University of Minnesota School of Nursing

Disparities in Nursing Staffing in Nursing Homes

Reed Larson, SN, Donna Bliss, PhD, RN, Olga Gurvich, MA, Kay Savik, MS,
and Christine Mueller, PhD, RN, University of Minnesota, Minneapolis, MN

Introduction

• The size and diversity of the older population needing nursing home (NH) care in the United States is increasing.

• There are published reports of racial/ethnic disparities in NH resident health outcomes and quality of care.

• NH staffing is associated with resident quality of care outcomes.

• Information is lacking about disparities in NH staffing and its relationship to factors that have an association with health disparities such as NH location and the socioeconomic status (SES) of the community in which the NH lies.

Purpose

The purpose of this study was to:

- Describe the nursing staffing in a national proprietary chain of NHs
- Assess the relationship between NH staffing and the resident racial and ethnic composition of NHs, NH location, and the SES of the NH community.

Methods

• Data were from three large data sets from 2000-2002: Online Survey, Certification, and Reporting for NH staffing, U.S. Census for community data and the Minimum Data Set from a national proprietary chain of NHs for resident demographics (n=111,533).

• NH staffing included registered nurses (RNs), licensed practical nurses (LPNs), and certified nursing assistants (CNAs).

• Staffing data are reported in *hours per resident per day* (hprd).

• Data were summarized using descriptive statistics such as percentages and means and standard deviations.

• Correlations were used to analyze associations among the variables. those significant at p<.05 are presented.

Acknowledgements: This study was funded by the National Institute of Nursing Research, NIH, 1R03NR011243, and the University of Minnesota Undergraduate Research Opportunity Program

Results

Sample: 446 NHs in 29 States and 9 U.S. Census divisions

Table 1: NH Characteristics

Race/Ethnicity of NH Residents	Mean (SD)
% White	87.5 (17.4)
% Black	9.1 (15.7)
% Asian	0.9 (5.8)
% Hispanic	1.9 (5.7)
% American Indian	0.6 (2.2)

Table 2: Community Characteristics

Community SES	Mean (SD)
% Working class	64 (11)
% community below poverty level	7 (5)
% community in a rural area	20 (33)
% community in an urban area	51 (48)
	Median (range)
Median household income	$36,177 ($145,524)
Median house value	$88,200 ($584,100)

Figure 1: Nursing Staffing in Nursing Homes

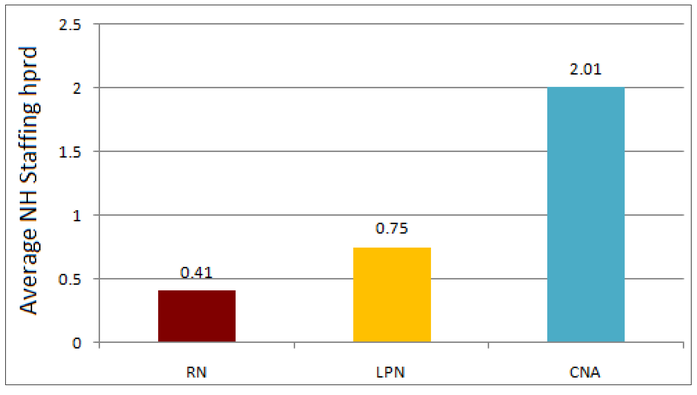

Table 4: Association between NH Staffing Resident Characteristics

Pearson r	RN	LPN	CNA
% White in NH	.14**	-.04	-.09
% Black in NH	-.15**	.13**	-.03
% Asian in NH	.05	-.10*	.11*
% Hispanic in NH	.05	-.07	.22**

* p< .05; **p < .01

Table 3: Association between NH Staffing and Community SES

Pearson r	RN	LPN	CNA
Median household income	.20**	.07	.17**
Median house value	.22**	.03	.25**
% Working class	-.15**	-.07	-.20**
% community below poverty level	-.12**	-.06	.01
% community in rural area	-.10*	-.16**	-.16**
% community in urban area	.11*	.11*	.16**

* p< .05; **p < .01

• **RN staffing** was *negatively* associated with the % of Black NH residents, community poverty level and % of working class. There was a *positive* association between RN staffing, percent of white residents, median household income of the community and % of population in urban areas.

• **LPN staffing** was *negatively* associated with % of Asian NH residents and *positively* associated with both the % of Black residents and % of population in urban area.

.

• **CNA staffing** was *negatively* associated with % working class of the community. There was a *positive* association between CNA staffing and % of Asians and % of Hispanics in NHs, median household income of the community, % of population in an urban area.

Figure 2: Relationship of NH Staffing and Community SES

Conclusions

• Average nursing staffing levels are consistent with recommended levels.
• Findings show that disparities exist in NH staffing.
• NHs in low SES communities may need additional resources to increase staffing to provide quality care.
• Planning for location of nursing homes may help reduce disparities.