

Predictors of Registered Nurse Employment and Earnings in Long-Term Care

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Background on Registered Nurses & LTC

- Registered nurses (RNs) are the largest group of licensed nurses in the U.S.
- Their main employment setting is hospitals (~60-65%)
- RNs who work in long-term care settings earn less than in hospitals
- This study looks at...
 - Demographic and human capital characteristics of LTC vs. non-LTC RNs
 - Earnings of LTC vs. non-LTC RNs

Methods

- Data: U.S. National Sample Survey of Registered Nurses
- Study population: RNs employed in nursing as of December 31, 2021, active in patient care, had no training as an advanced practice RN (n=14,216)
- Long-term care defined as skilled nursing facility or nursing home, rehabilitation or long-term acute care, home health or day care services
 - 9% of the population works in long-term care
- Analyses: descriptive statistics & regression analyses

Demographics of RNs in LTC vs. Other

Variable	LTC	Other
Race/Ethnicity (p=0.76)		
Hispanic	8.8%	9.8%
White	64.5%	64.4%
Black	12.4%	10.8%
Asian	10.2%	10.0%
Other	4.1%	5.0%
Age Group (p<0.001)		
Under 35	14.1%	27.6%
35-44	23.4%	28.1%
45-54	27.2%	22.3%
55-64	24.6%	16.5%
65 and older	10.7%	5.5%
Rural residence (p<0.001)	18.3%	12.1%

Education of RNs in LTC vs. Other

Variable	LTC	Other
Initial RN Degree (p<0.001)		
Associate Degree	61.8%	45.8%
Bachelor of Science Degree	29.7%	47.4%
Other Program Type	8.5%	6.8%
Initial RN program Location (p=<0.01)		
United States	89.8%	93.4%
Outside United States	10.2%	6.6%
Currently enrolled (p=0.04)	11.1%	14.8%
Previously licensed as LPN/LVN (p<.001)	28.7%	14.9%

