

The Older Workers and Retirement Chartbook

By [Monique Morrissey](#), [Siavash Radpour](#), and [Barbara Schuster](#) • November 16, 2022

The Older Workers and Retirement Chartbook shows the risks to retirement security and disparities in retirement preparedness, and explores the links between labor market challenges facing older workers and retirement insecurity.

Updated February 9, 2023

Several themes emerge from our research:

The U.S. population is aging; at the same time, the labor force participation rate is increasing among older Americans. As a result of well-documented flaws in the U.S. retirement system, many older workers hope to continue working as long as possible to make ends meet. However, many face barriers to working longer and lack access to decent jobs with decent pay. Older workers who cannot afford to retire often face diminishing job quality and earnings as a result of loss of bargaining power.

The connection between work and retirement insecurity is a two-way street. Bad jobs lead to bad retirements, but retirement insecurity also forces older workers to accept bad jobs. Workers with the freedom to walk away from a bad job can negotiate better pay and working conditions with their existing or new employers, individually or as part of a union. In this way, they can strengthen the bargaining power of other workers as well.

Some workers are able to work longer to close the retirement income gap, but expecting workers to work longer is neither a fair nor a realistic solution to a broken retirement system. Some workers may benefit from delaying retirement to increase their savings and accrued benefits while shortening their retirement. But expecting workers to work into old age is neither a feasible nor an equitable solution to the retirement crisis. For one thing, the increase in life expectancy has been concentrated among higher earners with jobs that are less physically demanding. For another, Americans already work more, and longer, than workers in most peer countries.

Many workers are forced to retire earlier than planned because of poor health, job loss, difficult working conditions, or caregiving responsibilities. Workers who lose their jobs at an older age have a

much harder time reentering the workforce than those who lose jobs earlier in their careers; many become discouraged and retire earlier than planned. Despite some health improvements at older ages and a shift from manufacturing to office jobs, many older workers are in poor health or have physically demanding and onerous jobs they cannot reasonably be expected to perform in old age. Those who do manage to keep working into their late 60s and 70s are often just trying to make ends meet by supplementing Social Security benefits with earnings but without accruing retirement benefits or savings.

Black, Hispanic, women, disabled, and LGBTQ workers are at greater risk of financial hardship at older ages. The root cause of this risk is not poor planning. Rather, retirement insecurity is a systemic problem. Lack of access to employer-sponsored retirement plans explains most of the coverage gap between white workers and Black and Hispanic workers. When Black and Hispanic workers do have access to such plans, the plans are less generous on average than the plans white workers have access to. Meanwhile, lower incomes on average make it harder for Black, Hispanic, women, and disabled workers to contribute to a retirement plan or otherwise save for retirement. Black workers offset some of these disadvantages by gravitating toward public-sector jobs with lower pay but secure pension benefits. While women have caught up with men in retirement plan coverage, their lower lifetime earnings, greater caregiving burdens, and longer life spans put them at higher risk of old-age poverty. LGBTQ seniors face adverse effects of past and present discrimination, including less access to spousal benefits.

We need to address specific challenges facing older workers. Policies that help level the playing field for older workers include enforcing age discrimination laws, expanding the Earned Income Tax Credit to help more adults without dependent children, implementing policies that reduce the employer cost of providing health insurance to older workers, changing performance metrics used to evaluate worker training programs that lead those programs to favor enrolling younger workers, and creating a dedicated Older Workers Bureau in the U.S. Department of Labor to help identify and address challenges faced by older workers.

Policies that improve working conditions for all workers can especially benefit vulnerable older workers. Though older workers can benefit from targeted policies, the impact of such policies is often limited. Leveling the playing field for all workers can be more effective in aiding older workers than implementing targeted policies. Broad-based policies that would have a big impact on older workers include: macroeconomic policies designed to produce full employment; protecting workers' right to collectively bargain for better wages and working conditions; ensuring access to affordable health care and caregiving help; enacting paid leave and scheduling policies to ensure workers can take time to care for themselves and their families; fixing a patchwork unemployment insurance system; and measures that better protect workers from injury and illness, including COVID-19 and other infectious diseases.

Everyone faces significant risks as they age. It is unrealistic to expect older workers to save enough to offset the financial fallout from unexpected job loss, retiring during a stock or housing market downturn, becoming widowed or divorced, or incurring expensive medical or long-term care needs. Even well-off Americans are easily impoverished by

long-term care, and they are more likely to live long enough to develop cognitive disabilities and other conditions associated with advancing age, and thus to need long-term care.

Expanding social insurance programs will help contain costs and spread them over lifetimes and across risk pools. Some older workers will have the bad luck of losing their jobs or seeing their net worth plummet during financial market downturns as they approach retirement age. Many Americans will need expensive medical treatment or long-term care, and the likelihood of facing unaffordable costs tends to increase with age. Social insurance programs such as Social Security, Medicare, and Medicaid can serve to lower costs and spread costs and risks over time and across populations, protecting the unluckiest while bringing peace of mind to all. However, these programs need to be expanded, as do safety net programs such as Supplemental Security Income (SSI).

There are many gaps in our knowledge. Household and employer surveys provide limited information on how older LGBTQ workers and retirees are faring, and small sample sizes and other data limitations pose challenges to studying other demographic groups, such as Asian Americans. Household and employer surveys are also subject to nonresponse bias and misreporting, problems that can be exacerbated by confusion over terms used to describe retirement benefits and sources of income. It is challenging to assess how much older households' increase in indebtedness is due to expanded access to higher education and homeownership as opposed to the rising cost of college, housing, and health care. Survey data offer only a murky window onto what happened to older workers during the COVID-19 pandemic and related recession, many of whom appear to have exited the workforce without showing up in administrative or survey data as an increase in unemployed, retired, or disabled workers. And no one knows where COVID-19 is headed or how it will affect the workforce or disability programs in the long run.

While there is always room for more research, this is not a reason not to act on what we already know.

Chapter 1

Older workers

Older workers face challenges linked to age discrimination, poor health, and other barriers to employment. Retirement insecurity also forces workers to stay in bad jobs. Targeted policies can help, but so can policies that improve working conditions for all workers.

Chapter 2

Retirement

Relying on employers to offer retirement benefits has never served U.S. workers well, leaving roughly half of private-sector workers without coverage. Expanding Social Security is the simplest and most effective solution to the retirement crisis.

Chapter 3

Risk

Americans face increasing economic risks as they age, including risks associated with poor health, job loss, and financial market downturns. Social insurance programs help shield older workers and retirees from these risks but need to be expanded.

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The Older Workers and Retirement Chartbook

Chapter 1. Older workers

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What economic challenges do older workers face?

America's workforce is aging. During the economic recovery that followed the Great Recession of 2008–2009, four in 10 Americans ages 55 or older were in the labor force, the highest participation rate in half a century. These older workers made up 23.6% of the overall labor force in 2020, the highest share on record (authors' analysis of BLS 1948–2021). Though the COVID-19 pandemic had a disproportionate impact on older workers, causing their share of the workforce to dip slightly in 2021 (to 23.4%), the dip is likely to prove only a temporary interruption of a longer-term trend reflecting the aging of the large baby boomer cohort, slower population growth, longer life expectancies, and later retirement (Toossi and Torpey 2017; Huston 2019).

Some Americans are happy to keep working at older ages for financial and social reasons, but others work reluctantly in low-paying, physically taxing jobs that do not offer a path to retirement (Ghilarducci et al. 2021; Gatta and Horning 2022; Bruder 2017). The policy choices that shape their working lives weakened workers' bargaining power, eroded the real value of the minimum wage and other labor standards, allowed employers to shift more responsibility for health care and retirement onto workers, and failed to protect workers from wage theft, employee misclassification, health and safety violations, and other abuses (Bivens et al. 2014; Cooper and Kroeger 2017; EPI 2018).

While anti-worker policies and adverse labor market conditions also harm younger workers, older workers face special challenges linked to age discrimination, obsolete or employer-specific skills, poor health, and other barriers to obtaining and keeping good jobs. Older workers who lose their jobs suffer greater earnings losses than their younger counterparts. Their options for reentering the workplace are often constrained by health limitations and caregiving responsibilities; by family, housing, and community ties to areas with aging populations and declining industries; by employers leery of offering lower-paying jobs to "overqualified" workers with nontransferable skills; and by other barriers to reemployment (Berkman and Truesdale 2022; Farmand and Ghilarducci 2019).

For these reasons, older workers are disproportionately represented among the long-term unemployed and among "discouraged" workers who are not prepared for retirement but have given up looking for work

(Johnson and Butrica 2012; Johnson and Gosselin 2018; Weller 2020; Townsend Kiernan and Miller 2021; Maestas and Li 2006). Displaced older workers who do find work often do so only after enduring long searches and accepting significant pay cuts (Farber 2017; Koenig, Trawinski, and Rix 2015).

The same factors that affect older workers' reemployment prospects if they lose their jobs also affect their ability to negotiate better pay and working conditions at their current jobs. These and other factors may be driving down older workers' wages relative to those of prime-age workers, though patterns differ by gender and educational attainment. One factor that has weakened older workers' bargaining power is declining retirement security, which, combined with poor external job prospects, leaves many workers stuck in bad jobs (Farmand and Ghilarducci 2019).

More research is needed on how age interacts with gender, race, ethnicity, educational attainment, and other factors that have been shown to influence workers' bargaining power (Naidu and Carr 2022; Farmand and Ghilarducci 2022). It is likely that older age exacerbates the labor market disadvantages faced by Blacks, Hispanics, and women, though age may have a less negative effect among more privileged groups. Bahn (2020), for example, lists reasons why older women may have weak bargaining power, including age discrimination, having caregiving responsibilities, being secondary earners whose mobility is constrained by a spouse's job, and being employed in such occupations as nursing and teaching where large employers often face little competition in hiring.

What do the charts tell us?

Despite challenges, more Americans age 65 and older are working or actively looking for work than before 2000. Older men have higher labor force participation rates than older women, but the gender gap has narrowed, especially in the 55–64 age group (Chart 1A). Among older workers, labor force participation rates are highest for Hispanic and Asian American men (Chart 1B).

Though there has been a societal shift toward sedentary occupations, many older workers—and especially those without college degrees—work in physically demanding jobs (Chart 1C). Black and Hispanic older workers are more likely to have such jobs than their white non-Hispanic counterparts (Chart 1D).

The share of workers ages 55–64 represented by a union has declined, weakening older workers' bargaining power and eroding workplace protections (Chart 1E). Union members are more likely to have good pensions, job security, and other advantages that reduce the likelihood of leaving the workforce sooner than planned (Chart 1F). But since most workers do not have these protections, unplanned retirement because of poor health, job loss, or deteriorating working conditions is common among both men and women, especially among workers without college degrees who retire before age 65 (Charts 1G and 1H). Black and Hispanic workers are more likely to retire involuntarily—including a majority of Black workers who retire at age 65 or older but had hoped to work longer (Chart 1I).

Tight labor markets, like union representation, increase workers' ability to negotiate better

pay and working conditions. Older workers' job market insecurity peaked during the Great Recession of 2008–2009, but these workers regained some confidence as the economy recovered (Chart 1J). Older women are more pessimistic about their job prospects than older men (Chart 1K), with discrimination against older women job applicants a likely factor (Lahey 2008; Neumark, Burn, and Button 2019).

What can we do to alleviate challenges faced by older workers?

Older workers can be helped by policies that level the playing field with younger workers. A growing body of research finds that many employers discriminate against older applicants (e.g., Lahey 2008; Farber et al. 2019; Neumark, Burn, and Button 2019; Neumark et al. 2019). Policymakers should strengthen protections for older workers, who, under the Supreme Court's interpretation of the Age Discrimination in Employment Act (ADEA), face a stricter burden of proof than plaintiffs in other employment discrimination cases (Harrison 2021; Olen 2019; McLaughlin 2019). The ADEA is further weakened by the growing practice of employers requiring workers to agree to arbitration to resolve disputes rather than allowing them to pursue claims in court (Colvin 2018; Harris 2020). In addition to tightening legislative language and ending forced arbitration, regulators should identify and prevent discriminatory practices, such as writing job descriptions with ageist language (Burn et al. 2022). An Older Workers Bureau at the Department of Labor could help identify problem areas, support research, and work with employers and other stakeholders to make the workforce a more welcoming place for older workers (Ghilarducci 2021; Risher 2022).

Employers who stereotype older workers are hindered from hiring the best person for the job to the detriment of both employers and workers. But discrimination might be rationalized as a way for employers to avoid the higher health care or other costs associated with employing older workers. Expanding Medicare eligibility to more older workers—or to everyone—and making it the primary payer would be one way to make sure health care costs are not a disincentive to employing older workers (Clark and Shoven 2019).

Another targeted policy that would help older workers is expanding the Earned Income Tax Credit (EITC). Few older workers are helped by the EITC, which focuses on working parents and provides only small benefits to workers between the ages of 25 and 64 who are not custodial parents (Schvedov and Schramm 2020). The American Rescue Plan of 2021 temporarily expanded EITC eligibility and benefits to low-income workers over the age of 18 without dependent children at home, but Congress let these provisions expire (Dolby 2021; Rahman-Davies 2022). Permanently increasing benefits and expanding eligibility to all low-wage workers would boost labor force participation and help struggling Americans at both ends of the age spectrum.

Older workers also face barriers to accessing career counseling and job training programs. With a few exceptions, such as the Senior Community Service Employment Program (NCOA 2022) and the New Start Career Network (Heidkamp et al. 2022), these

programs often focus on younger workers because unemployed older workers are more likely to find part-time or lower-paid jobs or to want the flexibility of self-employment, which affects how the programs are evaluated (Abraham and Houseman 2020). Adding staff, programs, and performance metrics better suited to older workers' needs could help fill the lacuna in job training programs and counseling oriented toward older workers.

While leveling the playing field is important, targeted policies can have limited impacts, while policies that improve working conditions for all workers can have the greatest impact on more vulnerable workers, including older workers. A priority is pursuing full-employment fiscal and monetary policies, since tight labor markets make employers work harder to recruit, hire, and retain older workers and other workers who are often discriminated against or overlooked. Older workers' gains in the strong pre-COVID-19 economy were halted by the pandemic, though their plight would have been much worse had policymakers not responded swiftly to replace lost income and boost the economy (CBPP 2022a, 2022c).

Expanding the economic pie through broad-based policies from which all workers benefit is important, but so is ensuring that workers fully share in it. Central to achieving this goal is protecting workers' right to collectively bargain for better wages, working conditions, and job protections. Because unions and union members prioritize retirement benefits in bargaining, 85% of union members participate in a retirement plan, including 68% who participate in secure defined benefit pensions. In contrast, only 51% of nonunion workers participate in an employer-sponsored retirement plan of any kind and only 13% participate in a defined benefit pension (BLS 2022a). Access to secure retirement benefits gives older workers the freedom to walk away from bad jobs, reinforcing their bargaining power (Farmand and Ghilarducci 2019).

Beyond the direct effects of union representation on members' well-being, unions have important spillover effects, raising pay and labor standards for nonunion workers and supporting pro-worker policies (Bivens et al. 2017; Feigenbaum, Hertel-Fernandez, and Williamson 2019). By amplifying worker voices, unions also have positive impacts on the broader society. For example, the presence of unionized nurses was associated with a lower number of nursing home deaths in New York State during the COVID-19 pandemic (Dean et al. 2022).

