

# Commuting Patterns of Healthcare Workers

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## INTRODUCTION

- Nationwide job trends indicate that commuters are travelling long times and distances to get to work because workers want higher pays, more flexible hours, or better career opportunities.
- Findings from the National Sample Survey of Registered Nurses show that between 1980 and 2004, an increasing share of registered nurses (RNs) travelled from their home in rural areas to work in larger rural and urban areas. In 2004, 37% of RNs living in rural areas commuted, compared with 14% in 1980, and this occurred despite an overall growth in the proportion of RNs residing in the rural areas.
- Little is known about commuting among allied health occupations and whether these occupations exhibit patterns similar to those found nationwide and among RNs.

## STUDY OBJECTIVES

- To examine the individual, work, and community characteristics that are associated with commuting patterns across occupations
- To identify occupations that commute most frequently and experience the longest commute time
- To identify the most common commute patterns and forms of transportation for healthcare workers
- To identify the extent to which healthcare workers' commuting patterns vary across the nation
- To examine whether there are any benefits to increased commute time

## DATA AND METHODS

- 2015 American Community Survey (ACS): Nationally representative household survey conducted by US Census Bureau that includes detailed sociodemographic & work characteristics
- United States Department of Agriculture Economic Research Service (USDA ERS): Data on metro status, and local economy such as county level median household income and county level unemployment rates
- Sample: 18 years and older, employed, not working from home, and residing in the continental US

- Descriptive statistics were used to compare commuting patterns and characteristics at individual, work and community levels across occupations
- Ordinary least squares (OLS) was used to analyze the predictors of commute time, and as well as to examine the effect of commute time on earnings
- Logistic regression was used to analyze whether individuals commute to geographic areas for work that are outside the area of their residence

- Outcome variables include: (i) Commute time (minutes), (ii) Wages (US 2015 dollars), and (iii) Whether or not individuals' work PUMAs are different than their residence PUMAs

Independent Variables include:

- Geographic Variations: census regions such as Midwest, Northeast, South, and West
- Local Economy: median household income at the county level, and the unemployment rate at the county level
- Individual Characteristics: age, sex, marital status, whether or not any child in the household, race/ethnicity, other household income, homeownership status, whether or not one lives in a metro area
- Work-related Characteristics: time of arrival at work, commute time, earnings, fulltime work status, whether or not one works and resides in same or different PUMAs
- Modes of Transportation: whether or not one drives alone vs. relies on carpools, public transportation, or other modes of transportation

