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What Commute Patterns Can Tell Us About the Supply of Allied Health Workers and Registered Nurses

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BACKGROUND

Information on the available supply of workers in a local job market helps health workforce planners determine whether there are qualified workers to fill health care jobs in demand. Reports on supply often rely on data that identify residence but not work location. Even when both work location and residence data are available, supply estimates are usually based on where someone works, which may not be a good representation of the available local labor supply. Health care, a service industry, ideally should be located where patients have the most demand for services. This study explores commuting patterns among selected health care occupations, including where people live versus work, and how these patterns may inform discussions of health workforce supply.

METHODS

We used data from the 2017 American Community Survey (ACS), an annual survey of 3.5 million households collected by the U.S. Census Bureau and extracted through the Integrated Public Use Microdata Series (IPUMS).[1] The ACS, has been a regular source of information for mapping the geographic distribution of a wide range of occupations, describing the time, duration and distance of workers' commutes, and identifying common forms of transportation for commuting. The ACS provides detailed demographic, socioeconomic, and work characteristics (e.g., occupation, industry, wages, and hours worked). We selected health care occupations that require a bachelor's degree or less for entry, often considered allied health occupations: dental hygienists, dental assistants, therapists, licensed practical/vocational nurses (LPNs/LVNs), emergency medical technicians (EMTs)/paramedics, clinical lab technicians/technologists (CLTTs), other technicians/technologists, medical assistants (MAs), nursing/psychiatric aides, home health aides, and personal care aides. We also included two categories of RNs: 1) those with less than a bachelor's degree and 2) those with a bachelor's degree in nursing or higher. We restricted our analysis to individuals 18 years of age and above, currently employed in the United States. We excluded individuals who reported working from home. Our weighted sample represented 9,318,682 individuals.

KEY FINDINGS

- Most individuals commuted to a different geographic area from their home.
- The average one-way commute time for these occupations ranged from 24.5 to 31.2 minutes compared to the nationwide average for all workers' commute time of 27.0 minutes, and most of these commuters drove alone.
- Blacks, Asians/Pacific Islanders, and other non-White races experienced 1 to 2 minutes longer commute on average compared to Whites. On the other hand, Hispanics had about a 45-second shorter commute compared to non-Hispanics.

CONCLUSIONS AND POLICY IMPLICATIONS

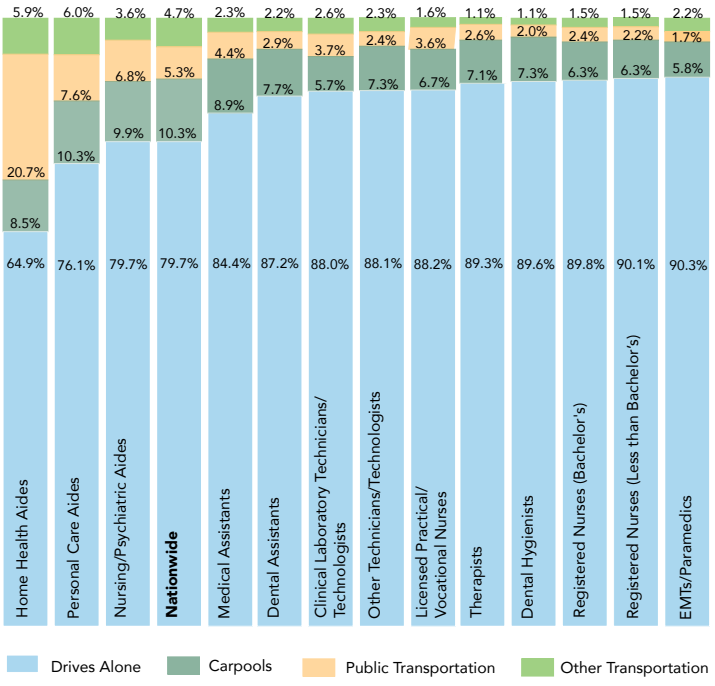
ACS is a valuable resource that provides detailed commuting information for a wide swath of health care workers although there are limitations and results that should be interpreted with some caution. Our study found that commute patterns among allied health care workers and RNs generally followed national patterns across all occupations including average commute time and common modes of transportation. The ACS provides a starting point to understanding health care workers' commute patterns, helping policymakers identify opportunities for transportation subsidies, transportation infrastructure that improves access to jobs for individuals and communities, and affordable housing.

