Are Duty Hour Regulations Promoting a Culture of Dishonesty Among Resident Physicians?

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Since the implementation of common duty hour standards by the Accreditation Council for Graduate Medical Education (ACGME) in 2003, and the release of added standards in 2011, there have been efforts to assess these requirements on patient safety and resident learning. A number of resident and program director surveys have sought to gauge the effects of the standards on trainee competency, fatigue, quality of life, and patient safety.[1–17] While the results of these surveys differ slightly among specialties, several pervasive themes have emerged. First, the 16-hour limitation for first-year residents enacted in July 2011 is not popular, with most respondents indicating that this regulation may be detrimental to resident training.[1,8,11,13,14,16] Second, many respondents have indicated that they think the regulations have not significantly improved patient safety.[2,3,5,6,17] Third, residents in many medical specialties and most in surgical specialties disapprove of the regulations.[1,14,15,17]

The most recent systematic review and meta-analysis evaluating the effects of the ACGME regulations on morbidity and mortality in surgical patients demonstrated no observable effect on patient safety.[18] This review corroborates previous studies[19–24] that showed patient outcomes or the quality of care in the United States has not improved since the implementation of the duty hour restrictions.

A review of studies evaluating duty hour violations indicates that many resident physicians in the United States violate the regulations on at least an occasional basis.[4,7,14,25,26] In a review of programs that were recurring offenders, Philibert and colleagues[27] identified 2 universal reasons for violations: first, ''rotations to institutions valued for their clinical volume and intensity, but with a heavy service component,'' and second, ''excess hours because residents identify deeply with the culture of their program, with longer hours attributed to their engagement in and commitment to their program and patients.'' A physician's responsibility toward his or her patients and the conflict this creates with compliance with the regulations may be particularly challenging for learners. Residents frequently cite the need for continued care of a patient as the reason for intentional violations.[28] They are faced with a moral dilemma[29] when they feel rushed to leave the hospital at the potential expense of their patients.

Trainees essentially have 3 basic avenues for maintaining compliance and avoiding violations when faced with excessive duties. First, they may become more efficient and complete more work in a shorter period of time. While some enhanced resident efficiency has probably occurred, residents cannot be expected to simply ''work harder.'' Often they are dealing with factors that do not have set timetables and are beyond their control, including critically ill patients or the needs of patients and families. Second, residents can shift responsibilities and sign out incomplete duties to other residents. While this is frequently used to off-load residents at the end of their duty period, residents may wish to avoid this because it puts work onto the shoulders of others, and residents may be labeled as lazy or incompetent by their colleagues. Residents often are expected by their senior colleagues to get their own work done before going home. Residents also have an established relationship with patients and feel a responsibility toward completing patient tasks because of this bond. The third option is for residents to complete their duties by working longer than allowed, and underreport their hours to avoid being penalized for duty hour noncompliance. This strategy allows them to complete their duties, care for their patients, maintain a close physician-patient relationship, and avoid being labeled as lazy.

The means by which the ACGME and its Residency Review Committees assess compliance with the resident duty hour standards is through direct resident interviews during accreditation site visits, review of duty hour logs submitted by the program, and the ACGME Resident Survey. Unfortunately, these methods are easily subverted through inaccurate reporting. One study comparing an internal graduate medical education survey and the ACGME survey demonstrated wide discrepancies in resident reporting of issues.[30] Furthermore, in 1 survey 14% of 26 general surgery residents admitted to not answering the ACGME survey questions truthfully.[31] Why would residents lie about violation occurrence on the

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ACGME survey? The answer is that residents are aware of the consequences of survey responses suggesting noncompliance with the duty hour standards, including the potential of repercussions to the residents. It may be easier to deny programmatic issues because it ensures that the program itself will remain viable. Furthermore, denying problems on the ACGME survey may lead to less frequent monitoring from program directors and chairs. Less oversight in this regard provides individual residents the opportunity to make decisions regarding patient care at their own discretion.

Residents also are aware that there can be personal repercussions when they report duty hour noncompliance in their program. Residents may be punished by faculty for logging hours that exceed the limit. To avoid potential penalties for truthfully reporting their hours, residents will underreport the number of hours worked. Recently, in a national survey of more than 1000 surgery residents regarding the effects of the 2011 ACGME regulations, greater than 60% of residents indicated that they falsely reported duty hours to appear in compliance, with almost 15% doing so on a daily or weekly basis.[32] In a national survey of neurological surgery residents, 60% acknowledged that they underreport their hours, with 25% doing so on a regular basis.[33] Previous studies of surgical and medical residents at 1 institution and a nationwide survey of family medicine residents indicated that 50% and 20% of respondents, respectively, indicated that they underreported duty hours.[1,34] Residents, particularly in surgical specialties, may consistently work beyond the duty hour limits, yet rarely report violations. While program directors may be unaware this behavior is occurring, in some programs, the program director is aware of this behavior but is not motivated to correct it because the reported hours for the residents appear to be in compliance. In addition, many residents and program directors disapprove of the restrictions,[1,14,15,17] which may offer added justification for these individuals to inaccurately report their hours or to be complicit in resident underreporting.

