Michigan's Direct Care Workforce

Living Wage and Turnover Cost Analysis

August 2021

PSC

PUBLIC SECTOR
CONSULTANTS

Public Sector Consultants
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Prepared for

Center for Health Care Strategies
www.chcs.org

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Executive Summary

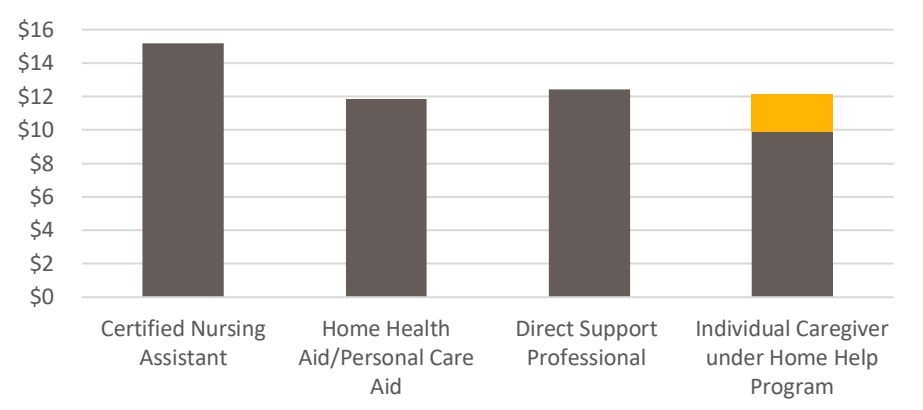
The demand for workers who provide direct care to older adults and people with disabilities is high and increasing, as evidenced by the rising number of people in need of services, the waitlists for current service programs, and the number of unfilled direct care positions. From 2021 to 2028, there are expected to be around 18,000 annual direct care job openings, resulting in more than 140,000 cumulative job openings (MDMTB 2020). Moreover, there is considerable anecdotal evidence that turnover rates for direct care workers are high, creating acute challenges for the clients they serve, their employers, and the state of Michigan. Many direct care stakeholders point to relatively low wages as a key factor contributing to these high turnover rates. A challenging work environment, particularly during the COVID-19 pandemic, extensive work travel, and limited benefits are also contributing factors.

In December 2020, the Center for Health Care Strategies engaged Public Sector Consultants (PSC) to conduct a study on the Direct Care Workforce (DCW) in Michigan. The purposes of the study were to assess the size and characteristics of the DCW, compare hourly DCW wages to estimated living wages and competitor occupation wages, and assess the costs of DCW turnover rates. Amid a projected shortfall of direct care workers in Michigan, PSC's research will help inform policymakers and DCW stakeholders as they seek viable solutions to bolstering the workforce.

Key Findings

- **Size and demographics:** There are approximately 165,000 people employed in Michigan's DCW, equivalent to 4 percent of total employment in the state. The DCW is overwhelmingly female, primarily has a high-school degree or some college, and is mostly white or Black/African American. However, it is disproportionately Black/African American compared to Michigan's general population. The workforce has a diverse age range, with the majority between the ages of 25 and 64.
- **Wages by DCW occupation in 2020:** Hourly wages for the direct care workforce vary by specific occupation (Exhibit 1). Certified nursing assistants ($15.18) have higher hourly wages than home health and personal care aides ($11.85) and direct support professionals ($12.43). Individual caregivers under Michigan's Home Help program have the lowest wages ($9.90 without premium pay, $12.25 with premium pay).

EXHIBIT 1. DCW Hourly Wages in Michigan—2020



Source: Source: BLS March 31, 2021b; MDHHS Home Help Program 2021.
Note: Wages for certified nursing assistants and home health and personal care aides are median; wages for direct support professionals are mean; wages for individual caregivers are actual as of October 2021, with the yellow portion representing premium pay.

- **Living Wages in 2020:** PSC utilized a living wage methodology from the Massachusetts Institute of Technology (MIT), which considers a living wage to be a self-sufficiency wage for which the worker does not rely on public assistance, such as Medicaid, but is not high enough to produce savings for retirement or home purchase. As a result, a living wage is largely a paycheck-to-paycheck wage for which the worker can only afford common household expenses. In 2020, whether a direct care worker has a living wage depends on the specific occupation and the presence of children. Most direct care workers who do not have a child maintain a living wage, particularly if there is another working adult in the household. For direct care workers with children, however, very few maintain a living wage. The results are consistent with demographic data on the direct care workforce, which indicate that around half rely on public assistance and close to half have a child in their household.
    - **Certified Nursing Assistants**: Certified nursing assistant wages meet or exceed living wage estimates much more often than other DCW occupations. The majority of ceritifed nursing assistants without children maintain a living wage. Very few maintain a living wage with children.
    - **Home Health Aides and Personal Care Aides**: Only when home health aides and personal care aides have no children and another working adult in the household do they have a living wage. Few maintain a living wage as a single adult with no children, and almost none maintain a living wage with children.
    - **Direct Support Professionals.** While detailed wage data is unavailable, wage data obtained from surveys indicate that direct support professionals face a very similar dynamic as home health aides and personal care aides.
    - **Individual Caregivers under the Home Help program.** Without premium pay, none would have a living wage regardless of family status. Even with the recent extension in premium pay, individual caregivers face a similar dynamic as home health aides and personal care aides.
- **Competitor wages:** In 2020, DCW hourly wages for direct care workers were mostly in line with other occupations that direct care workers consider as alternative employment, such as fast-food workers, retail salespersons, and cashiers. The one exception is medical assistants, who have hourly wages that exceed all DCW categories. Still, some very large corporations in retail sales have started to offer higher minimum wages than most direct care worker wages in Michigan, providing competitive pressure on the direct care workforce. While state-level, DCW occupational wage data not is not yet available for 2021, national hourly wages for many low-wage occupations have increased, including direct care workers. However, inflation has increased as well, potentially offsetting wage gains. At the same time, it is difficult to determine whether competitive wage dynamics have shifted materially in Michigan in 2021. However, anecdotal evidence in 2021 indicates that DCW employers in Michigan are largely struggling to recruit and maintain workers, in part due to higher wages in alternative occupations. This struggle is acutely concerning given the essential medical and non-medical services direct care workers provide to the elderly and individuals with disabilities. Indeed, direct care workers provide life-or-death services, and it is unfortunate that hourly wages are not commensurate with their responsibilities.
- **Turnover costs:** PSC primarily focused on employer turnover costs, which include direct costs, such as separation, vacancy, replacement, training, and worker injury costs, and indirect costs, such as lost

productivity, reduced service quality, lost client revenues, lost clients to other agencies, and a decline in employee morale. Estimated employer total (direct and indirect) turnover costs range from $6,160 to $7,893 per turnover occurrence depending on occupation, and estimated annual statewide costs are $684 million. Although the focus was on employer turnover costs, PSC identified a direct and indirect cost framework that may still be applicable to other stakeholders, including the State of Michigan

- **Data gaps:** Despite the importance of the DCW and the considerable attention it receives from federal and state officials and other stakeholders, there are large data gaps that render precise estimates on size, wages, and turnover costs challenging to achieve. There is clearly opportunity for additional data collection and research on the DCW in Michigan and nationally.

