

New study reveals increasing nurse-to-patient ratios do not extend patient safety

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Generic image of a nurse comforting a patient

(Medical Xpress) -- Hospitals are currently under pressure to control the cost of medical care, while at the same time improving patient health and reducing medical errors through appropriate nurse staffing levels. A study into the effects of a law requiring increased nurse-to-patient ratios on patient mortality finds that mandating such changes do not reduce adverse patient outcomes.

Led by Andrew Cook from Resolution Economics LLC and Professor Martin Gaynor from the University of Bristol Centre for Market and Public Organisation (CMPO), the study provides new evidence into the effects of increased nurse staffing ratios.

The researchers examined the effect on patient health outcomes of AB394, landmark legislation passed in California (1999), which made it the first US state to mandate minimum levels of nurse-to-patient ratios in all [acute care](#) units with the aim that it would result in better [patient outcomes](#).

Using patient outcome data from 294 hospitals in California (from 2000 to 2006) with both high and low patient-to-nurse ratios, the researchers analysed the effects this legislation had on two

patient [safety indicators](#) which are potentially sensitive to changes in nurse staffing. These are 'failure to rescue' rates, which are rates of death from patients who have died after developing a complication while in hospital and who, under normal circumstances of care, might have been 'rescued from the complication, and bed sores, which develop when there is a failure to frequently move an immobile patient (or other factors such as low blood pressure or diabetes).

One of the key findings from this study was that although the legislation had the desired effect of decreasing patient-nurse ratios this improvement did not transcend to [patient safety](#), as 'failure to rescue' rates did not correspondingly improve across hospitals.

Dr. Andrew Cook, lead author of the study, said: "One would expect high patient-to-nurse ratios to be associated with relatively higher rates of failure to rescue, however our findings suggest that mandating nurse-to-patient ratios, on its own, does not lead to improved patient safety."

Martin Gaynor from the University's Centre for Market and Public Organisation, added: "While we do not find evidence that the regulation improved patient safety, that does not necessarily mean that nurse staffing levels are unimportant. Improved nurse staffing might be crucial in improving patient safety, but only in combination with other elements. It is important that analysts, policy-makers, and healthcare providers sort out these important issues."

Provided by University of Bristol

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