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## Resident Duty Hour Limits Don't Improve Surgical Patient Safety



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A retrospective study published online in the *Journal of the American College of Surgeons* shows that work hour restrictions for resident physician, revised in 2011 mainly to reduce fatigue-related errors, have not decreased postoperative complication rates in several common surgical specialties.

"Our finding suggests the ACGME reform is not meeting its goal of improved patient safety in surgery," said lead investigator Ravi Rajaram, MD, MSc, a Resident Clinical Scholar at the American College of Surgeons (ACS). The 2011 resident duty hour reform was implemented by AGME (Accreditation Council for Graduate Medical Education), the accrediting and standards-setting body for about 9,500 U.S. medical residency programmes. Residents are medical school graduates who are training in a specialised area of medicine, including surgery.

The 2011 revision limits first-year residents to working at most 16 hours continuously and requires they be directly supervised by senior physicians at all times when in-house. These new standards also mandate at least 14 hours off work after a 24-hour shift. In addition, residents working 24-hour shifts may spend no more than four hours (instead of the former six hours) in transferring patients to another care provider, often called patient "handoffs."

"These restrictions impose obstacles for residents and their residency programmes," explained Dr. Rajaram, also a fellow with the Surgical Outcomes and Quality Improvement Center, Northwestern University Feinberg School of Medicine, Chicago, Ill. "Under the new policies, residents are handing off patients more often, and patient handoffs are one of the most common preventable causes of serious patient harm events."

For this study, patient outcomes data were obtained from the American College of Surgeons National Surgical Quality Improvement Program (ACS-NSQIP®). ACS NSQIP is the leading nationally validated, risk-adjusted, outcomes-based programme to measure and improve the quality of surgical care in hospitals.

Researchers analysed outcomes within 30 days of an operation — a combined measure of patients' deaths and serious complications — in five surgical specialties: neurosurgery, obstetrics/gynaecology, orthopaedic surgery, urology, and vascular surgery. The number of patients included in this study ranged from 22,158 in urology to 61,640 in vascular surgery during the three-year period examined.

In each of the five surgical specialties, researchers evaluated patient outcomes in the year before the 2011 reform, the first year after reform, the second year after reform, and both post-reform years combined. First, the researchers compared outcomes between teaching hospitals and nonteaching hospitals. The revised duty hours should not affect nonteaching hospitals, hence this group allowed the researchers to adjust for other factors that might affect surgical care universally over time, such as different medications or new medical technologies. This "difference-in-differences" statistical method allowed for a more accurate analysis of the correlation between duty hour policies and patient outcomes at teaching hospitals.

Additionally, the researchers controlled for other factors that could influence surgical outcomes, including patient demographics and pre-existing medical conditions.

Based on these adjusted analyses, Dr. Rajaram et al. found no significant association between the duty hour reform and the number of 30-day patient deaths and serious postoperative complications in the two years after reform, or either year separately, for any surgical specialty studied.

Source: [American College of Surgeons](#)

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