Defining the Direct Care Workforce

Michigan's DCW is comprised of five occupational categories: certified nursing assistants (CNA), personal care aides (PCA), home health aides (HHA), direct support professionals (DSP), and paid and unpaid family caregivers. A brief overview of these occupations is provided below.

Certified Nursing Assistants

Certified nursing assistants are often the principal caregivers in nursing and residential care facilities and provide both nonmedical and medical services. CNAs perform duties such as monitoring patient health status, assistance with eating, bathing, dressing, grooming, toileting, or ambulating patients in a health or nursing facility. CNAs generally work under the supervision of licensed or registered nurses. Depending on training levels and the state in which they work, they may dispense medication or may need to have state-level credentials and/or licenses (BLS March 31, 2021c, April 9, 2021a). In Michigan, there is considerable federal and state oversight of the CNA occupation. Certified nursing assistants are required have minimum levels of training (75 hours), pass a written exam, and demonstrate their skills in front of a registered nurse (Turner et al. 2020).

Personal Care Aides

Personal care aides may work with older adults or individuals with disabilities or illnesses. PCAs provide nonmedical services, including companionship, assistance with personal care for activities of daily living, and transportation. PCA duties often include providing assistance with eating, bathing, dressing, grooming, toileting, ambulation, meal planning, shopping, light housekeeping, laundry, and driving. (BLS March 29, 2019b, April 9, 2021a).

Work is performed in various settings depending on the needs of the care recipient and may include their home, place of work, out in the community, or a daytime nonresidential facility. PCAs may by supervised by licensed nursing staff or work independently and may or may not have state-level credentials, depending on the state in which they work (BLS March 29, 2019b, April 9, 2021b). In Michigan, there is minimal state and federal oversight over the PCA occupation, and certification and training are generally not required. The only exception is training required for PCAs who participate in the MI Choice waiver program, though there are still no minimum training durations or exam requirements (Turner et al. 2020).

Home Health Aides

Home health aides may work with older adults or individuals with disabilities or illnesses. Depending on the state in which they work, HHAs may provide basic health-related services, such as checking a client's pulse, temperature, and respiration rate. Occasionally, they change bandages or dressings, give massages, care for skin, or help with braces and artificial limbs. With special training, experienced HHAs may help operate medical equipment, such as ventilators. Like PCAs, they may help with nonmedical tasks such as meal preparation, light housekeeping, and laundry (BLS March 29, 2019a, April 9, 2021b).

HHAs are supervised by medical practitioners, usually nurses, and may work with therapists and other medical staff. HHAs predominantly work in an individual's residence, which may include a home or residential facility. Depending on the state in which they work and their responsibilities, they may be

required to be licensed and/or have specific training (BLS March 29, 2019b, April 9, 2021b). In Michigan, HHAs are more stringently regulated than PCAs, as they are subject to federal regulations as part of the Medicare certification process. HHAs must complete at least 75 hours of training, pass a state-mandated exam, and complete 12 hours of continuing education annually (Turner et al. 2020).

Direct Support Professionals

Direct support professionals work only with individuals with disabilities, providing nonmedical and some medical services. There is no Bureau of Labor Statistics (BLS) occupational category for DSPs, which has prompted advocacy groups and bipartisan members of Congress to call on the BLS to add DSPs as an occupational category (NADSP 2018; Sens. Hassan and Collins 2021).

Individual Caregivers

Individual caregivers include relatives, friends, and neighbors who provide in-home care to older adults and individuals with disabilities. Individual caregivers can assist with activities of daily living and may also assist with some medical services after being trained by the individual needing care or their medical provider. While publicly available data on this category of direct care workers is limited, there is widespread anecdotal evidence that individual caregivers are a significant portion of the DCW. There are two types of individual caregivers: paid and unpaid.

- **Paid:** Michigan has several Medicaid programs that facilitate payments to individual caregivers, including the Home Help program. The Home Help program does not have any training requirements for workers. This is largely due to the State's expectation that individual clients are best positioned to identify the skills necessary for individual caregivers to provide effective services (Turner et al. 2020).
- **Unpaid:** There is considerable anecdotal evidence that individual caregivers provide in-home care on a voluntary basis. Unpaid caregivers include individuals who have dropped out of the labor force to provide full-time unpaid care, and those who have full or part-time jobs in other industries but provide care to family members and friends outside of work hours.

Workforce Size

Estimating the overall size of the direct care workforce (DCW) in Michigan is challenging. Solid baseline figures are available from the BLS Occupational Survey for certified nursing assistants, home health aides, and personal care aides.[1, 2] However, limited publicly available data on direct support professionals and individual caregivers reduces the precision of estimates and creates uncertainty. To approximate the size of the 2020 DCW in Michigan, PSC used BLS data for the three categories listed above, State of Michigan estimates for the number of DSPs, and the number of paid individual caregivers who participate in Michigan's Home Help program.

[1] The BLS began grouping HHAs and PCAs into a single occupational category in 2019; however, PSC used 2018 BLS data to generate 2020 employment estimates for each category.

[2] PSC used employment and wage data from the Bureau of Labor Statistics May 2020 State Occupational Employment and Wage data for Michigan, which was released on March 31, 2021, available at https://www.bls.gov/oes/current/oes_mi.htm. Employment data includes full- and part-time workers and does not include the self-employed, unincorporated firm owners, household workers, and unpaid family workers.

