

# COVID-19 RECOVERY OUTLOOK: DISPARITIES IN TELEWORK BY RACE AND ETHNICITY

July 9, 2020

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The COVID-19 pandemic has focused attention on telework, a term referring to employer-approved work by an employee at a remote location other than the employer's worksite (such as the employee's home) using Internet and telephone communications.<sup>1,2</sup> In March 2020, as Montgomery County and the Washington, D.C. Metropolitan area went under a public health lockdown, many employers began allowing employees to work remotely (telework) full-time, while many other workers in jobs that could not be done remotely were either furloughed or laid off by their employers or (if in a job deemed essential) continued working at risk of infection. Workers in jobs that could not be done remotely faced two elevated risks: economic hardship and/or infection.

A review of research and data shows that Latinx and Black workers have been disproportionately affected by the health and economic risks of the COVID-19 pandemic. As a result of the pandemic, these two groups have experienced greater losses of life, serious illness, job losses, and pay cuts.<sup>3,4,5</sup> These elevated risks reflect underlying and long-standing employment disparities that have, among other effects, concentrated Black and Latinx workers across the U.S. in occupations that typically cannot be performed remotely.<sup>6,7</sup> While the pandemic continues, the inability of many Black and Latinx workers to work remotely will continue to put these workers at higher risk for negative health and economic impacts.

Post-COVID-19, the current risks faced by workers who cannot telework will subside while the long-term net benefits for workers of more telework are less clear. More telework options may offer certain workers more choices about where to live and whether to commute -- yet may also create downward pressure on wages and put full-time remote workers at a disadvantage for advancement and job security. Of more critical policy concern, however, will be the lingering effects of the disparities in economic hardship created during the pandemic. Workers who faced economic hardship during the pandemic may take years to recover financially, making public programs such as unemployment insurance, rental assistance, food assistance, employment assistance, and workforce development critical. Moreover, the underlying employment disparities by race and ethnicity which pre-dated the pandemic are likely to persist, affecting discrimination in hiring, wage differentials, and disparate access to health and retirement benefits. Thus, eliminating disparities by race and ethnicity in telework specifically may prove less effective than eliminating the more fundamental disparities in how workers are employed across occupations.

## SUMMARY OF KEY TAKEAWAYS

- During the pandemic, disproportionalities by race and ethnicity in who holds jobs that can be done remotely have had significant negative consequences for Black and Latinx workers in terms of loss of life, illness, job losses, and pay cuts. Post-pandemic, it may take many years for workers to recover from the financial losses.
- While ability to work from home has clearly been a benefit during the pandemic, post-pandemic the net benefits to workers of increased telework are more unpredictable. Critically, however, the larger negative effects of the underlying and long-term employment disparities by race and ethnicity present an urgent and ongoing policy concern.

## DISPARITIES IN ABILITY TO WORK FROM HOME BY RACE AND ETHNICITY

The COVID-19 pandemic has had dire and disproportionate consequences for the working poor and for Black and Latinx people resulting in loss of life, serious illness, job losses, and pay cuts.<sup>8</sup> Inequities by race and ethnicity have manifested as both disease and economic burdens as follows:

- **Increased Disease Burden.**
  - In April 2020, the U.S. Centers for Disease Control and Prevention (CDC) wrote, “Among COVID-19 deaths for which race and ethnicity data were available, New York City identified death rates among Black persons (92.3 deaths per 100,000 population) and Hispanic/Latino persons (74.3) that were substantially higher than that of white (45.2) or Asian (34.5) persons.”<sup>9</sup>
  - In May 2020, the New England Journal of Medicine published a study of COVID-19–positive patients in Louisiana which found that “black race was associated with approximately twice the odds of hospital admission as white race.”<sup>10</sup>
  - In June 2020, the CDC reported that an investigation of COVID-19-positive in patients in metropolitan Atlanta, Georgia, showed an independent association between Black race and hospitalization, even after controlling for other characteristics including diagnosed underlying conditions.<sup>11</sup>
- **Increased Financial Burden.** In April 2020, the Pew Research Center reported that job and wage losses from COVID-19 were hitting Latinx people the hardest. Pew reported that “some 61% of Hispanic Americans and 44% of black Americans said that they or someone in their household had experienced a job or wage loss due to the coronavirus outbreak, compared with 38% of white adults.”<sup>12</sup>

Prior to the pandemic, Latinx and Black workers were less likely than White or Asian workers to work from home. According to the U.S. Bureau of Labor Statistics, data collected in 2017 and 2018 related to the American Time Use Survey found that “wage and salary workers who were Hispanic or Latino were less likely to work at home than workers who were not Hispanic or Latino (13 percent, compared with 27 percent). Blacks were less likely to work at home than Whites or Asians (18 percent, compared with 26 percent and 32 percent, respectively).”<sup>13</sup> Thus, going into the pandemic, long-standing disproportionalities by race and ethnicity put Black and Latinx workers at greater risk of negative consequences.

