PHI QUALITY CARE THROUGH QUALITY JOBS

THE DIRECT SERVICES WORKFORCE IN LONG-TERM SERVICES AND SUPPORTS IN MARYLAND AND THE DISTRICT OF COLUMBIA

Known as "America in Miniature" for its diverse natural terrain, Maryland is also a microcosm of the United States when it comes to population change and the growing crisis in care for older adults and individuals with disabilities. Within the next decade, the number of adults aged 65 and older in Maryland and its urban neighbor, the District of Columbia (DC), is expected to increase by more than 330,000 (a 36 percent increase from 2015 to 2025), while the population of working-age adults will increase by less than 80,000 (just 2 percent).[1] Mirroring national realities, these trends contribute to a growing mismatch between the population demand for long-term services and supports (LTSS) and the supply of direct services workers who provide them. The poor quality of direct services jobs exacerbates this workforce shortage, as workers move to other sectors that offer better wages and benefits, more stable hours, opportunities for advancement, and other advantages.[2]

Providers, payers, policymakers, and other stakeholders in Maryland and DC agree that improving direct services jobs and the stability of the workforce is a pressing priority. To help inform efforts to improve recruitment, retention, and career development, this research brief provides a detailed snapshot of LTSS needs and the direct services workforce across this diverse region. By taking a collaborative, data-driven approach, Maryland and DC can lead the nation in addressing these challenges and ensuring that older adults and people with disabilities access the care and support they need in the years ahead.

METHODOLOGY

The analyses in this report include personal care aides, home health aides, and nursing assistants, which are the three primary occupational categories for direct services workers according to the Standard Occupational Classification (SOC) system developed by the Bureau of Labor Statistics (BLS). The North American Industry Classification System (NAICS) was used to define long-term care industries, including home care (Home Health Care Services and Services for the Elderly and People with Disabilities); nursing homes (Skilled Nursing Facilities only); and residential care (Residential Intellectual and Developmental Disability Facilities, Continuing Care Retirement Communities and Assisted Living Facilities for the Elderly, and Other Residential Care Facilities).[3]

Wages, employment trends, and employment projections were sourced from the BLS Occupational Employment Statistics (OES) program, the BLS Employment Projections program, and the Maryland Department of Labor, Licensing, and Regulation's Office of Workforce Information and Performance (OWIP). Wages were calculated as a weighted average of median hourly wages by occupation in each region. (Small survey samples at the local level impede cross-tabulations of wage and employment data by industry and occupation.) Median wages are preferable to mean wages, which are skewed by a small proportion of atypically highly paid home care workers. The Consumer Price Index (CPI) for All Urban Consumers (Current Series) was used to adjust wages for inflation.

Direct services worker demographics, employment status, annual earnings, poverty status, reliance on public assistance, and health insurance status were analyzed from the U.S. Census Bureau's American Community Survey (ACS). Given the imprecise coding system used by the ACS, two parent industries—Individual and Family Services and Residential Care Facilities (Except Skilled Nursing Facilities)—were used to examine home care workers and residential care workers.

To achieve as much specificity as possible about workforce supply and demand in Maryland while accounting for smaller sample sizes in some areas of the state, this report developed regional definitions using elements of metropolitan and non-metropolitan statistical areas (as defined by the U.S. Census Bureau) combined with Workforce Investment Areas (as defined by the Maryland Department of Labor, Licensing, and Regulation). Because county-specific data are not available through the American Community Survey, Public Use Microdata Areas (PUMAs) were converted to counties and then classified into regions to align with the other analyses in this report.
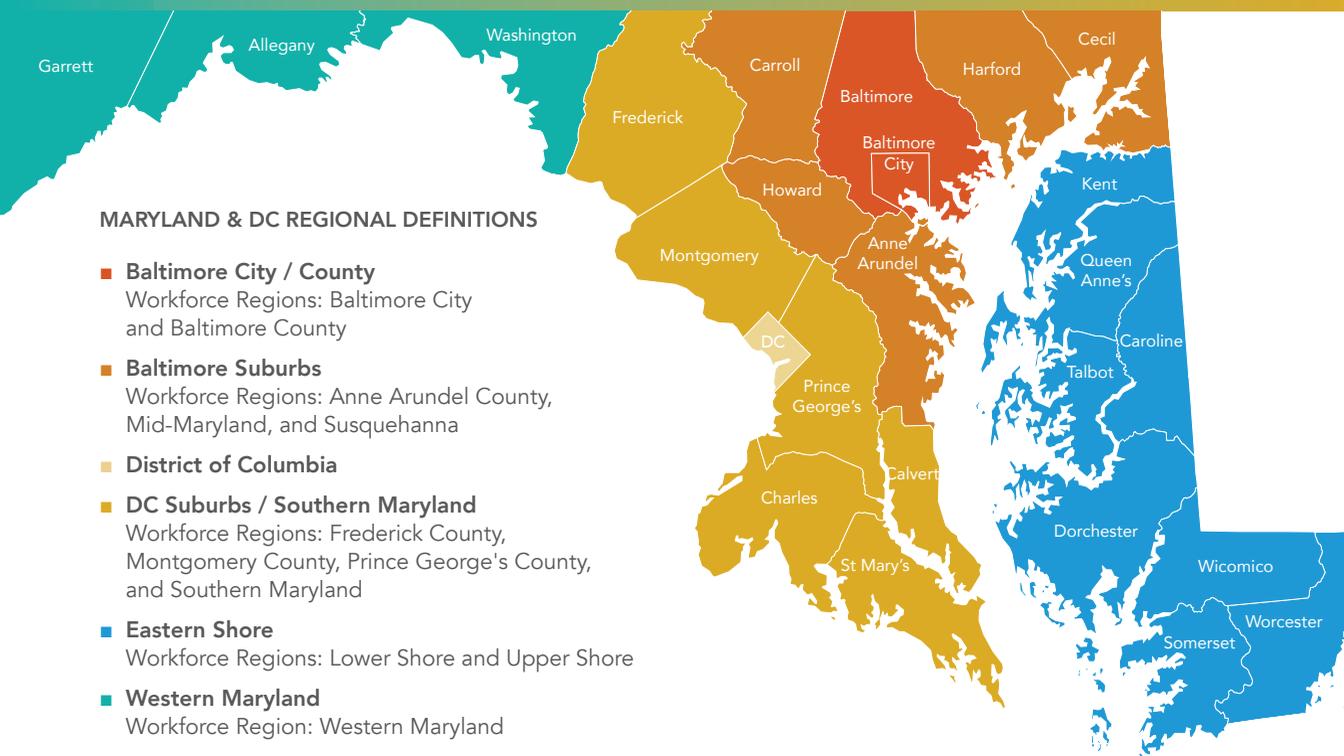
MARYLAND & DC REGIONAL DEFINITIONS

- ■ **Baltimore City / County**
  Workforce Regions: Baltimore City
  and Baltimore County

- ■ **Baltimore Suburbs**
  Workforce Regions: Anne Arundel County,
  Mid-Maryland, and Susquehanna

- ■ **District of Columbia**

- ■ **DC Suburbs / Southern Maryland**
  Workforce Regions: Frederick County,
  Montgomery County, Prince George's County,
  and Southern Maryland

- ■ **Eastern Shore**
  Workforce Regions: Lower Shore and Upper Shore

- ■ **Western Maryland**
  Workforce Region: Western Maryland

Garrett, Allegany, Washington, Frederick, Carroll, Baltimore, Baltimore City, Harford, Cecil, Kent, Howard, Montgomery, Anne Arundel, Queen Anne's, Caroline, Talbot, DC, Prince George's, Charles, Calvert, Dorchester, Wicomico, St Mary's, Somerset, Worcester

KEY FINDINGS

1 **The population in the Maryland and DC region is rapidly growing older**, which is driving up demand for long-term services and supports (LTSS).

2 From 2014 to 2024, **Maryland will need nearly 40 percent more direct services workers** and DC will need **35 percent** more workers to meet growing LTSS needs.

3 The majority of direct services workers in the region **are women (88 percent) and people of color (88 percent), and 32 percent** were born outside the U.S. The demographic profile of the workforce varies significantly across the region, particularly between rural and urban areas.

4 Direct services workers in Maryland earn a median hourly wage of **$13.03** and median annual income of **$22,700**, while those in DC earn **$14.19** per hour and **$23,700 per year.** Earnings vary from $14,600 for some workers on the Eastern Shore to nearly $28,000 in DC.

5 **Nearly 1 in 5 direct services workers in DC and more than 1 in 10 in Maryland live in poverty.** Sixty-three percent of workers in DC and 43 percent in Maryland rely on some form of public assistance.

6 **Nearly 50 percent** of the direct services workforce have not completed formal education beyond high school, though educational attainment rates range from about **40 percent to nearly 60 percent across the region.**

7 At least **1 in 10 direct services workers** in Maryland (16 percent) and DC (10 percent) **lacks health insurance.** In some parts of the region, more than a third of the workforce with health insurance relies on Medicaid, Medicare, or another form of public coverage.

8 Transportation needs vary across the region: most workers in Maryland rely on private cars to get to work **(72 percent)**, while nearly half of workers in DC **(46 percent)** use public transportation.

WHAT IS THE DIRECT SERVICES WORKFORCE?

