Resident Duty Hour Restrictions: The Implications Behind the New Data Ahead of the Single Accreditation System

Andrew C. Berry, DO; Elizabeth K. McClain, PhD, EdS, MPH

From the Division of Gastroenterology at Larkin Community Hospital in South Miami, Florida (Dr Berry), and the William Carey University College of Osteopathic Medicine in Hattiesburg, Mississippi (Dr McClain).

Financial Disclosures: None reported.

Support: None reported.

Address correspondence to Andrew C. Berry, DO, 7000 SW 62nd Ave, Ste 401, South Miami, FL 33143-4717.

Email: aberry5555@gmail.com

Submitted
April 30, 2018;
accepted
May 2, 2018.

In the April 2018 issue of *The Journal of the American Osteopathic Association*, Buser et al¹ mentioned that, as of February 2018, 712 of 862 (80%) American Osteopathic Association (AOA) residency programs and 853 of all 1244 (69%) AOA training programs (residencies, internships, fellowships) achieved or submitted an application for accreditation through the Accreditation Council for Graduate Medical Education (ACGME). With a single accreditation system comes a single system of trainee regulations. The premise of strict vs flexible resident duty hour policies remains at the forefront of regulatory debate, with the addition of robust data from the Flexibility in Duty Hour Requirements for Surgical Trainees (FIRST) trial² in 2016 and the Individualized Comparative Effectiveness of Models Optimizing Patient Safety and Resident Education (iCOMPARE) trial³ in 2018 regarding internal medicine trainees.

Both the AOA and the ACGME have been analyzing data on resident duty hours and dynamically adjusting their restriction policies over the years. Gone are the days of the rogue unregulated trainee physician. The elusive balance of patient safety, resident well-being, and resident education remain the cornerstones. In 1988, 4 years after the Libby Zion case, an ACGME-appointed task force was formed to investigate resident hours and supervision standards across all accredited programs.⁴ However, it wasn't until 2003 that the ACGME implemented the first national regulation, establishing the 80-hour work week—capping the length of overnight shifts and mandating a minimum amount of time off between shifts.⁵ In 2008, the Institute of Medicine recommended additional limitations on work hours and an increase in direct supervision of residents to improve patient safety.⁵ The public demanded that the Joint Commission or the Occupational Safety and

Health Administration step in to regulate residents' hours if no changes were made.⁶ Shortly thereafter, in 2011, the ACGME shortened interns' maximum shift length to 16 hours and increased the time off after overnight on-call duties for interns and intermediate-level residents.⁷

The initial resident response was somewhat unexpected, levying new concerns that shortened duty hours would impair education and leave trainees less prepared for more senior, supervisory roles.⁸ A far greater percentage reported worsened education and work schedules, with twice as many disapproving of the new regulations as approving.⁸ With more frequent shift changes came more hand-offs, more potential for error, and a reduction in continuity of care, potentially affecting the educational and emotional experience associated with an uninterrupted patient-physician relationship.⁸

These new concerns levied the ACGME to prompt the design of 2 large, national, randomized studies for both surgical (FIRST)² and internal medicine (iCOMPARE)³ trainees to help assess the ramifications of changing duty hour regulations—strict vs flexible. Strict regulations entailed the 2011 policies,⁷ and flexible policies allowed programs to be flexible with resident hours, with the following terms: interns' shifts could exceed 16 hours; shifts of year-2 residents and above could exceed 28 hours; there would be no requirement for 8 to 10 hours off between shifts; and there would be no requirement for 14 hours off after a shift that exceeded 24 hours (written communication, Accreditation Council for Graduate Medical Education, March 10, 2017). Specific temporary waivers allowed selected participating programs to use these controversial policies. Although Public Citizen, a consumer advocacy organization, and the American Medical Student Association strongly urged the ACGME to rescind these

measures, calling them unjust and unethical,⁹ the trials proceeded.

The FIRST trial² demonstrated that flexible duty hour policies were not associated with an increased rate of death or serious complications. Although residents with flexible policies did not report less satisfaction with their overall resident education nor perceive that fatigue affected their personal or patient safety, they did report a negative effect on their personal well-being.² The delicate balance of reducing resident fatigue by limiting duty hours while minimizing harm associated with disrupted continuity of care remained problematic, as flexible-policy residents were half as likely to report leaving an operation or handing off an active patient care issue as were those in the standard-policy group.²

A follow-up resident perception analysis¹⁰ helped delineate trainee concerns over a flexible policy, finding that first-year interns had concerns regarding flexible policies affecting their well-being and job satisfaction, whereas more experienced senior residents had concerns about patient safety and continuity of care. Interns' concerns may stem from less control of restricted timeframes and the necessity to complete mundane tasks—writing notes, entering orders, or performing clerical work—under the new flexible policy. Regardless, in March 2017, the ACGME relaxed resident duty hour restrictions, allowing programs the flexibility to have first-year residents work shifts lasting up to 24 hours, with up to an additional 4 hours for care transition, starting in July 2017.

