CENTER for RETIREMENT RESEARCH at BOSTON COLLEGE

RACIAL DISPARITIES IN COVID-19 EXPERIENCES AMONG OLDER ADULTS WITH DISABLING CONDITIONS

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Abstract

This paper examines the experiences of older adults with disabling conditions during the COVID-19 pandemic using data from the 2020 *Health and Retirement Study*. It documents the negative health, work, and financial experiences of older adults by disability status, race, and ethnicity. It also explores the intersectionality of race and ethnicity with disability and the role of contextual factors affecting the environments in which people live (e.g., health and economic conditions) using county- and state-level data.

The paper found that:

- Many older adults reported experiencing financial hardships (31 percent), delaying health care (31 percent), and experiencing effects on work (29 percent).
- Compared with older adults without disabilities, older adults with disabilities were more likely to report delaying many types of health care, such as surgeries and prescriptions, experiencing financial hardships since the start of the pandemic.
- Among older adults whose work was impacted by the pandemic, more older adults with disabilities reported stopping work than older adults without disabilities, and fewer moved to remote work.
- There were differences in experiences across races and ethnicities. Hispanic, Latino, and Black older adults, and older adults in other racial and ethnic groups, were more likely than White older adults to report that financial hardships and that the pandemic impacted their work.
- Differences across racial and ethnic groups were larger when examined across disability status than when examined among all older adults. For example, more Hispanic or Latino older adults with disabilities did not have enough money to buy food (22 percent) compared with Hispanic or Latino older adults without disabilities (11 percent) and with White older adults with disabilities (7 percent).
- Older adults with disabilities were more likely to live in counties with greater vulnerability to the pandemic.
- Although there were few associations between contextual factors and individual experiences, race, ethnicity and disability status remained important after accounting for these factors.

The policy implications of the findings are:

- Developing a robust, disability-inclusive public health response for future public health emergencies could provide additional protection to this vulnerable population.
- Continuing to study intersecting identities is important to understanding the experiences of older adults and recognizing that multiple marginalized identities could exacerbate negative outcomes.
- Enacting policies that mitigate the financial impacts of public health emergencies might be universally beneficial for older adults.

Introduction

The COVID-19 pandemic has highlighted vulnerabilities in economic security and physical health among older adults, people with disabilities, and people of color. In this study, we explore the intersectionality of these identities, and examine how they are associated with the structural forces that contribute to and exacerbate these inequalities. We obtained the data for the study from the COVID-19 module of the *Health and Retirement Study* (HRS) 2020. This module asked a representative sample of older adults to self-report the effects of the pandemic on their work, finances, and physical health, including COVID diagnoses and receipt of health care.

Our study is meant to inform the Social Security Administration's (SSA's) understanding of the disproportionality of negative COVID-19 outcomes among vulnerable populations, the intersectionality of disability with race and ethnicity among Americans ages 50 and older, and opportunities for providing supports to communities most impacted by COVID-19. This study addresses the following questions:

- What percentage of older adults with disabling conditions had negative health, work, and financial experiences during the COVID-19 pandemic?
- Did these percentages differ according to race, age, and disability?
- Are contextual or social factors associated with intersectional disparities?

We found that more older adults with disabilities reported negative health, work, and financial experiences than those without disabilities, and found differences by race and ethnicity overall and among older adults with disabilities. We also found that older adults with disabilities were more likely to live in counties with greater vulnerability to the pandemic, such as counties with dense populations and poor health infrastructure, indicating that people with disabilities might be particularly vulnerable to current and future pandemics. Individual race and disability remained significantly associated with negative COVID experiences after accounting for contextual factors.

Background

The impacts of the COVID-19 pandemic have been experienced unequally across both geography and the social structure of the United States. In particular, older adults, marginalized racial groups, and people living in communities with low resources have been among those hardest hit by the myriad health and economic effects of the pandemic. Historically

marginalized racial and ethnic groups, particularly non-Hispanic Black adults, have had higher rates of infection, hospitalization, and death compared with non-Hispanic White adults (Atlantic Monthly Group 2021; Kirby 2020; Oppel et al. 2020; Price-Haywood et al. 2020). Observations of the disparate racial and ethnic burden of COVID-19 have been broadly documented across geographical regions (Polyakova 2021). Likewise, older Americans have been disproportionately impacted by the pandemic. According to the Centers for Disease Control and Prevention, more than 81 percent of COVID-19 deaths have been among people older than 65 (as of August 2021), and the number of deaths in that age group is 80 times higher than the number of deaths among those ages 18 to 29 (CDC 2021).

These disparities in COVID outcomes have underscored the social and structural inequities that influence health and well-being, including the role of intersectionality. Intersectionality is a theory suggesting that multiple and coexisting dimensions of marginalization or inequality, such as race, age, gender, or disability status, might have overlapping and cumulative effects beyond the sum of their individual parts. In other words, people at the intersection of more than one identity that has been disproportionately impacted by COVID might be particularly vulnerable to adverse outcomes (Bowleg 2020; Elnaiem 2020; Gonzales et al. 2021; Walubita et al. 2021). For example, emerging evidence indicates that older Black and Hispanic adults are more likely than their White counterparts to report food and housing insecurity and difficulty paying household expenses during the pandemic (Bui et al. 2021; Lopez, Rainie, and Budiman 2020).

Evidence suggests that the risks of COVID infection are exacerbated by preexisting vulnerabilities in the social environments in which people live. For example, counties with larger non-White populations have experienced higher rates of COVID-19 deaths and hospitalizations (Schnake-Mahl and Bilal 2021). In addition, people with disabilities who are non-White or live in households with incomes below the poverty level are significantly overrepresented in counties with higher COVID-19 incidence compared with other people with disabilities (Chakraborty 2021). Similarly, a nationwide study showed that just a small increase in fine particulate matter ($PM_{2.5}$), was associated with an 11 percent increase in the COVID-19 death rate for U.S. counties (Wu et al. 2020), and emerging evidence suggests socioeconomic characteristics of counties are associated with both the severity and the transmission of COVID-19 infection (Andersen et al. 2021; Baum and Henry 2020; Hatef et al. 2020).

Despite growing evidence about inequities in vulnerability across sociodemographic groups, surprisingly little is known about the experiences people with disabilities have had with COVID-19. Their risk factors include being more likely to have an underlying health problem (Stevens et al. 2014; Dixon-Ibarra and Horner-Johnson 2014), live in a congregate care setting (McConkey et al. 2016), and rely on assistance with personal care and routine preventative measures (Armitage and Nellums 2020).

Emerging evidence on this topic has been grim. A study of nearly 65 million patients across 547 health care centers in the United States found the mortality rate of people with intellectual and developmental disabilities was nearly eight times higher than the general population (Gleason et al. 2021), confirming smaller studies suggesting people with intellectual and developmental disabilities are at higher risk for COVID infection and mortality (Landes, Turk, and Wong 2021; Landes et al. 2020). Likewise, a similar study of more than 2 million health care patients in Canada found people with physical disabilities were more likely to die of COVID-19 than those without a disability, even after adjusting for a number of socioeconomic factors. (To the authors' knowledge, such a study has not been done in the United States.) A systematic review of the impacts of COVID-19 on people with physical disabilities suggests that the pandemic is associated with daily functioning, resulting in diminished access to health care, mood changes, and lower levels of physical activity (Lebrasseur et al. 2021).

In particular, evidence shows that people with disabilities who are older, people of color, or both, might be particularly vulnerable to negative impacts of COVID-19. Therefore, it is important to examine disability and COVID-19 using an intersectional lens. Already, racial differences in disability prevalence exist: Native American persons have the highest rate of disability (3 in 10), followed by Black persons (1 in 4), White persons (1 in 4), Native Hawaiians/Pacific Islander and Hispanic persons (1 in 6), and Asian persons (1 in 10) (Courtney-Long et al. 2017).

Moreover, the virus's impact on older adults with disabilities might go beyond a higher risk for serious infection and include limited access to care for all health conditions, financial implications, and effects on employment. Given the nature of the infection and the social mitigation strategies put into place for containment, COVID-19 can be considered a "social disease" (Trout and Kleinman 2020), as it impacts social and economic domains of everyday life in

addition to individual health. For older adults with disabilities, the impacts of COVID-19 might exacerbate existing differences in health care, employment, and financial security.

COVID-19, Disability, Race or Ethnicity, and Disparities in Health Care

Historically marginalized ethnic and racial groups and people with disabilities face disparities in health care. Compared with White communities, communities of color have less access to health care services, are more likely to receive lower quality care, and have poorer health outcomes (Agency for Healthcare Research and Quality 2011; U.S. Department of Health and Human Services, Office of Minority Health 2015, 2020). All of these factors could make these groups more vulnerable to the negative outcomes associated with COVID-19 (Lund et al. 2020). Even with improved access, the average cost of health care for working-age adults with disabilities is five times higher than for those without disabilities; prescription drug costs were seven times higher (Kennedy, Wood, and Frieden 2017).

COVID-19, Disability, Race or Ethnicity, and Disparities in Employment

Even before the pandemic's economic losses and the reduction in the U.S. workforce, the Bureau of Labor Statistics' summary of labor force characteristic for persons with a disability noted that unemployment rates for people with disabilities were higher than those of people without a disability (Jashinky et al. 2021; BLS 2020c). The effects of the pandemic on the labor market have amplified this concern. Between March and August 2020, employment of people with disabilities declined by 20 percent, compared with a 14 percent decline for those without a disability (BLS 2020a). Jobless rates continue to be greater for those with disabilities compared with those without disabilities, and this margin is expanding (BLS 2021a).

The COVID-19 pandemic also dealt a unique shock to older workers (Davis 2021). Roughly 3.7 million workers 55 and older became unemployed between March and April 2020. Although many were soon recalled to work, 35 percent of the older unemployed lost their jobs permanently in the fourth quarter of 2020. By October 2021, the employment-population ratio of workers 55 and older was down 2.2 percentage points from February 2020. Employment declines among older workers were greatest for low earners, women, people of color, and workers without a college degree (Davis 2021). Quinby, Rutledge, and Wettstein (2021) used the monthly Current Population Survey to study older workers' transitions out of employment

and into retirement before and during the pandemic. The paper found that among workers age 55 and older, the likelihood of leaving work over the course of a year rose by 7.6 percentage points, a 50 percent increase over the pre-pandemic rate. They also found differences in socioeconomic and demographic subgroups. Women, adults without a college degree, Asian-American persons, and employees in occupations less amenable to remote work saw disproportionate impacts. In contrast, the likelihood of retiring increased by only 1 percentage point, with retirement concentrated among those older than 70. Accordingly, workers were not more likely to claim Old-Age, Survivors, and Disability Insurance benefits. Likewise, Gopi at al. (2022) found that employment for older workers dropped substantially more than would have been predicted before the pandemic. They also found declines in labor force exit due to disability (4–5 percent), and applications for disability insurance (15 percent).

COVID-19, Disability, Race or Ethnicity, and Disparities in Financial Security

The disruption of financial resources – from job loss, unpaid leave, decreased household income, and economic hardship – for older adults with disabilities or their family caregivers during a crisis can result in reduced access to other resources, such as food and preventive health care services (Abrams et al. 2021; Bui et al. 2021; Choi, Carr, and Namkung 2022; Gauthier et al. 2021; Taylor et al. 2021; Morris 2022). Therefore, older adults with disabilities and historically marginalized racial and ethnic groups are likely to face unique challenges because of financial disruptions (Garcia et al. 2021). For example, emerging evidence indicates that older Black and Hispanic adults are more likely than their White counterparts to report food and housing insecurity and difficulty paying household expenses during the pandemic (Bui et. al. 2021; Lopez et al. 2020). Working-age adults with disability have also been especially vulnerable to food insecurity during the pandemic because of both financial and physical barriers, including inability to or fear of going out to purchase food (Choi, Carr, and Namkung 2022; Friedman 2021).

In light of this evidence, and the gaps therein, we sought to understand the COVID-19 pandemic's effects on the health, work, and financial experiences using nationally representative data for working-age older adults and adults age 50 and older with disabling conditions. We compared differences in outcomes between adults with and without disabling conditions. We emphasized intersectionality with racial and ethnic identity by examining differences across and

within races and ethnicities. Finally, we examined the extent to which contextual factors are correlated with outcomes. Given the unique ways in which people with disabilities might interact physically and socially with their community, the role of contextual factors in COVID-related outcomes might be particular important for people with disabilities.

Data and Methods

Data Sources

We used the HRS as our primary data source for our analysis. The HRS is a longitudinal survey that has been fielded every other year since 1992. The survey collects data on health, work, retirement, income, and other related topics from a nationally representative sample of the U.S. population age 50 and older (Sonnega et al. 2014). For our COVID outcomes, we used the 2020 HRS wave, which included a module that asked about the effects of the COVID-19 pandemic on older adults' ability to access health care, their finances, and their labor force participation (Health and Retirement Study 2021). We also used the 2018 *RAND-HRS Longitudinal File***,** a cross-wave HRS file that has been cleaned and streamlined to track each HRS respondent from 1992 to 2018.[1] Finally, for our area-level analysis we used the *HRS Cross-Wave Geographic Information (Detail) Restricted Data* file, which contains geographical data, including the county and state name and Federal Information Processing Series (FIPS) code, for each HRS respondent through 2018. We linked this file to the 2020 HRS file to determine the county and state of residence for each respondent in our sample.

For our area-level analysis, we drew from a number of publicly available data sources to characterize aspects of potential COVID vulnerability. We describe the measures further in the text (Table 1). We used the following data sources:

- The *American Community Survey* (ACS)**,** administered by the Census Bureau annually to track population and housing data in the United States. We used the 2016–2020 ACS five-year estimates for our analysis.
- The Agency for Healthcare Research and Quality's database of *Social Determinants of Health* (SDOH) beta files, which aggregates data from existing sources related to social

[1] We merged the 2020 HRS data to the RAND files using the household and respondent identification numbers.

context, economic context, education, and physical infrastructure. We used the SDOH file from 2018 for our analysis.

- The 2021 *County Health Rankings*, which provides county-level data on health outcomes and health factors. These measures are weighted and aggregated to provide a ranking for each county.
- The *COVID-19 Pandemic Vulnerability Index (PVI) Model 11.2*, which aggregates 18 components of pandemic vulnerability related to infection spread, population concentration, intervention measures, and the health environment of each county to estimate its vulnerability to the COVID-19 pandemic. The PVI is updated daily.
- *COVID Act Now***,** which tracks COVID-19 risk level, case numbers, and vaccination rates at the county level. This data is updated daily.
- The National Conference of State Legislatures**,** which produces yearly statistics of state-level political party representation in state legislatures and in the governor's office.

Sample

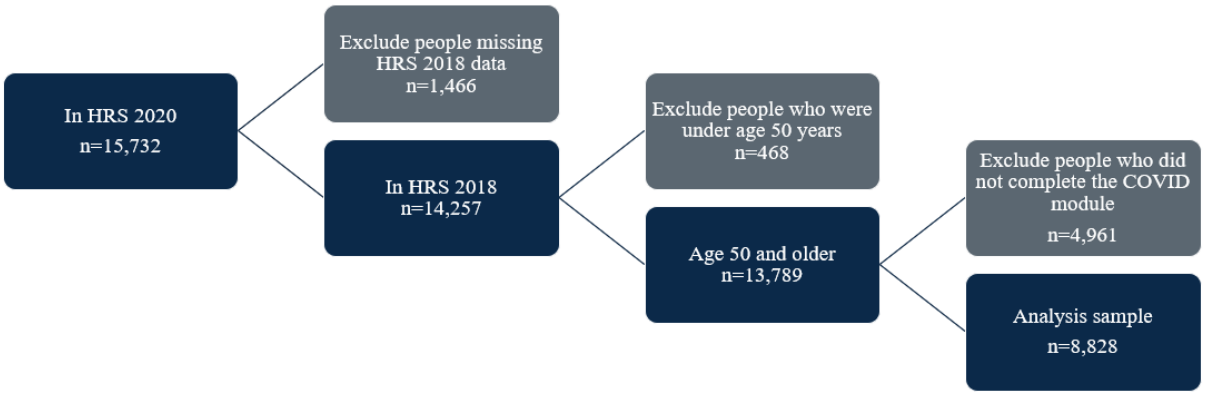
Our final sample included 8,828 participants from the 2020 HRS.[2] Of these, 3,155 participants were surveyed as part of the early-release sample. Figure 1 displays the sample restrictions. We excluded from our analysis any participant who we could not match to the 2018 RAND file, because we use these data in our modeling to define respondent race, disabling condition, and covariates.[3] We also excluded participants younger than 50, because they did not meet our definition of older adult. Finally, we limited our sample to respondents who completed the COVID-19 module.

