Are We Competent to Assess Competence?

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In this month’s issue of *Family Medicine*, we feature five papers on “assessing competence.” The papers cover a spectrum of issues relating to the assessment of competence in physicians and medical trainees at different stages of their careers.

Assessing Competence of Practicing Physicians

The paper by St George, Kaigas, and McAvoy describes the methods, successes, and challenges of assessing the competence of practicing physicians in three countries (New Zealand, Canada, and the United Kingdom) that are far ahead of the United States in doing so. The assessment programs in these countries focus not just on assessing competence of physicians who come to the attention of licensing authorities because of concerns about poor performance. Some of these assessment programs, operating under authority of or in collaboration with licensing boards, also conduct routine interval assessments of physicians who have no history of any performance problems—so-called screening assessments.

These interval screening assessments are an attempt at early detection of physicians who might be performing below the standard of care, thus permitting interventions to improve their care before problems occur. While such screening assessments are not yet conducted in the United States, there is movement in that direction by specialty boards, exemplified by the new Maintenance of Certification program being established by the American Board of Family Practice (ABFP).

Interest in such screening assessments has also been expressed by state licensing authorities in the United States. Although no states currently conduct such assessments, it is possible that we will see such assessments in the future. The problem, however, as noted by St George et al, is that there is currently no clearly optimal method for evaluating the competence of practicing physicians.

Assessing Competence of Residents

Two papers, one by Wendling and the other by Replogle and Johnson, focus on assessing competence of family medicine residents. Both papers describe methods widely used in family medicine residency programs, and they point out both the strengths and limitations of those methods.

Wendling describes an assessment method whereby faculty members observe residents’ performance, sometimes using video or direct in-exam room observations, during the residents’ encounters with patients. The evaluation focuses on whether residents demonstrate the specific patient care skills they are expected to master. These observations are performed each day, and residents receive detailed summative feedback on a quarterly basis.

There are several strengths to Wendling’s approach. Evaluations are performed daily, and over time, they are performed by a variety of faculty members, thus providing input from many individuals about a resident’s performance. Further, the evaluations have some degree of objectivity, in that they assess residents’ performance on a predetermined checklist of skills. And, based on data provided in Wendling’s paper, the evaluation method is accepted by both faculty and residents.

The weakness of the approach, however, is similar to the weakness of most evaluation methods used in family medicine residencies. That is, no objective evidence is provided that the evaluation methods lead to improved competence of the residents. Specifically, we do not know if such evaluations are reliable and valid measures of the residents’ ability to provide high-quality medical care. We also do not know if good performance on such evaluations predicts that the residents will perform well in their future practices. We think it does, and it seems plausible that it does, but we don’t really know.

Faculty of family medicine residencies put a great deal of effort into

See related articles on pages 172-203.

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the methods they use to teach and evaluate residents’ performance. We need research to show us whether those efforts result in more competent practicing physicians. Indeed, our residents’ future performance is not just a matter of professional pride or of doing good for the public. Trends indicate that even the future income of our residents will depend, to a significant degree, on their ability to provide high-quality patient care.3

The paper by Replogle and Johnson does, in fact, provide us with some information about predicting the future performance of current family medicine residents using a psychometrically sound instrument.4 These authors evaluated the ABFP In-training Examination, an instrument that many residencies use to gauge the medical knowledge of their residents and to determine if that knowledge increases as residents pass through the years of residency.

Replogle and Johnson assessed whether scores on the In-training Examination can be used to identify residents at risk of failing the ABFP board certification examination after graduation from residency. They found that the overall (composite) In-training Examination score did a somewhat good job of this, with a positive predictive value of 0.72. Individual component scores (i.e., scores on the individual specialty topics of medicine, pediatrics, surgery, and so forth), on the other hand, did not, with positive predictive values ranging from only 0.26 to 0.57.

What we learn from this article is that we can use the composite In-training Examination scores as a reasonably good measure of whether residents have enough knowledge to pass the ABFP certification examination. We cannot, however, use the examination to make judgments about their knowledge in individual content areas.

