

GUEST EDITORIAL

## The 2011 ACGME Program Requirements: A New Model for Quality and Safety

On June 23, 2010, the Accreditation Council for Graduate Medical Education (ACGME) posted on its web site new program requirements for residency training in the United States.<sup>1</sup> These guidelines were highly anticipated by the academic medical community since they contained the duty hour regulations that would likely frame the work schedules of house staff for the next decade. This expectancy was heightened by the release in 2008 of the Institute of Medicine (IOM) Report – “Resident Duty Hours: Enhancing Sleep, Supervision and Safety.”<sup>2</sup> This report raised concerns that the ACGME 2003 duty hour regulations did not go far enough to ensure the safety of patients and residents. Specifically, the IOM identified research models that found safety gains from more restrictive shift lengths, and highlighted other industries that have aggressively regulated hours at work and at rest.

The recommendations of the IOM were met with cynicism focused on the economic costs of such restrictive schedules and the potential negative impact on training as residents spent less time in clinical settings and more time off duty. Many were also concerned that a decrease in shift length meant a necessary increase in patient “handovers” or “sign-outs” that might have a negative effect on patient safety.

The new ACGME guidelines will go into effect on July 1, 2011. Specific changes to resident duty hours affect all years of post-graduate training. The 2003 requirements allowed for shifts of 24 hours plus an additional 6 hours for educational activities and patient sign-out. This effectively resulted in residents at all levels working for periods up to 30 consecutive hours. The new guidelines are more restrictive and are differentiated for level of training. For PGY-I residents (interns), duty periods may no longer exceed 16 total hours. For PGY-II residents and above, the new limit is 24 total hours, and it is strongly suggested that this time period include opportunity for “strategic napping” between the hours of 10 pm and 8 am. These upper-level

residents will now be allowed only an additional 4 hours for patient transitions, instead of the 6 hours in the previous iteration of the duty hour requirements. Time off between duty periods is also stipulated by the ACGME requirements. Similar to the earlier regulations, residents must have at least 8 hours off between work periods, and “should have 10 hours off.” A new component stipulates that these work-free intervals must be greater than 14 hours for upper year residents following any 24-hour shift. The total limit of 80 hours per week is similar to the 2003 regulations. A new caveat requires all moonlighting activities of residents to be counted against this limit. This stipulation addressed a frequent concern that sleep deprivation of residents was also influenced by activities some individuals pursued outside of their appointed training programs. Other work rules have remained stable between the two sets of regulations; these include the requirements for call no more frequently than every third night and one day free from duty each week.

While the duty hour requirements have generated the most attention, it is important not to lose sight of several other new stipulations that are intended to improve the safety of patient care in a training environment. To best understand their impact, I believe one should re-examine the death of Libby Zion.<sup>3</sup> Ms. Zion’s case is perhaps the best publicized example of an adverse clinical event, and undoubtedly one of the most important events in the timeline of the examined interface between graduate medical education and patient safety.

In 1984, Ms. Zion presented to the emergency room of a large teaching hospital in New York. Her initial complaints included a fever, agitation and abnormal limb movements. She was noted to be taking phenelzine, a monoamine oxidase inhibitor, for treatment of depression. She was evaluated by both a PGY-I and PGY-II resident in the emergency room, who discussed their findings with the attending physician by phone. She was given the admission diagnosis of

“viral syndrome with hysterical symptoms.” To alleviate her shaking, the residents prescribed meperidine, a narcotic frequently used for its alleviating effect on rigors typically associated with a fever. The intern and resident left her bedside at about 3am. The intern proceeded to provide care for some of the other 40 patients she was responsible for, and the resident went to sleep in a call room. When Ms. Zion became even more agitated, hospital staff called the intern twice. Following one call, the nurses were given an order to restrain the patient. Subsequently, the intern placed a new verbal order to administer haloperidol, a potent neuroleptic intended to sedate Ms. Zion. At no point did either house officer return to her bedside to directly re-evaluate her. At 6:30 am, her temperature was found to be 107° F. Despite emergency cooling measures, she suffered a cardiac arrest, and could not be resuscitated.