During the pandemic, workers in jobs that could not be done from home have been more likely to be furloughed or laid off by their employers or to continue work at risk of infection. Many of the jobs that cannot be done from home also tend to pay less, with the effect that the workers more likely to lose their jobs during the pandemic have also been workers more likely to have been earning relatively lower wages, leaving them less able to weather financial hardship.<sup>14</sup>

Post-pandemic, however, once the jobs that cannot be done remotely no longer carry a greater risk of infection, the telework aspect of employment disparities will be less urgent than the broader issues related to employment disparities by race and ethnicity, such as discrimination in hiring, wage differentials, disparate access to health and retirement benefits, and differentials in access to education, training, and career development opportunities.<sup>15</sup>

## OCCUPATIONAL GROUPS VARY IN SHARE OF JOBS THAT CAN BE DONE FROM HOME

A 2020 study published by the National Bureau of Economic Research (NBER) found that the potential for a job to be done from home varies widely across the major occupational groups, as shown in Figure 1 below.<sup>16,17</sup>

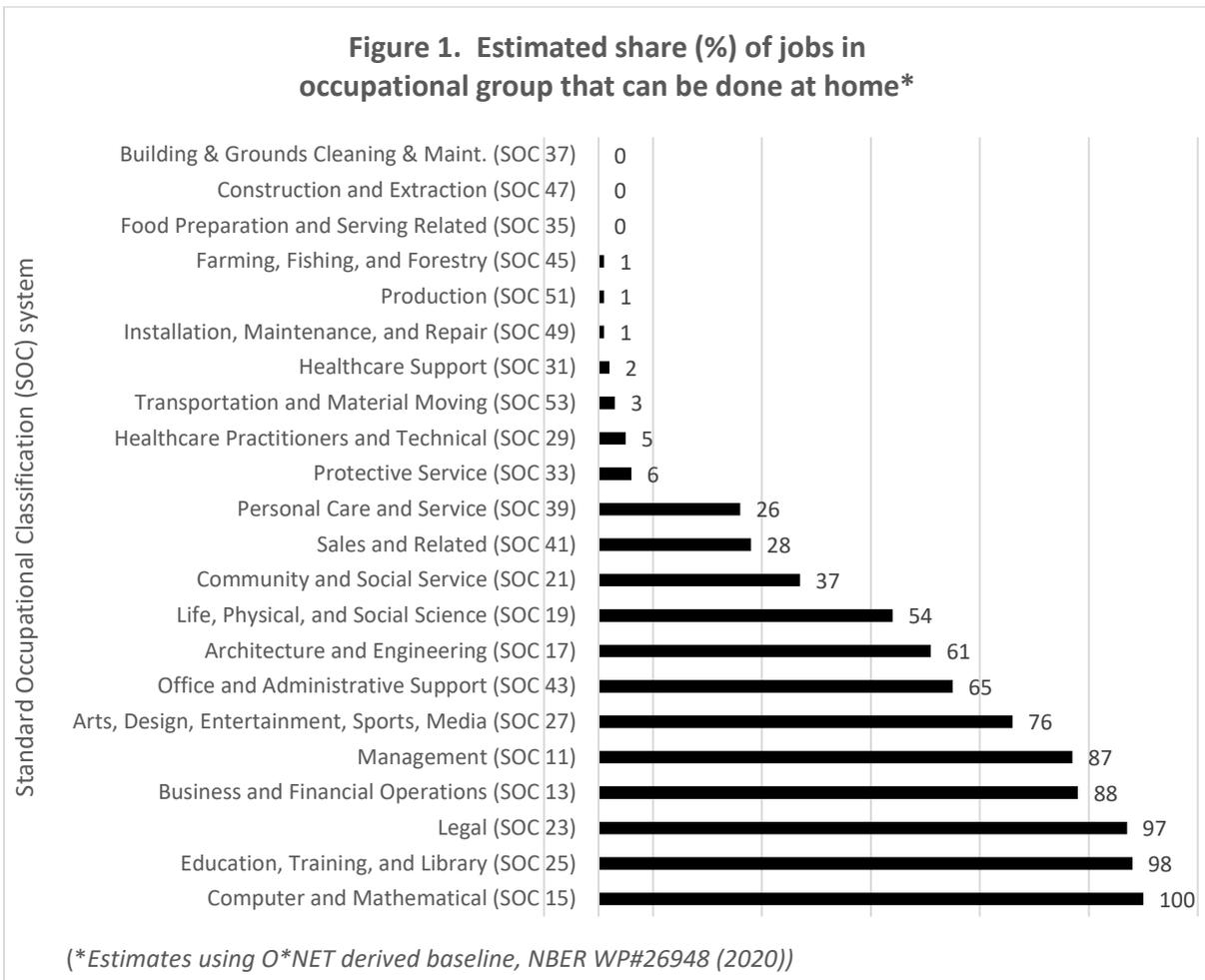


Table 1 in the Appendix shows the relative share, as of 2019, of total employment among the major occupational group for the Washington DC Metropolitan area and the U.S. Major occupational groups where NBER estimated that over half the jobs could be done at home accounted for about 52% of this region's employment in 2019 as compared to about 38% of national employment.

## LABOR FORCE DISPARITIES BY RACE AND ETHNICITY

Table 2 in the Appendix compares U.S. census and labor force data for 2018, disaggregated by race and ethnicity.<sup>18,19</sup> An OLO analysis of this national data shows that in 2018, workers were not represented across the major occupational groups at rates commensurate with their share of the U.S. population when categorized by race or ethnicity. These disparities have implications for the likelihood that workers could telework during the pandemic, as illustrated by the following examples:

- For the six major occupational groups where NBER estimated that more than 75 percent of jobs could potentially be done from home<sup>1</sup>, Latinx and Black workers were consistently under-represented in the U.S. in 2018, as shown in Table 2 in the Appendix. Jobs in these occupational groups also had higher than average median annual incomes nationally and regionally, as shown in Table 1 in the Appendix.