The direct services workforce includes personal care aides **(PCAs)**, home health aides **(HHAs)**, and certified nursing assistants **(CNAs)** who provide essential day-to-day support for individuals with long-term conditions or disabilities in a range of settings, including private homes, assisted living and other residential facilities, and skilled nursing homes. As well as providing assistance with personal care (such as bathing, dressing, mobility, toilet care, and eating), PCAs may also help consumers with housekeeping, transportation, and social or employment activities outside the home. In comparison, HHAs and CNAs perform clinical tasks under the supervision of a licensed professional, such as wound care, medication administration, and/or range of motion exercises. (See Figure 1 for more details about each role.)

It is important to note that there are a range of direct services roles that fall within these three main categories and merit specific attention, even though they are not differentiated within the SOC system. Direct support professionals (DSPs) are a key example; although classified as PCAs, they play a distinct role in providing tailored support for individuals with intellectual and developmental disabilities. Advocates stress that tailored strategies to address supply and demand, training, and job quality issues among DSPs should be identified and implemented.

Figure 1: Direct Services Workers by Training Requirements, Responsibilities, and Care Setting

Job Title	Training Requirements	Responsibilities	Care Setting(s)
Certified Nursing Assistant (CNA)	**Federal requirements:** 75 hours. **MD:** 100 hours including 40 hours of practical experience. CNA certification is the basis of further credentials, including Home Health Aide (below), Geriatric Nursing Assistant, or Certified Medication Aide. **DC:** 120 hours including 75 hours of practical experience.	• Assist with activities of daily living (ADLs) • Perform certain clinical tasks under supervision of a licensed professional (depending on state laws).	Work primarily in skilled nursing facilities (SNFs), but may also work in continuing care retirement communities (CCRCs), assisted living facilities (ALFs), hospitals, or in private homes.

Job Title	Training Requirements	Responsibilities	Care Setting(s)
Home Health Aide (HHA)	**Federal requirements:** 75 hours. **MD:** Individuals must complete the CNA training and certification requirements, then pass a competency evaluation. HHA training is typically provided by the licensed home health agency employer. **DC:** 125 hours including 40 hours of practical experience.	• Assist with ADLs • Help with household tasks (also known as instrumental activities of daily living [IADLs]) • Perform certain clinical tasks under supervision of a licensed professional (depending on state laws)	Work primarily in private homes, but may also work in small group homes or larger care communities, including CCRCs, ALFs, or residential intellectual and developmental disabilities facilities
Personal Care Aide (PCA)	**No federal requirements.** **MD:** Agency-employed aides are trained by a registered nurse according to the needs of their clients. Training for individual providers in participant-directed programs is at the discretion of the participant. **DC:** PCAs providing services under the Medicaid State Plan and both HCBS waiver programs must be certified as HHAs. Participant-directed services are not offered under Medicaid.	• Assist with ADLs • Help with household tasks (also known as instrumental activities of daily living [IADLs]) • May assist with transportation, employment, and other aspects of social engagement outside the home.	Work primarily in private homes (through agencies or direct hire by individuals), but may also work in small group homes or larger care communities, including CCRCs, ALFs, or residential intellectual and developmental disabilities facilities.

QUICK FACTS: LTSS IN MARYLAND AND DC

- Total spending on LTSS was $7.8 billion in Maryland and $1.4 billion in DC in 2014.[4]

- Spending by Medicaid – the primary payer of LTSS – was $3.1 billion on LTSS in Maryland ($516 per resident) and $816 million in DC ($1,193 per resident) in 2016.[5]

- The total number of Medicaid LTSS recipients was approximately 56,000 in Maryland and 22,500 in DC in 2013.[6]

- Thanks to rebalancing efforts, 56 percent of Medicaid LTSS dollars in both Maryland and DC were spent on home and community-based services (HCBS) in 2016; the national average was 57 percent (ranging from 27 to 81 percent).[7] (See Appendix 1 for spending details by setting.)

- Although Maryland has made progress in improving access to HCBS, there were still 23,000 older adults on waiting lists for §1915(c) and §1115 waiver programs as of 2016.[8] There are no waiting lists for DC's waiver programs.

- DC and Maryland share 12th place on the 2017 LTSS Scorecard, which evaluates states from the perspective of consumers and their families.[9] The region is particularly strong on "LTSS affordability and access," ranking first and sixth in the nation, respectively.

Note: Reference years vary according to source for each of these "Quick Facts."

WHAT IS THE POPULATION DEMAND FOR LTSS?

Currently, nearly **270,000 Maryland and DC residents report difficulties with activities of daily living (ADLs) or instrumental activities of daily living (IADLs).[10]** This figure represents four percent of the total population across the region. A much larger proportion of adults aged 65 and above require this assistance: 15 percent in Maryland and 18 percent in DC. Although many of these individuals will receive unpaid support from family members and friends, a significant proportion will require paid LTSS at some point. There are also more than 26,000 individuals living in nursing homes across Maryland and DC region.[11]

The number of individuals with long-term support needs in the region will increase dramatically as the population grows older.[12] **In Maryland, the number of older adults is predicted to grow by 75 percent within the next 30 years, from 837,500 in 2015 to nearly 1.5 million in 2045.** During the same period, **the number of adults aged 85 and over will increase by nearly 200 percent.** With only 5 percent expected growth among working-age adults, the ratio of working-age adults to those aged 85 and above in the state will shrink from 32:1 in 2015 to just 12:1 by 2045.

Figure 2: Projected Population Growth by Age in MD, 2015-2045
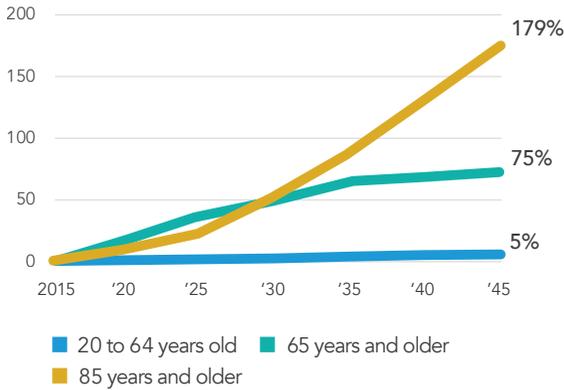
Source: Maryland Department of Planning State Data Center. 2017. *Household Population Projections by Age, Sex and Race.* http://planning.maryland.gov/MSDC/Pages/s3_projection.aspx; analysis by PHI (July 14, 2018).

Although 2045 population estimates are not available for DC, projections through 2025 indicate the early stages of a similar trend, as the number of adults aged 65 and above will increase by nearly 25 percent within this decade. By contrast, however, DC will also see a 15 percent increase in the number of working-age adults from 2015 to 2025.

Within Maryland, the Baltimore Suburbs and the DC Suburbs/Southern Maryland will experience the fastest growth in the older population between 2015 and 2045; in both areas, the number of adults aged 65 and over will nearly double, and those over 85 will increase by more than 200 percent. The smallest—but still substantive—increases in the older population will be seen in Baltimore City/County and in Western Maryland. (See Appendix 3 for detailed population projections.)

THE DIRECT SERVICES WORKFORCE SUPPLY

There are nearly 71,000 direct services workers in Maryland and DC, including 21,030 PCAs, 18,200 HHAs, and 31,410 CNAs. Over the past decade, the workforce has grown by 43 percent, up from 49,300 workers in 2007. The number of CNAs has remained relatively constant, however, while the HHA workforce has nearly doubled and the number of PCAs has grown by a staggering 280 percent. (See Appendix 2 for detailed employment trends by region and occupation.)

Source: U.S. Bureau of Labor Statistics. 2018. *Occupational Employment Statistics, May 2017 State Occupational Employment and Wage Estimates.* https://www.bls.gov/oes/current/oessrcst.htm; analysis by PHI (July 17, 2018).

Figure 3: Direct Services Workforce Employment Trends by Occupation in MD and DC, 2007-2017

(in Thousands)
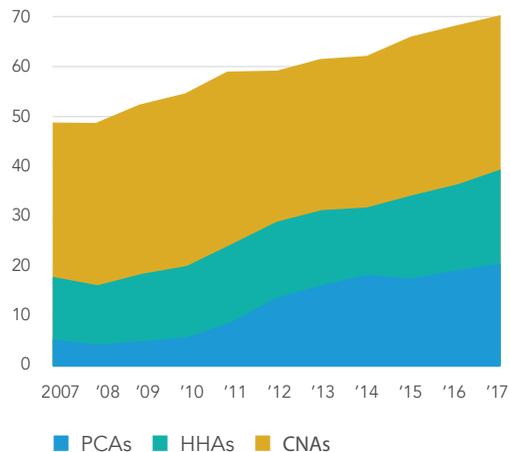
Figure 4: Direct Services Workforce by Region and Occupation, 2017 *(in Thousands)*
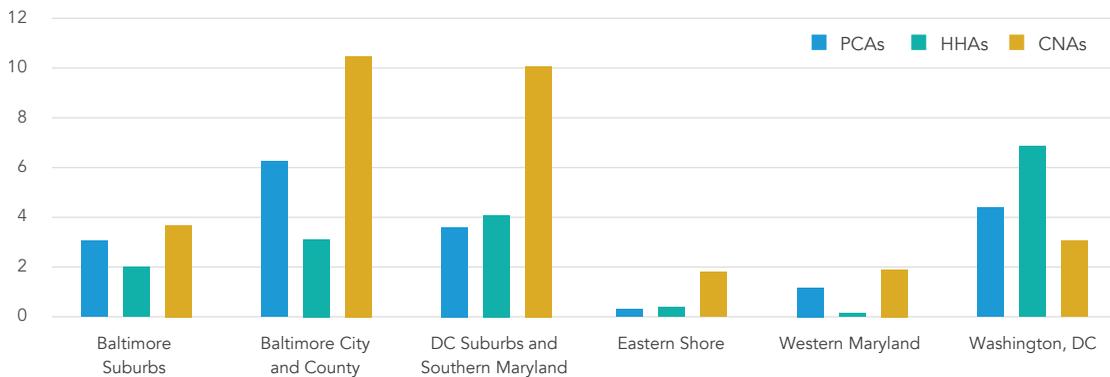
Due to the increasing population demand, Maryland will need nearly 40 percent more direct services workers and DC will need 35 percent more workers between 2014 and 2024. By comparison, the number of jobs across all sectors is expected to grow by just 6 percent in DC and 18 percent in Maryland during the same period. Within Maryland, the largest expected growth in the direct services workforce is on the Eastern Shore (27 percent) and in the Baltimore Suburbs (22 percent), while the smallest growth is expected in Western Maryland (2 percent).

