In the latter part of 2019 and into 2020, the labor market outcomes for persons with a disability were some of the best on record since 2008, when monthly employment data for persons with a disability became available. After peaking at 16.9 percent in June 2011, the unemployment rate for persons with a disability steadily declined and reached a low of 6.1 percent in September 2019. In February 2020, before the current recession, the unemployment rate for persons with a disability was 7.8 percent, the employment-population ratio was 19.1 percent, and the labor force participation rate was 20.7 percent.

Since February 2020 and the beginning of the COVID-19 pandemic, there have been unprecedented changes in employment. To limit the spread of COVID-19, many firms and establishments ceased or scaled back operations, and the public has practiced social-distancing in a variety of ways. Many states issued stay-at-home orders beginning in March 2020. Stay-at-home orders varied in terms of their level of restriction, but often directed individuals to remain in their homes except to perform essential activities such as obtaining food or seeking medical attention. Often businesses that were deemed essential were allowed to remain open, whereas non-essential businesses had to close or to continue operations without placing their employees or customers at risk of contracting the virus or violating a stay-at-home order. These rapid and unprecedented developments have had a major impact on employment in general, and it is important to examine the impact on the employment of persons with a disability.

This brief presents analysis of trends in key labor force statistics from the Current Population Survey (CPS) for persons with a disability.
with and without a disability to provide insight into recent changes. In addition, this brief explores two key aspects of occupations and industries that are associated with employment outcomes since February 2020 (prior to the impact of COVID-19): whether or not it is possible to perform a job at home (i.e., telework), and whether or not a job requires workers to be in close proximity with others (i.e., contact intensity). This analysis uses recent independent research to define the types of jobs that might be performed at home, and the level of contact-intensity for particular types of jobs, in order to assess employment outcomes for persons with and without a disability by these job characteristics.
Historical Unemployment Rate and Proportion of the Unemployed on Layoff

The unemployment rate is the number of unemployed persons as a percentage of the labor force. Figure 1 presents the seasonally-unadjusted monthly unemployment rate for persons with and without a disability ages 16 and over from June 2008 to July 2020. While volatile on a month-to-month basis, unemployment rates for persons age 16 and over with and without disability were trending downward from September 2011 until February 2020. However, as Figure 1 shows, the unemployment rate for both groups spiked dramatically in April 2020. The one-month increase in the unemployment rate from 8.3 percent in March to 18.9 percent in April 2020 for persons with a disability was the largest increase since 2008 when monthly data for persons with a disability became available. This is also the largest one-month increase in unemployment for persons without a disability since 2008 – from 4.4 percent in March 2020 to 14.3 percent in April 2020. The unemployment rates for both groups have declined steadily since April 2020, and were 14.3 percent for persons with a disability and 10.3 percent for persons without a disability in July 2020.

Figure 1. Unemployment Rate for Persons with and without a Disability

![Unemployment Rate Chart]


---

6 The number of persons in the labor force is the sum of the employed and the unemployed – that is, the number of persons who are working or actively seeking work.
Unemployed persons may be “on-layoff” – and expect to return to work – or may have lost their job and be seeking employment. Figure 2 reports the seasonally unadjusted proportion of the unemployed who are on layoff, for persons with and without a disability. From January 2009 until February 2020, those on layoff typically constitute less than 20 percent of the total number of unemployed, and more than 80 percent typically do not have a job and are actively looking for work. While there are monthly fluctuations, the proportions of the unemployed on layoff follow a similar trend and magnitude for persons with and without a disability. However, since February 2020, there has been a large increase in the proportion of the unemployed who are on layoff compared to those who lost their jobs permanently – both for persons with and without a disability.

For the unemployed with a disability, the proportion on layoff was 10.6 percent in February 2020 and increased to 75.2 percent in April 2020. For the unemployed without a disability, the proportion on layoff was 17.8 percent in February 2020 and increased to 79.7 percent in April 2020. Since April 2020, the proportion of the unemployed on layoff declined for both groups. In July 2020, 47.8 percent for persons with a disability and 56.4 percent for persons without a disability reported being unemployed and on layoff. The high proportion of the unemployed on layoff in recent months indicates that a greater share of the unemployed remain attached to their employer compared to historic trends.

**Figure 2. Proportion of the Unemployed on Layoff – Persons with and without a Disability**

Source: Current Population Survey
Figure 3 presents key labor force statistics – the unemployment rate (Figure 3A), employment-population ratio (Figure 3B), and the labor force participation rate (Figure 3C) – for persons with and without a disability ages 16 and over for each month in 2020. During this period, persons with and without a disability experienced large increases in unemployment rates, and declines in employment-population ratios and labor force participation rates. The most dramatic changes for both groups occurred from March 2020 to April 2020 when the entire country felt the impact of the COVID-19 pandemic. There were, however, slight labor-market improvements from April 2020 to July 2020.

