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Leveraging Data to Monitor the Allied Health Workforce: National Supply Estimates Using Different Data Sources

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BACKGROUND

Effective health workforce planning requires accurate and timely information about the existing supply of healthcare providers. A major challenge to monitoring the healthcare workforce is securing up-to-date and valid data on the number and characteristics of the entire spectrum of the healthcare workforce. This study produced national estimates of the supply and characteristics of nine specific types of allied health workers, drawn from four publicly available national data sources. The resulting report compares the findings and describes uses and limitations of these national data sources for health workforce planning.

METHODS

We compared the estimated workforce size and characteristics of nine allied health occupations (or occupation groups): occupational therapists, physical therapists, respiratory therapists, speech-language pathologists, clinical laboratory technologists/technicians, dental hygienists, diagnostic-related technologists/technicians, medical assistants, and social workers. We used the most recent data available (from 2014 to 2016) from the American Community Survey (ACS) and the Current Population Survey (CPS), both data from the U.S. Census Bureau; the Occupational Employment Statistics (OES) from the U.S. Bureau of Labor Statistics; and the National Provider Identifier (NPI) Registry from the Centers for Medicare and Medicaid Services' National Plan and Provider Enumeration System. National supply size estimates and numbers per 100,000 population are provided in the report. Demographic and socioeconomic characteristics, to the extent the data were available, were detailed in a two-page Data Snapshot for each occupation that were compiled in an appendix to the report.
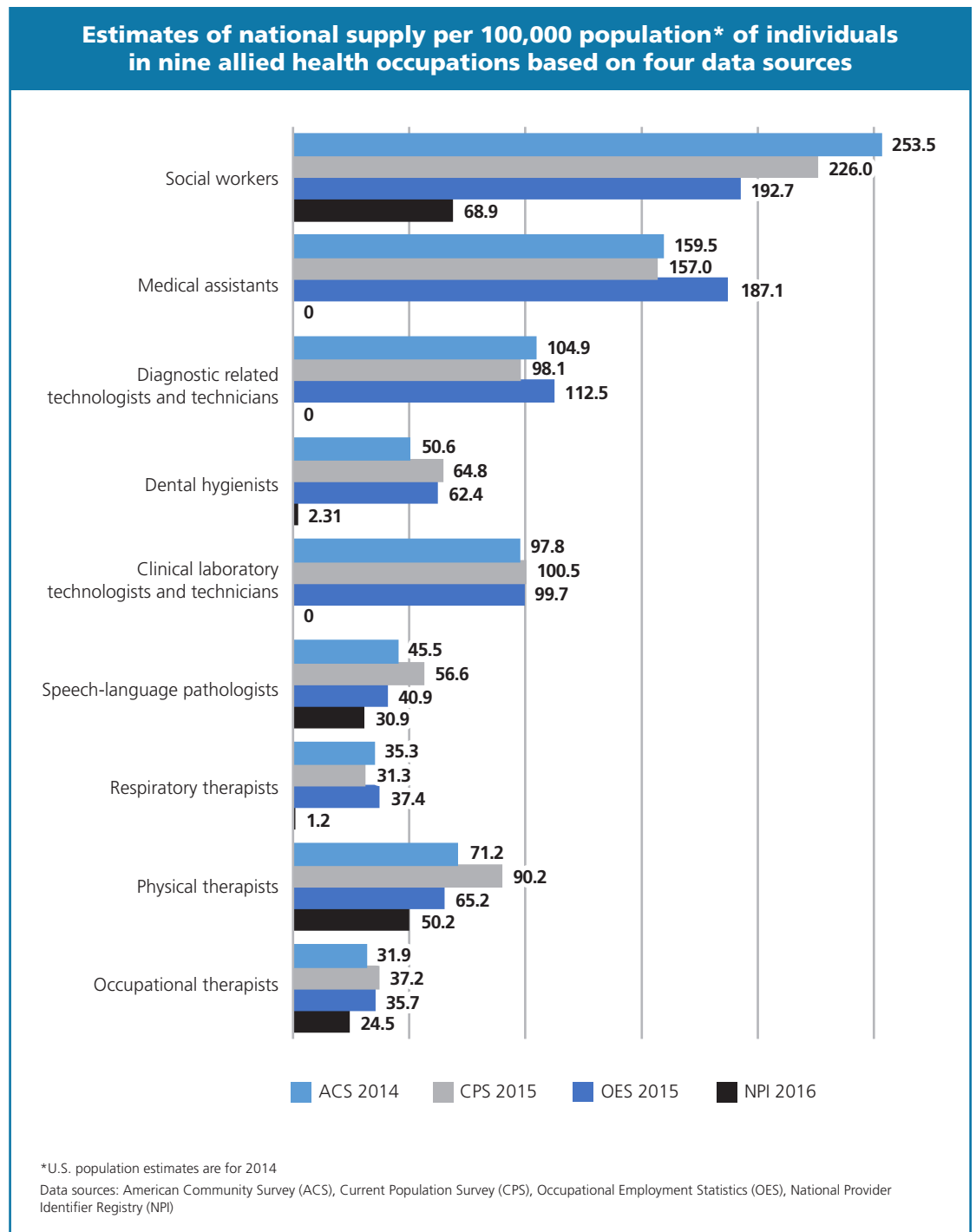
KEY FINDINGS