[2] The 2020 HRS was fielded between March 2020 and June 2021 and included 15,732 participants. The COVID-19 module was added in May 2020. Between June 11, 2020 and October 2020, a random 25 percent subset of the HRS sample was surveyed with the COVID-19 module. From September 2020 to May 2021, another random 25 percent subset of the HRS sample was surveyed with the COVID-19 module. In January 2022, the data from the 2020 HRS was released without weights.

[3] We could not match 1,466 participants to the HRS 2018 data. These participants might have been newly added to the HRS (such as a new spouse of an existing participant) or included in prior years but did not complete the 2018 survey. We excluded these participants because we measured disability and work status through 2018 for everyone in the analysis. We measured these variables through 2018 rather than 2020 because of the potential relationship between COVID and disability and work in 2020. For example, respondents could have developed disabling conditions because of COVID, and we can't disentangle that effect. Our estimates are therefore likely undercounting the share of people with disabilities, which could make our effect sizes appear smaller than the actual differences in COVID impacts between people with and without these disabling conditions.

The early-release sample is a random 25 percent subset of the HRS sample that was surveyed with the COVID-19 module. The data from this nationally representative subsample was released in November 2020 with preliminary weights. We used this early-release sample and its corresponding weights as part of our sensitivity analysis.

Figure 1. *Sample Size and Restrictions*



COVID Outcome Measures

We focused on three primary outcomes related to COVID-19: (1) health care delays, (2) financial hardship, and (3) effects on work. For each domain, we examined self-reported measures of whether the respondent experienced that outcome. We also examined changes in preparedness for retirement.

For health care delays, respondents were asked, "Since March 2020, was there any time when you needed medical or dental care, but delayed getting it, or did not get it at all?" Respondents who answered yes were asked to select why their care was delayed and what type of care was delayed. Respondents were also asked whether they thought they ever had COVID-19. They were then asked whether they had ever been tested for COVID-19. Those who answered yes were asked for their test results.

To assess financial hardship, respondents were first asked whether their income increased, decreased, or stayed the same. They were then asked to select the types of financial hardships they had experienced, such as missing a rent payment or being unable to pay a medical bill.

To assess work effects, respondents were asked, "Was your work affected because of the coronavirus pandemic?" Respondents who answered yes were asked whether they had to stop working entirely. If they were still working, they were asked whether they experienced effects, such as changes in hours and switching to remote work. Respondents could also indicate that they were not working at the time of the pandemic.

Each wave of the HRS asks respondents whether they expect to retire by age 65 and how frequently they think about retiring. The HRS also asks their expected retirement age. For these outcomes, we limited our sample to those who were working in both 2018 and 2020, so we could examine responses from both the 2018 HRS and the 2020 HRS.

Definitions of Disability

For our primary analysis, we defined "disabling condition" as the presence of difficulty with an activity of daily living (ADL) or an instrumental activity of daily living (IADL). We examined whether respondents ever reported having difficulties with one or more ADLs or IADLs in any wave of the HRS through 2018. We also considered four alternative measures of self-reported disability status: (1) the presence of a work-limiting condition when the 2018 HRS survey was fielded, (2) receipt of Supplemental Security Income (SSI) or Disability Insurance (DI) benefits in any wave of the HRS through 2018, (3) the presence of two or more chronic health conditions, and (4) the presence of five or more chronic health conditions. However, we could define only the first two measures for working age adults, because "work-limiting" conditions are directly tied to working, and SSI is converted to retirement benefits after age 65 regardless of disability status. Because the sample population includes adults age 50 and older, many respondents were not working or were retired by 2018, regardless of disability status. Our measure using ADLs and IADLs reflects disability status among people of all ages or work statuses in our sample. This approach of combining ADLs and IADLs is often used to measure functional disability for older adults (Spector and Fleishman 1998; Millán-Calenti et al. 2010). Results for the alternative measures of disability are available in the appendix.

Other Individual-Level Measures

We considered four mutually exclusive categories of race and ethnicity: (1) non-Hispanic White, (2) non-Hispanic Black, (3) non-Hispanic other race, and (4) Hispanic. Our other

covariates included gender, birth year, education, marital status, HRS cohort, and number of long-term health conditions.[4]

Area-Level Measures

We considered nine area-level contextual factors (Table 1). These factors were in five domains: (1) COVID-risk and vulnerability; (2) socioeconomic characteristics; (3) medical infrastructure and health care access; (4) employment opportunities and income; and (5) governance. Based on prior evidence, we hypothesized that these five domains would have the biggest influence on individual-level COVID outcomes. Within the first four domains, we chose two factors that were measurable and publicly available. For example, we considered hospital bed capacity and the ratio of primary care physicians to the population as measures of health care access. Because the spike in COVID-19 hospitalizations highlighted a shortage in hospital capacity, we prioritized this measure. Eight of our measures are reported at the county level; governance is collected at the state level.

Table 1. *List of Area-Level Contextual Data*

Area-level factor	Source	Time period	Definition
COVID-19 risk and vulnerability			
Cases per 100,000	COVID Act Now	March 2020–May 2021	This measure represents the average number of COVID-19 cases in a given county per 100,000 people. A higher number implies that COVID-19 was more prevalent in that county than others. We calculated monthly means by averaging daily data on cases per 100,000 people for each month. We then averaged the monthly means to get a mean cases per 100,000 metric across our time period.
Pandemic Vulnerability Index (PVI) score	PVI	March 2020–May 2021	This measure aggregates components of pandemic vulnerability to create a PVI score of 0 to 1. Scores closer to 1 imply higher vulnerability to COVID-19. We used the PVI score for the first day of each month as the month-specific PVI. We then averaged

[4] This measure comes from the RAND file. The eight long-term health conditions included high blood pressure, diabetes, cancer, lung disease, heart disease, stroke, psychiatric problems, and arthritis.

			the score across all months to get a mean PVI score across our time period.
Socioeconomic characteristics			
Social Vulnerability Index score	Agency for Healthcare Research and Quality	2018	This measure ranks factors such as socioeconomic status, housing, transportation, and racial breakdown of a county to index its vulnerability to natural disasters and other emergencies. Values range from 0 to 1, where values closer to 1 imply higher social vulnerability.
Racial segregation, White versus non-White	County Health Rankings	2015–2019	This measure indexes the degree to which White and non-White residents are geographically segregated from one another within a county. Values range from 0 to 100, where values closer to 100 imply a higher level of segregation.
Medical infrastructure and health care access			
Hospital bed capacity	PVI subscore	June 2020	This is a measure of the number of hospital beds divided by the population of the county. Values range from 0 to 1, with values closer to 1 implying that the county has a higher hospital capacity. We used the PVI hospital bed capacity subscore for the first day of each month as the month-specific capacity. We then averaged the score across all months to get a mean hospital bed capacity across our time period.
Years of potential life lost, all races	County Health Rankings	2017–2019	This measure is the age-adjusted rate of potential life lost from deaths of people under age 75 per 100,000 people in a given county. A higher value suggests a higher rate of premature death.
Employment opportunities and income			
Unemployment rate, all races	American Community Survey	2016–2020	This measure is the percentage of the population older than 16 who are unemployed. Values range from 0 to 100, with values closer to 100 implying a higher rate of unemployment.
Percentage of people receiving government assistance	American Community Survey	2016–2020	This measure is the percentage of the total population that receive cash public assistance or participate in the Supplemental Nutrition Assistance Program. Values range from 0 to 100, with values closer to 100 implying a higher rate of people receiving government assistance. To create this measure, we divided the number of people receiving

			assistance by the total population of a given county.
Governance			
	National Conference of State Legislature	2020	These data detail partisan composition of a state based on (1) the majority political party in control of the state legislature and (2) the party affiliation of the governor. States are defined as republican, democrat, or divided if the legislative and governor parties are different. We code 1 for republican and 0 otherwise.

We linked these data to the individual-level HRS data through the county and state FIPS code available in the HRS Cross-Wave Geographic Information file.

Weights

Our primary results are regression-adjusted for race and ethnicity, disability status, and personal characteristics (gender, birth year, education, marital status, and number of long-term health conditions). They are unweighted. The weights for the full HRS 2020 sample had not been released at the time of our analysis. Because the HRS weights are based primarily on descriptive characteristics similar to the characteristics we adjusted for, our regression-adjusted results would be very similar to the results from a weighted analysis (Heeringa, West, and Berglund 2017). Although we do not have weights for the full sample, the HRS released preliminary weights for the nationally representative early-release sample. We applied these weights in sensitivity analyses. Results remain unchanged with the addition of weights.

Methods

Individual-Level Analysis

We present descriptive statistics summarizing self-reported COVID-19 effects on work (for example, lost job, changes in income, and effects on workplace), financial issues, receipt of first round of stimulus payment, and health experiences (for example, self-reported COVID diagnosis, test results, effects on receipt of or delays in health care, and hospitalizations) for older adults by race or ethnicity and disabling conditions. We also examined retirement preparedness (for example, plans to retire, and frequency of thoughts about retirement) among working-age older adults.

We first compared the characteristics of our sample by disabling condition and race or ethnicity. For our primary analysis, we estimated logistic regression models for binary and categorical outcomes and linear regression models for continuous outcomes to assess the differences in outcomes between those with and without disabling conditions. These models controlled for personal characteristics (gender, birth year, education, marital status, HRS cohort, and number of long-term health conditions). We estimated models among all older adults and separately within each race or ethnicity category. To compare characteristics of older adults with and without disabling conditions, we report the results from t-tests for binary and continuous outcomes and Chi-squared tests for categorical outcomes. To compare characteristics of older adults by race and ethnicity, we report the results from Chi-squared tests for binary outcomes and F-tests for continuous outcomes. In addition, we estimated overall differences in our outcomes across race within disabling conditions. We used a Chi-squared test for our binary outcomes, and an F-test for our continuous outcomes.

We conducted a variety of sensitivity analyses to determine how our results would change if we altered our chosen disability definition, weights, or covariates. We present our primary analysis using alternative definitions of disability: presence of a work-limiting condition, receipt of SSI or DI, and presence of two or more or five or more chronic health conditions. We also present unadjusted regression results. Finally, we repeated our analysis by restricting our sample to the nationally representative, early-release sample and using the corresponding early-release weights.

Area-Level Analysis

We used multilevel modeling techniques to assess whether and how contextual factors might be associated with the differences between self-reported COVID-19 effects among those with disabling conditions and those without disabling conditions and by race and ethnicity. Drawing on standard multilevel approaches in which individuals are nested within counties, multilevel models enabled us to simultaneously consider individual-level and community-level contextual factors—and the interdependencies therein—in these experiences.

We first compared the area-level contextual factors of our sample by race or ethnicity and disabling condition. We used t-tests to compare characteristics of older adults with and without disabling conditions. We then focused our area-level analysis on the three primary COVID-19-

related outcomes in our previous analysis: (1) health care delays, (2) financial hardship, and (3) effects on work. We used the full analytical sample in which geocoded information was available. We fit all models in STATA using the melogit command and standardized all area-level factors and control variables. We assessed the model's goodness-of-fit with the Akaike Information Criteria (AIC) and Bayesian Information Criteria (BIC) statistics and likelihood-ratio tests.

To test the potential association of area-level factors with individual COVID-19 experience, we employed three models. Our first model was an unadjusted multilevel model with a random slope for county. Our second model built on this first model by adjusting for individual-level control variables. These models enabled us to examine individual-level and area-level factors in conjunction and in relation to each other. First, we examined whether there is an association between area-level contextual factors and individuals' financial, health care and work-related experiences related to COVID-19 as we have hypothesized. Second, the models enabled us to determine whether disabling conditions and race or ethnicity remain significant predictors of differences in COVID outcomes after taking into account contextual factors.

Our second model follows the specification in Equation 1:

$$y_i = \alpha + \beta_1 s_i + \beta_2 r_i + \beta_3 d_i + \gamma_1 w_j + b_{j[i]} + \varepsilon_i \quad (1)$$
$$b_j \sim N(0, \tau^2),$$

where, for individual i in county j, y_i = COVID outcomes for individual i (financial hardship, health care delays, or effects on work because of COVID-19), r_i denotes the race or ethnicity category of individual i, d_i denotes the disability status of individual i, $w_{j[i]}$ denotes the county or state-level factor of interest, and s_i represents a vector of individual-level covariates that include gender, birth year, education, marital status, HRS cohort, and number of long-term health conditions.

Finally, our third model added interaction terms between the county- or state-level factor and race and disability status. The addition of the interaction terms enabled us to ascertain whether there are differential impacts of area-level contextual factors across race or ethnicity and across disabling conditions. In other words, we could ask whether area level factors are

associated with individual COVID outcomes differently for individuals of different racial and ethnic identities and for adults with or without disabling conditions.

Model 3 follows the specification in Equation 1, with variables defined the same as above:

$$y_i = \alpha + \beta_1 s_i + \beta_2 r_i + \beta_3 d_i + \gamma_1 w_j + \phi_1 r_i w_j + \phi_3 d_i w_j + b_{j[i]} + \varepsilon_i \quad (2)$$

$$b_j \sim N(0, \tau^2)$$

For each of our three COVID outcomes, we ran a separate set of models testing each of our nine area-level measures separately. We did not include a model with multiple contextual factors for two reasons. First, we wanted to simplify interpretation of our models by identifying the unique effects of the identified contextual factor. Second, there were high levels of collinearity between contextual factors. As such, we ran 27 multilevel models: 3 models for each of the 8 county-level factors, and 3 models for the state-level measure. This resulted in a total of 81 models. All models are unweighted, because the HRS does not produce weights for the geocoded subsample that are nationally representative. For models with county-level measures, we also include sensitivity analyses subsetting our models to counties in which there are at least 10 respondents, following guidelines in the literature for minimum thresholds for sample sizes (Ali et al. 2019). All models use our primary definition of disability as the presence ADL or IADLS. Models using the three alternative definitions of disability are available upon request; model results are very similar across all disability definitions.

Results

Almost 40 percent of the older adults in our sample required assistance with an ADL or IADL (Table 2). About 60 percent of the respondents were married or living with a partner, and 40 percent were male. The average birth year was 1951, meaning the average age was about 69 in 2020. On average, respondents had 13 years of education and 2.3 health conditions out of the 8 conditions we examined. Slightly more than one-third of respondents were working for pay in 2020 when they were surveyed.

There were differences in demographic characteristics across race. Overall, about one-half of respondents were non-Hispanic White, one-quarter were non-Hispanic Black, and 18 percent were Hispanic. Hispanic and Black respondents had higher rates of disability and were also younger, on average, than White respondents by about five years. White respondents were

the oldest on average and were least likely to be working. The distributions of each of these characteristics across race and ethnicity were statistically significant.

What Negative Health Experiences Did Older Adults Experience During the Pandemic?

Overall, 4 percent of respondents reported that they had received a positive COVID diagnosis (Table 3). Higher shares of Hispanic or Latino older adults or older adults of another race (about 6 percent each) reported a positive diagnosis, compared with Black or White older adults (about 3 percent each). About one-third (32 percent) of respondents reported that they had been tested for COVID. This percentage was higher among older adults with disabling conditions (35 percent compared with 30 percent) and, across race and ethnicity, it was highest among Black older adults (41 percent). About 10 percent of those tested reported that they received a positive test result. Among those with a positive COVID test result, higher shares of Black or Hispanic older adults reported a hospitalization because of the virus (24 percent and 21 percent), compared with White older adults (11 percent).

