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Abstract

Home health and personal care aides play the important role of helping individuals with disabilities or chronic illnesses who need assistance with their daily living activities. This paper develops a methodology for estimating what workers in jobs requiring similar skills to home health and personal care aides are paid. The methodology that we develop can be applied to any occupation, but here we apply it to care workers. Our methodology draws heavily on the wage and employment information that is provided by the Bureau of Labor Statistics’ Occupational Employment Wage Statistics program. A second key source of information is the Department of Labor’s Occupational Information Network, which has information on a large number of job attributes. We also make use of the Current Population Survey, which has useful demographic information in addition to wages.

1 Introduction

Home health and personal care aides play the important role of helping individuals with disabilities or chronic illnesses who need assistance with their daily living activities. These workers, whom we will simply call care workers, will become increasingly important as the ranks of older individuals swell with baby boomers. As noted by Banerjee, Gould, and Sawo[2], care workers were among the hardest hit workers during the pandemic as a result of the high contact nature of their job.

Care workers’ wages are quite low.¹ According to the Occupational Employment and Wage Statistics (OEWS) survey data, the median wage of home health and personal care aides was \$14.07 in 2021.

Care workers are disproportionately composed of women, Hispanics, and immigrants and generally have a low level of education. In addition, as noted by Robertson, Sawo, and Cooper[7],

¹Throughout this paper, we will use the terms “care workers” and “home health and personal care aides” interchangeably.

there are institutional factors that may affect their pay. Specifically, care workers are “paid by those they serve or their immediate family, private long-term care insurance, or through Medicare or Medicaid’s Home and Community Based Services waiver program (HCBS) with the majority of workers being paid through the HCBS waiver program, which is administered at the state level through a federal waiver program.”

In this paper, we develop a methodology for estimating what workers in jobs requiring similar skills to care workers are paid. The methodology that we develop can be applied to any occupation, but here we apply it to care workers. Our methodology draws heavily on the wage and employment information that is provided by the Bureau of Labor Statistics’ Occupational Employment Wage Statistics (OEWS) program. A second key source of information is the Department of Labor’s Occupational Information Network (O*NET), which has information on a large number of job attributes. Using these two data sets, we estimate how similar other occupations are to the care workers occupation. We then obtain a “comparable wage” estimate as a weighted average of the wages paid in similar occupations, where each occupation’s weight depends on how similar it is to care workers. Our analysis also makes use of the Current Population Survey (CPS), which has useful demographic information.²

2 Comparable Wage Methodology

Let \hat{w}_a^{COMP} denote the comparable log wage estimate for care workers in area a . We calculate the comparable wage as a weighted geometric average of the wages in other occupations in area a :

$$\hat{w}_a^{COMP} = \sum_o \pi_{o,a} \ln(\bar{w}_{o,a}) \tag{1}$$

where $\ln(\bar{w}_{o,a})$ denotes the log of the mean wage received by workers in occupation o and area a and $\pi_{o,a}$ is the weight attached to occupation o in area a . The weight for occupation o depends on how similar occupation o is to the care workers occupation, and how much employment there is in occupation o and area a .

We calculate the weights in several steps. Most of the work involves finding a way to use the O*NET information to weight various occupations according to their similarity with the care

²The OEWS no longer distinguishes between the extremely similar occupations home health and personal care aides, instead combining the detailed SOC codes 31-1121 and 31-1122. The CPS treats the home health and personal care aides as distinct occupations. When dealing with CPS data, we simply aggregate the detailed Census Occupation codes 3601 and 3602 into one that we call care workers.

workers occupation.

We choose variables in categories that represent basic job skill requirements (e.g., deductive reasoning, oral expression, trunk strength) and job attributes (e.g., frequency of decision making). All in all, we end up with 148 variables belonging to 11 distinct O*NET categories.