- For the major occupational groups where NBER estimated that less than a quarter of jobs could be done from home<sup>2</sup>, Latinx workers were over-represented in 2018 nationwide. For example, Latinx workers were over-represented in two major occupational groups where virtually no jobs can be done from home and the annual median income is less than \$31,000: Latinx workers were over-represented in Food Preparation and Serving Related Occupations (SOC 35) by about nine percent and in the Buildings and Grounds Cleaning and Maintenance Occupations (SOC 37) by about 20 percent nationwide.

## EMPLOYMENT DISPARITIES POST-COVID-19: TELEWORK MAY BE THE LEAST OF IT

A previous OLO paper on telework and economic development in the post-COVID-19 recovery (found [here](#)) discussed how increased rates of telework forced by the pandemic may boost future rates of telework even after the pandemic subsides, creating both risks and opportunities for the County’s economic development.

National employment patterns predating the pandemic show that Latinx and Black workers have been less likely to be able to work from home during the pandemic, as compared to White or Asian workers, contributing to the disproportionately negative health and economic consequences of the pandemic for Latinx and Black workers in the U.S. It may take years for workers to recover financially from job losses and pay cuts resulting from the pandemic.<sup>20</sup> Assisting affected workers in economic recovery will be a long-term policy concern.

**Disproportionate economic hardship created during the pandemic will persist after the pandemic.** It is likely that the economic burdens created during the pandemic will have long term impacts on affected workers. Because the economic burdens have fallen disproportionately on Black and Latinx workers during the pandemic, the long-term recovery from these burdens will also fall disproportionately on Black and Latinx workers. Workers who have lost their jobs during the pandemic may have incurred debt, fallen behind on rent, and depleted their savings. Such financial setbacks make it much more difficult to save for retirement, pay for a child’s college education, purchase a home, or finance a new business venture. These financial implications may play out for years post-pandemic, making public programs such as unemployment insurance, rental assistance, food assistance, employment assistance, and workforce development critical for overcoming the disparate financial burdens created during the pandemic.

