

Better sleep: Antidote to on-the-job fatigue

Everyone benefits when healthcare workers get adequate sleep.

By Claire C. Caruso, PhD, RN

Getting enough good-quality sleep each day is important not just for nurses' personal health and safety but for patient safety, too. Like the basic need to eat and drink, the need to sleep is critical for maintaining life and health—and for working safely. Sleeping 7 to 8 hours per night is linked to a wide range of better health and safety outcomes. Long work hours and shift work, in contrast, are tied to sleep disturbances and health and safety risks for nurses, including declines in mental function and physical ability, reduction in immunologic function, and higher rates of depression, injury, heart disease, GI disorders, mood disturbances, and cancer. Multiple studies have found that performance in a person who has been awake for 17 hours or more resembles that of someone with alcohol intoxication.

Negative effects of fatigue extend to employers, who lose an estimated \$2,000 to \$10,000 per employee annually from reduced productivity, increased errors, absenteeism, lack of full functioning at work, increased healthcare and worker compensation costs, and worker turnover due to disability, death, or resigning to take jobs with less demanding schedules. Risks extend to the community, as when a tired nurse makes a patient-care error or has a motor vehicle accident while commuting.

Obviously, sleep deprivation can have serious and even fatal consequences. Nurses, managers, and employers all share in the responsibility to reduce risks connected with fatigue. A 2010 study found the percentage of American healthcare workers who reported 6 or fewer hours of sleep per day (too little, according to sleep experts) increased from 28% in the mid-1980s to 32% in the mid-2000s. So it's likely that a growing number of nurses aren't getting enough sleep.

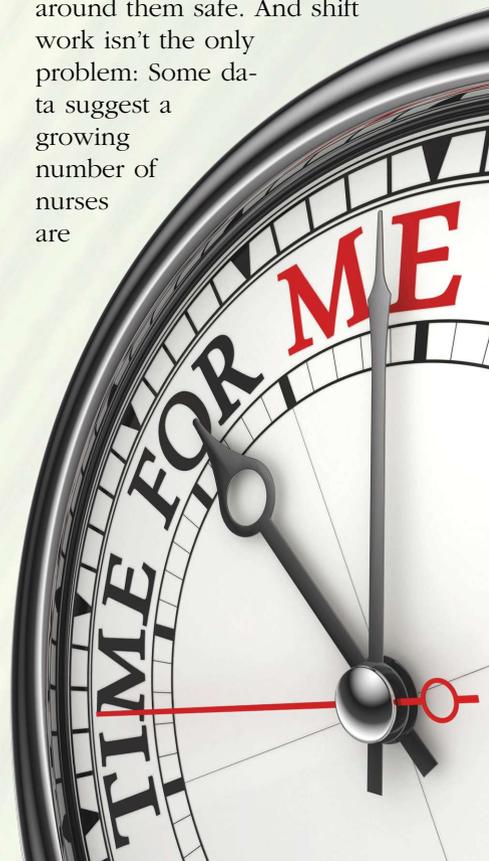
Probable causes

What factors are driving this trend? For starters, a lack of knowledge about the importance of sleep. Sleep rarely is covered in basic nursing education programs or continuing education programs. The resulting knowledge gap leads to a misconception about sleep—namely, that longer experience with sleep deprivation plus motivation and dedication to the job help people function satisfactorily when they don't get enough sleep. Recent studies provide evidence against these notions.

Work demands also affect sleep. The timing of work shifts can strain a nurse's ability to get enough sleep. Working nights or irregular hours runs counter to the body's natural tendency. Human beings are hard-wired to sleep during the night, be active during the day, and retire

and arise at similar times day after day. Yet healthcare facilities require a nursing workforce around the clock to ensure vital patient-care services. Shift work (any shift outside the normal daylight hours of 7 A.M. to 6 P.M.) is linked to poorer sleep, circadian-rhythm disturbances, strains on family and social life, injuries, and a wide range of illnesses.

