

Weekend Nurse Staffing Impacts Stroke Outcomes



Data from a recent study indicated that stroke patients treated at specialised units on the weekend have better outcomes when there is a higher registered nurse-to-bed ratio. The study, which covered 103 stroke units encompassing 56,666 stroke patients, was published in *PLOS Medicine*.

Researchers investigated claims that mortality rates were higher for stroke patients admitted over the weekend, said lead author Benjamin D. Bray, MRCP, of King's College London and the Royal College of Physicians in the United Kingdom. They utilised data taken from two datasets on stroke care in England: one relating to administrative data and the other involving patient characteristics and processes of care.

Weekend nurse staffing was among the variables explored in the study. Bray's research team also investigated the relationship between the number of days per week rounds occurred with stroke specialist clinicians and mortality outcomes.

Data analysis showed no remarkable difference in stroke unit mortality outcomes when specialist physicians did rounds fewer than seven days a week, Bray explained. The research team, however, observed a significant difference in outcomes in relation to nurse staffing. Where there were 1.5 nurses per 10 beds, Bray noted, there was an equivalent of one excess death per 25 admissions compared to units where there were three or more nurses per 10 beds.

Data on Mortality Rates

In addition, stroke units where fewer than 1.5 nurses per 10 beds on the weekend had seven-day mortality rates of 7.1 percent, 30-day mortality rates of 14.6 percent and 90-day mortality rates of 20.3 percent. The same mortality rates were observed in stroke units where nurse staffing on weekends ranged from 2.9 nurses down to 1.5 nurses per 10 hospital beds, according to the authors.

In contrast, stroke units with higher weekend staffing (i.e., three nurses or more per 10 beds) had a seven-day mortality rate of 4.5 percent, a 30-day mortality rate of 10.2 percent and a 90-day mortality rate of 15.5 percent.

While staffing involves costs, Bray's team noted, the research data indicate higher weekend registered nurse-to-bed ratios in stroke units for better outcomes. The authors said that further research was necessary to investigate different models of physician-nursing staffing to impact outcomes in the most positive way possible.

Although data show that staff account for the bulk of healthcare spending (64 percent in the National Health Service), there remains very little research into the effect of clinical staffing levels on patient outcomes.

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