**Disproportionate employment across occupational groups will persist after the pandemic.** It is also likely that the racial and ethnic patterns of employment inequity that predate the pandemic will persist for the foreseeable future. Workers of different racial and ethnic groups are disproportionately represented across the major occupational groups, which differ widely in wages, opportunities for advancement, and job stability in a changing economy. As shown in Tables 1 and 2 in the Appendix, employment inequities fall disproportionately on Latinx and Black workers who, as of 2018, were under-represented nationwide in every major occupational group with a median annual income above \$50,000, making them less able to weather a recession or build wealth over time. These are serious consequences of critical long-term policy concern.

<sup>1</sup> SOC 11, 13, 15, 23, 25, and 27.

<sup>2</sup> SOC 29, 31, 33, 35, 37, 45, 47, 49, 51, and 53.

**Increased rates of telework pose risks and benefits to workers after the pandemic.** As outlined in Table 3 in the Appendix, over the long term, greater use of remote workers offers both risks and benefits for workers, employers, and communities. While the pandemic has created clear risks for workers who cannot work from home, after the pandemic subsides, the long-term net benefit for workers of expanded telework is less clear. More options to telework will offer workers in certain jobs more choices about where to live and whether to commute. Yet, more options to work from anywhere may create downward pressure on wages and put full-time remote workers at a disadvantage for advancement and job security as compared to in-office workers who develop stronger interpersonal working relationships with their co-workers and supervisors. Thus, eliminating disproportionalities by race and ethnicity in telework specifically may prove less effective than eliminating the more fundamental disparities in how workers are employed across occupations.<sup>21</sup>

**Table 1. Employment and annual median wage (May 2019) by Major Occupational Group, ranked by estimated share of jobs within occupational group that could be done from home.<sup>22</sup>**

Major Occupational Group (SOC system) <sup>23</sup>	Washington-Arlington-Alexandria, DC-VA-MD-WV		U.S.			Est. % jobs that can be done from home <sup>24</sup>	
	Employment*		Annual median wage**	Employment*			Annual median wage**
	#	% of total		#	% of total		
Computer and Mathematical (SOC 15)	242,090	8%	\$106,220	4,552,880	3%	\$88,340	1.00
Education, Training and Library (SOC 25)	202,570	6%	\$88,980	8,886,600	6%	\$50,790	0.98
Legal (SOC 23)	68,860	2%	\$134,790	1,150,780	1%	\$81,820	0.97
Business and Financial Operations (SOC 13)	323,820	10%	\$89,710	8,183,750	6%	\$69,820	0.88
Management (SOC 11)	254,570	8%	\$140,310	8,054,120	5%	\$105,660	0.87
Arts, Design, Entertainment, Sports, Media (SOC 27)	74,450	2%	\$75,780	2,017,810	1%	\$51,150	0.76
Office and Administrative Support (SOC 43)	358,860	11%	\$44,670	19,528,250	13%	\$37,580	0.65
Architecture and Engineering (SOC 17)	62,800	2%	\$100,220	2,592,680	2%	\$81,440	0.61
Life, Physical, and Social Science (SOC 19)	63,660	2%	\$103,300	1,288,920	1%	\$68,160	0.54
Community and Social Service (SOC 21)	43,000	1%	\$56,220	2,244,310	2%	\$46,090	0.37
Sales and Related (SOC 41)	272,300	9%	\$31,090	14,371,410	10%	\$29,630	0.28
Personal Care and Service (SOC 39)	78,760	2%	\$28,260	3,303,200	2%	\$26,220	0.26
Protective Service (SOC 33)	92,140	3%	\$53,100	3,498,800	2%	\$41,580	0.06
Healthcare Practitioners and Technical (SOC 29)	150,380	5%	\$81,650	8,673,140	6%	\$68,190	0.05
Transportation and Material Moving (SOC 53)	168,420	5%	\$33,990	12,532,030	9%	\$32,440	0.03
Healthcare Support (SOC 31)	93,760	3%	\$31,080	6,521,790	4%	\$28,470	0.02
Installation, Maintenance, and Repair (SOC 49)	96,050	3%	\$54,830	5,713,450	4%	\$46,630	0.01
Production (SOC 51)	54,340	2%	\$37,520	9,158,980	6%	\$36,000	0.01
Farming, Fishing, and Forestry (SOC 45)	1,780	0%	\$37,270	484,750	0%	\$27,180	0.01
Food Preparation and Serving Related (SOC 35)	256,020	8%	\$28,070	13,494,590	9%	\$24,220	0.00
Construction and Extraction (SOC 47)	117,590	4%	\$49,220	6,194,140	4%	\$47,430	0.00
Building & Grounds Cleaning & Maint. (SOC 37)	103,140	3%	\$30,830	4,429,100	3%	\$28,330	0.00
<b>All Occupations (Total)</b>	<b>3,179,340</b>			<b>146,875,480</b>			

\*U.S. Bureau of Labor Statistics (BLS) estimates exclude self-employed workers.