## FINDINGS

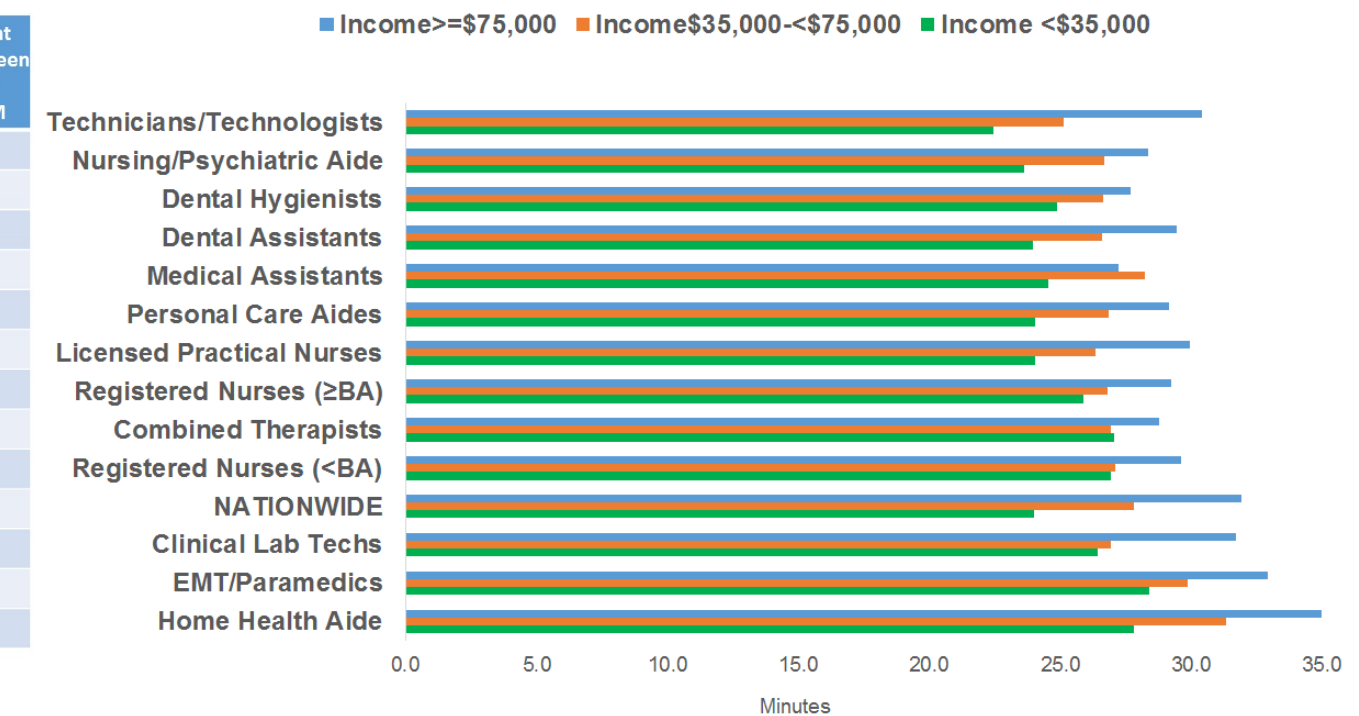
### Demographics by Occupation

	N (Weighted)	Female	Age	Married	Any Child?	Homeownership
Personal Care Aides	1,221,450	84%	44	47%	46%	48%
Home Health Aide	472,676	91%	44	49%	53%	44%
Nursing/Psychiatric Aide	1,528,525	86%	40	46%	50%	50%
Medical Assistants	516,945	92%	37	53%	54%	56%
Dental Assistants	307,748	94%	37	59%	51%	67%
Dental Hygienists	178,916	96%	44	74%	55%	85%
EMT/Paramedics	203,166	31%	36	51%	41%	67%
Licensed Practical/Vocational Nurses	813,208	88%	43	56%	52%	63%
Clinical Lab Techs	321,069	74%	43	60%	43%	69%
Other Technicians/Technologists	621,050	80%	36	48%	40%	62%
Combined Therapists	273,539	82%	43	71%	53%	78%
Registered Nurses (<BA)	1,205,882	91%	46	67%	54%	78%
Registered Nurses (≥BA)	1,986,772	88%	43	70%	51%	77%