We also use the education level that is typically required for the job. This variable differs from the years of schooling variable found in the demographic data sets, but the two variables are highly correlated.³

2.1 Factor Analysis

Many of the O*Net variables are highly correlated, reflecting the fact that they contain similar information. The first step in our analysis is to reduce the number of variables using factor analysis. We are able to boil down our initial list of 148 variables to 11 factors. These factors explain greater than ninety percent of the variation in the O*NET variables.

2.2 Distance Calculation

In order to calculate the comparable wage using equation (1), we need to obtain values for the weights $\pi_{o,a}$. We first normalize the factors to have mean 0 and variance 1 and then estimate the wage regression model:

$$\ln(\bar{w}_o) = \beta_0 + \sum_{k=1}^K \beta_k F_{o,k} + \beta_{K+1} Y_o + \epsilon_o \quad (2)$$

where $\ln(\bar{w}_o)$ is the log of the mean wage for occupation o , $F_{o,k}$ is the value of the k -th factor for occupation o , K is the total number of factors, Y_o is the normalized number of school years typically needed for occupation o (from O*NET), and ϵ_o is the error term. The factor coefficients, β_k , are used to estimate the distance D_o between occupation o and care workers using the Euclidean distance formula:

$$D_o = \frac{1}{K+1} \left(\sum_{k=1}^K c_k (F_{o,k} - F_{C,k})^2 + c_{K+1} (Y_o - Y_C)^2 \right) \quad (3)$$

where $F_{C,k}$ is the value of the k -th factor for the care workers occupation and weights c_k are

³The correlation between O*NET required education and CPS measured education is 0.93. Required education is about half a year less on average than measured education.

given by

$$c_k = \frac{|\beta_k|}{\sum_{k=1}^{K+1} |\beta_k|} \quad (4)$$

Note that we weight factors in terms of their importance in the wage function.

2.3 Constructing the Proximity Weights

The function $\hat{\theta}_o = \exp(-\exp(\alpha + \sigma D_o))$ is a natural function to use to weight the distance of occupation o from the care workers occupation. Not only does the proximity-related weight $\hat{\theta}_o$ vary inversely with the distance D_o , but this decline is faster than would occur with the single exponential $\exp(-(\alpha + \sigma D_o))$. We choose the parameters α and σ to solve the following two equations:

$$\exp(-\exp(\alpha + \sigma D_{min})) = \theta_{min} \quad (5)$$

$$\exp(-\exp(\alpha + \sigma D_{10\%})) = \theta_{10\%} \quad (6)$$

where $D_{10\%}$ is the distance from the care workers occupation to the occupation that is in the 10th percentile, when occupations are ranked in order of their distance from the care workers occupation. θ_{min} is the value $\hat{\theta}_o$ takes at the occupation o that is nearest to the care workers occupation and $\theta_{10\%}$ is the value that $\hat{\theta}_o$ takes at the occupation that is at the 10th percentile. We set $\theta_{min} = 0.99$ and $\theta_{10\%} = 0.01$.

The exact shape of the function depends on how many jobs have similar attributes to care workers. The curve is flat (steep) in regions where there are (are not) several jobs with similar attributes. The proximity function we obtain from the actual data is graphed below in figure 1.

Finally, the normalized proximity weight is given by:

$$\theta_o = \frac{\hat{\theta}_o}{\sum_o \hat{\theta}_o} \quad (7)$$

We might note that the weights are pretty stable with respect to our parameter choices.

2.4 Employment and Final Weights

Next, we take an occupation's employment into account. Let $E_{o,a}$ denote employment in occupation o in area a . We define "effective area a employment" in occupation o as a match for the

