



COVID-19: Equity in Recovery Series

COVID-19: Which Workers Will Be Most Impacted?

By Keith Wardrip and Anna Tranfaglia, April 2020

Introduction

The COVID-19 pandemic has leveled a significant toll on the health and welfare of communities across the globe. In the U.S., federal, state, and local governments have encouraged residents to engage in social distancing (i.e., avoiding close contact with others) and have ordered the closure of nonessential businesses (e.g., clothing stores, fitness centers) in order to slow transmission of the disease. While appropriate for arresting the spread of COVID-19, these practices have already produced dramatic short-term effects on economic activity.¹ Weekly unemployment claims have skyrocketed,² and the unemployment rate rose from 3.5 percent in February to 4.4 percent in March.³

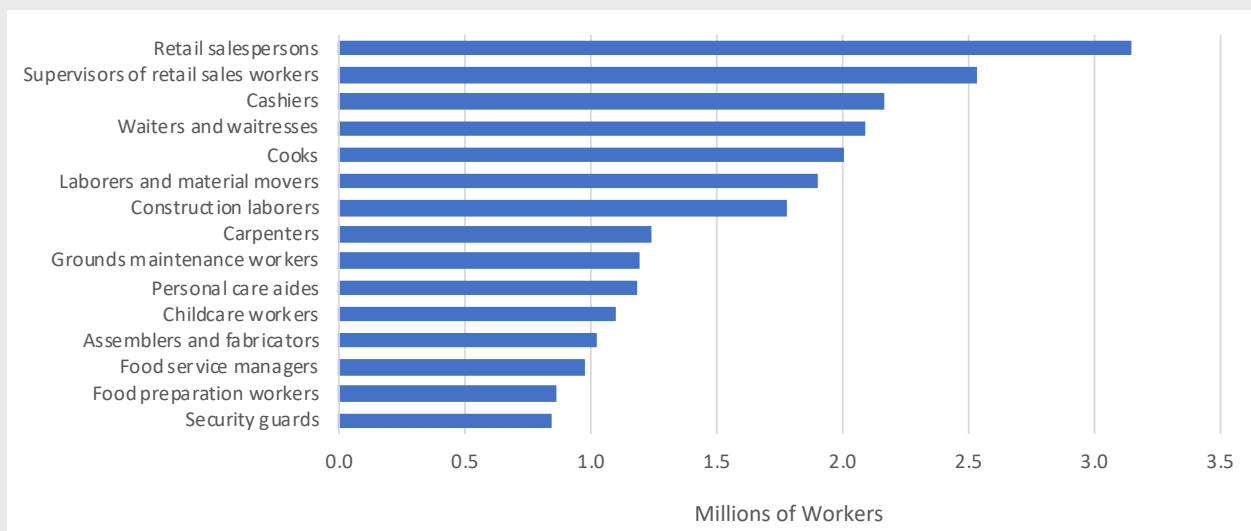
While the eventual economic costs of battling this

pandemic are impossible to predict, timely policy and programmatic decisions can and should be informed by reasonable short-term estimates. A number of attempts to estimate job loss and unemployment levels have been made, but the workers facing the greatest economic risk as a result of social distancing also warrant our attention.⁴ In this brief, we identify the occupations that are most likely to be negatively affected by social distancing practices and then describe the characteristics of the workers holding those jobs.

Which Occupations Are Most Economically At Risk in the Early Days of the Crisis?

Our analysis is predicated on the belief that current social distancing measures will have the greatest negative effect on jobs that require working in close proximity to others.

Figure 1. Fifteen Largest Economically At-Risk Occupations (U.S.)



Sources: Authors' calculations using American Community Survey One-Year Public Use Microdata Sample (2017), USDOL/ETA Occupational Information Network (O*NET) (24.2 database), and BLS Occupational Employment Statistics (May 2018).