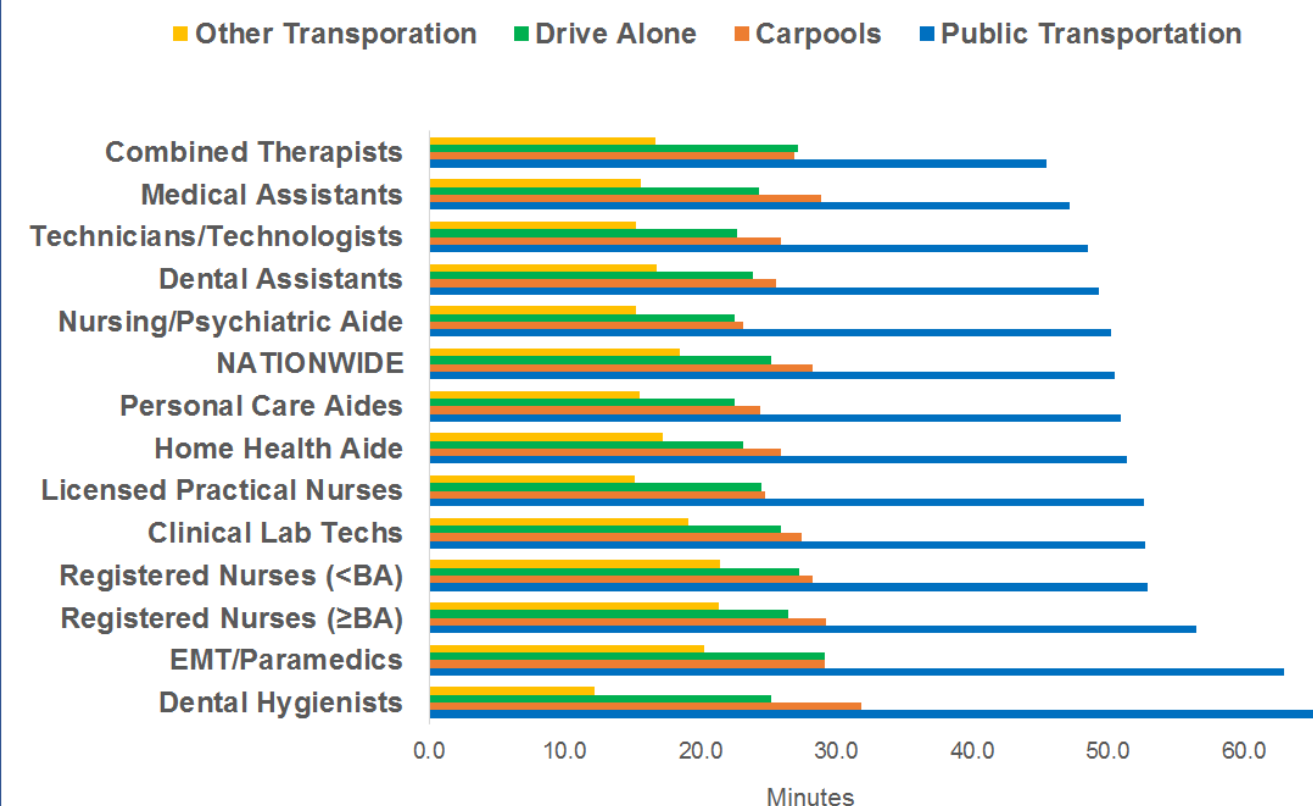
### Work-related Characteristics by Occupation

	Wages (\$)	Weekly Hours Worked	Full-time	One-way Commute Time (minutes)	Metro Residence	Home & Work: Different PUMA	Arriving at work between 6AM to 10:59AM
Personal Care Aides	17,295	33.9	59.8%	24.3	86%	76.1%	67.1%
Home Health Aide	18,465	33.3	57.4%	28.2	84%	78.2%	77.5%
Nursing/Psychiatric Aide	24,554	36.5	77.8%	24.2	86%	74.9%	56.7%
Medical Assistants	28,244	37.9	85.8%	25.4	91%	83.9%	89.4%
Dental Assistants	28,803	35.1	77.3%	24.8	91%	80.0%	91.2%
Dental Hygienists	48,328	31.4	58.1%	26.2	91%	81.2%	93.7%
EMT/Paramedics	42,544	45.6	89.8%	29.4	87%	77.3%	64.4%
Licensed Practical/Vocational Nurses	36,098	37.6	81.8%	25.3	85%	73.8%	66.2%
Clinical Lab Techs	45,538	38.6	86.8%	27.2	91%	82.9%	63.6%
Other Technicians/Technologists	30,754	36.7	80.3%	23.5	91%	77.1%	76.4%
Combined Therapists	54,800	37.2	82.7%	27.3	89%	80.9%	79.9%
Registered Nurses (<BA)	54,315	37.7	84.2%	27.1	86%	75.2%	69.6%
Registered Nurses (≥BA)	67,590	38.2	84.8%	28.0	93%	85.0%	72.4%

