RESIDENT TIMES
Issues that Impact Resident Work Hours and Patient Safety Volume 1, Number 2 Fall/Winter 2007

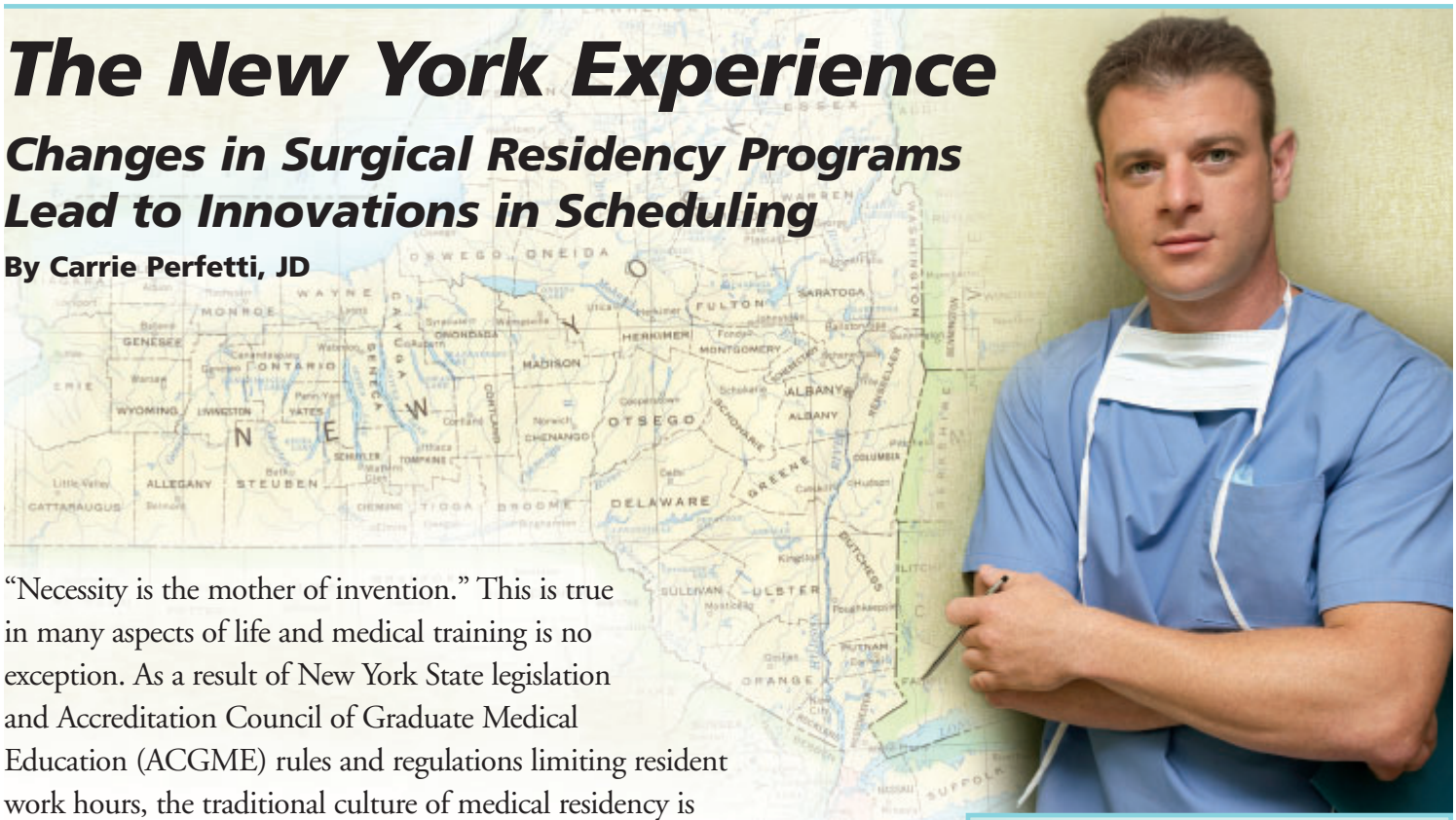
Welcome to the second issue of *Resident Times*

—a semi-annual newsletter, providing the graduate medical education community with factual information pertinent to resident work hours and patient safety.

