

Longer nurse tenure on hospital units leads to higher quality care

April 14 2014



Patients get the best care when they're treated on hospital units where nursing teams have been together for a long time, according researchers at Columbia University. Credit: Columbia University

When it comes to the cost and quality of hospital care, nurse tenure and teamwork matters. Patients get the best care when they are treated in units that are staffed by nurses who have extensive experience in their current job, according to a study from researchers at Columbia

University School of Nursing and Columbia Business School. The study was published in the current issue of the *American Economics Journal: Applied Economics*.

The review of more than 900,000 patient admissions over four years at hospitals in the Veterans Administration Healthcare System is the largest study of its kind to link nurse staffing to [patient outcomes](#). The researchers analyzed payroll records for each nurse and medical records for each patient to see how changes in nurse staffing impacted the length of stay for patients. Because length of stay is increased by delays in delivery of appropriate care and errors in care delivery, a shorter length of stay indicates that the hospital provided better treatment. At the same time, a shorter length of stay also makes care more cost-effective. The study found that a one-year increase in the average tenure of RNs on a hospital unit was associated with a 1.3 percent decrease in length of stay.

"Reducing length of stay is the holy grail of hospital management because it means patients are getting higher quality, more cost-effective care," says senior study author Patricia Stone, PhD, RN, FAAN, Centennial Professor of Health Policy at Columbia Nursing. "When the same team of nurses works together over the years, the nurses develop a rhythm and routines that lead to more efficient care. Hospitals need to keep this in mind when making staffing decisions – disrupting the balance of a team can make quality go down and costs go up."

While many hospitals rely on temporary staffing agencies at least some of the time to fill RN vacancies, the study found that it's more cost-effective for hospitals to pay staff RNs overtime to work more hours on their unit. RNs working overtime resulted in shorter lengths of stay than hours worked by nurses hired from staffing agencies, the study found.

Nursing skill also mattered, the study found. Length of stay decreased more in response to staffing by RNs than by unlicensed assistive

personnel. Furthermore, the study showed that length of stay increased when a team of RNs was disrupted by the absence of an experienced member or the addition of a new member.

"This rigorous econometric analysis of [nurse staffing](#) shows that hospital chief executives should be considering policies to retain the most experienced nurses and create a work environment that encourages nurses to remain on their current units," says the senior economist on the study team, Ann Bartel, PhD, Merrill Lynch Professor of Workforce Transformation at Columbia Business School.

The researchers used the VA's Personnel and Accounting Integrated Data for information on each nurse's age, education, prior experience, VA hire date, start date at the current VA facility, and start date for the current unit at that facility. To assess patient outcomes, the researchers used the VA's Patient Treatment File for information on each patient including dates of admission and discharge for each unit and for the overall hospitalization, as well as age and diagnoses. The final sample accounts for 90 percent of all acute care stays in the VA system for the fiscal years 2003 to 2006.

More information: The paper is titled: "Human Capital and Productivity in a Team Environment: Evidence from the Healthcare Sector," and it was published in April 2014.

Provided by Columbia University Medical Center

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