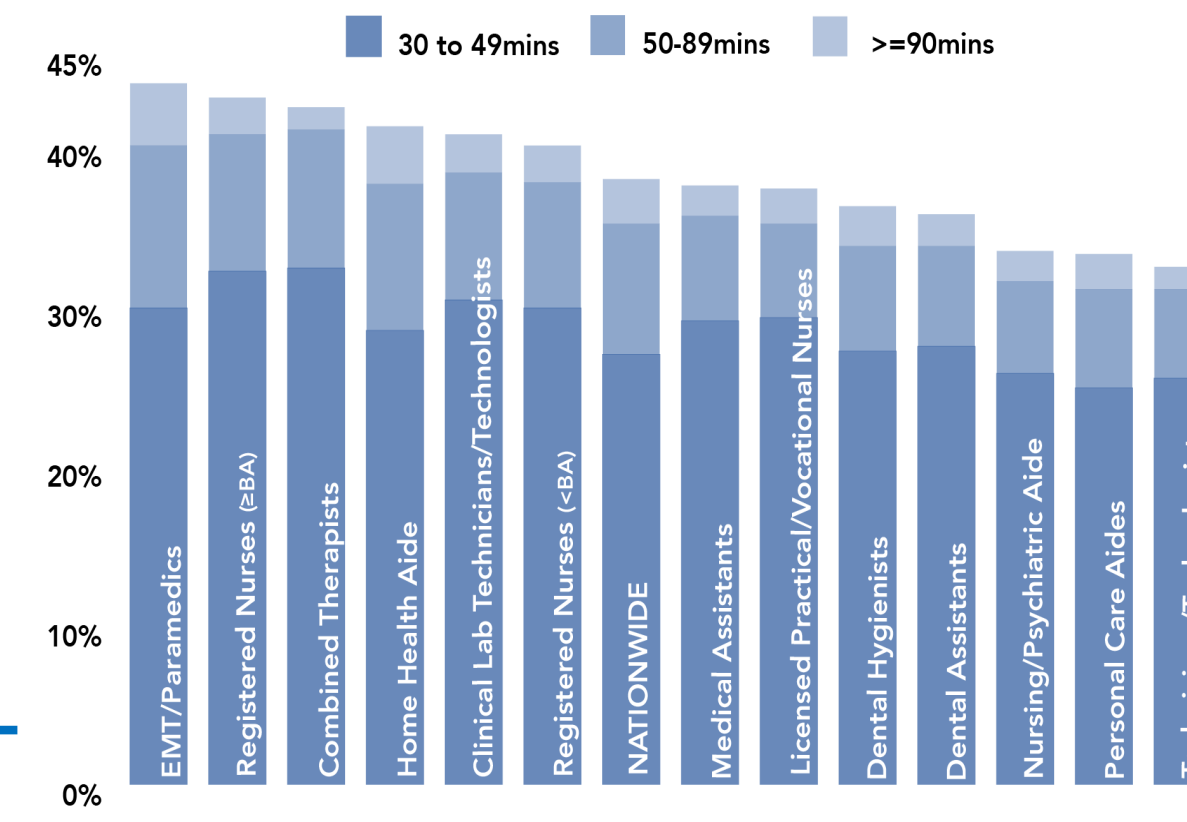
### Commute Time (Mins) by Wage Intervals