According to MDHHS' Behavioral Health and Developmental Disabilities Administration, there are at least 50,000 DSPs in Michigan, who generally are assumed to be represented by the three BLS occupational categories. However, DSP advocacy groups and some research indicate that DSPs are not necessarily fully represented (PCPID 2017; Macbeth 2018). To account for this, PSC estimated the portion who are excluded from the BLS categories. Nationally, full- and part-time DSPs are estimated to be 1.3 million (PCPID 2017), or around 28 percent of the 4.6 million CNAs, HHAs, and PCAs in the U.S. As a result, PSC has assumed that 28 percent—or approximately 33,000—of the 117,120 CNAs, HHAs, and PCAs in Michigan are DSPs. The remaining 17,000 DSPs in Michigan would constitute a net addition to the total DCW size.

Under the Home Help program, paid individual caregivers are considered privately employed by the client, often a family member or friend.[3] Because the BLS occupational survey generally does not include private household workers (BLS March 31, 2021a), it is unlikely that Michigan's paid individual caregivers would be included in the existing BLS DCW occupational categories. As of October 2020, the Home Help program currently had 64,355 individuals who provide direct care services to clients, of which 30,592 were individual caregivers and 33,743 are other direct care workers employed by DCW agencies (MDHHS Home Help Program 2021). PSC included the 30,592 paid individual caregivers in the total estimate of Michigan's DCW size but excluded the 33,743 direct care workers who are employed by DCW agencies, as those direct care workers are likely included in BLS occupational surveys.[4]

Using this approach, PSC estimated that the overall size of the DCW in 2020 in Michigan was approximately 165,000 (Exhibit 2). The largest occupational categories are nursing assistants (48,610) and personal care aides (41,106), followed by paid individual caregivers in the Home Help program (30,592), and home health aides (27,404). While DSPs (50,000) would represent the second largest category, a large portion are already included across the other DCW categories. As a result, PSC estimated there are 17,000 DSP workers excluded from existing BLS categories. In addition, PSC did not include unpaid individual caregivers and other privately paid direct care workers in its DCW figures. While these categories may be sizeable in Michigan, there is no reliable proxy or estimate. The omission of these caregivers suggests that the estimated 165,000 DCW figure may be conservative.

Additionally, the location quotients (LQ) for certified nursing assistants (1.26), home health aides (0.76), and personal care aides (0.76)—figures that represent the share of an occupation's employment in a region relative to the occupation's national share of employment—suggest that CNAs are more concentrated than HHAs and PCAs in Michigan (Exhibit 2). For example, if an occupation represents 2.0 percent of a region's total employment while the same occupation represents 1.0 percent of total employment in the U.S., the occupation's LQ would be 2.0. An LQ greater than 1.0 indicates a higher-than-average concentration in Michigan, which CNAs exceed but HHAs and PCAs do not. These figures suggest that Michigan faces a greater labor shortage challenge for HHAs and PCAs, relative to the U.S.

[3] Family caregivers in the Home Help program are enrolled in Michigan's Community Health Automated Medicaid Processing System (CHAMPS) and receive W2s from the State of Michigan but are considered employed by the family or friend for whom they provide care.

[4] The BLS collects data on the direct care workforce and other occupations by providing semi-annual mail surveys to nonfarm establishments, which include private, for-profit companies, government agencies, and nonprofit institutions. For caregivers that are part of the Home Help program and employed by DCW agencies, they are likely to be included in the BLS surveys.

EXHIBIT 2. Michigan's Direct Care Workforce Size by Occupational Category, 2020

	Certified Nursing Assistants	Personal Care Aides	Home Health Aides	Direct Support Professionals*	Home Help Individual Caregivers*	Total DCW
Size	48,610	41,106	27,404	17,000	30,592	164,712
Location Quotient	1.26	0.76	0.76	N/A	N/A	N/A

Source: BLS March 31, 2021b; MDHHS Home Help Program 2021.
Note: *not included in BLS categories.

Demographics

PSC collected DCW demographic data using five-year estimates from the 2019 U.S. Census Bureau American Community Survey (ACS), as its demographic information tends to be more granular than that of the BLS. Demographic information for direct support professionals and paid individual caregivers was unavailable.

Direct care workers across all categories are overwhelmingly female, representing 87 percent of the workforce, which is much higher than female representation of 51 percent in Michigan's general population (Exhibit 3). Nearly two-thirds (63 percent) of the workforce are white, and 29 percent are Black or African American. These figures indicate that the workforce is disproportionately Black or African American compared to Michigan's population, which is 14 percent. Educational attainment is mainly high school or some college: one-third have a high-school degree (34 percent), and two-fifths have some college with no degree (39 percent). There is wide dispersion by age, with the 25–34, 35–44, 45–54, and 55–64 age brackets each constituting approximately 20 percent of the workforce.

EXHIBIT 3. Direct Care Workforce Demographics in Michigan, 2019

	All Direct Care Workers	Certified Nursing Assistants	Personal Care Aides	Home Health Aides	Direct Support Professionals*	Home Help Individual Caregivers*
Gender						
Female	87%	89%	84%	90%	N/A	N/A
Male	13%	11%	16%	10%	N/A	N/A
Race/Ethnicity						
White	63%	62%	63%	62%	N/A	N/A
Black or African American	29%	29%	29%	30%	N/A	N/A
Latino or Hispanic	4%	4%	4%	3%	N/A	N/A
Asian American	2%	2%	1%	1%	N/A	N/A
Two or more races	2%	2%	2%	3%	N/A	N/A
Other	1%	1%	1%	0%	N/A	N/A
Education						
Less than high school	9%	7%	11%	8%	N/A	N/A

	All Direct Care Workers	Certified Nursing Assistants	Personal Care Aides	Home Health Aides	Direct Support Professionals*	Home Help Individual Caregivers*
High school diploma or equivalent	34%	31%	36%	34%	N/A	N/A
Some college	39%	44%	33%	41%	N/A	N/A
Associate's degree or higher	18%	18%	19%	16%	N/A	N/A

Source: U.S Census Bureau, 2019 American Community Survey five-year estimates.
Note: *not in BLS categories.

Additional characteristics—including health insurance coverage, receipt of public food assistance, means of transportation, and number of children in household—also provide helpful insights into the DCW (Exhibit 4).