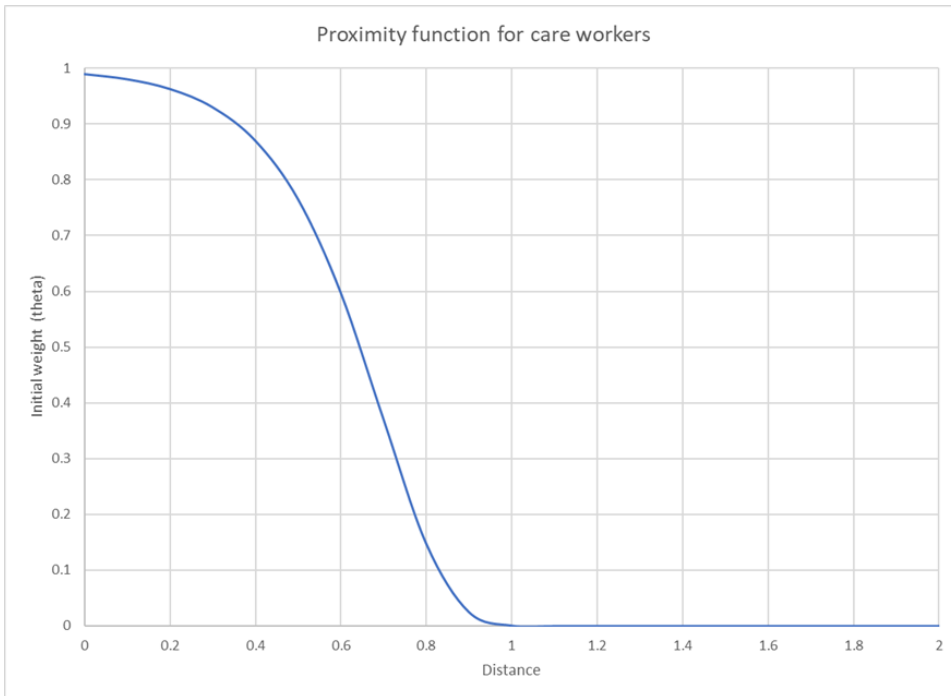


Figure 1: Proximity weight function for care workers

care workers occupation as the product of θ_o and $E_{o,a}$:

$$\hat{E}_{o,a} = \theta_o E_{o,a} \quad (8)$$

“Effective employment” is an increasing function of both employment in occupation o and the proximity-related weight θ_o . Normalizing, the weights $\pi_{o,a}$ in (1) are given by:

$$\pi_{o,a} = \frac{\hat{E}_{o,a}}{\sum_a \hat{E}_{o,a}} \quad (9)$$

3 Results

3.1 Comparable Wage Estimates

We use employment and wage estimates from BLS’ OEWS program to calculate the comparable wage for care workers. We restrict the set of comparable occupations to those that are listed in O*NET job zones 1 and 2. These occupations require little preparation. Column 2 of Table A1 in Appendix A shows the proximity weights as defined by (7) that we obtain for the reference

year 2022.⁴ We only show weights that are at least as large as one percent. The occupations in the table have a combined weight of 87.6%; the remaining 12.4% is accounted for by occupations with proximity weights less than 1 percent. As one might expect, orderlies, childcare workers, and physical therapist aides are occupations with high proximity weights. On the other hand, food services workers, like non-restaurant food servers and institution and cafeteria cooks, also have high proximity weights. It is also interesting to note that production occupations also play a significant role in the comparable wage calculation.

We now use the final weights defined by (9) to calculate the comparable wage for care workers according to equation (1). Table 1 presents 2022 estimates for the entire nation. Column 1 of the table shows total employment in the care workers occupation. Care worker employment is quite large; in 2022, employment was well over three million nationwide. The second column in Table 1 presents the mean care worker wage. Column 3 shows the mean wage in comparable occupations. We calculate this wage by applying the formula in equation (1) and then exponentiating. Column 4 presents the ratio of the mean care worker wage to the comparable wage estimate. A ratio less than 1 means that the mean wage of care workers is lower than the estimated mean wage for comparable jobs. We will refer to the difference between 1 and this ratio as the wage gap, which we present in column 5. Nationwide, the mean hourly wage for care workers was \$14.87 in 2022. The comparable wage estimate is \$16.50, implying a wage gap of 10 percent.