About one-third (31 percent) of respondents reported that they needed medical or dental care but delayed getting it, or did not get it at all, since March 2020. More people with disabilities reported delaying needed health care (36 percent compared with 27 percent). Respondents were asked why they delayed or did not get health care and could indicate multiple responses. More than half (52 percent) of older adults who delayed care reported that the clinic, hospital, or doctor's office canceled, closed, or suggested rescheduling. About a third (33 percent) reported that they decided to wait. Other less common responses included not being able to afford it, not being able to get an appointment, and fear of going. Reported reasons differed according to respondents' disability status. Older adults with disabilities were more likely than those without disabilities to report that they delayed care because they could not afford it (17 percent versus 12 percent, respectively), and less likely to report that the doctor's office canceled their care (47 percent versus 56 percent) or that they decided to wait (31 percent versus 35 percent).

Respondents who delayed receiving needed health care were asked what type of care they delayed and could indicate multiple responses. There were differences in many of the types of care delayed between those with and without disabilities and in all of the types of care delayed by race and ethnicity. Among respondents who delayed any health care, we found the following:

- About three-quarters (72 percent) of older adults delayed dental care. There was no difference by disability. Older adults of another race were most likely to report delaying dental care (77 percent).
- More than half (57 percent) of older adults delayed doctor visits, including delaying telemedicine and in-person care. There was no difference by disability. Hispanic or Latino older adults were most likely to report delaying a doctor visit (63 percent).
- About 13 percent delayed surgeries. More older adults with disabilities delayed surgeries (16 percent compared with 11 percent). There were small differences by race and ethnicity, with rates varying from 12 percent (Hispanic or Latino) to 14 percent (White and another race).
- About 7 percent delayed filling a prescription. More older adults with disabilities delayed prescriptions (9 percent compared with 5 percent). There were differences by race and ethnicity, with rates varying from 5 percent (White) to 12 percent (Hispanic or Latino).
- About one-quarter (23 percent) reported delaying another type of health care, with more older adults with disabilities (27 percent) and older adults of another race (27 percent) delaying other health care.

What Negative Work Experiences Did Older Adults Experience During the Pandemic?

More than one-quarter (29 percent) of older adults reported that their work was affected during the pandemic. Because many older adults were not working at the start of the pandemic, we also examined the share whose work was affected among those who were working. About 40 percent of older adults who were working when the pandemic started reported that their work was affected. Even among those working, a smaller share of older adults with disabilities reported effects on their work (35 percent compared with 40 percent). This percentage was highest among Hispanic or Latino older adults (46 percent) and older adults of another race (49 percent).

Among those whose work was affected, almost half (44 percent) reported that they stopped work entirely. This percentage was higher among people with disabilities (51 percent) and Hispanic or Latino (59 percent) or Black (53 percent) older adults. About half of those who stopped work reported that it was because of a furlough or temporary layoff (49 percent). Among those whose work was affected, but who did not stop working, many older adults reported switching to remote work (47 percent), changing their work days or hours (28 percent),

their work becoming more risky or dangerous (21 percent), or their work becoming harder (21 percent). White adults and non-Hispanic older adults of another race were most likely to have moved to remote work (51 and 56 percent, respectively).

What Negative Financial Experiences Did Older Adults Experience During the Pandemic?

Respondents were asked which types of financial hardships they experienced since the start of the pandemic. Many older adults reported no hardships (69 percent). However, older adults with disabilities were less likely to report no financial hardships (61 percent compared with 74 percent)—that is, they were more likely to experience hardships. Similarly, Hispanic or Latino, Black, and other older adults were less likely to report no financial hardships than White older adults. Among the most common hardships reported were not having enough money to buy food (9 percent) and having trouble buying food even if they had the money (16 percent). About 1 in 15 older adults reported missing credit card or other debt payments, missing other payments, or other material hardships (7 percent each), or missing rent or mortgage payments (6 percent). For each of these hardships, older adults with disabilities were more likely to report hardships than older adults without disabilities. Black older adults were the most likely to report missing payments. For example, 10 percent of Black older adults missed a rent or mortgage payment compared with 2 percent of White older adults. Non-Hispanic older adults of another race were the most likely to report not having enough money to buy food (17 percent) or having trouble buying food even though they had money (19 percent), compared with White older adults (5 and 14 percent, respectively).

Most older adults reported that their income stayed the same (77 percent), but 18 percent reported their income declined, and 5 percent reported their income increased. Though there were no differences between those with and without disabilities, there were differences across race. Hispanic or Latino older adults were the most likely to see a decrease in income (29 percent), compared with 13 percent of White older adults.

Most older adults reported that they received a stimulus payment in late 2020 or early 2021 (80 percent). There were no differences by disability. There were some differences by race, with rates varying from 77 percent (Hispanic or Latino) to 82 percent (White).

What Was the Role of Intersectional Identities on These Outcomes?

We examined COVID outcomes both by disability within racial and ethnic categories and by race and ethnicity among those with disabilities to understand the intersectionality of these characteristics among Americans age 50 and older. Although many patterns of health, work, and financial impacts were similar, intersectional findings emerged in several areas:

- **COVID testing.** Although there were differences across race and ethnicity in COVID testing, diagnosis, and hospitalization rates (Table 3), there were few intersectional findings with disability. Among White older adults, those with disabilities were more likely to receive a COVID diagnoses or to be tested than those without disabilities (Table 4).
- **Health care delays.** Within each race and ethnicity group, disabled older adults were more likely to delay health care. The difference was largest for older adults of another race, among whom 43 percent of those with disabilities delayed health care compared with 28 percent of those without disabilities. Among those with disabilities, there were also statistically significant differences across race and ethnicity. We compared the same 43 percent of older adults of another race with a disability who delayed health care to 38 percent of White older adults with a disability and 35 percent of older adults with disabilities who were Black or Hispanic or Latino.
- **Delaying prescriptions.** Many of the same patterns in types of health care delays by disability persisted or were exacerbated when we consider separate racial and ethnic groups. For example, 17 percent of Hispanic or Latino older adults with a disabling condition reported delaying prescriptions compared with 6 percent of those without disabilities. Among all older adults, the difference by disability was 4 percentage points.
- **Stopping work.** Among those whose work was affected, there were differences in those who stopped working by disability and exacerbations by race or ethnicity. For example, 62 percent of Black older adults with disabilities reported stopping work, compared with 44 percent of all older adults, 52 percent of older adults with disabilities of any race, and 53 percent of Black older adults regardless of disability status.
- **Moving to remote work.** Among all older adults whose work was affected, there was no difference by disability in those who moved to remote work (Table 3). However,

Hispanic or Latino older adults with disabilities were more likely to move to remote work compared with those without disabilities (48 percent compared with 28 percent). Conversely, Black older adults with disabilities were less likely to move to remote work compared with those without disabilities (23 percent compared with 48 percent).

- **Financial hardships.** The differences in older adults' financial hardships by disability status persisted across White, Black, and Hispanic or Latino older adults. Some of the largest differences were in having enough money to buy food. Twenty-two percent of Hispanic or Latino older adults with disabilities did not have enough money to buy food, compared with 11 percent without disabilities. For Black older adults, 18 percent with disabilities did not have enough money to buy food compared with 8 percent without disabilities. There were similar patterns of older adults reporting that they had trouble buying food even if they had the money.
- **Stimulus payments.** There were no differences in stimulus receipt by disability, overall or within racial and ethnic groups. There were some differences by race or ethnicity that persisted among those with disabling conditions. Seventy-one percent of disabled older adults of another race received the stimulus payment, compared with about 80 percent of disabled older adults who were Black (78 percent), Hispanic or Latino (80 percent), or White (81 percent).

Our results were similar when examining different definitions of disabling conditions, including having a work-limiting condition and ever receiving SSI or DI benefits (Appendix Table 1). We saw a similar pattern for older adults with two or more chronic conditions compared with those with one or fewer, and larger negative experiences for older adults with five or more chronic conditions (Appendix Table 2).

We also found similar results when examining non-regression adjusted outcomes (Appendix Table 3) and when examining a weighted, nationally representative subset of respondents (Appendix Table 4).

Retirement Preparedness

Among respondents who were working at the time of the surveys in both 2018 and 2020, most respondents expected to work full-time past age 65. The average self-reported probability

of working after age 65 was about 45 percent in 2018 and 43 percent in 2020. There were differences across disability, race, and ethnicity groups. Working older adults with disabilities predicted lower probabilities of working past age 65 (39 percent in both years). Black older adults had the lowest predicted probability of working past age 65 (about 37 percent), but there were no differences between older Black workers with and without disabilities in 2020.

Role of Contextual and Social Factors

Next, we focus on the contextual factors associated with COVID experiences. We link respondent level HRS to a series of data, described earlier, for their respective counties and states of residence in 2020. Data security restrictions prevent us from reporting some specifics on the county of HRS geocoded respondents' residence. In general terms, the HRS respondents in our sample represent a large number but less than half of the U.S counties with geographic variation in terms of U.S. region and urbanicity. There is an average of 11 HRS respondents per county, with a minimum of 1 respondent and a maximum of 306 respondents residing in a county.

What Were the Unadjusted Differences in County Characteristics Across Disabling Conditions and Race or Ethnicity?

As with our individual-level analysis, we explored differences in county characteristics between older adults with and without disabling condition, across our whole sample and within racial and ethnic categories (Table 5). We found statistically significant differences in county-level characteristics for people with and without disabilities, across the full sample and within racial and ethnic categories. Across the full sample, adults with disabling conditions were more likely to live in counties characterized by higher levels of COVID vulnerability, and lower levels of economic opportunity, socioeconomic vulnerability, and health care access, as measured by our county-level factors. Specifically, adults with disabling conditions were more highly concentrated in counties with a higher average case counts, higher scores on the Pandemic Vulnerability and Social Vulnerability Indexes, more years of potential life lost (YPLL), and higher rates of unemployment and populations receiving government assistance.

This pattern also remained consistent within race and ethnicity. Non-Hispanic Black adults with disabling conditions live in counties that have poor performance on measures across

the eight county characteristics we examined.[5] However, for residential racial segregation, non-Hispanic Black adults with disabling conditions were more likely to live in counties that are less racially segregated. Likewise, Hispanic adults with disabling conditions were more likely to live in counties with higher scores on the Pandemic Vulnerability and Social Vulnerability indexes, and higher levels of unemployment and percentages of county residents receiving public assistance relative to their counterparts without a disability. However, those individuals were more likely to live in counties with more hospital beds per capita.

When examining differences within the subgroup of respondents with disabling conditions, the observed racial patterns persisted. Older adults with disabilities who are non-White were more clustered in counties with less favorable county characteristics, relative to people with disabilities who identify as non-Hispanic White.

Are Contextual Factors Associated with COVID Outcomes for Individuals with Disabling Conditions?

Next, we examined the association of contextual factors on individual experiences with financial hardship, delaying health care, and whether one's work was affected. We started by examining the intraclass coefficient for all three COVID outcomes separately. In the context of multilevel models, the intraclass correlation coefficient (ICC) ranges from 0 to 1 and reveals the correlation between two observations (individuals) within the same cluster (county or state). Higher correlations between individuals means there is clustering in our data and, as such, a higher ICC suggests that the use of a multilevel model is preferred to a linear model. Although there is no uniform benchmark for what constitutes a value of an ICC that is "large enough" to suggest the use of a multilevel model, a commonly used rule of thumb is that a value of an ICC greater than 0.05 merits the use of a multilevel model. The intraclass coefficient for the unadjusted model of financial hardship with county measures is 0.07, suggesting that clustering at the county level can explain 7 percent of the individual-level variation in financial hardship. However, the ICC for work being affected is 0.0388 and the ICC for delaying health care is 0.0046. These small values suggest that there might not be clustering of work effects and health care delays at the county level. As such, we report findings on financial hardship in this text and

[5] We did not measure differences in state-level governance because the sample size was too small for inference.

reserve the results for models related to whether work was affected or delays in health care for the appendix.

Tables 6 to 14 display the results of the set of multilevel models estimating associations of area-level factors with financial hardship, health care, and work, using odds ratios. We found only two significant county-level factors on the likelihood of declaring financial hardship because of COVID-19: (1) YPLL (Table 10) and (2) state political party affiliation (Table 14). We did, however, observe statistically significant positive associations with financial hardship for both disability and with race or ethnicity across all models for all county-level factors, suggesting that an individual's disability status and race or ethnicity remain positive predictors of financial hardship because of COVID-19 even after accounting for contextual factors.

Focusing on the set of models with statistically significant relationships, we first describe the set of models examining the role of YPLL. Model 1 suggests that for every one standard deviation increase in an individual's county mean value of YPLL, that individual is 5 percent more likely to report a financial hardship. YPLL measures premature mortality in a county by counting the years of life lost before age 75, thus focusing on preventable deaths. This measure captures elements associated with SDOH and area-level health behaviors such as smoking and accidents. In Model 1, the estimated odds ratios corresponding to whether an individual has a disabling condition and corresponding to an individual's race or ethnicity are also greater than one and highly significant. Including individual-level covariates in Model 2, the odds ratio corresponding to YPLL attenuates slightly but remains statistically significant and greater than one. In Model 2, there is no statistically significant association between the YPLL measure at the county level and disability, implying that there is no differential effect of a county's YPLL on the likelihood of financial hardship for people with or without a disabling condition. There is a statistically significant association for the interaction between YPLL and both non-Hispanic Black persons and persons of non-Hispanic other races. The main effects on YPLL, disability, and race or ethnicity all remain greater than one and statistically significant.

Focusing on the state-level model of political party (Table 12), we found that older adults were more likely to report a financial hardship in a state with a republican-controlled government (OR = 1.2). As with the county-level models, the main effects on disability and race or ethnicity remain positive and statistically significant. In addition, we observed an association between

delayed health care and political party wherein individuals in republican-controlled states are less likely to report delaying health care (OR = 0.7).

We do not see a consistent pattern of association between county-level contextual factors and individual experiences with delayed health care or work being affected.

Discussion

Summary of Key Findings

We found evidence of negative COVID-19 effects on health, work, and financial experiences for older adults with disabilities. This group was more negatively impacted on several measures compared with those without disabilities. In addition, older adults with disabilities who were Black or Hispanic often had disparate impacts compared with either those without disabilities or White older adults with disabilities.

Most notably, older adults with disabilities were more likely to report experiencing financial hardships than older adults without disabilities. Overall, about one-third of older adults reported financial hardships since the start of the pandemic. Although there was no difference by disabling condition in the receipt of stimulus payments, older adults with disabling conditions were more likely to experience each of the financial hardships examined. There were also large differences at the intersection of race or ethnicity and disabling condition. For example, twice as many Hispanic older adults with disabilities did not have enough money to buy food compared with those without disabilities.

Older adults with disabilities also reported negative impacts on health care delays and work. They were also more likely than older adults without disabilities to report delaying many types of health care, such as surgeries and prescriptions, since March 2020. Among older adults whose work was impacted by the pandemic, more older adults with disabilities reported stopping work than older adults without disabilities, and fewer moved to remote work.

Although few contextual factors were associated with these negative COVID outcomes, we found evidence that the contextual factors mattered. First, there were important differences in county-level characteristics for people with and without disabilities, across the full sample and within race or ethnicity. Moreover, older adults with disabilities who are Hispanic, Black, or another race other than White tend to live in counties that performed poorly on measures of several county-level factors relative to people with disabilities who identify as non-Hispanic

White. We did not see a consistent pattern of association between county-level contextual factors and individual experiences with delayed health care or work being affected. For financial outcomes, only YPLL is significant and in the expected direction. These findings reveal that people with disabilities tend to be more highly concentrated in areas that are more susceptible to COVID and other socioeconomic inequalities. However, these contexts do not appear to influence their COVID outcomes beyond respondents' individual identities and experiences.