Because shift work can't be eliminated for nurses altogether, the challenge is to develop strategies to make critical nursing services available around the clock while keeping nurses healthy and everyone around them safe. And shift work isn't the only problem: Some data suggest a growing number of nurses are



being asked to work long hours. Every extra hour on the job is one less hour available to attend to off-the-job responsibilities and personal needs. When your day is too full, sleep often gets the short end of the stick.

General guidelines to prevent fatigue

The National Institute for Occupational Safety and Health (NIOSH) suggests managers and employers consider the following strategies to reduce fatigue-related workplace risks.

- *Rest periods between shifts.* Establish at least 10 consecutive hours per day of protected off-duty time so workers can get 7 to 8 hours of sleep.
- *Rest breaks during shifts.* Frequent brief rest breaks (every 1 or 2 hours) during demanding work are more effective against fatigue than a few longer breaks. Providing longer meal breaks helps, too.
- *Shift lengths.* Usually, five 8-hour shifts or four 10-hour shifts per week are tolerable. Depending on an employee's workload, 12-hour days may be tolerable if combined with more frequent interspersed rest days. During the evening and night, shorter shifts (such as 8 hours) are better tolerated than longer shifts.
- *Workload analysis.* Analyze work demands with respect to shift length. Twelve-hour shifts are more tolerable for lighter tasks, such as desk work.
- *Rest days.* Plan one or two full days of rest to follow five consecutive 8-hour shifts or four 10-hour shifts. Consider two rest days after three consecutive 12-hour shifts.
- *Training.* Provide training to make workers aware of the pros and cons of shift work, as well as the resources available to help them cope with schedule-related problems.
- *Incident analysis.* Examine near-misses and incidents by nurses to determine the role (if any) of fatigue as a root cause or con-

Fatigue resources from NIOSH

At the National Institute for Occupational Safety and Health (NIOSH), an active community of scientists is working on several projects aimed at reducing risks associated with long work hours and shift work. Current studies and projects include:

- research on new methods to better measure work hours
- surveillance of work hours and sleep to better understand the extent of the problem
- studies to estimate risks to workers and employers
- training interventions to educate staff nurses and nurse managers (as well as other workers) affected by shift work and long work hours.

For more information on this topic, including strategies for improving sleep and alertness for individual nurses and organizations where nurses work, see the NIOSH web page on work schedules (www.cdc.gov/niosh/topics/workschedules). As new training programs and other resources become available, they will be listed on this website.

tributing cause to these incidents.

Joint Commission weighs in

In December 2011, the Joint Commission issued a sentinel event alert about healthcare worker fatigue and patient safety. The alert provided the following suggestions for healthcare organizations for reducing fatigue-related risks:

- Examine and improve work schedules, staffing, and the patient hand-off process.
- Consider the possibility of fatigue in all adverse events.
- Involve staff members in designing their schedules.
- Create and implement a fatigue-management plan.
- Educate staff about sleep and fatigue.
- Support employees who work long shifts.
- For organizations that allow sleep breaks during the work shift, provide a good sleep environment and adequate release from work responsibilities.

How to help yourself

As a nurse, you can take certain steps to reduce your fatigue. Make sleep a priority and allow enough time to sleep. To prepare for sleep, avoid heavy foods and alcohol before retiring. Also, reduce intake of caffeine and other stimulants several hours before bedtime. Exercise routinely; staying physically fit can help reduce stress, maintain health,

and improve your sleep. Prepare a good sleep environment—dark, comfortable, quiet, and cool—to help you fall asleep quickly and stay asleep.

