Chapter 3.26
ePortfolios in Graduate Medical Education

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ABSTRACT

Residency education is the period of clinical education that follows graduation from medical school, and prepares physicians for the independent practice of medicine. The Accreditation Council for Graduate Medical Education (ACGME) is an organization responsible for accrediting residency education programs. The ACGME is increasingly emphasizing educational outcomes in the accreditation process. The authors will discuss the experience of GME programs using ePortfolios for both formative and summative evaluation of residents and the integration of ePortfolios as part of institutions' learning management systems. ePortfolios can be especially useful for evaluating and documenting mastery of educational outcomes such as practice-based improvement, use of scientific evidence in patient care, and professional and ethical behaviors that are difficult to evaluate using traditional assessment instruments. The authors also review the literature describing the use of ePortfolios as a tool that is both powerful and reflective, for the assessment of program outcomes by administrators and faculty.

BACKGROUND

Residency education or graduate medical education (GME) is the period of clinical education that follows graduation from medical school, and prepares physicians for the independent practice of medicine. Depending on the specialty, resident physicians require between three to seven years of full-time experience in a training program to graduate as qualified specialists ready to practice. Resident physicians care for patients under the direct supervision of teaching physicians. The clinical experiences occur in a range of venues from community settings and outpatient practices to institutional environments such as hospitals and long-term care facilities. These clinical experiences are integrated into a comprehensive educational program that includes didactic activities and research.

Keeping track of residents' progress and assuring that all residents acquire the necessary knowledge, skills, and attitudes to become competent physicians in their areas of specialty can be a challenge given this variety of training experiences. Increasingly, accrediting agencies are holding training programs accountable for documenting outcomes. Traditionally, the Accreditation Council for Graduate Medical Education (ACGME) has focused on evaluating the adequacy of the process or structure of the residency programs to educate residents. In 1999, the ACGME introduced a new paradigm, the Outcomes Project, which places greater emphasis on a program's actual accomplishments through an assessment of program outcomes (ACGME, 2004).

In order to accomplish this goal, the ACGME has outlined six competencies: patient care, medical knowledge, professionalism, interpersonal and communication skills, practice-based learning and improvement, and systems-based practice. The rationale for this emphasis on outcomes is the need to ensure that physicians become and remain competent to meet the health care needs of their communities. At the end of their training, physicians must develop competence in lifelong learning strategies, reflective clinical practice, skills, and appropriate attitudes. Achieving these outcomes and documenting the achievement presents challenges for planners of postgraduate teaching, learning, and assessment. Medical educators and trainees must meet these new challenges in the face of dramatic changes in the U.S. health care system. Mounting clinical and academic activities due to changes in health care delivery and advances in medicine have increased demands on academic faculty, resulting in less time for teaching and mentoring (Ozuah, 2002).

To be able to assess this expanded range of competencies, training programs must redefine their current assessment approaches. Graduate medical education programs need to move from an almost exclusive reliance on traditional evaluations such as global subjective ratings of performance and written examinations, towards a competency-based model that requires multidimensional evaluations such as objective structured clinical examinations (OSCEs), standardized patient exams, chart reviews, and peer and patient evaluations. Even these additional assessment methodologies will not enable us to effectively evaluate all of the competencies. The assessment methodologies appear to be more effective in the evaluation of patient care, knowledge, and communication than they are in the evaluation of competencies such as practice-based learning and improvement (Lynch, Swing, Horowitz, Holt, & Messer, 2004), systems-based practice (Ziegelstein & Fiebach, 2004), and professionalism. There is a need for new tools with which to conduct valid and accurate assessments of these competencies. Moreover, these new tools should be compatible with the learner-centered model that emphasizes self-reflection and self-directed learning, critical skills that put learners in control of their own learning.

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