Union-backed policies that benefit workers of all ages include paid leave, expanded caregiving assistance, flexible and fair scheduling, improved health and safety protections, and unemployment insurance reform (e.g., AFL-CIO 2021a, 2021b, 2021c; Olen 2021; Quinnell 2014). These policies especially help older workers, who are more likely than younger cohorts to have health conditions that require extended leave (Smalligan and Boyens 2020), to be caring for frail adult family members (AARP and National Alliance for Caregiving 2020; Butrica and Karamcheva 2018), to face elevated health and safety risks (Smith and Pegula 2020; CDC 2022; Shah Goda and Soltas 2022), or to experience long-term unemployment (Johnson and Butrica 2012; Townsend Kiernan and Miller 2021).

Some policies would not disproportionately help older workers but would have a significant positive effect on the most vulnerable. A long-overdue increase in the minimum

wage would help more workers ages 55 and older (4.7 million) than teens (3.3 million). If workers earning close to the minimum who would also get a raise are included in the calculations, 14.6% of older workers would be helped by increasing the federal minimum wage to \$15 in 2025 (Cooper, Mokhiber, and Zipperer 2019).

A key issue for older workers is control over when and how much they work. Though older workers have somewhat more predictable schedules than younger workers, the erratic schedules common in the service sector are associated with psychological distress, poor sleep, work-family conflict, and economic insecurity among older workers (Abrams, Harknett, and Schneider 2022). In response to a 2015 survey, 37.7% of workers ages 50 and older cited the right number of hours as an essential or very important attribute that their job lacked, with 25.4% of respondents currently working more hours and 12.3% working fewer hours than desired. This hours mismatch was the most common source of dissatisfaction reported, ranking above concerns about pay, benefits, and other job attributes (Maestas et al. 2017).

A desire for fewer hours leads many older workers to take part-time jobs that do not offer retirement and other benefits. The SECURE Act of 2019 took a small step in the right direction by requiring some employers to extend eligibility for 401(k) plans to some long-term part-time workers (Barney 2020). However, much more could be done to improve the pay and benefits of part-time workers (Golden 2020).

The COVID-19 pandemic exacerbated many of the challenges facing older workers. Temporary measures enacted during the pandemic alleviated some of these challenges and contributed to a rapid economic recovery. But many problems remained unaddressed, including critical health and safety issues. Even as the virus spread rapidly among workers in nursing homes, meatpacking plants, and other workplaces, the Occupational Safety and Health Administration failed to implement an infectious disease standard (Michaels and Wagner 2020; Schwing 2020). Emergency paid leave provisions for workers needing time off for COVID-19 reasons have expired, leaving many low-income workers with a hard choice between staying home without pay, sometimes at the risk of losing their jobs, or working sick or leaving sick family members home alone, thus contributing to the spread of the disease (Romig 2022a).

One of the most effective temporary measures implemented during the pandemic was expanding eligibility for, increasing the amount of, and extending the duration of unemployment insurance benefits. Before the pandemic expansion, only three in 10 unemployed workers received benefits (Bivens et al. 2021; Dube 2021). Older workers figure prominently among underemployed workers, the long-term unemployed, and discouraged workers who fall through cracks in the system. Extending unemployment insurance benefits not only helps long-term unemployed workers make ends meet, it also enables them to find better jobs and work that matches their skills, leading to higher earnings and longer-lasting employment (Farooq, Kugler, and Muratori 2022).

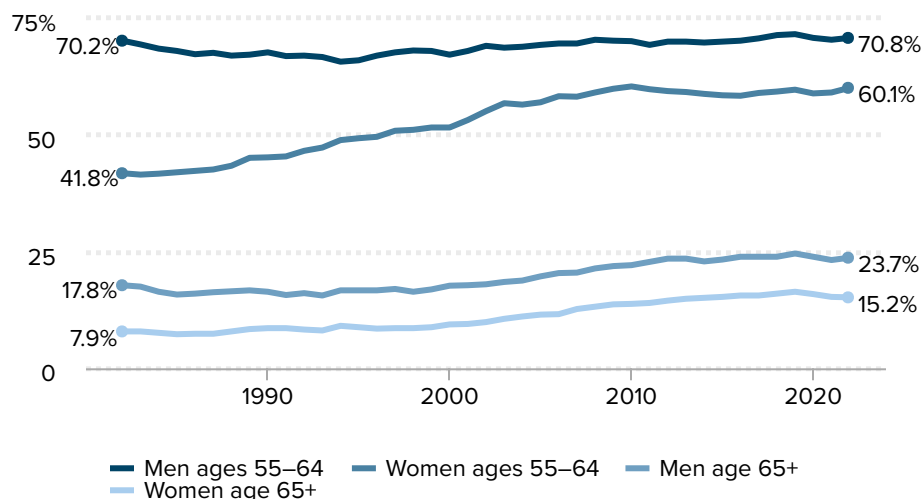
Another potentially useful pandemic reform was federal support for states offering short-time compensation. These programs, also known as “work-sharing” programs, compensate workers for reduced hours rather than requiring employers to lay off workers

before they become eligible for benefits. Though many employers in the United States are not familiar with this option, which remains available in some states, it is popular in some countries and may be especially useful to older workers, who suffer worse consequences than younger workers when employment ties are severed (NELP 2020; NELP and CLASP 2016). Work-sharing may also accustom employers and workers to a shorter workweek, an additional benefit for older workers (Baker 2018).

These and other emergency measures taken during the pandemic show what is possible, but more lasting solutions are called for, including permanent unemployment insurance reform, EITC expansion, and paid leave policies.

Labor force participation among older Americans is steady or increasing

Labor force participation rate of older Americans, by gender and age, 1982–2022



Notes: Labor force participants are employed workers and unemployed workers who are actively seeking work. The labor force participation rate for a given age group is the number of labor force participants divided by the total number of people in that age group.

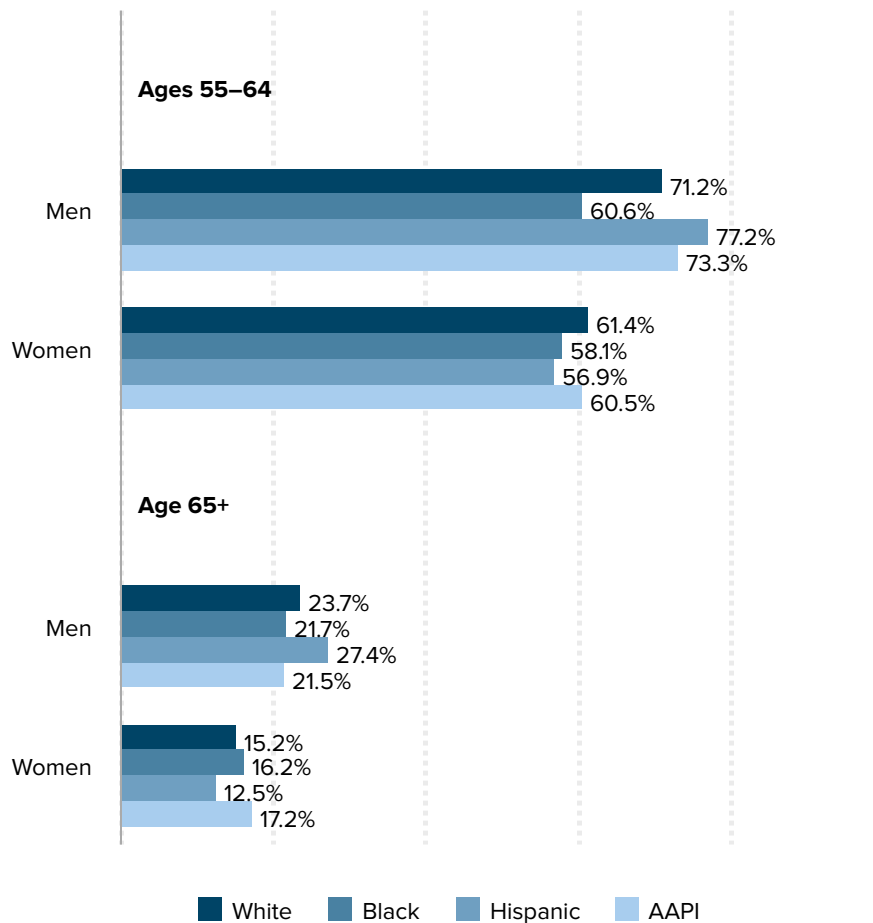
Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of microdata from the Current Population Survey (CPS) 1976–2022 Outgoing Rotation Group, extracted from CPS-IPUMS (Flood et al. 2021).

The labor force participation (LFP) rate of 55- to 64-year-olds—the share of the population that is either working or looking for work—has leveled off over the last decade and a half. In the preceding decades, it climbed steadily for women while falling slightly for men. Meanwhile, the LFP of both men and women age 65 and older has trended upward over the last 30 years. These trends of steady or increasing labor force participation among older workers contrast with a long-term decline in the LFP of prime-age workers (those ages 25–54), not shown in the chart. Researchers have attributed that decline to a lack of support for working women with caregiving responsibilities and declining job opportunities for men without college degrees, among other factors (see, for example, Hipple 2016; Krueger 2017; Richter, Chapman, and Mihaylov 2018).

The increase in labor force participation among Americans age 65 and older likely reflects both positive and negative factors: improved health and job opportunities for highly educated seniors alongside declining retirement security for less educated workers. Meanwhile, the stagnant LFP among Americans ages 55–64 is the result of offsetting trends. On one hand, fewer 55-year-olds are still working as a result of the decline in prime-age LFP. On the other hand, those who are still working at age 55 are retiring later, causing a shallower decline in LFP for workers in the 55–64 age range.

Hispanic and Asian American men have the highest labor force participation among older Americans

Labor force participation rate of older Americans, by race and ethnicity, gender, and age, 2022



Notes: Labor force participants are employed workers and unemployed workers who are actively seeking work. The labor force participation rate for a given age group is the number of labor force participants divided by the total number of people in that age group. Hispanic refers to Hispanic of any race, while white, Black, and AAPI refer to non-Hispanic whites, non-Hispanic Blacks, and non-Hispanic Asian Americans and Pacific Islanders. Data cover the first half of 2022.

Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis

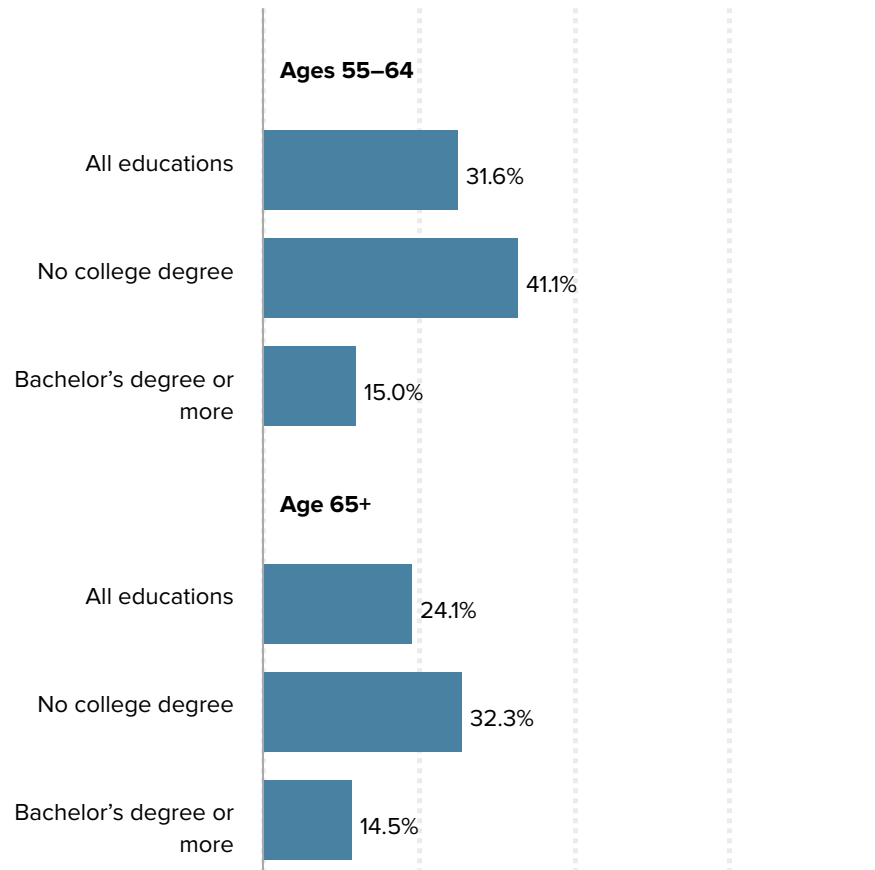
(SCEPA) analysis of monthly microdata from the Current Population Survey (CPS) Outgoing Rotation Group for January–July 2022 (Flood et al. 2021).

Hispanic and Asian American and Pacific Islander (AAPI) men have the highest labor force participation rates among Americans ages 55–64, followed by white men. Hispanic men are also more likely than men in any other racial or ethnic group to continue working (or looking for work) past age 65. Across both groups of older men, Black men have the lowest labor force participation rates, and research suggests that poor health is a key reason why older Black men exit the labor force (Quinby and Wettstein 2021).

Racial and ethnic differences in labor force participation among older women ages 55–64 are less noticeable than among older men in this age group. However, Hispanic women are less likely than other women to be working at older ages.

Many older workers have physically demanding jobs

Share of older workers in physically demanding jobs, by educational attainment and age, 2018



Notes: Workers are in a physically demanding job if they answered that their job requires “lots of physical effort” “all” or “most” of the time.

Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of Health and Retirement Study data (RAND 2022; University of Michigan 2022).

There is a common assumption that jobs are becoming less physically demanding, enabling workers to continue working at older ages. However, progress in

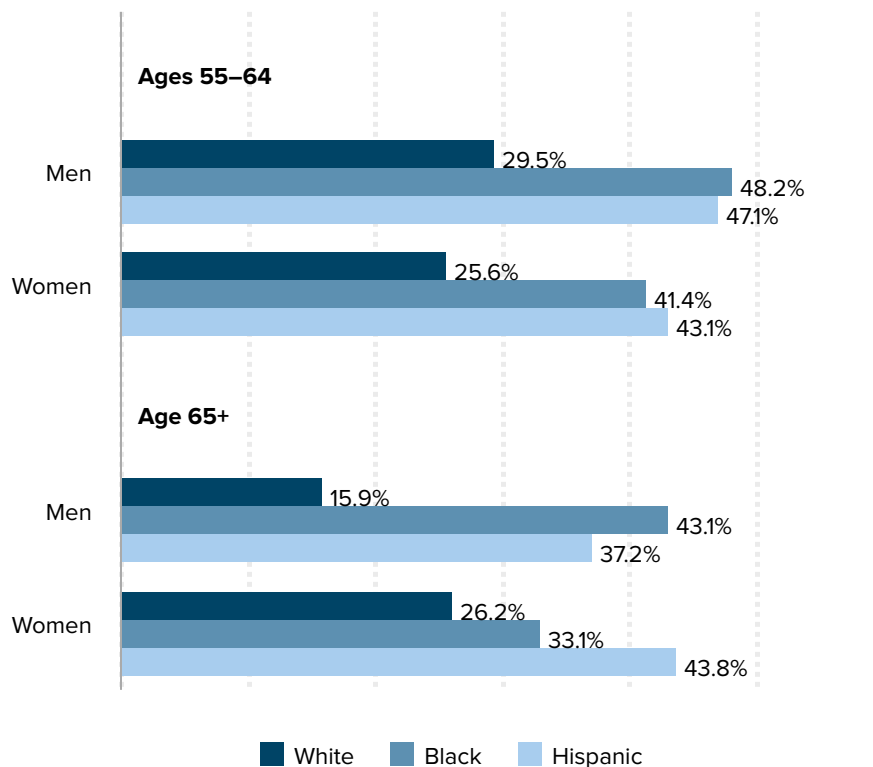
recent decades has been slow and uneven. According to research not shown in the chart, despite a shift from moderately physical jobs to sedentary but cognitively demanding ones, there has been a slower decline in the share of older workers with jobs requiring intense or sustained physical effort (Johnson 2004; Johnson, Mermin, and Resseger 2007; Ghilarducci et al. 2016).

