Experts seek reforms to prevent errors from medical resident fatigue, lack of supervision

June 24 2011

A group of 26 of the nation's leaders in medicine, health care, patient safety, and research today called for sweeping changes in the design, supervision and financing of U.S. hospital residency care programs to protect patients from serious, preventable medical errors, and end dangerously long work hours for physicians in training.

In a set of recommendations published in the June 24 issue of the online journal Nature & Science of Sleep, the authors say the rules for residency training set to take effect on July 1 "stop considerably short" of best practices to ensure patient safety, and they call on hospital administrators and residency program directors to go much further to keep health care safe.

The report examining residency work hours, supervision, and safety is the product of a conference held last June at Harvard Medical School. The conference was convened to develop a road map for implementation of the Institute of Medicine (IOM) recommendations for residency reform published in 2009. The IOM report called for major changes in residency training programs, including eliminating shifts exceeding 16 hours without sleep for all resident physicians, but those recommendations have yet to be implemented.

"The current system amounts to an abuse of patient trust," says Lucian Leape, M.D., adjunct professor of health policy at the Harvard School of Public Health and a co-author of the report. "Few people enter a hospital expecting that their care and safety are in the hands of someone who has

been working a double-shift or more with no sleep. If they knew, and had a choice, the overwhelming majority would demand another doctor or leave."

Research shows that resident fatigue is a major contributor to the millions of medical errors that occur each year in the nation's hospitals. In April, a study in the journal Health Affairs showed that despite more than a decade of national focus on patient safety, medical errors occur as much as 10 times more than some previous estimates have indicated. A 2010 report from the HHS Inspector General's Office revealed that as many as 180,000 patients die each year due to harm resulting from medical care.

Christopher Landrigan, M.D., M.P.H., a co-author of the Harvard report and lead author of the recent and widely cited North Carolina Patient Safety Study, says rates of harm due to medical error have been relatively constant. "Adoption of even the best proven interventions to reduce medical errors – including elimination of shifts exceeding 16 consecutive hours for resident physicians – has been extremely poor."

Besides resident physician fatigue, the Harvard recommendations cover six other areas: workload and supervision; moonlighting; resident physician safety; hand-over practices and training in quality improvement; monitoring and oversight of the Accreditation Council for Graduate Medical Education (ACGME), the body that oversees residency programs; and funding for reform implementation

Key recommendations include:

- Limiting all resident physician work hours to shifts of 12 to 16 hours;

- Making ACGME work-hour compliance a condition of participation for Medicare graduate medical education (GME) support.

- Identifying in real time when a resident physician's workload is excessive and additional staff should be activated;

- Requiring attending physicians to supervise all hospital admissions;

- Mandating in-house supervision for all critical care services, including emergency, intensive care and trauma services; and

- Making comprehensive fatigue management a Joint Commission National Patient Safety Goal. The recommendations note that "fatigue is a safety concern not only for resident physicians, but for nurses, attending physicians and other health care workers."

As of July 1, 2011, the ACGME has agreed to limit the shifts of first-year residents to no more than 16 hours without sleep. However, it will continue to permit shifts of 28 consecutive hours for more senior residents, including surgical residents, because, the ACGME says, these residents are more experienced.

"Extensive research has shown that experience does not overcome the need for sleep," says report co-author Charles Czeisler, Ph.D., M.D., chief of the Division of Sleep Medicine at Brigham and Women's Hospital, Boston. "There is no justification for maintaining unsafe work hours, other than that they're a good deal for hospitals. But they endanger patients, and they even endanger residents."

He says the ACGME has taken a "very limited" approach to the IOM's recommendations, noting that the ACGME's new rules will cover only "a

small fraction" of the resident workforce and not get at the root of the problem. In addition, ACGME enforcement is not rigorous enough, says Czeisler, because it relies heavily on self-regulation, and lacks external or public accountability.

Helen Haskell, founder of Mothers Against Medical Error in Columbia, S.C., and a member of the Harvard conference group, called the current residency training system "inhumane." Haskell's 15-year-old son died in 2000 as a result of a medical error while under the care of a resident physician. "If you have a system that is asking people to do something that is humanly impossible, as well as dangerous to themselves and to others, then you have a system that is deeply flawed," she says.

Teaching hospitals are loath to shorten resident work hours because of financial and staffing implications. If hours for residents are reduced, other staff – such as attending physicians or physician assistants – will need to step in. Although residents don't get paid for the additional hours they work, an attending physician or physician assistant would have to be paid.

However, Czeisler points out that Medicare already provides more than $9 billion a year to academic medical centers in GME funds that cover residents' salaries. He and his co-authors say re-designing training to eliminate dangerously long shifts, waste and inefficiency will produce savings that will help to offset the cost of hiring additional personnel if they are needed. Several hospitals featured in the Harvard report have done so successfully and could be models for others.

Among the expert group's other recommendations:

- Re-design resident workload requirements to maximize educational value. Much of what residents currently do – drawing

blood, filling out paperwork and starting intravenous lines adds to their heavy workload and is more appropriately done by other hospital personnel.

- Provide transportation to all residents who report feeling too tired to drive home safely. In addition, hospitals should automatically provide transportation for all residents who, for unforeseen reasons or emergencies, work consecutively for more than 24 hours.

- Include moonlighting in work hour limits. Hospitals should establish formal policies on moonlighting and actively monitor resident physician moonlighting.

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