While nearly half (47 percent) of the workforce has private health insurance coverage (via an employer or union) and more than 10 percent purchase private insurance directly, 42 percent participate in Medicaid or another form of public health insurance (Exhibit 4). Meanwhile, health care coverage differs between occupational categories. For example, 57 percent of CNAs receive private health insurance via an employer or union, while only 47 and 37 percent of HHAs and PCAs, respectively, have such coverage. Medicaid/public insurance coverage also varies, with half of PCAs, 43 percent of HHAs, and 35 percent of CNAs on Medicaid/public insurance.

30 percent of the direct care workforce receive public food assistance via the Supplemental Nutrition Assistance Program (SNAP). There are differences among the three occupational categories, with 35 percent of PCAs, 30 percent of HHAs, and 26 percent of CNAs participating in SNAP.

Overall, almost half (48 percent) of all direct care workers rely on some form of public assistance, including health insurance, food assistance, and cash transfers (Turner et al. 2020).

Regarding transportation, two-thirds of direct care workers rely on their own transportation to commute to work. 5 percent or less utilize public transportation, work from home, or walk or bicycle to work. These results are unsurprising given Michigan's expansive geography and relative lack of public transportation options. Results are consistent across all categories, though 9 percent of PCAs work from home, which may indicate that a small portion are taking care of a family members. The large reliance on personal transportation is consistent with the reality that may direct care workers need to drive from home to home to provide care. It also shows the need to collect data on the percentage of workers who receive travel reimbursements (e.g., per mile) and/or receive gas reimbursements, which may be a factor for whether to remain a direct care worker.

Finally, 44 percent of direct care workers have a child of any age, including adult children, living in their household, while 34 percent have a child between the ages of 0–17. Results were consistent across categories, though CNAs have a slightly higher percentage of households with children. Notably, these figures only include one's *own* children living in the household; the inclusion of other children or family members would likely increase the percentage of dependents in households.

The demographic variables provide additional insight on the common profile of a direct care worker and offer useful context for the living wage analysis, given the relationship between hourly wages, household size, and receipt of public assistance.

EXHIBIT 4. Direct Care Workforce Demographics, 2019

	All Direct Care Workers	Certified Nursing Assistants	Personal Care Aides	Home Health Aides	Direct Support Professionals*	Home Help Individual Caregivers*
Health Insurance						
Private (employer/union)	47%	57%	37%	47%	N/A	N/A
Private (purchased)	10%	9%	12%	9%	N/A	N/A
Medicaid/public insurance	42%	35%	50%	43%	N/A	N/A
Transportation						
Own	66%	72%	60%	66%	N/A	N/A
Public	2%	2%	2%	1%	N/A	N/A
Work from home	5%	2%	9%	4%	N/A	N/A
Walk/bicycle/other	2%	2%	3%	3%	N/A	N/A
N/A	24%	22%	26%	25%	N/A	N/A
Own Children Living in Household						
Any age	44%	46%	42%	43%	N/A	N/A
Age 0–17	34%	40%	30%	31%	N/A	N/A
SNAP Recipients						
	30%	26%	35%	30%	N/A	N/A

Sources: U.S Census Bureau, 2019 American Community Survey five-year estimates.
Note: *not included in BLS categories.

Wage Analysis

Hourly wages for direct care workers vary by occupational category. As of May 2020, CNAs had the highest median hourly wage at $15.18; the median hourly wage for PCAs and HHAs was $11.85, more than 20 percent lower.[5] Given the lack of a DSP occupational category in BLS data, there is no comparable median DSP hourly wage. However, PSC utilized an estimate from the National Alliance for Direct Support Professionals, which conducted a national and state survey of DSPs, including in Michigan. The survey estimated that the mean hourly DSP wage in 2020 (pre-pandemic) was $12.43 (NADSP 2021), very close to the mean hourly wage of HHAs/PCAs ($12.60) and lower than the CNA mean wage ($15.40). Median hourly wages for all DCW occupations are above the current state minimum wage of $9.65 per

[5] Beginning in 2019, the BLS combined home health aide and personal care aide wage data. PSC did not use historical breakdowns to estimate May 2020 wages, unlike what it did with employment figures. This is due to historical data on hourly wages of home health aides and personal care aides being close and methodological challenges in estimating different wages for each category.

hour, but significantly lag median ($19.67) and mean ($25.67) hourly wages for all occupations in Michigan (Exhibit 5).[6]

Additionally, hourly wages under the Home Help program were $9.90 as of March 2020. However, amid the COVID-19 pandemic, the Michigan legislature provided a $2 per hour premium pay increase from April 2020 to February 2021 to all direct care workers who participate in the Home Help program or work in a Medicaid-certified nursing home. The premium pay was then extended until the end of September 2021 and increased to $2.25 per hour for March 2021 to September 2021 (MDHHS April 2021). In September 2021, the Michigan legislature extended premium pay for another fiscal year and slightly increased it to $2.35 per hour. In practice, this meant that individual caregivers in the Home Help program received an hourly pay increase from $9.90 in March 2020 to $11.90 between April 2020 and February 2021 and then to $12.15 from March through September 2021. From October 2021 through September 2022, the hourly wage will be $12.25 with the legislature's recent premium pay extension.

PSC did not assume employees under the BLS occupational categories all received $2 and $2.35 per hour premium pay increases, since not all participate in a Medicaid program or work for a certified nursing home. Moreover, the BLS generally does not consider premium pay as part of occupational wages (BLS March 31, 2021a).

EXHIBIT 5. Hourly Wages and Annual Earnings for Direct Care Workforce, 2020

	All Occupations in Michigan	Certified Nursing Assistants	Personal Care and Home Health Aides	Direct Support Professionals*	Home Help Individual Caregivers*
Median hourly wage	$19.67	$15.18	$11.85	N/A	$9.90 (March 2020) $12.25 (current)
Median annual earnings	$40,920	$31,570	$24,640	N/A	N/A
Mean hourly wage	$25.67	$15.40	$12.60	$12.43	$9.90 (March 2020) $12.25 (current)
Mean annual earnings	$53,390	$32,030	$26,200	$25,854	N/A

Sources: BLS March 31, 2021b; NADSP 2021; MDHHS April 2021.
Note: *not in BLS categories; the first three categories represent wages as of May 2020; family caregiver hourly wages include pre-pandemic pay of $9.90 (March 2020) and current wages under premium pay of $12.25.

