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The Impact of the 2011 New Duty Hours Regulations on EM Residents

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This past July, newly minted medical school graduates stepped into their new roles as physicians under the updated Accreditation Council for Graduate Medical Education (ACGME) duty hour restrictions. More restrictive than the prior duty hour changes in 2003, the purpose of the new restrictions has been to stress greater intern supervision and abbreviate intern work hours. The ACGME, as the accrediting body for advanced training programs, takes into account recent literature as well as the opinions from medical and patient-safety organizations to set standards that shape the resident learning and work experience. Based on the findings of several studies, including a 2008 study by the Institute of Medicine on resident duty hours¹, the ACGME was prompted to update their guidelines in an attempt to minimize errors by the most inexperienced physicians in teaching hospitals.

Though the most novice of physicians, interns frequently manage the majority of day-to-day patient care and are often the first-line responders when patients' conditions decline. Not uncommonly, interns previously worked the greatest number of hours. Multiple studies, both in simulation modules as well as in a clinical intensive care unit (ICU) setting have shown that sleep deprived interns made up to 36% more errors than their peers who work staggered 16-hour shifts.^{2,3} Thus, it is not surprising that the 2011 ACGME new regulations focus primarily on them. As of July 2011, interns may not work more than 16 consecutive hours and must have a minimum of 8 hours off before returning to work.

Though the new ACGME guidelines have led sweeping changes for many residency programs across the nation, emergency medicine (EM) residency programs, for the most part, will be minimally affected. Essentially no major ACGME changes have been made to emergency medicine (EM)-specific work week hours, as shifts continue to remain capped at 12 hours and cannot exceed a total of 60 hours per week. According to the University of California Irvine

Emergency Medicine Residency Director, Dr. Bharath Chakravarthy, "Overall the new duty hours do not affect emergency medicine programs in a significant way due to our shift schedule. Even prior to the implementation of the schemata, most EM programs across the country were already in compliance. Where we might see a change is in how our EM residents 'take call' during traditionally call rotations (surgery, ICU etc)." As Dr. Chakravarthy alludes, EM residents will be affected when venturing away from the ED for off-service rotations.

Traditionally, rotations such as trauma and ICU blocks required ED residents partaking in tradition call schedules (i.e. 30-hour calls every third or fourth night) which is where off-service EM residents has the potential to exceed 80 hours per week. Now, due to the new hour regulations, most of these departments have needed to adopt night float and shift systems. Dr. Matthew Dolich, the General Surgery Residency Director at University of California Irvine Medical Center (UCIMC), states, "We have had to restructure into a dedicated night-float system to ensure compliance. However, the seniors on our [Trauma] service are working about the same number of hours per week as before (approx 75), since there was little room for an increase anyway." According to Long Beach Memorial's Pediatrics Chief Resident Dr. Albert Khait, EM residents who rotate through the pediatric intensive care unit (PICU) will notice this rotation also has adopted a shift system, which "allows anesthesia interns to continue rotating in the PICU along with the UCI EM and the UCI pediatric residents." While these new shift-based systems minimize the number of consecutive hours an intern can stay on duty, the number of hours worked per week may essentially be the same in both as each resident still only gets an average of 1 day off a week. Furthermore, the new intern hours regulation creates more frequent patient handoffs, known to be one of most common sources of medical errors that occur in the emergency department.

Focusing on medical errors as a primary outcome, Dr. Christopher Landrian, an associate professor at Harvard School of Medicine, conducted a retrospective review of 2,000 medical charts from 2001 to 2007 and found no significant reduction in rates of harm after the implementation of the 2003 resident work hour limits⁴. Essentially one-fifth of all hospitalized patients continued to experience harm from medical errors despite the introduction of the 80-hour per week cap. While it may be too soon to determine if these new 2011 duty hour limits will reduce the incidence of medical errors in teaching hospitals, Dr. Chakravarthy assures “Emergency Medicine is fairly self sufficient with 24-hour in-house attending coverage which is a unique teaching concept that is inline with the ACGME’s move to put patient safety first.”

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