

- Title:** The Impact of Nurse Staffing on Hospital Quality
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- Purpose:** To estimate the impact of nurse staffing on hospital performance improvement in the Centers for Medicare and Medicaid (CMS)/Premier Hospital Quality Incentive Demonstration (HQID) project.
- Background:**
- To date there has been no research on how nurse staffing impacts hospital performance on the type of process quality metrics used in HQID.
 - Other research studies and literature reviews on the relationship between nurse staffing levels and hospital quality have yielded inconsistent results on the impact of registered nurse (RN) hours on patient outcomes including adverse events, mortality, and length of stay (LOS), and offered little evidence that licensed practical nurse (LPN) or licensed vocational nurse (LVN) hours had any impact on those issues.
- Methods:**
- The research team used a random effects model for hospitals participating in HQID that provided relevant hospital quality and staffing data for each of three medical conditions (acute myocardial infarction, pneumonia, and heart failure) used in the analysis.
 - The research team used condition-specific composite quality scores and a hospital-wide composite quality score as quality measures. Nurse staffing measures included RN hours, LPN hours, and nursing assistant (NA) hours per patient day.
- Key Findings:**
- Increased RN hours per patient day were associated with higher quality.
 - Across models, there were no consistent patterns related to the impact of LPN and NA hours on quality.
 - The results suggest that RNs affect the care processes that are related to quality outcomes. The research team also acknowledges that many other factors also affect these care processes but that available data did not allow for identification of those factors.
- Major Implication(s)**
- Future research should attempt to specify the causal linkages between RN hours and the quality of patient outcomes. Additionally, studies should examine the effects of other medical staff, information infrastructure, and a corporate culture of quality on improving hospital performance.
- References:** Davidson, G., Belk, K., & Moscovice, I. (2010). The Impact of Nurse Staffing on Hospital Quality (pp. 167-189) in *The Performance of a National Health Workforce* (J. Moore et al., Eds), World Health Organization and the European Commission, Paris, France.