\*\*BLS calculates annual wages by multiplying the hourly wage by 2,080 hours.

APPENDIX

<b>Table 2: Percentage over- or under-representation of workers by race and ethnicity across the major occupational groups, ranked by estimated share of jobs in occupational group that can be done at home.</b>					
<b>Major Occupational Group (Standard Occupational Classification (SOC) system)</b>	Est. share (%) of jobs in occupational group that could be done at home /3	% workers are over/(under) represented in occupational group, relative to their share of U.S. population. /1/2			
		White	Black or African American	Asian	Hispanic or Latinx
Computer and Mathematical (SOC 15)	100	(12.5)	(5.6)	16.1	(10.5)
Education, Training, and Library (SOC 25)	98	3.5	(4.1)	(1.7)	(7.3)
Legal (SOC 23)	97	4.8	(6.0)	(0.9)	(8.8)
Business and Financial Operations (SOC 13)	88	0.2	(4.4)	2.0	(8.8)
Management (SOC 11)	87	5.4	(6.5)	(0.9)	(7.6)
Arts, Design, Entertainment, Sports, Media (SOC 27)	76	4.6	(6.6)	(1.1)	(6.7)
Office and Administrative Support (SOC 43)	65	(1.6)	0.2	(2.0)	(0.8)
Architecture and Engineering (SOC 17)	61	(0.7)	(7.5)	6.3	(9.1)
Life, Physical, and Social Science (SOC 19)	54	(1.3)	(8.0)	7.4	(8.8)
Community and Social Service (SOC 21)	37	(5.3)	5.8	(3.4)	(5.3)
Sales and Related (SOC 41)	28	1.6	(3.1)	(1.6)	(1.6)
Personal Care and Service (SOC 39)	26	(8.8)	1.8	3.1	(0.1)
Protective Service (SOC 33)	6	(4.3)	6.0	(4.8)	(3.0)
Healthcare Practitioners and Technical (SOC 29)	5	(2.9)	(1.8)	2.6	(9.3)
Transportation and Material Moving (SOC 53)	3	(6.0)	5.7	(2.9)	4.6
Healthcare Support (SOC 31)	2	(14.0)	12.4	(1.9)	0.8
Installation, Maintenance, and Repair (SOC 49)	1	5.8	(5.2)	(3.7)	2.0
Production (SOC 51)	1	(1.6)	(1.0)	(1.0)	4.8
Farming, Fishing, and Forestry (SOC 45)	1	11.1	(9.9)	(5.2)	29.3
Food Preparation and Serving Related (SOC 35)	0	(4.5)	(0.4)	(0.1)	8.7
Construction and Extraction (SOC 47)	0	8.9	(7.0)	(5.4)	18.1
Building & Grounds Cleaning & Maint. (SOC 37)	0	(0.9)	0.6	(4.1)	19.9
<i>1/ Calculated using Labor Force Statistics from the Current Population Survey (2018) for people age 16 and over, U.S. Bureau of Labor Statistics.</i>					
<i>2/ Calculated using Total population, age 18-64, by ethnicity and by race alone or in combination, in Current Population Survey (CPS 2018).</i>					
<i>3/ Estimate based on O*NET derived baseline, NBER Working Paper #26948, April 2020 (see Endnotes).</i>					