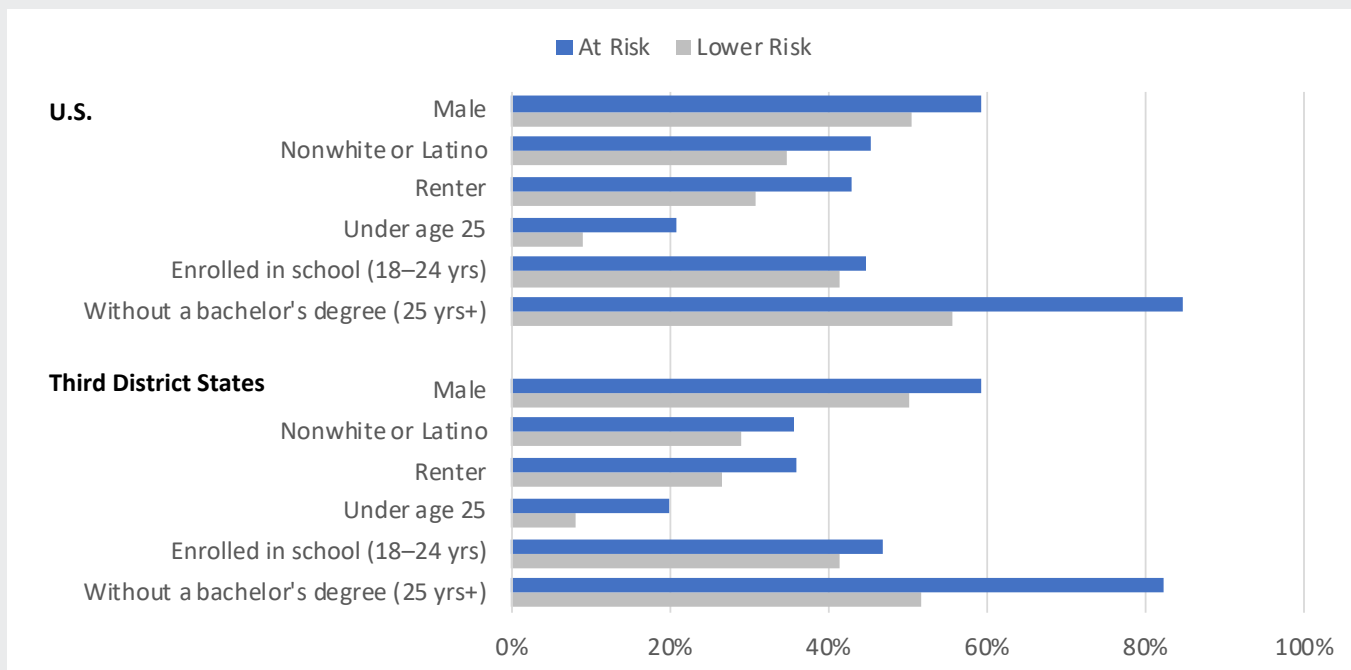
Intuitively, jobs requiring close proximity to customers or coworkers will be more difficult to do from home than jobs that allow for greater distance from others. We use two data sets to inform this analysis. The first is a national occupation-level survey that allows us to estimate the share of workers operating either moderately close (at arm’s length) or very close (near touching) to other people.⁵ The second is a nationally representative survey of American households with demographic and economic information on U.S. workers.⁶ By combining these two surveys, we can describe those we identify as **at-risk workers**: workers in occupations for which at least two-thirds report working in close proximity to others, provided those occupations are not in health care or education and provided the worker is not a local, state, or federal employee or employed by a grocery store or pharmacy. The balance of the civilian employed workers 18 years old and over are classified as **lower-risk workers**. To be clear, while health-care and other essential workers risk their personal health and safety through increased exposure to the disease, we exclude them from our definition of at-risk workers because this brief focuses on economic risk.