Living Wage Estimates

There has been considerable public debate over whether low-wage workers, such as direct care workers, should receive hourly wage increases that reflect a living wage. Debate has often focused on national and state-level minimum wages, in addition to other means of boosting wages and benefits. The wages of direct care workers amid COVID-19 gained further prominence, given the health risks workers faced and their critical importance to providing care to the sick, older adults, and those with disabilities.

However, whether hourly wages are considered living wages depends on the living wage methodology used, where workers live, and importantly, whether workers have children. PSC primarily utilized the Massachusetts Institute of Technology (MIT) Living Wage Calculator for this study (Glasmeier 2020). The

[6] The Bureau of Labor Statistics (BLS) occupational wage data includes hourly and annual wages for full and part-time workers.

MIT Living Wage Calculator incorporates basic household expenses, such as food, housing, transportation, childcare, healthcare, internet and cell phone service, and civic engagement. It also accounts for regional and state differences. Federal and state income taxes, adjusted for deductions and earned income and child tax credits, are also included in the calculation of a living wage. Annual costs and taxes are translated into living annual earnings and then to living hourly wages, with living wages generally higher if workers have children (Glasmeier 2020). For workers with families, MIT assumes one child is a four-year old (preschool age), and for two children assumes one child is four years old and the other child is nine years old (elementary school age).

The methodology does not include savings (e.g., for retirement or home purchase) and spending on leisure (e.g., vacations), indicating that a living wage represents living from paycheck to paycheck. For most Michigan residents with low incomes, the prospect of saving money—whether for a house, education, vacation, or an emergency—is limited, and the MIT living wage calculation reflects this reality.

According to the 2020–2021 MIT "Living Wage Calculator User's Guide," the living wage "determines the minimum employment earnings necessary to meet a family's basic needs while also maintaining self-sufficiency" and is the minimum income standard "that, if met, draws a fine line between the financial independence of the working poor and the need to seek out public assistance or suffer consistent and severe housing and food insecurity" (Glasmeier 2020).

The MIT Living Wage Calculator provides a sound methodology for estimating a living wage that has been enhanced over time with new data sources. The most recent update was in May 2021, and its estimated living wages are adjusted for 2020 prices. Using the 2020 BLS occupational wage data allows for direct comparison to MIT-determined 2020 living wages. PSC consulted other noteworthy living wage methodologies, including the United for Asset Limited, Income Constrained, Employed (ALICE) 2019 ALICE Household Survival Budget for Michigan and the Food Bank of Michigan's Self-sufficiency Standard. However, PSC chose the MIT Living Wage Calculator since it was the most recently updated and included 2020 prices, while the other methodologies either used 2019 household expense prices or were unclear whether they adjusted for 2020 prices.

EXHIBIT 6. Living Hourly Wage in Michigan for Single Adult Households—2020

One adult	One adult plus one child	One adult plus two children
$13.63	$31.15	$41.65

Source: Glasmeier 2020. MIT's data assumes "one child" is a four-year-old; "two children" are a four-year-old and a nine-year-old.

As shown in Exhibit 6, the living wage for one adult with no children was $13.63 per hour, which median hourly CNA wages exceeded ($15.18), but median hourly wages for PCAs/HHAs ($11.85) and mean hourly wages for DSPs ($12.43) did not.[7] These figures indicate that while a majority of CNAs with no children had a living wage, a minority of the remaining occupations did not. This dynamic partially explains why CNAs rely less on public assistance than PCAs and HHAs. The hourly wage for paid individual caregivers

[7] The median wage is the 50th-percentile wage, meaning that 50 percent of workers have a wage that exceeds the median wage and 50 percent of workers have a wage that is lower. When a median wage exceeds the living wage, this indicates that most, but not necessarily all, workers have a wage that exceeds the living wage. When a median wage is lower than the living wage, this indicates that most, but not necessarily all, workers have a wage that is lower than the living wage. The BLS provides wage data on the 10th, 25th, 50th, 75th, and 90th percentiles, but does not provide the lowest and highest wages.

in the Home Help Program was significantly below the living wage in March 2020 ($9.90 per hour), but has since increased to $12.25, which is still below the living wage.

When children are included in the living wage calculation, however, all DCW wages are significantly below the estimated living wage (Exhibit 6). This is largely due to the introduction of childcare costs, as well as higher household costs in categories including medical care and transportation. For a direct care worker who was a single parent, hourly wages did not provide anything close to a living wage, indicating lower quality of life and greater reliance on public assistance.

EXHIBIT 7. Living Hourly Wage in Michigan for Two-adult Households

Two Adults (One Working)	Two Adults (One Working) Plus One Child	Two Adults (One Working) Plus Two Children	Two Adults (Both Working)	Two Adults (Both Working) Plus One Child	Two Adults (Both Working) Plus Two Children
$22.20	$26.03	$29.66	$11.10	$16.96	$22.71

Source: Glasmeier 2020. "One child" is a four-year-old; "two children" are a four-year-old and a nine-year-old.
Note: When only one adult is working, it is assumed the other adult is providing child care. When both adults are working, the estimated living wage is per working adult.

PSC also assessed living wage data for two adults from the MIT Living Wage Calculator, including when only one is working and when both are working, and with one child and two children (Exhibit 7). The mean and median hourly wages for all DCW occupational categories fell short of estimated living wages for two adult households with one working adult, whether or not they had children. With two working adults, however, the presence of children made a difference in the likelihood of DCW members earning a living wage. For two working adults with no children, the living wage was $11.10 per working adult, which all DCW occupational wages exceed. When one child or two children were included in the scenario, the living wages increased to $16.96 and $22.71 per hour per adult, respectively. While a small portion of direct care workers, primarily CNAs, may have had wages that exceeded the living wage for one child, it is unlikely that any did for two children.

2020 Competitive Wage Analysis

The wages of alternative occupations can influence a worker's motivation to leave or remain in a DCW position, which often include other low-wage occupations, both within and outside the healthcare industry. Occupations included in the competitive wage analysis were selected in collaboration with the MDHHS Aging and Adult Services Agency (AASA) and Center for Health Care Strategies (CHCS). These include medical assistants, fast-food and counter servers, cashiers, and retail salespersons.