Medical educators have a responsibility to ensure that residents being trained in the United States are competent professionals. The ACGME competencies clearly indicate that honesty and adherence to legal and medical regulations are key components of professionalism that practicing physicians must adhere to. However, the ACGME duty hour regulations have inadvertently created a learning environment where intentional violations, dishonest reporting of hours worked, and inaccurate ACGME survey responses are occurring. While such behavior is not universally practiced among US residents, there is a significant proportion of the population, particularly in surgical specialties, who may be engaging in these activities on a regular basis.[1,31–34] Are we fostering dishonesty and disregard for authority within our residents by placing them in a situation where lying is the easiest option?

Medical educators can expect debate over further limitations to resident work hours in the near future given the growing public concern[35] for physician fatigue, the example of the European Working Time Directive whereby physicians are allowed to average only 48 hours per week,[36] and the agenda of the Institute of Medicine calling for further hours reductions in the United States.[37] As we go forward, it is imperative to consider the unintended consequences of the duty restrictions regarding the competencies we are seeking to develop in our trainees. The first step in addressing the dilemma is further study of resident behaviors and the means by which we monitor compliance with the duty hour standards. Most importantly, medical educators must realize that the punitive measures created to keep residents compliant, while well intentioned, have inadvertently generated a learning environment muddied with dishonest behavior. Unfortunately, solutions to this problem will not be easy. Should duty hours be reduced further, without associated changes to how to deal with violations of the standards, we are likely to see increased resistance among residents and program directors and further amplification of dishonest behaviors regarding duty hours.

References

1 Lo V, Ward C. 2011 ACGME duty hour week proposal—a national survey of family medicine residents. *Fam Med*. 2011;43(5):318–324.
2 Reiter ER, Wong DR. Impact of duty hour limits on resident training in otolaryngology. *Laryngoscope*. 2005;115(5):773–779.
3 Shea JA, Weissman A, McKinney S, Silber JH, Volpp KG. Internal medicine trainees' views of training adequacy and duty hours restrictions in 2009. *Acad Med*. 2012;87(7):889–894.
4 Cull WL, Mulvey HJ, Jewett EA, Zalneraitis EL, Allen CE, Pan RJ. Pediatric residency duty hours before and after limitations. *Pediatrics*. 2006;118(6):e1805–e1811.
5 Choby B, Passmore C. Faculty perceptions of the ACGME resident duty hour regulations in family medicine. *Fam Med*. 2007;39(6):392–398.
6 Johnson NE, Maas MB, Coleman M, Jozefowicz R, Engstrom J. Education research: neurology training reassessed: the 2011 American Academy of Neurology Resident Survey results. *Neurology*. 2012;79(17):1831–1834.
7 Fitzgibbons SC, Chen J, Jagsi R, Weinstein D. Long-term follow-up on the educational impact of ACGME duty hour limits: a pre-post survey study. *Ann Surg*. 2012;256(6):1108–1112.
8 Mir HR, Cannada LK, Murray JN, Black KP, Wolf JM. Orthopaedic resident and program director opinions of resident duty hours: a national survey. *J Bone Joint Surg Am*. 2011;93(23):e1421–e1429.
9 Shea JA, Willett LL, Borman KR, Itani KM, McDonald FS, Call SA, et al. Anticipated consequences of the 2011 duty hours standards: views of internal medicine and surgery program directors. *Acad Med*. 2012;87(7):895–903.
10 Borman KR, Jones AT, Shea JA. Duty hours, quality of care, and patient safety: general surgery resident perceptions [discussion in *J Am Coll Surg*. 2012;215(1):77–79]. *J Am Coll Surg*. 2012;215(1):70–77.
11 Drolet BC, Spalluto LB, Fischer SA. Residents' perspectives on ACGME regulation of supervision and duty hours—a national survey. *N Engl J Med*. 2010;363(23):e34.
12 De Martino RR, Brewster LP, Kokkosis AA, Glass C, Boros M, Kreishman P, et al. The perspective of the vascular surgery trainee on new ACGME regulations, fatigue, resident training, and patient safety. *Vasc Endovascular Surg*. 2011;45(8):697–702.

13 Antiel RM, Thompson SM, Reed DA, James KM, Tilburt JC, Bannon MP, et al. ACGME duty-hour recommendations—a national survey of residency program directors. *N Engl J Med*. 2010;363(8):e12.

14 Fargen KM, Chakraborty A, Friedman WA. Results of a national neurosurgery resident survey on duty hour regulations. *Neurosurgery*. 2011;69(6):1162–1170.

15 Drolet BC, Christopher DA, Fischer SA. Residents' response to duty-hour regulations—a follow-up national survey. *N Engl J Med*. 2012;366(24):e35.

16 Lee DY, Myers EA, Rehmani SS, Wexelman BA, Ross RE, Belsley SS, et al. Surgical residents' perception of the 16-hour work day restriction: concern for negative impact on resident education and patient care. *J Am Coll Surg*. 2012;215(6):868–877.

