

MEDLINE Abstract

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BACKGROUND: Although nurses are the most likely first responders to witness an in-hospital cardiac arrest (IHCA) and provide treatment, little research has been undertaken to determine what features of nursing are related to cardiac arrest outcomes.

OBJECTIVES: To determine the association between nurse staffing, nurse work environments, and IHCA survival.

RESEARCH DESIGN: Cross-sectional study of data from: (1) the American Heart Association's Get With The Guidelines-Resuscitation database; (2) the University of Pennsylvania Multi-State Nursing Care and Patient Safety; and (3) the American Hospital Association annual survey. Logistic regression models were used to determine the association of the features of nursing and IHCA survival to discharge after adjusting for hospital and patient characteristics.

SUBJECTS: A total of 11,160 adult patients aged 18 and older between 2005 and 2007 in 75 hospitals in 4 states (Pennsylvania, Florida, California, and New Jersey).

RESULTS: Each additional patient per nurse on medical-surgical units was associated with a 5% lower likelihood of surviving IHCA to discharge (odds ratio=0.95; 95% confidence interval, 0.91-0.99). Further, patients cared for in hospitals with poor work environments had a 16% lower likelihood of IHCA survival (odds ratio=0.84; 95% confidence interval, 0.71-0.99) than patients cared for in hospitals with better work environments.

CONCLUSIONS: Better work environments and decreased patient-to-nurse ratios on medical-surgical units are associated with higher odds of patient survival after an IHCA. These results add to a large body of literature suggesting that outcomes are better when nurses have a more reasonable workload and work in good hospital work environments. Improving nurse working conditions holds promise for improving survival following IHCA.

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