Figure 5: Employment Projections by Region, 2014-2024 *(in Percents)*
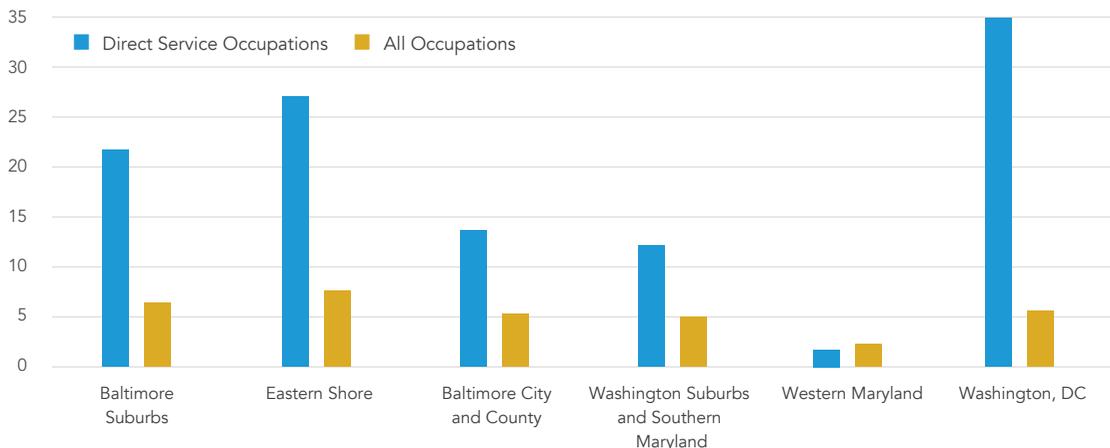
Sources: Maryland Department of Labor, Licensing, and Regulation. 2018. *Maryland Occupational Wage Estimates, Workforce Investment Areas.* https://www.dllr.state.md.us/lmi/wages/. Analysis by PHI (July 17, 2018). Current employment data were missing for home health aides in Baltimore City, Somerset County, Wicomico County, and Worcester County, and employment data for personal care aides were missing for Harford and Cecil counties; Projections Central. 2017. *Long Term Occupational Projections, State Occupational Projections.* http://www.projectionscentral.com/Projections/LongTerm; Maryland Department of Labor, Licensing, and Regulation. 2018. *Maryland Occupational & Industry Projections, Workforce Region 2014-2024.* https://www.bls.gov/oes/current/oessrcst.htm. Analysis by PHI (July 14, 2018). Employment projections for HHAs and CNAs were not available for Caroline, Cecil, Dorchester, Harford, Kent, Queen Anne's, Somerset, Talbot, Wicomico, or Worcester counties. Instead, an aggregate occupational group (Standard Occupational Code 31-1000) was used, which includes CNAs, HHAs, orderlies, and psychiatric aides (with the latter two occupations constituting a very small portion of the total).

At the national level, labor force participation among **women ages 20 to 64, who currently comprise the majority of the direct services workforce**, is declining, with fewer women now entering the workforce than in previous generations.[13] This workforce will increase by 3.5 million in the next decade, compared to 7.7 million in 1996 to 2006. However, the labor force will add another 2.2 million men aged 20 to 64 in the next decade and, notably, 5.3 million more older adults.

These trends suggest opportunities to recruit new, "non-traditional" workers to the direct services workforce.

WHO ARE DIRECT SERVICES WORKERS?

Although broadly reflecting the demographic profile of the direct services workforce across the U.S.,[14] the direct services workforce in Maryland and DC varies considerably between urban and rural areas. Nearly 9 in 10 direct services workers in the region are female (88 percent) and their median age is 38 years old, although median age ranges from 29 years in residential care in DC to 46 years in home care in Maryland. Within Maryland, the Eastern Shore has the highest proportion of female workers (92 percent) while the DC Suburbs/Southern Maryland have the highest proportion of male workers (16 percent). (See Appendix 4 through 8 for a full picture of the direct services workforce in each region within Maryland.)

Figure 6: Demographic Profile of the Direct Services Workforce in Washington, DC *(in Percents)*
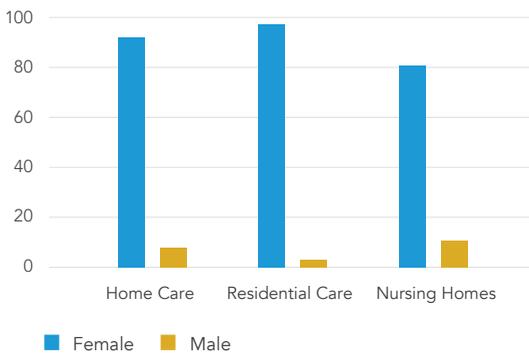
Figure 7: Demographic Profile of the Direct Services Workforce in Maryland *(in Percents)*
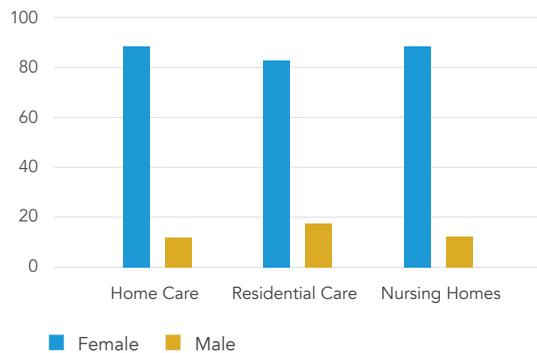
Source: U.S. Census Bureau. 2017. *American Community Survey (ACS), 2012-2016 5-year Public Use Microdata Sample (PUMS).* https://www.census.gov/programs-surveys/acs/data/pums.html; analysis by PHI (July 25, 2018).

More than 87 percent of direct services workers are people of color in Maryland and DC, compared to half of all workers in the region.[15] Black or African-American workers constitute the majority of workers across all care settings. Comparing within Maryland, however, the proportion of people of color in the direct services workforce ranges from 8 percent in Western Maryland to 80 percent in Baltimore City/County.

Nearly one-third of direct services workers across Maryland and DC were born outside the U.S., while 85 percent of the workforce are U.S. citizens by birth or naturalization.

The percentage of direct services workers who were born outside the U.S. ranges from 3 percent in Western Maryland and the Eastern Shore to 63 percent in the DC Suburbs/Southern Maryland.

Nearly 50 percent of the direct services workforce have not completed formal education beyond high school, although levels of educational attainment vary considerably between care settings. Within Maryland, the percentage of workers with a high school diploma or less varies from just over 40 percent in the Baltimore Suburbs to nearly 60 percent on the Eastern Shore.

Figure 8: Demographic Profile of the Direct Services Workforce in Washington, DC
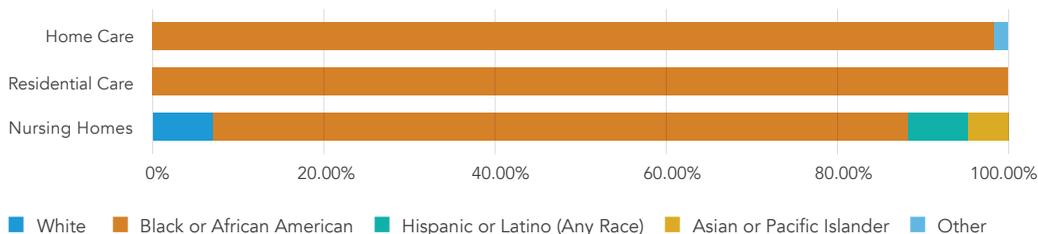
Figure 9: Demographic Profile of the Direct Services Workforce in Maryland
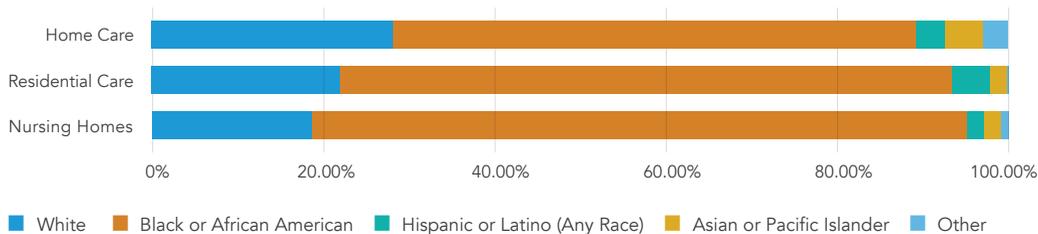
Source: U.S. Census Bureau. 2017. *American Community Survey (ACS), 2012-2016 5-year Public Use Microdata Sample (PUMS).* https://www.census.gov/programs-surveys/acs/data/pums.html; analysis by PHI (July 25, 2018).