Finally, become educated about workplace fatigue to find ways to cope with it. For NIOSH information on sleep and work schedules, see *Fatigue resources from NIOSH*. If you experience ongoing sleep difficulties, seek help from an appropriate healthcare provider. ●

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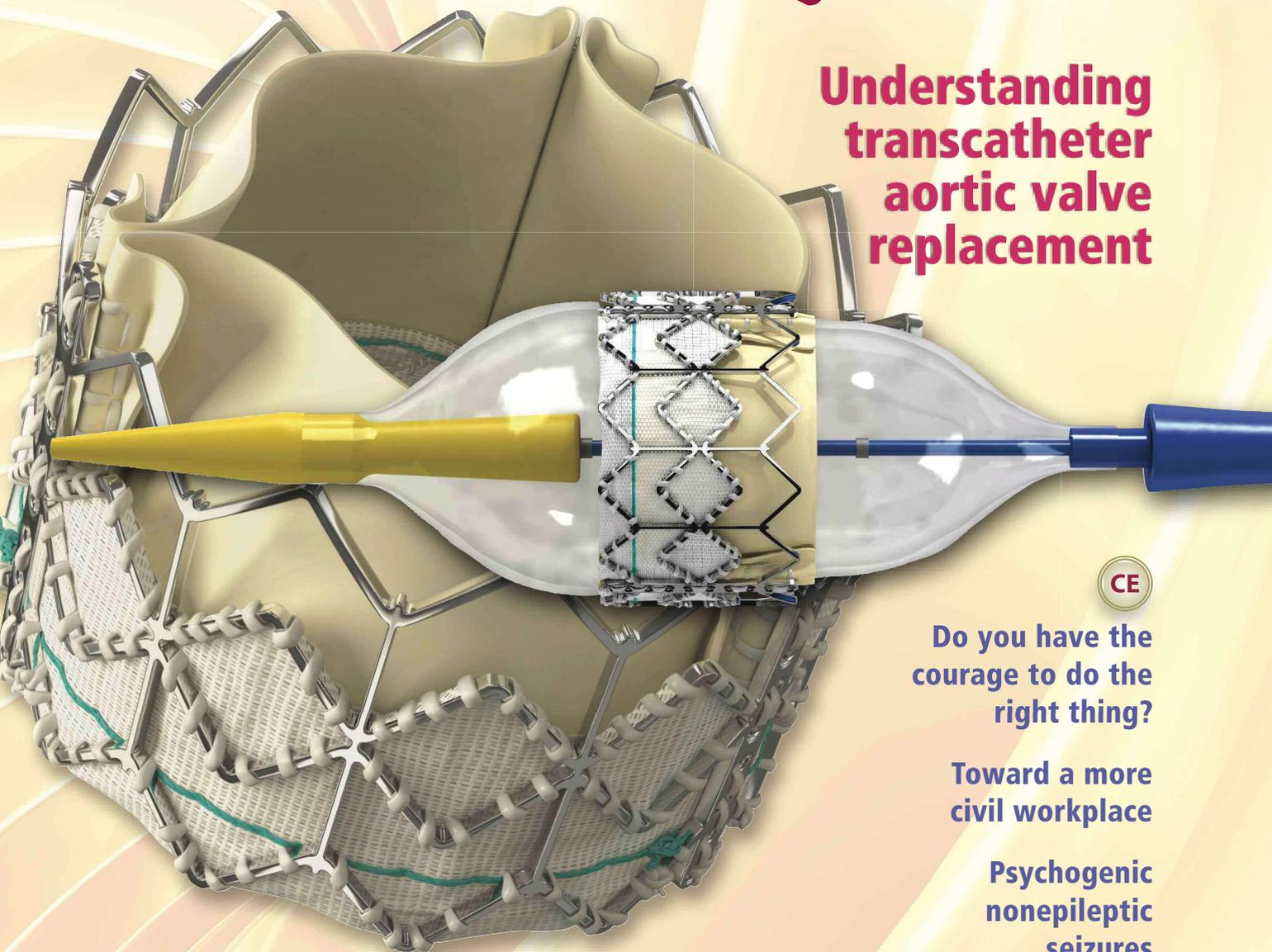
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