

The Influence of Nurse Staffing Levels on Quality of Care in Nursing Homes

BACKGROUND

Choosing a nursing home for a long-term placement is a daunting and emotionally charged task for families, especially because quality of nursing home care is difficult to assess. The Center for Medicare and Medicaid Services (CMS) provides information to consumers about factors related to the quality of care residents receive-- the number of average nurse staffing hours per resident per day and the “deficiency scores” which are based on violations of the federal safety regulations found during the annual nursing home inspection. Deficiency scores capture both the scope and severity of all violations; higher points equate to a greater number of violations and more serious violations reflecting poorer quality.

THE STUDY

This study examines the relationship between increasing certified nursing assistants (CNA) and licensed nurse staffing ratios and deficiencies in Florida nursing homes over a four year period. We hypothesize that higher nurse staffing levels – both CNA hours per resident day (HPRD) and licensed nurse (RN and LPN combined) HPRD – will be significant predictors of lower deficiency scores after controlling for facility characteristics.

STUDY METHOD

Data from Florida staffing reports on CNA and Licensed nurse staffing was merged with the Online Survey Certification and Reporting data to examine the relationship among staffing levels and deficiency citations for 663 Florida nursing homes between 2002-2005.

Using a generalized estimating equation approach in SAS Proc Genmod, we estimate the relationship between CNA and licensed nursing staff, and facilities’ total deficiency score and quality of care deficiency scores – calculated using the Centers for Medicare and Medicaid Services’ Nursing Home Compare Five-Star

Quality Rating System which accounts for the complexity of the scope and severity of the citations.

FINDINGS

Higher CNA HPRD are associated with lower scores on both total deficiencies and deficiencies related specifically to quality of resident care

Every additional hour of certified nursing assistant care per resident day is associated with a 10% decrease in the total deficiency score.

Every additional hour in CNA care, there is a 33% reduction in the quality of care deficiency score.

Licensed nursing is not statistically related to deficiency scores when controlling for CNA HPRD

DISCUSSION AND POLICY RECOMMENDATIONS

Our data are reported over the 4-year period that Florida increased nurse staffing standards and reported total staffing standards among the highest in the country. The findings support for the importance of higher CNA HPRD to improve both total deficiencies and deficiencies related specifically to quality of resident care. These findings hold even while controlling for organizational characteristics and patient acuity.

This policy brief is based on research by Kathryn Hyer, Kali S. Thomas, Laurence G. Branch, Jeffrey S. Harman, Christopher E. Johnson & Robert Weech-Maldonado published in *Gerontologist*, online May 20, 2011.

This research was partially funded by a grant from the Commonwealth Fund (#20050582) and the U.S. Administration on Aging (#90AM2750). The University of South Florida, School of Aging Studies, Florida Policy Exchange Center on Aging, Tampa, FL 33612.