Figure 3A presents the seasonally unadjusted unemployment rate for persons with and without a disability for each month in 2020 – to complement Figure 1, which shows the historical trend since 2008. Figure 3A highlights the large increases in the unemployment rate for both groups – the unemployment rate for persons with a disability more than doubled from 7.8 percent in January 2020 to 18.9 percent in April 2020, but has since declined to 14.3 percent in July 2020. The unemployment rate for persons without a disability more than tripled from 3.8 percent in January 2020 to 14.3 percent in April 2020, and has fallen to 10.3 percent in July 2020.

Figure 3B presents the seasonally unadjusted employment-population ratio for persons with and without a disability ages 16 and over for each month in 2020. The employment-population ratio is the percentage of the population that is currently employed. From January 2020 to April 2020, the employment-population ratio declined by 2.7 percentage points percent for persons with a disability (18.8 to 16.1 percent), and increased 1.2 percentage points from April 2020 to July 2020 (16.1 to 17.3 percent). The ratio declined by 10.1 percentage points for persons without a disability from January 2020 to April 2020 (66.0 to 55.9 percent), but increased 4.4 percentage points from April 2020 to July 2020 (55.9 percent to 60.3 percent). Without adjusting for changes in the population size, the number of employed persons with a disability declined by 12.5 percent, from 5.74 million in January to 5.02 million in July 2020. The number of employed persons without a disability declined by 7.8 percent, from 151.26 million in January 2020 to 139.47 million in July 2020.

Figure 3C presents the seasonally unadjusted labor force participation rate for people with and without a disability ages 16 and over for each month in 2020. The labor force participation rate is the percentage of the population that is either working or actively seeking work. The labor force participation rate for persons without a disability fell by 1.5 percentage points from January 2020 to July 2020 (68.7 to 67.2 percent), whereas for persons with a disability the rate dropped 0.2 percentage points over the same time period (20.4 to 20.2 percent).  

7 A possible explanation for the large increase in the unemployment rate for persons with a disability, coupled with a moderate decline in the employment-population ratio and no change in the labor force participation rate, is the decline in the population of persons with a disability from January to July 2020, as measured in the CPS. The denominator of both the employment-population ratio and labor force participation rate is the population size and, according to the CPS, the population of persons with a disability declined by 5.0 percent from 30.47 million in January to 28.96 million July. This decline may be due to monthly fluctuations in
population size, sampling error, lower response rates, or some other factor. In contrast, the population of persons without a disability in the CPS appears to have increased by 0.6 percent, from 229.03 million in January to 231.41 million in July 2020.
Distribution of the Decline in Employment by Occupation and Industry: February 2020 to July 2020

The total number of employed persons with a disability declined by approximately 890,500, from 5.91 million in February 2020 (prior to the economic impact of COVID-19) to 5.02 million in July 2020. During the same time-period, total employment for persons without a disability declined by approximately 12.6 million, from 152.1 million in February 2020 to 139.5 million in July 2020. These large declines in employment are spread unevenly across occupations and industries for both groups.

Figures 4 and 5 present the distribution of the decline in employment by occupation and industry for workers with and without a disability, from February 2020 to July 2020. These figures do not reflect the share of workers in each occupation and industry as a proportion of the total - that is, the figures do not distinguish occupations and industries employing large numbers of persons from those employing small numbers – but rather describe variation in the extent of the decline in employment by occupation and industry. This analysis grouped occupations into one of ten categories and industries into one of twelve categories based on the U.S. Census Bureau’s occupation and industry classification system used in the CPS.8

Figure 4 presents the distribution of the decline in employment by occupation for workers with and without a disability from February 2020 to July 2020. Workers with a disability in service occupations accounted for the largest share of the total decline in employment – representing 33.9 percent of the decline from February 2020 to July 2020. The second largest share of decline in employment for workers with a disability was in professional and related occupations, which account for 19.9 percent of the decline. Combined, service and professional, and related occupations represent more than half (53.8 percent) of the total decline in employment for workers with a disability. The shares of employment decline were similar for workers with and without a disability in five occupation groups: Service; Professional and Related; Office and Administrative; Farming, Fishing, and Hunting; and Installation, Maintenance and Repair. However, there are differences in the distribution of the decline in employment among workers with and without a disability across occupations.