Study Limitations

The results of this analysis are similar to the results we examined on a nationally representative, weighted subset of adults age 50 and older. However, the data and findings have two key limitations. First, the negative COVID experiences are self-reported and subject to potential biases. For example, because the survey was fielded over about a year, some respondents were answering questions about the impacts of COVID very early during shutdowns while others had a longer period of time to experience negative impacts. Thus, early respondents might not yet have experienced the negative effects that they would eventually experience, and later respondents might have forgotten or misreported experiences from nearly a year earlier. However, the timing of interviews is plausibly random with respect to whether someone has a disabling condition (measured in 2018) and with respect to their race or ethnicity. In addition, some older adults might have experienced different delays in care given variation in the duration and timing of lockdowns and temporary clinic closures. Second, we cannot determine a causal link between disability, race, or ethnicity on pandemic-related outcomes. Some questions were phrased to inquire about the "effects" of COVID-19, while others focused on experiences since March 2020. However, it is likely that older adults with disabilities had more financial hardships, barriers to health care, and difficulty accessing work before the pandemic. Indeed, there is a great deal of literature documenting many such difficulties. This study provides descriptive evidence of the disparities experienced in approximately the first year of the pandemic, but causation cannot be determined.

Implications of the Findings

The findings highlight key takeaways about the importance of: 1) a robust disability-inclusive public health response; 2) the intersectionality lens; and 3) financial policies. First, the

pandemic had disparate impacts on people with disabilities, and the vulnerability of this community suggests future public health events, such as pandemics or natural disasters, might impact them similarly. Before such events occur again, resources could be put into understanding particular needs to better support the well-being of people with disabilities.

Second, it is important to examine this population using an intersectionality lens. Older adults with intersecting identities of disability and historically marginalized race or ethnicity were more likely to have been negatively impacted by the pandemic. When considering impacts separately by race or ethnicity, or by disability, the extent of hardships experienced at the intersection of these identities is hidden. Although the effects we examined are self-reported and do not measure the extent of the hardships experienced, the finding that more people with multiple marginalized identities faced difficulties highlights that continued study of this intersection should lead to policies better aimed at alleviating hardship.

Finally, policies mitigating financial impacts could be universally beneficial. Financial impacts were widespread across every demographic group. We found evidence that intersectional disparate effects were felt on many types of financial hardships. Although most older adults received a stimulus payment, about a third still experienced financial hardships. Although many benefits were expanded during the pandemic, such as extended eligibility for the Supplemental Nutrition Assistance Program, 13 percent of older adults with disabilities reported not having enough money to buy food. Especially for older adults who have reached retirement age, additional financial support might be necessary to mitigate hardships.

References

Abrams, Dominic, Fanny Lalot, and Michael A. Hogg. 2021. "Intergroup and Intragroup Dimensions of COVID-19: A Social Identity Perspective on Social Fragmentation and Unity." *Group Processes & Intergroup Relations* 24(2): 201-209.

Agency for Healthcare Research and Quality. 2011. "Disparities in Health Care Quality Among Racial and Ethnic Minority Groups: Selected Findings from the 2010 National Healthcare Quality and Disparities Reports." Rockville, MD: Department of Health and Human Services. Available at: https://www.ahrq.gov/sites/default/files/wysiwyg/research/findings/nhqrdr/nhqrdr10/minority.pdf

Ali, Amjad, Sabz Ali, Sajjid Ahmed Khan, Dost Muhammad Khan, Kamran Abbas, Alamgir Khalil, Sadaf Manzoor, and Umair Khalil. 2019. "Sample Size Issues in Multilevel Logistic Regression Models." *PloS one*. 14(11): e0225427.

Andersen, Lauren M., Stella R. Harden, Margaret M. Sugg, Jennifer D. Runkle, and Taylor E. Lundquist. 2021. "Analyzing the Spatial Determinants of Local COVID-19 Transmission in the United States." *Science of the Total Environment* 754: 142396.

Armitage, Richard and Laura B. Nellums. 2020. "The COVID-19 Response Must Be Disability Inclusive." *The Lancet Public Health* 5(5): e25

Atlantic Monthly Group. 2021. "The COVID Racial Data Tracker." Accessed June 17, 2020. Available at: https://covidtracking.com/race

Baum, Christopher (Kit) F. and Miguel Henry. 2020. "Socioeconomic Factors Influencing the Spatial Spread of COVID-19 in the United States." SSRN. Available at: https://ssrn.com/abstract=3614877

Bowleg, Lisa. 2020. "We're Not All in This Together: On COVID-19, Intersectionality, and Structural Inequality." *American Journal of Public Health* 110(7): 917.

Bui, Cindy N., Changmin Peng, Jan E. Mutchler, and Jeffrey A. Burr. 2021. "Race and Ethnic Group Disparities in Emotional Distress Among Older Adults During the COVID-19 Pandemic." *The Gerontologist* 61(2): 262-272.

Bureau of Labor Statistics. 2021a. "Persons with a Disability: Labor Force Characteristics—2020." https://www.bls.gov/news.release/disabl.nr0.htm

Bureau of Labor Statistics. 2020b. "Labor Force Statistics from the Current Population Survey: Supplemental Data Measuring the Effects of the Coronavirus (COVID-19) Pandemic on the Labor Market." https://www.bls.gov/cps/effects-of-the-coronavirus-COVID-19-pandemic.htm#highlights%20Oct%202020

Bureau of Labor Statistics. 2020c. “Persons with a Disability: Labor Force Characteristics—2019.” https://www.bls.gov/news.release/archives/disabl_02262020.htm

Choi, Shinae L., Deborah Carr, and Eun Ha Namkung. 2022. “Physical Disability and Older Adults’ Perceived Food and Economic Insecurity During the COVID-19 Pandemic.” *The Journals of Gerontology: Series B* 77(7): e249-55.

Centers for Disease Control and Prevention (CDC). 2021. “COVID-19 Recommendations for Older Adults.” Accessed August 2022. https://www.cdc.gov/aging/covid19/covid19-older-adults.html

Courtney-Long, Elizabeth A., Sebastian D. Romano, Dianna D. Carroll, and Michael H. Fox. 2017. “Socioeconomic Factors at the Intersection of Race and Ethnicity Influencing Health Risks for People with Disabilities.” *Journal of Racial and Ethnic Health Disparities* 4(2): 213-222.

Davis, Owen. 2021. “Employment and Retirement Among Older Workers During the COVID-19 Pandemic.” Working Paper Series 6. New York, NY: Schwartz Center for Economic Policy Analysis and Department of Economics, The New School for Social Research.

Dixon-Ibarra, Alicia and Willi Horner-Johnson. 2014. “Peer Reviewed: Disability Status as an Antecedent to Chronic Conditions: National Health Interview Survey, 2006–2012.” *Preventing Chronic Disease* 11.

Elnaiem, Ahmed D. 2021. “Intersectionality in the Time of COVID-19: Dispatches from a Contact Tracer.” *American Journal of Public Health* 111(1): 93-94.

Friedman, Carli. 2021. “Food Insecurity of People with Disabilities Who Were Medicare Beneficiaries During the COVID-19 Pandemic.” *Disability and Health Journal* 14(4): 101166.

Garcia, Marc A., Amy D. Thierry, and Claire B. Pendergrast. 2021. “The Devastating Economic Impact of COVID-19 on Older Black and Latinx Adults: Implications for Health and Well-Being.” *The Journals of Gerontology: Series B.*

Gauthier, Gertrude R., Jeffrey A. Smith, Catherine García, Marc A. Garcia, and Patricia A. Thomas. 2021. “Exacerbating Inequalities: Social Networks, Racial/Ethnic Disparities, and the COVID-19 Pandemic in the United States.” *The Journals of Gerontology: Series B* 76(3): e88-e92.

Gleason, Jonathan, Wendy Ross, Alexander Fossi, Heather Blonsky, Jane Tobias, and Mary Stephens. 2021. “The Devastating Impact of COVID-19 on Individuals with Intellectual Disabilities in the United States.” *NEJM Catalyst Innovations in Care Delivery* 2(2).

Gonzales, Ernest, Stacey Gordon, Cliff Whetung, Gerri Connaught, Jasmin Collazo, and Jill Hinton. 2021. "Acknowledging Systemic Discrimination in the Context of a Pandemic: Advancing an Anti-Racist and Anti-Ageist Movement." *Journal of Gerontological Social Work* 1-15.

Hatef, Elham, Hsien-Yen Chang, Christopher Kitchen, Jonathan P. Weiner, and Hadi Kharrazi. 2020. "Assessing the Impact of Neighborhood Socioeconomic Characteristics on COVID-19 Prevalence Across Seven States in the United States." *Frontiers in Public Health* 8: 571808.

Health and Retirement Study. 2021. "2020 HRS COVID-19 Project, Early Version 1.0." https://hrsdata.isr.umich.edu/sites/default/files/documentation/data-descriptions/1613082944/2020COVID_DD_Feb2021.pdf

Heeringa, Steven G., Brady T. West, and Patricia A. Berglund. 2017. *Applied Survey Data Analysis.* New York, NY: Chapman and Hall/CRC.

Jashinsky, Terri L., Carrie L. King, Noel M. Kwiat, Brittney L. Henry, and Alexis Lockett-Glover. 2021. "Disability and COVID-19: Impact on Workers, Intersectionality with Race, and Inclusion Strategies. *The Career Development Quarterly* 69(4): 313-325.

Kennedy, Jae, Elizabeth Geneva Wood, and Lex Frieden. 2017. "Disparities in Insurance Coverage, Health Services Use, and Access Following Implementation of the Affordable Care Act: A Comparison of Disabled and Nondisabled Working-Age Adults." *INQUIRY: The Journal of Health Care Organization, Provision, and Financing*.

Kirby, Tony. 2020. "Evidence Mounts on the Disproportionate Effect of COVID-19 on Ethnic Minorities." *The Lancet Respiratory Medicine* 8(6): 547-548. https://doi.org/10.1016/S2213-2600(20)30228-9PubMedGoogle ScholarCrossref

Landes, Scott D., Margaret A. Turk, and Ashlyn WWA Wong. 2021. "COVID-19 Outcomes Among People with Intellectual and Developmental Disability in California: The Importance of Type of Residence and Skilled Nursing Care Needs." *Disability and Health Journal* 14(2): 101051.

Landes, Scott D., Margaret A. Turk, Margaret K. Formica, Katherine E. McDonald, and J. Dalton Stevens. 2020. "COVID-19 Outcomes Among People with Intellectual and Developmental Disability Living in Residential Group Homes in New York State." *Disability and Health Journal* 13(4):100969.

Lebrasseur, Audrey, Noémie Fortin-Bédard, Josiane Lettre, Eve-Line Bussières, Krista Best, Normand Boucher, Mathieu Hotton, et al. 2021. "Impact of COVID-19 on People with Physical Disabilities: A Rapid Review." *Disability and Health Journal* 14(1): 101014.

Lopez, Mark Hugo, Lee Rainie, and Abby Budiman. 2020. "Financial and Health Impacts of COVID-19 Vary Widely by Race and Ethnicity." Pew Research Center. Accessed July 8, 2020. Available at: https://www.pewresearch.org/fact-tank/2020/05/05/financial-and-health-impacts-of-covid-19-vary-widely-by-race-and-ethnicity/

Lund, Emily M., Anjali J. Forber-Pratt, Catherine Wilson, and Linda R. Mona. 2020. "The COVID-19 Pandemic, Stress, and Trauma in the Disability Community: A Call to Action." *Rehabilitation Psychology* 65(4): 313.

McConkey, Roy, Fiona Keogh, Brendan Bunting, Edurne Garcia Iriarte, and Sheelah Flatman Watson. 2016. "Relocating People with Intellectual Disability to New Accommodation and Support Settings: Contrasts Between Personalized Arrangements and Group Home Placements." *Journal of Intellectual Disabilities* 20(2): 109-120.

Millán-Calenti, José C., Javier Tubío, Salvador Pita-Fernández, Isabel González-Abraldes, Trinidad Lorenzo, Teresa Fernández-Arruty, and Ana Maseda. 2010. "Prevalence of Functional Disability in Activities of Daily Living (ADL), Instrumental Activities of Daily Living (IADL) and Associated Factors, as Predictors of Morbidity and Mortality." *Archives of Gerontology and Geriatrics* 50(3): 306-310.

Morris, Zachary. 2022. "Understanding the Increased Financial Hardship Experienced by Older Adults with Disabilities during the COVID-19 Pandemic." Working Paper 2022-9. Chestnut Hill, MA: Center for Retirement Research at Boston College.

Oppel, Richard A., Robert Gebeloff, K.K. Rebecca Lai, Will Wright, and Mitch Smith. 2020. "The Fullest Look Yet at the Racial Inequity of Coronavirus." *The New York Times*. Available at: https://www.nytimes.com/interactive/2020/07/05/us/coronavirus-latinos-african-americans-cdc-data.html

Price-Haywood, Eboni G., Jeffrey Burton, Daniel Fort, and Leonardo Seoane. 2020. "Hospitalization and Mortality Among Black Patients and White Patients with COVID-19." *New England Journal of Medicine* 382(26): 2534-2543.

Polyakova, Maria, Victoria Udalova, Geoffrey Kocks, Katie Genadek, Keith Finlay, and Amy N. Finkelstein. 2021. "Racial Disparities in Excess All-Cause Mortality During the Early COVID-19 Pandemic Varied Substantially Across States: Study Examines the Geographic Variation in Excess All-Cause Mortality by Race to Better Understand the Impact of the COVID-19 Pandemic." *Health Affairs* 40(2): 307-316.

Quinby, Laura, Matthew S. Rutledge, and Gal Wettstein. 2021. "How Has COVID-19 Affected the Labor Force Participation of Older Workers?" Working Paper 2021-13. Chestnut Hill, MA: Center for Retirement Research at Boston College.

Schnake-Mahl, Alina S. and Usama Bilal. 2021. "Person, Place, Time and COVID-19 Inequities." *American Journal of Epidemiology*.

Sonnega, Amanda, Jessica D. Faul, Mary Beth Ofstedal, Kenneth M. Langa, John WR Phillips, and David R. Weir. 2014. "Cohort Profile: The Health and Retirement Study (HRS)." *International Journal of Epidemiology* 43(2): 576-585.

Spector, William D. and John A. Fleishman. 1998. "Combining Activities of Daily Living with Instrumental Activities of Daily Living to Measure Functional Disability. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences* 53(1): S46-S57.

Stevens, Alissa, Elizabeth Courtney-Long, Cathleen Gillespie, and Brian S. Armour. 2014. "Peer Reviewed: Hypertension Among US Adults by Disability Status and Type, National Health and Nutrition Examination Survey, 2001–2010." *Preventing Chronic Disease* 11.

Trout, Lucas Jacob and Arthur Kleinman. 2020. "COVID-19 Requires a Social Medicine Response." *Frontiers in Sociology* 5: 579991.

U.S. Department of Health and Human Services, Office of Minority Health. 2015. "HHS Action Plan to Reduce Racial and Ethnic Health Disparities." Available at: https://minorityhealth.hhs.gov/assets/pdf/hhs/HHS_Plan_complete.pdf

U.S. Department of Health and Human Services, Office of Minority Health. 2020. "2020 Update on the Action Plan to Reduce Racial and Ethnic Health Disparities." Available at: https://www.minorityhealth.hhs.gov/assets/PDF/Update_HHS_Disparities_Dept-FY2020.pdf

Walubita, Tubanji, Ariel Beccia, Esther Boama-Nyarko, Melissa Goulding, Carly Herbert, Jessica Kloppenburg, Guadalupe Mabry, Grace Masters, Asli McCullers, and Sarah Forrester. 2021. "Aging and COVID-19 in Minority Populations: A Perfect Storm." *Current Epidemiology Reports* 8(2): 63-71.

Wu, Xiao, Rachel C. Nethery, M. Benjamin Sabath, Danielle Braun, and Francesca Dominici. 2020. "Air Pollution and COVID-19 Mortality in the United States: Strengths and Limitations of an Ecological Regression Analysis." *Science Advances* 6(45): eabd4049.