As shown in the chart, three in 10 (31.6%) workers ages 55–64, and four in 10 (41.1%) non-college-educated workers in this age group, reported working in jobs that required “lots of physical effort” most or all of the time. While the share of non-college-educated workers with physically demanding jobs is lower at age 65 and older, it remains surprisingly high (32.3%).

Other research echoes these findings. Researchers at the Center for Economic Policy Research, for example, found that 34.8% of workers 58 and older had physically demanding jobs in 2009 (Rho 2010), a share that was essentially unchanged (34.5%) five years later (Bucknor and Baker 2016). Similarly, a RAND survey found that 37.5% of workers ages 50 and older regularly moved heavy loads or people, 36.8% often worked in tiring or painful positions, and 29.3% had jobs that involved standing all or almost all of the time, with a majority of older workers (58.0%) exposed to at least one of these difficult working conditions (Maestas et al. 2017).

Older Black and Hispanic workers are much more likely than older white workers to have physically demanding jobs

Share of older workers in physically demanding jobs, by race and ethnicity, gender, and age, 2018



Notes: Workers are in a physically demanding job if they answered that their job requires “lots of physical effort” “all” or “most” of the time. Hispanic refers to Hispanic of any race, while white and Black refer to non-Hispanic whites and non-Hispanic Blacks.

Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of Health and Retirement Study data (RAND 2022; University of Michigan 2022).

Older workers perform more physically taxing work than might be expected, and older Black and Hispanic workers are much more likely than white workers

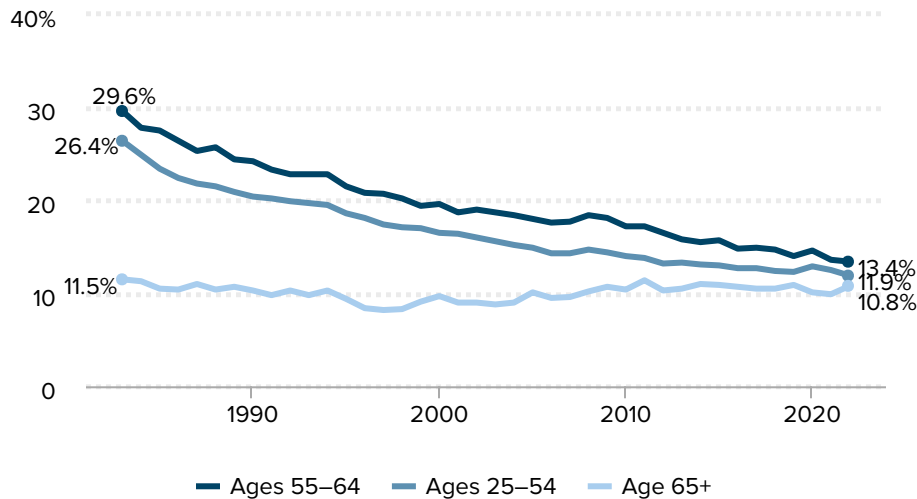
to have physically demanding jobs. The share of Black and Hispanic workers with jobs that require “lots of physical effort” all or most of the time is above 40% for those ages 55–64 and remains high (above 30%) for those age 65 and older.

Though there has been a shift over time toward less physically demanding work, this shift has been concentrated among white workers (Ghilarducci et al. 2016; not shown in the chart). Between 1992 and 2014, the share of white workers ages 55–62 with jobs described as requiring “lots of physical effort” decreased 7 percentage points. But during that period there was just a 1 percentage point decline in the share of Black workers in that age group with such jobs.

The distribution of physically taxing jobs is mixed when it comes to gender. Men ages 55–64 are more likely to have physically demanding jobs than women ages 55–64, but among workers 65 and older, white and Hispanic men are less likely than white and Hispanic women to have physically demanding jobs. This does not contradict other research finding that older men generally have more physically demanding jobs because workers 65 and older are a relatively small share of the older workforce (Maestas et al. 2017; Rho 2010).

Union representation has declined among workers approaching retirement

Share of workers represented by a union, by age, 1983–2021



Notes: Workers are represented by a union if they are union members or if they are not members but report that they are covered by a union contract.

Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of Current Population Survey (CPS) Outgoing Rotation Group microdata, January 1983–June 2022 (Flood et al. 2021).

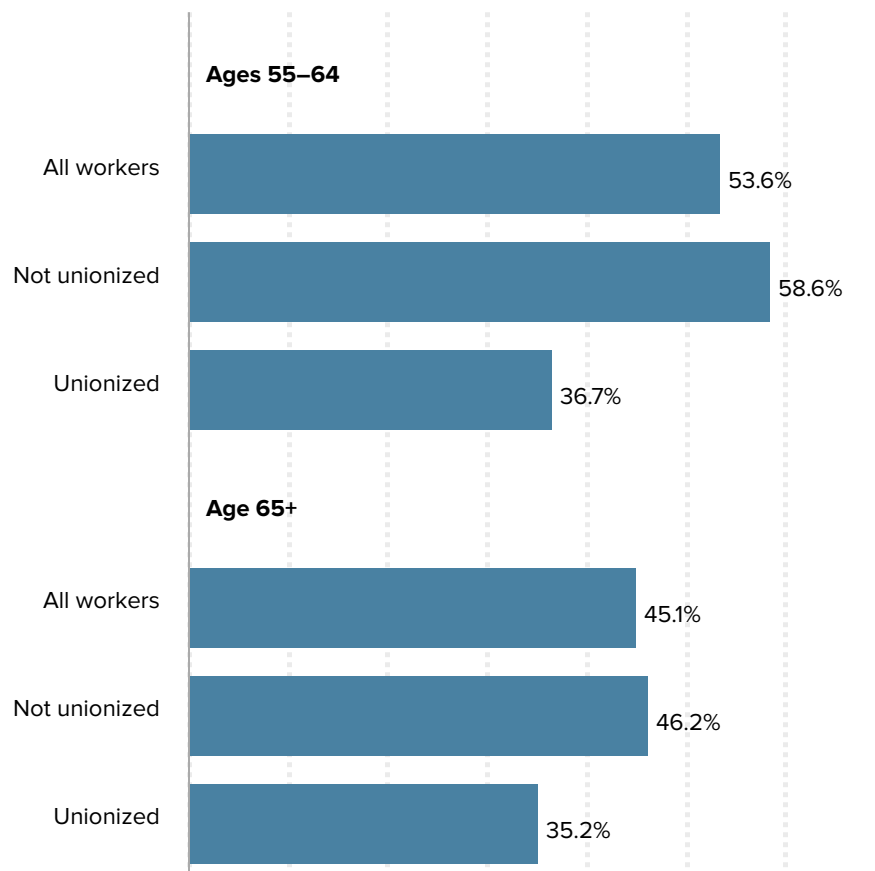
Union representation has generally declined as labor laws and institutions—notably the weak penalties imposed on employers engaged in unfair labor practices—increasingly serve to help private-sector employers block organizing efforts (Mishel, Rhinehart, and Windham 2020). As the chart shows, this is true for workers ages 55–64 as well as prime-age workers ages 25–54.

An exception is workers 65 and older, who are less likely to be represented by a union than younger workers but have not seen a decline in representation. These workers are more likely to work in part-time and other noncareer jobs not covered by union contracts, according to EPI and SCEPA analysis of Health and Retirement Survey data (RAND 2022; University of Michigan 2022; see also Johnson, Kawachi, and Lewis 2009). Their low but stable union representa-

tion may be because union workers are retiring at older ages because of a shift away from physically demanding manufacturing jobs (Bivens et al. 2017) and because many pension plans for unionized public-sector workers have raised their normal retirement ages (Brainard and Brown 2018).

Many older workers leave the workforce sooner than planned, but union workers are less likely to experience involuntary retirement

Share of retired older workers who retired involuntarily, by union representation and age (2014–2018 pooled data)



Notes: The sample includes individuals who reported being retired in the current survey but working as employees in the previous one. Involuntary retirement is defined as retirement preceded by poor health or disability (including poor mental health or stress); by a layoff, business closure, or ownership change; or by changes in working conditions or compensation.

Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of Health and Retirement Study data (RAND 2022; University of Michigan)

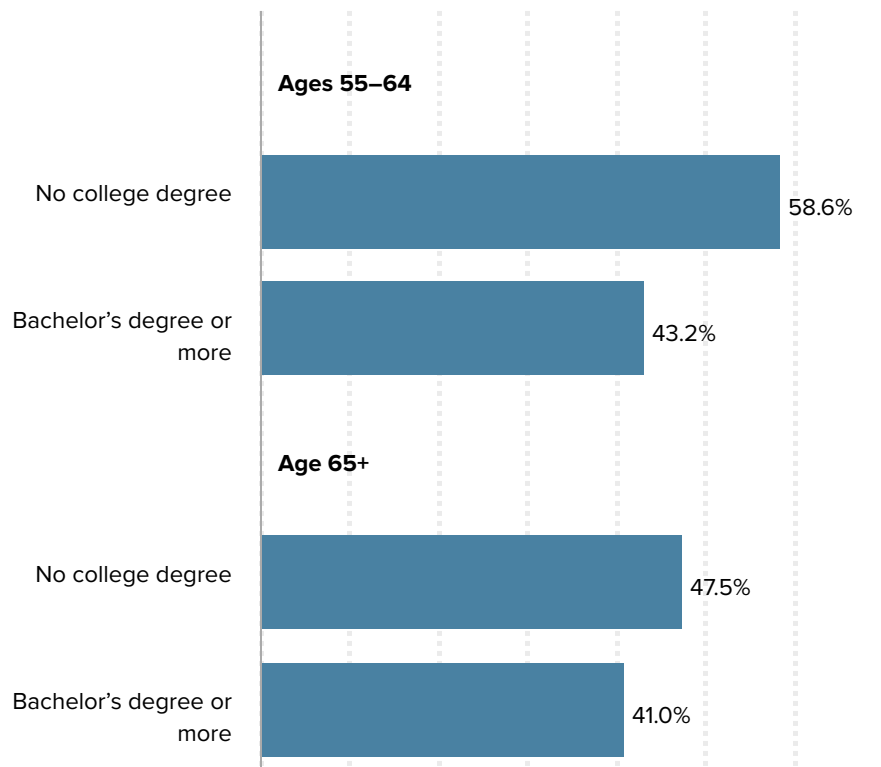
2022).

Many workers who retire in their 50s or early 60s do so after experiencing poor health, job loss, deteriorating working conditions, or reduced earnings. Among retired workers ages 55–64, slightly more than half (53.6%) retired involuntarily. The share is lower among retirees age 65 and older (45.1%), simply because more workers in this age group are ready to retire and thus do so voluntarily. The high share of involuntary retirements before age 65 shows that the plan to work to age 65 or older—voiced by roughly half of workers (Munnell, Rutledge, and Sanzenbacher 2019)—is often unrealistic. Other research has confirmed high rates of involuntary retirement and suggests that involuntary retirement may be increasing (Munnell, Rutledge, and Sanzenbacher 2019; Johnson and Gosselin 2018).

The chart also shows that union members are less likely to be forced to retire. This is likely because unions offer better protections against arbitrary termination and union jobs offer better health and leave benefits. Differences in the composition of the unionized and nonunionized workforce may also play a role, as public-sector workers, who are more likely to have college degrees and white-collar jobs, are also more likely to belong to unions (Gould 2020b; Bivens et al. 2017). Finally, workers represented by a union are more likely than nonunion workers to have access to a retirement plan at work and are better prepared for retirement, according to analysis of 2019 Survey of Consumer Finances microdata (Federal Reserve 2022a). This gives union workers more control over how long to work and when to retire.

Older workers without a college degree are more likely to be forced into retirement

Share of retired older workers who retired involuntarily, by educational attainment and age (2014–2018 pooled data)



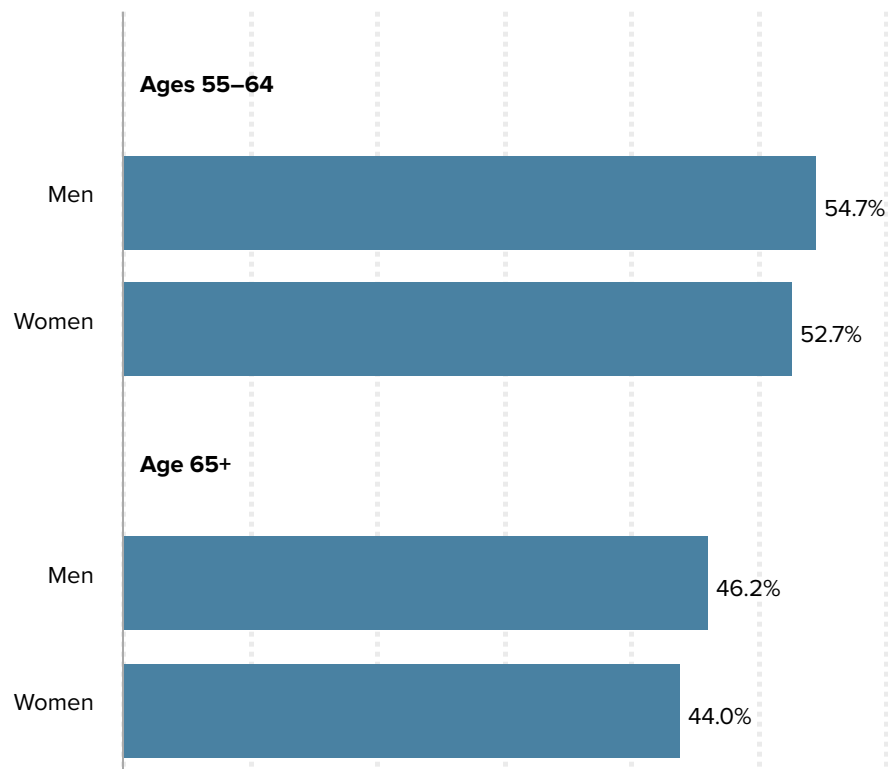
Notes: The sample includes individuals who reported being retired in the current survey but working as employees in the previous one. Involuntary retirement is defined as retirement preceded by poor health or disability (including poor mental health or stress); by a layoff, business closure, or ownership change; or by changes in working conditions or compensation.

Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of Health and Retirement Study data (RAND 2022; University of Michigan 2022).

The commonly expressed desire to work until age 65 or older is unrealistic for many older workers, particularly those without a college degree. Over half (58.6%) of non-college-educated retirees ages 55–64, and nearly half (47.5%) of their 65-and-older counterparts, experienced poor health, job loss, deteriorating working conditions, or reduced earnings at their last job. These non-college-educated workers are more likely than college-educated workers to be in poor health, which is the biggest cause of involuntary retirement (Munnell, Rutledge, and Sanzenbacher 2019; Rutledge 2018b).

