Increase in nurse numbers linked to better patient survival rates in ICU

By Christian Duffin

Higher numbers of nurses per bed are associated with better survival rates among patients in intensive care – and the benefits are at their greatest among the very seriously ill – research suggests.

A team of UK researchers concluded that seven extra lives would be saved for every 100 patients at relatively high risk of death if nurse numbers increased from four to six per bed.

Among patients with mid-range relative severity of illness, about four extra lives per 100 would be saved.

The researchers say that the reason survival rates improve with higher numbers of nurses could be that nurses spend more time with critically ill patients than other healthcare professionals do, and are more likely to detect early signs of deterioration. Another reason is that fewer permanent staff might mean greater reliance on agency and bank staff, who may have less expertise or be unfamiliar with some aspects of a unit’s way of working.

The researchers examined 40,000 patient records from 65 intensive care units in the UK. Information on patients, including whether a patient lived or died, came from the Intensive Care National Audit and Research Centre case mix programme. An Audit Commission survey of ICUs from 1998 gave information about staffing levels, and these two sets of data were merged.

Higher numbers of consultants were also associated with better survival rates in ICU, although these rates did not vary according to illness severity.

The study is the first to examine patient survival in ICU relating to medical and nursing staff numbers.

Lead researcher Elizabeth West, a nurse and professor of applied social research at the University of Greenwich in London, said: ‘It seems reasonable to argue that skilled nurses, who have the time to observe patients closely, to intervene or mobilise the team if they begin to deteriorate, would be most important to patients who are at the greatest risk. This study is the first to produce evidence that this is the case.’

Safe staffing

The team’s research should be scrutinised by the National Institute for Health and Care Excellence as it draws up guidance on safe staffing for this year and next, she added.

British Association of Critical Care Nurses chair Annette Richardson said: ‘The findings do not surprise me because when you work in critical care you know that very sick patients require nurses with a high degree of expertise. The research shows that nurse numbers are important. If ICUs have only four nurses per bed, there will be times during the week when ICUs cannot provide one-to-one nursing care.’

The research is at tinyurl.com/critical-care-research

Lexi’s ‘outstanding’ design is a winner

Schoolgirl Lexi Taylor-Duff was a category winner in the RCN’s UK-wide competition to design a card to mark International Nurses Day on May 12.

Lexi’s design for the 8-11 age group featured a nurse caring for a patient on a drip, with the caption ‘You make a difference across the world.’

She is pictured with RCN general secretary Peter Carter at her school, Seafield Primary in West Lothian.

Dr Carter said Lexi’s design was ‘outstanding’. He added: ‘It really puts across her appreciation of the work nurses do and it was a delight to meet her, her family and the teachers and children from the school.’

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