

## SOUNDING BOARD

## The New Recommendations on Duty Hours from the ACGME Task Force

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In July 2003 the Accreditation Council for Graduate Medical Education (ACGME) enacted resident duty-hour standards for all accredited programs that sought to integrate limits on resident hours within the larger set of ACGME standards. The aim of these standards was to promote high-quality learning and safe care in teaching institutions.<sup>1</sup> When the standards were established, the ACGME promised the profession that it would revisit them in 5 years.

The educational community and the public have identified three elements of the 2003 standards as particularly problematic. First, the duty-hour limits may have created or exacerbated the adoption of a “shift mentality” during residency. This attitude may conflict with physicians’ moral and professional responsibility to their patients and may leave residents unfamiliar with and unprepared for the hours and professional obligations of practicing physicians. Second, duty hours remained the primary focus for programs and institutions; larger changes in the learning environment that were envisioned when the duty-hour standards were instituted in 2003 never materialized.<sup>2</sup> Changes discussed extensively in the formulation of the current requirements included enhancing supervision and faculty oversight of care, improving handover practices, engaging in further study of the relationship between sleep and performance, and increasing the attention paid to safety as a systems issue. Third, the current limit on continuous duty is the subject of intense debate, with lingering concerns that it may leave residents susceptible to the effects of acute sleep loss. Residents in surgical and inpatient-intensive medical specialties also have difficulty complying with this standard, which places them in the ethical quandary of choosing between leav-

ing patients in order to comply with “the rules” or violating the standard by remaining with a sick patient when they believe it is their professional responsibility.<sup>3</sup> Of added concern are reports suggesting that the 2003 limits did not increase residents’ hours of sleep<sup>4</sup> or reduce fatigue<sup>5,6</sup> and that the added time created under the new standards is not being used by residents for reading and study. Most important, studies using national data samples failed to show that the duty-hour limits had a positive effect on the quality and safety of inpatient care.<sup>7-9</sup>

Coincident with the 5-year anniversary of the standards, the Institute of Medicine (IOM) released the report *Resident Duty Hours: Enhancing Sleep, Supervision, and Safety*.<sup>10</sup> It discussed attributes of the educational program beyond resident hours that promote patient safety in teaching hospitals, including appropriate supervision and transfers of care and a culture of safety in educational settings. The components that received the most attention, however, related to further modifications of the ACGME standards, the significant associated costs, and criticism of the effectiveness of the ACGME’s enforcement of its duty-hour standards.

In consultation with its Council of Review Committee Chairs, the ACGME commissioned a 16-member task force to review relevant research, hear testimony, and draft new standards. The group received written position statements from more than 100 medical organizations, heard personal testimony, and held discussions with members of the IOM committee, patient advocates, sleep physiologists, experts on patient safety and quality of care, educators, and international medical educators with experience in systems with greater restrictions on resident hours. The testi-

**Table 1. Comparison of Selected Sections of the Proposed ACGME Requirements with the 2003 Standards and the IOM Recommendations.\***