Of the 152.3 million workers analyzed, we classify nearly one-quarter — about 38 million workers — as at risk. The 15 largest economically at-risk occupations are shown in Figure 1. Most of the occupations shown in this figure —

and nearly 60 percent of at-risk workers overall — are in sales, food service, and construction, but economic risk is not confined to these three broad groups, as the presence of occupations such as childcare workers⁷ and security guards makes clear. **See Figure 1.**

In Pennsylvania, New Jersey, and Delaware — the three states at least partially included in the Third Federal Reserve District and hereafter referred to collectively as Third District states for the sake of brevity — at-risk workers total 2.5 million (23.2 percent). The top 15 at-risk occupations for Third District states overlaps the top 15 for the nation with one exception: Hairdressers and cosmetologists replace assemblers and fabricators. While this analysis is predicated on occupational proximity, it is important to note that even jobs not requiring close proximity (e.g., an accountant for a regional restaurant chain) may be vulnerable if other workers at the establishment (e.g., waiters) cannot work and revenue plummets. In the aggregate, then, the indirect effects of social distancing have the potential to hit four broad industries the hardest: accommodation and food services; retail trade; construction; and arts, entertainment, and recreation. Both in the nation and in Third District states, more than 40 percent of workers in these four industries are considered at-risk workers.⁸

Figure 2. Characteristics of Workers by Occupational Risk



Note: Workers living in group quarters are excluded from the estimate of renter occupancy.

Sources: Authors’ calculations using American Community Survey One-Year Public Use Microdata Sample (2017), USDOL/ETA Occupational Information Network (O*NET) (24.2 database), and BLS Occupational Employment Statistics (May 2018).

Figure 3. Economic Conditions of Workers by Occupational Risk

	U.S.		Third District States	
	At Risk	Lower Risk	At Risk	Lower Risk
Median earnings	\$23,141	\$41,535	\$23,339	\$46,480
Median share of household earnings	50%	59%	47%	58%
Working fewer than 35 hours/week	30%	17%	32%	17%
No health insurance	19%	7%	14%	5%
Income below the poverty line	11%	5%	9%	3%
Housing cost burdened	28%	18%	28%	18%

Notes: Earnings represent the sum of income from wages, salaries, and self-employment. Median share of household earnings includes earnings from all household members, including noncivilian workers and those younger than 18. Housing cost burdened is defined here as paying more than 30 percent of income for housing costs and utilities, and includes both owners and renters. The American Community Survey data set excludes roughly 1 percent of workers from its poverty rate calculation and 2 percent from its ratio of housing costs to household income, so these workers are excluded from this analysis. Poverty and housing cost burdened levels are lower than national levels because our sample excludes adults who are unemployed or not in the labor force, as well as those under the age of 18.

Sources: Authors' calculations using American Community Survey One-Year Public Use Microdata Sample (2017), USDOL/ETA Occupational Information Network (O*NET) (24.2 database), and BLS Occupational Employment Statistics (May 2018).

Who Holds These Jobs?

Figure 2 compares the characteristics of at-risk workers with those of lower-risk workers. In both the U.S. and in Third District states, at-risk workers are between 7 and 12 percentage points more likely than lower-risk workers to be male, to be nonwhite or Latino, and to rent their homes. Because at-risk workers are much more likely to be under 25 years old than their lower-risk counterparts, and because a slightly greater share of these younger workers are enrolled in school, a considerably greater proportion of all at-risk workers are students under 25. Some of these students may be able to rely on financial support from parents, but others are working their way through college with financial obligations of their own. These at-risk workers may find their educational plans jeopardized by lost wages or unemployment.

The greatest difference between these two groups of workers is their educational attainment: Among those age 25 and over, more than 80 percent of workers in at-risk occupations do not have a bachelor's degree — a level that's roughly 30 percentage points higher than that for workers in lower-risk occupations. Without an appropriate policy response, workers with lower levels of formal education are poised to bear the brunt of the economic effects of social distancing. **See Figure 2.**

What Are the Economic Conditions of These At-Risk Workers?

As illustrated previously, at-risk workers are more likely than lower-risk workers to fall into demographic categories associated with higher levels of economic precariousness. Figure 3 explores how these groups

of workers compare along a few meaningful economic metrics. Both in the nation and in Third District states, at-risk workers earn substantially less than do those in lower-risk jobs, with a difference of more than \$18,000 in the former and more than \$23,000 in the latter.⁹ The typical at-risk worker accounts for 50 percent of total household earnings in the nation (47 percent in Third District states), a slightly lower share than for lower-risk workers but a substantial contribution nonetheless — and one that could be reduced or eliminated as a result of social distancing.

