



Competency-based Ophthalmology Training: Are We Truly Assessing Skills?

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Competency-based medical education (CBME) has gradually replaced the traditional time-based training models across many specialties, including ophthalmology. At its core lies a simple yet powerful principle: advancement in training should be determined not by the duration of exposure or the number of procedures performed, but by the learner's demonstrated competence. However, as residency programs adopt competency-based frameworks, an important question arises; are we truly assessing skills, or are we still counting numbers?

Ophthalmology residency is inherently skill-intensive, requiring the integration of clinical acumen, microsurgical precision, sound decision-making, effective communication, and strong ethical judgment to develop a competent ophthalmologist. Traditionally, training has relied heavily on clinical exposure. Residents participated in outpatient clinics, assisted

in surgical procedures, and progressively undertook operative responsibilities under supervision. Successful completion of training was often defined by fulfilling a predetermined number of clinical and surgical cases and passing summative examinations. Although this approach ensured adequate exposure to a wide range of clinical situations, it did not necessarily guarantee consistent or uniform competence among graduating trainees.

Competency-based training aims to address this gap. It emphasises clearly defined learning objectives, structured skill acquisition, continuous assessment, and feedback (Grover et al., 2018). Yet, in practice, implementation often falls short of its intended philosophy. Logbooks continue to dominate evaluation systems. Residents are required to document numbers—how many cataract surgeries performed, how many trabeculectomies assisted, how many

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intravitreal injections given. While numerical thresholds are important indicators of exposure, they do not necessarily reflect proficiency.

A resident may complete the required number of phacoemulsification or small incision cataract surgeries but still struggle with intraoperative complications or efficiency. Conversely, another resident may demonstrate excellent surgical judgement and technique with fewer cases but receive similar certification. The distinction between exposure and competence is subtle but critical. Competence encompasses not only technical execution but also preoperative planning, complication management, post-operative care, and patient communication.

Assessment strategies must therefore evolve to align with the principles of competency-based education. Workplace-based assessment tools such as Direct Observation of Procedural Skills (DOPS), Mini-clinical Evaluation Exercises (Mini-CEX), and structured case-based discussions provide valuable opportunities for direct observation and immediate, constructive feedback in real clinical settings (Sud and Khanduja, 2022). Furthermore, structured assessment formats like the Objective Structured Clinical Examination (OSCE) and the Objective Structured Assessment of Technical Skills (OSATS) facilitate the standardised evaluation of both cognitive competencies and procedural proficiency

However, the effectiveness and reliability of these assessment methods depend largely on adequate faculty training, proper calibration among assessors, and sustained institutional commitment to objective and consistent evaluation practices (Honavar, 2017).

Another concern is the variability in faculty expectations. Without standardised rubrics and clearly defined benchmarks, assessment may become subjective. One supervisor may consider a resident competent after independent completion of surgery, while another may expect refinement in efficiency, tissue handling, and complication anticipation before granting autonomy. This inconsistency can lead to disparities in training outcomes across institutions (Thomas, Dogra and Anantharaman, 2019).

Surgical simulation offers an additional and valuable avenue for enhancing skill development in ophthalmology training. Wet laboratories, virtual simulators, and video-based feedback systems enable residents to practice and refine surgical techniques within a controlled and risk-free environment before performing procedures on patients (Honavar, 2018).

Simulation platforms can generate objective performance metrics; such as the centration and size of capsulorhexis, efficiency of phacoemulsification time, and precision of instrument handling; which serve as measurable indicators of technical progress. Incorporating simulation-based assessment into formal evaluation frameworks may not only improve patient safety but also contribute to more standardised and systematic acquisition of surgical skills. Equally important is the assessment of non-technical competencies. Communication skills, professionalism, teamwork, ethical reasoning, and empathy are central to ophthalmic practice (Wentzell et al., 2020)

A technically skilled surgeon who lacks effective communication may compromise patient trust

and outcomes. Structured feedback from patients, nursing staff, and peers can provide valuable insight into these dimensions. Multi-source feedback systems, though resource-intensive, align closely with the spirit of competency-based education.

The transition toward authentic competency-based assessment also requires strong institutional commitment. Faculty development programs play a crucial role in preparing assessors to conduct objective evaluations and provide meaningful, constructive feedback. Adequate time must be dedicated to direct observation and reflective discussion, rather than relying exclusively on end-of-posting or summative examinations. In addition, the use of digital platforms to monitor trainee performance and document feedback can enhance efficiency, ensure transparency, and facilitate longitudinal tracking of competency development.

In resource-limited settings, the implementation of comprehensive competency-based frameworks may appear challenging. Nevertheless, meaningful progress can be achieved through gradual and pragmatic steps. Introducing structured Direct Observation of Procedural Skills (DOPS) for essential procedures, standardising Objective Structured Clinical Examination (OSCE) checklists, and organising periodic faculty calibration workshops represent practical and feasible starting points. Furthermore, collaboration among training institutions to harmonise assessment standards could help reduce inter-institutional variability and contribute to strengthening the overall quality of ophthalmology training at a national level.

Importantly, competency-based education should not become an administrative exercise. Its primary goal is to ensure that graduating residents are safe, confident, and adaptable practitioners capable of independent clinical decision-making. As ophthalmology advances with innovations in imaging, surgical techniques, and artificial intelligence, training must emphasise critical thinking and lifelong learning. Competence is not a static achievement but a dynamic process that continues to develop through experience, reflection and continuous professional growth.

Ultimately, the success of competency-based ophthalmology training depends on our ability to move beyond simple procedural counts toward meaningful and comprehensive evaluation of skills. While numerical targets may reflect opportunities for exposure, structured and objective assessment better reflects true readiness for independent practice. By refining our evaluation frameworks, investing in faculty development, and adopting reliable assessment tools, training programs can more closely align with the fundamental goals of competency-based education.

The question, therefore, is not whether competency-based training is desirable; it unquestionably is. Rather, the real challenge lies in ensuring that our assessment practices genuinely and consistently measure competence. Only then can we confidently affirm that graduating ophthalmologists are not merely experienced through exposure, but truly skilled and prepared for the responsibilities of independent practice.



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