

Correlation between patient claims data and work environment in Norwegian hospitals

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Introduction

Patient outcomes can be measured through different approaches and catch different problems: adverse events, patient safety culture measurements, patient safety climate measurements, patient claims, compensation for patient harms, quality registries etc. Health professionals, except patient claims and other systems where patients claim directly, report most of the events. There is a growing body of evidence for associations between the work environment and patient outcomes. A good work environment may maximize healthcare workers' efforts to avoid failures and to facilitate quality care that is focused on patient safety. It is therefore, of interest to evaluate whether there may be a correlation between work environment determinants and patient claims as indicator for patient harm.

Purpose/Methods

In an ecological study, involving most hospitals in Norway, patient claims from The Norwegian system for patient compensation were used as outcome data. In a multicenter study involving almost all Norwegian hospitals with more than 85 beds, information about nurses' perceptions of organizational characteristics were collected. Subscales from this survey were used to describe properties of the organizations through nurses' perceptions of the quality system, patient safety management, nurse-physician relationship, staffing adequacy, participation in hospital affairs, quality of nursing and patient safety. The average scores for these organizational characteristics were aggregated to hospital level, and merged with estimated probabilities for 30-day survival in and out of hospital (survival probabilities) from a national database. In this observational study, the relationships between the organizational characteristics (independent variables) and clinical outcomes (patient claims) were examined.

Results

This study showed that perceived staffing adequacy ($p=0.002$) and nurses' assessments of participation in hospital affairs ($p=0.01$) in hospitals with high hospital mortality ($p=0.004$), were correlated with high claim frequencies for hospital associated infections. Patient claims that involved activities before and after admission to hospital was not correlated to work environment determinants.

Conclusions

The study shows that there is a correlation between work environment in hospitals and serious patient claims and patient harms. Patient claim data can differentiate between the phases of patient flow through levels of the health services, and only patient claim data reflecting harm initiated at the hospital are associated with hospital work environment.