Table 1: Demographic Profile of the Direct Services Workforce in DC and Maryland

	Washington, DC			Maryland		
	Home Care	Residential Care	Nursing Homes	Home Care	Residential Care	Nursing Homes
Gender						
Female	91.8%	97.3%	80.5%	88.4%	82.8%	88.3%
Male	8.2%	2.7%	19.5%	11.6%	17.2%	11.7%
Age						
16-24	5.1%	4.9%	8.2%	9.4%	12.9%	11.2%
25-34	33.2%	54.2%	21.1%	20.3%	33.7%	26.6%
35-44	25%	25.1%	24.6%	18.7%	21.1%	23.6%
45-54	20.8%	3.8%	22.1%	24.7%	16.3%	19.9%
55-64	13.5%	0%	18.8%	18.7%	12.4%	14.2%
65+	2.5%	12.1%	5.3%	8.1%	3.6%	4.5%
Median	38	29	40	46	36	40
Race and Ethnicity						
White	0%	0%	7.1%	28.1%	22%	18.7%
Black or African American	98.2%	100%	81.2%	61.2%	71.5%	76.4%
Hispanic or Latino (Any Race)	0%	0%	7.1%	3.4%	4.4%	2.1%
Asian or Pacific Islander	0%	0%	4.6%	4.3%	2%	1.9%
Other	1.8%	0%	0%	2.9%	0.1%	0.9%
Citizenship Status						
U.S. Citizen by Birth	82.6%	75.2%	59.9%	60.4%	62.5%	67.9%
U.S. Citizen by Naturalization	8.2%	19.1%	20.2%	17.6%	17.5%	17.2%
Not a U.S. Citizen	9.2%	5.7%	19.9%	22%	20.1%	14.9%
Educational Attainment						
Less than High School	4.3%	9.4%	6.4%	10.2%	12.6%	7.7%
High School Graduate	51.8%	24.3%	49.5%	35.4%	33.3%	44.2%
Some College, No Degree	29.5%	56.1%	26.3%	30.2%	32.3%	37%
Associate's Degree or Higher	14.4%	10.2%	17.7%	24.2%	21.8%	11.1%

THE CHALLENGES FOR DIRECT SERVICES JOBS

The critical role that direct services workers play in the provision of LTSS is poorly matched by the quality of their jobs, nationally and regionally. **In Maryland, the median hourly wage for all direct services workers in 2017 was $13.03, with a range from $11.65 for PCAs to $14.25 for CNAs.** By comparison, the 2017 living wage for Maryland was estimated at $14.62 for a single adult and $33.27 for an adult with two children.[16] Notably, **adjusting for inflation, direct services wages actually decreased by 7 percent from 2007 to 2017.**

Median wages in 2017 for direct services workers in DC were slightly higher at $14.19, with a range from $13.82 for PCAs to $16.01 for CNAs. On the other hand, the living wage in DC was $17.11 for a single adult and $32.82 for an adult with two children.[17] Unlike in Maryland, hourly wages did increase from 2007 through 2017 for direct services workers in DC, especially for PCAs (20 percent) and HHAs (12 percent); nonetheless, these workers still earn substantively less than CNAs.

Figure 10: Direct Services Workers Median Hourly Wages in MD and DC, Adjusted for Inflation, 2007-2017
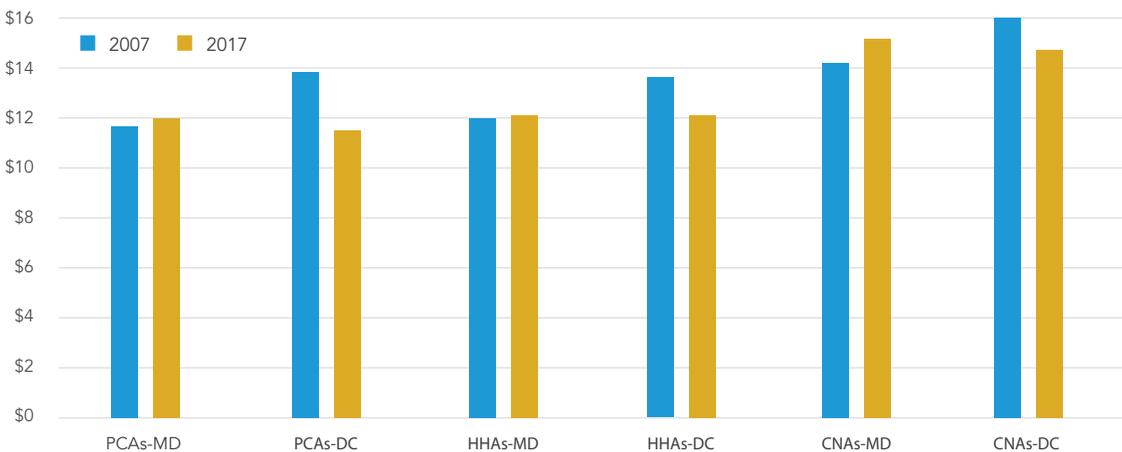
Source: U.S. Bureau of Labor Statistics. 2018. *Occupational Employment Statistics, May 2007 to May 2017 State Occupational Employment and Wage Estimates.* https://www.bls.gov/oes/current/oessrcst.htm; analysis by PHI (July 17, 2018).

Median annual earnings are $22,700 for direct services workers in Maryland and $23,700 for workers in DC. Within the region, however, annual earnings vary considerably, from just $14,600 in home care on Maryland's Eastern Shore to nearly $28,000 in nursing homes in DC.

Figure 11: Median Annual Income by Region and Care Setting, 2017 *(in Thousands)*
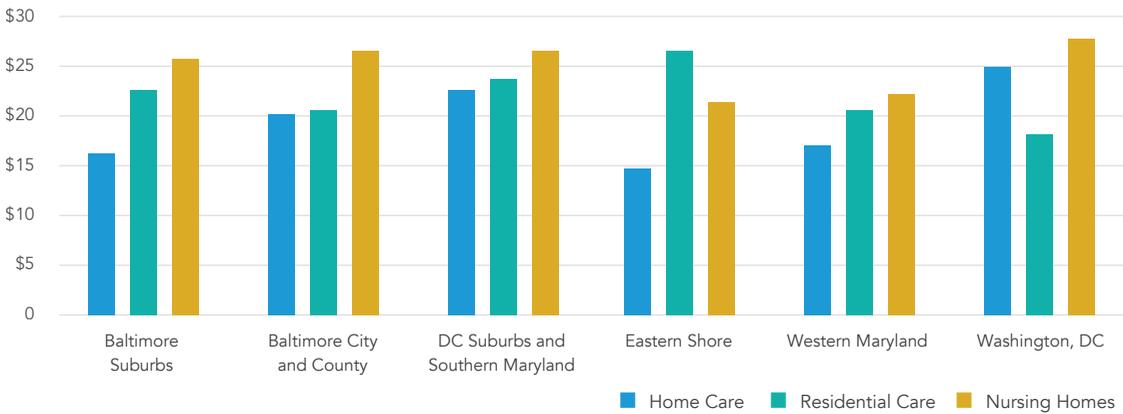
Low annual earnings are a function of employment status as well as low wages. Although approximately **83 percent of all direct services workers in Maryland and DC work full time**, which is higher than the national average for these workers (69 percent), patterns of work vary substantively within the region and across care settings; for example, **less than 60 percent of home care workers are full time in Baltimore City/County, the Baltimore Suburbs, and the Eastern Shore**.

Figure 12: Employment Status by Region, 2017
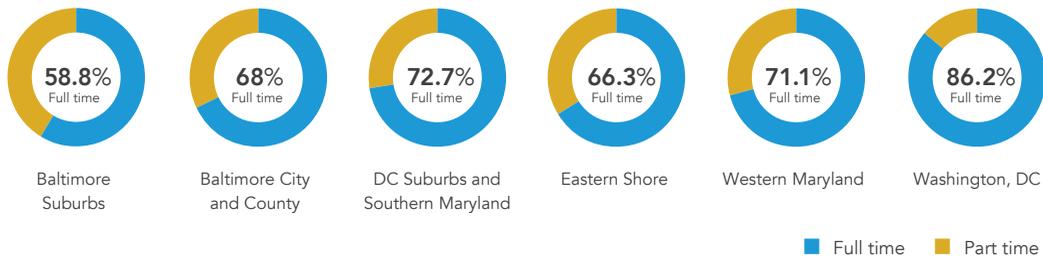
58.8% Full time	**68%** Full time	**72.7%** Full time	**66.3%** Full time	**71.1%** Full time	**86.2%** Full time
Baltimore Suburbs	Baltimore City and County	DC Suburbs and Southern Maryland	Eastern Shore	Western Maryland	Washington, DC

■ Full time ■ Part time

Source: U.S. Census Bureau. 2017. *American Community Survey (ACS), 2012-2016 5-year Public Use Microdata Sample (PUMS).* https://www.census.gov/programs-surveys/acs/data/pums.html; analysis by PHI (July 25, 2018);

Due to low wages and annual earnings, poverty rates and the use of public assistance are high among direct services workers nationwide, including in Maryland and DC. **More than 1 in 10 direct services workers in Maryland and nearly 1 in 5 in DC live in poverty.**[18] When nearly 40 percent of all direct services workers across the region live below 200 percent of the federal poverty line. **Within Maryland, poverty rates range from 6 percent of nursing assistants in nursing homes in the Baltimore Suburbs to nearly 30 percent of home care workers on the Eastern Shore.**

