Building a Better Doctor: The ACGME Outcome Project and Radiology Training

Jennifer E. Gould, MD

J Vasc Interv Radiol 2006; 17:S133–S140

Abbreviations: ABR = American Board of Radiology, ACGME = Accreditation Council for Graduate Medical Education, ACR = American College of Radiology, APDR = Association of Program Directors in Radiology, IOM = Institute of Medicine, MOC = Maintenance of Certification, IR = interventional radiology, OSCE = Objective Standardized Clinical Examination, RRC = Residency Review Committee, RSVP = Recognizing Success via Implementation

THE Accreditation Council for Graduate Medical Education (ACGME) is the organization responsible for accrediting residency and fellowship training programs in the United States. As declared in its mission statement, the organization's purpose is "to improve the quality of health in the United States by ensuring and improving the quality of graduate medical education experience for physicians in training" (1). Currently, the ACGME is changing the way physicians are trained.

Over the past decade, the American public and organizations like the Institute of Medicine (IOM) and the National Health Council have called for physicians to develop attributes that include a commitment to professional competence and lifelong learning, use of scientific and medical evidence to make patient care decisions, openness to new technologies, and implementation of patient-centered care based on a team approach wherein the patient is a team member (2–7). Basing much of its work on the premise that effective medical education and quality health care go hand in hand, the ACGME decided in the mid-1990s to reform training in all medical specialties and subspecialties to respond to these demands. It developed a long-term plan with several goals: producing competent physicians, ensuring that those physicians have the knowledge to maintain that competence into the future, and accrediting training programs based on a program's ability to impart the knowledge and skills necessary to achieve those goals.

The challenge now faced by programs and program directors is how best to change training to meet the ACGME requirements. The information that follows addresses what the changes are and how they apply to radiology training.

THE ACGME OUTCOME PROJECT

In 1997, the ACGME announced its plan to improve graduate medical education and program accreditation. This plan, titled the Outcome Project, is intended to increase the emphasis on educational outcomes and use these outcomes to determine a program's effectiveness and therefore support for its continued accreditation. At the heart of this project, the ACGME believes that good physicians take better care of patients and that a program must have good patient outcomes to produce competent physicians. In essence, quality education is unlikely to occur if medical care is not of high quality or if programs fail to use outcomes to improve internal processes (8). The ACGME proposes that once the Outcome Project is fully implemented, continued accreditation will be based almost entirely on the quality of the program's graduates and their competence to practice the specialties/subspecialties in which they trained.

To reach this point, training programs must comply with a series of new requirements. These requirements will be described in greater detail in the sections that follow, but are listed briefly here. First, programs are expected to identify learning objectives based on the ACGME's six general competencies (**Table 1**) and to teach residents in such a way that they achieve these objectives. Second, programs must use dependable evaluation methods to evaluate whether trainees are attaining the objectives. The evaluation methods must be revised and improved as needed to increase their dependability and reliability. Finally, the program must continuously review data on the educational outcomes of individual trainees and aggregates of trainees to facilitate continuous program improvement (9).

In response, the ACGME will be changing the reaccreditation process. Currently, programs preparing for their reaccreditation site visits produce documents listing curricula, procedure logs, evidence of feedback to trainees, and more. This "busywork" largely describes how and what a program is teaching—a measure of the potential to educate trainees. In the new system, wherein programs provide evidence that trainees have learned the material, the ACGME will instead focus on measures of program effectiveness. As things change to these outcomes-based assessments

From the Mallinckrodt Institute of Radiology, 510 S. Kingshighway Blvd., St. Louis, MO 63110. **Address correspondence to** J.E.G.; gouldj@wustl.edu.