Passing the ABFP certification examination, of course, does not assure competence in clinical practice. Only about 7% of physicians sitting for the examination will fail it—a number probably far lower than the number of physicians who practice less-than-optimal medicine. In fact, during my years of service on a state licensing board, I personally had the opportunity to see a number of physicians who were ABFP-certified and recertified as they came before the board because of poor patient outcomes and obviously substandard practice. To effectively measure clinical competence, we need better measures than a knowledge test like the ABFP examinations.

Assessing Competence of Medical Students

The two final papers in the series of articles on competence take steps in the direction of creating and testing the kinds of tools we need to measure competence. One paper, by Lang, McCord, Harvill, and Anderson,6 describes development and use of an instrument for assessing medical students’ communication skills. The other paper, by Crosson, Deng, Brazeeau, Boyd, and Soto-Green,7 describes use of an instrument to measure medical students’ cultural competence.

Both of these papers are small pieces in a larger puzzle, since they provide a preliminary look at how to evaluate only one facet of clinical competence. I would like to see more such efforts, however, so that we can better assess the skills of our students and ultimately of our residents and practicing physicians.

Such instruments are much needed, as illustrated in Family Medicine’s recent supplement on the Undergraduate Medical Education for the 21st Century (UME-21) initiative. In the supplement, we published a series of articles outlining a national-level effort to bring new skills to medical students at participating institutions.8 Many of the educational programs described in the special issue were truly innovative, and if students learned and retained what they were supposed to learn from these educational programs, it would undoubtedly make them more competent and effective physicians in their future practice.

But, few of the articles in that supplement evaluated whether students actually acquired the desired skills. Rather, most of the papers reported on whether the planned content appeared in the course when it was implemented, whether students and faculty rated the educational experience favorably, and whether there were improvements in students’ self-reported attitudes, confidence, and knowledge. Only limited data were provided to show whether students’ attitudes and knowledge really changed, and no data were presented about whether students performed with more competence when they moved to the role of practicing physician.

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The lack of data on whether trainees’ performance meets standards for competence is not unique to the UME-21 papers. Rather it is typical of many, if not most, educational research and methods papers we receive to consider publishing in Family Medicine. And, for that matter, it appears typical of what I see in many articles published in other journals devoted to medical education, like Academic Medicine and others.

It seems to me that family medicine faculty are quite creative in their roles as medical educators. Many among us develop and implement new and innovative ways to teach our trainees. We routinely measure teachers’ performance and assess whether trainees enjoy and value what we teach them. Other frequently used evaluation methods measure trainees’ self-reported confidence, knowledge, attitudes, and
performance, and higher-level evaluations measure trainees’ actual knowledge and attitudes.

I don’t see many papers, however, either submitted to *Family Medicine* or published elsewhere, that use objective measures to assess whether the result of our teaching is the production of physicians who are more capable and competent. I also don’t see many papers that assess whether our teaching gives trainees the skills they need to become physicians who will maintain a satisfactory level of performance during their future practices.

Is it possible that we don’t know how to assess these outcomes? We all think we know a “good student” or “good resident” when we see one, but perhaps we have not developed the ability to quantify and objectively measure the qualities that make those students and residents “good.” Perhaps we, as faculty members in medical education programs, do not yet have the competencies necessary to measure competence.

I challenge educators and authors to develop those competencies. When developing a new course or rotation, include (and report and publish) a determination of whether course objectives are met. Those objectives should include having trainees develop and master specific, measurable, performance-related competencies. If trainees do not demonstrate proficiency in those competencies, perhaps they should not pass the course or rotation (how many of us have “passed” students or residents on to their next rotations even when we thought their performance was less than optimal?). And, if all trainees demonstrate proficiency in the competencies we set for them, then maybe we are setting our standards too low. If we can do all of this, and do it effectively, only then can we have confidence that we are training competent physicians.

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**References**