Table 1: 2022 national estimates of care workers vs. comparable workers

Care Worker Employment	Mean Care Worker Wage	Mean Comparable Worker Wage	Ratio of Care Workers' to Comparable Workers' Wage	Wage Gap
3,504,228	\$14.87	\$16.50	0.90	9.9%

Table B1 in Appendix B presents wage gap estimates for each state. There is substantial variation in the wage gap among the states, but it is nearly always positive and, in many cases, quite substantial. The gap exceeds 15% in 17 states and the District of Columbia and exceeds 20% in Texas, Michigan, and Alabama. In contrast, the care worker wage actually exceeds the comparable wage by a small amount in North Dakota, South Dakota, Nevada, and Alaska.

As discussed above, the weights in our comparable wage calculation depend on both occu-

⁴The OEWS obtains a representative sample over a period of three years. However, wages in 2020 and 2021 are down weighted and put into current dollars.

pation’s size and on how similar it is to the care worker occupation. If two occupations are the same size, the occupation that is more similar to care workers receives a greater weight than the occupation that is less similar. It is of interest to calculate the wage gap if we weight alternative occupations only by their size and not by how similar they are to the care worker occupation. This is the approach taken in a recent paper put out by Khavjou et al. from the Department of Health and Human Services (HHS)[6]. As shown in the second row of Table 2, when one does not weight occupations by their proximity to the care worker occupation, the comparable wage estimate in 2022 is \$18.55, implying a wage gap of 20 percent. This is very close to the estimate HHS obtains.⁵ Apparently, when one does not take into account how similar alternative occupations are to care workers, one obtains a much larger estimate of the wage gap.

As yet a third way of calculating the wage gap, we take account of how similar an occupation is to the care worker occupation, but do not restrict jobs to O*NET zones 1 and 2. As shown in the third row of Table 2, the estimated wage gap is slightly higher than when comparable occupations are restricted to zones 1 and 2. Of the three approaches, we prefer the one restricting occupations to zones 1 and 2 and using proximity weights, yielding the estimates in row 1.

Table 2: 2022 national estimates of comparable wages using different weighting approaches

Weighting Approach	2022		
	Compar- able Wage	Ratio of Care Workers’ to Comparable Workers’ Wage	Wage Gap
Job zone and O*NET proximity weights	\$16.50	0.90	9.9%
Job zone only	\$18.55	0.80	19.8%
O*NET Proximity weights only	\$16.66	0.89	10.8%

Has the pandemic affected the care worker wage gap? To answer this question, we calculate the pay gap for 2019. The resulting estimates are displayed in Table 3. Again, the estimates in row 1 are from our preferred method that uses proximity weights and restricts comparable occupations to be in zones 1 and 2. The estimates in row 2 restrict comparable occupations to be in zones 1 and 2, but do not take into account how similar or dissimilar these occupations are to care workers. The estimates in row 3 are calculated using proximity weights, but comparable occupations are not restricted to be in zones 1 and 2. Our preferred estimates in row 1 based on

⁵This is despite a few differences in our calculations, including a slightly different reference period.

proximity weights and occupations in zones 1 and 2 show that the wage gap increased from 2% in 2019 to 10% in 2022. The estimates that use proximity weights but do not restrict comparable occupations to lie in zones 1 and 2 show an increase in the wage gap from 7% to 11%. In contrast, the estimates that do not utilize proximity weights indicate that the wage gap has been relatively constant, remaining at 20% both before and after the pandemic. Apparently, care worker wages have fallen relative to the wages in occupations that are most similar to care workers, something that one misses if one does not use proximity weights.