17 Cohen-Gadol AA, Piepgras DG, Krishnamurthy S, Fessler RD. Resident duty hours reform: results of a national survey of the program directors and residents in neurosurgery training programs [discussion in *Neurosurgery*. 2005;56(2):398–403]. *Neurosurgery*. 2005;56(2):398–403.

18 Jamal MH, Doi SA, Rousseau M, Edwards M, Rao C, Barendregt JJ, et al. Systematic review and meta-analysis of the effect of North American working hours restrictions on mortality and morbidity in surgical patients. *Br J Surg*. 2012;99(3):336–344.

19 Volpp KG, Rosen AK, Rosenbaum PR, Romano PS, Even-Shoshan O, Canamucio A, et al. Mortality among patients in VA hospitals in the first 2 years following ACGME resident duty hour reform. *JAMA*. 2007;298(9):984–992.

20 Volpp KG, Rosen AK, Rosenbaum PR, Romano PS, Even-Shosan O, Wang Y, et al. Mortality among hospitalized Medicare beneficiaries in the first 2 years following ACGME resident duty hour reform. *JAMA*. 2007;298(9):975–983.

21 Shetty KD, Bhattacharya J. Changes in hospital mortality associated with residency work-hour regulations. *Ann Intern Med*. 2007;147(2):73–80.

22 Rosen AK, Loveland SA, Romano PS, Itani KM, Silber JH, Even-Shoshan O, et al. Effects of resident duty hour reform on surgical and procedural patient safety indicators among hospitalized Veterans Health Administration and Medicare patients. *Med Care*. 2009;47(7):723–731.

23 Volpp KG, Rosen AK, Rosenbaum PR, Romano PS, Itani KM, Bellini L, et al. Did duty hour reform lead to better outcomes among the highest risk patients? *J Gen Intern Med*. 2009;24(10):1149–1155.

24 Silber JH, Rosenbaum PR, Rosen AK, Romano PS, Itani KM, Cen L, et al. Prolonged hospital stay and the resident duty hour rules of 2003. *Med Care*. 2009;47(12):1191–1200.

25 Tabrizian P, Rajhbeharrysingh U, Khaitov S, Divino CM. Persistent noncompliance with the work-hour regulation. *Arch Surg*. 2011;146(2):175–178.

26 Maloney CG, Antommaria AH, Bale JF, Ying J, Greene T, Srivastava R. Factors associated with intern noncompliance with the 2003 Accreditation Council for Graduate Medical Education's 30-hour duty period requirement. *BMC Med Educ*. 2013;12:33.

27 Philibert I, Miller R, Heard JK, Holt K. Assessing duty hour compliance: practical lessons for programs and institutions. *J Grad Med Educ*. 2009;1(1):166–167.

28 Fletcher KE, Nickoloff S, Whittle J, Jackson JL, Frank M, Schapira MM. Why residents consider working beyond the duty hour limits: implications of the ACGME 2011 duty hour standards. *J Grad Med Educ*. 2011;3(4):571–573.

29 Grogan EL. Should I lie about my work hours this week? *J Am Coll Surg*. 2005;200(4):635–636.

30 Fahy BN, Todd SR, Paukert JL, Johnson ML, Bass BL. How accurate is the Accreditation Council for Graduate Medical Education (ACGME) Resident survey: comparison between ACGME and in-house GME survey. *J Surg Educ*. 2010;67(6):387–392.

31 Sticca RP, Macgregor JM, Szlabick RE. Is the Accreditation Council for Graduate Medical Education (ACGME) Resident/Fellow survey, a valid tool to assess general surgery residency programs compliance with work hours regulations? *J Surg Educ*. 2010;67(6):406–411.

32 Drolet BC, Sangisetty S, Tracy TF, Cioffi WG. Surgical residents' perceptions of 2011 Accreditation Council for Graduate Medical Education duty hour regulations. *JAMA Surg*. 2013;148(5):427–433.

33 Fargen KM, Dow J, Tomei KL, Friedman WA. Follow-up on a national survey: American neurosurgery resident opinions on the 2011 ACGME implemented duty hours. *World Neurosurg*. 2013 Aug 14. doi: pii: S1878-8750(13)01001-2. 10.1016/j.wneu.2013.08.015. [Epub ahead of print].

34 Carpenter RO, Spooner J, Arbogast PG, Tarpley JL, Griffin MR, Lomis KD. Work hours restrictions as an ethical dilemma for residents: a descriptive survey of violation types and frequency. *Curr Surg*. 2006;63(6):448–455.

35 Blum AB, Raiszadeh F, Shea S, Mermin D, Lurie P, Landrigan CP, et al. US public opinion regarding proposed limits on resident physician work hours. *BMC Med*. 2010;8:33.

36 Directive 2003/88/EC of the European Parliament and of the Council of 4 November 2003 concerning certain aspects of the organisation of working time. *Official Journal of the European Union*. 2003;L 299:9–19.

37 Ulmer C, Miller Wolman D, Johns MME; Institute of Medicine. *Resident Duty Hours: Enhancing Sleep, Supervision, Safety*. Washington, DC: National Academies Press; 2008.