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Testing for Competence

It's been said that we're living in a post-truth world, where even scientifically verifiable facts can be less influential than the shifting tides of public opinion. In times like these, the need for prudent clinical judgement in graduate medical education has never been higher. And with a world of information instantaneously available on our mobile devices, the need to commit rote facts to memory has likely never been less important. Yet our medical education system remains firmly entrenched in an archaic model that values memorization of facts over demonstration of critical thinking. The sad truth is that it's far easier and cheaper for our certifying organizations to measure what trainees have memorized than to probe the depth of their clinical judgement.[1]

There is no doubt that psychometricians and test administrators applaud the steady move toward assessment by multiple-choice testing, as it offers more scorable items per unit time, is more defensible, is perceived as fairer, and is far cheaper and more practical to administer. The steep trade-off, however, is that multiple choice testing often lacks content validity and is completely inauthentic for evaluating trainees with respect to how radiology is actually practiced.[2] It is relegated to fact recall and is unable to demonstrate a test-taker's ability to critically think. It is also incapable of evaluating important core competencies of interest to the Accreditation Council for Graduate Medical Education (ACGME), namely communication, patient care, and professionalism.

Today's trainee seeking board certification in diagnostic radiology must navigate a long educational pathway whereby nearly every independent assessment metric consists of multiple-choice testing of medical knowledge. The Medical College Admission Test, the United States Medical Licensing Examination, the American College of Radiology In-Training Examination, and now the American Board of Radiology (ABR) qualifying and certifying examinations all measure knowledge by way of multiple-choice fact recall. Studies show that success on ABR standardized examinations correlates most with success on these other tests,[3,4] raising the question of whether they even measure the knowledge for which they are intended - or whether they are simply assessing a skill in standardized test-taking.

The ABR only recently transitioned to a completely multiple-choice format in 2007 when it announced it was eliminating the long-respected oral board examination, a test that, despite its recognized flaws, did a splendid job of evaluating candidates' clinical judgement, communication skills, and ability to critically think. The oral format inspired a culture of learning rooted in case-based radiology review, with a focus on differential diagnoses, in-depth knowledge of patient management, and relentless practice of communication skills. Indeed, the test format itself was responsible for positive learning outcomes: in the process of studying for the oral boards, residents learned content and practiced skills that certainly helped them become better radiologists. The same just simply cannot be said about residents today studying for the core exam.

The ABR's decision to pivot away from assessing competence may ultimately affect its brand. Indeed, its mission today seems less clear compared to what it was just a decade ago. Ultimately, what should matter most to our trainees, our profession, and the general public is not a certifying board that focuses solely on exam administration and enforcement,[5,6] but rather one that pledges itself to assessing trainee competence in areas vital to the independent practice of radiology. As diplomates and stewards of our profession, we should be free to stand up and voice our opinions on this issue.

For now, it's up to individual residency programs to carry out the important task that the board once valued. Although already responsible for virtually every other facet of residency training and ACGME policy enforcement, program directors should nonetheless consider making room for formal assessments of trainee competence. Authentic evaluation of cases on actual or simulated workstations could ensure that residents make salient findings, formulate differential diagnoses, suggest potential additional imaging studies of value, and highlight appropriate patient management and treatment options. Neighboring programs could pool resources to organize local or regional oral examinations, ensuring the proficiency of their combined upper level residents prior to graduation. This would be a good opportunity for residency programs to shift away from the current culture of "teaching to the core exam" and return to a more traditional Socratic teaching format aimed at helping residents become better radiologists.[7]

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