Table 3: 2019 national estimates of comparable wages using different weighting approaches

Weighting Approach	2019		
	Compar- able Wage	Ratio of Care Workers' to Comparable Workers' Wage	Wage Gap
Job zone and O*NET proximity weights	\$12.93	0.98	2.4%
Job zone only	\$15.77	0.80	20.0%
O*NET Proximity weights only	\$13.51	0.93	6.7%

3.2 Demographic Characteristics

Our estimates indicate a fairly sizable gap between the wages that care workers receive and what one might expect given the wages that workers in comparable occupations receive. The care workers occupation tends to be overwhelmingly female. It also has an above average concentration of Black and Hispanic workers as well as immigrants. According to Current Population Survey (CPS) data from July 2020 to June 2023, the proportions of care workers who were women, Blacks, Hispanics, and immigrants were 82.4%, 27.4%, 23.0%, and 30.8%, respectively. In contrast, in comparable occupations, these proportions were 48.6%, 15.4%, 32.6%, and 29.0%, respectively.

An interesting question is to what extent the wage gap can be accounted for by the demographic characteristics. We use the CPS to estimate the proportions of women, Blacks, Hispanics, and immigrants in each comparison occupation and add these to the wage equation (2):

$$\ln(\bar{w}_o) = \beta_0 + \sum_{k=1}^K \beta_k F_{o,k} + \beta_{K+1} Y_o + \sum_{m=1}^M \beta'_m x_{o,m} + \epsilon_o \quad (10)$$

where $x_{o,m}$ is the normalized proportion of workers in occupation o with the m -th demographic characteristic. We then modify the weights in the distance function accordingly:

$$D_o = \frac{1}{K + M + 1} \left(\sum_{k=1}^K c_k (F_{o,k} - F_{C,k})^2 + c_{K+1} (Y_o - Y_C)^2 + \sum_{m=1}^M c'_m (x_{o,m} - x_{C,m})^2 \right) \quad (11)$$

where $x_{C,m}$ is the proportion of workers with demographic characteristic m in the care workers occupation and:

$$c_k = \frac{|\beta_k|}{\sum_{k=1}^{K+1} |\beta_k| + \sum_{m=1}^M |\beta'_m|}, \quad c'_m = \frac{|\beta'_m|}{\sum_{k=1}^{K+1} |\beta_k| + \sum_{m=1}^M |\beta'_m|} \quad (12)$$

One complicating consideration stems from the fact that while OEWS using SOC occupation codes, CPS uses the generally less detailed Census codes. As a first step in bringing in the demographic information from the CPS, we therefore aggregate across the SOC occupations to form Census occupations. Specifically, we calculate the mean wage and mean O*NET characteristics for each Census occupation by taking employment weighted averages across the corresponding SOC occupations. The third row in Table 4 shows the results of redoing the OEWS calculations using Census occupational codes. Note that the estimated wage gap of 9% is a tad smaller than the estimate when one uses the SOC codes.

The last row in Table 4 shows the comparable wage estimate that results when one uses the modified proximity weights in (11) that take into an occupation's similarity to the care worker occupation in both its job characteristics and demographic composition. As shown in the table, the comparable wage estimate of \$15.52 implies a wage gap of about 4%. So demographic characteristics appear to explain a little more than half of the 9% wage gap. This result should be interpreted with some care. Rather than reflecting simply discrimination in the labor market, it also might reflect the fact that demographic characteristics are correlated with unmeasured or mismeasured job characteristics.

Recall that when we weight alternative occupations only by their size and not by how similar they are to the care worker occupation, we obtain an estimate of wage gap of 20%.⁶ Controlling for job characteristics reduces the wage gap to 9%. Controlling additionally for demographic

⁶This estimate is naturally the same whether or not one uses SOC or Census occupation codes.