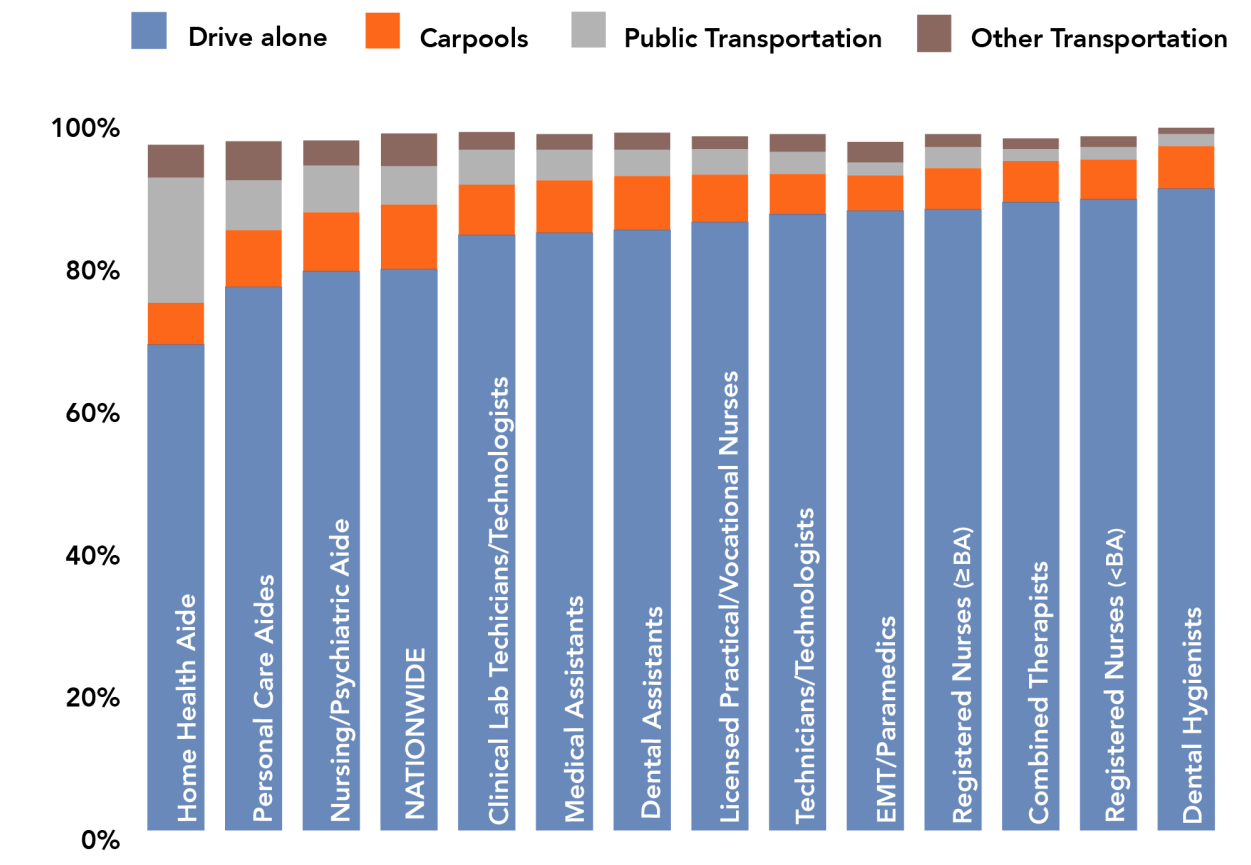
### Commute Time (Mins) by Modes of Commute



### Long Commute (≥30 mins) by Occupation



### Modes of Commute by Occupation



## CONCLUSIONS

- Healthcare workers followed similar commute patterns to the rest of the US.
- Across occupations, workers in low-paying healthcare occupations were more likely to use public transportation and had longer commute times compared to high-paying healthcare occupations. These occupations also had a higher representation of racial/ethnic minorities.
- Longer commute minutes were positively associated with more income after controlling for various factors, but not for each specific occupation.

## LIMITATIONS

- Driving alone was associated with higher income, which is consistent with nationwide pattern, however ACS reports only one mode of commute.
- We were unable to capture the direction of commute. If rural to larger rural commute is increasing, then policies that yield more competitive rural salaries or rural job creation could encourage more rural-residing healthcare workers to work in the communities they reside.
- Further research is warranted to better understand whether people commuting long time and distance is a choice or a necessity for workers.

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