

The Clinical Learning Environment

The Foundation of Graduate Medical Education

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MORE THAN A DECADE AFTER THE INSTITUTE OF Medicine reported problems with the quality and safety of US health care,^{1,2} formal training of the health care workforce in quality and patient safety is still inadequate. A recently released survey of hospital leaders from the American Hospital Association³ (AHA) highlighted the need to educate US physicians and trainees regarding quality improvement. The AHA report identified deficiencies in newly trained physicians in systems-based practice, communication skills, and the ability to work within teams.

The Accreditation Council for Graduate Medical Education (ACGME) recognizes the public's need for a physician workforce capable of meeting the requirements of the rapidly evolving health care environment. This effort dates to the late 1990s, when the ACGME, collaborating with the American Board of Medical Specialties, established 6 core competencies creating a framework for attaining the skills needed for the modern practice of medicine. This framework drives both curriculum design and evaluation of educational outcomes for resident physicians. The next step in the evolution of resident physician training is the Next Accreditation System (NAS), which is now being implemented by the ACGME. The NAS emphasizes outcomes instead of processes for resident learning. These outcomes are assessed by achievement of performance measures, including milestones as residents progress toward independent practice.⁴ Examples of these outcomes include clinical experience as evidenced by case logs, milestones progression, scholarly activity, and specialty certification pass rates.

The Clinical Learning Environment Review (CLER) program is the first component of the NAS⁵ to be operationalized nationally. The CLER program identifies US teaching hospitals' efforts to engage residents in 6 focus areas: patient safety; health care quality, including reduction in health care disparities; transitions in care; supervision; duty hours and fatigue management and mitigation; and professionalism. CLER site visits have started at all ACGME-accredited sponsoring institutions having more than 1 training program. The CLER site visits are being conducted by a team

including ACGME staff and volunteer site visitors from other sponsoring institutions and involve discussions and observations with hospital executive leadership (including the chief executive officer), resident physicians, faculty, graduate medical education leadership, nursing, and other hospital staff. These visits are designed to stimulate improvement in residents' engagement in the 6 focus areas and, as such, are intentionally not directly linked to accreditation.

Site visitors gain knowledge about residents' engagement in the 6 focus areas through group meetings and visits in clinical service areas. Group meetings involve structured interviews with residents, faculty, and program directors. Walking rounds entail unplanned visits to various clinical sites at random times of the day and evening to meet with physicians, nursing, and other staff and discuss resident engagement. From these 2 sources of information, the site visit team assesses how the institution is performing in each of the 6 focus areas. At the end of the visit, the site visit team provides the institution with feedback and a written report soon thereafter. The ACGME is currently planning on repeating the CLER visits every 18 months to assess institutional progress in improving resident involvement in the 6 focus areas. A newly established evaluation committee is developing a set of performance expectations for teaching hospitals and medical centers. Institutional performance will be evaluated in light of these expectations. With time, the aggregated experience regarding institutional performance in these areas will shape future ACGME accreditation requirements.

Early experience with CLER visits revealed numerous interesting improvement projects and some efforts in the education and training of residents and fellows in the 6 focus areas. Site visitors have also encountered hospitals and medical centers where the role of the residents in organizational efforts to improve health care quality and patient safety was, at best, uncertain. These visits revealed significant opportunities to enhance graduate medical education as well as institutional performance to better meet the needs of pa-

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tients. For example, during one visit, the CLER team found that the residents and fellows were responsible for less than 1% of the more than 4000 reports submitted to the medical center's reporting system annually. At another teaching hospital, the CLER visit team found that residents and nurses were using the patient safety reporting system to instigate punishment or retribution directed at other members of the health care team. This finding was known to the hospital's senior leadership, including the chief executive officer; however, the hospital leadership had no plans or strategies to resolve this problem. Site visitors have frequently encountered chief residents and faculty across multiple specialties who are unaware of how to conduct a root cause analysis and who have not participated in any type of quality improvement activity.

High-quality graduate medical education requires the executive leadership of teaching hospitals to recognize and embrace resident/fellow training as an integral part of organizational initiatives to enhance quality, safety, and value in patient care. Conversely, graduate medical education must include training and active participation in quality and safety initiatives by every resident physician. There are more than 125 000 physicians in training in the United States, each with an intimate view into the strengths and weaknesses of how health care is delivered at the bedside, in the clinic, or in the laboratory. These physicians in training represent the front line of health care delivery today and the future of the practice of medicine.

Given the broad public need and mandate to improve the quality and safety of medical care in the United States, the future workforce must be trained to recognize opportuni-

ties for improvement and actively engage their health care organizations to implement systems-based improvements in patient care. Teaching hospitals and other clinical learning environments must teach quality and safety improvement and incorporate residents and fellows into formal quality and safety structures and initiatives. Through its CLER program, the ACGME seeks to engage US teaching institutions in identifying and implementing the most effective quality improvement strategies that focus on the safety, quality, and value of care. By doing so, the ACGME seeks to enhance the preparation of residents and fellows to best serve their patients in an ever increasingly complex health care environment.

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