

# Tired doctors make more mistakes

## *Experts call for system overhaul*



Fatigue isn't the only contributor to medical errors among medical residents. A new study finds that financial woes, family concerns and other elements of distress also play a major role in potentially fatal mistakes. Fatigue and distress among doctors are known causes of medical errors, but Mayo Clinic researchers say that theirs is the first study to show how each contributes to mistakes. And they recommend that distress be considered independently of fatigue when new training guidelines are considered.

"Changes to the process of physician training should address both resident fatigue and distress to improve resident and patient safety as both factors independently increase the risk of self-reported major medical errors," said lead researcher Dr. Colin P. West, a internist at the Mayo Clinic in Rochester, Minn. Fatigue, along with lower quality of life, burnout, depressive symptoms and other signs of distress, independently led to increased rates of self-reported major medical errors among internal medicine

residents, West said. "In fact, common levels of fatigue and distress are associated with double or triple the risk of these errors," he said.

This is an important distinction, West said, because most current efforts to reform medical training that are intended to promote resident and patient safety have focused on fatigue. "Our results support this, but suggest that specific attention to promoting resident well-being is needed as well," he said. "We don't know enough about effective ways to promote physician well-being, however, and further research is needed to answer this question." The report appears in the September 23/30, 2009 issue of the Journal of the American Medical Association (JAMA).



Medical mistakes are a serious issue. Nearly 100,000 people in the United States die each year from preventable medical errors, according to a report in 1999 from the Institute of Medicine. West's team used data from 430 internal medicine residents, who were surveyed quarterly from 2003 through 2008. The survey asked about their medical errors, if any, as well as quality of life, fatigue, burnout, depression and sleepiness.

Among the 378 doctors who answered questions about medical errors, 39 percent said they had made at least one major error. West's group found a connection between these errors and fatigue. For every point increase in the fatigue score, doctors were 14 percent more likely to make a medical error. In addition, for every point increase in the sleepiness score, doctors were 10 percent more likely to err. Medical errors were also linked to burnout, depression and overall quality of life, the researchers found.

Changes in how doctors are trained are making things better for doctors and safer for patients, said Dr. David J. Birnbach, a professor and vice provost of the University of Miami and associate dean and director of the UM-Jackson Memorial Hospital Center for Patient Safety at the Miller School of Medicine. "We've known for a long time that fatigue in anyone is bad, and medical personnel who are very fatigued tend to make more errors," he said. "We in the United States have made a dramatic change in the way we train residents to limit the number of hours they work. That's regulated at a federal level."

But more needs to be done, Birnbach said. "If you are distressed or fatigued, either of them will impact on your ability to function optimally," he said. "At the end of the day, you are going to make more mistakes. Medical errors kill people." Birnbach said he's concerned that, although residents are working shorter hours, no system exists to monitor whether they are tired or whether the hospital is complying with current regulations.

Also, he said, no mechanism is in place to deal with distress and fatigue among older practicing doctors, who make up the bulk of physicians. "We have not regulated the group that is most sensitive to sleep deprivation," he said. "We have no rules for the 65- or 70-year-old practitioner." Regulating the hours residents can work in training is "a good start," he said, "but eventually, we are going need to regulate everybody's hours in medicine to increase the safety."

In another report in the same issue of *JAMA*, doctors who participated in a program that included meditation, self-awareness exercises and stories of "meaningful clinical experiences" improved their well-being, had more empathy toward patients and were less "emotionally exhausted" or burned out, the researchers found. The study demonstrated that primary care physicians participating in a continuing medical education program that focused on self-awareness experienced improved personal well-being, including burnout and improved mood, the researchers wrote.

"They also experienced positive changes in empathy and psychosocial beliefs, both indicators of a patient-centered orientation to medical care," they said. Such changes are associated with positive patient associations, such as taking a patient's experience of illness into account and promoting patients' participation in care, the study concluded.