



Background

- Nursing staff provide critical around-the-clock care to nursing facility residents.
- In September 2023, the Centers for Medicare & Medicaid Services (CMS) proposed a rule that would increase minimum staffing requirements in certified nursing facilities as follows: 0.55 hours per resident day (HPRD) of registered nurses (RNs) and 2.45 HPRD of certified nursing assistants (CNAs).

Study Objective

Examine the associations between nurse staffing and family members' rating of nursing facilities across quality-of-care domains: staffing, care provided, resident activities, resident safety

Methods

- We used two publicly available secondary data sets: CMS's **Nursing Home Compare** and the Maryland Health Care Commission **Family Satisfaction with Care Survey**.

Population Studied

- 217 Maryland nursing facilities and aggregated survey responses from 4,610 resident family members in 2021.

Study Design

- A series of adjusted multivariate logistic regression models to examine the cross-sectional relationships between nurse staffing HPRD and family members' rating of quality-of-care domains.

CNA and—to a lesser extent—RN care hours appear to be strongly and positively associated with care satisfaction among family members of nursing facility residents.

Establishing minimum nurse staffing requirements has the potential to improve not only resident outcomes, but family members' satisfaction with the care provided.

Table 1. Logistic Regression Estimates Predicting the Probability of Family Member Rating Each Quality Domain Higher than the State Average (N = 217)

	Staff and Administration	Care Provided to Residents	Resident Activities	Resident Safety
	<i>b</i> (SE)AOR	<i>b</i> (SE)AOR	<i>b</i> (SE)AOR	<i>b</i> (SE)AOR
Nurse Staffing				
Adjusted RN HPRD	0.28(0.58)1.33	0.95(0.68)2.59	1.93(0.70)** 6.87	0.74(0.73)2.10
Adjusted CNA HPRD	1.76(0.53)*** 5.81	2.02(0.56)*** 7.56	1.24(0.52)* 3.45	2.50(0.64)*** 12.13
Adjusted LPN HPRD	0.44(0.76)1.54	0.80(0.81)2.21	-0.30(0.79)0.74	1.13(0.90)3.09
Ownership				
Non-Profit (ref.)				
For-Profit	-1.03(0.40)* 0.36	-0.91(0.43)* 0.40	-0.58(0.42)0.56	-2.30(0.52)*** 0.10
Resident Census				
1-60 residents (ref.)				
61-120 residents	-0.25(0.49)0.78	-0.74(0.52)0.48	-0.08(0.50)0.92	-0.88(0.58)0.42
121+ residents	-0.51(0.58)0.60	-0.63(0.61)0.53	-0.84(0.59)0.43	-1.09(0.68)0.34
Vacancy				
High / >=70% (ref.)				
Low / <70%	0.07(0.37)1.07	0.40(0.39)1.49	0.29(0.37)1.34	0.68(0.44)1.96
Urbanicity				
Rural (ref.)				
Urban	-1.56(0.47)** 0.21	-1.45(0.49)** 0.23	-1.49(0.50)** 0.23	-1.95(0.54)** 0.14
C statistic	0.79	0.80	0.79	0.86

Adjusted odds ratios (AORs) and corresponding beta coefficients and standard errors (SEs) from logistic regressions. *** p < 0.001, **P < 0.01, *P < 0.05

Results & Discussion

- Adjusted RN HPRD were positively linked to family members' ratings of activities, while no relationship was observed for other care domains.
- Adjusted CNA HPRD were positively linked to higher family ratings across all care domains.
- There was no association between adjusted LPN HPRD and family ratings of care across any care domain.
- Establishing minimum staffing requirements has the potential to improve not only resident outcomes, but also family members' satisfaction with the care environment.

Limitations

- The cross-sectional study design limits assumptions of causality
- Limited to nursing facilities in Maryland
- Excludes residents' views of care

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