Figure 13: Poverty Rates by Care Setting and Region, 2017 *(in Percents)*
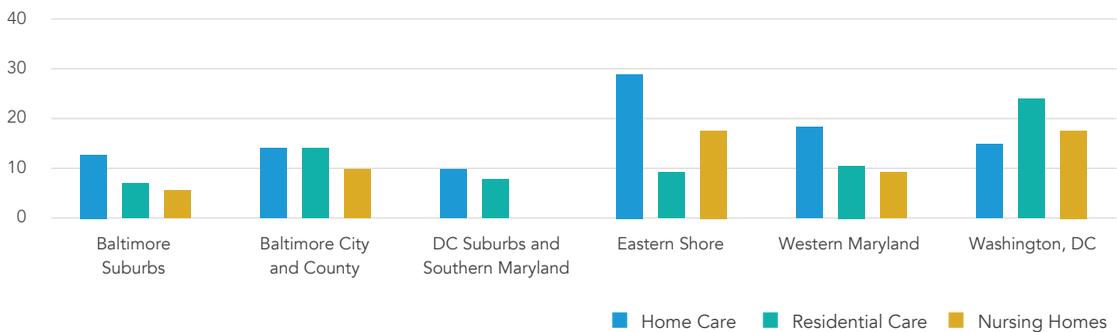
In addition to experiencing high rates of poverty, **43 percent of direct services workers in Maryland and 63 percent in DC rely on public assistance**, primarily food and nutrition assistance and Medicaid. Within the region, public assistance use is particularly high on the Eastern Shore among nursing assistants in nursing homes, and in DC among home care workers (76 percent) and residential care workers (74 percent).

Figure 14: Use of Public Assistance by Region, 2017 *(in Percents)*
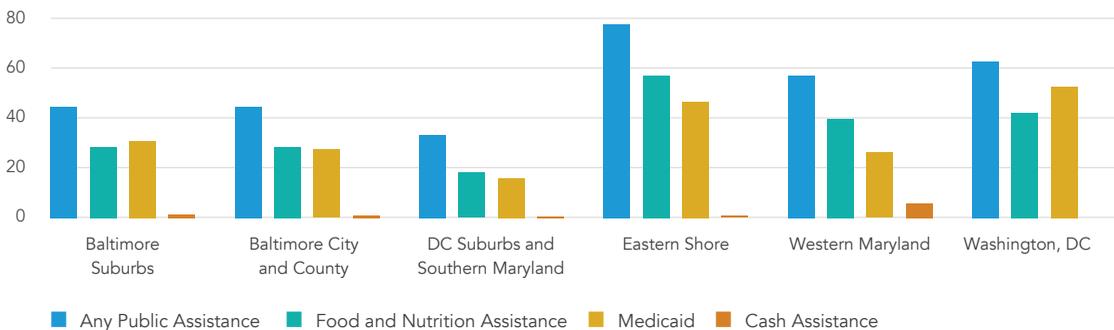
Source: U.S. Census Bureau. 2017. *American Community Survey (ACS), 2012-2016 5-year Public Use Microdata Sample (PUMS).* https://www.census.gov/programs-surveys/acs/data/pums.html; analysis by PHI (July 25, 2018);

At least 1 in 10 direct services workers in Maryland (16 percent) and DC (10 percent) lacks health insurance, while 15 percent of direct services workers nationwide are uninsured.[19] In some parts of the region, more than a third of the workforce relies on public health insurance (Medicaid, Medicare, or other public insurance), including on the Eastern Shore (61 percent) and in DC (57 percent), Western Maryland (37 percent), and the Baltimore Suburbs (35 percent). (See Table 2 for more details on health insurance coverage for direct services workers in the region.)

Finally, for a low-income workforce, transportation time and cost are important elements of job quality and determinants of access to care. Most workers in Maryland rely on private cars to get to work (72 percent), while nearly half of workers in DC (46 percent) use public transportation. The longest commutes take place among those relying on public transportation across all settings, ranging from 45 minutes to one hour.

Figure 15: Mode of Transportation to Work by Region, 2017
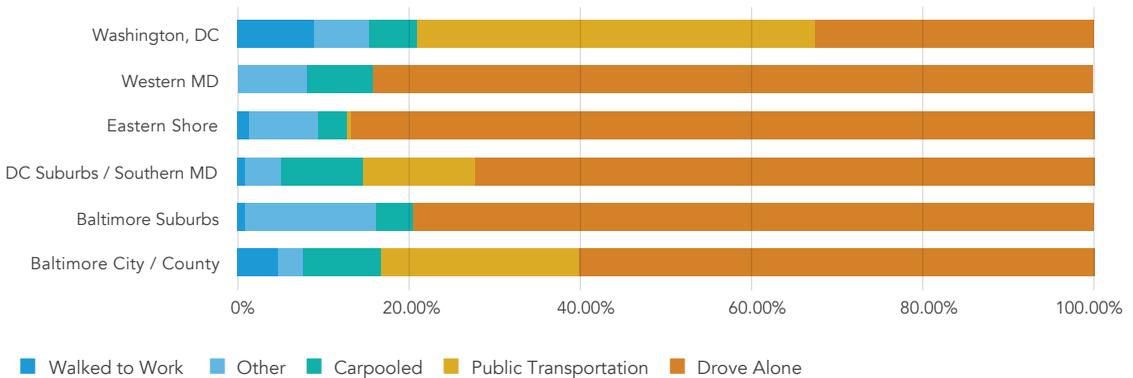
Source: U.S. Census Bureau. 2017. *American Community Survey (ACS), 2012-2016 5-year Public Use Microdata Sample (PUMS)*. https://www.census.gov/programs-surveys/acs/data/pums.html; analysis by PHI (July 25, 2018). "Other" includes the response "worked at home."

Table 2: Direct Services Job Quality in DC and Maryland

	Washington, DC			Maryland		
	Home Care	Residential Care	Nursing Homes	Home Care	Residential Care	Nursing Homes
Employment Status*						
Full Time	79.1%	81%	85.7%	66.1%	87.7%	80.7%
Part Time, Non-Economic Reasons	13.9%	12.4%	6.9%	21%	9.5%	17%
Part Time, Economic Reasons	7%	6.6%	7.4%	12.8%	2.8%	2.3%
Annual Earnings						
Median Personal Earnings	$25,047	$18,402	$27,719	$20,152	$22,177	$25,763
Median Family Earnings	$49,105	$23,878	$55,206	$57,099	$58,138	$62,290
Poverty Status						
Less than 100%	15.5%	24.5%	17.9%	13.4%	10.3%	9%
Less than 138%	18.1%	48.8%	17.9%	24.4%	19.6%	14.6%
Less than 200%	36.7%	61.2%	34.4%	45.2%	35.4%	33.9%
Public Assistance						
Any Public Assistance	61.8%	76.3%	59%	46%	36.6%	43.3%
Food and Nutrition Assistance	45.2%	42%	36.2%	24.9%	25.6%	32.7%
Medicaid	54.4%	66.6%	42.7%	27.8%	24.3%	21.6%
Cash Assistance	7.4%	13.7%	0%	1.9%	1.9%	2.5%
Health Insurance Status						
Any Health Insurance	90.5%	96%	84.6%	80.4%	84.2%	89.3%
Health Insurance through Employer/Union	31.6%	32.1%	44.5%	38.7%	53.9%	62.6%
Medicaid, Medicare, Other Public Coverage	56.3%	76.3%	49.5%	36.4%	27.4%	25.6%
Health Insurance Purchased Directly	4.7%	25.9%	3.6%	15.1%	7.4%	7.4%

* Workers may work part time for "economic" or "non-economic" reasons. Economic reasons include not being able to obtain full-time hours due to business conditions within a company or the broader market, while non-economic reasons include family caregiving responsibilities, educational enrollment, health concerns, and other personal reasons. Across Maryland and DC, more workers report non-economic reasons (including 14 percent of home care workers in DC and more than 20 percent in Maryland) than economic reasons for working part time.

To a large extent, the challenges facing the direct services workforce in LTSS in Maryland and DC reflect nationwide realities. The workforce is comprised almost entirely of historically marginalized workers—including women, people of color, and/or immigrants—who face significant obstacles in education and employment. Despite the demands of the job and the unequivocal importance of their contributions, these workers still struggle to make a livable wage and achieve economic stability.

But underneath these universal realities are significant local variations that require targeted strategies and solutions.

Employment supports for immigrant workers may be critical for the workforce in DC and its environs, for example, but less relevant in the western reaches of Maryland. Improving hours for workers in the Baltimore area may be a more pressing concern than in DC, where most workers are already full time. All workers may face transportation barriers, but the solutions will vary for those in urban versus rural areas. Combined with broad-based reforms, such tailored interventions and employment supports will be essential for building and supporting a direct services workforce that is prepared to meet the needs of older adults and individuals with disabilities now and in the future.