Alternative occupation and DCW wage data differed by category in 2020 (Exhibit 8). CNAs had higher median wages than fast-food and counter servers, cashiers, and retail trade salespersons, but lower wages than medical assistants. Indeed, medical assistants had higher median wages than all other categories, suggesting that it might be a desirable alternative occupation for direct care workers provided applicants can meet training and credentialing requirements. Meanwhile, the median wages of PCAs, HHAs, and DSPs were slightly higher than fast-food and counter servers and cashiers, slightly lower than retail salespersons, and considerably lower than medical assistants. Altogether, the 2020 median wages of the DCW occupations were broadly in line with alternative occupation wages, except for medical assistants.

Finally, the wages of individual caregivers in the Home Help Program in March 2020 ($9.90 per hour), were considerably lower than all alternative occupations but have since caught up due to premium pay.

While median wages were broadly in line with alternative occupations, retail sales had a wider wage range than DCW occupations, ranging from $10.23 to $22.31 per hour from the 10th to 90th percentile (Exhibit 8). This indicates that 80 percent of wages are between $10.23 per hour and $22.31 per hour for retail sales. The range contrasts with the wage range for the 10th to 90th percentile of CNAs ($12.34–$19.25 per hour) and HHAs/PCAs ($10.20–$15.66 per hour), particularly at the high end. These differences indicate that a portion (less than 50 percent) of the retail sales occupation had higher hourly wages than both CNAs and HHAs/PCAs in 2020, which may place some competitive pressure on the direct care workforce. On the other hand, other alternative occupations, such as fast-food servers and cashiers, had narrower wage ranges than DCW occupations, including at the high end (Exhibit 8).

EXHIBIT 8. Alternative Wages and Size versus DCW Wages and Size, 2020

	Medical Assistants	Fast-Food and Counter Servers	Cashiers	Retail Sales	Certified Nursing Assistants	Personal Care and Home Health Aides	Direct Support Professionals*	Home Help Individual Caregivers*
Median Hourly Wage	$16.84	$11.22	$11.50	$12.54	$15.18	$11.85	$12.43	$9.90 (March 2020) $12.25 (current)
90th percentile wage	$20.42	$14.15	$14.87	$22.31	$19.25	$15.66	N/A	N/A
10th percentile wage	$13.08	$10.01	$10.11	$10.23	$12.34	$10.20	N/A	N/A
Size	22,750	107,340	91,250	111,230	48,610	68,510	17,000	30,592

Sources: BLS March 31, 2021b; NADSP 2021; MHDDS April 2021, MDHHS Home Help Program 2021.
Note: *not included in BLS categories; DSP wages are mean wages.

While wage analysis focused on 2020 figures, 2021 wages have increased amid the COVID-19 pandemic, particularly for low-wage occupations. Detailed occupational wage data at the state level in 2021 is not publicly available, but there is considerable anecdotal evidence that DCW employers are struggling to maintain and recruit workers in part due to rising wages in alternative occupations, particularly retail sales. Indeed, several large store and nonstore retailers, such as Target, Amazon, and Costco, have introduced minimum starting wages for all workers of $15 or $16 per hour in recent years, including during the COVID-19 pandemic (Target 2020; Salinas 2018; Clarey 2021). These large employers offer minimum wages, regardless of experience, which are at or above all direct care worker occupations. The wage gaps have provided competitive pressure on the direct care workforce in2021, creating challenges for employers, DCW clients, and other DCW stakeholders across Michigan.

At the same time, very large retail company employees are only a subset of total retail sales employees in Michigan, which were over 111,000 in 2020. Until state-wide 2021 wage data by DCW occupation and alternative occupation are published, it is difficult to confidently determine whether competitive wage dynamics have shifted in 2021.

Turnover Rate and Cost Analysis

Direct care worker turnover can have detrimental impacts on the clients they serve, increase costs to DCW employers and to the State of Michigan, and worsen health outcomes. However, there are multiple estimates of DCW turnover rates, with little consensus on a specific methodology or rate.

Turnover Rates and Occurrences

There are a variety of ways to define and measure turnover. Peer-reviewed publications present few consistent definitions (Zuniga 2019). For the purposes of this study, the turnover rate is calculated by comparing total separations to total jobs (separations divided by jobs), with separations defined as an employee's social security number appearing on a company's payroll in one quarter, but not in the following quarter (EMSI n.d.a and n.d.b). Separations may be for any reason, including voluntary or involuntary termination and retirement. Importantly, this study includes separations due to direct care workers switching from one DCW occupation to another, within or across occupational categories (e.g., a PCA changing employers as a PCA or becoming an CNA). PSC's estimates appear much higher than estimates derived from other methodologies that do not reflect this type of separation (Turner et al. 2020)) and are not directly comparable as a result. However, because firms incur costs for each departure (regardless of type), it is necessary to include these separations in estimated turnover costs.

EXHIBIT 9: Statewide Turnover Rates and Occurrences by DCW Occupational Category, 2020

	Certified Nursing Assistants	Personal Care Aides	Home Health Aides	Direct Support Professionals	Home Help Individual Caregivers	All Direct Care Workers
Turnover Rate	68%	89%	89%	43%	N/A	N/A
Jobs	48,610	41,106	27,404	17,000	30,592	164,712
Turnover Occurrences	33,055	36,584	24,390	7,276	N/A	101,305

Source: EMSI census and proprietary employment data.

The average turnover rate for all occupations in Michigan in 2020 was 60 percent (EMSI 2021). As illustrated in Exhibit 9, HHA, PCA, and CNA turnover rates were high at 89 percent, 89 percent, and 68 percent, respectively. Relative to competitor occupations, DCW turnover rates were higher than those for medical assistants (49 percent) and retail salespersons (78 percent), but lower than those for fast-food workers (136 percent) and cashiers (109 percent) (EMSI 2021).[8] DSP turnover rates for Michigan were unavailable under the same approach. However, a recently published national average DSP turnover rate was lower (43 percent) than the Michigan average for all occupations (NCI 2020).[9] While it may be

[8] See Appendix A for more information on EMSI, from which PSC gathered occupational turnover rate data.

[9] For definitions of Direct Service Provider used in this study, see NCI 2020, page 2. For methodology used to calculate turnover in this study, see NCI 2020, page 19: "Each agency's turnover rate is calculated as: (total separated DSPs in past year) divided by (total direct support staff as of December 31, 2019). The state turnover rate is an average of the turnover rates of agencies in each state. The turnover rate in this report is a point-in-time rate. The denominator (total number of employed DSPs at each agency) is taken from a specific point in time: Dec. 31, 2019. Some other turnover rate calculations use the average number of people employed at each agency across 12 months as the denominator in the turnover rate calculation."

reasonable to presume that paid individual caregivers have even lower turnover rates than other DCWs due to familial ties, limited data makes this difficult to determine. Thus, PSC omitted this category.

