Evidence indicates extended work hours are a hazard to patients as well as to nurses. Now two nursing professors who have studied nurses’ working conditions call for alternatives to 12-hour shifts and urge the profession to rethink their extensive use.

“Nurses often prefer working a bunch of 12-hour shifts and then having lots of time off. But there is a big downside, as studies have shown,” Jeanne Geiger-Brown, RN, PhD, told OR Manager. “Nursing fatigue with 12-hour shifts is quite profound. And we know fatigue produces a lot of adverse consequences for patients and nurses.” She issued the challenge with Alison Trinkoff, RN, ScD, FAAN, in the Journal of Nursing Administration. Both are on the faculty of the University of Maryland.

Among findings are that 12-hour shifts increase the risks of needlestick injuries, musculoskeletal disorders, errors, and drowsy driving (sidebar, p 16).

Twelve-hour shifts started in the 1970s when there was a severe nursing shortage. Nurses themselves came up with the idea of 12-hour shifts as a way to solve the problem. They have since become a way of life in hospitals.

**Nurses, hospitals see advantages**

Advantages of 12-hour shifts are that nurses have more time off and fewer commutes. They also help nurses who have difficulty leaving on time at the end of their shift because of the need to finish charting and other work.

“If you can’t extricate yourself, it’s better to do that 3 days a week than 5 days a week,” Geiger-Brown notes.

Hospitals also see advantages. On nursing units, they have to schedule only 2 shifts instead of 3. That also means fewer handoffs, which have been linked to missed communication, though the effect of fewer handoffs on patient safety hasn’t been studied.

**Consequences of fatigue**

Among the effects of fatigue, nurses who work 12-hour stints consecutively can become sleep deprived. In a new study, Geiger-Brown found nurses who work a string of 12-hour shifts averaged just 5.5 hours of sleep. Those who work nights slept an average of only about 5.2 hours, and some slept only 2 hours.

Night-shift nurses have to fight their “circadian pacemaker,” biorythms that cause people to be awake during the day and sleep at night.

Some nurses realize they suffer ill effects from long shifts and leave the hospital for other work settings. But many are not aware of the toll fatigue takes on their ability to function. Sleep deprivation also has health
effects including hypertension, diabetes and impaired glucose tolerance, obesity, heart attack and stroke, unhealthy behaviors, and depression, the nurse researchers say.

**What can managers do?**

Doing away with 12-hour shifts would put nurse managers and administrators in a bind, Geiger-Brown acknowledges. The shifts are popular, and managers and administrators are often evaluated on staff satisfaction and recruitment and retention.

She suggests strategies nurse leaders can use to mitigate the risks.

- **Consider that some nurses should not work 12-hour shifts.** Among these are nurses with chronic illnesses such as diabetes, hypertension, epilepsy, and cancer or who are pregnant, making them especially vulnerable to fatigue.
- **Ensure nurses end their shifts on time.** “In my study, 12-hour shifts actually were 12½ hours, but 50% of shifts were much longer—a lot were 13 or 13½ hours,” Geiger-Brown says.
- **Avoid having night-shift nurses stay for meetings at 7:30 am.** “Night nurses have a limited reservoir of wakefulness to drive safely,” she says.
- **Keep a fund for cab rides.** A nurse who feels too tired to drive can use the funds to take a taxi home and back to work. “Nurses don’t use it a lot, but it certainly could save their life or someone else’s life on the highway.”
- **Make sure nurses take their breaks.** “We found in our study that nurses would work a 12-hour shift without taking a lunch break,” she says. Not only are breaks mandated by law, “they show basic human respect and are necessary for employee well-being.”
- **Examine your unit’s culture.** On some units, nurses always take their breaks and get out on time. On others, they gut it out and stay over. “Nurse managers are in a prime position to look at the culture of their unit and make nurses’ health a high priority,” Geiger-Brown advises.

**Professional guidelines**

The American Nurses Association (ANA) and AORN have statements on nurse work schedules and fatigue.

ANA’s statements generally say that employers and RNs have a responsibility to be sure work schedules provide for adequate rest and recuperation.

AORN’s guidance statement on safe call practices offers a framework for developing and implementing a call schedule that considers staff and patient safety.

AORN also has a position statement advising that perioperative RNs not be required to work for more than 12 consecutive hours in a 24-hour period and not more than 60 hours in a 7-day period, consistent with a recommendation from the Institute of Medicine. Exceptions, such as disasters, should be outlined in organizational policy. ◊

References


Literature on 12-hour shifts

Long hours worked
An analysis of logs kept by 393 nurses about their work found:
- 31% worked shifts of 12.5 hours or more.
- 14% reported working 16 or more consecutive hours at least once during the 4-week period.
- Nurses left on time at the end of their shift less than 20% of the time.
- The likelihood of an error was 3 times higher when nurses worked shifts of 12.5 hours or more. Risks of errors began to increase when shifts exceeded 8.5 hours.


A study of 2,273 RNs documented:
- More than half of hospital nurses typically worked 12 hours or more a day and more than 50 hours a week.
- Nurses were likely to work many days in a row without enough rest between shifts and during time off.


Long shifts and fatigue
The Institute of Medicine noted strong evidence linking long work hours (more than 12 hours in a 24-hour period, more than 60 hours in 7 days, rotating shifts, and insufficient breaks) to:
- slowed reaction time
- lapses in attention to detail
- errors of omission
- compromised problem solving
- reduced motivation
- decreased energy for completing required tasks successfully.

The institute recommended that nurses work no more than 12 hours in a 24-hour period and no more than 60 hours in a 7-day period.


Needlestick injuries
- Odds of a needlestick injury increased significantly when nurses worked 12 or more hours.
- 37% of these injuries were from contaminated or possibly contaminated needles.

Musculoskeletal injuries
• Odds of injuries increased in nurses working 12+ hours a day, even after adjusting for physical and psychological demands of the job.

Drowsy driving
• Nurses working 12.5 hours or more had twice the odds of drowsy driving and of a collision or near miss compared with those working 8.5–hour shifts.