**Table 3. Potential risks and benefits of increased rates of remote work (telework).**

<b>POSSIBLE EFFECTS OF MORE TELEWORKING FOR EMPLOYEES</b>	
<p><b>Potential risks to workers:</b></p> <ul style="list-style-type: none"> <li>• Wages: An option to work from anywhere full-time may allow employers to recruit workers from anywhere, including candidates living in places with a lower cost of living, putting a downward pressure on employee wages.</li> <li>• Less face-to-face interaction between teleworking employees and supervisors jeopardize advancement for remote workers and reduce employer loyalty to remote workers.</li> <li>• Less face-to-face interaction between teleworking colleagues may reduce employee satisfaction and loyalty to employer.</li> </ul>	<p><b>Potential advantages to workers:</b></p> <ul style="list-style-type: none"> <li>• An option to work from anywhere full-time may allow employers to recruit candidates living anywhere, increasing job prospects for workers.</li> <li>• An option to work from anywhere full-time may allow employees to keep their current job and move to a place with a lower cost of living.</li> <li>• Commuting: Telework reduces or eliminates employee time and costs to commute to workplace.</li> <li>• Telework may improve work/life balance for employees.</li> </ul>
<b>POSSIBLE EFFECTS OF MORE TELEWORKING FOR EMPLOYERS</b>	
<p><b>Potential risks to employers:</b></p> <ul style="list-style-type: none"> <li>• Costs may increase for employer-provided computer hardware, software, information technology (IT) support and IT security for remote workers.</li> <li>• Managing employees and onboarding new hires may be harder when employees work remotely.</li> <li>• Employers located anywhere may recruit candidates living anywhere, reducing employee retention rates for jobs done remotely.</li> </ul>	<p><b>Potential advantages to employers:</b></p> <ul style="list-style-type: none"> <li>• Employers may save money on office space leasing and maintenance.</li> <li>• Employee job satisfaction may increase for those workers who prefer to telecommute.</li> <li>• Wage savings: An option to work from anywhere full-time may allow employers to recruit from a wider pool of applicants, including those living in places with lower cost of living, putting downward pressure on wages.</li> </ul>
<b>POSSIBLE EFFECTS OF MORE TELEWORKING FOR MONTGOMERY COUNTY</b>	
<p><b>Potential risks to County:</b></p> <ul style="list-style-type: none"> <li>• An option to work from anywhere full-time may lead some current residents who work remotely to move <i>outside</i> the County, decreasing the local income tax base.</li> <li>• Reduced use of office space could be detrimental to the commercial real estate and construction sectors and negatively affect property tax revenue generation.</li> <li>• Reduced transit ridership would decrease fare revenues, increase net operating costs, and pressure transit agencies to reduce service.</li> </ul>	<p><b>Potential advantages to County:</b></p> <ul style="list-style-type: none"> <li>• An option to work from anywhere full-time may lead some remote workers to move <i>into</i> the County, increasing the local income tax base.</li> <li>• Reduced use of office space could allow for creative reuse of vacated space for other uses, such as conversions to affordable housing.<sup>25</sup></li> <li>• Fewer commuters would enable those who must commute to have faster trips, especially if employers stagger remote work across a week.</li> <li>• Less commuting would improve air quality and lower greenhouse gas emissions.</li> </ul>