The New York Experience

Changes in Surgical Residency Programs Lead to Innovations in Scheduling

By Carrie Perfetti, JD



"Necessity is the mother of invention." This is true in many aspects of life and medical training is no exception. As a result of New York State legislation and Accreditation Council of Graduate Medical Education (ACGME) rules and regulations limiting resident work hours, the traditional culture of medical residency is changing. Program developers are looking outside the box for innovative ways to schedule and meet work hour requirements.

Twenty years ago it was common for residents and interns to work 110 hours in one week and as much as 36 hours in one day. Recognizing the impact of this grueling schedule on patient safety, in 1989 New York State became the first and only state to pass a law limiting resident work hours. In 2000, New York further enhanced its commitment to the enforcement of these regulations by funding annual and complaint-driven investigations of New York's 122 teaching facilities. These investigations are completed by IPRO under a contract with the New York State Department of Health. In 2003, the ACGME adopted rules limiting resident work hours that extended work hour limits beyond New York State to all residency programs in the country.

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IN THIS ISSUE:

GRADUATE MEDICAL EDUCATION
Past, Present and Future

March 2007

US House of Representatives, the Committee on Energy and Commerce and its Subcommittee on Oversight and Investigations as part of an investigation into preventable medical errors, request that the Agency for Healthcare Research and Quality (AHRQ) consider pursuing a study of medical errors associated with physician and resident work schedules.

May 21, 2007

***ScienceDaily* – A research study, presented at the American Thoracic Society 2007 Conference, entitled "Approved Medical Resident Hours Still Resulting in Sleepy Doctors States,"** Medical residents working within the mandated maximum of 80 hours per week experience severe sleepiness, a finding that may have implications for both patient care and resident safety.

May 2007

Agency for Healthcare Research and Quality prompted by the House Energy and Commerce Committee, agrees to study medical errors associated with physician and resident work schedules.

May 2007

Senate Bill S.1481, Fair and Reliable Medical Justice Act, is introduced in the Senate. Its purpose is to restore fairness and reliability to the medical justice system and promote patient safety. This bill would foster alternatives to current medical tort litigation to promote disclosure of health care errors and provide fair and reasonable compensation to patients injured by health care errors, promote patient safety through disclosure of health care errors, and support and assist states in developing such alternatives.

August 2007

European Working Time Directive Legislation for Junior Doctors (Interns)—Change in interim limit of current average 58-hour maximum working week to an interim limit of an average 56-hour maximum working week.

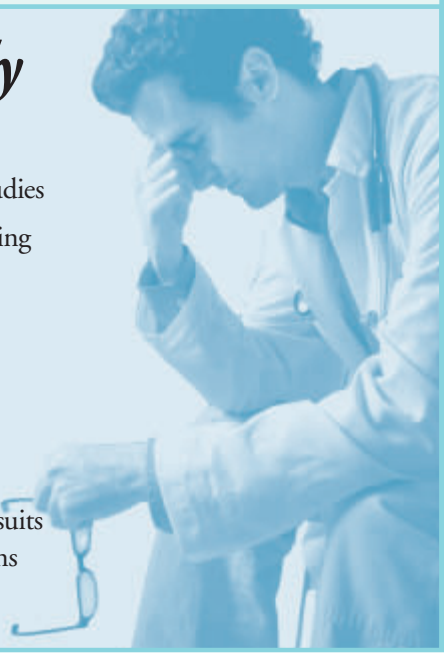
Effective August 2009—final deadline for the average 48-hour maximum working week and the maximum shift length is 11 hours.

