

Bleary-eyed doctors may be better for patients

THE PHILADELPHIA INQUIRER

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Residents chat with an attending physician at Abington Hospital in 2005. TOM GRALISH / Staff Photographer

By David A. Asch and Sanjay V. Desai

Let's say your mother requires a colon resection due to a small cancer and has to be admitted to one of two hospitals in town. Both are well-respected teaching hospitals full of surgery residents - young doctors who have recently completed medical school and are training under the supervision of experienced surgeons. In both hospitals, the residents work no more than 80 hours a week. But in one, the residents sometimes work for 30-hour stretches, while in the other, they are not allowed to work more than 16 hours at a time.

Which hospital would you send your mother to? Obviously the second hospital, where the surgical residents are better rested. Right?

Wrong. Last week, the New England Journal of Medicine published results from the FIRST (for "Flexibility in Duty Hour Requirements for Surgical Trainees") Trial, a multicenter, randomized study of different work schedules for surgery residents. It revealed that patients were just as safe when restrictions on resident physicians' shift lengths were eliminated.

What's more, the residents working without the restrictions were much less likely to hand off care of a patient in the middle of an operation or recovery to another resident who didn't know the patient as well. Also, the doctors working the longer hours were less likely to believe their shifts would compromise patient safety or their development into capable surgeons.

In indicating that rigid shift limits for residents are no better for patients and might be worse, the study also reveals how we can use research to determine the best ways to train doctors, just as we use research to determine the best ways to treat patients. We would never rely on opinion or anecdote to treat someone with colon cancer; we would want to follow evidence from the best clinical trials. Why shouldn't we want the same kind of evidence to decide how to train the doctors who will treat those very patients?

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In many ways, this study examines issues that go back to 1984, when an 18-year-old college student named Libby Zion died at New York Hospital under the care of resident physicians. Her death began three decades of debate about doctors' hours and supervision and led to major policy changes.

Those debates have often focused on the "obvious" claim that resident physicians tired by long hours will make mistakes that harm patients. The Federal Aviation Administration prohibits airline pilots from flying for long periods without rest for the same reason. Good science supports this logic in the case of doctors, too, but it's only part of the story.

The airplane analogy breaks down because a pilot can be swapped out mid-flight, and the new pilot doesn't really need to know anything about the passengers in the cabin. But when a doctor at a busy hospital is swapped out for another, the new one needs to know a lot about all the patients in the beds being covered.

Shorter shifts mean more patient handoffs, so the doctor monitoring you at night or taking over in the morning might not know much about you. Patient handoffs turn out to be an important source of errors - perhaps a far more important source than fatigue.

A 2009 report on resident hours by the Institute of Medicine found research linking shift length to fatigue compelling and recommended shorter shifts to promote patient safety. But it also called for prospective trials to test those recommendations. The findings of the FIRST Trial justify that call for more testing.

This shouldn't be surprising. When the evidence before us reflects only one part of a highly complex system, such as the fatigue caused by longer shifts, we pay less attention to other considerations that might be just as important. These include the frequency of handoffs and night shifts, loss of continuity of care, and concern that shorter shifts might lead to less competent doctors, or doctors who are trained to watch the clock more than their patients.

These concerns might or might not be justified. But it's been more than 30 years since Libby Zion died, and until FIRST, we didn't have the kind of comprehensive trials we needed to find out. FIRST shows how research can dispel what may seem "obvious," and why we should demand proper research on issues as important as the health of our future patients and the competence of our future physicians.

We are part of a team leading a National Institutes of Health-funded trial called iCOMPARE (Individualized Comparative Effectiveness of Models Optimizing Patient Safety and Resident Education), which is almost identical to FIRST but focused on physicians training in internal medicine rather than surgery. FIRST and iCOMPARE are the two largest prospective trials in medical education history, and we hope they mark the beginning of a new era of evaluating our approach to medical training - and its consequences for the care of millions of patients a year - with the same rigor with which we examine our approach to medical care.

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