APPENDIX 1

Medicaid Expenditures for Long-Term Services and Supports by Setting, 2016 *(in Thousands)*

	Nursing Facilities		Other Institutional Settings		Home and Community-Based Settings		Total	National Rank
	Amount	% of LTSS Spending	Amount	% of LTSS Spending	Amount	% of LTSS Spending		
MD	$1,195,942	38%	$165,858	5%	$1,748,754	56%	$3,110,554	23rd
DC	$252,675	31%	$105,590	13%	$457,793	56%	$816,058	2nd
US	$56,729,271	34%	$15,543,412	9%	$94,407,727	57%	$166,680,410	--

Source: Eiken, Steve, Kate Sredl, Brian Burwel, and Angie Amos. 2018. *Medicaid Expenditures for Long-Term Services and Supports in FY 2016.* Baltimore, MD: Centers for Medicare & Medicaid Services (CMS). https://www.medicaid. gov/medicaid/ltss/downloads/reports-and-evaluations/ltssexpenditures2016.pdf. Data are for the federal fiscal year (10/2015-9/2016). "Other institutional settings" include intermediate care facilities for individuals with intellectual disabilities and mental health facilities. Percentages may not add to 100 percent due to rounding.

APPENDIX 2

Employment Trends in the Direct Services Workforce by Region and Occupation, 2007 to 2017

Area	Occupation	2007	2017	Change	% Change
District of Columbia	PCAs	970	4,440	3,470	358%
	HHAs	1,210	6,910	5,700	471%
	CNAs	3,090	3,160	70	2%
Total		**5,270**	**14,510**	**9,240**	**175%**
Maryland	PCAs	4,570	16,590	12,020	263%
	HHAs	11,280	11,290	10	0%
	CNAs	28,180	28,250	70	0%
Total		**44,030**	**56,130**	**12,100**	**27%**

Source: U.S. Bureau of Labor Statistics. 2018. *Occupational Employment Statistics, May 2007 to May 2017 State Occupational Employment and Wage Estimates.* https://www.bls.gov/oes/current/oessrcst.htm. PCA=Personal care assistant; HHA=Home health aide; CNA=Certified nursing assistant

APPENDIX 3

Population Projections by Age Group and Region, 2015 to 2045

Region	Age Group	2015	2025	2035	2045	Change	% Change
Baltimore City	20-64	889,115	863,666	859,433	884,861	-4,254	0%
and County	65+	207,368	259,968	288,584	291,389	84,021	41%
	85+	33,676	33,296	42,829	57,583	23,907	71%
Baltimore Suburbs	20-64	842,631	847,392	836,563	875,350	32,719	4%
	65+	196,412	283,273	352,786	363,107	166,695	85%
	85+	23,199	31,966	54,430	82,042	58,843	254%
Eastern Shore	20-64	200,871	207,439	214,507	229,517	28,646	14%
	65+	66,649	88,678	104,945	103,761	37,112	56%
	85+	8,417	10,522	15,683	21,077	12,660	150%
DC Suburbs and	20-64	1,561,159	1,580,869	1,603,112	1,663,239	102,080	7%
Southern Maryland	65+	323,515	464,190	597,010	643,895	320,380	99%
	85+	42,081	56,423	95,800	143,735	101,654	242%
Western Maryland	20-64	149,654	154,287	156,465	166,433	16,779	11%
	65+	43,552	55,357	64,521	63,624	20,072	46%
	85+	6,171	7,067	9,411	12,215	6,044	98%
State of Maryland	20-64	3,643,430	3,653,653	3,667,247	3,819,400	175,970	5%
	65+	837,496	1,151,466	1,404,517	1,465,776	628,280	75%
	85+	113,544	139,274	217,422	316,652	203,108	179%
Washington, D.C	20-64	455,463	524,098	NA	NA	NA	15%
	65+	77,004	95,292	NA	NA	NA	24%
	85+	11,447	12,079	NA	NA	NA	6%

Source: Maryland Department of Planning State Data Center. 2017. *Household Population Projections by Age, Sex and Race.* http://planning.maryland.gov/MSDC/Pages/s3_projection.aspx; DC: District of Columbia Office of Planning. 2016. *DC Forecasts, Population Forecast by Single Age Citywide.* https://planning.dc.gov/node/1212966; analysis by PHI (July 14, 2018). NA = Population projections not available beyond 2025 for Washington, DC.

APPENDIX 4

Profile of Direct Services Workforce by Care Setting in Baltimore City and County, 2017

	Home Care	Residential Care	Nursing Homes	Total
Gender				
Male	11.3%	12.6%	6%	9.5%
Female	88.7%	87.4%	94%	90.5%
Age				
16-24	9.3%	4.6%	14.1%	10%
25-34	23.2%	37.1%	27.5%	28.7%
35-44	19.2%	27.9%	15.9%	20.2%
45-54	15.4%	14%	20.2%	16.9%
55-64	20.4%	13.8%	20%	18.5%
65+	12.5%	2.6%	2.3%	5.8%
Median	44	36	40	40
Race and Ethnicity				
White	28.4%	8.2%	7.4%	14.6%
Black or African American	65.9%	86.9%	86.8%	79.9%
Hispanic or Latino (Any Race)	0%	4.9%	0.5%	1.5%
Asian or Pacific Islander	1.4%	0%	3.7%	1.9%
Other	4.4%	0%	1.6%	2.1%
Citizenship Status				
U.S. Citizen by Birth	69%	74.8%	87.1%	77.8%
U.S. Citizen by Naturalization	15.4%	7.5%	6.6%	9.8%
Not a U.S. Citizen	15.6%	17.8%	6.3%	12.4%
Educational Attainment				
Less than High School	12.2%	24.7%	9.6%	14.5%
High School Graduate	33.9%	26%	36.9%	33%
Some College, No Degree	31.4%	27.1%	40.4%	33.8%
Associate's Degree or Higher	22.6%	22.3%	13.1%	18.7%
Class of Worker				
For-Profit	67.4%	74.2%	80.3%	74.3%
Non-Profit	12.2%	20.8%	15.7%	15.9%
Independent Providers	20.4%	5%	4%	9.7%

	Home Care	Residential Care	Nursing Homes	Total
Employment Status				
Full Time	59.6%	65.8%	76.5%	68%
Part Time	40.4%	34.2%	23.5%	32%
Annual Earnings				
Median Personal Earnings	$20,447	$20,763	$26,401	$22,840
Median Family Earnings	$56,779	$55,002	$57,558	$55,206
Federal Poverty Level				
Less than 100%	14.5%	14.3%	10.7%	12.9%
Less than 138%	21.7%	19.4%	16.7%	19.1%
Less than 200%	47.9%	33.4%	38.8%	40.4%
Public Assistance				
Any Public Assistance	48.3%	43.4%	42.5%	44.7%
Food and Nutrition Assistance	21%	33.4%	33.4%	29.3%
Medicaid	29%	26.9%	27.3%	27.8%
Cash Assistance	2.2%	1.6%	3.5%	2.6%
Health Insurance Status				
Any Health Insurance	84.2%	85.6%	85.5%	85.1%
Health Insurance through Employer/Union	37.9%	55.8%	55.3%	49.7%
Medicaid, Medicare, or Other Public Coverage	41.2%	27.8%	28.9%	32.7%
Health Insurance Purchased Directly	13.6%	5.6%	7.2%	8.9%
Means of Transportation				
Drove Alone	63.2%	52.1%	63.4%	60.3%
Carpool	7.4%	7.8%	10.6%	8.8%
Public Transportation	19.2%	34.4%	18.3%	22.9%
Walked to Work	4.4%	3.7%	6.4%	5%
Other	1.9%	1%	1.1%	1.4%
Worked at Home	3.9%	1%	0.2%	1.7%
Median Travel Time *(in Minutes)*				
Drove Alone	20	20	20	20
Public Transportation	30	50	40	40
Walked to Work	15	30	10	15
Carpool	30	25	20	25
Other	15	45	30	45
Total	20	30	25	25

Source: U.S. Census Bureau. 2017. *American Community Survey (ACS), 2012-2016 5-year Public Use Microdata Sample (PUMS)*. https://www.census.gov/programs-surveys/acs/data/pums.html; analysis by PHI (July 25, 2018).

APPENDIX 5

Profile of Direct Services Workforce by Care Setting in the Baltimore Suburbs, 2017

	Home Care	Residential Care	Nursing Homes	Total
Gender				
Male	14.4%	12.7%	10.8%	12.9%
Female	85.6%	87.3%	89.2%	87.1%
Age				
16-24	20.1%	19.5%	15.1%	18.5%
25-34	14.6%	37.6%	28.8%	25.3%
35-44	16.8%	19.9%	28.7%	21.1%
45-54	26.3%	15.3%	11%	18.7%
55-64	15.6%	7.7%	12.7%	12.5%
65+	6.6%	0%	3.8%	3.9%
Median	44	31	39	37
Race and Ethnicity				
White	50.5%	39.4%	41.6%	44.8%
Black or African American	40.7%	53.6%	53.5%	48.1%
Hispanic or Latino (Any Race)	2.9%	4.2%	3.9%	3.6%
Asian or Pacific Islander	3.4%	2.8%	1.1%	2.6%
Other	2.5%	0%	0%	1%
Citizenship Status				
U.S. Citizen by Birth	84.4%	73%	84.1%	81.1%
U.S. Citizen by Naturalization	5.3%	23%	7.7%	11%
Not a U.S. Citizen	10.3%	4%	8.2%	7.9%
Educational Attainment				
Less than High School	2.4%	10.9%	4.3%	5.4%
High School Graduate	31.9%	30%	47.1%	35.8%
Some College, No Degree	40.1%	43.7%	39.4%	40.9%
Associate's Degree or Higher	25.6%	15.4%	9.1%	17.9%
Class of Worker				
For-Profit	53.3%	73.3%	82.1%	67.3%
Non-Profit	16.4%	20%	16.5%	17.5%
Independent Providers	30.3%	6.6%	1.3%	15.2%