ARTICLES OF INTEREST

- Okie, Susan, MD. "An Elusive Balance—Residents' Work Hours and the Continuity of Care." *New England Journal of Medicine* 356:2665. 8 Jun, 2007. Perspective.
- Yoon, Harry H., MD, MHS. "Adapting to Duty-Hour Limits—Four Years On." *New England Journal of Medicine* 356:2668. 28 Jun, 2007. Perspective
- Judith A. Owens, MD, MPH. "Sleep Loss and Fatigue in Healthcare Professionals." *Journal of Perinatal & Neonatal Nursing* 21(2):92-100. Apr/Jun, 2007.
- Jellinek, S P, Cohen, V, Cassera, F, Teperikidis, E, Nelson, M, Paris, B. "Encore Presentation: Changing Behavior of Medical Residents Toward Medication Reconciliation to Comply with National Patient Safety Goal." *Journal of the American Geriatrics Society* 55(4) SUPPLEMENT:S99. Apr, 2007.
- Parthasarathy, Sairam, MD, Hettiger, Kathleen, RPSGT, Budhiraja, Rohit, MD, Sullivan, Breandan, MD. "Sleep and Well-Being of ICU Housestaff." *Chest* 131(6):1685-1693. Jun, 2007.
- Clancy, Carolyn M, MD. "Putting the Patient in Patient Safety." *Journal of Patient Safety* 3(2):65-66. Jun, 2007.
- Kusuma, Sharat K, MD, MBA, Mehta, Samir, MD, Sirkin, Michael, MD, Yates, Adolph J, MD, Miclau, Theodore, MD, Templeton, Kimberly J, MD, Friedlaender, Gary E, MD, "Measuring the Attitudes and Impact of the Eighty- Hour Workweek Rules on Orthopaedic Surgery Residents." *Journal of Bone & Joint Surgery—American* 89-A(3):679-685. 1 Mar, 2007.
- Shetty, K D, Bhattacharya, J. (2007). "Changes in Hospital Mortality Associated with Residency Work-Hour Regulation." *ANN INTERN MED* 147(2):73-80. 17 Jul, 2007
- Barger LK, Ayas NT, Cade BE, et al. "Impact of Extended-Duration Shifts on Medical Errors, Adverse Events, and Attentional Failures." *PLoS Med* 2006. 3(12). <dx.doi.org/10.1371/journal.pmed.0030487>

What Potentially Lies Ahead?

- Release of additional work hour studies
- More states requiring public reporting of medical errors and near-miss incidents
- Greater public awareness of the connection between resident work hours, medical errors and patient safety risks
- An increase in medical liability lawsuits and malpractice insurance premiums



LEGAL WATCH

Resident Work Hours With A Safety Focus

With increased attention focused on the need for local and national legislation to promote patient safety, current studies are examining the multitude of processes that can contribute to medical errors and near-miss incidences. In 2000, the Institute of Medicine reported that medical error was a leading cause of death, accounting for 44,000 to 98,000 in hospital deaths in the U.S.[1] Based on current studies showing the impact of excessive work hours on patient safety, the potential exists to impose liability on GME program administrators for negligent supervision and direct negligent acts of residents in training that result in harm to patients and even third parties. The ideal solution, however, may be a move from a liability perspective to an environment that examines patient safety from a root cause analysis standpoint as a way of addressing the impact of excessive work hours on patient safety. A recent letter sent by the House Energy and Commerce Chair, referring to the study by AHRQ, states, "health care organizations need to create cultures of safety that promote responsibility, analysis and prevention of error."[2]

According to a comprehensive review of work hour studies provided by members of the American Medical Association's Resident and Fellow Section, studies are looking at the effect of limiting extended work shifts on resident safety.[3] In a nationwide study, 2,737 interns completed monthly reports on number of extended work-shifts, motor vehicle crashes, near-miss incidents, and episodes of falling asleep at the wheel. The study found that additional extended work shifts increased the risk of a crash during a commute home from work by 16.2%. The risk of needle sticks or lacerations by a sharp object was also evaluated and those injuries were determined to be more likely to occur during extended work shifts rather than normal work shifts. Sixty-four percent of interns reported lapse in concentration and 31% reported fatigue as contributing factors to the injuries.[4]

While studies have had varying results and findings, current articles citing these studies indicate that there is not sufficient data to prove a direct connection between reducing work hours and improved patient safety. However, with the possible impact of excessive work hours on patient safety, the medical community is becoming increasingly aware of the need to balance restricted work hours with resident education.

An argument against reducing resident work hours is that it increases handoffs and results in loss of continuity of care having a direct effect of increasing medical errors. While this addresses a valid issue, this argument overlooks the counter-argument that improving handoff communication is the essential solution rather than increasing resident work hours.[5] Improving handoff communication not only enhances the exchange of information to incoming residents, thus limiting the potential for errors, but it enhances the educational process overall. Another area that has been addressed is the impact of ancillary staffing issues in

WEB RESOURCES

Resident work hour news, discussions, and current projects can be further researched at the following Web sites:

www.amsa.org Information regarding campaigns, and legislative lobbying being done by the American Medical Student Association.

www.acgme.org ACGME Resident Work Hour Reports and useful links for Residents and Program Directors.

www.hourswatch.org Sponsored by the Committee of Interns and Residents, and the American Medical Student Association, who together monitor and lobby for work hour enforcement.

http://sleep.med.harvard.edu Harvard Medical Sleep Study department with information regarding resident work hours and fatigue.

facilities as having direct impact on patient safety as well as providing an environment of non-compliance with resident duty hours. In these situations, the increase in resident hours resulting from staffing shortages did not provide any educational value to residents, but rather filled a gap in areas where available ancillary support staff was lacking.

