

Validity Evidence for Use of an Objective Structured Clinical Examination (OSCE) in Anesthesiology Certification

Hastie MJ, Spellman JL, Pagano PP, Hastie J, Egan BJ. Designing and Implementing the Objective Structured Clinical Examination in Anesthesiology. *Anesthesiology*. 2014;120(1):196-203. <https://doi.org/10.1097/aln.0000000000000068>

Confirms the compatibility of OSCE and clinical evaluations as methods in reflecting longitudinal growth.

Rebel A, DiLorenzo A, Nguyen D, et al. Should Objective Structured Clinical Examinations Assist the Clinical Competency Committee in Assigning Anesthesiology Milestones Competency? *Anesthesia & Analgesia*. 2019;129(1):226-234. <https://doi.org/10.1213/ane.0000000000004120>

The oral examination is complementary to the written certifying examinations.

Sun H, Warner DS, Patterson AD, et al. The American Board of Anesthesiology's Standardized Oral Examination for Initial Board Certification. *Anesthesia & Analgesia*. 2019;129(5):1394-1400. <https://doi.org/10.1213/ane.0000000000004263>

The standardized oral exam and the OSCE measure distinct constructs.

Wang T, Sun H, Zhou Y, et al. Construct Validation of the American Board of Anesthesiology's APPLIED Examination for Initial Certification. *Anesthesia & Analgesia*. 2021;133(1):226-232. <https://doi.org/10.1213/ane.0000000000005364>

A description of the development, administration, and scoring of the ABA's OSCE.

Warner DO, Isaak RS, Peterson-Layne C, et al. Development of an Objective Structured Clinical Examination as a Component of Assessment for Initial Board Certification in Anesthesiology. *Anesthesia & Analgesia*. 2020;130(1):258-264. <https://doi.org/10.1213/ane.0000000000004496>

Validity Evidence for the Use of OSCEs

With appropriate attention to design, acceptable reliability and validity can be achieved for the OSCE.

Carraccio C, Englander R. The Objective Structured Clinical Examination. *Archives of Pediatrics & Adolescent Medicine*. 2000;154(7):736. <https://doi.org/10.1001/archpedi.154.7.736>

Cohen R, Reznick RK, Taylor BR, Provan J, Rothma A. Reliability and validity of the objective structured clinical examination in assessing surgical residents. *The American Journal of Surgery*. 1990;160(3):302-305. [https://doi.org/10.1016/s0002-9610\(06\)80029-2](https://doi.org/10.1016/s0002-9610(06)80029-2)

12 tips for developing an OSCE guided by Kane's validity framework.

Daniels VJ, Pugh D. Twelve tips for developing an OSCE that measures what you want. *Medical Teacher*. 2017;40(12):1208-1213. <https://doi.org/10.1080/0142159x.2017.1390214>

Gillis ME, Scott SA, Richardson CG, et al. Developing and Assessing the Feasibility of Implementing a Surgical Objective Structured Clinical Skills Examination (S-OSCE). *Journal of Surgical Education*. 2020;77(4):939-946. <https://doi.org/10.1016/j.jsurg.2020.02.018>

The Oral Certification Exam tests different knowledge, skills, and abilities than the Qualifying Exam.

Gorgas DL, Calderon Y, Carter WA, White SR, Feldhaus KM, Reisdorff EJ, Joldersma KB, Kraus CK. [The correlation between performance on the American Board of Emergency Medicine \(ABEM\) qualifying and oral certifying examinations](#). *Acad Emerg Med* 2024;31(1):91-3. PMID: 37515431. <https://doi.org/10.1111/acem.14780>

The concept of the OSCE as a tool for performance-based assessment in simulated environment is described.

Khan KZ, Ramachandran S, Gaunt K, Pushkar P. The Objective Structured Clinical Examination (OSCE): AMEE Guide No. 81. Part I: An historical and theoretical perspective. *Medical Teacher*. 2013;35(9):e1437-e1446. <https://doi.org/10.3109/0142159x.2013.818634>

A survey about the psychometric quality of OSCEs as used in Family Practice (FP)/General Practice (GP) training programs.

Kreptul D, Thomas RE. Family medicine resident OSCEs: a systematic review. *Education for Primary Care*. 2016;27(6):471-477. <https://doi.org/10.1080/14739879.2016.1205835>

Administration of a surgical OSCE can be used to evaluate preoperative and intraoperative decision making and complement other forms of assessment.

Orovec A, Bishop A, Scott SA, et al. Validation of a Surgical Objective Structured Clinical Examination (S-OSCE) Using Convergent, Divergent, and Trainee-Based Assessments of Fidelity. *Journal of Surgical Education*. Published online February 2022. <https://doi.org/10.1016/j.jsurg.2022.01.014>

Ortiz C, Belmar F, Rebolledo R, et al. Validity Argument for a Simulation-Based Objective Structured Clinical Examination Scenario for Evaluation of Surgical Skills in Trauma. *Journal of Surgical Research*. 2021;268:507-513. <https://doi.org/10.1016/j.jss.2021.06.069>

This OSCE is a feasible method for obtaining moderately reliable, valid data not available from other sources about the clinical performance of residents.

Petrusa ER. Reliability and Validity of an Objective Structured Clinical Examination for Assessing the Clinical Performance of Residents. *Archives of Internal Medicine*. 1990;150(3):573. <https://doi.org/10.1001/archinte.1990.00390150069014>

Provides validity evidence to support the use of the Procedural Skills-OSCE as an in-training examination.

Pugh D, Hamstra SJ, Wood TJ, et al. A procedural skills OSCE: assessing technical and non-technical skills of internal medicine residents. *Advances in Health Sciences Education: Theory and Practice*. 2015;20(1):85-100. <https://doi.org/10.1007/s10459-014-9512-x>

Demonstrates the construct-related validity and generalizability of these high-stakes OSCE scenarios.

Sidi A, Gravenstein N, Lampotang S. Construct Validity and Generalizability of Simulation-Based Objective Structured Clinical Examination Scenarios. *Journal of Graduate Medical Education*. 2014;6(3):489-494. <https://doi.org/10.4300/jgme-d-13-00356.1>

The OSCE is a useful tool for teaching basic clinical skills and for forming initial impressions of interns' clinical styles and abilities.

Skinner BD, Newton WP, Curtis P. The educational value of an OSCE in a family practice residency. *Academic Medicine*. 1997;72(8):722-724. <https://doi.org/10.1097/00001888-199708000-00020>

Encouraging results for the predictive and construct validity of the OSCE as an assessment of clinical competence.

Vallevand A, Violato C. A Predictive and Construct Validity Study of a High-Stakes Objective Clinical Examination for Assessing the Clinical Competence of International Medical Graduates. *Teaching and Learning in Medicine*. 2012;24(2):168-176. <https://doi.org/10.1080/10401334.2012.664988>

Encouraging results for the predictive and construct validity of the OSCE as an assessment of clinical competence.

Walters K, Osborn D, Raven P. The development, validity and reliability of a multimodality objective structured clinical examination in psychiatry. *Medical Education*. 2005;39(3):292-298. <https://doi.org/10.1111/j.1365-2929.2005.02091.x>

VESCA offers a promising means to enhance validity and fairness in distributed OSCEs or national exams.

Yeates P, Moulton A, Cope N, et al. Measuring the Effect of Examiner Variability in a Multiple-Circuit Objective Structured Clinical Examination (OSCE). *Academic Medicine*. 2021; <https://doi.org/10.1097/acm.0000000000004028>