

Sleep-deprived nurses may struggle to remain vigilant during 12-hour shifts

June 8 2010

A small percentage of nurses struggle to remain vigilant during successive 12-hour shifts, according to a research abstract that will be presented Tuesday, June 8, 2010, in San Antonio, Texas, at SLEEP 2010, the 24th annual meeting of the Associated Professional Sleep Societies.

Results indicate that lapses of attention among [nurses](#) working successive 12-hour shifts ranged from zero to 48 lapses per vigilance test. Although half of nurses committed no more than one lapse, 10 percent of nurses had nine or more lapses during the testing period. Further analysis revealed that 39 percent of nurses had moderate lapses and seven percent had frequent lapses. Factors associated with lapses included sleep prior to shift, caffeine use and fatigue levels.

"There are a small percentage of nurses that appear to have impaired ability to maintain vigilance during a neurobehavioral test," said principal investigator Jeanne Geiger-Brown, PhD, RN, associate professor at the University of Maryland School of Nursing in Baltimore, Md. "The primary role of the nurse is to maintain a vigilant presence and detect subtle changes in patients' conditions in order to head off complications. Impaired vigilance can reduce their effectiveness."

The study also found that the average total sleep time between 12-hour shifts was only 5.5 hours. Night-shift nurses averaged only about 5.2 hours of sleep, and the quality of their sleep was extremely fragmented.

"We were surprised at the short duration of sleep that nurses achieve between 12-hour shifts," said Geiger-Brown. "Over 50 percent of shifts were longer than 12.5 hours, and with long commutes and family responsibilities, nurses have very little opportunity to rest between shifts."

The study involved 80 registered nurses who were working three successive 12-hour shifts, either day or night. Lapses and median reaction times were measured with the five-minute Palm Psychomotor Vigilance Test.

The American Academy of Sleep Medicine reports that shift work disorder occurs when complaints of insomnia or excessive sleepiness occur in relation to work hours that are scheduled during the usual sleep period. Total [sleep time](#) is typically curtailed by one to four hours in night and early-morning shift workers, and [sleep](#) quality is perceived as unsatisfactory. Excessive sleepiness usually occurs during work shifts and often is accompanied by reduced alertness and impaired mental ability.

Geiger-Brown was the co-author of an article in the March issue of The Journal of Nursing Administration that proposed it may be time to end the practice of scheduling 12-hour nursing shifts. The authors reported that recent evidence of the safety risks involved with long work hours challenges the current scheduling paradigm.

Provided by American Academy of Sleep Medicine

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