[1]To Err is Human: Building a Safer Health System, *Institute of Medicine, National Academy Press,* Nov. 1999

[2]http://www.aafp.org/online/en/home/publications/news/news-now/resident-studentfocus/20070418dutyhoursstudy.html

[3]http://jama.ama-assn.org/cgi/content/full/296/9/1055

[4]For a complete reading of these studies, please see above Web site.

Recent law may extend liability for driving injuries caused by sleepy Residents

According to Maggie's Law, a New Jersey statute, a sleep deprived driver who has been awake for more than 24 hours and causes injuries can be convicted of criminal liability.

For full reading of this text please see: "Maggie's Law Underscoring Importance of Corporate Fatigue Management," *Insurance Journal* 12 Aug, 2003. <http://www.insurancejournal.com/news/nationa/2003/08/12/31404.htm>

Update on Brewster v. Rush Presbyterian—Appeal Pending

A pending State of Illinois Supreme Court review of Brewster v. Rush Presbyterian will re-examine potential hospital liability for third party injuries caused by a drowsy resident driver. It should be noted that the holding in the case is specifically relevant to Illinois which deems the employer not liable for the off duty actions of the employee. As discussed in one commentary, other jurisdictions have had different findings (i.e. Texas, Oregon and California). A similar set of facts in those jurisdictions could lead to a very different conclusion, thus the appealed Brewster case may very well lead to a different conclusion as well.

FURTHER READING

"Focusing on Near Miss can Bring Major Improvements." *ACP Observer* Sep, 2005. <http://www.acponline.org/journals/news/sep05/nearmiss>

"National Study of Medical Interns Finds Majority Exceed Work Hour Limits: Link Made Between Needle Stick Injuries and Long Shifts," *AHRQ* Press Release, 6 Sep, 2006. <http://www.ahrq.gov/news/press/pr2006/needlestpr.htm>

"Safety of Medical Residents' Long Hours Questioned," *NPR* 12 Jul, 2007 <http://www.npr.org/templates/story.php?storyId=4512366>

"Are Residents' Extended Shifts Associated With Adverse Events?" *PloS Medicine Journal* 12 Dec, 2006.

"Adapting to Duty-Hour Limits—Four Years." *N ENGL J MED* 356;26. 28 Jun, 2007.

The New York Experience

Continued from page 1

Changes in Residency Programs in New York State

Organization-wide shifts in attitude toward work hour regulations have trickled down to individual programs. Abandoning the more traditional every third night (Q3) call schedule, surgery programs are adopting innovative strategies for scheduling

Over the last five years, IPRO has seen changes in surgical program scheduling. Use of a team approach for coverage of call for all team patients (12 hour shifts) is one of them. For example:

- Residents work on a team comprised of different PGY levels. The team is responsible for providing 24-hour coverage of their patient load. On a six resident team, three residents (one from each PGY level) would work the day coverage and the other three would cover the night shifts.
- Use of Night Floats—While this system hasn't been historically used in surgical programs, as of 2005, six surgical programs were using this system as a way of providing 24-hour coverage for their service.
- Use of Physician Extenders—including Nurse Practitioners and Physician Assistants—for beeper-call coverage.

Innovations in scheduling have not been isolated to call schedules alone. Changes in conference presentation has led to the use of PowerPoint presentations posted online to provide a creative solution for educating post-call residents. These presentations are accessible for review at any time allowing post-call residents to go home following call and still receive the educational component. Similarly, some facilities videotape or videocast Grand Rounds for post-call residents.

