



Robert Wood Johnson Foundation

NEWS RELEASE  
August 3, 2015

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## **Working Overtime, Managing a Large Workload Increases Risk for Injury Among New Nurses**

*Young nurses, those working night shifts and longer hours at higher risk for needle sticks, muscle strains and sprains.*

Strains, sprains and needle sticks are among the most common non-fatal injuries associated with nursing, and research suggests that newly licensed nurses are at greater risk for these injuries than their more experienced counterparts.

A new study conducted by [RN Work Project](#), and published in the [International Journal of Nursing Studies](#), finds that the higher risk is associated with working longer hours and higher than average workloads. Amy Witkoski Stimpfel, PhD, RN, assistant professor at the College of Nursing, New York University, led the research team. The *RN Work Project* is funded by the Robert Wood Johnson Foundation.

Nurses who provide direct care frequently lift, turn, and transfer patients. They also inject medications and insert intravenous lines. These activities can result in muscle strains and sprains and inadvertent needle sticks. Despite national policy changes, new hospital regulations, and improvements in health care technology, these two types of injuries persist among health care workers, particularly those with fewer than five years of experience.

The *RN Work Project* research team found that nurses who worked nights and weekly overtime of eight hours or more reported needle stick injuries and strains and sprains more often than nurses who do not.

Needle-stick injuries were also more common among nurses who were younger than 30, had a higher than average workload, and lower than average autonomy (in this case, defined as the ability to work independently of others). Strains and sprains were more common among nurses who worked the night shift, had a higher-than-average workload, and were in poor health. Nurses working in geographical areas with more job opportunities for nurses than average also had a higher risk of muscle strains and sprains.

“The majority of newly licensed nurses working in the United States work 12-hour shifts and work overtime each week,” said Witkoski Stimpfel. “Even after controlling for other factors, we found that working overtime hours was associated with needle sticks and working night shifts

was associated with sprain or strain injuries. This suggests that more research is needed in this area to identify interventions that could reduce injury rates.”

The risk for strains and sprains was lower for nurses whose first nursing degree was a BSN, who had higher-than-average job commitment, worked in hospitals with higher-than-average nurse-to-patient ratios, and who lived in places with higher unemployment rates.

The data the research team analyzed were drawn from the *RN Work Project*'s longitudinal study of newly licensed RNs, being conducted from 2006 to 2016. Data were collected by sending a 100-question survey to nurses. The final sample included 1,744 newly licensed nurses.

The other principal investigators on the team were Christine Kovner, PhD, RN, FAAN, Mathy Mezey Professor of Geriatric Nursing at the College of Nursing, New York University; and Carol S. Brewer, PhD, RN, FAAN, UB Distinguished Professor at the School of Nursing, University at Buffalo. Kovner and Brewer direct the *RN Work Project*.

“New nurses experience many stressors, both physical and psychological, in their new professional roles,” said Kovner. “Interventions that reduce those stressors not only increase nurses’ safety, but also improve quality of care. Our study is part of a growing body of evidence that suggests newly licensed nurses should not work excessive overtime and should have limited night-shift work.”

“We did not ask questions about safety training or continuing education to help nurses avoid these kinds of injuries,” said Brewer. “Those might help mitigate such injuries, and research into that would be warranted. It would be worthwhile to investigate other modifiable risk factors, too, like the availability and use of safety equipment, such as patient lifts. Nurses’ fatigue and the quality and quantity of sleep they get would also be good areas for inquiry.”

The [\*RN Work Project\*](#) is a 10-year study of newly licensed registered nurses that began in 2006. It is the only multi-state, longitudinal study of new nurses’ turnover rates, intentions, and attitudes—including intent, satisfaction, organizational commitment, and preferences about work. The study draws on data from nurses in 34 states and the District of Columbia, covering 51 metropolitan areas and nine rural areas.

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