Category	ACGME 2003 Requirements	IOM 2008 Recommendations	Proposed 2010 ACGME Requirements
Supervision	Programs must ensure that qualified faculty provide appropriate supervision	Residency review committee should establish measurable standards of supervision according to specialty and level of training Residents in first yr must have immediate access to in-house supervision	Residents and attendings should inform patients of their role in the care of each patient Supervising faculty should delegate portions of care to residents Senior residents or fellows should serve in a supervisory role for junior residents Progressive responsibility for care must be assigned by the program director and faculty Residents are responsible for knowing the limits of their scope of authority Programs must set guidelines as to when residents are expected to communicate with supervisors Faculty assignments should be of sufficient duration to assess residents' knowledge and skills Programs must observe the following three classifications of supervision: level 1 — direct supervision (the supervising physician is physically present with the resident and patient); level 2 — indirect supervision; level 2a — supervising physician is on site and available to provide direct supervision; level 2b — supervising physician is available by phone and available to provide direct supervision; level 3 — oversight (the supervising physician reviews procedures and encounters after care is delivered) During the postgraduate yr 1, residents must have supervision level 1 or 2a
Workload	Learning objectives must not be compromised by excessive reliance on residents to fulfill service obligations Assignments must recognize that faculty and residents collectively are responsible for patient safety and welfare	Resident workload should be adjusted and work that is of limited or no educational value limited Residents should be provided with adequate time for patient care and reflection Appropriate limits on caseload should be set, taking into consideration complexity of illness and residents' competency	The workload for each resident must be based on level of training, patient safety, resident education, severity and complexity of patient illness, and available support services (specialty-specific guidelines to be enumerated by each specialty review committee) The learning objectives of the program must not be compromised by excessive reliance on residents to fulfill nonphysician service obligations
Maximum hr/wk	80/wk, averaged over 4 wk	80/wk, averaged over 4 wk	80/wk, averaged over 4 wk

Maximum length of duty period	<p>Continuous on-site duty, including in-house call, must not exceed 24 consecutive hr</p> <p>Residents may remain on duty up to 6 additional hr to participate in didactic activities, transfer care of patients, conduct outpatient clinics, or maintain continuity of medical and surgical care</p> <p>No new patients may be accepted after 24 hr of continuous duty</p>	<p>Extended duty must not exceed 16 hr, unless a 5-hr nap is provided; 5-hr nap must be included in 80-hr limit; after 5-hr nap, resident may continue for up to 9 more hr for a total of 30 hr</p> <p>No new patients after 16 hr</p> <p>Extended duty (e.g., 30 hr with 5-hr nap) must not occur more frequently than every third night; averaging is not allowed</p>	<p>Duty periods of residents in postgraduate year 1 must not exceed 16 hr</p> <p>Intermediate-level and senior residents (postgraduate yr 2 and above) may be scheduled for a maximum of 24 hr of continuous duty; programs must encourage residents, as professionals, to use alertness-management strategies to maintain alertness in the context of patient care responsibilities; strategic napping, especially after 16 hr of continuous duty and between 10 p.m. and 8 a.m. is strongly suggested</p> <p>Residents may remain on site for periods of no longer than an additional 4 hr to provide for the transfer of care and may not attend continuity clinics after 24 hr of duty</p> <p>In unusual circumstances, residents may remain beyond scheduled hr to continue to provide care for a single patient; justifications are limited to required continuity of care for a patient who is severely ill or whose condition is unstable, academic importance, or humanistic attention to the needs of a patient or family; residents cannot be compelled to spend these additional hr</p>
In-hospital on-call frequency	Every third night, on average	Every third night; no averaging	Intermediate-level and senior residents (postgraduate yr 2 and above) — every third night (no averaging)
Minimum time off between scheduled duty periods	Adequate time for rest and personal activities must be provided, consisting of 10 hr off between all daily duty periods and after in-house call	Time off must be provided as follows: 10 hr off after regular daytime duty period 12 hr off after night duty 14 hr off after an extended duty period, and must not return before 6 a.m. the next day	Residents in postgraduate yr 1 should have 10 hr off and must have 8 hr free of duty between scheduled duty periods Intermediate-level residents should have 10 hr off and must have 8 hr between duty periods and 14 hr free of duty after 24 hr of in-hospital duty Residents in the final yr of training should have 10 hr free of duty and must have 8 hr between scheduled duty periods; review committees may create standards that allow residents to return to work in less than 8 hr under the monitoring of the program director
Maximum frequency of in-hospital duty	Specialty-specific requirements apply	Night duty must not exceed 4 consecutive nights and be followed by a minimum of 48 continuous hr off (after 3 or 4 consecutive nights)	Residents must not be scheduled for more than 6 consecutive nights of night duty (night float) (the maximum no. of consecutive wk of night float and maximum no. of mo of night float per yr may be further specified by the specialty review committee)
Mandatory off-duty time	24 hr off per 7-day period, averaged over 4 wk, inclusive of call	24 hr off per 7-day period; no averaging; one golden weekend per mo <sup>†</sup>	24 hr off per 7-day period (when averaged over 4 wk); home call cannot be assigned on these free days
Moonlighting	Moonlighting must not interfere with residents' ability to achieve the goals and objectives of the educational program Internal moonlighting must be considered part of the 80-hr limit	Internal and external moonlighting count as part of 80-hr limit Residents must receive permission from program director to moonlight, and resident performance will be monitored to ensure no adverse effects from moonlighting	Internal and external moonlighting are to be included in 80-hr limit Residents in postgraduate year 1 must not be permitted to moonlight, internally or externally

