



## Resident Duty Hour Restrictions: Is Less Really More?\*

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A group of individuals representing the Council of Pediatric Subspecialties and the Organization of Neonatal Training Program Directors who are involved in the training of physicians wishes to comment on the further restriction of duty hours recently recommended by the Institute of Medicine.<sup>1</sup> Concern for patient safety prompted the 2003 Accreditation Council for Graduate Medical Education (ACGME) restrictions on resident duty hours to 80 per week, with no longer than 30 hours allowed in 1 stretch. These ACGME restrictions were established despite unresolved issues about the 1989 template, the New York State regulations Section 405.4. These issues included concerns about negative impacts on surgical training and quality, continuity of patient care, and professionalism.<sup>2,3</sup> Many educators have already expressed concern that the rigidity of the current work hour limit conveys a lack of professional responsibility, instills a detachment of physicians from patients, and will ultimately change the culture of medicine by disrupting the physician-patient relationship.<sup>3,4</sup> The perceived risk is that newly trained medical professionals may become “shift workers,” rather than professionals dedicated to their patients. Despite such concerns about current regulations, further decreases and restrictions in duty hours have recently been proposed by the Institute of Medicine (IOM).<sup>1</sup>

Several cogent arguments about the impact of further decreases in duty hours need to be raised, including negative consequences on patient care, the education of future specialists and subspecialists, workforce, and the entire health care system.

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Shortened shift duration and increased “cross coverage” result in more frequent handoffs of patients, fragmentation of care, and important educational deficiencies that negatively impact patient care. One recent study suggests that ACGME regulations have reduced patient safety in the intensive care unit.<sup>5</sup> Continuity of patient care over a period of time, especially for those who are critically ill, is essential to understanding the pathophysiology, management, and impact of care for a specific disease and patient. Further restrictions and consequent fragmentation of duty hours will increase the frequency with which trainees must leave while their patient is experiencing significant change that would benefit greatly from caregiver continuity.

Further restriction or fragmentation of duty hours may also negatively impact the competency of trainees in the early recognition, resuscitation, and stabilization of the acutely ill patient. For example, neonatal intubation, a critical skill once expected to be mastered by Postgraduate Level 2, is now performed with poor success rates by senior residents.<sup>6-8</sup> This may be a factor in “trained” pediatricians, despite being credentialed to provide acute care, choosing practices in which such care is instead provided by in-house physicians (ie, neonatologists, hospitalists, intensivists). Furthermore, the judgment of when to apply these skills is best acquired over time in a patient care setting. Decreased duty hours are likely to affect patient care in the community when less well-prepared residents move from training into practice settings without the benefit of support and supervision from nurse practitioners, fellows, or attending physicians.

A major area of concern is the decreased one-on-one contact between trainees and families so important to the development of the doctor-patient relationship. These interactions require time and must occur when all parties are appropriately prepared and engaged. Trainee focus on completion of a work-list by an imposed deadline inappropriately prioritizes physician “needs” over patient needs. Learning how to effectively talk with patients and families is unlikely to occur in the face of a ticking stopwatch.

The ACGME has not differentiated level of training as applied to duty hours, nor does the current IOM statement. There is no recognition that the educational focus of an intern is quite different from a third-year fellow. Similarly, there is no recognition that the responsibilities of an on-call intern are very different from a third-year fellow. Subspecialty fellows in critical

care specialties must have the opportunity to manage greater numbers of patients with increasing complexity/acuity and be able to assume a more prominent role in counseling patients and their families. Having mastered basic technical skills during residency, they must have the opportunity to develop a more specialized technical skill set. The ACGME and American Board of Pediatrics requirements for scholarly activity also require them to have increased opportunities to teach and supervise junior trainees and to become knowledgeable in research. From a practical standpoint, the role of the fellow more closely resembles the role of the attending subspecialty physician than it does residents. However, the inflexibility of the current and proposed duty hour restrictions conflicts with the unique educational needs of the subspecialty fellow. Duty hour restrictions have been imposed on all levels of training, making it increasingly difficult to support the scholarly mission and foster the development of autonomy in subspecialty trainees. Despite a body of literature on the impact of the current ACGME regulations on residency training, there are no data on the impact of duty hour limitations on the training of pediatric subspecialty fellows. It is our opinion that subspecialty fellows, owing to their increased age and maturity, as well as experience from prior residency training, should be allowed to manage their duty hours with more autonomy than more junior trainees.