8 Industry classification codes in the CPS represent the Census 2002 classification system, and were developed using the North American Industry Classification System (NAICS). Industry codes are 4-digit, however this brief uses a common categorization of industry at the 2-digit level to 14 major industry groups. However, we combine the Agriculture and Mining industries and do not include those in the Armed Forces industry. Occupation classification codes in the CPS represent the Census 2010 classification system and were developed using the Standard Occupational Classification (SOC) Manual: 2010. This brief uses 10 major occupation groups, not including Armed Forces.
Figure 4. Distribution of the Decline in Employment by Occupation and Disability Status: February 2020 to July 2020

Notes: This Figure presents the distribution of the decline in employment for workers with and without a disability by occupation, from February to July 2020. Employment declined for workers with and without a disability in each occupation group – however, the decline in employment among workers with a disability in construction and extraction occupations was less than 500, consequently the percentage change in employment is zero.
Source: Current Population Survey
Figure 5 presents the distribution of the decline in employment by industry for workers with and without a disability from February 2020 to July 2020. There are differences in the shares of the decline in employment by industry for workers with and without a disability. Yet, in employment for both groups, two industries accounted for more than half of the decline: the education and health services industry, and the leisure and hospitality industry.
Figure 5. Distribution of the Decline in Employment by Industry and Disability Status: February 2020 to July 2020

Notes: This Figure presents the distribution of the decline in employment for workers with and without a disability by industry, from February to July 2020. Employment declined for workers with and without a disability in each industry group – however, there was an increase in employment of approximately 26,000 for workers with a disability in the Agriculture and Mining industry, which represents less than 1 percent of total employment for workers with a disability.

Source: Current Population Survey
Changes in Employment by Occupation and Industry: February 2020 to July 2020

Figures 6 and 7 report the percentage change in employment by occupation and industry for workers with and without a disability, from February 2020 to July 2020, adjusted for changes in the population.9,10 These figures provide insight into which occupations and industries have experienced the largest within-group changes from February 2020 to July 2020. The percentage changes in employment are within each occupation and industry group and do not account for the total share of employment represented in each group.

As Figure 6 shows, workers with a disability in production occupations experienced the largest percentage decline in employment from February 2020 to July 2020 compared to other occupations – a decrease of 26.7 percent. This can be interpreted as: the number of workers with a disability in production occupations declined by 26.7 percent from approximately 373,850 workers (out of 30.95 million persons with a disability) in February 2020 to approximately 256,350 workers (out of 28.96 million persons with a disability) in July 2020. Workers with a disability in service occupations experienced the second greatest percentage decline, dropping 21.7 percent in population-adjusted terms from 1,129,300 workers with a disability employed in February 2020 (out of 30.95 million persons with a disability) to 827,200 workers in July 2020 (out of 28.96 million persons with a disability). Workers with a disability in sales, farming and fishing, and construction and extraction occupations experienced increases in population-adjusted employment from February 2020 to July 2020.

9 The data in Figures 6 and 7 are computations using CPS population and employment data. To adjust for changes in the population, these Figures present changes in employment-population ratios for the specified group. For example, from February 2020 to July 2020, the total number of employed persons with a disability declined by approximately 890,500 from 5.91 million in February to 5.02 million in July, which is equivalent to a 15.1 percent decline in employment. However, the population of people with disabilities, as measured in the CPS, also declined during this period by 6.4 percent, from 30.95 million in February to 28.96 million in July. In this example, the population-adjusted change in employment from February to July 2020 is 9.2 percent (i.e., the decline from a 19.11 percent employment-population ratio in February to a 17.35 percent ratio in July).

10 Employment-population ratios represent the percentage of the population that is currently working. The changes in both employment and population size affect the employment-population ratios. For instance, if employment in a certain industry does not change from one time period to the next but the population size decreases, then the employment-population ratio increases – not because more people are employed, but because a greater share of that reduced population are employed. In some instances, the direction (positive or negative) of percentage changes in employment and population-adjusted percentage changes in employment may differ. For example, the employment of persons with a disability in the construction industry declined by 1.3 percent from February to July. Despite this decline in employment, because the size of this population also declined by 6.4 percent, the population-adjusted percent change in employment for persons with a disability in the construction industry is a positive 5.4 percent (as shown in Figure 7).
Figure 6. Change in Employment by Occupation and Disability Status: February to July 2020 (Population-Adjusted)

Notes: This chart presents the population-adjusted percentage change in employment from February to July 2020, by occupation group for workers with and without disabilities. Each percentage change represents the change in employment-population ratios for the specified group. For instance, the employment-population ratio declined by 9.2 percent for workers with disabilities in total, from February to July 2020.

