

Nurses sleep less before a scheduled shift, hindering patient care and safety

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Nurses sleep nearly an hour and a half less before work days compared to days off, which hurts patient care and safety, finds a new study by researchers at NYU Rory Meyers College of Nursing. The findings are

published in *Sleep Health*, the journal of the National Sleep Foundation.

"Nurses are sleeping, on average, less than recommended amounts prior to work, which may have an impact on their health and performance on the job," said Amy Witkoski Stimpfel, Ph.D., RN, assistant professor at NYU Rory Meyers College of Nursing and the study's lead author.

Nursing, especially in hospitals, is dominated by [shift work](#), with nurses working outside of the traditional 9-to-5 day in order to be at the bedside around the clock. Research shows that shift work takes a toll on circadian rhythms and can impair the performance of workers.

In addition, 12-hour shifts are common and often result in unexpected overtime to finish patient care tasks or charting. Taken together with commute times and domestic responsibilities, nurses often have limited time to sleep before or between shifts.

Sleep deprivation hurts workers' ability to handle complex and stressful tasks, and work-related sleep loss has led to serious errors in other industries, with the nuclear meltdown at Chernobyl as a particularly devastating example. In healthcare, fatigued nurses may be a risk for making critical mistakes in administering medication or making clinical decisions.

In order to better understand nurses' [sleep behaviors](#) and patient outcomes, Witkoski Stimpfel and her colleagues studied sleep duration and work characteristics among registered nurses to determine whether sleep duration influences quality of care and patient safety. The researchers used data from two surveys of 1,568 nurses collected in 2015 and 2016.

The nurses were asked how much sleep they usually get, including naps, in the 24 hours prior to a scheduled shift, as well as how much sleep they

usually get when they are not scheduled to work. They were also asked about the quality of [patient care](#) in their workplace. Patient safety was measured using the Agency for Healthcare Research and Quality (AHRQ) Hospital Survey on Patient Safety Culture.

Nurses reported getting, on average, just under 7 hours (414 minutes) of sleep prior to a work day and more than 8 hours (497 minutes) prior to a non-work day. Thus, the difference in sleep duration between work and non-work days was 83 minutes, or nearly an hour and a half less sleep before a work shift.

In addition, getting less sleep was associated with lower measures of patient safety and quality of care, a finding that may indicate several underlying issues. At the individual level, nurses who are sleeping less may be more fatigued at work, which may result in performance impairments. At the organizational level, if nurses are working in an environment that has frequent staffing shortages or high turnover resulting in unexpected overtime and long hours, [patient safety](#) may be compromised in part by tired, overworked nurses.

Can nurses "catch up" on sleep between shifts? Witkoski Stimpfel said it is unlikely.

"Research on chronic partial sleep deprivation in healthy adults shows that after several days of not getting enough sleep, more than one day of 'recovery sleep'—or more than 10 hours in bed—may be needed to return to baseline functioning. But considering a [nurse's](#) schedule, which often involves consecutive 12-hour shifts and may only offer one or two days off between shifts, the risk of complete recovery, or 'catching up,' is low," noted Witkoski Stimpfel.

The researchers note that more research on nurses' sleep is needed, but in the interim, healthcare leaders can use evidence-based scheduling

strategies, limit the use of overtime, and provide professional development on the importance of sleep for nurses.

"It is in everyone's interest to have nurses well-rested so they can perform their critical function within the healthcare system and keep patients safe," said Christine Kovner, Ph.D., RN, FAAN, Mathey Mezey Professor of Geriatric Nursing at NYU Meyers and the study's coauthor.

More information: Amy Witkoski Stimpfel et al, Nurses' sleep, work hours, and patient care quality, and safety, *Sleep Health* (2019). [DOI: 10.1016/j.sleh.2019.11.001](https://doi.org/10.1016/j.sleh.2019.11.001)

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