In March 2018, iCOMPARE's initial data were published, comparing the 2011 duty-hour policies with flexible duty hour policies for internal medicine trainees.³ Although the patient safety and mortality data have not yet been analyzed, the published data demonstrate no significant between-group differences in the time nor perceptions of time interns spent in direct patient care and education. However, interns in flexible-policy programs were more likely to report dissatisfaction with the effect of the program on their personal lives, overall well-being, and quality of

education—mimicking some of the findings from the FIRST trial.²

The AOA has its own defined duty hour policy, which allows full substitution of the ACGME duty hours policy at program discretion.¹¹ All AOA duty-hour policies reflect the most updated ACGME flexible duty-hour policy enacted in July 2017, except that year-1 trainees cannot exceed a 24-hour work period for any reason. More advanced residents and fellows are allowed a 4-hour allowance for transfer of care, which all ACGME trainees are given.^{7,11(pp39-40)}

Although more robust data exist on duty hour restrictions, no clear policy encompasses the major concerns of graduate medical education personnel and trainees: resident education, patient safety, and resident well-being. Duty hour policy remains especially difficult to study, as significant resident underreporting of duty hours limits the validity and conclusions of the studies.¹² As medicine itself is becoming more individualized, the single best policy for duty hour restrictions may best reflect the specialty type and program infrastructure, including health/wellness resources and program-specific goals. Safe, resilient health systems should not depend on overworked resident physicians and must acknowledge the current millennial learner's demands with regard to resident education, patient safety, and life balance/burnout prevention in a looming single accreditation system. (doi:10.7556/jaoa.2018.116)

References

1. Buser BR, Swartwout JE, Biszewski M, Lischka T. Single accreditation system update: a year of progress. *J Am Osteopath Assoc*. 2018;118(4):264-268. doi:10.7556/jaoa.2018.051
2. Billimoria KY, Chung JW, Hedges LV, et al. National cluster-randomized trial of duty-hour flexibility in surgical training. *N Engl J Med*. 2016;374(8):713-727. doi:10.1056/NEJMoa1515724
3. Desai SV, Asch DA, Bellini LM, et al. Education outcomes in a duty-hour flexibility trial in internal medicine. *N Engl J Med*. 2018;378(16):1494-1508. doi:10.1056/NEJMoa1800965
4. Asch DA, Parker RM. The Libby Zion case. one step forward or two steps backward? *N Engl J Med*. 1988;318(12):771-775.
5. Institute of Medicine Committee on Optimizing Graduate Medical Trainee (Resident) Hours and Work Schedule to Improve Patient Safety. Ulmer C, Miller Wolman D, Johns MME, eds. *Resident Duty*

Hours: Enhancing Sleep, Supervision, and Safety. Washington, DC: National Academies Press; 2009.

6. Blum AB, Raiszadeh F, Shea S, et al. US public opinion regarding proposed limits on resident physician work hours. *BMC Med*. 2010;8:33. doi:10.1186/1741-7015-8-33
7. Resident duty hours in the learning and working environment: comparison of 2003 and 2011 standards. Accreditation Council for Graduate Medical Education website. <https://www.acgme.org/acgmeweb/Portals/0/PDFs/dh-ComparisonTable2003v2011.pdf>. Accessed April 3, 2018.
8. Drolet BC, Christopher DA, Fischer SA. Residents' response to duty-hour regulations—a follow-up national survey. *N Engl J Med*. 2012;366:e35. doi:10.1056/NEJMp1202848
9. Individualized Comparative Effectiveness of Models Optimizing Patient Safety and Resident Education (iCOMPARE) Trial and Flexibility in Duty Hour Requirements for Surgical Trainees (FIRST) trial [letter]. American Medical Student Association website. http://www.amsa.org/wp-content/uploads/2015/11/151119_Letter-to-ACGME-re-FIRST-iCOMPARE-trials_FINAL-WITH-ENCLOSURES.pdf. Accessed April 4, 2018.
10. Yang AD, Chung JW, Dahlke AR, et al. Differences in resident perceptions by postgraduate year of duty hour policies: an analysis from the Flexibility in Duty Hour Requirements for Surgical Trainees (FIRST) Trial. *J Am Coll Surg*. 2017;224(2):103-112. doi:10.1016/j.jamcollsurg.2016.10.045
11. *The Basic Documents for Postdoctoral Training*. Chicago, IL: American Osteopathic Association; 2018. <https://osteopathic.org/wp-content/uploads/2018/03/aoa-basic-document-for-postdoctoral-training.pdf>. Updated March 1, 2018. Accessed July 5, 2018.
12. Bennett CL, Finch A, Vuong K, McDonald D, Rennie S. Surgical resident duty hours. *N Engl J Med*. 2016;374(24):2399-2401. doi:10.1056/NEJMc1604659

© 2018 American Osteopathic Association

Keywords: duty hours, graduate medical education, single accreditation system

JAOA Submissions: Online-Only Content

Videos and slides can be great supplemental components to published research. *The Journal of the American Osteopathic Association* encourages authors to include such online-only content with their manuscript submissions. E-mail jaoa@osteopathic.org for more information.