**Table 1. (Continued.)**

Duty-hr exceptions	Review committee may grant exceptions for up to 10%, or a maximum of 88 hr, for individual programs based on a sound educational rationale	Review committee may grant exceptions for up to 10%, or a maximum of 88 hr, for individual programs based on a sound educational rationale	Duty-hr exceptions to 88 hr per week averaged are permissible for select programs with a sound educational rationale; before submitting the request to the review committee, the program director must obtain permission from the designated institutional official and the Graduate Medical Education Committee
Home call	The frequency of home call is not subject to the every-third-night, or 24+6, limitation, but home call must not be so frequent as to preclude provision for rest and reasonable personal time Residents on home call must have 1 day in 7 free from all responsibilities, averaged over 4 wk Hr logged when residents are called into the hospital are counted toward the 80-hr limit		Time on home call spent by residents in hospital must count toward the 80-hr maximum weekly limit; frequency of home call is not subject to the every third night limitation; at-home call must not be so frequent or taxing as to preclude rest or reasonable personal time for each resident Residents are permitted to return to the hospital while on home call to care for new or established patients; each episode of this type of care, although it must be included in the 80-hr weekly maximum, will not initiate a new off-duty period

\* Information on four categories of the proposed requirements that are not listed in the table (teamwork; professionalism, personal responsibility, and patient safety; transitions of care; and alertness management) is available with the full text of this article at NEJM.org. ACGME denotes Accreditation Council for Graduate Medical Education, and IOM Institute of Medicine.

† Golden weekends are weekends entirely free of responsibility for patient care.

mony echoed many of the concerns about the limitations of the standards that the ACGME had identified. A particular concern was that the same standards were being applied to different specialties and residents at different levels of training and expertise. Perhaps the most challenging aspect of the work done by the task force entailed reconciling recommendations from the IOM committee to further restrict resident hours — particularly the continuous duty period — with the request from the medical education community to incorporate more flexibility for different specialties and levels of training.

Although much of the debate has focused on establishing appropriate limits on resident hours, the task force recognized that ensuring patient safety and providing an excellent teaching environment entail more than setting these limits. Paramount is an environment characterized by supervision customized to residents' level of competence, faculty modeling of fitness for duty, and the provision of high-quality care in a team setting and an institutional culture of safety and reliability in which redundant systems prevent errors from reaching the patient. A pivotal attribute of this culture is the meaningful involvement of residents in institutional efforts to enhance the safety and quality of care.

The IOM report noted that sleep loss, inexperience, workload intensity, inadequate supervision, poor handover practices, and systemic factors contribute to the errors made by residents (and other health professionals), yet the relative proportion of errors attributable to each factor is not known.<sup>10</sup> Studies of closed malpractice claims have implicated lack of supervision, handover practices, and general communications issues as the major factors contributing to errors in teaching settings.<sup>11</sup> Beyond establishing new limits on resident hours, the standards drafted by the task force (Table 1) emphasize the importance of faculty supervision and teaching, improvement of the patient handover process, and education of residents about how to manage alertness as part of their professional obligation. (An unabridged version of the task force standards is available with the full text of this article at NEJM.org.) Illness and the need for medical care are unpredictable, and circumstances arise when physicians must overcome fatigue to help patients in need. Even more important is the obligation of resident physicians to realize the effect that activities outside

the program have on their alertness when in their roles as learners and providers of care. Without this cognizance, additional limits on hours may leave residents with fewer hours of teaching, practice, and professional socialization but may not help to provide the increased rest and alertness that are the intent of duty-hour limits.