Table 4: 2022 national estimates using Census occupations and controlling for demographics

	Mean Wage	Ratio of Care Workers' to Comparable Workers' Wage	Wage Gap
Care Workers	\$14.87	–	–
Comparable Workers using. . .			
Job zone only	\$18.56	0.80	19.9%
O*NET Proximity weights only	\$16.51	0.90	10.0%
Job zone and O*NET proximity weights	\$16.33	0.91	9.0%
Controlling for Demographics only	\$17.69	0.84	15.9%
Job zone controlling for Demographics	\$17.19	0.87	13.5%
O*NET Proximity weights controlling for Demographics	\$16.17	0.92	8.0%
Job zone and O*NET proximity weights controlling for Demographics	\$15.52	0.96	4.2%

characteristics reduces it further to 4%. While demographic characteristics do not play an insignificant role in explaining the lower wages earned by care workers, job characteristics are more important. Note too that the order in which one controls for job and demographic characteristics has a modest impact on the estimates of how much of the simple unadjusted 20% wage gap can be attributed to each. As shown in row 4 of Table 4, if one adjusts the weights to just control for demographic characteristics, the simple unadjusted wage gap of 20% falls to 16%. Adding controls for job characteristics would then reduce the wage gap to 4%.

4 Conclusion

Home health and personal care aides play an important role in the U.S. health care system, a role that will increase as the population ages.⁷ These workers have low education levels and receive low wages. Drawing on the employment and wage information in the OEWS and the information on job attributes in O*NET, we have developed a methodology for estimating what wages in occupations with similar skills and job requirements are paid.

Robertson, Sawo, and Cooper have indicated that institutional factors, such as the fact that the majority of care workers are paid through Medicaid’s Home and Community Based Services

⁷Bates and Chapman[3] express the concern that in the future there will be a care workforce shortage and present a methodology for assessing the size of this shortfall.

waiver program, may have an important effect on care workers' wages. Possible evidence for this is provided by the fact that our comparable wage and wage gap estimates vary widely across states.

Nationally, the mean hourly wage of care workers in 2022 was just under \$15 an hour. The low wage earned by care workers is largely explained by the fact that they are in jobs requiring skills that are not well rewarded in the labor market, but the care worker wage is about 20 percent lower than other jobs requiring little or no preparation. A good portion of this gap disappears when one focuses on jobs that have similar attributes and skills to care worker jobs. Specifically, our estimates indicate that nationwide care workers' wages are 10% lower than the wages in occupations with similar skill requirements. Besides their low level of education, care workers are disproportionately composed of women, Hispanics, and immigrants. For example, according to the CPS survey between 2020-2022, the percentages of care workers that were females, Hispanics, and immigrants were 82.4%, 23.0%, and 30.8%, respectively. Evidence of the importance of female immigrants, many of whom are Hispanic, is provided by Grabowski, Gruber, and McGarry[5] who find that an increase in their presence in an area reduces the number of nursing home residents, which they argue is due to the fact that immigrants "often work as home health or personal care aides, professions that allow older adults to remain in their home longer and at greater levels of disability."⁸ We find that controlling for demographic characteristics explains about half of the wage gap.

Labor market competition following the pandemic appears to have lessened wage inequality, strengthening a trend that may have started as early as 2013.⁹ However, our estimates based on proximity weights and occupations in zones 1 and 2 show that the wage gap increased from 2% in 2019 to 10% in 2022, indicating that after the pandemic the wages of care workers fell further behind those of workers in jobs having similar attributes and skill requirements.

⁸Grabowski, Gruber, and McGarry also find that an increased number of immigrants leads to an increased number of certified nursing assistants.

⁹The trend toward lower wage inequality may have started as early as 2013 and appears to have increased as a result of the pandemic. See Dey Handwerker, and Piccone (2022)[4]; Shambaugh, and Strain (2021)[8]; and Autor, Dube, and McGrew (2023)[1].