Older men and women both face high rates of involuntary retirement

Share of retired older workers who retired involuntarily, by gender and age (2014–2018 pooled data)



Notes: The sample includes individuals who reported being retired in the current survey but working as employees in the previous one. Involuntary retirement is defined as retirement preceded by poor health or disability (including poor mental health or stress); by a layoff, business closure, or ownership change; or by changes in working conditions or compensation.

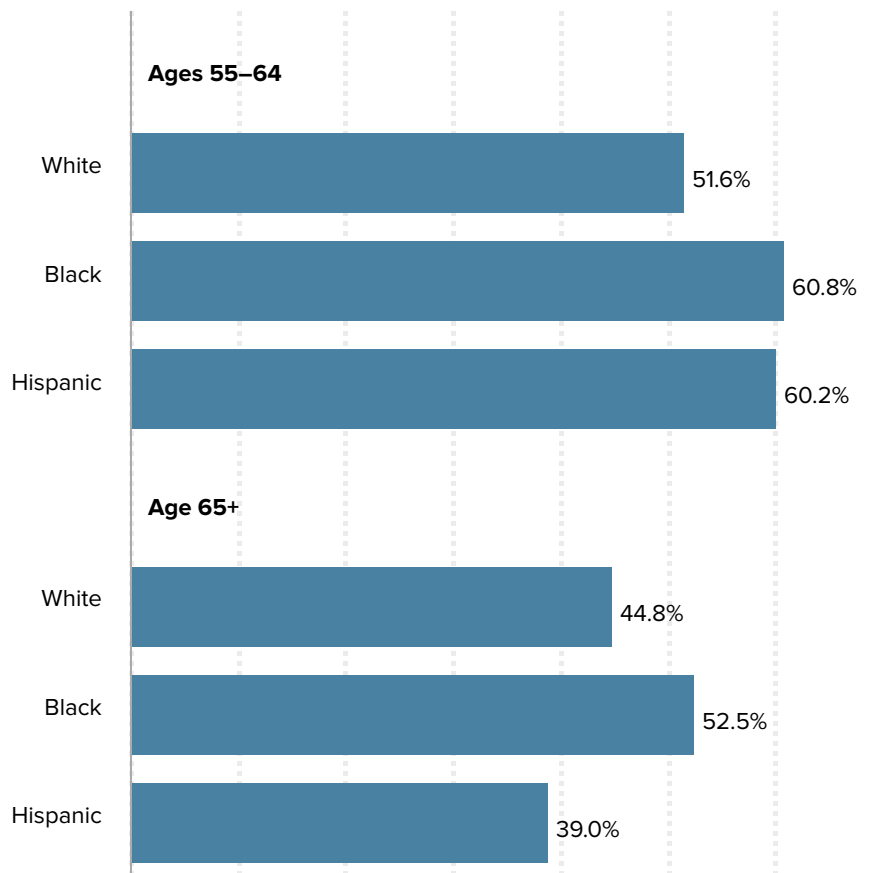
Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of Health and Retirement Study data (RAND 2022; University of Michigan 2022).

Just over half (52.7%) of 55- to 64-year-old women who retired did so after experiencing poor health, job loss, deteriorating working conditions, or reduced

earnings at their last job. The share of men in this age group experiencing involuntary retirement is even higher (54.7%). The difference could be because men are more likely to have physically demanding jobs that are challenging for workers in poor health (Maestas et al. 2017) or simply because many women *voluntarily* retire before age 65 to retire around the same time as older husbands (Maestas 2018). Workers who retire at older ages are more likely than their younger counterparts to do so voluntarily. Nevertheless, 46.2% of retired men and 44.0% of retired women age 65 and older retired after it became more difficult or impossible to continue working.

Most older Hispanic and Black workers who retire before age 65 do so involuntarily

Share of retired older workers who retired involuntarily, by race, ethnicity, and age (2014–2018 pooled data)



Notes: The sample includes individuals who reported being retired in the current survey but working in the previous one. Involuntary retirement is defined as retirement preceded by poor health or disability (including poor mental health or stress); by a layoff, business closure, or ownership change; or by changes in working conditions or compensation. Hispanic refers to Hispanic of any race while white and Black refer to non-Hispanic whites and non-Hispanic Blacks.

Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis

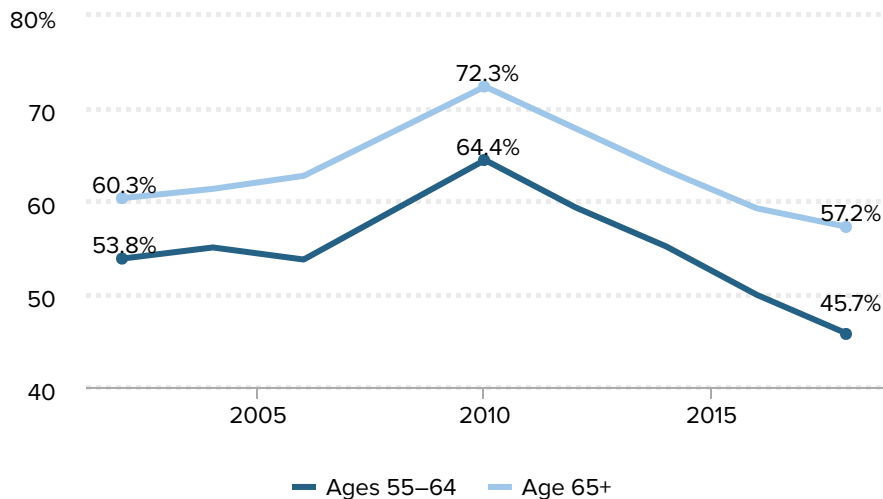
(SCEPA) analysis of Health and Retirement Study data (RAND 2022; University of Michigan 2022).

Six out of 10 Hispanic and Black 55- to 64-year-olds who retired had experienced poor health, job loss, deteriorating working conditions, or reduced earnings at their last job. In contrast, just over half (51.6%) of white workers who retired before age 65 did so involuntarily. White workers are more likely than their Hispanic and Black peers to retire voluntarily because they have the means to forgo job earnings and have access to affordable health insurance before attaining Medicare eligibility at age 65 (Copeland and Greenwald 2021).

Financial pressures hindering voluntary retirement reported by more Black and Hispanic workers include low income and wealth, as well as the need to pay off debt, provide economic support to friends and family, and pay for a child's education. These pressures lead to wider gaps between when Black and Hispanic workers expect to retire and the actual experience of Black and Hispanic retirees (relative to white retirees' expectations and experiences of retirement).

Tighter labor markets decrease older workers' job insecurity and thus strengthen their bargaining power

Workers' average self-assessed probability of not getting rehired at the same level if they lost their job, by age, 2002–2018



Notes: Probabilities are based on workers' responses to a questionnaire that asks, "Suppose you were to lose your job this month. What do you think are the chances that you could find an equally good job in the same line of work within the next few months?" The sample includes employees who reported working full- or part-time and excludes self-employed and partially retired workers.

Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of Health and Retirement Study data (RAND 2022; University of Michigan 2022).

High shares of older workers are pessimistic about their work options should they lose their job. Research shows that older workers are more likely than younger workers (not shown in the chart) to think they cannot find a job comparable to their current one—a well-founded fear that exists at every earnings level and reflects the reality of an unfriendly labor market for older job seekers (RELAB 2020). The chart shows that this belief is especially prevalent among workers age 65 and older, though a tight labor market gives these workers

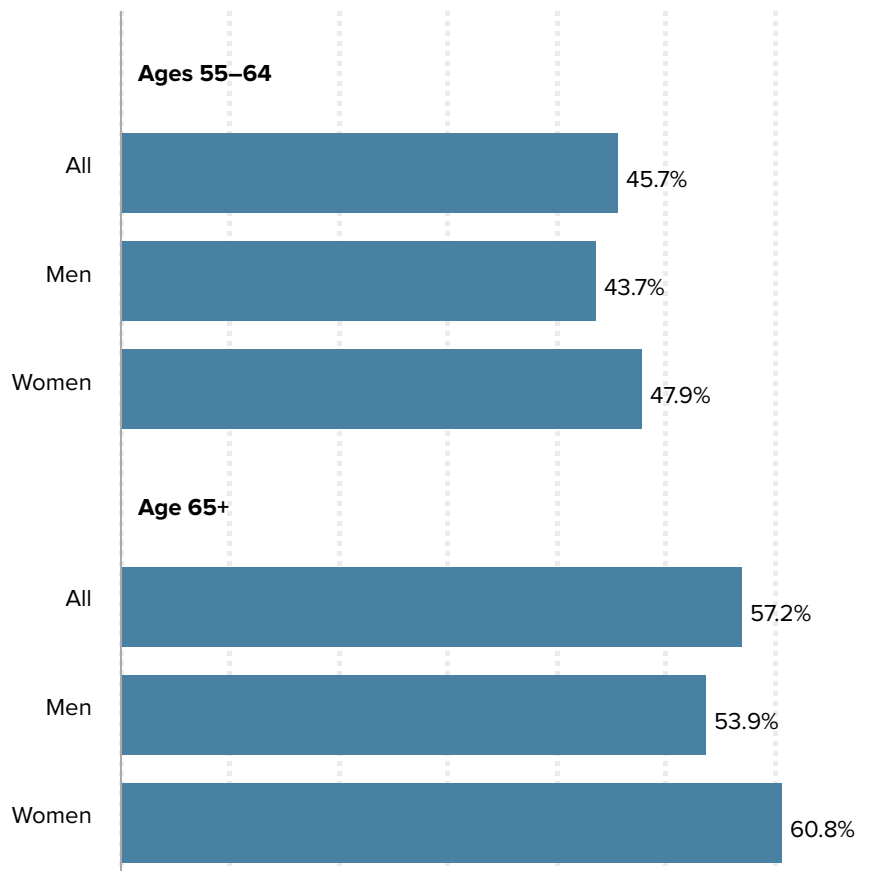
more confidence about their job prospects.

As the chart shows, when the economy in 2010 was reeling from the Great Recession, nearly three-fourths (72.3%) of workers age 65 and older and nearly two-thirds (64.4%) of workers ages 55–64 said that if they lost their job they would not find a comparable one. Those shares were far lower in 2018, when the economy had fully recovered and the unemployment rate was less than half of what it was in 2010 (BLS 2022b).

In addition to facing age discrimination in hiring, older workers may have more job-specific skills that are less valuable to other employers. The difficulty older workers face in finding a comparable job, which is similar for college-educated and non-college-educated workers and for white, Black, and Hispanic workers (not shown in the chart), weakens their ability to bargain for better pay and working conditions (RELAB 2020).

Older women are more likely than older men to lack confidence in their job prospects

Workers' average self-assessed probability of not getting rehired at the same level if they lost their job, by gender and age, 2018



Notes: Probabilities are based on workers' responses to a questionnaire that asks, "Suppose you were to lose your job this month. What do you think are the chances that you could find an equally good job in the same line of work within the next few months?" The sample includes employees who reported working full- or part-time and excludes self-employed and partially retired workers.

Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of Health and Retirement Study data (RAND 2022; University of Michigan)

2022).

Nearly half of workers ages 55–64 and well over half of those age 65 and older think they would not be able to get a comparable job if they lost their current job. Older women have higher rates of perceived job insecurity, probably with good reason. Lahey (2008), for example, found that younger women job applicants were more than 40% more likely than older women applicants to be called for interviews for entry-level jobs. Another study, by Neumark, Burn, and Button (2019), found that potential employers discriminate against both middle-aged (ages 49–51) and older (ages 64–66) women applicants even for jobs that are not physically demanding. In contrast, middle-aged men do not face discrimination for physically demanding or not physically demanding jobs. It is only older men who face job discrimination, and only when they are applying for physically demanding jobs.

The Older Workers and Retirement Chartbook

Chapter 2. Retirement

By [Monique Morrissey](#), [Siavash Radpour](#), and [Barbara Schuster](#) • November 16, 2022

What challenges do workers face in preparing for retirement?

Half of American workers face a sharp drop in living standards at retirement based on a conservative measure that assumes retirees will draw down all their savings and use all their assets in retirement, including the equity in their homes (Munnell, Chen, and Siliciano 2021; Munnell et al. 2020). America's looming retirement crisis is often attributed to longer life spans and workers' failure to save and invest optimally, but workers in other countries face similar longevity and financial planning challenges yet achieve better retirement outcomes (Mitchell and Lusardi 2015; OECD 2021a, 2021b).

The U.S. retirement system is sometimes described as a three-legged stool made up of mandatory Social Security, voluntary employer pensions, and private savings. The three-legged stool simile is offered by way of explaining Social Security's modest benefits, but the other legs are so wobbly that the value of Social Security benefits far exceeds that of other retirement savings and benefits for at least half of older Americans (Sabelhaus and Volz 2020, Figure 4). Because many workers are not covered by a workplace plan, they may continue working into old age to make ends meet, including some who are already receiving Social Security benefits. Among seniors age 65 and older, one-fourth of whom are still working, four in 10 rely on Social Security payments for at least half their income (Dushi and Trenkamp 2021).

The Organisation for Economic Co-operation and Development (OECD) estimates that U.S. workers with average earnings will replace 39.2% of their earnings with Social Security benefits if they work steadily from ages 22 to 67 (67 is Social Security's normal retirement age for workers born after 1959). By contrast, the average replacement rate from mandatory pensions is 51.8% in OECD countries, based on an average OECD normal retirement age of 66.1 years (OECD 2021b, Chapter 4). If U.S. workers also participate in a 401(k) plan with a 9% contribution rate from ages 35 to 67, the OECD estimates that they will replace 65.7% of their earnings in retirement, but such steady participation is unrealistic for the many workers who lack access to a workplace plan (OECD 2021b, Chapter 4; OECD 2021d).

Relying on employers to offer retirement benefits has never served U.S. workers well, leaving roughly half of private-sector workers ages 25–64 without coverage; this was true even in the heyday of traditional

pensions (Munnell and Quinby 2009). The U.S. retirement system went from bad to worse when private-sector employers began switching from traditional defined benefit pensions to 401(k)-style defined contribution plans in the 1980s and early 1990s (EBSA 2021), shifting most of the cost and all the risk of retirement benefits to workers. Despite making it easier for employers to offer a plan, the 401(k) revolution did not expand participation in retirement plans but simply replaced one type of plan with another.

Employers are not required to contribute anything to a 401(k) plan, though most do. In a typical plan, the employer contributes 3% of pay—the maximum matching contribution—if the worker contributes 6%. However, at least 23% of 401(k) participants are enrolled in plans where the maximum employer contribution is less than 3% of pay, including plans that offer workers no employer contribution at all (authors' analysis of Brightscope and ICI 2022, Exhibits 1.2 and 1.8).

Higher-paid workers are more likely to have access to 401(k) plans, and those plans tend to be more generous. The median employer contribution for workers in the top fourth of the wage distribution who maximize their employer match is 4%, versus 3% for workers in the bottom three-fourths of the wage distribution (BLS 2020, Table 34). This nominal difference understates the actual difference in employer contributions going to highly paid and lower-paid workers because it does not account for differences in participation rates, which range from 22% of workers in the bottom fourth of the wage distribution to 59% of workers in the top fourth of the distribution, according to the same employer survey (which includes workers who do not have access to a plan).