Turnover Cost Estimates

PSC took a two-pronged approach to estimating the costs of direct care workforce turnover in Michigan. First, it performed a literature review to identify turnover cost conceptual frameworks and turnover rates across occupational categories. Secondly, PSC applied these frameworks to Michigan-specific data to determine costs per turnover occurrence and statewide costs for each occupational category and the DCW as a whole. The highest-quality research on turnover costs applies primarily to employer costs, which is where PSC focused its analysis.

Framework

For this report, PSC adapted the methodology in labor economist Dr. Dorie Seavey's report, *The Cost of Frontline Turnover in Long-term Care,* to Michigan variables. According to Seavey, turnover costs may be grouped into direct and indirect costs, as portrayed in Exhibit 10.

EXHIBIT 10. Direct and Indirect Turnover Costs

Direct Costs	Indirect Costs
Separation	Lost productivity
Vacancy	Reduced service quality
Replacement	Lost client revenue and/or reimbursement
Training	Lost clients to other agencies
Worker injuries	Deterioration in organizational culture and employee morale

Source: Seavey 2004, 12, 14–16.

Direct, out-of-pocket costs relevant to turnover of frontline workers in long-term care can be grouped into five main categories: separation costs, vacancy costs, replacement costs, training costs, and the costs of worker injuries, as described in Exhibit 11 (Seavey 2004, 12).

EXHIBIT 11. EXAMPLES OF DIRECT COSTS, BY CATEGORY

Separation	Vacancy	Replacement	Training	Worker Injuries
Exit interviews	Additional overtime	Advertising	Formal classroom training	Lost days
Administrative processing	Temporary hires	Screening, interviewing, and selecting candidates	On-the-job training	Experience-rate increases in Workers' Compensation
Experience-rate increases in unemployment insurance		Physical exams		
Legal fees		TB tests, Hepatitis B vaccinations, etc.		

Separation	Vacancy	Replacement	Training	Worker Injuries
		Background checks		
		Employment testing and certification		
		Hiring bonuses		

Source: Seavey 2004, 13.

Indirect costs include lost productivity until a replacement is trained, reduced service quality, lost client revenues and/or reimbursement, lost clients to other agencies, and deterioration in organizational culture and employee morale (Seavey 2004, 14–16).

It is important to note that these are all enterprise-level (employer) costs, and do not include increased healthcare costs due to lower care quality for consumers or higher injury-related medical costs for workers. Nor do they include downstream costs such as:

- Underfunding of direct care services due to financial drain
- Increased costs to Medicaid and Medicare due to reduced service quality and resulting illness and injury
- Higher levels of institutionalization (e.g., nursing home and health system demand) due to insufficient home and community-based resources

Calculations

For each direct care workforce occupational category, PSC performed the following calculations:

- Calculated a direct and total (direct plus indirect) turnover cost per occurrence by applying published turnover cost rates per turnover occurrence to 2020 median annual earnings (i.e., multiplying turnover cost rate per occurrence by median annual earnings)
- Applied the 2020 turnover rate to the total estimated DCW jobs to obtain the total number of DCW turnovers statewide
- Multiplied the number of DCW turnovers by direct and total turnover costs per occurrence to establish statewide direct and total DCW turnover costs for Michigan

Finally, PSC calculated the proportion of total employer costs spent on specific types of activities (e.g., time spent by salaried employees shifting responsibilities and hiring and training new employees) based on an in-depth time study performed in 2016 by Sheryl Larson, Ockjean Kim, Anick Tolbize, and Robert York. This analysis allows us to identify where DCW employers likely incur the largest turnover costs by DCW occupation (Appendix B).

Estimated Turnover Cost per Occurrence

Direct cost estimates are based on a 2012 review of 31 case studies conducted by Boushey and Glynn (2012) that cited "direct costs" that would also be considered "direct costs" under the Seavey methodology. According to Boushey and Glynn, these costs to employers ranged from 16 to 19.7 percent of median annual earnings.

Total (direct plus indirect) estimates are based on a review of eight studies conducted by Seavey, whose methodology is commonly replicated across the long-term care industry. According to Seavey, the total (direct plus indirect) cost to employers of replacing an employee in the U.S. is roughly 25 percent of annual earnings.

PSC applied these rates to Michigan median annual earnings for each DCW occupational category to obtain estimates of the 2020 direct and total costs per turnover occurrence in Michigan for each occupational category (Exhibit 12).

EXHIBIT 12. Direct and Total per Occurrence Turnover Cost by DCW Occupational Category, 2020

Turnover Cost Category	Certified Nursing Assistants	Personal Care Aides	Home Health Aides	Direct Support Professionals	Home Help Individual Caregivers
Direct turnover cost rate (%)[10]	19.7	16.1	16.1	16.1	N/A
Direct cost per turnover occurrence	$6,219	$3,967	$3,967	$4,163	N/A
Total (direct and indirect) cost rate (%)	25	25	25	25	N/A
Total (direct and indirect) cost per turnover occurrence	$7,893	$6,160	$6,160	$6,464	N/A
2020 median annual earnings	$31,570	$24,640	$24,640	$25,854	N/A

Source: Public Sector Consultants
Note: DSP annual wages are mean wages.

As illustrated in Exhibit 12, total cost per turnover is highest for nursing assistants ($7,893), followed by direct support professionals ($6,918), and home health aides and personal care aides (both $6,160). Paid family caregiver turnover rates were unavailable. While it is reasonable to assume that paid family caregiver turnover costs are greater than zero, these costs by definition do not accrue to firms and are thus difficult to quantify. Thus, PSC omitted this occupational category from its overall analysis.

Statewide Turnover Costs

In 2020, Michigan's total (direct plus indirect) statewide DCW turnover costs amounted to $684 million, as illustrated in Exhibit 13. This is roughly 5.9 times Michigan's entire fiscal year 2020-2021 senior support services appropriation ($114.1 million) (Frey, 2020).