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A Occupations with the largest proximity weights

Table A1: Proximity weights, SOC-based, May 2022

SOC Code	Title	No Job Zone Match	Job Zone Match
31-1131	Nursing assistants	3.21%	0.00%
35-3041	Food servers, nonrestaurant	3.16%	3.33%
31-1132	Orderlies	3.09%	3.25%
39-2021	Animal caretakers	3.06%	3.23%
35-2012	Cooks, institution and cafeteria	3.03%	3.19%
39-9011	Childcare workers	3.03%	3.19%
31-2022	Physical therapist aides	2.99%	3.15%
51-9192	Cleaning, washing, and metal pickling equipment operators and tenders	2.86%	3.02%
51-9196	Paper goods machine setters, operators, and tenders	2.79%	2.94%
35-2015	Cooks, short order	2.78%	2.93%
35-2019	Cooks, all other	2.78%	2.93%
51-9111	Packaging and filling machine operators and tenders	2.68%	2.82%
35-2021	Food preparation workers	2.62%	2.76%
47-2053	Terrazzo workers and finishers	2.43%	2.56%
51-2021	Coil winders, tapers, and finishers	2.35%	2.48%
51-3092	Food batchmakers	2.23%	2.35%
51-3099	Food processing workers, all other	2.23%	2.35%
51-4193	Plating machine setters, operators, and tenders, metal and plastic	2.21%	2.33%
51-4199	Metal workers and plastic workers, all other	2.21%	2.33%
51-2031	Engine and other machine assemblers	2.17%	2.28%
51-4022	Forging machine setters, operators, and tenders, metal and plastic	1.99%	2.09%
35-9011	Dining room and cafeteria attendants and bartender helpers	1.93%	2.04%
51-9051	Furnace, kiln, oven, drier, and kettle operators and tenders	1.91%	2.01%

Table A1 – *Continued from Previous Page*

SOC		No Job	Job
Code	Title	Zone	Zone
		Match	Match
51-6011	Laundry and dry-cleaning workers	1.66%	1.75%
37-2012	Maids and housekeeping cleaners	1.64%	1.73%
47-3012	Helpers – carpenters	1.60%	1.69%
47-3019	Helpers, construction trades, all other	1.60%	1.69%
51-4031	Cutting, punching, and press machine setters, operators, and tenders, metal and plastic	1.58%	1.66%
51-4071	Foundry mold and coremakers	1.55%	1.64%
37-2011	Janitors and cleaners, except maids and housekeeping cleaners	1.49%	1.57%
37-2019	Building cleaning workers, all other	1.49%	1.57%
31-1133	Psychiatric aides	1.40%	1.48%
51-2090	Miscellaneous assemblers and fabricators	1.35%	1.42%
49-3093	Tire repairers and changers	1.29%	1.36%
51-7041	Sawing machine setters, operators, and tenders, wood	1.28%	1.35%
51-7099	Woodworkers, all other	1.28%	1.35%
35-9031	Hosts and hostesses, restaurant, lounge, and coffee shop	1.16%	1.23%
47-2082	Tapers	1.11%	1.17%
31-9099	Healthcare support workers, all other	1.09%	0.00%
51-9022	Grinding and polishing workers, hand	1.09%	1.15%
51-3011	Bakers	1.02%	1.07%
37-3011	Landscaping and groundskeeping workers	1.00%	1.05%
37-3019	Grounds maintenance workers, all other	1.00%	1.05%
35-3031	Waiters and waitresses	0.99 %	1.04 %
	Total	87.44%	87.59%