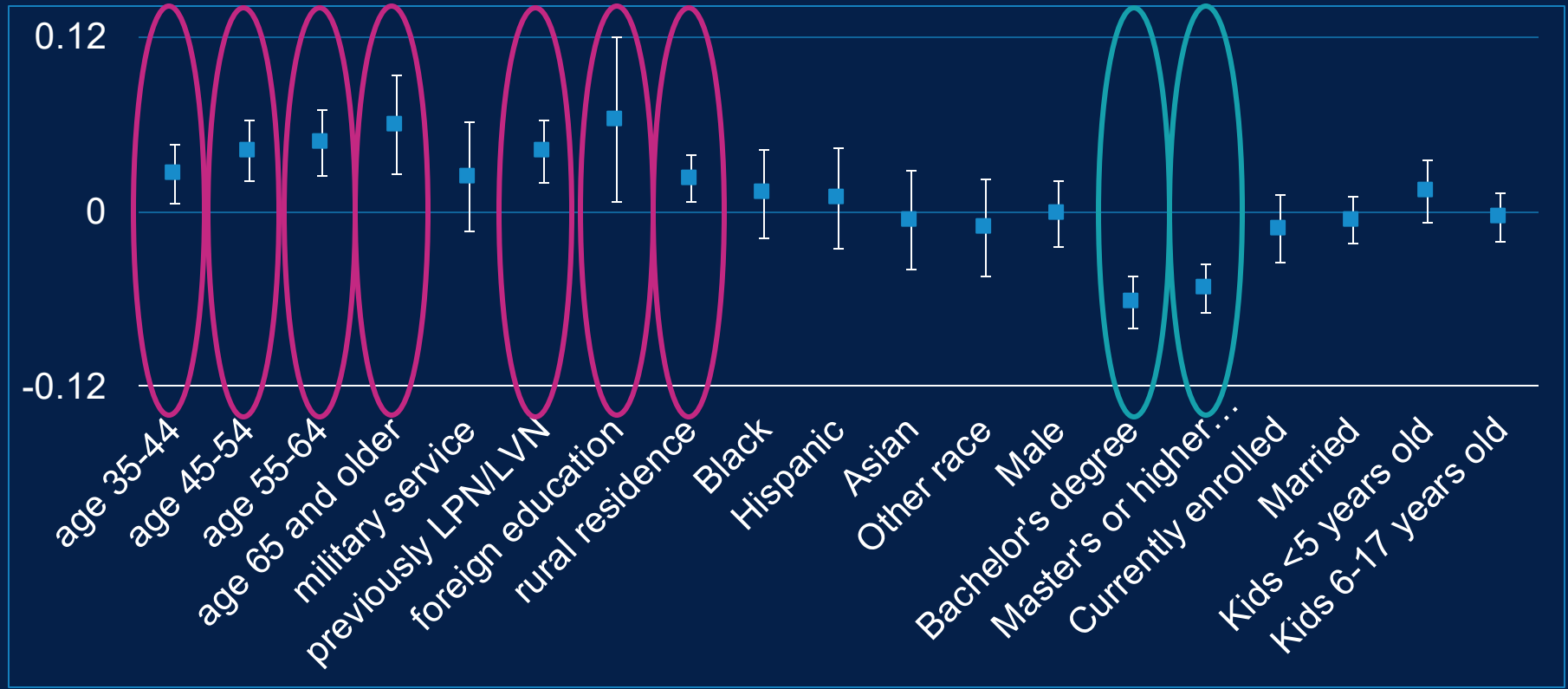
Employment of RNs in LTC vs. Other

Variable	LTC	Other
Agency vs. Direct Employee ($p < 0.05$)		
Direct Employee	88.1%	91.4%
Not a Direct Employee	11.9%	8.6%
Position Title ($p < 0.001$)		
Staff/Charge Nurse	42.0%	77.7%
Management	19.7%	7.5%
Patient educator/coordinator	5.6%	4.4%
Other	32.8%	10.4%
Union represented ($p = 0.001$)	6.0%	21.1%
Different setting in prior year ($p = 0.29$)	23.6%	21.7%

Predictors of working in LTC

- Logistic regression
- Controlling for...
 - Demographics: age, race/ethnicity, sex, marital status, presence of kids in the home, rural residence
 - Human capital: highest education, international education, current enrollment, prior LPN licensure, military service

Predictors of working in LTC



Predictors of hourly wages

- Descriptive statistics
- Linear regression
 - Wages in logarithmic form
 - Controlling for...
 - Demographics: age, race/ethnicity, sex, marital status, presence of kids in the home, rural residence
 - Human capital: highest education, international education, current enrollment, prior LPN licensure, military service
 - Employment: agency employment, position title, holding multiple jobs, union representation

Earnings of RNs in LTC vs. Other ($p < 0.01$)

Weighted Median	LTC	Other
Hourly Wage	\$37.69	\$43.75
Non-unionized Hourly Wage	\$37.50	\$42.86
Unionized Hourly Wage	\$46.15	\$50.00
Hourly Wage by Race/Ethnicity		
Hispanic	\$38.09	\$45.24
White	\$37.50	\$42.86
Black	\$40.00	\$43.75
Asian	\$42.86	\$50.00
Other	\$34.52	\$44.29

Wage regression - $\log(\text{wage})$, weighted

Variable	All Settings	LTC
Long-term care setting	-0.095*	
Temp agency	0.177*	0.150*
Job title		
Management	-0.065*	-0.154*
Patient/clinical educator	-0.116*	-0.174*
Other	-0.151*	-0.036
Union represented	0.084*	0.156*
Holds multiple jobs	-0.059*	-0.234

Wage regression - $\log(\text{wage})$, weighted

Variable	All Settings: Coefficient	LTC Settings: Coeff
Highest education		
Bachelor's degree	0.050*	0.010
Master's or doctorate	0.119*	0.174
Educated outside US	0.023	0.019
Previously was LPN	-0.068*	-0.076
Currently enrolled	-0.050*	-0.093
Military service	-0.048	-0.235

Wage regression - $\log(\text{wage})$, weighted

Variable	All Settings: Coefficient	LTC Settings: Coeff
Age group		
35-44 years	0.071*	0.081*
45-54 years	0.099*	0.046*
55-64 years	0.146*	0.091*
65+ years	0.189*	0.142*
Race/ethnicity		
Black	0.011	-0.038
Hispanic	-0.003	-0.075
Asian	-0.001	-0.116
Other race	-0.056	-0.112
Male	0.031	0.060
Rural residence	-0.066*	-0.009*

Discussion

- LTC nurses are older
- Less likely to have BS or MS – correlated with age
- No racial or sex differences in probability of LTC employment
- More likely to be internationally educated
 - Other research finds that LTC immigrant nurses have more human capital
- Prior LPN work associated with higher probability of LTC
 - Many LPN-to-RN completers start in LTC and stay there
 - Analysis of NC data found only 1.4% of LPNs advance to RN each year

Discussion

- LTC nurses earn nearly 10% less
- No wage differences by race-ethnicity
- Lower wages overall for internationally educated
 - Other research finds that international RNs are less sensitive to wage variation
- Prior LPN associated with lower wages – but not for LTC nurses
- Managers and patient educators/coordinators earn less for both LTC and non-LTC