Most of the difference in participation rates reflects a difference in access—that is, whether an employer offers a plan and whether a worker meets age and tenure criteria for eligibility, which tend to be stricter for low-wage workers (BLS 2020, Table 30). Low-wage workers are also more likely to have high-turnover and part-time jobs that make them ineligible for benefits, sometimes the result of deliberate strategies adopted by employers to minimize benefit costs for low-wage workers without running afoul of rules intended to prevent employer discrimination against these workers (Kristal, Cohen, and Navot 2018; Kolhatkar 2022). By any measure, most workers with access to a plan choose to participate, though it is difficult to reliably estimate take-up rates in voluntary defined contribution plans because access and participation rates vary across surveys (Radpour, Papadopoulos, and Ghilarducci 2021).

Low-wage workers not only receive less help from employers, they also receive less help from the government. The federal tax subsidy for retirement plans, ostensibly designed to encourage saving, is a function of the income tax that would otherwise be owed on investment earnings, and many low-wage workers owe little or no income tax (though they face higher payroll tax rates than high earners and, in most states, higher state and local tax rates) (Marr, Frentz, and Huang 2013; Wiehe et al. 2018). The Tax Policy Center estimates that only 3.8% of taxpayers in the bottom fifth of the income distribution receive a tax benefit from participating in a retirement plan, and the benefit they receive is only 0.3% of the total, most of which goes to taxpayers in the top income fifth (Tax Policy Center 2020).

Traditional defined benefit pensions are more efficient than 401(k)-style defined contribution plans because they can average costs across workers with different life spans and who retire during a variety of market conditions, including both bull and bear markets. Because pension funds engage in risk pooling and earn higher net investment returns, contributions to 401(k) plans need to be almost twice as large as contributions to defined benefit pensions to provide similar retirement security (Morrissey 2009; Morrissey 2019; Rhee and Forna 2014). In practice, contributions to retirement plans have not increased to make up for the risks associated with 401(k)s, even as retirement wealth has become more skewed toward wealthy households (Munnell, Aubry, and Crawford 2015; authors' analysis of Federal Reserve 2022a, 2022b). Thus the 401(k) revolution has not led to an increase in funds set aside for retirement but instead has made retirement more precarious and unequal.

Large disparities in retirement preparedness are the result of both random factors, such as stock market gyrations that affect 401(k) balances, and systemic failures, such as upside-down tax incentives that provide the most help to those who need it least. The lifelong hardships faced by low-wage workers—including many Black, Hispanic, disabled, LGBTQ, and women workers—continue into old age because of an employer-based retirement system that is stacked against low-wage workers. As a result, Black and Hispanic seniors age 65 and older have more than double the poverty rates of white seniors in the same age group (Li and Dalaker 2021). Nearly half of seniors with disabilities live in or near poverty and are unable to afford basic necessities (United for ALICE 2022); older women, especially women of color, have higher poverty rates than men; and widowed, divorced, and never-married women are at even greater risk of old-age poverty than married women (Justice in Aging 2020b; National Women's Law Center and Justice in Aging 2021; Entmacher and Matsui 2013; Copeland 2022). Though fewer data are available on older LGBTQ adults, they also appear to have higher poverty rates than non-LGBTQ older adults, though the difference is not statistically significant owing to a small sample size (Badgett, Choi, and Wilson 2019, Table 6).

Black workers are more likely to work in industries and occupations that have low rates of access to retirement plans (Rhee 2021a, 2021b). However, an exception to the rule that Black workers and other disadvantaged groups tend to have jobs lacking retirement benefits is Black workers' overrepresentation in public-sector jobs, which typically pay less but offer secure defined benefit pensions (Madowitz, Price, and Weller 2020; Thompson and Volz 2021). Among workers ages 45–65 in 2001–2019, 26% of Black workers participated in defined benefit pensions, compared with 24% of white workers and 13% of Hispanic workers. However, because older Black workers were less likely to participate in defined contribution plans than older white workers, their overall participation in retirement plans was somewhat below that of older white workers, 56% versus 59% (Sabelhaus and Thompson 2021, Table 10).

Among households headed by someone ages 40–59, defined benefit pensions accounted for 40% of Black households' total wealth in 2019, when assessed using a measure of wealth that includes the estimated value of future pension and Social Security benefits. Including Social Security benefits (25%) and savings in defined contribution plans (12%), retirement wealth accounted for 76% of Black households' total wealth. In contrast,

retirement wealth accounted for 50% of white households' total wealth, of which defined benefit pensions accounted for 20%, Social Security benefits for 16%, and defined contribution plan savings for 14% (authors' analysis of Thompson and Volz 2021, Table 3). Because the wealth distribution is highly unequal, these breakdowns of Black and white wealth holdings do not reflect the wealth holding of a typical (median) Black or white household, for which the largest share of wealth is in the form of Social Security payments (Thompson and Volz 2021, Table 4). Though not included in measures of retirement wealth, Black retirees are also more likely to receive financial support from family or friends than white retirees (Copeland and Greenwald 2021).

The Black–white gap in retirement plan participation is exacerbated by Black workers having fewer years of employment, a problem linked to employment discrimination, health disparities, caregiving responsibilities, and incarceration. The unemployment rate of older Black workers ages 55–64 is typically 1.5 to 2 times that of older white workers (Wilson and Darity 2022). Black Americans are nearly five times as likely to be incarcerated as white Americans, with dire consequences for future employment and retirement outcomes (Schmitt and Kandra 2021; Chiteji 2020). In addition to higher rates of job loss and incarceration, Black workers are more likely than white workers to leave the workforce for health reasons or to care for family members, including grandchildren (Copeland and Greenwald 2021; Johnson 2020; Lahey 2018). Among those ages 45–65, 32% of Black and 23% of white adults were not working when surveyed in 2001–2019 (Sabelhaus and Thompson 2021, Table 10).

Hispanic workers are less likely to participate in retirement plans than either white or Black workers, a finding that holds across age and educational attainment groups. For example, Hispanic workers ages 45–65 were less likely to participate in retirement plans (35%) than their white (59%) or Black (56%) counterparts in 2001–2019. Unlike older Black workers, older Hispanic workers also had lower defined benefit pension coverage (13%) than older white workers (24%) (Sabelhaus and Thompson 2021, Table 10).

Despite low rates of retirement plan participation, retirement wealth accounted for 68% of Hispanics' total wealth among households headed by someone age 40–59 in 2019, of which defined benefit pension benefits accounted for 30%, Social Security benefits for 28%, and defined contribution plan assets for 10%. This finding reflects low levels of nonretirement wealth rather than high levels of retirement wealth. As in the case of Black and white households, averages are shaped by the wealth holdings of better-off households. The typical (median) Hispanic household has neither a defined benefit pension nor a defined contribution plan, and its most important asset is in the form of Social Security benefits (authors' analysis of Thompson and Volz 2021, Tables 3 and 4).

Hispanic workers cluster in low-wage occupations that offer few benefits (Rhee 2021a, 2021b). Lower educational attainment, poor health, language barriers, and other known factors explain some but not all of their low pay and low retirement plan participation. Foreign-born Hispanics are generally lower-paid and less likely to participate in retirement plans than Hispanics born in the United States. Foreign-born Hispanic men have higher employment rates than white, Black, or U.S.-born Hispanic men, but foreign-born Hispanic women have lower employment rates than their white, Black, or U.S.-born Hispanic

counterparts. Immigrants who came to the United States later in life may not qualify for Social Security or other retirement benefits, a problem also faced by those who lack legal authorization to work (Johnson, Mudrazija, and Wang 2016).

One explanation for Hispanics' low levels of participation in retirement plans may be their greater reliance on family support (Richman et al. 2012). However, this may be as much a response to as a cause of limited access to retirement plans. Hispanic seniors age 65 and older are more likely to live in multigenerational households (44%) than are Black (33%) or white (16%) seniors (Johnson, Mudrazija, and Wang 2016). Multigenerational living arrangements help families economize on living expenses and allow grandparents to assist with child care and adult children to assist frail parents and grandparents. Hispanic retirees are also more likely to receive financial support from family or friends than white retirees (Copeland and Greenwald 2021).

Blacks and Hispanics also face a greater risk of developing disabling health conditions as they age (Goodman, Morris, and Boston 2019; Weaver 2020). Adults with disabilities, regardless of race and ethnicity, face significant challenges in the workforce. They are less than half as likely to be employed as nondisabled adults, even though most do not meet the overly stringent eligibility standards for receiving Social Security Disability Insurance (SSDI) benefits. By one estimate, workers with disabilities earn 74 cents for every dollar earned by their nondisabled peers (Vallas et al. 2022). Poor employment prospects and health-related expenses lead to high poverty rates and other measures of financial hardship, such as high rates of food and housing insecurity, difficulty paying medical bills, and forgoing needed medical care (Goodman, Morris, and Boston 2019; Weaver 2020; Vallas et al 2022; CBPP 2021).

For adults with disabilities, employment challenges are exacerbated by significant barriers to accessing benefits. This is the case even for disabled workers who should qualify based on stringent eligibility standards, a problem aggravated in recent years by inadequate and poorly allocated administrative funding (Weaver 2021). Half or fewer applicants for Social Security Disability Insurance (SSDI) benefits are ultimately accepted, and many are accepted only after a lengthy appeals process (CBPP 2021; Weaver 2020). Even a study cited by supporters of tightening eligibility requirements found that 72% of SSDI applicants who were denied benefits based on their supposed capacity for gainful employment were earning little or nothing two years later (Maestas, Mullen, and Strand 2013; Morrissey 2015).

Disabled adults' low employment rate and low earnings affect their retirement savings and benefits, leading to financial hardship in old age. Employment problems are compounded by the slow and difficult process of obtaining disability benefits, as many workers who should be eligible for full SSDI benefits instead apply for reduced Social Security retirement benefits at age 62, before they reach full retirement age, often unaware that they may qualify for SSDI benefits even if they have already applied for retirement benefits. Accepting reduced Social Security retirement benefits rather than full disability benefits also means these workers will not qualify for Medicare until age 65, whereas SSDI recipients qualify for Medicare two years after receiving SSDI (Cloyd 2021).

All these problems are made worse by woefully inadequate Supplemental Security Income (SSI) benefits for low-income seniors and people with disabilities. A half century after SSI was signed into law, it does not provide enough income to keep beneficiaries out of poverty. Its income and asset limits are not indexed to inflation, let alone to a modern standard of living (Nuñez 2022). SSI's meager benefits disproportionately hurt women, who make up half (50%) of disabled adults age 18–64 and two-thirds (65%) of seniors age 65 and older receiving SSI benefits (SSA 2020).

Though working women have caught up with working men in terms of retirement plan participation, they are still at greater risk of financial hardship in old age because of lower pay, longer life spans, and more years spent out of the paid workforce or working part-time while caring for family members. Women are more likely than men to be single at older ages because they often outlive older husbands. Women are also more financially affected than men by late-in-life divorce. One reason for this discrepancy is that 401(k) savings are not well protected in divorce, unlike traditional defined benefit pensions. Traditional pensions are generally better for women because they provide a secure income, including spousal benefits, until beneficiaries die, and women tend to live longer and rely more heavily on spousal income and benefits than men (Matsui 2021; Stein 2021; Lin and Brown 2021; Entmacher and Matsui 2013).

Women shoulder more caregiving responsibilities than men, a factor in their lower lifetime earnings and greater retirement insecurity. Caring for young children and then for grandchildren or frail adult family members reduces the time women spend in the paid workforce. More than one-third (35%) of adults ages 50–64 provide unpaid personal care to adults who need such help. The majority (60%) of caregivers of adults are women (AARP and National Alliance for Caregiving 2020). Following women in their 50s as they aged over the 1992–2010 period, Fahle and McGarry (2018) found that caring for spouses, parents, and parents-in-law reduced employment by 8% and was associated with 1.3 fewer hours of paid work per week for women remaining in the workforce. Providing financial support to parents and caring for frail spouses are factors correlated with lower retirement wealth for older women, though it is difficult to differentiate between lower-wealth families relying more on unpaid care as opposed to caregiving having an impact on wealth (Bond, Saad-Lessler, and Weller 2020).

Caregiving is also a concern for older LGBTQ adults, who are less likely to have children than non-LGBTQ adults and who often find themselves caring for aging parents, spouses, and partners, but who have fewer younger family members they can rely on when they need help. Though friend networks play an important caregiving role in LGBTQ communities, LGBTQ seniors, especially men, are more likely to age alone, a problem exacerbated by the fact that many LGBTQ seniors do not feel welcome in many senior centers, assisted living and long-term care facilities, and health care settings (SAGE and National Resource Center on LGBT Aging n.d.; LGBT MAP and SAGE 2010; Schmidt 2022; Choi and Meyer 2016).

For LGBTQ workers as for other disadvantaged and discriminated-against groups, employment disparities carry over into retirement (Fredriksen-Goldsen et al. 2017). While data on pay and benefits are limited, the evidence suggests that LGBTQ men earn less

than non-LGBTQ men, while LGBTQ women, like their non-LGBTQ counterparts, earn less than men (Badgett, Carpenter, and Sansone 2021). Though the Social Security Administration and some employers have taken steps to provide access to retirement benefits for same-sex partners, spouses, and survivors, including those who would have qualified for spousal benefits in the absence of prohibitions against same-sex marriage before the Supreme Court's 2015 *Obergefell v. Hodges* decision, these changes came too late for many LGBTQ couples (SSA n.d.; Choi and Meyer 2016). Such factors, along with health disparities, contribute to higher indebtedness and lower retirement confidence for LGBTQ adults compared with non-LGBTQ adults (Badgett, Choi and Wilson 2019; Emler 2016; Copeland and Greenwald 2022).

Point-in-time measures give an incomplete picture of retirement security, which is not just a function of the retirement savings and benefits an individual manages to accumulate while working and whether these funds will be sufficient to cover normal living expenses in retirement. Retirement security is also influenced by past disparities, such as inherited wealth and educational advantages or lack thereof, and future responsibilities and risks, such as the need to support family members or cover health-related expenses.

The U.S. tax system plays a significant role in augmenting disparities in retirement security. While lower-income workers are poorly served by a do-it-yourself retirement system, wealthy households benefit disproportionately from federal subsidies for retirement saving. This is not just because they are more likely to have access to employer-based retirement accounts and their account balances are larger, but also because they can maximize the tax advantage by allocating riskier assets with higher expected rates of return to retirement accounts that allow investment income to grow tax-free (Mitchell 2022; Wamhoff 2021).

Thus, the employer-based retirement system serves to magnify inequality, including racial and ethnic gaps in retirement wealth. Because Black and Hispanic households have historically been shut out of many housing markets and other asset-building opportunities (Rothstein 2017), they are disadvantaged by a system that rewards risk taking rather than incentivize new saving. Black and Hispanic households are often exposed to financial risk not by choice but by circumstances. They were disproportionately affected by plummeting housing prices during the Great Recession of 2008–2009, for example (Wolff 2018).

Financial burdens also weigh more heavily on Black and Hispanic families. For example, Blacks and Hispanics are more likely than whites to cite paying off debt or paying for a child's education as barriers to saving. They are also more likely than whites to prioritize supporting family and friends over saving for retirement (Copeland and Greenwald 2021), a difference likely based on Black and Hispanic families' greater immediate needs and reliance on reciprocity rather than on complacency about the future.