The simplest of solutions, to extend training, has potentially grave consequences. Our trainees already struggle to handle the massive educational debt of college and medical school.<sup>9</sup> Our current health care system already underfunds training of specialists and subspecialists, and longer training would only increase those costs.<sup>10</sup> To meet patient care demands, we anticipate the need for significant increases in physician numbers to counteract the decreased work hours expected by the younger generations. There are currently few considerations of the costs in effort, time, and dollars that these increases will require. In his commentary responding to the recent report, Iglehart<sup>11</sup> noted that the IOM model estimating the number of additional full-time equivalent positions needed to supplement the resident workforce includes up to 5984 mid-level providers, 5001 attending physicians, or 8247 additional residents. The use of alternative providers to cover trainee activities may be problematic, especially in light of recent concern over the effects of fatigue on nurse practitioners. The National Association of Neonatal Nurse Practitioners is considering a formal policy on fatigue<sup>12</sup> that may well further fragment patient care and limit the available pool of providers. Furthermore, shifting care to alternative providers may not be an option for highly specialized tertiary and quaternary care or for subspecialties in which dangerous shortages already exist.<sup>13-15</sup> Nurse practitioners are recruited from the pool of staff nurses, another group noting significant shortages.

The increased cost of duty hour regulations to teaching hospitals, especially during our current fiscal crisis, will be significant<sup>16</sup> and must be evaluated. Given that these hospitals provide a significant portion of care to the indigent and underinsured, access to medical care for many is likely to be negatively affected.

A broader assessment of the impact of duty hour restrictions needs to be considered, including effects on more senior physicians. Much of the workload created by reduced trainee

duty hours has been taken up by more senior physicians, frequently in their 50s and 60s. In fact, nephrology fellows have noted that growing faculty workload is decreasing their interest in continuing in the field.<sup>17</sup> The risk to patients from fatigued attending physicians should also be considered.

With little objective evidence that the current restrictions in the United States or abroad have improved outcomes and that further change will be beneficial, it seems ill advised to alter current recommendations.<sup>18-28</sup> Limitations of many studies include poor design, small sample size, and poor compliance.<sup>29</sup> We strongly recommend expanded, meticulous research to gather and assess the impact of the current duty hour restrictions, including evaluation of the quality of the current "product" of our training programs.

We advocate that a broader spectrum of issues be considered in the debate on trainee work hours and be addressed with evidence-based approaches. If there is insufficient evidence, regulatory agencies should facilitate quality research to provide the needed evidence. It is inappropriate to base policy on small numbers of underpowered, poorly controlled studies. Major efforts should focus on benchmarking methods for adult teaching within the context of limited duty hours. Areas requiring further study include supervision, fatigue metrics, computerized<sup>30</sup> and bedside hand-off methods, multidisciplinary rounds, patient flow, acuity metrics, methods of adapting patient load to provider pools, effective use of shifts and alternative care providers (nurse practitioners, physician assistants, general pediatricians, hospitalists, and subspecialists), efficacy of simulation training, prevention of medical errors, and, importantly, patient satisfaction and patient outcomes. Cost-benefit analyses are needed to address the impact of changing duty hours on the larger health-care system. A balanced examination of the effectiveness of shorter duty hours on graduating trainees and educators in other countries is needed.<sup>31,32</sup> To act on anything less than objective, evidence-based data would be irresponsible and detrimental to our patients and their families.

## SUMMARY

It is our opinion that proceeding with additional regulations without appropriate evaluation of current outcomes and without advanced planning to determine optimal infrastructure, resources, methods, personnel, and scheduling required to optimize the training of new specialists and subspecialists gravely risks the delivery of patient care and the future of medical education and research. We urge the ACGME and IOM to reconsider broadly applying duty hour restrictions without considering level of training, allowing more advanced subspecialty trainees the autonomy that advanced educational objectives requires. Most importantly, we recommend that the current duty hour rules be evaluated by rigorous scientific methods before implementation of any new regulations at the national level.

*References are available at [www.jpeds.com](http://www.jpeds.com).*

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