

## Lack of nurses linked to missed care and higher patient mortality

May 5 2017

There is a clear correlation between the number of registered nurses working at an acute hospital, the amount of nursing care that is left undone and the number of patients who die, a new thesis from Karolinska Institutet in Sweden shows. Moreover, the higher death rate associated with low nurse staffing levels does not decline if the nurses are replaced by support workers.

Research conducted since the 1980s has established an inverse correlation between <u>nurse</u> staffing levels and the rate of patient deaths at acute hospitals, but no studies have yet been done to show what it is attributable to or whether there is a causal relationship. In her thesis from Karolinska Institutet, Jane Ball has interrogated the relationship between nurse staffing levels, missed care and risk of patient death in over 300 acute hospitals in nine European countries, including Sweden and the UK.

## 10 per cent missed care linked to a 16 per cent higher risk of death

Nurses were asked to answer a questionnaire on how much and what type of care they did not provide owing to lack of time during their latest <u>work shift</u>. These responses were then related to reports of nurse staffing during the same work shift. The results show a clear correlation between fewer nurses, more missed care and higher patient mortality. In <u>patients</u> who had undergone common, non-life threatening surgical procedures,



10 per cent missed care was linked to a 16 per cent higher risk of death within 30 days of surgery.

"We found a significant association between mortality rates and the volume of missed care owing to lack of nursing time, which supports the inference of a causal connection between registered nurse staffing and patient mortality," says Jane Ball, registered nurse, doctoral student at Karolinska Institutet's Department of Learning, Informatics, Management and Ethics (LIME) and researcher at University of Southampton, England.

In Sweden, 74 per cent of the surveyed nurses reported that they had left necessary care undone due to lack of time; in the UK the corresponding figure was 86 per cent. Ms Ball's thesis also shows that low levels of registered nurse staffing cannot be compensated for by other healthcare staff – the volume of omitted necessary care remains unchanged.

## The problem deserves more attention

"What surprised me most while working on my thesis is that staffing levels differ a great deal between different departments and hospitals," says Ms Ball. "It also surprises me that even more attention isn't given to low nurse staffing levels given that short-staffing jeopardises patient safety and put lives at risk."

Ms Ball will now go on to analyse the correlation further with the help of electronic data instead of questionnaires, and examine in more detail the role of patient surveillance on patient survival.

On 5 May 2017 Jane Ball defends her thesis "Nurse staffing levels, care left undone & patient mortality in acute hospitals" at Karolinska Institutet.



**More information:** Nurse staffing, care left undone and patient mortality in acute hospitals: <u>openarchive.ki.se/xmlui/handle/10616/45563</u>

## Provided by Karolinska Institutet

Citation: Lack of nurses linked to missed care and higher patient mortality (2017, May 5) retrieved 6 May 2024 from https://medicalxpress.com/news/2017-05-lack-nurses-linked-higher-patient.html

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