In contrast to employer-based plans, Social Security's progressive benefit formula replaces a higher share of earnings for low-wage workers. Social Security benefits therefore serve to reduce wealth inequality, including the racial wealth gap. Researchers at the Center for Retirement Research, for example, estimated that among older households ages 51–56 between 1992 and 2016, the typical Black household had 46% of the retirement wealth of

the typical white household, while the typical Hispanic household had 49%, if the future value of Social Security benefits was included in the wealth calculation. Without Social Security, however, these figures would fall to 14% and 20%, respectively (Hou and Sanzenbacher 2020). Wolff (2018) and Thompson and Volz (2021) found similarly wealth-equalizing effects of Social Security and defined benefit pensions for different age groups. However, Social Security's progressivity has been somewhat eroded by growing disparities in life expectancy between low and high earners that affect the value of lifetime benefits (National Academies 2015; Rutledge 2018a).

The shift from secure pensions to risky and inadequate 401(k) plans unfortunately coincided with cuts to Social Security enacted in 1983, when the system faced an imminent shortfall. These cuts took the form of a gradual increase in the normal retirement age from 65 to 67 and the taxation of some Social Security benefits, with the tax revenue reverting to the system. The increase in the normal retirement age is equivalent to a 13.3% across-the-board cut in benefits for workers born in 1960 or later, with smaller cuts for workers born between 1938 and 1959. Factoring in the taxation of benefits, GenXers will experience cuts averaging around 22% relative to what they would have received absent the 1983 reforms. Later generations will experience even deeper cuts as an increasing share of benefits is taxed (Morrissey 2019; Purcell 2015).

Meanwhile, longer life spans and slower economic growth have made funding retirement more expensive, whether that funding happens through intergenerational transfers, as with Social Security, or depends on investment returns, as with traditional pensions and retirement savings plans. Falling birth rates, increased life expectancy, and reduced immigration have resulted in an older U.S. population and older workforce. Adding to these challenges is the fact that most workers have seen slow or stagnant wage growth as their wages have fallen behind productivity growth (Goss 2022; American Academy of Actuaries 2020; EPI 2022). As corporate profits and high earners have captured a growing slice of the economic pie, this redistribution away from low- and middle-income families has hurt consumer demand and slowed growth while hindering many workers' ability to save for retirement (Bivens and Banerjee 2022).

What do the charts tell us?

Only half of prime-age (25–54) workers participate in an employer-based retirement plan, a share that drops to one-third for workers age 65 and older (Chart 2A). The main reason so few workers participate in an employer-based retirement plan is that employers are not required to offer one, and those that do can limit eligibility to workers meeting minimum age, tenure, and hours worked requirements. Most workers who do have access to a plan either are enrolled automatically, as in the case of traditional pensions, or choose to participate, as in voluntary 401(k) plans (Chart 2B).

Participation might be expected to increase with age as workers pay off student loans, settle into career jobs, and approach retirement. This does not happen, however. Retirement plan participation is little higher for workers ages 55–64 than for prime-age workers, and it is significantly lower for workers age 65 and older (Chart 2A). Participation

is especially low for older workers without four-year college degrees, women age 65 and older, and older Hispanic workers (Charts 2C–2E).

It is normal for high earners to save more in retirement accounts than low earners when the goal is to replace a target share of earnings at retirement. But there is no good reason for retirement plan *participation* to depend on earnings. Among workers ages 55–64, however, only 1 in 5 in the bottom income quintile participates in a retirement plan, whereas four in five in the top income quintile participate. The pattern is similar—but participation rates are even lower—for workers age 65 and older (Chart 2F).

Participating in a retirement plan does not guarantee that workers will be able to maintain their standard of living or avoid hardship in retirement. However, workers with traditional defined benefit plans are generally better prepared for retirement than those with 401(k)-style defined contribution plans because in defined benefit plans, employers are responsible for funding a guaranteed benefit in the form of a monthly pension check. Older Black workers are more likely than older white or Hispanic workers to participate in these more secure plans because they are more likely to work in the public sector, where defined benefit pensions are more common. However, older Black workers are less likely to participate in defined contribution plans—or in any type of plan—than white workers. Hispanic workers are less likely than either Black or white workers to participate in either type of plan (Chart 2G).

Another gauge of retirement preparedness is whether a household has savings in a tax-favored retirement plan from a current job, a past job, or an individual retirement account (IRA). We would expect most households approaching retirement to have savings in one of these accounts, since participation in 401(k)-style defined contribution plans has exceeded participation in defined benefit pensions since 1992, and most IRA funds were rolled over from 401(k) plans (EBSA 2021; Copeland 2020).

However, the typical household ages 55–64 has very little saved in these accounts and is no more likely to have retirement account savings than a prime-working-age household ages 25–54. Among households with retirement accounts, older households do have more saved than their younger counterparts, but not much more than the equivalent of a year’s income (Charts 2H and 2I).

Households age 65 and older are even less likely to have retirement account savings, such that the typical household in this age group has none (Charts 2H and 2I). This older generation was more likely to be covered by traditional pensions during their working lives, and some households that once had retirement accounts have drawn down their savings.

Among households age 55 and older, only college-educated, married, and non-Hispanic white households have substantial savings in retirement accounts (Charts 2K–2L), and they are a minority of older households.

What can we do to improve retirement security?

For some workers, delaying retirement can help close the retirement income gap by allowing more time to increasing savings and accrued benefits while shortening the amount of time spent in retirement itself, when assets are spent down. Deferring retirement can be especially beneficial for women whose careers have been delayed or interrupted by childrearing (Maestas 2018). However, expecting workers to work into old age is neither a feasible nor an equitable solution to the retirement crisis because the increase in life expectancy has been concentrated among higher earners with less physically demanding and onerous jobs. Americans already work more hours per year and more years than workers in most peer countries (OECD 2021c, 2022).

Though retirement challenges appear complex, the solution is simple, if politically challenging: Expand Social Security, SSI, and other social insurance programs. Social Security expansion should include both across-the-board and targeted benefit increases, including a caregiver credit that boosts benefits for workers whose caregiving responsibilities cause them to earn less than the median worker, and a higher special minimum benefit for workers who earn low wages over long careers. These are among the common elements of Social Security expansion plans proposed in recent years by Rep. John Larson (D-Conn.), Sen. Bernie Sanders (D-Vt.), Sen. Elizabeth Warren (D-Mass.), and others that have garnered strong support in the Democratic caucus. However, Social Security expansion has encountered resistance from Republican lawmakers despite support from Republican voters (Morrissey 2019; Data for Progress 2022; Altman 2022).

Older workers with caregiving responsibilities would have been helped by expanded funding for Home and Community Based Services in Medicaid, a major component of the Biden administration's Build Back Better plan that, unfortunately, did not make it into the Inflation Reduction Act of 2022 (Justice in Aging 2020a; Coalition on Human Needs 2022). The Supplemental Security Income (SSI) Restoration Act introduced by Sen. Sherrod Brown (D-Ohio) would also offer critical support to many vulnerable older Americans, including those with disabilities, by upgrading the financial eligibility rules and bringing them in line with current economic realities (Romig 2021).

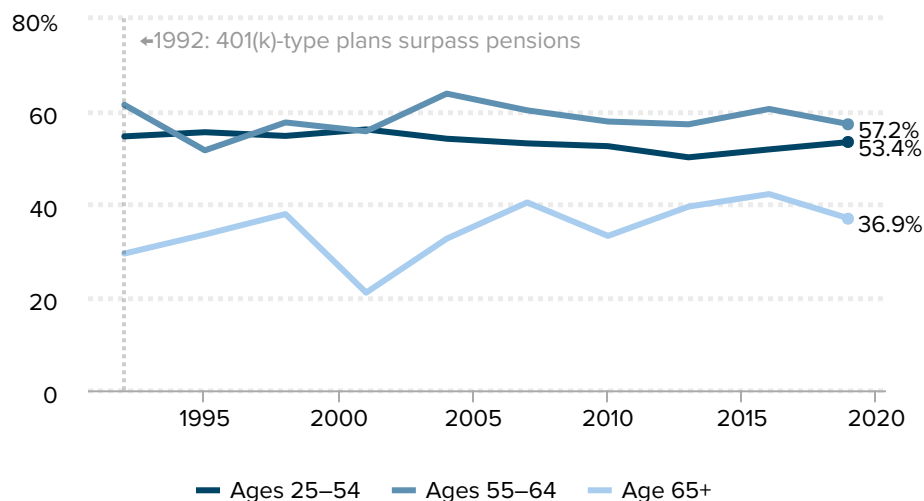
Expanding Social Security would reduce the reliance on employers to voluntarily provide benefits, an aspect of the U.S. retirement system that has proven to be a failure. A complementary approach would be to require employers to offer pension benefits or contribute to a secure low-cost retirement plan, such as the Guaranteed Retirement Account plan (Ghilarducci 2008). The two approaches could be combined. For example, employers could be required to contribute to retirement savings accounts, which would enable workers to defer filing for Social Security benefits and so realize a larger monthly benefit when they did file (Koenig, Fichtner, and Gale 2018).

More incremental steps to expand access to retirement plans, lower costs, and promote fairness include automatic IRA plans set up by state and local governments and refundable tax credits for retirement saving (Pew 2016; Fisher and Ghilarducci 2017; Antonelli 2020; Georgetown CRI 2021; Batchelder, Goldberg, and Orszag 2006). It is also important to defend traditional pensions, which work for those workers lucky enough to

have them, including public-sector workers, whose employers are well suited to take on long-term liabilities (Morrissey 2019).

Retirement plan participation remains low despite 401(k) revolution

Share of workers who participate in a retirement plan at a current job, by age, 1992–2019



Notes: Retirement plans include traditional defined benefit pension plans and retirement savings accounts such as 401(k)s.

Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of 1992 to 2019 Survey of Consumer Finances microdata (Federal Reserve 2022a).

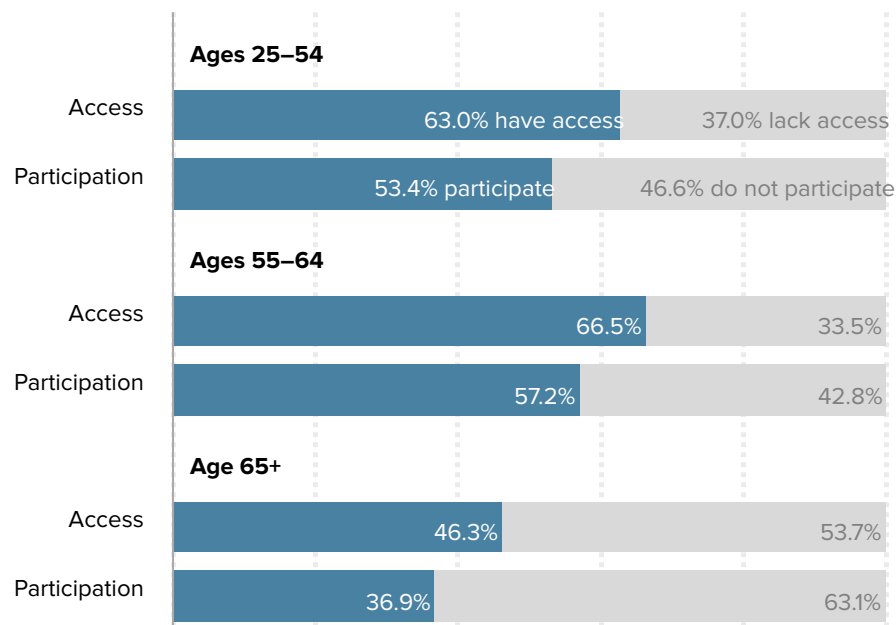
Roughly half of prime-age workers (ages 25–54) and older workers approaching retirement (ages 55–64) participate in a retirement plan, such as a traditional defined benefit pension plan or 401(k)-style defined contribution plan. This share has not changed noticeably in recent decades despite a change in the tax code in the late 1970s that set the stage for 401(k) plans. Under a defined contribution plan such as a 401(k), employee and/or employer contributions go into an investment account. These plans shift much of the cost and all of the risk of retirement onto workers (Morrissey 2019). Defined contribution plans overtook defined benefit pension plans in 1992, when the number of participants in defined contribution plans exceeded the number of participants in defined benefit pension plans (EBSA 2021). Yet as this chart shows, making it easier and cheaper for employers to offer retirement plans boosted participation in

these easier and cheaper defined contribution plans but did not expand overall participation in retirement plans.

The chart also shows that retirement plan participation is much lower for workers age 65 and older. Some of these workers describe themselves as retired from career jobs and have part-time or temporary jobs with fewer benefits. Participation in workplace retirement plans has increased somewhat among these workers in recent decades as more are retiring at older ages from jobs with benefits. One factor contributing to later retirement is the shift to 401(k) plans. Unlike traditional pension plans, 401(k) plans do not specify a “normal” retirement age and provide less secure retirement income (Munnell 2015).

Only about half of workers approaching retirement age participate in a retirement plan, largely owing to lack of access

Share of workers who have access to and participate in a retirement plan at a current job, by age, 2019



Notes: Retirement plans include traditional defined benefit pension plans and retirement savings accounts such as 401(k)s.

Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of 2019 Federal Reserve Board of Governors Survey of Consumer Finances microdata (Federal Reserve 2022a).

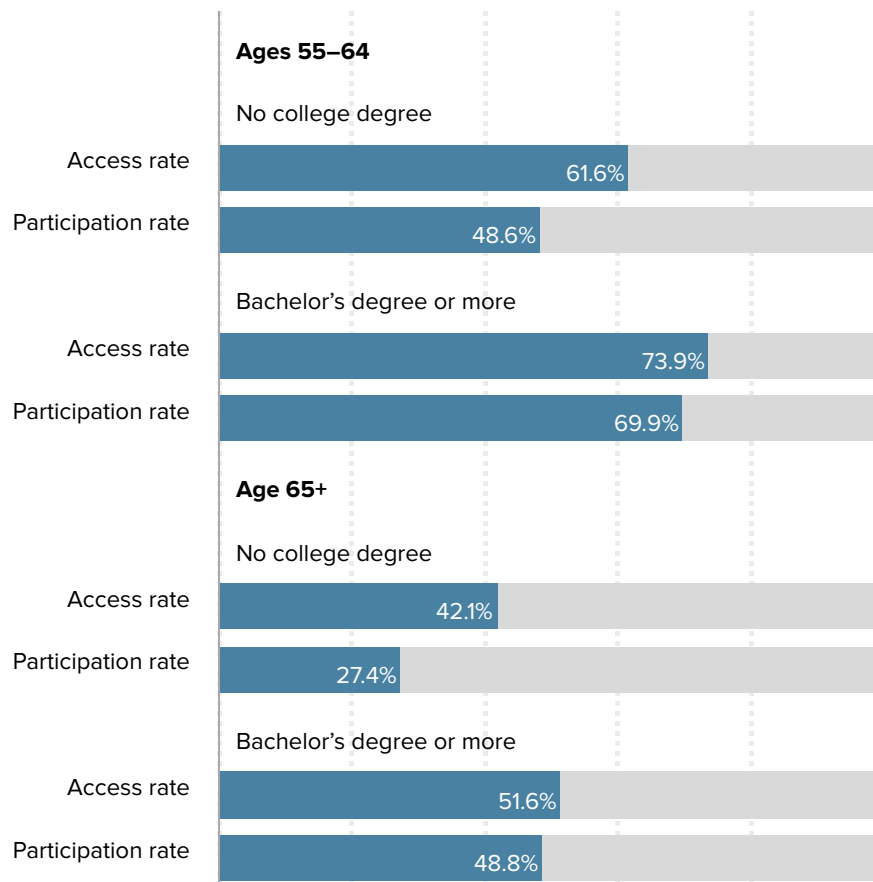
Only 57.2% of older workers approaching retirement (ages 55–64) participate in a retirement plan. This is only slightly more than the 53.4% of prime-age workers (ages 25–54) who participate. These data call into question the common assumption that workers catch up on retirement preparation as they get older and settle into career jobs.