The New York Experience: Continued Improvements

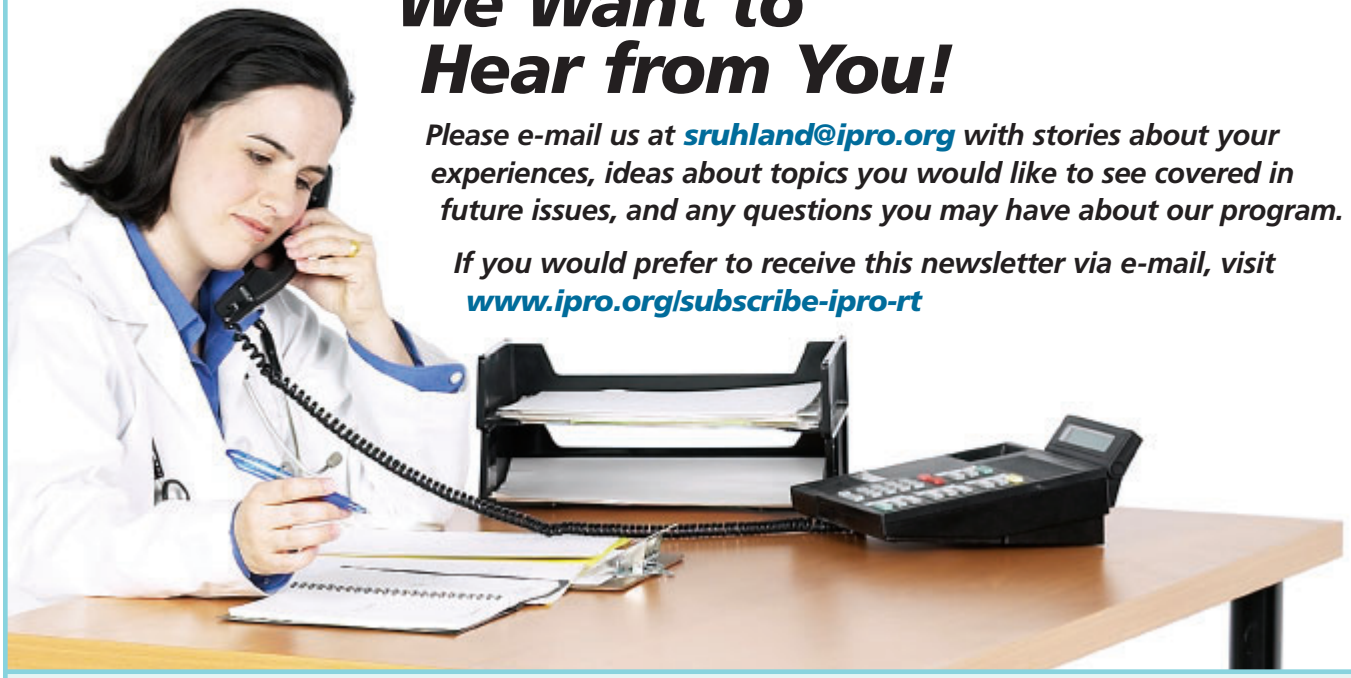
Compliance with work hour regulations has steadily improved in New York from 2001 to the present. Surgery continues to be the most frequently cited specialty area with violations of >24 consecutive hours. Increased compliance with the 24 consecutive work hour rule could directly impact future compliance overall.

Facilities should investigate alternative scheduling options when developing internal work hour policies to respond to problems identified. The scheduling options presented here are but a few alternative approaches to consider. Facilities should be cautioned to carefully review any scheduling pattern under consideration to ensure it meets facility and regulatory requirements.

IPRO remains a collaborative resource for facilities to use when looking at different scheduling options.

UPCOMING EVENTS OF INTEREST

- 2007 American Association of Medical Colleges (AAMC) Annual Meeting, November 2–7, 2007, Washington, DC **www.aamc.org**
- 19th National Forum on Quality Improvement in Health Care, December 9–12, 2007, Orlando, FL **www.ihi.org**
- American Medical Student Association (AMSA) 58th Annual Convention, March 12–16, 2008, Houston, TX **www.amsa.org**
- 2008 Association for Hospital Medicine (AHME) Spring Educational Institute, May 7–10, 2008, San Diego, CA **www.ahme.org**



We Want to Hear from You!

Please e-mail us at sruhland@ipro.org with stories about your experiences, ideas about topics you would like to see covered in future issues, and any questions you may have about our program.

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Resident Times is published twice yearly by the IPRO Hospital Compliance Department. Additional copies are available by calling 800-233-0360, extension 114.

Editors:

Ethelind Ade, RN, BSN, JD
Assistant Director, Hospital Compliance
eade@ipro.org
800-852-3685, extension 430

Sheryl Ruhland
Administrative Coordinator, Hospital Compliance
sruhland@ipro.org
800-233-0360, extension 114

IPRO Regional Office:
20 Corporate Woods Boulevard
Albany, New York 12211-2370

IPRO Corporate Headquarters:
1979 Marcus Avenue
Lake Success, New York 11042

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