The standards affirm the responsibility of faculty to make sure that residents are prepared for the independent practice of medicine. Faculty are also responsible for ensuring that clinical responsibilities are not so overwhelming — in terms of time or task — as to render residents unable to learn or to provide their patients with high-quality care. The new standards address differences in capabilities and practices for first-year residents, placing more restrictive limits on their hours and requiring added supervision. These changes were made on the basis of testimony presented to the task force about the capabilities and supervisory needs of first-year residents, data from the ACGME resident survey showing that first-year residents have longer work hours than any other cohort of residents,<sup>12</sup> and scientific evidence showing that fatigue affects the frequency of errors committed by first-year residents.<sup>13</sup> As residents mature in knowledge, experience, and clinical judgment, the standards permit them to gradually move from a structured, directly supervised, time-limited setting to more advanced training, then to the independent practice of medicine, in which the structure of work and the allotment of time are dictated by patients' needs and physician professionalism. This progression logically begins with a more highly controlled first year of residency. The task force ultimately rejected the idea of adjusting the limits on duty hours according to specialty because studies have not shown that the safety effect of current standards varies with specialty<sup>7-9</sup> and because the standards establish the maximum number of hours that residents may work. Specialties with less demanding requirements for education and patient care could easily be accommodated within the proposed limits, and residency review committees may choose to set more restrictive limits, as is already being done in some specialties, such as emergency medicine. Another important reason for rejecting limits based on specialty is the complexity this consideration would add to the processes of institutional monitoring and enforcement.

A worrisome element of the IOM report was criticism of the ACGME's enforcement of the 2003 duty-hour limits.<sup>10</sup> The ACGME independently identified the difficulty of enforcement as a problem, along with the inherent challenges of enhancing the frequency and intensity of duty-hour surveillance at the program level, given the nearly 9000 accredited programs. Recognition of the need for enhanced measures to promote compliance has led to a new program of annual site visits to sponsoring institutions, focusing on duty-hour compliance, supervision, and provision of a safe and effective environment for care and learning. Experts in safety, sleep medicine, and graduate medical education are collaborating to facilitate a realistic analysis of institutions' ability to provide a safe and effective learning environment. The ACGME will provide each institution with a report that details its compliance status and identifies noncompliance issues for timely resolution. The plan is to make these results available to the public.

The goal of the ACGME's new approach to duty hours is to foster a humanistic environment for graduate medical education that supports learning and the provision of excellent and safe patient care. The graduate medical education community has a moral responsibility to prepare residents to practice medicine outside the learning environment, where they will be unsupervised, must think independently, and must function when fatigued.<sup>14</sup>

In its 2003 report *Crossing the Quality Chasm*, the Institute of Medicine recommended a broad-based, systems approach to patient safety.<sup>15</sup> The planned approach combines enhanced limits on duty hours for first-year residents, graduated supervision requirements, improvement of transfers of care, enhanced expectations related to professionalism and fitness for duty, and involvement of residents in a culture of care that embodies reliability, quality, and safety. The ACGME's new comprehensive standards will enhance the quality and safety of patient care in teaching hospitals, meet the clinical educational needs of residents, and benefit the future quality and safety of care when residents trained under the new standards enter independent practice.

The standards will be available for comment until August 9, 2010, on the ACGME Web site (<http://acgme.org>). The ACGME welcomes input from both the educational community and the

public. The task force will consider all comments and make modifications as needed. The enhanced standards will be put into effect in July 2011, at which time institutional site visits will also begin.

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