DOI: 10.1097/01.RVI.0000247947.72093.37

Table 1
Six General Competencies

Patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.
Medical knowledge about established and evolving biomedical, clinical, and cognate (e.g., epidemiologic and social-behavioral) sciences and the application of this knowledge to patient care.
Interpersonal and communication skills that result in effective information exchange and learning with patients, their families, and other health professionals.
Professionalism, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.
Practice-based learning and improvement that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, and improvements in patient care.
Systems-based practice, as manifested by actions that demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.

Minimum program requirements language from the General Competencies at www.acgme.org/outcome/comp/compMin.asp

and improvements, the ACGME plans to remove some of the needless "busywork" and move away from periodic accreditation reviews (usually every 3–5 y) to a system wherein visits are rare and programs provide continuous data that electronically demonstrate performance improvement and achievement of educational goals (10).

All training programs are responsible for the requirements, but not all programs have the same timeline for implementation. The Residency Review Committee (RRC) for Diagnostic Radiology residency programs has already added information about the changes, including a modified version of the minimum program language for the competencies (**Table 1**), to the program requirements for radiology residency training, and the ACGME is already requiring Diagnostic Radiology residency programs to provide evidence of education and assessment of the competencies during accreditation reviews. Meanwhile, the minimum program language and associated changes have not yet been written into the requirements for most of the radiology subspecialty programs (the fellowship programs), including Interventional Radiology (IR). According to the ACGME's timeline, last updated in November 2005, the radiology subspecialty training programs are not yet required to demonstrate education and assessment of the competencies during the reaccreditation site visit, and there is no projected date for their involvement (11,12). Nevertheless, several IR fellowship directors who have recently undergone reaccreditation have found that the reviewer expected documentation of program compliance with the requirements, so it is clear that the subspecialty programs need to be actively complying with the requirements and cannot wait for a date to be announced.

In many ways, exact details of how to meet the requirements are vague. The ACGME has purposefully left the precise details somewhat ambiguous. The rationale is that residency programs are unique and dynamic entities, and although a solution may work well in one program, it may not produce the same results when applied elsewhere. Therefore, although the competencies and the goals of outcomes-based assessment are the same for all programs, individual programs have been given the freedom to find solutions that best fit their circumstances (10).

The ACGME has created multiple resources on the Outcome Project website (http://www.acgme.org/Outcome/) to help programs and program directors understand and meet these requirements. These include an outline of the competencies with definitions and suggested goals, a "toolbox" of assessment methods, increasing information on model evaluation systems, and a section called RSVP (Recognizing Success via Implementation) that allows programs to share ideas and efforts for teaching and assessing the competencies.

THE ACGME GENERAL COMPETENCIES

Listed in **Table 1** and described below in greater detail, the six ACGME general competencies share a common theme: patient safety (13). As stated by David C. Leach, "The purpose of graduate medical education is to improve patient care" (14). This theme can easily be seen in definitions and descriptions of the competencies.

Each training program is required to write competency-specific objectives for the program as a whole as well as for each rotation and each residency level within that rotation. In an effort to help Diagnostic Radiology residency programs, the Association of Program Directors in Radiology (APDR) has published an article with suggested skills for each of the competencies (15). This document, published in 2002, can be used as a resource for programs writing or revising the needed objectives.

Several parameters should be considered when competency-based goals and objectives are being written. The learning objectives should be well defined, so that a trainee can easily understand the performance criteria expected at each stage of training. In addition, they should be achievable, appropriate to the field, specific, and, whenever possible, evidence based and geared toward learning to provide quality patient care.

Patient Care

The competency of Patient Care addresses the concept that the work physicians do should be patient focused. Divided into its components, patient care should be safe, of high quality, appropriately utilized, effective, quality controlled, and delivered with compassion and justice.

Important aspects include the ability to obtain and communicate accurate and essential information, the knowledge to counsel and educate patients and their families about the risks and benefits of examinations and procedures, and the capacity to work with other health care professionals on the patient care team. In addition, trainees, particularly those in procedural subspecialties of radiology, must be able to perform a focused history and physical examination, develop a diag-