The work conducted in this study results in additional questions needing investigation such as the extent to which health care markets are drawing upon their local labor supply or whether they may be drawing supply from areas that could otherwise use health care workers. Our findings suggest that researchers and workforce planners need to measure local supply based not only on where people report working but also where they live. For a workforce to be effective, workers must be located or able to be deployed where population need is greatest. Specific information about commuting patterns of the health workforce can be highly useful for planning for disasters, natural or otherwise, that cause disruption to the transportation infrastructure.

KEY FINDINGS *continued*

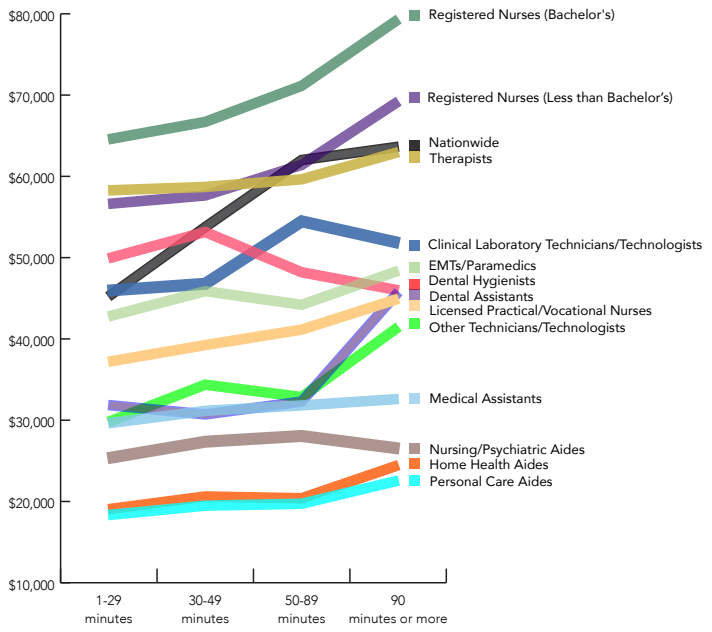
- Public transportation was most commonly used in the Northeast Census region where public transportation is widely available, and it was associated with more minutes spent commuting compared to other forms of transportation.
- One additional minute spent commuting by workers was associated with a 0.13% average increase in individual wages. Wage gains associated with spending more time commuting tended to diminish for the longest commutes in four occupations: clinical lab technicians/technologists, home health aides, nursing/psychiatric aides, and dental hygienists.
- Compared to driving alone, carpooling, commuting by public transportation, and relying on other transportation lowered wages by 9.8%, 21.4%, and 31.8%, respectively.

Percent Using Mode of Transportation as Primary Source for Commuting by Allied Health Workers and Registered Nurses, 2017



Note: EMTs = Emergency Medical Technicians.
Therapists include Radiation, Recreational, Respiratory, Exercise Physiologists, and Speech-language Pathologists.
RNs with a Bachelor's degree not in the field of nursing and RNs with above a Bachelor's degree in any field are excluded.
Data source: Ruggles S, Flood S, Goeken R, Grover J, Meyer, E, Pacas J, Sobek M. IPUMS USA: Version 8.0 [dataset]. Minneapolis, MN: IPUMS, 2018. https://doi.org/10.18128/D010.V8.0

Average Individual Wage Earnings by Commute Time Intervals of Allied Health Workers and Registered Nurses, 2017



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REFERENCE

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