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POINT

We Can't Go Back to 1987: Resident Work-hour Restrictions Are Still Needed…

Michele Fang, MD

Dr. Fang is a member of the Forum *editorial board and can be reached at michele-fang@uiowa.edu.*

Prior to the first duty-hour legislation in 2003, residents often worked 95 (and up to 135) hours a week.[1] In fact, 84% of residents scored a level of exhaustion consistent with clinical sleep disorders on the Epworth Sleepiness Scale.[2] Dawson et al. found that there was a dose dependent decline in cognitive psychomotor performance such that with 24 hours of constant wakefulness, one's cognitive psychomotor function was reduced to a level equivalent to having a blood alcohol level of 0.10.[3] Additionally, sleep deprivation decreases motivation, adversely affects demeanor, and damages long-term attitudes—all of which can compromise commitment to patients.[4]

Studying the effects of the 2003 duty hours (i.e. 80-hour work week limit), it was found that interns working reduced schedules made significantly fewer serious medical errors. (The control group made 35.9% more serious medical errors, 57% more nonintercepted serious errors, and was 6.7 times more likely to make serious diagnostic errors.)[5] Interns slept 5.8 hours more per week and had less than half the rate of attentional failures during on-call nights.[6] Residents felt that there were lower levels of stress, burnout, and depression with improved motivation to work and decreased subjective fatigue.[7]

In contrast, two recent studies found that the effects of the July 2011 Common Program Requirements for Resident Duty Hours and Supervision, which restricted the maximum shift length to 16 hours for first-year residents and to 24 hours from 30 hours for residents of subsequent years, had negative effects on serious medical errors made, continuity of care, perceived quality of care, and educational opportunities despite fewer hours worked.[8,9] Possible reasons for these unexpected results include "work compression," increased transitions of care, and greater use of night-float systems.

Drs. Goitein and Ludmeyer feel that resident workload is a more critical issue than work hours.[10] When work hours are reduced but workload remains constant or increases, "work compression" results and reduces time for education, rest, reflection, and bedside care. To mitigate the risk of work compression, more patients would need to be "shifted" to nonresident providers or a larger resident workforce (i.e. through longer residencies or greater numbers of first-year residents). The financial cost of implementing the 2011 work-hour restrictions is already estimated to be between $820 million and $1.64 billion per year.[11]

Handoffs are another area of concern and have gone up by 130% to 200% with duty-hour reform.[9] Despite the Accreditation Council for Graduate Medical Education (ACGME) emphasizing education on handoffs and care transitions, errors still occur with handoffs. In addition, trainees can develop a "shift-work" mentality where they only care for bits and pieces of patients through their hospital stay, making it more difficult to claim ownership (e.g. "I am responsible for this patient and know everything about the medical, family, and social histories.")

Night-float systems, where interns and residents work four to six consecutive nights with a maximum continuous duty of 14 hours, were commonly used to comply with the ACGME work-hour regulations. However, one study showed that residents did not sleep on the night-float rotation.[8] Working consecutive nights impairs residents' ability to adjust to a sleep schedule, isolates them from family/friends who sleep at night and work outside of the home during the day, and limits availability to attend daytime educational conferences.

In a survey conducted by the ACGME in February 2012, many residents reported disapproval with the 2011 regulations (48.4%); only 22.9% approved of the regulations.[12] Residents felt that their education and quality of life suffered, especially for senior residents. Perhaps returning to the 2003 work-hour rules would provide better patient safety, improved resident education, and greater resident satisfaction.

I, like many attending physicians, trained prior to the 2003 duty-hour standards. We worked more hours and were more autonomous than residents today. One study found that senior surgical residents who trained in the Netherlands (mean work: 55 hours per week) trained roughly two years less than their Canadian counterparts (mean work: 84 hours perweek).[13] Residents who worked more hours were found to better manage complex patient scenarios despite having similar technical skills and medical knowledge.[13] We should not go back to 1987, prior to the Bell Commission and NY405 law, where some residents were working more than 100 hours per week. Nonetheless, stringent guidelines make it difficult for attending physicians to teach residents to become competent conscientious physicians and for trainees to gain meaningful patient experiences in limited time periods.

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