Home Healthcare Aides

Aaron Kessler

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The Bureau of Labor Statistics puts out extensive data on the workforce, including details down to the state and metro level. (The most recent localized data is from 2018, that's what we'll use here.)

We'll use the occupation of "Home Health Aides" for this analysis. More information on the category can be found here.

Nationally, about 800,000 people work as such aides. They generally make little money despite the importance of their jobs in keeping people alive - averaging about $12/hr as of 2018.

State and local level workforces

Now let's analyze the BLS data more granularly to explore how different states compare with each other.

Since areas with the highest populations naturally tend to have more workers of any type, including those at restaurants and bars, we'll account for that by using a rate of "jobs per 1,000 workers" so it's more apples-to-apples. E.g. for each 1,000 workers in a state or metro area, how many are home health aides.

States

Which states have the **lowest** share of their workforce per 1,000 workers as home health aides? (Shown below in the *jobs_1000* column).

state	tot_emp	jobs_1000
New Hampshire	550	0.835
Nevada	1,460	1.080
North Dakota	550	1.316
Kentucky	2,680	1.420
California	24,560	1.444
Tennessee	4,750	1.607
Kansas	2,320	1.684
Vermont	580	1.910
South Dakota	810	1.920
Wisconsin	5,600	1.964
Wyoming	630	2.329
Rhode Island	1,160	2.400
Alabama	4,870	2.504
Virginia	9,700	2.530
Iowa	3,940	2.552

Which states have the **highest** share of their workforce per 1,000 workers?

state	tot_emp	jobs_1000
New York	191,820	20.437
Ohio	55,490	10.245
New Jersey	41,040	10.134
District of Columbia	6,420	9.013
Minnesota	22,380	7.804
Hawaii	4,920	7.659
Massachusetts	25,220	7.061
New Mexico	5,680	7.002
North Carolina	30,040	6.854
Pennsylvania	36,940	6.317
Arizona	17,570	6.299
Michigan	26,580	6.156
Texas	69,600	5.745
Illinois	33,990	5.674
South Carolina	9,600	4.654

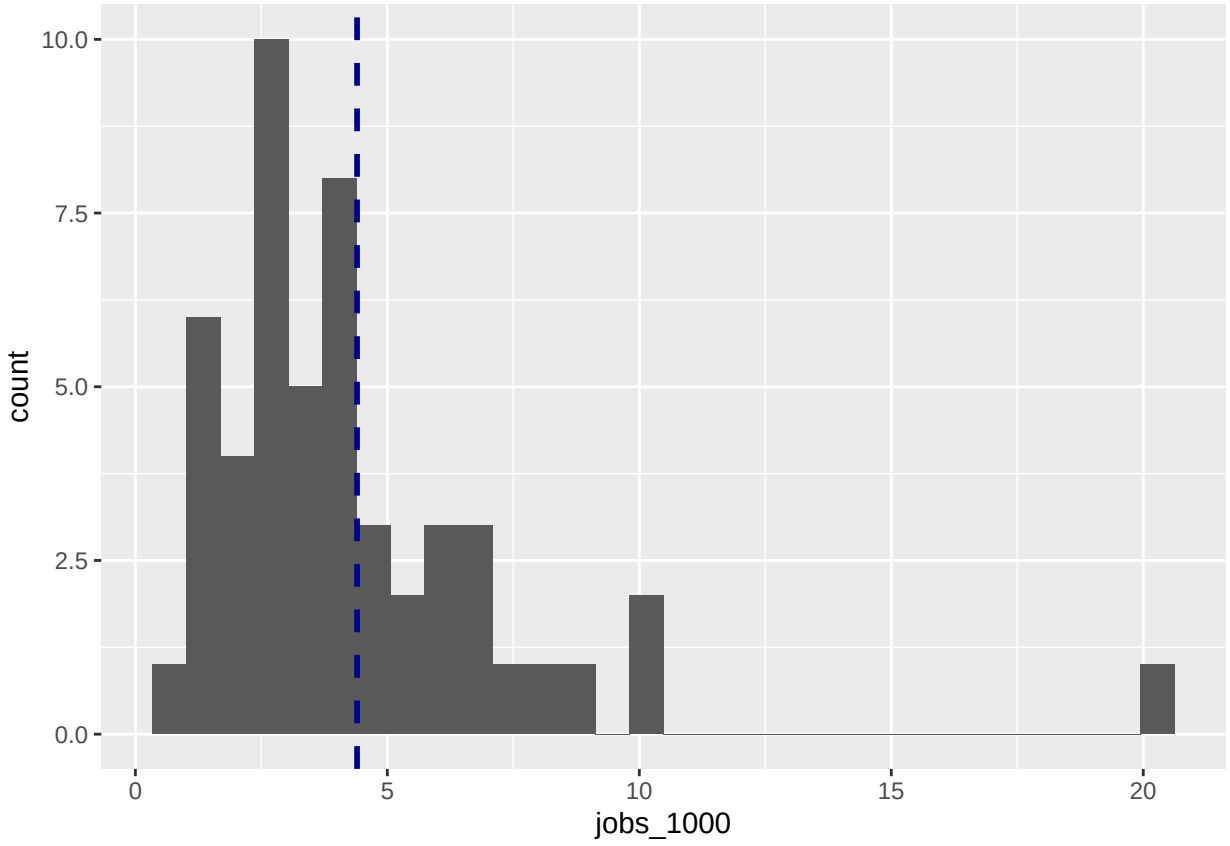
What's the range in values we're talking about states having by that measure:

minvalue	maxvalue
0.835	20.437

That's a pretty large difference between the worst and the best.
Let's take a quick look at what the distribution looks like with a historgram.

As we can see below, the distribtuion skews left, meaning most states have very few home health aides as a percentage of their workforces, while a smaller number of state have significantly more.

```
## `stat_bin()` using `bins = 30`. Pick better value with `binwidth`.
```



Metro Areas

Now we'll do the same thing but for **Metropolitan Statistical Areas (MSAs)**...

Which metro areas have the **lowest** share of their workforce per 1,000 workers as home health aides?

area_name	tot_emp	jobs_1000
Bloomington, IL	40	0.417
Vallejo-Fairfield, CA	80	0.591
San Jose-Sunnyvale-Santa Clara, CA	710	0.632
Dubuque, IA	40	0.679
Elkhart-Goshen, IN	100	0.736
Warner Robins, GA	50	0.755
Odessa, TX	60	0.832
El Centro, CA	50	0.843
Iowa City, IA	80	0.850
Reno, NV	200	0.853
Santa Maria-Santa Barbara, CA	170	0.912
Oxnard-Thousand Oaks-Ventura, CA	300	0.947
Stockton-Lodi, CA	240	0.968
Salinas, CA	180	0.976
St. Joseph, MO-KS	50	0.987

Which metro areas have the **lowest** share of their workforce per 1,000 workers?

area_name	tot_emp	jobs_1000
Brownsville-Harlingen, TX	4,050	29.238
Sherman-Denison, TX	1,190	26.486
McAllen-Edinburg-Mission, TX	6,480	24.894
New York-Newark-Jersey City, NY-NJ-PA	202,660	21.336
Bay City, MI	570	17.034
Flint, MI	2,280	16.576
Goldsboro, NC	670	16.178
Greenville, NC	1,090	14.190
Midland, MI	490	14.104
Las Cruces, NM	960	13.669
Columbus, OH	14,290	13.588
Corpus Christi, TX	2,490	13.268
Lima, OH	650	12.914
Canton-Massillon, OH	2,110	12.416
Grand Junction, CO	750	12.141

