance using a checklist requiring minimal training	Assessors include: OB-GYN instructor, certified midwife, nurse, chief resident, FM and OB faculty (consider pairing raters)
Key implementation steps?	<ul style="list-style-type: none"> Do a dry run using online OSCE implementation checklists Need curriculum refresher or OSCE orientation for trainees? 	<ul style="list-style-type: none"> Residency coordinator acts as timekeeper Station instructions posted on doors Affirm station length/rotation schedule Day of OSCE: implement refreshers on content/OSCEs
Next steps?	<ul style="list-style-type: none"> Identify key findings from post-OSCE resident and assessor debriefings Identify residents needing more practice Monitor FM interns' OB performance 	<ul style="list-style-type: none"> Debriefing overall is positive Also, a sense of improved FM and OB collaboration and coordination OB performance improved

Abbreviations: ROI, return on investment; FM, family medicine; PD, program director; OB-GYN, obstetrics and gynecology.

3. **Enhance data analysis.** Find a statistician (local medical school/college, national society) to evaluate your data, particularly if you are using the OSCE for summative (high-stakes) assessment or as an outcome measure for educational interventions, which may be shared through publication.
4. **Solicit feedback.** Invite OSCE actors, learners, and assessors to note OSCE general and station-specific issues to further clarify goals, define tasks, and improve stations. Invite faculty from other graduate medical education programs and institutions to evaluate the OSCE and offer feedback.
2. Khan KZ, Ramachandran S, Gaunt K, et al. The objective structured clinical exam (OSCE): AMEE guide no. 81—part I: an historical and theoretical perspective. *Med Teach.* 2013;35(9):e1437–e1446.
3. Khan KZ, Gaunt K, Ramachandran S, et al. The objective structured clinical exam (OSCE): AMEE guide no. 81—part II: organisation & administration. 2013;35(9):e1447–e1463.



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Resources

1. Miller GE. The assessment of clinical skills/competence/performance. *Acad Med.* 1990;65(suppl 9):63–67.