OPTIMIZING RESIDENT WORK SCHEDULES TO IMPROVE PATIENT SAFETY

A Report from the American College of Surgeons

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THE AMERICAN COLLEGE OF SURGEONS

Mission
Improving the care of the surgical patient and safeguarding standards of care in an optimal and ethical practice environment

History
Scientific and educational organization of surgeons founded in 1913. Parent of JC

Membership
Over 72,000 members; largest organization of surgeons in the world
Representation

THE 21\textsuperscript{st} CENTURY

- Competence, Quality & Safety
- Fellows will be challenged
- ACS Education Centers
- Simulation
- Team Training
STRENGTHS OF THE TRADITIONAL SURGERY RESIDENCY EDUCATION MODEL

- Acquisition of knowledge and skills through experiential learning
- Progressive transfer of patient care responsibilities from faculty to residents through longitudinal, immersive experiences; close faculty/resident interactions; mentorship and preceptorship; effective teamwork

STRENGTHS OF THE TRADITIONAL SURGERY RESIDENCY EDUCATION MODEL

• Exposure to the depth and breadth of elective and emergency surgery

• Mastery of skills to handle complex surgical problems under stressful conditions

• Integration of evidence-based scientific principles with the practice of surgery

SURGICAL SKILLS: THE DEVELOPMENT OF EXPERTISE

Specific Principles

• Deliberate practice
• Detailed, timely feedback
• Continuous improvement in performance resulting from experience and deliberate practice

Ericsson, Acad Med, 2004
KEY ISSUES RELATING TO OPTIMIZING RESIDENT WORK SCHEDULES TO IMPROVE PATIENT SAFETY

• Recognition of the impact of resident fatigue on delivery of optimal patient care and improvement in patient safety
• Consideration of resident fatigue within the larger context of other important factors that impact patient safety
• Need for careful study of the range of factors to deliver safe patient care and to offer residents in Surgery optimal education and training
IMPACT OF RESTRICTED RESIDENT WORK HOURS ON QUALITY OF SURGICAL CARE

• No measurable, statistically significant difference in the quality of surgical care, as assessed through NSQIP data

• Concerns about negative impact on continuity of care and loss of critical information with each hand-off

In Year 1, no significant relative changes in mortality for either medical or surgical patients.

In Year 2, odds of mortality decreased significantly in more teaching-intensive hospitals for medical patients only.

IMPACT OF RESTRICTED RESIDENT WORK HOURS ON PATIENT MORTALITY

- Improvements in mortality observed among patients admitted for infectious diseases and in medical patients > 80 years old
- No significant changes found in surgical patients

ADDITIONAL CONCERNS ABOUT RESTRICTED RESIDENT DUTY HOURS

• Inadequate educational experiences to address the cognitive elements, technical skills, and judgment in the current milieu of rapid scientific advances and development of new procedures and technologies
• Limited experiences of surgical residents, with insufficient focus on the whole patient
• Negative impact on the breadth and depth of surgical experiences, especially in emergency conditions, and on the continuum of care and team development
ADDITIONAL CONCERNS ABOUT RESTRICTED RESIDENT DUTY HOURS

- Apprehension about readiness of residents to enter practice and deliver optimal, safe care
- Dilution of patient-doctor relationships and insufficient professional development of residents
- Increased risk to patients from frequent handoffs outweighing any positive gains from care being provided by less fatigued residents
OTHER POTENTIAL UNINTENDED CONSEQUENCES OF RESTRICTED RESIDENT DUTY HOURS

• Negative impact on the surgical workforce needed to provide optimum care to patients and to ensure adequate access to surgical care, both for the present and the future

• Potential significant increases in health care costs to offset the decreases in the resident complement

• Untoward consequences on undergraduate medical education and other health care providers
RESIDENT PERSPECTIVE ON RESTRICTED DUTY HOURS

“Work-hour restrictions have failed to decrease resident stress, probably because we hold ourselves and our peers to extremely high standards and are trying to do the same amount of work, but more efficiently. I have not perceived a negative impact on patient care, but the logistical dilemma of maintaining the same level of patient care without increasing the number of residents per program is obvious.”
RESIDENT PERSPECTIVE ON RESTRICTED DUTY HOURS

“It is difficult and impractical to leave the hospital in the midst of providing direct care to the trauma or acute surgical patient, and doing so to meet hours requirements causes our education to suffer. Shift-work type concepts like “night-float” face this issue frequently during hand-off times.”

Jennifer Nelson, MD
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RECOMMENDATIONS FOR CONSIDERATION BY THE IOM COMMITTEE

- IOM should sponsor fully-funded, multi-institutional studies to evaluate the full impact of current reductions in resident duty hours and any changes considered for the future – The studies should focus on optimal duty hours to provide safe patient care of the highest quality, to achieve curricular objectives, and to minimize unintended consequences. IOM should disseminate evidence-based information from the studies
RECOMMENDATIONS FOR CONSIDERATION BY THE IOM COMMITTEE

- IOM should support the funding and use of advanced information technology and simulation at all levels of surgical residency education and systems of health care delivery.
- IOM should support team training initiatives with special emphasis on patient safety (similar to the CRM approach used in the aviation industry).
- IOM should investigate and support innovative approaches to support safe patient hand-offs.
RECOMMENDATIONS FOR CONSIDERATION BY THE IOM COMMITTEE

• Consideration should be given to exempting chief residents in Surgery from duty hour restrictions allowing them to function as professionals responsible for the total care of the patient, and teaching them to recognize and address fatigue through appropriate rest periods.

• Consideration needs to be given to removing the restrictive cap on CMS funded GME positions, to permit education and training of an appropriate workforce that is needed to care for patients.