This chart shows that lack of access is the biggest factor depressing worker participation in retirement plans. In most cases, workers who do not participate lack access to a plan, either because their employer does not sponsor one or because they do not meet eligibility requirements based on hours worked or tenure.

Retirement plan access and participation are much lower among workers age 65 and older. Some workers in this age group are semiretired and continue working for noneconomic reasons. But others need to work longer and save more to make up for insufficient retirement savings, often because of a lifetime of lower-income work. Lack of access to retirement plans at work makes saving for retirement more difficult. This is true even for workers who can stay employed and postpone their retirement (see Ghilarducci, Papadopoulos, and Webb 2022).

Older workers without a college degree are less likely to have access to and participate in a retirement plan

Share of older workers who have access to and participate in a retirement plan at a current job, by educational attainment and age, 2019



Notes: Retirement plans include traditional defined benefit pension plans and retirement savings accounts such as 401(k)s.

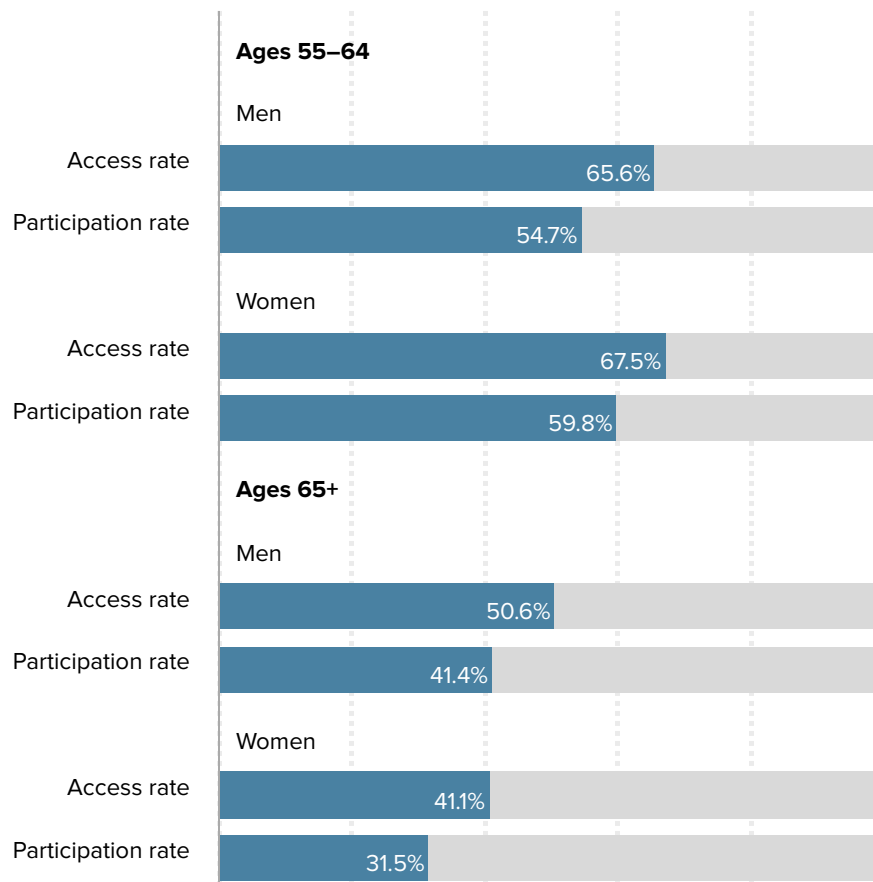
Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of 2019 Survey of Consumer Finances microdata (Federal Reserve 2022a).

Older workers without a bachelor's degree or more education are much less likely than their college-educated peers to have access to and participate in a retirement plan. For example, seven in 10 (69.9%) of workers ages 55–64 with a bachelor's degree participate in a plan, compared with less than half (48.6%) of their counterparts without a bachelor's degree. Workers without a bachelor's degree represent well over half of workers (59.7%) in this age group (not shown in the chart). (The distribution of workers by education level also comes from Survey of Consumer Finances microdata accessed from Federal Reserve 2022a).

Not having a bachelor's degree is also associated with lower retirement access and participation rates among workers age 65 and older. Among workers in this age group, 48.8% of workers with a bachelor's degree participate in a plan, nearly twice the participation rate of workers without a bachelor's degree (27.4%). Though not shown in the chart, workers with a bachelor's degree make up a larger share of workers age 65 and older (44.5%) than workers ages 55–64 (40.3%). The gap stems from the fact that college-educated workers are more likely to remain in the workforce at older ages, according to EPI and SCEPA analysis of SCF microdata (Federal Reserve 2022a). However, many workers in the 65+ age group, including those with a bachelor's degree, work part-time and/or supplement Social Security payments with income from lower-paid jobs taken as a transition to retirement. Often these “bridge” jobs do not provide retirement benefits (Cahill and Quinn 2020; Johnson and Kawachi 2007).

Working women age 65 and older are the least likely among older workers to participate in a retirement plan

Share of older workers who have access to and participate in a retirement plan at a current job, by gender and age, 2019



Notes: Retirement plans include traditional defined benefit pension plans and retirement savings accounts such as 401(k)s.

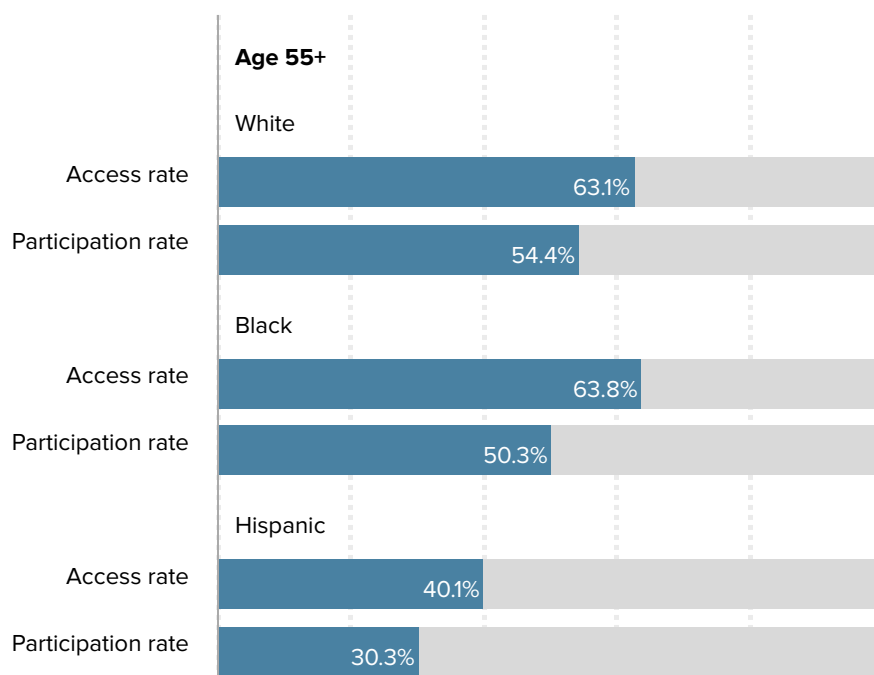
Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of Survey of Consumer Finances 2019 microdata (Federal Reserve 2022a).

Despite some progress, gender inequities in retirement persist. Working women approaching retirement (ages 55–64) are as likely to have access to a retirement plan as their male counterparts and are more likely to participate. However, working women age 65 and older are less likely to have access to a plan than working men in their age group or workers ages 55–64 (both men and women).

This limited access to retirement for working women age 65 and older is partly due to their work in part-time jobs, which are less likely to provide retirement benefits (BLS 2019). Because women make up nearly two-thirds of caregivers for adults (typically elder parents or spouses), their caregiving responsibilities often limit them to part-time jobs, which are far less likely to offer any retirement plan (AARP and National Alliance for Caregiving 2020). Even if women had equal access to retirement plans, they would be at greater risk of hardship in old age. That is because they earn less, live longer, and are more likely to be single or widowed than men, among other factors (Enda and Gale 2020; Entmacher and Matsui 2013; Entmacher, Waid, and Veghte 2016; Ghilarducci, Jaimes, and Webb 2018; Weller, Saad-Lessler, and Bond 2020).

Hispanic workers are the least likely among older workers to participate in a retirement plan

Share of workers age 55 and older who have access to and participate in a retirement plan at a current job, by race and ethnicity, 2019



Notes: Retirement plans include traditional defined benefit pension plans and retirement savings accounts such as 401(k)s. Hispanic refers to Hispanic of any race, while white and Black refer to non-Hispanic whites and non-Hispanic Blacks.

Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of Survey of Consumer Finances 2019 microdata (Federal Reserve 2022a).

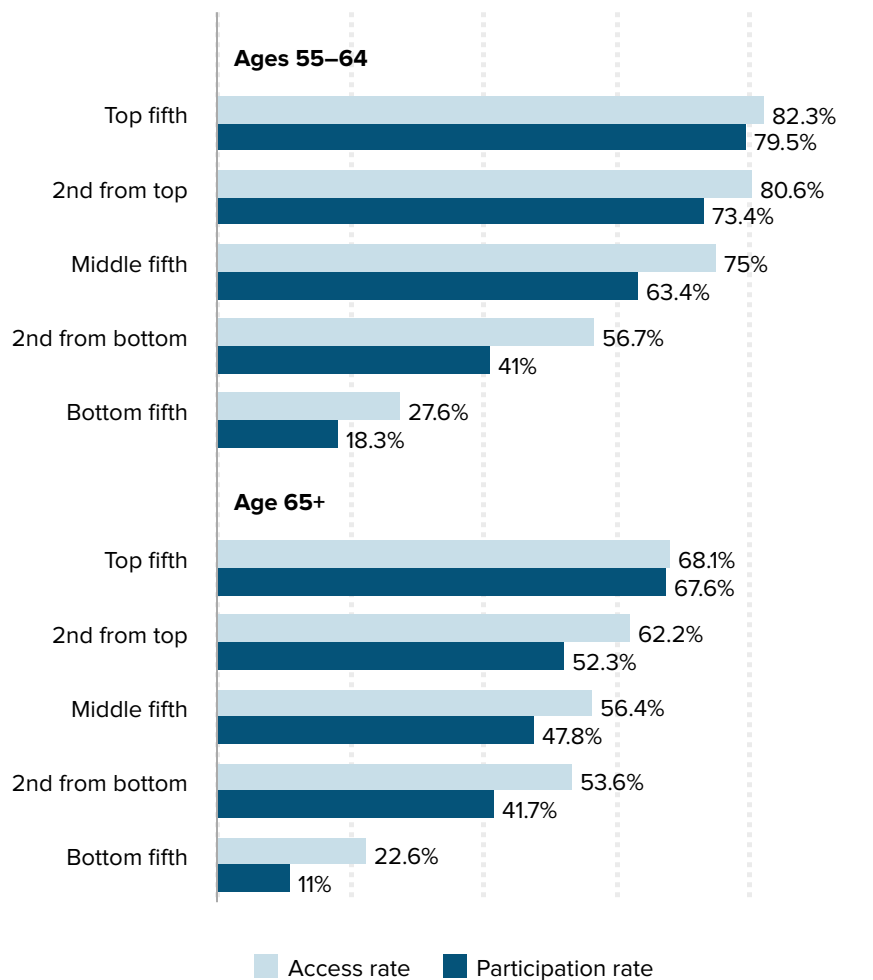
Older Black workers (age 55 and older) are slightly more likely to have access to a retirement plan than older white workers, though their participation rate is lower. Older Hispanic workers are much less likely than either Black or white workers to have access to or participate in retirement plans. Separate analysis of Survey of Consumer Finances and Current Population Survey data reveals

some factors at play behind the differing access rates. Older Black workers are more likely to work full-time, more likely to work in the public sector, and less likely to be self-employed than older white workers, all factors associated with greater access to retirement benefits (authors' analysis of Federal Reserve 2022a; Flood et al. 2021). On the other hand, older Hispanic workers are much less likely than Black or white workers to have jobs in the public sector.

The lower participation rates for Black and Hispanic workers are due in part to industry characteristics. Black and Hispanic workers are much more likely to work in such sectors as the Accommodation and Food Services sector, where pay is low and benefits are meager (Rhee 2021a, 2021b). A 2022 survey ranked this sector last in the quality of 401(k) plans offered (Godbout 2022). Low-income workers, including many Black and Hispanic workers, also receive little or no tax benefit from participating in a plan because they owe payroll and other taxes but not income tax. Low pay, low employer matches, and low or no tax benefits discourage participation in defined contribution plans that require workers to contribute to the plan and assess a penalty if workers need to access funds before age 59½.

High-earning older workers are three times as likely as low-earning older workers to have access to a retirement plan

Share of older workers who have access to and participate in a retirement plan at a current job, by earnings group and age, 2019



Notes: Retirement plans include traditional defined benefit pension plans and retirement savings accounts such as 401(k)s.

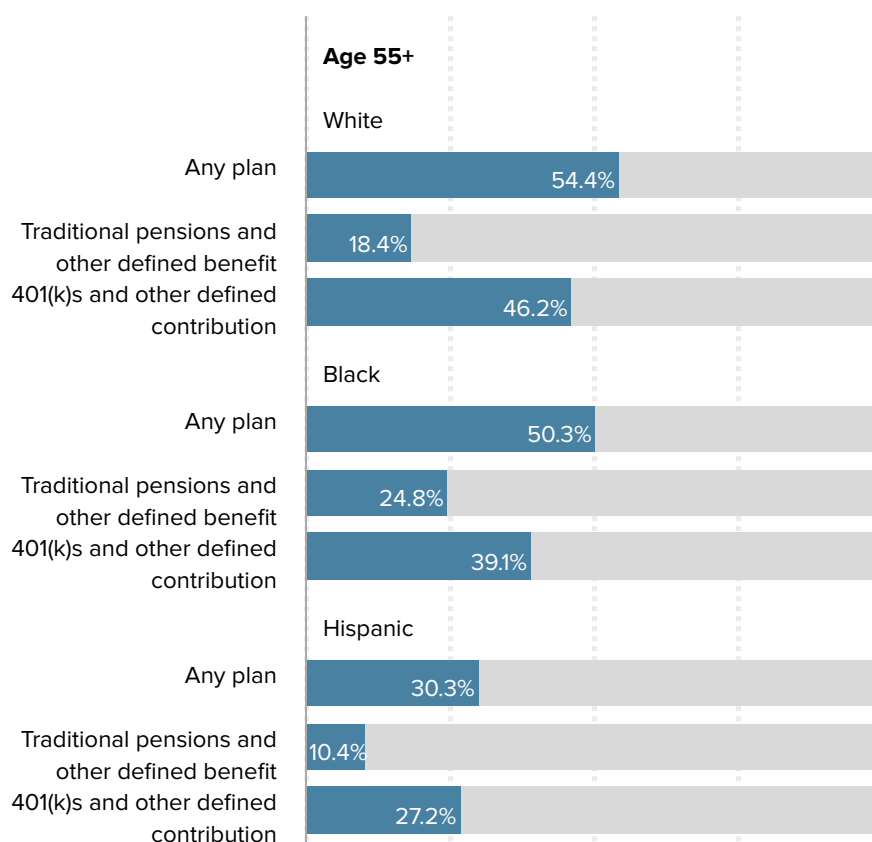
Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of Survey of Consumer Finances 2019 microdata (Federal Reserve 2022a).