## Endnotes

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- <sup>1</sup> U.S. Office of Personnel Management (OPM) website: [www.opm.gov/FAQs/](http://www.opm.gov/FAQs/). The Federal government defined “telework” in the *Telework Enhancement Act of 2010* (P.L. No. 111-292, enacted 12/09/2010); retrievable from [www.congress.gov/bill/111th-congress/house-bill/1722/text](http://www.congress.gov/bill/111th-congress/house-bill/1722/text). The U.S. Office of Personnel Management (OPM) cautions that the terms “remote” and “mobile” work may refer to arrangements that operate differently than telework.
- <sup>2</sup> *Is It Time to Let Employees Work from Anywhere?* by P. Choudhury, B. Larson and C. Foroughi (Harvard Business Review, Aug. 14, 2019); retrieved from <https://hbr.org/2019/08/is-it-time-to-let-employees-work-from-anywhere>.
- <sup>3</sup> *Class and COVID: How the less affluent face double risks*, by R. V. Reeves and J. Rothwell (Brookings, March 27, 2020); retrieved from [www.brookings.edu/blog/up-front/2020/03/27/class-and-covid-how-the-less-affluent-face-double-risks/](http://www.brookings.edu/blog/up-front/2020/03/27/class-and-covid-how-the-less-affluent-face-double-risks/).
- <sup>4</sup> *Hospitalization Rates and Characteristics of Patients Hospitalized with Laboratory-Confirmed Coronavirus Disease 2019 — COVID-NET, 14 States, March 1–30, 2020*, by S. Garg et al, *CDC Weekly*/ April 17, 2020 / 69(15);458–464; on April 8, 2020, CDC posted this report online as a *Morbidity and Mortality Weekly Report (MMWR) Early Release*. Retrieved from [https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/racial-ethnic-minorities.html#:~:text=Among%20COVID%2D19%20deaths%20for,or%20Asian%20\(34.5\)%20persons.](https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/racial-ethnic-minorities.html#:~:text=Among%20COVID%2D19%20deaths%20for,or%20Asian%20(34.5)%20persons.)
- <sup>5</sup> *Financial and health impacts of COVID-19 vary widely by race and ethnicity*, by M.H. Lopez, L. Rainie and A. Budiman (Pew Research Center, May 5, 2020); retrieved from <https://www.pewresearch.org/fact-tank/2020/05/05/financial-and-health-impacts-of-covid-19-vary-widely-by-race-and-ethnicity/>.
- <sup>6</sup> *Using Technology to Increase Fairness in Hiring*, by K. Trindel et al, in *What Works* (Chapter 4, p. 32); retrieved from [www.umass.edu/employmentequity/sites/default/files/WhatWorks4\\_Using%20Technology%20to%20Increase%20Fairness%20in%20Hiring.pdf](http://www.umass.edu/employmentequity/sites/default/files/WhatWorks4_Using%20Technology%20to%20Increase%20Fairness%20in%20Hiring.pdf).
- <sup>7</sup> *The persistence of racial discrimination in hiring*, by L. Quillian, et al, *Proceedings of the National Academy of Sciences* Sept. 2017, 201706255; DOI: 10.1073/pnas.1706255114; retrieved from [www.pnas.org/content/early/2017/09/11/1706255114](http://www.pnas.org/content/early/2017/09/11/1706255114).
- <sup>8</sup> *Class and COVID: How the less affluent face double risks*, by R. V. Reeves and J. Rothwell (Brookings, March 27, 2020); retrieved from [www.brookings.edu/blog/up-front/2020/03/27/class-and-covid-how-the-less-affluent-face-double-risks/](http://www.brookings.edu/blog/up-front/2020/03/27/class-and-covid-how-the-less-affluent-face-double-risks/).
- <sup>9</sup> *Hospitalization Rates and Characteristics of Patients Hospitalized with Laboratory-Confirmed Coronavirus Disease 2019 — COVID-NET, 14 States, March 1–30, 2020*, by S. Garg et al, *CDC Weekly*/ April 17, 2020 / 69(15);458–464; on April 8, 2020, CDC posted this report online as a *Morbidity and Mortality Weekly Report (MMWR) Early Release*. Retrieved from [www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/racial-ethnic-minorities.html#:~:text=Among%20COVID%2D19%20deaths%20for,or%20Asian%20\(34.5\)%20persons.](http://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/racial-ethnic-minorities.html#:~:text=Among%20COVID%2D19%20deaths%20for,or%20Asian%20(34.5)%20persons.)
- <sup>10</sup> *Hospitalization and Mortality among Black Patients and White Patients with Covid-19*, by Eboni G. Price-Haywood, M.D., M.P.H., Jeffrey Burton, Ph.D., Daniel Fort, Ph.D., and Leonardo Seoane, M.D., (May 27, 2020; *N Engl J Med* 2020; 382:2534-2543 DOI: 10.1056/NEJMsa2011686); retrievable from [www.NEJM.org](http://www.NEJM.org).
- <sup>11</sup> *Characteristics Associated with Hospitalization Among Patients with COVID-19 — Metropolitan Atlanta, Georgia, March–April 2020*, by Killerby ME, Link-Gelles R, Haight SC, et al. June 26, 2020, *Morbidity and Mortality Weekly Report (MMWR)*, U.S. Dept. of Health and Human Services; 2020;69:790–794. DOI: <http://dx.doi.org/10.15585/mmwr.mm6925e1>.
- <sup>12</sup> *Financial and health impacts of COVID-19 vary widely by race and ethnicity*, by M.H. Lopez, L. Rainie and A. Budiman (Pew Research Center, May 5, 2020); retrieved from [www.pewresearch.org/fact-tank/2020/05/05/financial-and-health-impacts-of-covid-19-vary-widely-by-race-and-ethnicity/](http://www.pewresearch.org/fact-tank/2020/05/05/financial-and-health-impacts-of-covid-19-vary-widely-by-race-and-ethnicity/).
- <sup>13</sup> *Job Flexibilities and Work Schedules — 2017-2018 Data from the American Time Use Survey*, News Release 9/24/2019, Bureau of Labor Statistics (BLS), U.S. Department of Labor; retrieved from [www.bls.gov/news.release/pdf/flex2.pdf](http://www.bls.gov/news.release/pdf/flex2.pdf).

