New limits on physician training hours could prove costly for US teaching hospitals

September 8 2011

The new limits on hours that physicians-in-training can work will prove costly for U.S teaching hospitals, which will need to spend up to $1.3 billion a year, and possibly more, to effect the changes, a new UCLA study suggests.

On July 1, the Accreditation Council for Graduate Medical Education (ACGME), the national body charged with overseeing the training of junior doctors as they complete their specialty training, put into effect strict duty-hour limits on interns and medical residents and instituted related changes to the training environment.

These reforms are intended to reduce medical errors by physicians-in-training at teaching hospitals that result from fatigue due to long work hours, though the changes do not assure a reduction in error rates.

The new UCLA study, published online in the Journal of General Internal Medicine, estimates that teaching hospitals nationwide will have to spend an aggregate $400 million to $1.3 billion each year to carry out the new hour limits and related changes. But some hospitals might have trouble coming up with the money to do it.

"Given the effort and money that teaching hospitals are investing in implementing these new duty-hour limits, many people hope that these changes will reduce the numbers of patients being harmed by medical errors, as well as the number of residents falling asleep at the wheel after long hours on duty," said lead study author Dr. Teryl Nuckols, an

associate professor of medicine in the division of general internal medicine and health services research at the David Geffen School of Medicine at UCLA. "Our analysis shows that if the reforms are successful, they are likely to be a good value for the money from the societal perspective."

"However, some teaching hospitals may struggle with the cost of implementing the reforms because there is no funding for doing so," she added.

Under the new guidelines, first-year residents, also known as interns, can work a maximum of 16 hours continuously and must have on-site supervision at all times. More senior residents can work up to 28 consecutive hours when they are "on call" in all but exceptional circumstances. Under previous guidelines, both interns and senior residents could work up to 30 consecutive hours.

Changes in the training environment include educating residents and faculty members about fatigue and patient safety; standardizing the process of giving residents increasing autonomy as they advance through training toward becoming fully qualified physicians; systematizing hand-overs of patient care as one physician comes off duty and another physician comes on; providing transportation or sleep facilities after extended shifts; and establishing annual site visits by the ACGME.

Drawing from published literature and publicly available data sources, the researchers created models to examine the costs of hiring substitutes to perform the work of residents and the potential effects of the changes on rates of harmful medical errors and their associated costs.

They found:

- The duty-hour changes will cost at least $177 million annually nationwide, based on the most optimistic assumptions about how changes might be implemented. However, under less optimistic assumptions, they could cost up to $982 million annually nationwide.
- The associated changes to the training environment will cost an additional $204 million annually nationwide.
- Considering the costs of the reforms and the benefits of reducing harmful medical errors, the reforms are likely to be considered cost-effective to society if medical errors fall by as little as 3 percent — a relatively modest decline. However, teaching hospitals would lose money by implementing the reforms unless errors decline to a much greater degree — at least 7.2 percent to 25.8 percent, depending on the cost of implementing the duty-hour changes.

The researchers also noted the ACGME's duty-hour limits are less expensive than those previously proposed by the Institute of Medicine, which would have cost $1.7 billion. Nevertheless, the price tag for these reforms is sizeable.

The study has some weaknesses, the researchers noted. For instance, while the analysis was able to consider the cost of different implementation strategies, the researchers do not yet know which strategies are best for preventing medical errors or for educating future doctors.

Provided by University of California - Los Angeles