■ National workforce supply estimates from the ACS, CPS and OES data sources for the nine selected occupations were generally comparable. Estimates based on NPI Registry data were smaller and not available for some occupations.

■ Social workers and medical assistants were the largest groups among the occupations studied. Occupational therapists and respiratory therapists were the smallest.

■ Speech-language pathologists and dental hygienists were predominantly female (>96%) and respiratory therapists had the highest percentage of males (34-35%).

■ Clinical laboratory technicians/technologists and medical assistants were the most racially diverse of the occupations studied (roughly half of those who were not Hispanic were of races other than White) and clinical laboratory technicians/technologists, medical assistants, and social workers had the highest proportions of Hispanic individuals (10-28%).

CONCLUSIONS AND POLICY IMPLICATIONS

Describing the supply of allied health occupations (including their size, distribution, demographic and socioeconomic characteristics) begins with choosing appropriate data sources. Assessing those sources involves consideration of factors such as: having the most up-to-date data; sample size; statistical reliability and precision; and the availability of details about the characteristics of the workforce. All four data sources described by this study provided some level of information that can be used to make decisions about the development, allocation and distribution of various healthcare occupations. One source, the NPI Registry, did not include data for three of the nine allied health occupations and provided consistently smaller supply size estimates than the other sources. This was not surprising because the NPI was developed to identify providers for billing and records transfer purposes, and individuals in occupations and roles not involved in those tasks would not be expected to be represented in the NPI Registry. Because of the variability in the workforce supply estimates derived from these data sources, health workforce planners should consider the pros and cons of different data sources before using one to estimate the supply characteristics of any single occupation.

- Medical assistants had the lowest annual earnings ($29,000-$32,000) and physical therapists had the highest ($60,000-$86,000) among the nine occupations. Earnings are challenging to compare across data sources because the definitions of earnings differed.

- In general, higher educational attainment was associated with higher earnings. The exception was social workers, with more than a third having attained master's degrees or higher, but who had annual earnings ($41,000-$50,000) similar to clinical laboratory technologists/technicians ($45,000-$52,000), among whom only 9% held a master's degree or higher.

Estimates of national supply per 100,000 population* of individuals in nine allied health occupations based on four data sources

Occupation	ACS 2014	CPS 2015	OES 2015	NPI 2016
Social workers	253.5	226.0	192.7	68.9
Medical assistants	159.5	157.0	187.1	0
Diagnostic related technologists and technicians	104.9	98.1	112.5	0
Dental hygienists	50.6	64.8	62.4	2.31
Clinical laboratory technologists and technicians	97.8	100.5	99.7	0
Speech-language pathologists	45.5	56.6	40.9	30.9
Respiratory therapists	35.3	31.3	37.4	1.2
Physical therapists	71.2	90.2	65.2	50.2
Occupational therapists	31.9	37.2	35.7	24.5

*U.S. population estimates are for 2014

Data sources: American Community Survey (ACS), Current Population Survey (CPS), Occupational Employment Statistics (OES), National Provider Identifier Registry (NPI)

More information is available in the report: Skillman SM, Dahal A, Frogner BK, Stubbs BA. *Leveraging Data to Monitor the Allied Health Workforce: National Supply Estimates Using Different Data Sources*. Center for Health Workforce Studies, University of Washington, Dec 2016. http://bit.ly/2iAVOYB.