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<sup>14</sup> NBER Working Paper Series: *How Many Jobs Can Be Done At Home?* J. Dingel and B. Neiman, (University of Chicago, Booth School of Business, Working Paper 26948, National Bureau of Economic Research/NBER, April 2020); retrieved from [www.nber.org/papers/w26948.pdf](http://www.nber.org/papers/w26948.pdf).

<sup>15</sup> *Systematic Inequality and Economic Opportunity*, by D. Solomon, C. Maxwell, and A. Castro (Center for American Progress, August 7, 2019); retrieved from [www.americanprogress.org/issues/race/reports/2019/08/07/472910/systematic-inequality-economic-opportunity/](http://www.americanprogress.org/issues/race/reports/2019/08/07/472910/systematic-inequality-economic-opportunity/).

<sup>16</sup> Ibid., *NBER Working Paper #26948: How Many Jobs Can Be Done at Home?* (April 2020); shown is the NBER estimated share of jobs by group based on O\*NET-derived baseline.

<sup>17</sup> The 2018 Standard Occupational Classification (SOC) system is a federal statistical standard used by federal agencies to classify workers into occupational categories for the purpose of collecting, calculating, or disseminating data. SOC system codes are retrievable from the U.S. Bureau of Labor Statistics: [www.bls.gov/soc/#:~:text=The%202018%20Standard%20Occupational%20Classification,%2C%20calculating%2C%20or%20disseminating%20data.](http://www.bls.gov/soc/#:~:text=The%202018%20Standard%20Occupational%20Classification,%2C%20calculating%2C%20or%20disseminating%20data.)

<sup>18</sup> Current Population Survey 2018, U.S. Census Bureau; retrieved from [www.census.gov/cps/data/cpstablecreator.html](http://www.census.gov/cps/data/cpstablecreator.html).

<sup>19</sup> The U.S. Census Bureau reports race data either “alone or in combination.” For example, the Census Bureau states: “Asian alone refers to people who reported Asian and did not report any other race.”; “Asian alone or in combination consists of those respondents who reported Asian, whether or not they reported any other races. In other words, people who reported only Asian or who reported combinations such as “Asian and White,” or “Asian and Black and [Native Hawaiian or Other Pacific Islander]” are included in the Asian alone or in combination category.” ( Census Bureau Race Definitions retrievable from: [www.census.gov/programs-surveys/cps/data/data-tools/cps-table-creator-help/race-definitions.html](http://www.census.gov/programs-surveys/cps/data/data-tools/cps-table-creator-help/race-definitions.html).) The Census Bureau currently adheres “to the 1997 Office of Management and Budget (OMB) standards on race and ethnicity which guide the Census Bureau in classifying written responses to the race question”; [www.census.gov/topics/population/race/about.html](http://www.census.gov/topics/population/race/about.html). For a longer discussion of the Census Bureau’s research to improve data on race and ethnicity, see: [www.census.gov/about/our-research/race-ethnicity.html](http://www.census.gov/about/our-research/race-ethnicity.html).

<sup>20</sup> *New Data Suggest COVID-19 is Widening Housing Disparities by Race and Income*, by S. Greene and A McCargo (Urban Institute, May 29, 2020); retrievable from [www.urban.org/urban-wire/new-data-suggest-covid-19-widening-housing-disparities-race-and-income](http://www.urban.org/urban-wire/new-data-suggest-covid-19-widening-housing-disparities-race-and-income).

<sup>21</sup> *Research Report: Private Transfers, Race, and Wealth*, by S. McKernan et al (Urban Institute, Aug. 11, 2011); retrieved from [www.urban.org/research/publication/private-transfers-race-and-wealth/view/full\\_report](http://www.urban.org/research/publication/private-transfers-race-and-wealth/view/full_report).

<sup>22</sup> Occupational Employment Statistics (OES) for May 2019, U.S. Bureau of Labor Statistics; retrieved from [www.bls.gov/oes/current/oes\\_47900.htm](http://www.bls.gov/oes/current/oes_47900.htm).

<sup>23</sup> Ibid, Standard Occupational Classification (SOC) system; see [www.bls.gov/soc/home.htm](http://www.bls.gov/soc/home.htm).

<sup>24</sup> Ibid, NBER Working Paper 26948: *How Many Jobs Can Be Done At Home?* (April 2020).

<sup>25</sup> *Office-to-Affordable Housing Task Force Report*, prepared by the Coalition for Nonprofit Housing and Economic Development for the Council of the District of Columbia (Council Document #RC23-0108, August 2019); retrievable from <https://lims.dccouncil.us/>.