In retrospect, it is evident that several points in the care of Ms. Zion were problematic. These include medication choices that created drug-drug interactions, erroneous judgments about her presenting diagnosis, and the inability of the residents to return to see her as she developed complications. As an educator and administrator, I would ask different questions. Do we believe that a PGY-I in 1984, without modern decision support tools, would reliably recognize drug-drug interactions? What factors prevented the residents from returning to re-evaluate the patient? Why was the supervising attending not called when the patient’s status was obviously deteriorating? Most importantly, how much of a role did fatigue really play in this scenario? In other words, would transferring this patient’s care to a well rested resident have resulted in a different outcome? I believe that the answer to the final question is definitively “no.” Thus, it is important to acknowledge the new safety initiatives mandated by the ACGME, as they are likely to fill important safety gaps beyond those created by physician fatigue.

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The first of these initiatives is outlined within the physician core competencies as a domain within the category of “Systems-Based Practice.”<sup>1</sup> Here it is stipulated that residents “must systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement.”<sup>1</sup> This competency statement further dictates that residents “work in interprofessional teams to enhance patient safety and improve patient care quality” and also that they “participate in identifying system errors and implementing potential systems solutions.” Later, within the newly re-named competency of “Professionalism, Personal Responsibility, and Patient Safety,” this is again emphasized. Here it is stated that the program director must ensure that residents are “integrated and actively participate in interdisciplinary clinical quality improvement and patient safety programs.” Finally, the ACGME adds “Residents and faculty members must demonstrate an understanding and acceptance of their personal role in the monitoring of their patient care performance improvement indicators.”

As a set, these requirements will ensure that residency programs go further to involve residents and faculty in safety and quality efforts. The current ACGME requirements are easily satisfied with conferences, and programs most often use the “Morbidity and Mortality” format to do so. The new requirements will require training programs to go beyond these traditional sessions in examining patient safety and quality, and make certain that residents are active participants in the process. Creating multidisciplinary efforts will be a new paradigm for many programs, and the monitoring and use of performance indicators for residents will likely be a larger challenge for others.

Another new focus has been placed on resident sign-outs or handovers. The ACGME refers to these vital activities as “transitions of care.” As in previous iterations, the new guidelines ask that programs create clinical schedules that minimize these transitions. However, it is now further specified that there be “structured hand-over processes to facilitate continuity and safety” **and that programs ensure that “residents are competent in communicating with team members” in the handover process.** These new features will again require training programs to develop systems and solutions that are beyond the current norms. Evaluating the competence of residents in these activities will be a special challenge.

Finally, the ACGME has formally outlined supervision models for residents. The new requirements define these levels as “Direct,” “Indirect” or “Oversight.” They further outline that PGY-I residents be directly supervised or indirectly supervised, with the latter model allowable only if the supervisor is immediately available. While this intensified need for supervision will be a shift for some programs, it is likely the single most important safety measure to be adopted. In simple terms, it will no longer be acceptable for the least experienced team members to make critical decisions without the input of senior residents and faculty. The goal here is to lessen the likelihood of a PGY-I learning of a flawed decision only during teaching rounds that occur hours after the clinical events that ensued.

In summary, the new ACGME requirements go beyond the well publicized ones intended to ensure residents are less fatigued. Further additions emphasize quality and safety with the strongest position this organization has ever taken on this issue. This will not be a seamless

transition. These new guidelines must be implemented in a time of economic uncertainty for many teaching hospitals. Institutions may not yet have information systems that easily provide the data required to meet these regulations. The idea of multidisciplinary processes is a novel one for many specialties. The evolutionary process will require program leaders to elicit guidance from faculty and hospital personnel who have not been actively engaged in the past. Moreover, these models for safety and quality will require new educational efforts to guide faculty and residents in the appropriate use of safety and quality principles.

In our institution, there are opportunities for residents and faculty to pursue formal coursework in this domain. Specifically, the Jefferson School of Population Health offers certificate and degree programs in Healthcare Quality and Safety. Even more accessible are planned online courses that will allow even those residents with limited time to learn more about these critical issues. This will be an exciting time for champions of safety and quality. They will not just witness, but certainly participate in the positive evolution of the graduate medical training environment. Moreover, it is hoped that these efforts will create a new generation of physicians, who all become such champions. ■

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### REFERENCES

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