Table 2. *Characteristics of Older Adults by Race, Ethnicity, and Disabling Condition (ADLs or IADLs)*

	All older adults	Disabling condition	No disabling condition	*p*-value[a]	Non-Hispanic White	Non-Hispanic Black	Hispanic or Latino	Non-Hispanic other	*Chi-square* value[a]
Unweighted number	8,828	3,497	5,331		4,781	2,010	1,553	428	
Percentage	100.0	39.6	60.4		54.7	22.8	4.9	17.6	
ADL/IADL	39.6	-	-	-	35.7	44.6	38.8	46.2	###
Work-limiting condition	39.8	-	-	-	40.9	41.1	36.7	36.0	###
SSI/DI receipt	13.0	-	-	-	9.1	22.7	12.9	12.5	###
Female	59.6	62.1	58.0	***	58.7	63.4	56.3	59.2	###
Age (mean)	66.7	69.0	65.1	***	69.1	64.0	62.0	64.1	###
Married or partnered	60.4	51.5	66.2	***	64.1	45.9	63.4	65.9	###
Years of education (mean)	12.9	12.1	13.5	***	13.7	12.9	13.6	10.3	###
Number of health conditions (mean)	2.3	3.1	1.8	***	2.3	2.4	2.1	2.1	###
Working for pay in 2020	35.2	18.3	46.2	***	31.8	37.4	46.5	38.5	###

[a] T-test significance is shown in each applicable row using *. Chi-square significance is shown using #. * Indicates $p < 0.10$, ** indicates $p < 0.05$, and *** indicates $p < 0.01$. Blank columns indicate a p-value that is not significant at the $p < 0.10$ level. We use an F-test for continuous variables rather than a Chi-square test.

ADL = activity of daily living; DI = Disability Insurance; IADL = instrumental activity of daily living; SSI = Supplemental Security Income.

Table 3. *Self-Reported Health, Work, and Financial Experiences during the COVID-19 Pandemic by Disabling Condition and Race or Ethnicity*

	All older adults	ADL or IADL	No ADL or IADL	*p*-value[a]	Non-Hispanic White	Non-Hispanic Black	Hispanic or Latino	Non-Hispanic other	*Chi-square* value[a]
Unweighted number	8,828	3,497	5,331		4,781	2,010	1,553	428	
Health outcomes (%)									
Ever received a COVID diagnosis				###					###
Yes	3.5	4.0	3.2		2.6	3.3	6.2	5.6	
Probably yes	0.6	0.5	0.6		0.8	1.7	1.3	2.6	
Probably no	0.7	0.8	0.6		0.9	0.6	1.6	3.7	
No	95.3	94.7	95.6		95.7	95.9	93.3	92.4	
Ever tested	32.3	35.1	30.4	***	27.4	40.6	35.7	33.6	###
If tested, any positive results	9.9	10.0	9.8		8.0	8.3	16.4	14.4	###
If positive diagnosis, hospitalization	15.5	16.8	14.8		11.1	23.9	21.0	-	###
Delayed any type of health care	30.7	36.3	27.2	***	31.1	30.5	28.8	33.7	###
Delayed surgery	13.1	15.9	10.5	***	13.7	12.5	12.1	13.9	###
Delayed doctor visit	57.2	58.5	56.2		56.2	55.2	62.9	56.2	###
Delayed filling a prescription	7.3	9.4	5.2	***	5.0	9.6	11.9	10.3	###
Delayed dental care	72.2	70.8	73.6		74.0	67.9	71.0	76.8	###
Delayed other health care	22.7	27.2	19.0	***	22.6	19.4	26.3	26.8	###
Reasons for delaying care									
Could not afford it	14.5	17.3	11.8	***	12.0	19.4	14.5	19.0	###
Could not get an appointment	15.7	16.8	14.8		15.6	15.4	16.1	16.2	
The clinic/hospital/doctor's office canceled, closed, or suggested rescheduling	51.8	47.1	55.6	***	55.1	49.3	44.8	50.7	###
Decided it could wait	33.3	30.6	35.4	**	35.7	28.4	32.2	36.6	###
Was afraid to go	23.9	23.9	23.9		21.7	24.4	30.6	24.2	###
Work outcomes (%)									

	All older adults	ADL or IADL	No ADL or IADL	*p*-value[a]	Non-Hispanic White	Non-Hispanic Black	Hispanic or Latino	Non-Hispanic other	*Chi-square* value[a]
Work affected because of the pandemic				###					###
Yes	28.7	24.1	30.9		26.3	29.5	32.3	37.9	
No	45.6	44.5	46.4		47.5	47.8	38.6	39.0	
Not working when pandemic started	25.7	30.3	22.1		26.2	22.7	29.3	24.3	
Work affected because of the pandemic (among those working)	38.6	35.5	40.0	***	35.6	38.2	45.6	49.1	###
Stopped work entirely	43.6	51.4	41.1	***	34.5	52.7	58.7	35.5	###
Reason for work ending									
Lost job/laid off permanently	14.0	16.5	13.0		12.6	16.4	14.2	23.1	
Furloughed/laid off temporarily	48.8	42.9	51.5		50.0	49.8	46.5	46.0	
Quit	6.1	6.7	5.8		3.7	6.9	9.0	17.4	#
Changed work days or hours	27.8	29.2	27.4		24.5	28.8	35.8	33.7	###
Work became more risky or dangerous	20.8	25.2	19.7	*	17.8	27.9	23.0	26.0	
Work became harder	21.4	25.6	20.5	*	22.2	21.5	17.3	24.5	
Switched to working remotely	46.5	43.0	47.3		50.8	43.8	33.0	55.8	###
Other changes	34.2	30.1	35.2		34.8	30.1	37.6	33.7	###
Financial outcomes (%)									
Missed rent or mortgage payments	5.5	7.6	4.2	***	1.9	10.3	9.3	8.1	###
Missed credit card or other debt payments	6.7	9.3	5.1	***	3.5	11.6	9.1	10.6	###
Missed other payments (such as utilities or insurance)	7.1	10.3	5.0	***	2.9	14.5	9.7	8.8	###
Could not pay medical bills	6.2	8.7	4.4	***	3.8	9.8	8.0	9.6	###
Didn’t have enough money to buy food	8.9	13.1	5.9	***	4.6	12.7	16.3	11.6	###
Had trouble buying food even though had money	16.0	19.7	13.4	***	13.9	17.4	19.4	18.5	###

	All older adults	ADL or IADL	No ADL or IADL	*p*-value[a]	Non-Hispanic White	Non-Hispanic Black	Hispanic or Latino	Non-Hispanic other	*Chi-square* value[a]
No hardship	68.6	60.5	74.0	***	76.3	60.1	58.7	60.0	###
Other material hardship	6.9	9.0	5.5	***	6.0	8.1	7.7	9.2	###
Income changed because of the pandemic				###					###
Income went up	5.1	5.1	5.2		5.0	5.9	4.6	6.0	
Income went down	17.8	18.7	17.2		13.3	17.6	29.3	26.0	
About the same	77.1	76.2	77.6		81.7	76.7	66.1	68.4	
Received stimulus payment in late 2020/early 2021	80.3	79.7	80.8		81.5	78.7	79.9	76.7	###
Retirement preparedness[b]									
Probability of working full-time after age 65 in 2020	43.4	38.6	44.3	**	47.6	37.4	45.3	39.7	###
Probability of working full-time after age 65 in 2018	45.0	39.2	46.2	***	49.4	38.3	47.8	41.2	###
Expected retirement age in 2020	69.0	68.9	69.0		69.8	67.8	68.5	69.2	###
Expected retirement age in 2018	68.8	68.7	68.8		69.4	68.0	68.3	68.9	###
Frequency of thoughts about retirement in 2020 (%)				###					###
Hardly at all	27.8	28.9	27.6		24.5	29.0	35.4	29.4	
A little	18.0	18.9	17.7		16.0	18.4	22.5	16.2	
Some	25.7	21.5	26.7		31.1	18.3	20.9	27.9	
A lot	28.6	30.6	28.1		28.2	34.8	21.8	16.3	

[a] T-test significance is shown in each applicable row using *. For categorical variables, Chi-square significance is shown in the variable heading row. Chi-square significance is shown using #. * Indicates $p < 0.10$, ** indicates $p < 0.05$, and *** indicates $p < 0.01$. Blank columns indicate a p-value that is not significant at the $p < 0.10$ level. We use an F-test for continuous variables rather than a Chi-square test.
[b] Among those working in 2018 and 2020.
ADL = activity of daily living; IADL = instrumental activity of daily living.

Table 4. *Self-Reported Health, Work, and Financial Experiences during the COVID-19 Pandemic by Disabling Condition within Race or Ethnicity*

	Non-Hispanic White			Non-Hispanic Black			Hispanic or Latino			Non-Hispanic other			
	ADL or IADL	No ADL or IADL	*p*-value[a]	ADL or IADL	No ADL or IADL	*p*-value[a]	ADL or IADL	No ADL or IADL	*p*-value[a]	ADL or IADL	No ADL or IADL	*p*-value[a]	*Chi-square* value[c]
Unweighted number	1,705	3,076		897	1,113		717	836		166	262		
Health outcomes (%)													
Ever received a COVID diagnosis			###			##			#				###
Yes	3.5	2.2		3.3	3.3		6.4	6.0		4.6	6.6		
Probably yes	0.9	0.8		2.2	1.4		-	1.9		-	3.6		
Probably no	1.2	0.7		0.6	0.6		3.6	-		-	5.5		
No	94.4	96.3		95.8	96.0		92.9	93.7		95.6	89.3		
Ever tested	30.4	25.7	***	42.3	39.3		37.7	34.0		38.4	30.6		###
If tested, any positive results	8.7	7.6		8.2	8.4		16.1	16.7		10.7	18.2		##
If positive diagnosis, hospitalization	13.6	8.7		17.4	29.3		16.9	25.7		-	-		
Delayed any type of health care	37.6	27.7	***	34.4	27.5	***	34.3	24.2	***	43.2	28.2	***	###
Delayed surgery	16.7	11.3	***	16.3	7.9	***	14.5	9.7		9.8	21.8		
Delayed doctor visit	56.3	56.2		55.0	55.3		65.9	59.5		70.4	44.0	**	
Delayed filling a prescription	6.7	3.6	**	9.5	9.7		17.1	5.7	***	14.9	6.5		###
Delayed dental care	71.9	75.6					71.8	70.0		79.1	74.1		###
Delayed other health care	25.7	20.4	**	65.8	70.1		31.1	20.7	**	31.4	22.3		###
Reasons for delaying care													
Could not afford it	15.3	9.1	***	20.3	18.3		16.7	12.0		20.5	17.3		###

	Non-Hispanic White			Non-Hispanic Black			Hispanic or Latino			Non-Hispanic other			
	ADL or IADL	No ADL or IADL	*p*-value[a]	ADL or IADL	No ADL or IADL	*p*-value[a]	ADL or IADL	No ADL or IADL	*p*-value[a]	ADL or IADL	No ADL or IADL	*p*-value[a]	*Chi-square* value[c]
Could not get an appointment	19.3	13.3	***	12.5	18.7	*	16.3	15.8		17.4	15.2		
The clinic/hospital/doctor's office canceled, closed, or suggested rescheduling	50.9	57.9	**	42.9	55.6	***	42.4	47.6		51.8	49.9		
Decided it could wait	32.5	37.7	*	26.0	30.7		30.8	33.7		33.5	39.1		##
Was afraid to go	22.0	21.5		28.1	20.9	*	25.0	37.4	***	25.6	23.4		##
Work outcomes (%)													
Work affected because of the pandemic			###			###			###			###	###
Yes	21.3	28.2		23.6	33.2		29.3	34.3	**	36.1	38.7		
No	46.6	48.1		48.0	47.7		36.4	40.5		36.0	40.9		
Not working when pandemic started	30.3	23.4		27.2	18.0		33.9	24.4	***	29.0	20.7		
Work affected because of the pandemic (among those working)	31.5	37.1	***	32.9	41.1	***	45.5	45.7		50.8	48.3		###
Stopped work entirely	41.4	32.7	**	61.7	49.6	**	63.9	56.5		31.8	37.0		###
Reason for work ending													
Lost job/laid off permanently	13.3	12.4		17.1	16.1		20.0	10.9		6.7	34.5		
Furloughed/laid off temporarily	42.5	52.7		45.0	52.1		44.1	47.9		44.0	46.7		
Quit	3.6	3.7		7.9	6.3		7.7	1.0		38.9	8.9		

	Non-Hispanic White			Non-Hispanic Black			Hispanic or Latino			Non-Hispanic other			
	ADL or IADL	No ADL or IADL	*p*-value[a]	ADL or IADL	No ADL or IADL	*p*-value[a]	ADL or IADL	No ADL or IADL	*p*-value[a]	ADL or IADL	No ADL or IADL	*p*-value[a]	*Chi-square* value[c]
Changed work days or hours	26.5	24.1		40.1	26.4	*	30.2	37.7		16.1	39.4	*	
Work became more risky or dangerous	20.7	17.2		28.7	27.7		27.4	21.4		27.5	25.6		
Work became harder	27.3	21.3		36.5	18.4	**	22.0	16.0		10.2	29.7	*	
Switched to working remotely	49.6	51.0		23.0	48.2	***	47.8	28.5	**	49.4	57.7		###
Other changes	29.3	36.0		31.5	29.7		25.4	41.6	*	37.7	32.4		#
Financial outcomes (%)													
Missed rent or mortgage payments	3.0	1.3	***	12.6	8.7	**	12.7	7.1	***	7.0	8.8		###
Missed credit card or other debt payments	5.6	2.2	***	14.3	9.6	***	11.8	7.4	***	11.7	9.9		###
Missed other payments (such as utilities or insurance)	4.7	1.9	***	18.8	11.1	***	13.6	7.1	***	11.9	6.5	*	###
Could not pay medical bills	5.7	2.5	***	13.1	7.2	***	9.7	6.5	**	13.4	6.7	*	###
Didn't have enough money to buy food	7.0	3.0	***	18.4	8.2	***	22.3	11.4	***	13.7	9.9		###
Had trouble buying food even though had money	18.1	11.4	***	21.1	14.4	***	22.7	16.6	***	17.5	19.2		###
No hardship	68.4	80.8	***	52.5	66.1	***	50.7	65.3	***	55.0	62.9		###
Other material hardship	7.8	4.9	***	10.5	6.2	***	9.7	6.1	**	11.4	7.6		###
Income changed because of the pandemic			###			###			###			###	###
Income went up	4.9	5.1		5.8	5.9		4.6	4.4		6.9	5.6		

	Non-Hispanic White			Non-Hispanic Black			Hispanic or Latino			Non-Hispanic other			
	ADL or IADL	No ADL or IADL	*p*-value[a]	ADL or IADL	No ADL or IADL	*p*-value[a]	ADL or IADL	No ADL or IADL	*p*-value[a]	ADL or IADL	No ADL or IADL	*p*-value[a]	*Chi-square* value[c]
Income went down	14.9	12.7		17.8	17.7		28.0	30.4		31.3	23.3		
About the same	80.3	82.3		77.1	76.5		67.2	65.3		62.3	71.5		
Received stimulus payment in late 2020/early 2021	81.5	81.5		77.7	80.0		80.2	79.5		70.7	79.8		###
Retirement preparedness[b]													
Probability of working full-time after age 65 in 2020	43.1	48.3		33.8	38.3		32.3	41.8	**	49.2	44.4		#
Probability of working full-time after age 65 in 2018	45.6	50.0		28.6	40.9	***	38.9	42.0		45.4	48.3		###
Expected retirement age in 2020	69.9	69.7		68.2	67.7		68.2	68.6		67.9	69.4		###
Expected retirement age in 2018	69.4	69.4		68.0	68.0		68.7	68.2		66.9	69.3		###
Frequency of thoughts about retirement in 2020 (%)			###			#			###				##
Hardly at all	24.6	24.5		27.9	29.3		40.0	33.8		32.7	28.7		
A little	17.7	15.8		20.0	18.0		19.6	23.6		16.6	16.2		
Some	32.6	30.9		12.1	19.9		13.5	23.5		24.7	28.7		
A lot	25.3	28.8		40.6	33.3		27.8	19.8		29.5	28.2		

[a] T-test significance is shown in each applicable row using *. For categorical variables, Chi-square significance is shown in the variable heading row. Chi-square significance is shown using #. * Indicates $p < 0.10$, ** indicates $p < 0.05$, and *** indicates $p < 0.01$. Blank columns indicate a p-value that is not significant at the $p < 0.10$ level. We use an F-test for continuous variables rather than a Chi-square test.

