How the ACGME Work-Hour Restrictions Have Affected Orthopedic Residents

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In July 2011, the Accreditation Council for Graduate Medical Education (ACGME) released stringent regulations dictating work-hour restrictions, having a significant impact on surgical residency programs. In conjunction with the previously mandated 80-hour resident duty limits from 2003, the 30-hour call was eliminated and a 16-hour duty maximum with no more than 6 consecutive nights of night float was instituted for interns. These changes were in line with a prevailing thought that sleep deprivation was a significant issue and tackling it would decrease the number of preventable medical errors. Although many current orthopedic surgeons in training do not appreciate the “rite of passage” undertones that accompany these recollections from their superiors, many of us residents do share the concern that the current imposition of work-hour restrictions will leave us with a less-experienced generation of surgeons who are less apt to combat the world’s ailing bones and joints in a time of growing demand for surgery, further specialization within the field, and more complex patient care needs. As the ACGME restrictions have now been in place for more than half a decade, to some degree, speculation and conjecture have begun to fade while hard evidence is accumulated regarding the effects these constraints have on budding orthopedic surgeons and whether these changes have improved patient care.

With the 2011 duty hour changes, the ACGME attempted to improve patient safety and resident well-being and education. However, a recent systematic review of the effect of resident duty hour restrictions among surgical residents—with a focus on articles that addressed the 2011 ACGME regulations—found no overall improvement in patient outcomes or resident education as a result of these restrictions. In fact, the authors found a negative impact for resident performance on certification examinations and for patient outcomes with the 2011 changes and called for greater flexibility to accommodate resident training needs, cautioning against a further decrease in resident training hours. In a national survey of orthopedic residency directors and residents, only 34.8% of respondents felt residents were more rested, questioning the impact of these changes on this facet of resident health. Regarding these rule changes, more than 71% of respondents strongly felt they had failed to improve surgical experience, 19.7% were satisfied with them, 10.8% felt they had led to an improvement in resident education, and 17.0% attributed an improvement in patient care to them. More than a year after their implementation, it was still reported that residents of all medical specialties had continued concerns that their education and patient care had been compromised. The effect of these 2011 restrictions on resident operative experience has been mixed, with some surgical departments
reporting significant declines in junior resident case volumes and others reporting insignificant decreases in operative volume for interns with increased volumes for second- and third-year residents. No significant changes in risk-adjusted 30-day mortality, serious morbidity, readmission, or failure to rescue rates have been reported for teaching hospitals compared with nonteaching hospitals. Furthermore, the restrictions have led many to question whether they may instead be detrimental to patient safety through lapses in continuity of care via the resultant increase in the number of patient handoffs. Orthopedic program directors have expressed concerns that this may “promote a shift-worker mentality rather than engendering a sense of altruistic responsibility and patient ownership.”

As residents and fellows, our training is a period of graduated responsibility that has a safety net of attending oversight at all times. If we are going to see a particular pathology or operate in a specific area for the first time (or even for the nth time, truly), we want it to be while having an attending surgeon available to first and foremost ensure proper patient care and secondarily instruct us. As demonstrated by the aforementioned referenced studies, the most recent iteration of restrictions on resident work hours has decreased the sheer number of patients seen in clinic or surgeries participated in, thereby lessening the “practice, practice, practice” that our prior generation of surgeons claim portends “perfection.” What is most frustrating is the lack of much hard evidence in the past 5 years that patients or residents are receiving any objective benefits in their treatment or education, respectively. It is frightening to think that our educational experience may have been hampered by these well-intentioned changes that may have consequently resulted in an “inferior” training.

So, the question becomes: How do we circumvent the perceived deficiencies in resident education since the 2011 ACGME changes? Part of the answer may be with increasing the proportion of hours spent performing tasks of high clinical or operative value through the minimization of more administrative responsibilities, as it has been demonstrated via preliminary workflow analysis that orthopedic surgery residents spend a disproportionate amount of time performing documentation and administrative-type work. Because many orthopedic residents may have concerns focused more on enhancing their surgical skills or clinical knowledge base, some of the paperwork or floor-related work that provides a lower educational yield can be addressed with the use of physician extenders. Some hospitals have increased their employment of nonresident physicians, physician assistants, and nurse practitioners to adjust for the residency duty hour changes. In the general surgery literature, physician extenders have shown an ability to write appropriate orders and reduce resident workload, effectively increasing the educational opportunities for residents (with resultant higher In-Training Examination scores), who spent less time tending to electronic medical record orders and acute patient care issues. However, graduating residents must understand the importance of proper time allocation, documentation, billing, and other administrative tasks to develop successful practices as attending surgeons. Some literature has suggested that although most surgical residents view the addition of non-physician practitioners to clinical services as positive, there have been concerns that these providers do not have the same goals as surgical residents and confusion exists about how they fit into the traditional surgical team hierarchy. Furthermore, the expense of each extender can reach approximately $90,000, which can be more than some institutions are willing or able to provide.

The more widespread use of Objective Structured Clinical Examinations may become necessary to objectively evaluate resident core competencies and identify areas of limitation in resident clinical skills. The use of training models and simulators is increasing and could be an avenue for future skill set improvements, although their cost can be prohibitive and the translatability to actual operating room skills remains a question.

Overall, orthopedic residents have a responsibility to themselves, their program, and the community to graduate from residency as educated orthopedic surgeons. Residents must be proactive and take advantage of the plethora of opportunities available for orthopedic education, including self-study, the aforementioned simulation training if available, video tutorials, and cadaveric dissection laboratories. The current generation has more supplemental learning avenues available to it than previous generations of orthopedic surgeons had. These should be used to improve resident exposure and education without overtly disobeying the implemented work-hour restrictions.

Because this new system has been in place for more than 5 years, it may not yet be possible to properly fully evaluate its efficacy. It would seem, however, that the 2011 ACGME restrictions have become an impediment to the education of the next generation of physicians and that avenues that supplement our education in this new regime must be explored.

REFERENCES


