

NURSE STAFFING

HIGHER RN STAFFING LEVELS ARE RELATED TO FEWER DEATHS OF PATIENTS WITH ACUTE MYOCARDIAL INFARCTION

Source

Person, S. D., Allison, J. J., Kiefe, C. I., Weaver, M. T., Williams, O. D., Centor, R. M., & Weissman, N. W. (2004). Nurse staffing and mortality for medicare patients with acute myocardial infarction. *Medical Care*, 42(1), 4-12.

Objective

To examine the relationship between nurse¹ staffing ratios and death in hospital of patients with acute myocardial infarction.

Background

To contain costs during the past decade, many hospitals have reduced their number of registered nurses (RNs) and increased their number of less qualified nursing personnel. As a result, there have been changes in the ratio of RNs to patients. Several studies have examined the relationship between nurse staffing levels and outcomes such as patient mortality on medical or surgical units. There has been little research focusing on the link between nurse staffing levels and outcomes for patients with a specific medical diagnosis such as acute myocardial infarction (AMI).

Methods

- This correlational retrospective study links national data on patients hospitalized with AMI from the Cooperative Cardiovascular Project in the United States with data on nurse staffing and other hospital characteristics from an American Hospital Association survey.
- The sample included 118,940 patients aged 65 and over from 4,401 hospitals.
- The main outcome measure was the death of the patient during hospitalization.

¹ In this study, 'nurse' refers to registered nurses (RNs) and licensed practical nurses (LPNs). The title for a practical nurse in Canada, with the exception of Ontario, is licensed practical nurse. In Ontario, the title for a practical nurse is registered practical nurse (RPN).

- Nurse staffing levels were measured by two separate variables: the ratio of full-time equivalent RNs to the average daily census (ADC) of patients in the hospital and the ratio of full-time equivalent LPNs to the ADC. For both RNs and LPNs, staffing ratios were reported in four categories, from the highest to lowest ratio of nurses to patients.
- Patient characteristics, treatment and hospital characteristics were considered when examining the relationship between nurse staffing levels and mortality.

Principal Findings

- Patients with AMI in hospitals with higher ratios of RNs to patients were less likely to die in hospital than patients in hospitals with lower ratios of RNs to patients.
- Patients with AMI in hospitals with higher ratios of LPNs to patients were more likely to die in hospital than those in hospitals with lower ratios of LPNs to patients.

What do the Study Findings Mean?

- Patients over 65 years of age with AMI may be less likely to die in hospital if cared for in environments with higher RN and lower LPN staffing.
- If the number of RNs on a unit is reduced, more patients with AMI may die.
- Patients with AMI benefit from RNs' knowledge, skill and clinical judgment.
- The more complex, acute and unpredictable the health care needs of the patient, the more necessary it is to have care provided by RNs.

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