Source: Current Population Survey
As shown in Figure 7, the percentage change in population-adjusted employment within industries from February 2020 to July 2020 varied considerably across industry groups. The highest percentage reduction for persons with a disability occurred in the information industry – however, persons with a disability in the information industry represent approximately one percent of the total employment of persons with a disability and the 36.4 percent decline from February 2020 to July 2020 represents a decline in employment of roughly 30,000. The greatest percentage decline for persons without a disability over the same time period occurred in the leisure and hospitality industry, where the population-adjusted employment fell by 21.7 percent. Employment for persons with a disability in the leisure and hospitality industry declined 20.8 percent from February 2020 to July 2020. Population-adjusted employment for persons with a disability increased from February 2020 to July 2020 in three industries: agriculture and mining (26.0 percent), construction (5.4 percent), and wholesale and retail trade (3.6 percent).
Figure 7. Change in Employment by Industry and Disability Status: February to July 2020 (Population-Adjusted)

Notes: This chart presents the population-adjusted percentage changes in employment from February to July 2020, by major industry group for workers with and without disabilities. Each percentage change represents the change in employment-to-population ratios for the specified group. For instance, the employment-to-population ratio declined by 9.2 percent for workers with disabilities in total, from February to July 2020.

Source: Current Population Survey
Change in Employment by Potential Availability of Telework and Level of “Contact Intensity”

Two key aspects of occupations and industries that have influenced employment outcomes during the COVID-19 pandemic have been whether or not it is possible to perform a job at home (i.e., telework), and whether or not a job requires workers to be in close proximity with others (i.e., level of contact intensity). This analysis uses recent independent research, described below, to define the types of jobs that can be performed at home, and the level of contact-intensity for particular types of jobs, to assess employment outcomes for persons with and without a disability.

Figure 8 presents the percentage change in employment from February 2020 to July 2020 for workers with and without a disability by the potential availability of telework in their occupation group. To determine the potential availability of telework by occupation group, this analysis uses estimates of the percentage of jobs that can be performed at home by 2-digit Standard Occupational Classification (SOC) major group code as reported in Dingel and Neiman (2020). Dingel and Nieman use the Department of Labor’s O*NET database, which contains hundreds of standardized and occupation-specific descriptors on almost 1,000 occupations, to estimate which occupations may be performed at home. The occupation groups with the highest proportion of jobs that may be performed at home are: Computer and Mathematical Occupations; Education, Training, and Library Occupations; and Legal Occupations. Three occupation groups do not include any jobs that may be performed at home: Construction and Extraction Occupations; Food Preparation and Serving Related Occupations; and Building and Grounds Cleaning and Maintenance Occupations.

Using the estimates from Dingel and Nieman, this analysis groups workers into one of three categories: 1) workers in an occupation group where more than 75 percent of the jobs can be performed at home are classified as having the potential for "high telework" opportunities, 2) workers in an occupation group where between 25 and 75 percent of jobs can be performed at home are classified as having "some telework" opportunities, and 3) workers in an occupation group where less than 25 percent of jobs can be performed at home are classified as having "limited telework" opportunities. In February 2020, approximately 30 percent of the workforce was employed in jobs assumed to have high telework opportunities, 28 percent in jobs assumed to have some telework opportunities, and 42 percent in jobs assumed to allow limited telework.

---


12 Dingel and Nieman categorize a job as being unable to be performed at home if any one of nine conditions are true for the average respondent in the Work Context Questionnaire, or if any one of eight conditions are true for the average respondent in the Generalized Work Activities Questionnaire. For example, if the average respondent answers that “handing and moving objects is very important” (Generalized Work Activities Q17A), then the job is classified as not able to perform at home. For the full list of criteria, please refer to the Dingel and Nieman (2020) paper.
As shown in Figure 8, workers with and without a disability in occupations with limited telework opportunities experience the greatest percentage decline in population-adjusted employment from February 2020 to July 2020 (15.1 percent decline for workers with a disability and 12.3 percent decline for workers without a disability). Surprisingly, workers in occupations with the potential for high telework opportunities experienced greater percentage declines in employment from February 2020 to July 2020 compared to workers in the occupations with some telework opportunities. Being in an occupation with limited telework opportunities is associated with larger declines in relative employment from February 2020 to July 2020 compared to occupations with some or high telework opportunities, though it should be noted that a number of other factors can influence employment changes.