B Log wage estimates by state

Table B1: Wage Gap estimates by state

FIPS	State	Care Worker Employment	Mean Care Worker Wage	Mean Comparable Worker Wage	Ratio of Care Workers' to Comparable Workers' Wages	Wage Gap
01	Alabama	20,206	\$11.22	\$14.03	0.80	20.1%
02	Alaska	6,309	\$17.58	\$17.14	1.03	-2.6%
04	Arizona	63,394	\$15.03	\$17.45	0.86	13.9%
05	Arkansas	18,388	\$12.83	\$14.66	0.87	12.5%
06	California	773,346	\$15.75	\$18.84	0.84	16.4%
08	Colorado	35,909	\$16.69	\$18.02	0.93	7.4%
09	Connecticut	41,229	\$16.98	\$18.09	0.94	6.1%
10	Delaware	9,034	\$13.40	\$15.95	0.84	16.0%
11	DC	11,034	\$16.76	\$19.85	0.84	15.6%
12	Florida	69,051	\$13.59	\$14.98	0.91	9.3%
13	Georgia	34,655	\$12.53	\$14.87	0.84	15.8%
15	Hawaii	6,775	\$15.71	\$18.23	0.86	13.8%
16	Idaho	18,319	\$13.35	\$15.36	0.87	13.1%
17	Illinois	101,430	\$15.52	\$16.93	0.92	8.3%
18	Indiana	39,602	\$13.68	\$16.75	0.82	18.3%
19	Iowa	23,011	\$15.43	\$15.53	0.99	0.6%
20	Kansas	25,938	\$12.38	\$14.98	0.83	17.4%
21	Kentucky	23,167	\$14.49	\$15.67	0.92	7.5%
22	Louisiana	34,868	\$10.15	\$12.52	0.81	18.9%
23	Maine	16,049	\$16.26	\$17.40	0.93	6.5%
24	Maryland	24,959	\$15.67	\$16.71	0.94	6.2%
25	Massachusetts	106,194	\$17.06	\$19.12	0.89	10.8%
26	Michigan	82,229	\$13.91	\$17.41	0.80	20.1%
27	Minnesota	106,641	\$15.53	\$17.19	0.90	9.6%

Table B1 – *Continued from Previous Page*

FIPS	State	Care Worker Employ- ment	Mean Care Worker Wage	Mean Compa- rable Worker Wage	Ratio of Care Workers' to Comparable Workers' Wages	Wage Gap
28	Mississippi	16,230	\$11.13	\$12.90	0.86	13.7%
29	Missouri	79,838	\$13.17	\$15.94	0.83	17.4%
30	Montana	8,298	\$14.32	\$14.94	0.96	4.2%
31	Nebraska	9,730	\$14.46	\$15.23	0.95	5.1%
32	Nevada	14,291	\$16.08	\$15.60	1.03	-3.1%
33	New Hampshire	7,853	\$15.56	\$16.86	0.92	7.7%
34	New Jersey	89,206	\$16.11	\$17.77	0.91	9.3%
35	New Mexico	35,743	\$12.83	\$14.62	0.88	12.2%
36	New York	504,157	\$17.11	\$19.42	0.88	11.9%
37	North Carolina	58,796	\$12.51	\$14.91	0.84	16.1%
38	North Dakota	6,630	\$17.26	\$16.56	1.04	-4.2%
39	Ohio	91,176	\$13.42	\$16.13	0.83	16.8%
40	Oklahoma	16,715	\$11.86	\$13.43	0.88	11.7%
41	Oregon	32,169	\$17.18	\$17.87	0.96	3.8%
42	Pennsylvania	193,932	\$13.82	\$16.16	0.86	14.5%
44	Rhode Island	7,572	\$16.81	\$16.95	0.99	0.9%
45	South Carolina	29,214	\$12.37	\$14.70	0.84	15.9%
46	South Dakota	3,825	\$15.20	\$14.73	1.03	-3.2%
47	Tennessee	27,660	\$12.93	\$14.94	0.87	13.4%
48	Texas	306,316	\$10.98	\$14.22	0.77	22.8%
49	Utah	13,208	\$15.82	\$16.09	0.98	1.6%
50	Vermont	6,927	\$15.49	\$17.78	0.87	12.9%
51	Virginia	58,669	\$13.06	\$15.87	0.82	17.7%
53	Washington	97,735	\$18.22	\$20.10	0.91	9.3%
54	West Virginia	17,194	\$11.78	\$14.00	0.84	15.8%
55	Wisconsin	76,261	\$14.09	\$16.87	0.84	16.5%

Table B1 – *Continued from Previous Page*

FIPS	State	Care Worker Employ- ment	Mean Care Worker Wage	Mean Compa- rable Worker Wage	Ratio of Care Workers' to Comparable Workers' Wages	Wage Gap
56	Wyoming	3,143	\$15.78	\$15.90	0.99	0.7%