	Home Care	Residential Care	Nursing Homes	Total
Employment Status				
Full Time	50.7%	63%	66.6%	58.8%
Part Time	49.3%	37%	33.4%	41.2%
Annual Earnings				
Median Personal Earnings	$16,357	$22,492	$25,855	$20,763
Median Family Earnings	$69,656	$84,854	$71,634	$71,634
Federal Poverty Level				
Less than 100%	12.8%	7.5%	6.3%	9.4%
Less than 138%	20.6%	29.7%	6.3%	19.1%
Less than 200%	37.7%	35.8%	22.9%	32.9%
Public Assistance				
Any Public Assistance	50.4%	34.8%	47.1%	45%
Food and Nutrition Assistance	26.1%	20.6%	41.3%	28.9%
Medicaid	41.9%	32.4%	14.4%	31.3%
Cash Assistance	0.4%	1.8%	4.3%	1.9%
Health Insurance Status				
Any Health Insurance	91.9%	95%	95.4%	93.8%
Health Insurance through Employer/Union	47.1%	56.6%	74.2%	57.6%
Medicaid, Medicare, or Other Public Coverage	46.8%	34.8%	17.6%	35%
Health Insurance Purchased Directly	16.2%	4.7%	7.6%	10.4%
Means of Transportation				
Drove Alone	70.1%	84.6%	86.9%	79.3%
Carpool	3.7%	6.9%	2.9%	4.4%
Public Transportation	0%	0%	0%	0%
Walked to Work	0.6%	0%	2%	0.8%
Other	1.4%	4.5%	4.5%	3.2%
Worked at Home	24.2%	4%	3.7%	12.3%
Median Travel Time *(in Minutes)*				
Drove Alone	25	20	20	20
Public Transportation	0	0	0	0
Walked to Work	4	0	15	4
Carpool	20	20	30	20
Other	1	15	45	15
Total	25	20	20	20

APPENDIX 6

Profile of Direct Services Workforce by Care Setting in the DC Suburbs and Southern Maryland, 2017

	Home Care	Residential Care	Nursing Homes	Total
Gender				
Male	11.2%	26.3%	18.5%	16.3%
Female	88.8%	73.7%	81.5%	83.7%
Age				
16-24	6.5%	13.7%	6.2%	7.8%
25-34	19.3%	31.1%	22.3%	22.5%
35-44	21%	15.9%	30.4%	22.8%
45-54	29.4%	21.6%	23.1%	26%
55-64	17.9%	13.6%	12.4%	15.4%
65+	5.8%	4.1%	5.6%	5.4%
Median	47	38	41	43
Race and Ethnicity				
White	12.1%	12.7%	7.9%	11%
Black or African American	72.1%	78.6%	86.9%	77.7%
Hispanic or Latino (Any Race)	5.9%	5%	3.4%	5%
Asian or Pacific Islander	7.1%	3.7%	1.3%	4.7%
Other	2.8%	0%	0.6%	1.6%
Citizenship Status				
U.S. Citizen by Birth	38.5%	35.6%	36.1%	37.2%
U.S. Citizen by Naturalization	27.1%	27.7%	34.4%	29.4%
Not a U.S. Citizen	34.4%	36.8%	29.5%	33.4%
Educational Attainment				
Less than High School	10.3%	6.5%	6%	8.3%
High School Graduate	34%	40%	52%	40.4%
Some College, No Degree	26.5%	31.3%	28.8%	28.1%
Associate's Degree or Higher	29.2%	22.1%	13.1%	23.1%
Class of Worker				
For-Profit	72.6%	75.2%	77.8%	74.7%
Non-Profit	7.8%	21.1%	18.6%	13.6%
Independent Providers	19.6%	3.7%	3.6%	11.8%

	Home Care	Residential Care	Nursing Homes	Total
Employment Status				
Full Time	64.7%	71.8%	87.3%	72.7%
Part Time	35.3%	28.2%	12.7%	27.3%
Annual Earnings				
Median Personal Earnings	$22,492	$23,878	$26,401	$24,334
Median Family Earnings	$59,448	$60,216	$69,020	$62,095
Federal Poverty Level				
Less than 100%	10.1%	8.4%	7.1%	8.9%
Less than 138%	22.1%	14.5%	10.1%	17.1%
Less than 200%	42.5%	34.7%	28%	36.7%
Public Assistance				
Any Public Assistance	36.6%	25.6%	34.1%	33.7%
Food and Nutrition Assistance	19.5%	16.9%	21.2%	19.5%
Medicaid	19.2%	13.9%	15.1%	16.9%
Cash Assistance	2.4%	2.7%	1%	2.1%
Health Insurance Status				
Any Health Insurance	73.1%	75.1%	89.1%	78.2%
Health Insurance through Employer/Union	39%	55%	66.7%	50.3%
Medicaid, Medicare, or Other Public Coverage	26.3%	16.5%	20%	22.5%
Health Insurance Purchased Directly	15.7%	8.7%	9%	12.4%
Means of Transportation				
Drove Alone	69.9%	72%	76.5%	72.2%
Carpool	8.9%	13.4%	7.6%	9.4%
Public Transportation	15.7%	11.6%	9.3%	13.1%
Walked to Work	0.8%	1.6%	1%	1%
Other	1.7%	1.4%	5%	2.6%
Worked at Home	3.1%	0%	0.5%	1.8%
Median Travel Time *(in Minutes)*				
Drove Alone	30	30	20	30
Public Transportation	60	45	60	60
Walked to Work	10	10	17.5	10
Carpool	30	30	25	30
Other	45	45	30	30
Total	30	30	25	30

Source: U.S. Census Bureau. 2017. *American Community Survey (ACS), 2012-2016 5-year Public Use Microdata Sample (PUMS).* https://www.census.gov/programs-surveys/acs/data/pums.html; analysis by PHI (July 25, 2018).

APPENDIX 7

Profile of Direct Services Workforce by Care Setting on the Eastern Shore, 2017

	Home Care	Residential Care	Nursing Homes	Total
Gender				
Male	10.3%	2.6%	6.3%	7.7%
Female	89.8%	97.4%	93.7%	92.3%
Age				
16-24	0%	12.3%	10.8%	5.4%
25-34	22.8%	30.6%	37.8%	28.8%
35-44	13.9%	28.3%	16.8%	17.2%
45-54	21%	9.8%	14.5%	17.1%
55-64	26.6%	16.7%	7.3%	18.9%
65+	15.7%	2.3%	12.9%	12.5%
Median	50	43	35	43
Race and Ethnicity				
White	31.9%	17.2%	30.2%	28.9%
Black or African American	66.9%	81%	69.5%	70.1%
Hispanic or Latino (Any Race)	0%	1.8%	0%	0.3%
Asian or Pacific Islander	0%	0%	0%	0%
Other	1.2%	0%	0.3%	0.7%
Citizenship Status				
U.S. Citizen by Birth	95.1%	100%	99.7%	97.4%
U.S. Citizen by Naturalization	3.4%	0%	0.3%	1.9%
Not a U.S. Citizen	1.5%	0%	0%	0.8%
Educational Attainment				
Less than High School	15.2%	3.6%	19.7%	14.6%
High School Graduate	49.8%	33.4%	38.9%	43.7%
Some College, No Degree	27.5%	23.9%	38.5%	30.3%
Associate's Degree or Higher	7.5%	39.1%	2.9%	11.4%
Class of Worker				
For-Profit	65.5%	58.9%	70.5%	65.9%
Non-Profit	9.4%	35.7%	23.2%	18.1%
Independent Providers	25.1%	5.4%	6.3%	15.9%

	Home Care	Residential Care	Nursing Homes	Total
Employment Status				
Full Time	48.7%	97.4%	78.9	66.3%
Part Time	51.3%	2.6%	21.1%	33.7%
Annual Earnings				
Median Personal Earnings	$14,638	$26,362	$21,596	$20,447
Median Family Earnings	$40,962	$48,868	$26,992	$38,338
Federal Poverty Level				
Less than 100%	29.1%	10%	18.3%	22.5%
Less than 138%	40.8%	15.2%	44.9%	37.7%
Less than 200%	53.7%	39.1%	61.3%	53.6%
Public Assistance				
Any Public Assistance	76.3%	66.8%	86.3%	77.8%
Food and Nutrition Assistance	52.6%	59.1%	65.6%	57.7%
Medicaid	39.4%	59.9%	54.7%	47.6%
Cash Assistance	1.5%	0%	0.3%	0.9%
Health Insurance Status				
Any Health Insurance	85.6%	99.2%	100%	92.4%
Health Insurance through Employer/Union	22.8%	29.8%	42.9%	30.2%
Medicaid, Medicare, or Other Public Coverage	55.8%	62.2%	68.7%	60.9%
Health Insurance Purchased Directly	18.8%	12.9%	4.3%	13.3%
Means of Transportation				
Drove Alone	84.1%	94.3%	87.3%	86.8%
Carpool	1.9%	5.7%	4.7%	3.4%
Public Transportation	0%	0%	1.5%	0.4%
Walked to Work	2.4%	0%	0%	1.3%
Other	2.3%	0%	0%	1.2%
Worked at Home	9.3%	0%	6.6%	6.9%
Median Travel Time (in Minutes)				
Drove Alone	25	25	20	20
Public Transportation	0	0	60	60
Walked to Work	1	0	0	1
Carpool	15	90	15	15
Other	15	0	0	15
Total	20	25	15	20

Source: U.S. Census Bureau. 2017. *American Community Survey (ACS), 2012-2016 5-year Public Use Microdata Sample (PUMS)*. https://www.census.gov/programs-surveys/acs/data/pums.html; analysis by PHI (July 25, 2018).