EXHIBIT 13. Direct and Total Statewide Turnover Cost by DCW Occupational Category, 2020

Turnover Cost Category	Certified Nursing Assistants	Personal Care Aides	Home Health Aides	Direct Support Professionals	All Direct Care Workers
Statewide direct costs	$205,577,387	$145,131,540	$96,754,360	$30,286,775	$477,750,062
Statewide total (direct plus indirect) costs	$260,885,009	$225,359,534	$150,239,690	$47,029,154	$683,513,387

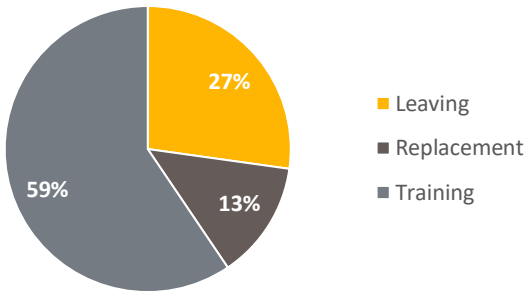
[10] According to Boushey and Glynn (2012), the cost of turnover is 19.7 percent of annual earnings for less than $50,000 and 16.1 percent for less for annual earnings less than $30,000. As such, PSC has applied 19.7 percent to CNAs and 16.1 percent to all other categories.

Source: Public Sector Consultants.

Turnover Costs by Category

PSC estimated turnover costs by cost category based on a detailed time study by Larson et al., conducted with a Midwestern direct care provider that employs nearly 962 direct service providers and 52 frontline supervisors. According to the study, costs associated with training accounted for the majority (nearly 60 percent) of all provider turnover expenses, followed by leaving and replacement costs (Exhibit 14).[11] As a case study, the study sample is not representative or generalizable. However, the quality of the data and its consistency with PSC's literature review and key stakeholder interview findings makes extrapolation to Michigan worthwhile for reference only (Appendix B).

EXHIBIT 14. Three-part Breakdown of Direct Turnover Costs



Source: Larson et al. 2016. Rates calculated by Public Sector Consultants.

When categorized by expense type, nearly three quarters of turnover costs (72 percent) are attributed to time spent by existing salaried employees, followed by expenses associated with wages and benefits paid during orientation and training for new hires (Exhibit 15). Each of these findings is consistent with anecdotal reports by Michigan DCW advocates.

EXHIBIT 15. Five-part Breakdown of Direct Turnover Costs

Source: Larson et al. 2016. Rates calculated by Public Sector Consultants.

[11] The study does not include costs due to worker injury, which would skew observed percentages if incorporated.

Conclusion

Despite data gaps on the direct care workforce, including its size, wages for all specific occupations, and turnover costs, PSC estimates provide reasonable figures that can help inform policymakers and DCW stakeholders. PSC analysis indicates that only when direct care workers do not have children do they come close to having a living wage, particularly for certified nursing assistants. Remaining DCW occupations, including home health aides, personal care aides, and direct support professionals, generally maintain a living wage when there is another working adult in the household, but struggle to have a living wage as a single adult. Individual caregivers under the Home Help program, even under premium pay, struggle to have a living wage. Finally, when children are included, very few direct care workers across all categories achieve a living wage.

In 2020, direct care worker wages are mostly in-line with alternative occupation wages, except for medical assistants. Some very large retail employers in the U.S. and Michigan started to offer minimum wages that meet or exceed direct care worker wages, placing competitive pressure on the direct care workforce. Moreover, in 2021 there has been significant anecdotal evidence that DCW employers are struggling to recruit and maintain direct care workers, in part due to higher wages in alternative occupations. However, there is insufficient, state-wide detailed occupational wage data to determine whether competitive wage dynamics have materially shifted in 2021.

Finally, while PSC's turnover cost estimates focused on direct and indirect costs that accrue to employers, and not on broader societal costs, such estimates provide a strong foundation for DCW stakeholders in their work to address high industry turnover. The analysis results can be particularly helpful for targeting interventions to areas of highest cost and for performing cost-benefit analyses of proposed policy changes to address turnover. PSC's estimated employer turnover costs are sizeable by turnover occurrence and for the state as a whole, and training costs are the highest likely cost.

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Appendix A: Emsi Data Source

PSC utilized Emsi, a U.S. labor market data company, to estimate turnover rates for direct care workers and competitor occupations. EMSI provides a detailed methodology summary on turnover rate calculations, well as a detailed methodology summary on separation data. Emsi provides a widely used software tool that aggregates U.S. labor market data by industry and occupation at the national, state, county, and city level and presents it in a user-friendly format.

Emsi also uses a proprietary search process to gather data on job openings at individual firms and posted on recruitment websites by job title and skillset, which generates estimates for in-demand jobs and skills. Relatedly, it uses a search process to search for job titles and skills listed in resumes posted on job and recruitment websites, which generates estimates for the supply of jobs and skills by region. State, county, and city governments, as well as universities and business associations, utilize Emsi data.

Appendix B: Direct Cost Breakdown of Statewide Turnover

EXHIBIT B1. Three-part Breakdown of Statewide Direct Turnover Costs, 2020

Framework Category	Nursing Assistant	Personal Care Aide	Home Health Aide	Direct Support Professional	All Direct Care Workers
Training	$151,604,853	$124,172,399	$38,216,714	$15,835,976	$329,829,942
Leaving	$69,385,084	$56,830,056	$17,490,667	$7,247,661	$150,953,468
Replacement	$33,992,468	$27,841,631	$8,568,858	$3,550,704	$73,953,661

Source: Public Sector Consultants estimates based on Larson et al. 2016.

EXHIBIT B2. Five-part Breakdown of Statewide Direct Turnover Costs, 2020

Expense Type	Home Health Aide	Personal Care Aide	Nursing Assistant	Direct Support Professional	All Direct Care Workers
Salaried employee time	$46,079,671	$149,720,440	$182,797,026	$46,079,671	$397,691,310
DCW orientation and Training wages and benefits	$10,627,737	$34,531,267	$42,159,995	$10,627,737	$91,722,847
DCW overtime due to vacancies	$5,157,001	$16,755,947	$20,457,710	$5,157,001	$44,507,581
Advertising, background checks, hepatitis B tests, external trainers	$2,098,096	$6,817,058	$8,323,099	$2,098,096	$18,107,647
Materials	$313,734	$1,019,373	$1,244,575	$313,734	$2,707,686

Source: Public Sector Consultants estimates based on Larson et al. 2016.

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