Given the number of occupations in sales and food service highlighted in Figure 1, it is unsurprising to find that at-risk workers are almost twice as likely to work part time and less likely to have health insurance when compared with workers in lower-risk occupations. As a consequence of their lower wages, at-risk workers are also more likely to live below the poverty line, and 28 percent have housing costs that consume more than 30 percent of their household income.¹⁰ **See Figure 3.**

Takeaways

Our analysis confirms the general consensus that the jobs most economically at risk from the COVID-19 pandemic occupy the lower end of the wage spectrum. We also expand the conversation by describing the workers who, for many until recently, paid their bills and supported their families by holding those jobs. Our analysis shows that:

- Compared with workers considered to be at lower risk, at-risk workers are more likely to be younger and nonwhite or Latino, to rent their home, and to have

less formal education.

- Although at-risk workers earn lower wages than lower-risk workers, their contributions to their households' earnings are significant, and reduced earnings could exacerbate already higher levels of housing cost burden.

with the passage of time, but preliminary analyses such as this one can inform the development of policies and programs designed to ameliorate the expected near-term impacts. In that spirit, forthcoming briefs in this series will explore topics such as the pandemic's implications for small businesses and for housing affordability and neighborhoods.

We will know the full effects of the COVID-19 pandemic only

Endnotes

- 1 For example, see "[Monitoring Real Activity in Real Time: The Weekly Economic Index](#)," by Daniel Lewis, et al., published by the Federal Reserve Bank of New York.
- 2 "[Unemployment Insurance Weekly Claims](#)," published by the U.S. Department of Labor, April 2, 2020.
- 3 "[March 2020 Employment Situation](#)," published by U.S. Bureau of Labor Statistics.
- 4 Early efforts assessing the characteristics of affected workers include "[Who Are the Workers Already Impacted by the COVID-19 Recession?](#)" by Alan Berube and Nicole Bateman, published by the Brookings Institution and "[The Effects of the Novel Coronavirus Pandemic on Service Workers in New England](#)," by Sara Chaganti, et al., published by the Federal Reserve Bank of Boston.
- 5 We use the U.S. Department of Labor/Employment and Training Administration's Occupational Information Network (O*NET) survey, specifically the "physical proximity" question. Other assessments of social distancing using O*NET's physical proximity measure include "[Social Distancing and Contact-Intensive Occupations](#)," by Fernando Liebovici, et al., published by the Federal Reserve Bank of St. Louis and "[Occupational Exposure to Social Distancing: A Preliminary Analysis Using O*NET Data](#)," by Michael J. Hicks, et al., published by the Center for Business and Economic Research at Ball State University. More information on the O*NET program is available at www.onetcenter.org/.
- 6 We use the U.S. Census Bureau's American Community Survey One-Year Public Use Microdata Sample (2017). More information on this program is available at www.census.gov/programs-surveys/acs.
- 7 Because states are taking different approaches to the status of childcare facilities during the COVID-19 pandemic, the Hunt Institute is currently tracking state-level directives at www.hunt-institute.org/covid-19-resources/state-child-care-actions-covid-19/.
- 8 Because these industries are characterized by occupations requiring close proximity to others, it is unsurprising that they also rank among the lowest in workers' ability to work from home. See "[COVID-19, Workers, and Policy](#)," by Stuart Andreason, published by the Federal Reserve Bank of Atlanta.
- 9 Charles Gascon also concludes that average annual earnings for high-risk occupations are substantially lower than those for low-risk occupations. See "[COVID-19: Which Workers Face the Highest Unemployment Risk?](#)" published by the Federal Reserve Bank of St. Louis. Support can also be found in a recent survey showing that the share of respondents who had to stay home from work and could not work remotely was almost twice as high for those with the lowest incomes as for any other group; see "[Class and COVID: How the Less Affluent Face Double Risks](#)," by Richard V. Reeves and Jonathan Rothwell, published by the Brookings Institution.
- 10 Whitney Airgood-Obrycki also finds that households with members employed in vulnerable industries are more likely to be housing cost burdened than those with workers in other industries; see "[Pandemic Will Worsen Housing Affordability for Service, Retail, and Transportation Workers](#)," published by the Joint Center for Housing Studies of Harvard University.