APPENDIX 8

Profile of Direct Services Workforce by Care Setting in Western Maryland, 2017

	Home Care	Residential Care	Nursing Homes	Total
Gender				
Male	9.8%	12.8%	7%	9.6%
Female	90.2%	87.2%	93%	90.4%
Age				
16-24	17.1%	28%	19.2%	20.2%
25-34	30.5%	19.2%	31.7%	28.3%
35-44	9.7%	17.2%	15.3%	13.1%
45-54	17.8%	4.3%	26.7%	17.5%
55-64	18.2%	11.4%	5.2%	12.7%
65+	6.8%	19.9%	2%	8.2%
Median	36	35	34	35
Race and Ethnicity				
White	91.1%	96.4%	84.2%	90.2%
Black or African American	6.1%	1.8%	14.1%	7.6%
Hispanic or Latino (Any Race)	0%	0%	0%	0%
Asian or Pacific Islander	0%	0%	0%	0%
Other	2.8%	1.8%	1.6%	2.2%
Citizenship Status				
U.S. Citizen by Birth	98.7%	98.2%	94.3%	97.2%
U.S. Citizen by Naturalization	0%	0%	5.7%	1.8%
Not a U.S. Citizen	1.3%	1.8%	0%	1%
Educational Attainment				
Less than High School	18.2%	0%	4.1%	9.7%
High School Graduate	42.2%	42.7%	30.2%	38.6%
Some College, No Degree	32.2%	31.5%	65.7%	42.4%
Associate's Degree or Higher	7.4%	25.7%	0%	9.2%
Class of Worker				
For-Profit	48.7%	38.5%	75%	54.5%
Non-Profit	30.5%	41.4%	10.9%	26.9%
Independent Providers	20.9%	20.1%	14.1%	18.6%

	Home Care	Residential Care	Nursing Homes	Total
Employment Status				
Full Time	62.6%	69.4%	85.2	71.1%
Part Time	37.4%	30.6%	14.8%	28.9%
Annual Earnings				
Median Personal Earnings	$17,230	$20,763	$22,217	$20,763
Median Family Earnings	$32,948	$41,527	$41,185	$41,185
Federal Poverty Level				
Less than 100%	18.6%	11.2%	9.4%	14.1%
Less than 138%	39.9%	19.9%	21.3%	29.7%
Less than 200%	66.6%	46.5%	45.5%	55.6%
Public Assistance				
Any Public Assistance	64%	51.5%	51.9%	57.5%
Food and Nutrition Assistance	41.4%	29.8%	46.7%	40.4%
Medicaid	40.3%	16.6%	15.1%	27.2%
Cash Assistance	0.5%	0%	4.4%	1.6%
Health Insurance Status				
Any Health Insurance	87.9%	81.2%	83.4%	85%
Health Insurance through Employer/Union	36%	47.2%	66.7%	48%
Medicaid, Medicare, or Other Public Coverage	48.7%	38.3%	18.2%	36.9%
Health Insurance Purchased Directly	6.9%	14.5%	0.5%	6.6%
Means of Transportation				
Drove Alone	81.2%	83.8%	88.5%	84.1%
Carpool	3.9%	16.2%	8.3%	8.1%
Public Transportation	0%	0%	0%	0%
Walked to Work	0.6%	0%	0%	0.3%
Other	5%	0%	3.3%	3.3%
Worked at Home	9.4%	0%	0%	4.3%
Median Travel Time *(in Minutes)*				
Drove Alone	15	20	15	15
Public Transportation	0	0	0	0
Walked to Work	15	0	0	15
Carpool	75	20	20	20
Other	15	0	1	15
Total	15	20	15	15

Source: U.S. Census Bureau. 2017. *American Community Survey (ACS), 2012-2016 5-year Public Use Microdata Sample (PUMS).* https://www.census.gov/programs-surveys/acs/data/pums.html; analysis by PHI (July 25, 2018).

NOTES

1. Maryland Department of Planning State Data Center. 2017. *Household Population Projections by Age, Sex and Race.* http://planning.maryland.gov/MSDC/Pages/s3_projection.aspx; DC: District of Columbia Office of Planning. 2016. DC Forecasts, Population Forecast by Single Age Citywide. https://planning.dc.gov/node/1212966; analysis by PHI (July 14, 2018). "Working age" includes those aged 20 to 64 years old.

2. Espinoza, Robert. 2017. *8 Signs the Shortage in Paid Caregivers is Getting Worse.* Bronx, NY: PHI. https://phinational.org/wp-content/uploads/2017/11/workforce-shortages-phi60issues01.pdf.

3. PCAs and HHAs in the nursing home industry were included in the residential care industry. These workers are likely supporting residents of Assisted Living Facilities and Continuing Care Retirement Communities that offer nursing services.

4. Kaiser Family Foundation (KFF). 2014. *Health Care Expenditures by Service by State of Provider.* https://www.kff.org/other/state-indicator/health-spending-by-service/?dataView=0&currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D. This is a broad estimate including expenditure on three categories: home health, nursing homes, and "other health, residential, and personal care expenditures" (given that one of the largest sources of spending in the last category is by Medicaid on HCBS). The estimate does not include expenditure through Older Americans Act, Title XX of the Social Security Act, or the Social Services Block Grant Program, or account for the uncompensated assistance that is provided by family members and friends.

5. Eiken, Steve, Kate Sredl, Brian Burwel, and Angie Amos. 2018. *Medicaid Expenditures for Long-Term Services and Supports in FY 2016.* Baltimore, MD: Centers for Medicare & Medicaid Services (CMS). https://www.medicaid.gov/medicaid/ltss/downloads/reports-and-evaluations/ltssexpenditures2016.pdf. Data are for the federal fiscal year (10/2015 to 9/2016).

6. Eiken, Steve. 2017. *Medicaid Long-Term Services and Supports Beneficiaries in 2013.* Baltimore, MD: CMS. https://www.medicaid.gov/medicaid/ltss/downloads/reports-and-evaluations/ltss-beneficiaries-2013.pdf.

7. Eiken et al, 2018. The national average does not include California, for which detailed information on the delivery of LTSS through managed care was not available.

8. KFF. 2016. "Waiting List Enrollment for Medicaid Section 1915(c) Home and Community-Based Services Waivers." https://www.kff.org/health-reform/state-indicator/waiting-lists-for-hcbs-waivers/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D.

9. Reinhard, Susan C., Jean Accius, Ari Houser, Kathleen Ujvari, Julia Alexis, and Wendy Fox-Grage. 2017. "Picking Up the Pace of Change, 2017: A State Scorecard on Long-Term Services and Supports for Older Adults, People with Physical Disabilities, and Family Caregivers." http://www.longtermscorecard.org/2017-scorecard.

10. U.S. Census Bureau. 2017. *American Community Survey (ACS), 2012-2016 5-year Public Use Microdata Sample (PUMS).* https://www.census.gov/programs-surveys/acs/data/pums.html; analysis by PHI (July 25, 2018). The number of individuals with ADL or IADL support needs ranges from 15,000 in Western Maryland to more than 83,000 in the DC suburbs. Difficulty with ADLs, or "self care," is measured in the ACS by asking if respondents have "difficulty dressing or bathing." Difficulty with IADLs, or "independent living," is measured by asking if respondents have difficulty "doing errands alone such as visiting a doctor's office or shopping."

11. U.S. Centers for Medicare and Medicaid Services (CMS). 2018. "Nursing Home Compare Datasets: Provider Information." https://data.medicare.gov/data/nursing-home-compare; analysis by PHI (August 3, 2018).

12. See, e.g., Favreault, Melissa and Judith Dey. 2016. *Long-Term Services and Supports for Older Americans: Risks and Financing Research Brief.* Washington, DC: Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services. https://aspe.hhs.gov/basic-report/long-term-services-and-supports-older-americans-risks-and-financing-research-brief.

13. U.S. Bureau of Labor Statistics (BLS), Employment Projections Program. 2017. *Civilian Labor Force, by Age, Sex, Race, and Ethnicity, 1996, 2006, 2016, and Projected 2026.* https://www.bls.gov/emp/; analysis by PHI (August 8, 2018). Comparable data for Maryland and DC are not available for the purposes of this analysis.

14. PHI. 2018. "Workforce Data Center." https://phinational.org/policy-research/workforce-data-center/.

15. U.S. Census Bureau. 2017. American Community Survey (ACS), 2012-2016 *American Community Survey 5-Year Estimates, Employment Status.* https://factfinder.census.gov/bkmk/table/1.0/en/ACS/16_5YR/S2301/0400000US11|0400000US24.

16. Massachusetts Institute of Technology (MIT). 2017. "Living Wage Calculation for Maryland." http://livingwage.mit.edu/states/24.

17. MIT. 2017. "Living Wage Calculation for District of Columbia." http://livingwage.mit.edu/states/11.

18. For 2016 federal poverty levels, see U.S. Department of Health and Human Services. 2016. *Annual Update of the HHS Poverty Guidelines.* 81 FR 4036. https://www.federalregister.gov/documents/2016/01/25/2016-01450/annual-update-of-the-hhs-poverty-guidelines.

19. PHI. 2018. "Workforce Data Center." https://phinational.org/policy-research/workforce-data-center/.

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