

## **Nurse staffing affects patient outcomes and length of stay, but less than previous estimates**

Increasing nursing hours per patient day by one hour reduced length of stay by 1-3%. A 10% reduction in the use of nursing aides reduced length of stay by 12% and a 10% reduction in contract nurses reduced length of stay by over 20%. A one year increase in average unit tenure (i.e. a reduction in turnover) reduced length of stay by over 2%.

These effects were smaller in intensive care units (ICUs) than in other acute care units. A one hour increase in nursing hours per patient day was associated with 1% reductions in mortality and nursing-sensitive patient safety indicators.

There were large effects on the estimates when the fixed effects were removed; for example the effect of nurse staffing levels on length of stay quadrupled and the effect of contract nurses reversed.

Using unit-level, monthly, panel data and fixed-effects models yields smaller estimated effects of nurse staffing on length of stay than models using cross-sectional data and/or more aggregated data.

Phibbs, CS. A longitudinal study of the effects of nurse staffing levels, nurse human capital, and nursing teams on patient outcomes for VA inpatient care. Paper presented at: iHEA Congress; July 11-13, 2011, 2011; Toronto, Canada.

<http://ihea2011.abstractsubmit.org/presentations/1741/>