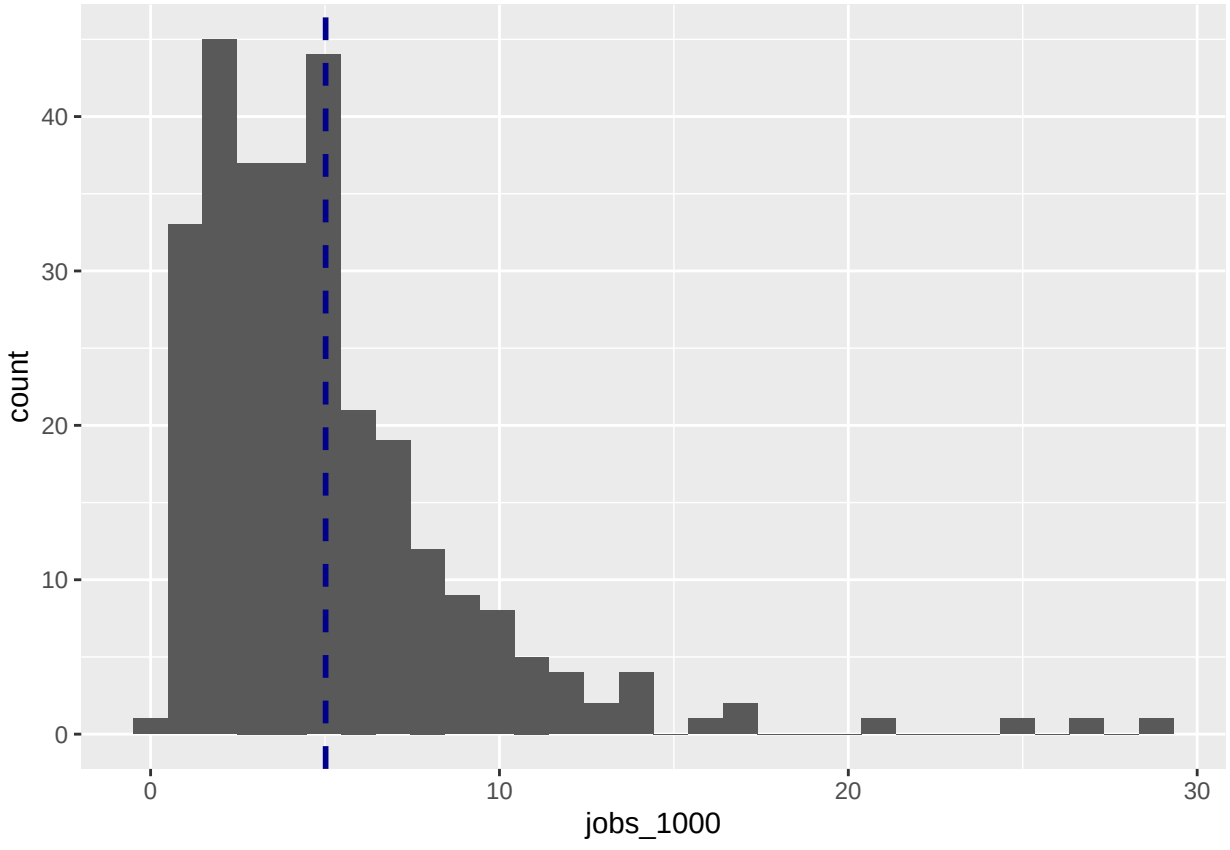
What's the range in values we're talking about states having by that measure:

minvalue	maxvalue
0.417	29.238

Once again, that's a pretty large difference between the worst and the best.

As we can see below, the distribtuion skews way left, meaning many areas have very few home health aides as a percentage of their workforces, while a smaller number have more.

```
## `stat_bin()` using `bins = 30`. Pick better value with `binwidth`.
```



Saving to a file Finally, we'll save the underlying data in a single Excel file for easy sharing, in case you want to explore the entire list of all states/metros included here.

```
sheets <- list("states_homehealthaides" = states_homehealthaides,
               "msa_homehealthaides" = msa_homehealthaides,
               "national_homehealthaides" = national_homehealthaides)

write_xlsx(sheets, "output/exported_homehealthaides.xlsx")
```