[b]Among those working in 2018 and 2020.
[c] Chi-square value is across race or ethnicity, conditional on having one or more difficulties with ADLs or IADLs.
ADL = activity of daily living; IADL = instrumental activity of daily living.

Table 5. *Contextual Factors of Counties in Which Older Adults Lived by Race or Ethnicity, and Disabling* Condition

	All older adults				Non-Hispanic White			
	All older adults	ADL or IADL	No ADL or IADL	*p*-value[a]	All Non-Hispanic White	ADL or IADL	No ADL or IADL	*p*-value[a]
Mean weighted county-level value for HRS respondents [a]								
COVID-19 risk and vulnerability								
Case counts (per 100,000)	21.7	22.1	21.4	***	21.5	21.9	21.2	***
Pandemic Vulnerability Index	0.5	0.5	0.5	***	0.5	0.5	0.5	***
Socioeconomic characteristics								
Social Vulnerability Index	0.5	0.5	0.5	***	0.5	0.5	0.5	***
Residential racial segregation	33.9	33.7	34.0		34.1	33.9	34.1	
Medical infrastructure and health care access								
Hospital beds capacity	0.4	0.4	0.4		0.4	0.4	0.4	
Years of potential life lost	7,760.5	8,105.5	7,502.2	***	7,644.5	7,946.3	7,438.3	***
Employment opportunities and income								
Unemployment	5.4	5.4	5.3	**	5.2	5.3	5.2	**
Percentage receiving government assistance	12.3	12.7	12.0	***	11.9	12.3	11.6	***
Number of observations	8,616	3,408	5,208		4,678	1,664	3,014	

	Non-Hispanic Black				Hispanic or Latino			
	All Non-Hispanic Black	ADL or IADL	No ADL or IADL	*p*-value[a]	All Hispanic	ADL or IADL	No ADL or IADL	*p*-value[a]
Mean weighted county-level value for HRS respondents								
COVID-19 risk and vulnerability								
Case counts (per 100,000)	21.8	22.1	21.5	***	22.3	22.6	22.0	*
Pandemic Vulnerability Index	0.5	0.5	0.5	***	0.5	0.5	0.5	***
Socioeconomic characteristics								
Social Vulnerability Index	0.6	0.6	0.5	***	0.6	0.6	0.5	***
Residential racial segregation	37.8	36.9	38.6	***	35.3	35.3	35.2	
Medical infrastructure and health care access								
Hospital beds capacity	0.4	0.4	0.4	**	0.5	0.5	0.4	***
Years of potential life lost	7,977.9	8,439.9	7,562.6	***	6,904.6	6,815.3	6,967.8	
Employment opportunities and income								
Unemployment	5.8	6.0	5.7	***	5.6	5.8	5.5	***
Percentage receiving government assistance	13.2	13.9	12.6	***	12.8	13.3	12.4	***
Number of observations	1,971	881	1,090		1,501	690	811	

	Non-Hispanic other			
	All Non-Hispanic other	ADL or IADL	No ADL or IADL	*p*-value[a]
Mean weighted county-level value for HRS respondents				

	Non-Hispanic other			
	All Non-Hispanic other	ADL or IADL	No ADL or IADL	*p*-value[a]
COVID-19 risk and vulnerability				
Case counts (per 100,000)	22.1	22.8	21.6	**
Pandemic Vulnerability Index	0.5	0.5	0.5	
Socioeconomic characteristics				
Social Vulnerability Index	0.5	0.5	0.5	
Residential racial segregation	37.2	37.1	37.4	
Medical infrastructure and health care access				
Hospital beds capacity	0.4	0.4	0.5	
Years of potential life lost	7,185.7	7,528.8	6,902.1	***
Employment opportunities and income				
Unemployment	5.7	5.5	5.8	
Percentage receiving government assistance	12.3	12.3	12.3	
Number of observations	413	162	251	

[a] Means of county-level variables are weighted to adjust for different proportions of HRS respondents across counties. A simple inverse-probability weight was created to account for county clustering across the entire sample and again for each racial/ethnic subgroup.
ADL = activity of daily living; HRS = Health and Retirement Study; IADL = instrumental activity of daily living.

Table 6. *Association between Area-Level Pandemic Vulnerability Index and Self-Reported Health, Work, and Financial Experiences during the COVID-19 Pandemic*

Pandemic Vulnerability Index (PVI)									
	Finance			Health care delays			Work		
	Model 0	Model 1	Model 2	Model 0	Model 1	Model 2	Model 0	Model 1	Model 2
PVI	1.05	1.03	1.04	1.0	1.0	0.9	1.0	1.0	1.0
Disability	1.94 ***	1.89 ***	1.90 ***	1.4 ***	1.6 ***	1.6 ***	0.4 ***	0.7 ***	0.7 ***
Race									
Black	1.99 ***	1.48 ***	1.48 ***	1.0	0.8 ***	0.8 ***	1.3 ***	0.9	0.9
Other	2.11 ***	1.60 ***	1.61 ***	1.1	0.9	0.9	1.5 ***	0.9	0.9
Hispanic	2.17 ***	1.64 ***	1.63 ***	0.9 **	0.8 ***	0.8 ***	1.4 ***	1.1 *	1.2 *
PVI* Disability	N/A	N/A	0.93	N/A	N/A	1.0	N/A	N/A	0.9
PVI*Black	N/A	N/A	1.04	N/A	N/A	1.0	N/A	N/A	1.0
PVI*Other	N/A	N/A	1.01	N/A	N/A	1.0	N/A	N/A	1.0
PVI* Hispanic	N/A	N/A	1.09	N/A	N/A	1.1	N/A	N/A	0.9
Individual Covariates		Yes	Yes		Yes	Yes		Yes	Yes
Interaction terms			Yes			Yes			Yes
N	8,503	8,486	8,486	8,505	8,487	8,487	8,533	8,507	8,507
Number of Counties	781	778	778	779	776	776	781	777	777
AIC	10,082.7	9,719.9	9,724.8	10,441.3	10,066.7	10,073.5	9765.9	8,352.6	8,356.5
BIC	10,132.0	9,889.0	9,922.1	10,490.7	10,228.8	10,263.8	9815.3	8,514.7	8,546.8

Notes: * Indicates $p < 0.10$, ** indicates $p < 0.05$, and *** indicates $p < 0.01$. N/A = not applicable.

Table 7. Association between Area-Level COVID Case Counts and Self-Reported Health, Work, and Financial Experiences during the COVID-19 Pandemic

Cases per 100,000 (C100)																
	Finance						Health care delays						Work					
	Model 0		Model 1		Model 2		Model 0		Model 1		Model 2		Model 0		Model 1		Model 2	
C100	1.06	*	1.05		1.05		0.9	**	1.0	*	0.9	**	1.0		1.0		1.0	
Disability	1.94	***	1.88	***	1.89	***	1.4	***	1.6	***	1.6	***	0.4	***	0.7	***	0.7	***
Race																		
Black	2.04	***	1.50	***	1.50	***	0.9		0.8	***	0.8	***	1.3	***	0.9		0.9	
Other	2.14	***	1.61	***	1.63	***	1.1		0.9		0.9		1.5	***	0.8		0.8	
Hispanic	2.18	***	1.64	***	1.63	***	0.9	**	0.8	***	0.8	***	1.4	***	1.1		1.2	*
C100* Disability	N/A		N/A		0.92		N/A		N/A		1.1	*	N/A		N/A		1.0	
C100*Black	N/A		N/A		1.09		N/A		N/A		1.0		N/A		N/A		1.0	
C100*Other	N/A		N/A		0.95		N/A		N/A		0.9		N/A		N/A		1.3	**
C100* Hispanic	N/A		N/A		1.08		N/A		N/A		1.1		N/A		N/A		1.0	
Individual covariates			Yes		Yes				Yes		Yes				Yes		Yes	
Interaction terms					Yes						Yes						Yes	
N	8,497		8,480		8,480		8,499		8,481		8,481		8,527		8,501		8,501	
Number of counties	777		774		774		775		772		772		777		773		773	
AIC	10,074.1		9,710.4		9,713.3		10,433.1		10,062.8		10,063.6		9,760.1		8,348.8		8,350.1	
BIC	10,123.4		9,879.5		9,910.6		10,482.5		10,231.9		10,253.8		9,809.5		8,510.9		8,540.4	

Notes: * Indicates $p < 0.10$, ** indicates $p < 0.05$, and *** indicates $p < 0.01$. N/A = not applicable.

Table 8. *Association between Area-Level Social Vulnerability Index and Self-Reported Health, Work, and Financial Experiences during the COVID-19 Pandemic*

Social Vulnerability Index (SVI)									
	Finance			Health care delays			Work		
	Model 0	Model 1	Model 2	Model 0	Model 1	Model 2	Model 0	Model 1	Model 2
SVI	1.05	1.04	1.06	1.0	1.0	0.9	0.9 *	1.0	1.0
Disability	1.94 ***	1.88 ***	1.89 ***	1.4 ***	1.6 ***	1.6 ***	0.4 ***	0.7 ***	0.7 ***
Race									
Black	2.01 ***	1.48 ***	1.48 ***	1.0	0.8 ***	0.8 ***	1.3 ***	0.9	0.9
Other	2.12 ***	1.59 ***	1.59 ***	1.1	0.9	0.9	1.5 ***	0.9	0.9
Hispanic	2.16 ***	1.63 ***	1.62 ***	0.9 *	0.8 ***	0.8 ***	1.4 ***	1.2 *	1.2 **
SVI* Disability	N/A	N/A	0.94	N/A	N/A	1.1	N/A	N/A	0.9
SVI*Black	N/A	N/A	1.00	N/A	N/A	1.0	N/A	N/A	1.0
SVI*Other	N/A	N/A	1.01	N/A	N/A	1.0	N/A	N/A	1.1
SVI* Hispanic	N/A	N/A	1.01	N/A	N/A	1.1	N/A	N/A	0.9
Individual covariates		Yes	Yes		Yes	Yes		Yes	Yes
Interaction terms			Yes			Yes			Yes
N	8,503	8,486	8,486	8,505	8,487	8,487	8,533	8,507	8,507
Number of counties	781	778	778	779	776	776	781	777	777
AIC	10,082.5	9,719.2	9,725.9	10,441.4	10,068.0	10,074.3	9,762.9	8,352.0	8,354.7
BIC	10,131.8	9,888.3	9,923.2	10,490.7	10,230.0	10,271.6	9,812.3	8,514.1	8,545.1

Notes: * Indicates $p < 0.10$, ** indicates $p < 0.05$, and *** indicates $p < 0.01$. N/A = not applicable.

Table 9. *Association between Area-Level Residential Racial Segregation and Self-Reported Health, Work, and Financial Experiences during the COVID-19 Pandemic*

Non-White–White residential racial segregation (NWS)									
	Finance			Health care delays			Work		
	Model 0	Model 1	Model 2	Model 0	Model 1	Model 2	Model 0	Model 1	Model 2
NWS	0.99	0.98	0.94	1.0	1.0	1.1	1.1 **	1.1 **	1.1
Disability	1.95 ***	1.89 ***	1.89 ***	1.4 ***	1.6 ***	1.6 ***	0.4 ***	0.7 ***	0.7 ***
Race									
Black	2.05 ***	1.51 ***	1.51 ***	0.9	0.8 ***	0.7 ***	1.2 ***	0.9	0.9 *
Other	2.12 ***	1.60 ***	1.61 ***	1.1	0.9	0.9	1.5 ***	0.8	0.9
Hispanic	2.20 ***	1.65 ***	1.70 ***	0.9 **	0.8 ***	0.8 ***	1.4 ***	1.1	1.1
NWS* Disability	N/A	N/A	0.96	N/A	N/A	0.9	N/A	N/A	1.0
NWS*Black	N/A	N/A	1.09	N/A	N/A	1.0	N/A	N/A	1.1
NWS*Other	N/A	N/A	1.22	N/A	N/A	0.8	N/A	N/A	1.2
NWS* Hispanic	N/A	N/A	1.16 **	N/A	N/A	1.0	N/A	N/A	1.0
Individual covariates		Yes	Yes		Yes	Yes		Yes	Yes
Interaction terms			Yes			Yes			Yes
N	8,490	8,473	8,473	8,492	8,474	8,474	8,520	8,494	8,494
Number of counties	772	769	769	770	767	767	772	768	768
AIC	10,075.0	9,711.9	9,713.0	10,425.6	10,050.6	10,054.9	9,752.4	8,340.9	8,346.2
BIC	10,124.4	9,880.9	9,910.3	10,474.9	10,212.6	10,245.1	9,801.7	8,503.0	8,536.5

Notes: * Indicates $p < 0.10$, ** indicates $p < 0.05$, and *** indicates $p < 0.01$. N/A = not applicable.

Table 10. *Association between Area-Level Years of Potential Life Lost and Self-Reported Health, Work, and Financial Experiences during the COVID-19 Pandemic*

Years of potential life lost (YPLL)												
	Finance			Health care delays			Work		
	Model 0	Model 1	Model 2	Model 0	Model 1	Model 2	Model 0	Model 1	Model 2
YPPL	1.08 ***	1.05 *	1.13 ***	0.9 ***	0.9 **	0.9 ***	0.8 ***	0.9 ***	0.9 *
Disability	1.95 ***	1.90 ***	1.90 ***	1.4 ***	1.6 ***	1.6 ***	0.4 ***	0.7 ***	0.7 ***
Race									
Black	2.00 ***	1.49 ***	1.53 ***	1.0	0.8 ***	0.8 ***	1.3 ***	0.9	0.9
Other	2.14 ***	1.61 ***	1.59 ***	1.1	0.9	0.8	1.5 ***	0.8	0.8
Hispanic	2.25 ***	1.69 ***	1.66 ***	0.8 ***	0.7 ***	0.8 **	1.4 ***	1.1	1.1
YPPL* Disability	N/A	N/A	1.0	N/A	N/A	1.0	N/A	N/A	0.9 **
YPPL*Black	N/A	N/A	0.9 **	N/A	N/A	1.1	N/A	N/A	1.1
YPPL*Other	N/A	N/A	0.8 *	N/A	N/A	1.0	N/A	N/A	1.0
YPPL* Hispanic	N/A	N/A	0.9	N/A	N/A	1.3 **	N/A	N/A	0.9
Individual covariates		Yes	Yes		Yes	Yes		Yes	Yes
Interaction terms			Yes			Yes			Yes
N	8,473	8,456	8,456	8,475	8,457	8,457	8,503	8,477	8,477
Number of counties	772	769	769	770	767	767	772	768	768
AIC	10,034.2	9,677.9	9,678.8	10,394.5	10,023.9	10,024.7	9,710.2	8,309.4	8,311.0
BIC	10,083.5	9,846.9	9,876.0	10,443.8	10,185.9	10,214.8	9,759.6	8,471.4	8,501.2

Notes: * Indicates $p < 0.10$, ** indicates $p < 0.05$, and *** indicates $p < 0.01$. N/A = not applicable.