**Figure 8. Change in Employment by Availability of Telework and Disability Status: February to July 2020 (Population-Adjusted)**

<table>
<thead>
<tr>
<th></th>
<th>High Telework</th>
<th>Some Telework</th>
<th>Limited Telework</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workers with a Disability</td>
<td>-11.0%</td>
<td>2.0%</td>
<td>-12.3%</td>
<td>-9.4%</td>
</tr>
<tr>
<td>Workers without a Disability</td>
<td>-7.1%</td>
<td>-7.5%</td>
<td>-9.2%</td>
<td>-10%</td>
</tr>
</tbody>
</table>

**Notes:** This chart presents findings from the Current Population Survey of the population-adjusted percentage change in employment from February to July 2020 for workers with and without disabilities, by the availability of telework in their occupation group. Workers in an occupation group where more than 75 percent of the jobs can be performed at home are classified as "high telework," workers in an occupation group where between 25 and 75 percent of jobs can be performed at home are classified as "some telework," and workers in an occupation group where less than 25 percent of jobs can be performed at home are classified as "limited telework." Each percentage change represents the change in employment-to-population ratios for the specified group. For example, the employment-to-population ratio declined by 11.0 percent for workers with disabilities in occupation groups with high telework from February to July 2020.

The percent of jobs that can be performed at home by occupation group comes from Dingel and Neiman (2020): [https://bfi.uchicago.edu/working-paper/how-many-jobs-can-be-done-at-home/](https://bfi.uchicago.edu/working-paper/how-many-jobs-can-be-done-at-home/)
Figure 9 presents the percentage change in employment from February 2020 to July 2020 for workers with and without a disability based on the level of “contact intensity” in their occupation group. To estimate the level of contact intensity by occupation group, this analysis relies on estimates from Leibovici et al. (2020). Leibovici et al. use the Department of Labor’s O*NET occupational database, which includes a question on the extent to which a job requires tasks to be performed in physical proximity to others, with possible response options being: I don’t work near other people (beyond 100 ft.), I work with others but not closely (e.g., private office), Slightly close (e.g., shared office), Moderately close (at arm’s length), and Very close (near touching). The authors assigned numerical scores to the survey responses as, respectively, 0, 25, 50, 75, and 100, from minimum to maximum physical proximity. Using the estimates from Liebovici et al., this analysis assigned workers in the CPS into one of three contact-intensity categories based on the average physical proximity of jobs in that occupation: low if 0 to 50, medium if 50 to 75, and high if 75 and above. Approximately 27 percent of the workforce was employed in low contact-intensity occupations, 51 percent in medium contact-intensity, and 22 percent in high contact-intensity. Examples of high contact-intensity occupations include barbers/hairstylists, occupational/physical therapists, and home/personal care aides.

From February 2020 to July 2020, employment for people without disability fell by 5.2 percent in the low contact-intensity category, by 9.3 percent in the medium category, and by 15.2 percent in the high category, indicating that higher contact-intensity (i.e. less ease of social-distancing) was associated with greater job loss. For people with disability, employment change followed a similar pattern over the same period, with an increase of 0.1 percent in the low contact-intensity category, a decrease of 8.0 percent in the medium category, and a drop of 26.2 percent in the high category.

---

Figure 9. Change in Employment by Job “Contact-Intensity” and Disability Status: February to July 2020 (Population-Adjusted)

Notes: This chart presents findings from the Current Population Survey of the population-adjusted percentage change in employment from February to July 2020 for workers with and without disabilities, by the "contact intensity" in their occupation group (where low contact intensity indicates greater ease of social distancing and high contact intensity indicates greater difficulty). Each percentage change represents the change in employment-to-population ratios for the specified group. For example, the employment-to-population ratio declined by 26.2 percent for workers with disabilities in occupation groups with high contact intensity from February to July 2020.

Contact intensity categories are derived from https://www.stlouisfed.org/on-the-economy/2020/march/social-distancing-contact-intensive-occupations
Authors

This research brief was prepared by staff in the Office of Disability Employment Policy (ODEP) in the U.S. Department of Labor: Christopher McLaren, Economist; Taylor Rhodes, Economist; David Rosenblum, Economist; Savi Swick, Director of Research and Evaluation; and John Tambornino, Senior Advisor to the Assistant Secretary. Vernon Brundage and staff in the Department’s Bureau of Labor Statistics (BLS) provided technical review and the Chief Evaluation Office (CEO) provided independent expert review. For further information please email McLaren.Christopher@DOL.gov or odep@dol.gov or call 1-866-ODEP-DOL (633-7365).

Disclaimer

The views expressed in this brief do not necessarily represent the views or policy of the U.S. Department of Labor.

About ODEP

The Office of Disability Employment Policy (ODEP) promotes policies and coordinates with employers and all levels of government to increase workplace success for people with disabilities. ODEP’s mission is to develop and influence policies and practices that increase the number and quality of employment opportunities for people with disabilities. For more information please visit: www.dol.gov/odep/.