In Pursuit of Optimal Duty Hours and Resident Experiences

Since the 1990s, Residency Program Directors in Internal Medicine have embraced—at least verbally—the need to provide humane work and learning environments for their residents. Earlier that decade, the Residency Review Committee (RRC) for Internal Medicine required us to ensure that all residents were freed of their duties at least 1 day out of every 7. Additionally residency activities were not to exceed 80 hours per week. Residency Program Directors represent many of America's best clinical educators and are also a pragmatic lot. While we were going about redesign of our programs and re-education of faculty about these new expectations, most of us shuddered to think what would happen if New York's code 405 were adopted outside that state. But by 2001, too many forces were at play that would lead to the ultimate imposition of tightly regulated and monitored duty hours. In July of 2003, the Accreditation Council for Graduate Medical Education (ACGME) pushed an additional requirement into each RRC's program requirements, the new "24/6" rule. If a resident is ever in the hospital for 24 hours—regardless of whether any sleep is included in that time—they must transition out of the hospital within the subsequent 6 hours.

The ACGME is serious about responding to the public's concern about unsafe work environments for residents and any situation that could result in excessive fatigue and adversely affect clinical judgment. Advocates applaud this movement as an enforceable mechanism to shut down the last remaining "sweat shop" training programs. They also hope that a wide range of maladaptive physician attitudes and behaviors will evaporate with these restrictions. Residency Program Directors are aware that this is an experiment of immense proportions that may obfuscate any advantageous or adverse outcomes for years to come.

Fortunately, enlightening research is beginning to emerge. The study by Howard et al. in this issue of the *Journal of General Internal Medicine* provides a much-needed look at the potential impact of duty-hour restrictions on patient mortality.¹ Howard et al. conducted an analysis on a database that captured all deaths in the state of New York 1 year before and 2 years after code 405 regulations went into effect. They focused on in-hospital mortality of adult patients from teaching and nonteaching hospitals whose primary diagnosis was congestive heart failure, myocardial infarction, or pneumonia. Unadjusted and adjusted measurements of mortality revealed small decreases over the three-year period for both teaching and nonteaching hospitals. They correctly interpret that the introduction of duty hour limitations did not appear to have either a positive or negative effect on mortality of these diagnoses in New York's teaching hospitals. From a patient safety perspective, what do these findings mean? It should be reassuring that this comprehensive analysis using historical controls revealed that the ultimate patient

outcome of death was not adversely affected. This is great news, but we would be wise to reflect on what is not addressed in this evaluation—issues such as patient length of stay, cost of hospitalization, and iatrogenic patient morbidity that. Additionally, we cannot extract measures of patient satisfaction from this type of database. Most clinicians have rich anecdotes about patients and their families who are frustrated when their care has been juggled between multiple physicians and physician teams. For those of us who celebrate the magic and sanctity of the intimate doctor-patient relationship, it is of grave concern that some patients are so befuddled by our rule-abiding systems that they cannot identify their primary physician. Clearly more research is needed to understand the impact of duty-hour limitations on these additional important outcomes. What about our learners' satisfaction and our opportunities as educators to instill and refine key aspects of their professional development? Still unknown is the impact of stringent duty hour restrictions on a resident's sense of primary responsibility for a patient's well being. What will happen to the opportunity for residents to see the clinical trajectory of an acute illness, and the previous downtime when on-call, that allowed learners to reflect on their patient's problems? What will be the impact on our ability as educators to permit learners to experience graduated autonomy in decision making for the care of their patients? Program Directors across the country are working with time-strapped attending physicians who are exasperated by absent residents, and who increasingly choose to usurp both routine and critical patient management decisions. Ultimately, residents never know those patients whom they have received in hand-offs as well as patients whom they have primarily evaluated. Will these "hand-off patients" emerge as the high-risk subset that is associated with worse health and education outcomes? Clinical educators have voiced multiple concerns over the past two years about increasingly restrictive boundaries. Practical tasks such as devising new scheduling logistics can be a nightmarish experience for many Program Directors. They are keenly aware that this unfunded mandate from the ACGME is simply resulting in more complex shift work schemes for residents, which are designed to address institutional service needs as opposed to educational ones. Program Directors also bemoan the fact that increasing numbers of medical students naively believe that how well a program documents adherence to duty hours indicates highest quality clinical education, instead of simply being a necessary but insufficient component. Frankly, many Program Directors are angered that they are devoting so much time and energy to this redesign effort, which focuses on counting hours. Their frustration stems from being forced to accept the inherent opportunity cost to handcrafting the clinical judgment of their learners and to developing meaningful educational initiatives. Resident duty hour restrictions

are here to stay. It is unclear whether they will prove to be a panacea or merely a diversion along our road to balancing the pressing agendas of clinical care and education. They may eventually help clarify the fact that inpatient care is best managed by physicians who are working in shifts, as already occurs in other settings (e.g., emergency and operating rooms). Many of the issues surrounding duty hours are rooted in the evolution of graduate medical education within the increasing service demands of complex medical centers. The pious rightly cry foul, expressing outrage that clinical service was built on the backs of physicians in training. Understandably though, it happened because clinical service and physician education are woven together so tightly. Until new funding streams emerge that permit nonresident-based solutions to service demands, residents and their educators must remain vigilant to protect the core values of good doctoring and clinical education. Educators are now accepting that attention to resident duty hours is a part of our new landscape. Many Program Directors are trying to learn valuable lessons from our colleagues in New York, regarding logistical structuring of our programs. Others are working within their unique health systems to advocate for nonresident-based solutions to help solve service demands when residents are less available. Many are now focusing their reactions on how to retain—or at least minimize the loss to—the components of highest quality clinical education. They are sharpening their discriminating skills to identify those clinical activities

that are most educationally useful, and they are working to eliminate activities of lesser educational value. Of course many Program Directors are still highly motivated to advocate for the acceptability of more flexibility at a local level, so that we may meet the diverse expectations that currently face us. We will need further creative research investigating important patient and resident outcomes to illuminate our way. Clinical education is tough, particularly in specialties that deal with a broad diversity of patient problems and that require understanding of the continuum of a patient's illness—something that typically unfolds over a longer period of time than is available in a brief trip through the operating room or emergency department. We must continue to “tend to our young” as they represent not only the future of Internal Medicine but also the clinicians who will provide the comprehensive, compassionate, and continuous care that complex adult patients deserve. As you and I go about our daily teaching interactions with residents, we must maintain our heightened awareness that time is limited, that the stakes are high, and that ultimately we are shaping the physicians who will care for our families. —**MARK C. WILSON, MD, MPH**, *Wake Forest University School of Medicine, Winston-Salem, North Carolina.*

REFERENCE

1. Howard DL, Silber JH, Jobs DR. Do regulations limiting residents' work hours affect patient mortality? *J Gen Intern Med* 2004;19:1–7.