Table 11. *Association between Area-Level Hospital Capacity and Self-Reported Health, Work, and Financial Experiences during the COVID-19 Pandemic*

Hospital capacity, available beds (HB)									
	Finance			Health care delays			Work		
	Model 0	Model 1	Model 2	Model 0	Model 1	Model 2	Model 0	Model 1	Model 2
HB	1.01	1.02	0.99	1.0	1.0	1.0	1.0	1.0	1.0
Disability	1.95 ***	1.89 ***	1.89 ***	1.4 ***	1.6 ***	1.6 ***	0.4 ***	0.7 ***	0.7 ***
Race									
Black	2.05 ***	1.51 ***	1.50 ***	0.9	0.8 ***	0.8 ***	1.3 ***	0.9	0.9
Other	2.14 ***	1.61 ***	1.65 ***	1.1	0.9	0.9	1.5 ***	0.9	0.9
Hispanic	2.21 ***	1.66 ***	1.65 ***	0.8 **	0.8 ***	0.8 ***	1.4 ***	1.1	1.1
HB* Disability	N/A	N/A	1.1 **	N/A	N/A	1.0	N/A	N/A	1.2 ***
HB*Black	N/A	N/A	0.9	N/A	N/A	1.0	N/A	N/A	0.9 *
HB*Other	N/A	N/A	0.8	N/A	N/A	1.0	N/A	N/A	0.8
HB*Hispanic	N/A	N/A	1.0	N/A	N/A	0.8 **	N/A	N/A	1.1
Individual covariates		Yes	Yes		Yes	Yes		Yes	Yes
Interaction terms			Yes			Yes			Yes
N	8,503	8,486	8,486	8,505	8,487	8,487	8,533	8,507	8,507
Number of counties	781	778	778	779	776	776	781	777	777
AIC	10,084.6	9,720.5	9,721.1	10,442.7	10,068.5	10,071.5	9,766.7	8,352.9	8,346.4
BIC	10,133.9	9,889.6	9,918.4	10,492.1	10,230.6	10,261.8	9,816.0	8,515.0	8,536.7

Notes: * Indicates $p < 0.10$, ** indicates $p < 0.05$, and *** indicates $p < 0.01$. N/A = not applicable.

Table 12. *Association between Area-Level County Unemployment Rate and Self-Reported Health, Work, and Financial Experiences during the COVID-19 Pandemic*

County unemployment rate (UR)									
	Finance			Health care delays			Work		
	Model 0	Model 1	Model 2	Model 0	Model 1	Model 2	Model 0	Model 1	Model 2
UR	1.05	1.01	1.03	1.0	1.0	1.0	1.0	1.0	1.0
Disability	1.94 ***	1.89 ***	1.89 ***	1.4 ***	1.6 ***	1.6 ***	0.4 ***	0.7 ***	0.7 ***
Race									
Black	2.01 ***	1.50 ***	1.52 ***	0.9	0.8 ***	0.8 ***	1.3 ***	0.9	0.9
Other	2.12 ***	1.61 ***	1.59 ***	1.1	0.9	0.9	1.5 ***	0.9	0.8
Hispanic	2.18 ***	1.65 ***	1.64 ***	0.9 **	0.8 ***	0.8 ***	1.4 ***	1.2 *	1.2 **
UR* Disability	N/A	N/A	1.0	N/A	N/A	1.0	N/A	N/A	0.9
UR*Black	N/A	N/A	0.9	N/A	N/A	1.0	N/A	N/A	0.9
UR*Other	N/A	N/A	1.1	N/A	N/A	0.9	N/A	N/A	0.9
UR*Hispanic	N/A	N/A	1.0	N/A	N/A	1.1	N/A	N/A	0.8 **
Individual covariates		Yes	Yes		Yes	Yes		Yes	Yes
Interaction terms			Yes			Yes			Yes
N	8,503	8,486	8,486	8,505	8,487	8,487	8,533	8,507	8,507
Number of counties	781	778	778	779	776	776	781	777	777
AIC	10,082.4	9,720.6	9,725.0	10,442.8	10,068.2	10,075.8	9,766.5	8,351.3	8,351.7
BIC	10,131.7	9,889.7	9,922.3	10,492.2	10,230.3	10,273.1	9,815.9	8,513.4	8,542.0

Notes: * Indicates $p < 0.10$, ** indicates $p < 0.05$, and *** indicates $p < 0.01$. N/A = not applicable.

Table 13. *Association between Residents in County Receiving Government Assistance and Self-Reported Health, Work, and Financial Experiences during the COVID-19 Pandemic*

Residents receiving government assistance (GA), percentage															
	Finance				Health care delays				Work						
	Model 0		Model 1		Model 2		Model 0		Model 1		Model 2		Model 0		Model 1		Model 2	
GA	1.04		1.03		1.07		1.0		1.0		1.0		0.9	**	0.9	**	1.0	
Disability	1.94	***	1.88	***	1.89	***	1.4	***	1.6	***	1.6	***	0.4	***	0.7	***	0.7	***
Race																		
Black	2.02	***	1.49	***	1.50	***	0.9		0.8	***	0.8	***	1.3	***	0.9		0.9	
Other	2.13	***	1.60	***	1.61	***	1.1		0.9		0.9		1.5	***	0.9		0.9	
Hispanic	2.17	***	1.64	***	1.63	***	0.9	**	0.8	***	0.8	***	1.4	***	1.2	*	1.2	**
GA* Disability	N/A		N/A		0.9		N/A		N/A		1.0		N/A		N/A		0.9	
GA*Black	N/A		N/A		1.0		N/A		N/A		1.0		N/A		N/A		1.0	
GA*Other	N/A		N/A		1.0		N/A		N/A		1.1		N/A		N/A		1.1	
GA*Hispanic	N/A		N/A		1.0		N/A		N/A		1.1		N/A		N/A		1.0	
Individual covariates			Yes		Yes				Yes		Yes				Yes		Yes	
Interaction terms					Yes						Yes						Yes	
N	8,503		8,486		8,486		8,505		8,487		8,487		8,533		8,507		8,507	
Number of counties	781		778		778		779		776		776		781		777		777	
AIC	10,082.9		9,719.8		9,725.6		10,442.3		10,068.5		10,075.5		9,760.2		8,349.3		8,355.3	
BIC	10,132.3		9,888.9		9,922.92		10,491.7		10,230.6		10,272.8		9,809.6		8,511.4		8,545.6	

Notes: * Indicates $p < 0.10$, ** indicates $p < 0.05$, and *** indicates $p < 0.01$. N/A = not applicable.

Table 14. *Association between Political Party of State and Self-Reported Health, Work, and Financial Experiences during the COVID-19 Pandemic*

Republican control of state (RCS)									
	Finance			Health care delays			Work		
	Model 0	Model 1	Model 2	Model 0	Model 1	Model 2	Model 0	Model 1	Model 2
RCS	1.2 **	1.2 **	1.2 **	0.8 ***	0.8 ***	0.7 ***	0.9 **	1.0	0.9
Disability	1.9 ***	1.9 ***	2.0 ***	1.4 ***	1.6 ***	1.6 ***	0.4 ***	0.7 ***	0.7 ***
Race									
Black	2.1 ***	1.5 ***	1.5 ***	0.9	0.8 ***	0.7 ***	1.3 ***	0.9	0.9
Other	2.1 ***	1.6 ***	1.5 ***	1.1	0.9	0.8	1.6 ***	0.8	0.9
Hispanic	2.2 ***	1.6 ***	1.7 ***	0.8 **	0.8 ***	0.7 ***	1.4 ***	1.1	1.0
RCS* Disability	N/A	N/A	0.9	N/A	N/A	1.0	N/A	N/A	1.0
RCS*Black	N/A	N/A	1.0	N/A	N/A	1.2 *	N/A	N/A	1.2
RCS*Other	N/A	N/A	1.1	N/A	N/A	1.2	N/A	N/A	0.9
RCS*Hispanic	N/A	N/A	1.0	N/A	N/A	1.5 ***	N/A	N/A	1.3
Individual covariates		Yes	Yes		Yes	Yes		Yes	Yes
Interaction terms			Yes			Yes			Yes
N	8,416	8,400	8,400	8,419	8,402	8,402	8,447	8,422	8,422
Number of states	47	47	47	47	47	47	47	47	47
AIC	9,999.8	9,635.1	9,640.9	10,322.0	9,955.6	9,956.7	9,727.4	8,269.2	8,274.4
BIC	10,049.1	9,804.0	9,837.9	10,364.2	10,117.4	10,153.8	9,776.7	8,431.1	8,464.4

Notes: * Indicates $p < 0.10$, ** indicates $p < 0.05$, and *** indicates $p < 0.01$. N/A = not applicable.

Appendix Table 1. *Self-Reported Health, Work, and Financial Experiences during the COVID-19 Pandemic by Alternative Disabling Conditions*

	All older adults	Work-limiting condition	No work-limiting condition	*p*-value[a]	SSI/DI receipt	No SSI/DI receipt	*p*-value[a]
Unweighted number	8,828	3,358	5,083		1,149	7,679	
Health outcomes (%)							
Ever received a COVID diagnosis				###			###
Yes	3.5	3.6	3.5		2.0	3.7	
Probably yes	0.6	0.7	0.6		0.4	0.6	
Probably no	0.7	0.9	0.5		0.9	0.7	
No	95.3	94.8	95.5		96.8	94.5	
Ever tested	32.3	33.8	32.0		32.7	32.2	
If tested, any positive results	9.9	9.3	10.5		5.5	10.8	***
If positive diagnosis, hospitalization	15.5	23.2	10.9	***	12.4	15.9	
Delayed any type of health care	30.7	37.3	27.1	***	32.6	30.4	
Delayed surgery	13.1	15.8	10.3	***	15.2	12.6	
Delayed doctor visit	57.2	58.0	56.8		52.2	58.1	**
Delayed filling a prescription	7.3	7.9	6.3		8.3	7.0	
Delayed dental care	72.2	71.5	73.4		73.0	72.1	
Delayed other health care	22.7	26.7	18.9	***	24.4	22.3	
Reasons for delaying care							
Could not afford it	14.5	15.3	13.6		17.0	13.8	*
Could not get an appointment	15.7	15.8	15.9		15.2	15.8	
The clinic/hospital/doctor's office canceled, closed, or suggested rescheduling	51.8	50.5	53.5		47.9	52.5	
Decided it could wait	33.3	33.6	33.4		31.6	33.5	
Was afraid to go	23.9	25.2	22.3		24.0	23.9	
Work outcomes (%)							
Work affected because of the pandemic				###			###
Yes	28.7	20.3	34.3		11.8	31.2	

	All older adults	Work-limiting condition	No work-limiting condition	*p*-value[a]	SSI/DI receipt	No SSI/DI receipt	*p*-value[a]
No	45.6	45.9	45.8		51.3	44.7	
Not working when pandemic started	25.7	31.6	19.1		38.5	23.7	
Work affected because of the pandemic (among those working)	38.6	31.0	42.7	***	20.3	40.8	***
Stopped work entirely	43.6	57.0	40.0	***	73.6	42.2	***
Reason for work ending				##			
Lost job/laid off permanently	14.0	20.7	11.9		18.9	13.7	
Furloughed/laid off temporarily	48.8	39.0	53.0		31.9	50.4	
Quit	6.1	9.9	4.4		8.6	5.9	
Changed work days or hours	27.8	27.3	27.9		24.8	27.8	
Work became more risky or dangerous	20.8	24.9	20.2		17.2	20.8	
Work became harder	21.4	26.7	20.5	*	14.7	21.5	
Switched to working remotely	46.5	41.3	47.4		34.7	46.7	
Other changes	34.2	36.3	34.0		40.4	34.1	
Income changed because of the pandemic				###			###
Income went up	5.1	3.5	6.3		3.7	5.4	
Income went down	17.8	17.5	18.4		12.0	18.7	
About the same	77.1	79.1	75.3		84.3	75.9	
Financial outcomes (%)							
Missed rent or mortgage payments	5.5	7.5	4.5	***	5.6	5.4	
Missed credit card or other debt payments	6.7	9.4	5.2	***	7.7	6.5	
Missed other payments (such as utilities or insurance)	7.1	9.2	5.8	***	9.0	6.6	***
Could not pay medical bills	6.2	8.2	4.8	***	7.6	5.8	**
Didn't have enough money to buy food	8.9	11.4	7.2	***	12.0	8.2	***
Had trouble buying food even though had money	16.0	19.7	13.4	***	21.3	15.0	***
No hardship	68.6	61.3	73.1	***	61.6	69.8	***
Other material hardship	6.9	9.3	5.5	***	7.2	6.8	
Received stimulus payment in late 2020/early 2021	80.3	82.6	79.6	***	83.6	79.8	**
Retirement preparedness[b]							
Probability of working full-time after age 65 in 2020	43.4	36.8	44.2	***	23.9	43.7	***

	All older adults	Work-limiting condition	No work-limiting condition	*p*-value[a]	SSI/DI receipt	No SSI/DI receipt	*p*-value[a]
Probability of working full-time after age 65 in 2018	45.0	41.8	45.4		20.0	45.4	***
Expected retirement age in 2020 (mean)	69.0	68.7	69.0		68.8	69.0	
Expected retirement age in 2018 (mean)	68.8	68.6	68.8		68.2	68.8	
Frequency of thoughts about retirement in 2020 (%)				###			###
Hardly at all	27.8	23.2	28.4		33.0	27.7	
A little	18.0	17.4	18.0		18.5	18.0	
Some	25.7	30.8	25.1		27.6	25.7	
A lot	28.6	28.8	28.5		21.4	28.7	

[a] T-test significance is shown in each applicable row using *. For categorical variables, Chi-square significance is shown in the variable heading row. Chi-square significance is shown using #. * Indicates $p < 0.10$, ** indicates $p < 0.05$, and *** indicates $p < 0.01$. Blank columns indicate a p-value that is not significant at the $p < 0.10$ level. We use an F-test for continuous variables rather than a Chi-square test.
[b]Among those working in 2018 and 2020.
DI = Disability Insurance; SSI = Supplemental Security Income.

Appendix Table 2. *Self-Reported Health, Work, and Financial Experiences during the COVID-19 Pandemic by Number of Chronic Conditions*

	All older adults	2+ chronic conditions	<2 chronic conditions	*p*-value[a]	5+ chronic conditions	<5 chronic conditions	*p*-value[a]
Unweighted number	8,828	5,920	2,908				
Health outcomes (%)							
Ever received a COVID diagnosis				###			###
Yes	3.5	3.3	3.7		4.8	3.3	
Probably yes	0.6	0.6	0.6		0.8	0.6	
Probably no	0.7	0.7	0.6		1.0	0.6	
No	95.3	95.4	95.1		93.4	95.4	
Ever tested	32.3	34.0	28.8	***	38.8	31.6	***
If tested, any positive results	9.9	9.5	10.5		12.6	9.5	
If positive diagnosis, hospitalization	15.5	17.0	13.2		33.2	13.5	***
Delayed any type of health care	30.7	33.3	25.9	***	39.8	29.8	***
Delayed surgery	13.1	14.4	10.0	***	18.2	12.4	***
Delayed doctor visit	57.2	58.7	53.8	**	63.4	56.4	**
Delayed filling a prescription	7.3	8.6	4.4	***	8.3	7.1	
Delayed dental care	72.2	70.6	76.0	***	61.3	73.6	***
Delayed other health care	22.7	23.9	19.9	**	28.8	21.9	***
Reasons for delaying care							
Could not afford it	14.5	15.8	11.6	***	19.1	13.9	**
Could not get an appointment	15.7	15.9	15.2		15.3	15.7	
The clinic/hospital/doctor's office canceled, closed, or suggested rescheduling	51.8	51.7	52.0		50.9	51.9	
Decided it could wait	33.3	31.9	36.3	**	32.9	33.3	
Was afraid to go	23.9	24.8	21.9		27.3	23.5	
Work outcomes (%)							
Work affected because of the pandemic				###			###
Yes	28.7	25.5	33.8		15.7	29.6	

