

ACGME Work-Hour Restrictions: A Better Quality of Life, But at What Cost?

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Since its development in 1981, the Accreditation Council for Graduate Medical Education (ACGME) has served as a non-profit, private council to monitor and evaluate resident training programs across 133 disciplines in the United States. In 2003, the ACGME implemented codified work-hour restrictions, largely in response to a number of troubling factors including escalating resident work demands, increased public concern, the possibility of governmental intervention, and published research on the consequences of sleep deprivation. In doing so, it has significantly changed the face of orthopedic residency training programs.



As residents, I'm certain we have encountered varying levels of resistance to work-hour restrictions in our respective residency programs. At times, clinical conversation with attending surgeons has progressed to more peripheral topics like the ACGME restrictions. Speculation about the "shift-worker" mentality that these guidelines cultivate inevitable segues to broader questions about the rigors of current orthopedic training.

While there was a time when I might have eschewed this point of view, I have become more disconcerted with the paradigm shift in residency training. In response to a report on resident work hours from the Institute of Medicine (IOM), the ACGME released more stringent regulations in July 2011. Further discussions are underway to evaluate broadening the reductions to a possible 56-hour workweek. Current ACGME work-hour guidelines dictate that interns and junior residents can now only continuously work 16- and 24-hours shifts, respectively, and at least 8-10 hours must be allotted for rest before returning to duty. "Strategic napping" is "strongly encouraged" after 16-hours of duty; 80-hour limitations are mandated; and 1 in 7 days must be

devoid of any clinical duties. In our hospital setting, interns can no longer take traditional 24-hour hospital call; limited coverage of the home-call pager is also not permitted, even with back-up assistance readily available.

In the interest of full-disclosure, I am a product of the contemporary work-hour restrictions and have never known the unregulated age of 48-hour shifts or weeks filled with q3 calls. However, as an intern and junior resident, I frequently exceeded my allotted work hours to complete my patient care duties and more importantly, operate post-call. I do not dispute that the ACGME work-hour regulations have improved quality of life among residents.¹⁻³ I also believe that the majority of residents support the intentions of these guidelines, but I have significant concerns about its downstream effects. There is limited evidence to support its questionable role in mitigating poor patient outcomes, in-house mortality, or preventable medical error.⁴ Ultimately, my wider concerns lie in the compromise of our postgraduate training and what has aptly been referred to as "the erosion of medical professionalism."⁵

As an intern, I once covered a Friday and Sunday call in late April for one of the junior residents who needed to go on emergency leave. With a chief resident available for backup, I had one of my busiest weekends of call to date, including 27 consults, 6 hip fractures, 5 open femoral and tibial shaft fractures, 3 comminuted elbows, and a C5 complete spinal cord injury. Exhausted from my attempts to manage this exclusively, I was struck by the value of this hard-nosed experience. That weekend, I learned the importance of preparation, calmness under pressure, prioritization, and ultimately, medical decision-making. Given current constraints, this experience would be impossible, and in my opinion, orthopedic training suffers as a result of that lack of practical knowledge.

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COMPROMISED TRAINING EXPERIENCE

Increasingly, orthopedic faculty and program directors are concerned about the preparedness of their current trainees and I believe this will only be exacerbated by more stringent work-hour restrictions such as those currently under debate.

In one recent study,⁶ only 17% of program directors believed that residents were adequately prepared for clinical practice as an attending orthopedic surgeon, while 20% believed that residents had sufficient outpatient clinic exposure. In contrast, residents expressed contrary points of view, with 56% and 60% claiming sufficient preparation and clinical exposure, respectively. However, more recent data suggest worsening educational value with the increased work-hour restrictions imposed in 2011.⁷ In a national survey of US residents,⁷ nearly half of respondents believed that the new ACGME regulations negatively impacted preparation for a more supervisory, senior resident role. More importantly, 41% of residents perceived a lower quality of resident education since implementation of new work-hour restrictions.

Candidates' performance on American Board of Orthopaedic Surgery Part I written examination have also shown a corresponding decrease, with failure rates approaching 20% in 2010. While there have been conflicting studies regarding the effect of work-hour restrictions on operative experience,⁸⁻¹⁰ diminished clinical practice may hasten a decision towards fellowship specialization in order to extend training exposure.¹¹ When surveyed, approximately a quarter of residents and 45% of program directors cited the impact of the 80-hour workweek on operative case loads as the impetus for fellowship training.⁶

EROSION OF MEDICAL PROFESSIONAL

Many have expressed concerns that resident work-hour restrictions would herald the adoption of a "shift worker" mentality among orthopedic residents.

Numerous programs are increasingly

reliant on a night float system in which frequent hand-offs and disruptions in continuity of care are considered the norm. Patient care is often fragmented during the transition from the emergency setting to definitive surgical treatment and postoperative care, and the resident's ability to develop strong doctor-patient relationships is impaired.

With the limitations on interns and junior residents, there has been a steady migration of the workload up the chain of command. Increasingly, senior residents and attendings are left to shoulder the burden of unabsorbed floor work, and quality of life among senior residents has declined.⁷ Many clinical teams are heavily dependent on physician extenders to meet patient care needs. In discussing this trend, Pellegrini⁵ stated that, "Absent hard data regarding favorable changes in medical errors and patient safety, and without a competency-based educational program to test and implement, we find ourselves left only with the abstract and intuitive sense that mandated limits to work hours for medical trainees defy the ethos that engenders professionalism in the practice of medicine."

CALL TO ACTION

Current ACGME work-hour guidelines have successfully restored a certain quality of life to residency training and decreased the burnout rate previously common to orthopedics.¹² However, it has also imposed some unintended consequences that threaten the overall quality of our residency education and the comprehensiveness of our patient care. We must be proactive in our attempts to preserve the caliber of graduate medical education and improve our collective residency training experience through the implementation of core competencies and training simulation models. We should support the proposed increase of allotted orthopedic training from 3 to 6 months during the intern year and encourage the pursuit of additional clinical and operative exposure. Most importantly, we must strongly question further work-hour restrictions that threaten to dilute our clinical experience and

extend the duration of residency training, particularly in the absence of more conclusive, evidence-based literature regarding its benefits.

AUTHOR'S DISCLOSURE STATEMENT

The author reports no actual or potential conflict of interest in relation to this article. The opinions or assertions contained herein are the private views of the author and are not to be construed as official or reflecting the views of the Department of Defense or the US government. The author is an employee of the US government.

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