	All older adults	2+ chronic conditions	<2 chronic conditions	*p*-value[a]	5+ chronic conditions	<5 chronic conditions	*p*-value[a]
No	45.6	46.3	44.1		49.2	45.2	
Not working when pandemic started	25.7	28.3	19.6		32.1	25.0	
Work affected because of the pandemic (among those working)	38.6	35.8	42.8	***	24.6	39.5	***
Stopped work entirely	43.6	45.6	41.5	**	46.9	43.5	
Reason for work ending							
Lost job/laid off permanently	14.0	12.8	15.3		12.2	14.0	
Furloughed/laid off temporarily	48.8	50.7	46.7		58.5	48.5	
Quit	6.1	6.3	5.8		9.1	6.0	
Changed work days or hours	27.8	29.2	26.4		31.8	27.6	
Work became more risky or dangerous	20.8	23.0	18.7	*	27.9	20.6	
Work became harder	21.4	23.3	19.6		33.3	21.0	*
Switched to working remotely	46.5	45.5	47.2		42.9	46.5	
Other changes	34.2	33.1	35.6		34.6	34.4	
Financial outcomes (%)							
Missed rent or mortgage payments	5.5	6.0	4.8	**	8.8	5.2	***
Missed credit card or other debt payments	6.7	7.8	5.0	***	10.8	6.4	***
Missed other payments (such as utilities or insurance)	7.1	8.1	5.4	***	10.9	6.7	***
Could not pay medical bills	6.2	7.7	3.7	***	10.9	5.7	***
Didn't have enough money to buy food	8.9	9.8	7.1	***	12.1	8.5	***
Had trouble buying food even though had money	16.0	17.8	12.5	***	23.1	15.3	***
No hardship	68.6	65.2	75.0	***	58.0	69.7	***
Other material hardship	6.9	7.7	5.3	***	10.1	6.6	***
Income changed because of the pandemic				###			###
Income went up	5.1	5.2	5.0		3.9	5.2	
Income went down	17.8	16.7	19.4		15.2	18.0	
About the same	77.1	78.1	75.5		80.9	76.8	
Received stimulus payment in late 2020/early 2021	80.3	81.4	78.1	***	81.6	80.2	40.1

	All older adults	2+ chronic conditions	<2 chronic conditions	*p*-value[a]	5+ chronic conditions	<5 chronic conditions	*p*-value[a]
Retirement preparedness[b]							
Probability of working full-time after age 65 in 2020	43.4	42.0	44.3		27.7	43.6	***
Probability of working full-time after age 65 in 2018	45.0	43.1	46.4	**	33.9	45.1	*
Expected retirement age in 2020	69.0	68.7	69.2	**	69.3	69.0	
Expected retirement age in 2018	68.8	68.6	69.0	*	68.7	68.8	
Frequency of thoughts about retirement in 2020 (%)				###			###
Hardly at all	27.8	26.2	29.3		34.6	27.7	
A little	18.0	16.9	18.9		17.2	18.0	
Some	25.7	25.7	25.7		15.6	25.9	
A lot	28.6	31.3	26.1		32.0	28.5	

[a] T-test significance is shown in each applicable row using *. For categorical variables, Chi-square significance is shown in the variable heading row. Chi-square significance is shown using #. * Indicates $p < 0.10$, ** indicates $p < 0.05$, and *** indicates $p < 0.01$. Blank columns indicate a p-value that is not significant at the $p < 0.10$ level. We use an F-test for continuous variables rather than a Chi-square test.
[b] Among those working in 2018 and 2020.

Appendix Table 3. *Self-Reported Health, Work, and Financial Experiences during the COVID-19 Pandemic by Race or Ethnicity, and Disabling Condition, Non-Regression-Adjusted*

	All older adults	ADL or IADL	No ADL or IADL	*p*-value[a]	Non-Hispanic White	Non-Hispanic Black	Hispanic or Latino	Non-Hispanic other	*Chi-square* value[a]
Unweighted number	8,828	3,497	5,331		4,781	2,010	1,553	428	
Health outcomes (%)									
Ever received a COVID diagnosis									###
Yes	3.5	3.6	3.4		2.6	3.3	6.0	4.5	
Probably yes	0.6	0.5	0.7		0.8	0.3	0.2	1.0	
Probably no	0.7	0.8	0.6		0.9	0.5	0.3	0.7	
No	95.3	95.1	95.4		95.8	95.9	93.5	93.5	
Ever tested	32.2	35.4	30.1	***	27.4	40.6	35.6	33.5	###
If tested, any positive results	9.8	9.5	10.1		7.9	8.3	15.8	12.1	###
If positive diagnosis, hospitalization	15.5	18.4	13.6		10.0	22.5	17.7	20.8	#
Delayed any type of health care	30.7	35.0	27.9	***	31.0	30.6	28.7	33.6	
Delayed surgery	13.1	17.0	9.9	***	13.6	12.6	11.5	13.3	
Delayed doctor visit	57.3	58.5	56.3		56.2	55.6	63.1	58.0	#
Delayed filling a prescription	7.3	10.5	4.7	***	4.9	9.5	11.8	8.5	###
Delayed dental care	72.3	67.7	76.0	***	74.0	67.9	71.1	76.8	##
Delayed other health care	22.6	27.1	19.0	***	22.5	19.2	26.1	26.8	##
Reasons for delaying care									
Could not afford it	14.5	19.1	10.7	***	12.0	19.2	14.6	19.0	###
Could not get an appointment	15.6	16.5	14.9		15.6	15.3	16.0	15.5	###
The clinic/hospital/doctor's office canceled, closed, or suggested rescheduling	51.7	46.3	56.1	***	55.0	49.4	44.6	49.3	###
Decided it could wait	33.2	29.7	36.1	***	35.7	28.1	32.0	35.2	###
Was afraid to go	24.0	24.9	23.2		21.7	24.3	30.7	25.4	###
Work outcomes (%)									
Work affected because of the pandemic				###					###

	All older adults	ADL or IADL	No ADL or IADL	*p*-value[a]	Non-Hispanic White	Non-Hispanic Black	Hispanic or Latino	Non-Hispanic other	*Chi-square* value[a]
Yes	28.7	17.5	36.0		26.3	29.5	32.3	36.5	
No	45.6	47.1	44.6		47.6	47.7	38.4	39.1	
Not working when pandemic started	25.7	35.4	19.4		26.1	22.8	29.3	24.5	
Work affected because of the pandemic (among those working)	38.6	27.1	44.7	***	35.6	38.2	45.6	48.3	###
Stopped work entirely	43.7	56.8	39.5	***	34.5	52.8	58.7	35.5	###
Reason for work ending									#
Lost job/laid off permanently	13.8	14.9	13.4		11.6	16.1	14.1	16.7	
Furloughed/laid off temporarily	48.9	44.9	50.8		50.2	49.8	46.9	42.6	
Quit	6.0	6.7	5.7		3.5	6.9	8.6	7.4	
Changed work days or hours	27.7	30.9	27.0		24.2	28.9	36.3	35.0	###
Work became more risky or dangerous	20.7	25.6	19.6	**	17.7	27.8	22.1	25.0	###
Work became harder	21.4	24.0	20.8		22.2	21.7	16.7	24.0	
Switched to working remotely	46.4	35.5	48.9	***	50.7	43.3	32.8	53.0	###
Other changes	34.3	34.7	34.2		34.9	30.0	37.7	33.0	
Financial outcomes (%)									
Missed rent or mortgage payments	5.5	7.1	4.4	***	1.9	10.3	9.5	8.0	###
Missed credit card or other debt payments	6.7	9.1	5.2	***	3.4	11.6	9.1	10.6	###
Missed other payments (such as utilities or insurance)	7.1	10.2	5.0	***	2.9	14.5	9.7	8.7	###
Could not pay medical bills	6.2	9.4	4.1	***	3.8	9.8	7.9	9.0	###
Didn't have enough money to buy food	8.9	13.9	5.7	***	4.6	12.7	16.4	11.6	###
Had trouble buying food even though had money	16.0	20.9	12.8	***	14.0	17.4	19.5	18.7	###
No hardship	68.6	59.2	74.7	***	76.3	60.1	58.5	59.8	###
Other material hardship	6.9	9.2	5.4	***	6.0	8.1	7.7	9.0	###
Income changed because of the pandemic				###					###
Income went up	5.1	4.4	5.6		5.0	5.8	4.6	5.4	
Income went down	17.7	15.7	19.0		13.3	17.5	29.2	25.1	

	All older adults	ADL or IADL	No ADL or IADL	*p*-value[a]	Non-Hispanic White	Non-Hispanic Black	Hispanic or Latino	Non-Hispanic other	*Chi-square* value[a]
About the same	77.1	79.9	75.3		81.7	76.8	66.1	69.5	
Received stimulus payment in late 2020/early 2021	80.4	80.2	80.4		81.5	78.7	79.9	77.5	#
Retirement preparedness[b]									
Probability of working full-time after age 65 in 2020	43.4	38.6	44.4	***	47.7	37.4	39.7	45.3	###
Probability of working full-time after age 65 in 2018	44.9	39.1	46.2	***	49.4	38.2	41.1	47.8	###
Expected retirement age in 2020	69.0	69.5	68.9	*	69.8	67.8	68.5	69.2	###
Expected retirement age in 2018	68.8	69.2	68.7		69.4	68.0	68.3	68.9	##
Frequency of thoughts about retirement in 2020 (%)				##					###
Hardly at all	27.8	30.8	27.1		24.5	29.1	35.3	27.9	
A little	18.0	18.7	17.8		16.1	18.1	22.6	15.6	
Some	25.7	20.6	26.9		31.2	18.0	20.3	27.9	
A lot	28.5	30.0	28.2		28.2	34.8	21.7	28.5	

[a] T-test significance is shown in each applicable row using *. For categorical variables, Chi-square significance is shown in the variable heading row. Chi-square significance is shown using #. * Indicates $p < 0.10$, ** indicates $p < 0.05$, and *** indicates $p < 0.01$. Blank columns indicate a p-value that is not significant at the $p < 0.10$ level. We use an F-test for continuous variables rather than a Chi-square test.
[b] Among those working in 2018 and 2020.
ADL = activity of daily living; IADL = instrumental activity of daily living.

Appendix Table 4. *Self-Reported Health, Work, and Financial Experiences during the COVID-19 Pandemic by Race or Ethnicity, and Disabling Condition, Weighted*

	All older adults	ADL or IADL	No ADL or IADL	*p*-value[a]	Non-Hispanic White	Non-Hispanic Black	Hispanic or Latino	Non-Hispanic other	*F-test* value[a]
Unweighted number	3,155	1,187	1,968		1,820	667	508	151	
Health outcomes (%)									
Ever received a COVID diagnosis									
Yes	1.1	2.1	0.8		1.0	1.0	2.6	12.8	
Probably yes	1.0	1.3	0.9		1.2	3.7	-	-	
Probably no	1.2	1.9	0.9		1.3	2.3	8.8	-	
No	96.7	95.1	97.5		96.7	97.5	96.5	80.9	
Ever tested	20.1	20.0	20.1		19.4	28.5	13.5	20.4	###
If tested, any positive results	2.6	5.7	1.5	***	4.1	4.8	11.6	-	###
If positive diagnosis, hospitalization	-	-	-		-	-	-	-	
Delayed any type of health care	30.4	35.8	27.9	***	31.4	29.5	27.4	25.2	###
Delayed surgery	14.5	17.9	12.3		15.8	13.6	11.4	-	###
Delayed doctor visit	58.7	59.1	58.5		58.8	52.3	61.4	61.1	
Delayed filling a prescription	5.0	8.9	2.2	**	4.0	8.5	21.2	-	###
Delayed dental care	76.8	75.3	77.8		78.1	70.0	67.1	61.6	###
Delayed other health care	21.7	23.4	20.8		20.8	17.7	25.8	38.5	#
Reasons for delaying care									
Could not afford it	10.6	10.6	10.6		9.5	17.1	18.1	13.2	###
Could not get an appointment	14.5	15.8	13.8		14.7	19.4	18.2	34.2	
The clinic/hospital/doctor's office canceled, closed, or suggested rescheduling	57.9	53.4	60.4		60.6	53.4	39.1	56.2	
Decided it could wait	28.5	26.9	29.3		29.1	15.1	29.2	-	###
Was afraid to go	19.6	22.5	17.7		17.5	24.7	25.9	-	##
Work outcomes (%)									

	All older adults	ADL or IADL	No ADL or IADL	*p*-value[a]	Non-Hispanic White	Non-Hispanic Black	Hispanic or Latino	Non-Hispanic other	*F-test* value[a]
Work affected because of the pandemic				###					###
Yes	32.2	26.8	34.3	***	31.1	26.9	43.4	39.1	
No	42.6	40.0	43.9		43.2	49.3	35.2	41.2	
Not working when pandemic started	25.2	31.4	21.6	***	25.7	23.8	24.1	22.6	
Work affected because of the pandemic (among those working)	43.1	40.3	44.0		41.9	35.3	57.2	48.8	###
Stopped work entirely	39.6	46.2	37.9		34.5	53.3	59.3	24.0	###
Reason for work ending				###					###
Lost job/laid off permanently	12.5	22.8	9.9		10.2	19.3	16.9	-	
Furloughed/laid off temporarily	52.8	41.9	56.7		52.4	58.7	50.8	-	
Quit	3.4	3.2	3.5		8.4	50.5	11.5	-	
Changed work days or hours	24.4	19.7	25.2		21.9	19.0	35.2	-	
Work became more risky or dangerous	15.5	22.8	14.3		15.1	24.6	24.4	-	
Work became harder	19.7	17.6	20.1		20.7	15.6	14.4	46.5	#
Switched to working remotely	53.4	50.2	53.9		52.9	57.8	52.5	67.2	###
Other changes	35.3	33.4	35.6		36.1	27.1	40.9	37.7	
Financial outcomes (%)									
Missed rent or mortgage payments	2.8	3.6	2.5		1.6	3.9	8.3	17.2	###
Missed credit card or other debt payments	3.9	5.9	2.8	***	2.6	7.7	8.9	6.0	###
Missed other payments (such as utilities or insurance)	3.3	5.6	1.9	***	1.9	8.4	9.3	1.9	###
Could not pay medical bills	3.1	5.3	1.7	***	2.4	4.7	6.8	6.8	###
Didn’t have enough money to buy food	6.2	7.7	5.0	**	4.2	11.2	16.4	4.2	###
Had trouble buying food even though had money	15.8	19.6	13.7	***	14.7	17.5	24.9	11.3	###

	All older adults	ADL or IADL	No ADL or IADL	*p*-value[a]	Non-Hispanic White	Non-Hispanic Black	Hispanic or Latino	Non-Hispanic other	*F-test* value[a]
No hardship	74.8	66.8	78.9	***	78.6	67.9	57.1	73.6	###
Other material hardship	5.2	7.2	4.3	**	4.6	7.7	7.3	11.0	##
Income changed because of the pandemic				###					###
Income went up	4.5	4.4	4.6		4.5	7.0	4.8	8.1	
Income went down	16.6	17.1	16.4		14.6	13.9	34.1	16.3	
About the same	79.0	78.6	79.2		81.2	80.1	61.3	78.3	
Received stimulus payment in late 2020/early 2021	80.9	83.4	79.6		81.4	79.6	79.5	77.3	###
Retirement preparedness[b]									
Probability of working full-time after age 65 in 2020	44.6	48.5	43.9		-	-	-	-	###
Probability of working full-time after age 65 in 2018	47.0	44.2	47.5		-	-	-	-	###
Expected retirement age in 2020	69.3	69.1	69.3		-	-	-	-	###
Expected retirement age in 2018	68.8	67.8	69.1	*	-	-	-	-	###
Frequency of thoughts about retirement in 2020 (%)									
Hardly at all	24.5	28.9	23.6		21.8	31.5	41.8	13.1	
A little	17.6	17.8	17.6		15.2	19.1	30.4	20.8	
Some	32.9	36.5	32.2		37.1	20.7	15.6	35.6	
A lot	25.0	17.0	26.6		26.1	29.5	14.3	30.5	

[a] T-test significance is shown in each applicable row using *. For categorical variables, F-test significance is shown in the variable heading row. F-test significance is shown using #. * Indicates $p < 0.10$, ** indicates $p < 0.05$, and *** indicates $p < 0.01$. Blank columns indicate a p-value that is not significant at the $p < 0.10$ level.

[b] Among those working in 2018 and 2020.

ADL = activity of daily living; IADL = instrumental activity of daily living.

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