High earners are much more likely than low earners to have access to and participate in retirement plans. Among workers approaching retirement age (ages 55–64), those in the top earnings fifth are three times as likely to have access and more than four times as likely to participate as those in the bottom earnings fifth.

Workers ages 55 to 64 are more likely to have access and participate than workers age 65 and older. The gap is due in part to the fact that workers age 65 and older are more likely to be working part-time. Among workers age 65 and older, those in the top earnings fifth are three times as likely to have access and more than six times as likely to participate as those in the bottom fifth.

While traditional pension coverage of older Black workers outstrips that of other older workers, retirement coverage for Hispanics lags

Share of older workers who participate in a retirement plan at a current job, by race/ethnicity and plan type, 2019



Notes: Defined benefit pension plans include traditional pension plans as well as other retirement plans in which employers are responsible for funding promised benefits. Retirement savings accounts such as 401(k)s are referred to as defined contribution plans because employer contributions (if the employer contributes at all), rather than retirement benefits, are determined in advance. Hispanic refers to Hispanic of any race, while white and Black refer to non-Hispanic whites and non-Hispanic Blacks.

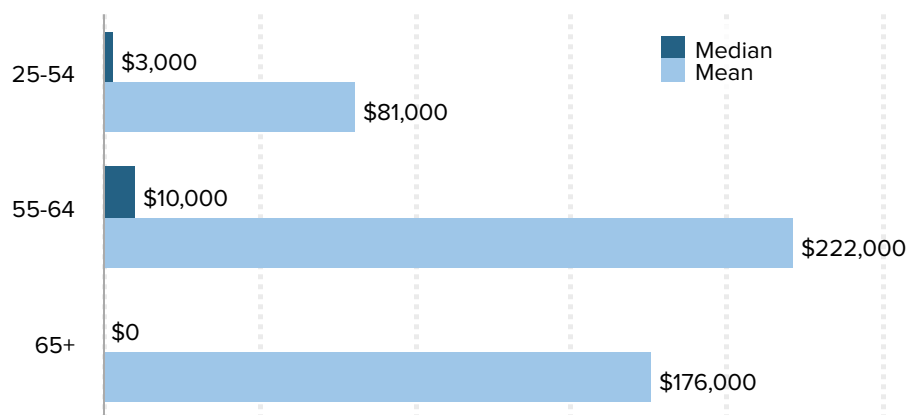
Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis

(SCEPA) analysis of Survey of Consumer Finances 2019 microdata (Federal Reserve 2022a).

Among workers age 55 and older, Hispanic workers are less likely to participate in retirement plans than white and Black workers. Black workers in the 55 and older age group are more likely than white workers to participate in traditional pension plans and other defined benefit plans and less likely to participate in 401(k)-style defined contribution plans. Although not shown in the chart, Black workers are more likely than white or Hispanic workers to be employed in the public sector, where traditional pensions are the norm (BLS 2019). Pensions are especially important to Black workers because discriminatory policies and practices have historically relegated these workers to jobs lacking secure benefits, have prevented Black families from accumulating home equity, and have generally hindered Black Americans from achieving financial security and transferring wealth to younger generations (Rothstein 2017).

Most older households have little or nothing saved in retirement accounts

Median and mean retirement account savings, by age, 2019



Notes: Retirement account savings include funds in 401(k)-style defined contribution plans and in IRAs but not in defined benefit pension plans.

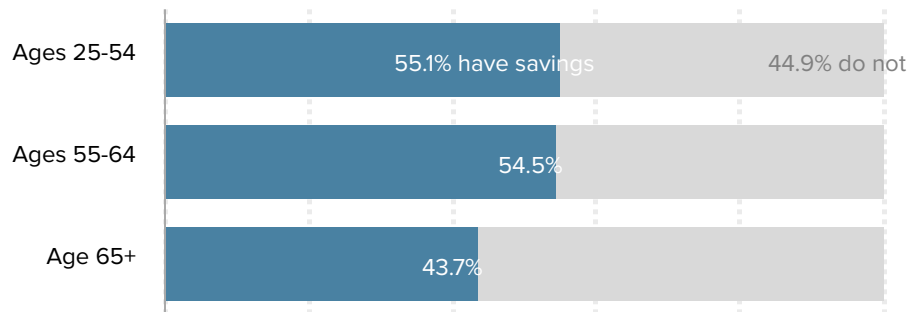
Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of Survey of Consumer Finances 2019 microdata (Federal Reserve 2022a).

As shown in the chart, the typical (median, or 50th percentile) household age 55–64 has only \$10,000 saved in a retirement account, with nearly half (44.5%) of households in this age group having nothing saved in these accounts (see Chart 2I). The mean amount saved by households in this age group (\$222,000) is much higher than the median as a few households with large savings push up the average.

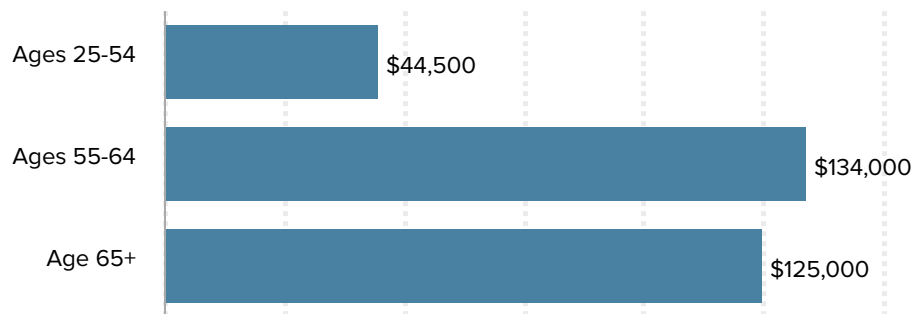
Households age 65 and older are even less likely to have retirement savings than those ages 55–64, with over half (56.3%) having none (Chart 2I). The median account balance for households age 65 and older is therefore \$0, while the mean is \$176,000. Smaller balances for the older age group reflect the fact that they were more likely than households in the 55–64 age group to have been covered by traditional pensions during their working lives, and that some older retirees who did have retirement accounts have drawn down their savings.

Many older households have no savings in retirement accounts, and the typical household with savings has relatively little saved

Share of households with retirement account savings, by age, 2019



Median account balance of households with retirement savings, by age, 2019



Notes: Retirement account savings include funds in 401(k)-style defined contribution plans and in IRAs but not in defined benefit pension plans.

Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of Survey of Consumer Finances 2019 microdata (Federal Reserve 2022a).

Just over half (54.5%) of households approaching retirement age (ages 55–64) have savings in a 401(k)-type account or an IRA. That is about the same share

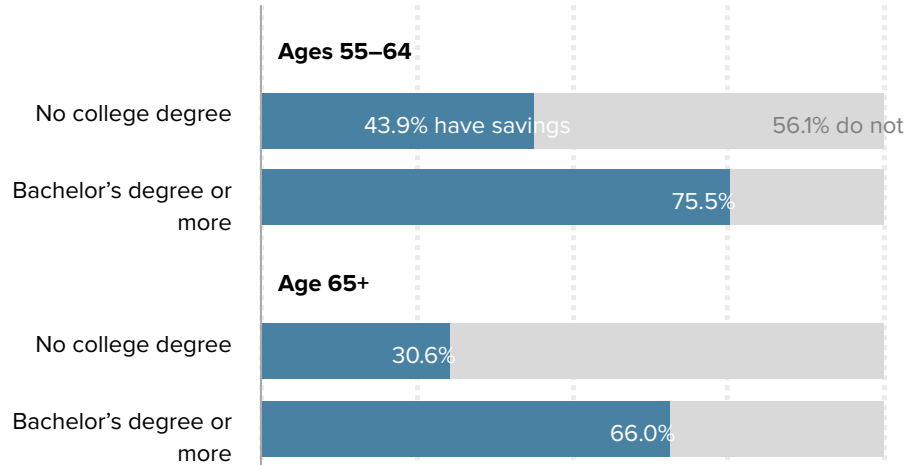
(55.1%) as prime-age households (ages 25–54). Households age 65 and older are less likely to have retirement account savings. But, though not shown in the chart, households age 65 and older are more likely than their counterparts approaching retirement age (ages 55–64) to have traditional pensions or other defined benefit plans from a current or past job. Half (49.7%) of households age 65 and older have defined benefit plans, versus 32.9% of households ages 55–64 (authors’ analysis of Federal Reserve 2022a, not shown in chart).

Among households with retirement account savings, account balances are higher for both groups of older households than for prime-age households, as would be expected. However, the median retirement account balance for households ages 55–64 is \$134,000, only somewhat higher than their median income of \$97,739. (Incomes, not shown in the chart, also come from the Survey of Consumer Finances data.) These figures suggest that even among the relatively privileged households with retirement account savings, account balances are only a fraction of what they would need to supplement Social Security income in retirement. Unless these households also have defined benefit pensions or other sources of income or wealth, many are likely to experience a sharp drop in their standard of living in retirement.

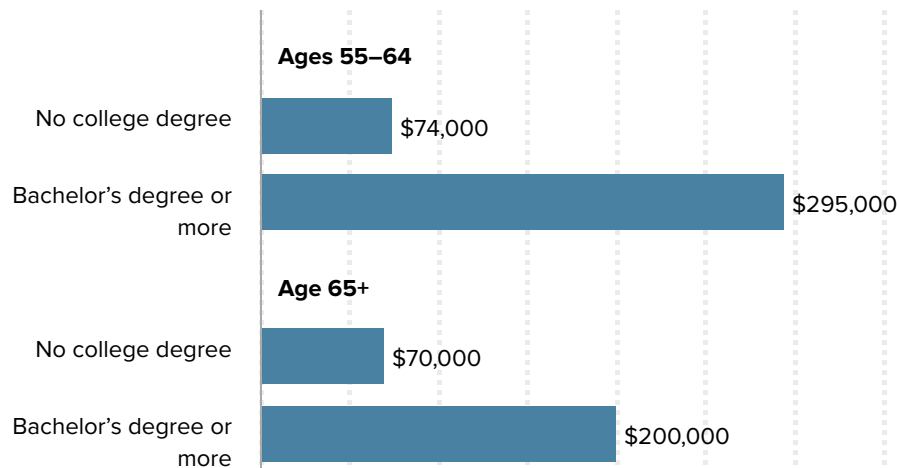
There is no consensus among experts about how much money people need to save in retirement accounts. Needed savings depends, among other things, on what other resources they have, such as Social Security income, home equity, or a traditional pension. However, few experts would suggest that a typical household will be able to maintain its standard of living in retirement with only one to two years’ worth of income saved in a retirement account, unless a household member has a traditional pension in addition to Social Security income.

Only college-educated older workers have significant retirement savings

Share of older households with retirement account savings, by educational attainment and age, 2019



Median account balance of older households with retirement account savings, by educational attainment and age, 2019



Notes: Retirement account savings include funds in 401(k)-style defined contribution plans and in IRAs, but not in defined benefit pension plans.

Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of Survey of Consumer Finances 2019 microdata (Federal Reserve 2022a).

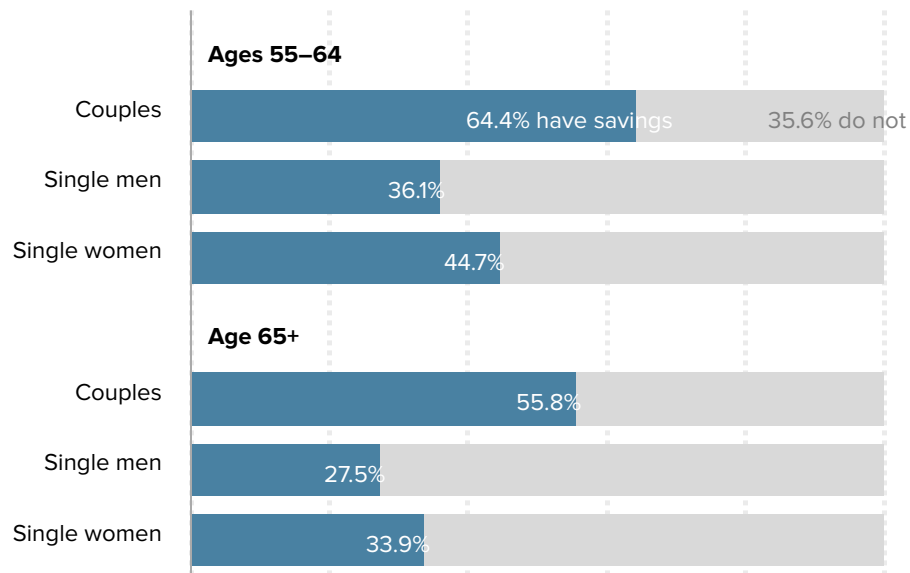
Among older households, only households with a bachelor's degree or more education are more likely than not to have retirement account savings. And only these households have a substantial dollar amount of savings in these accounts. These college-educated households are in the minority—constituting 33.4% of households in the 55–64 age group and 36.9% of households in the 65 and older group, according to the 2019 Survey of Consumer Finances microdata (authors' analysis of Federal Reserve 2022a, not shown in chart).

The low shares of non-college-educated households with retirement account savings and the low balances in those accounts suggest deep inequities in retirement preparedness. Roughly eight in 10 non-college-educated households approaching or entering retirement between ages 55 and 64 either have nothing (56.1%) or less than \$74,000 (22.0%) saved in these accounts.

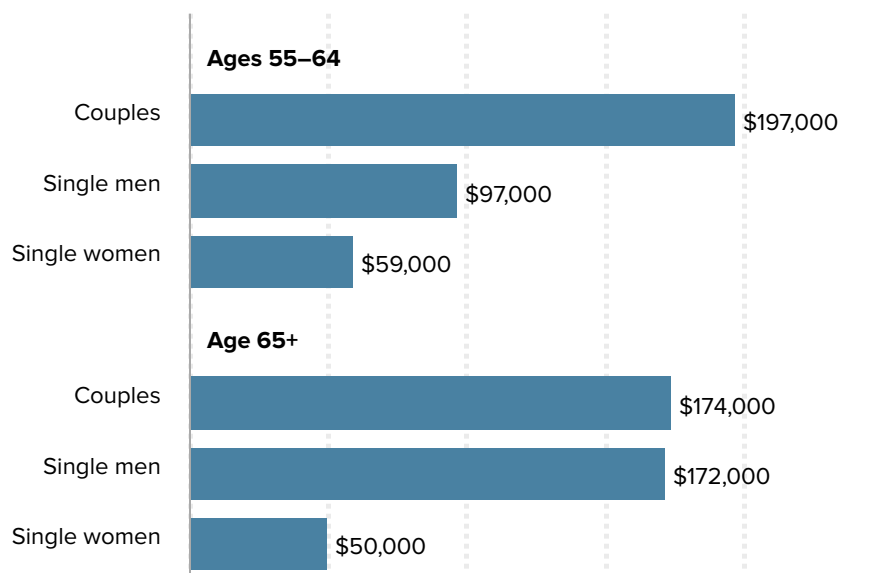
2K

Older couples are more likely to have retirement account savings than older single people, especially older single women

Share of older households with retirement account savings, by gender/marital or domestic partnership status and age, 2019



Median account balances of older households with retirement account savings, by gender/marital or domestic partnership status and age, 2019



Notes: Retirement account savings include funds in 401(k)-style defined contribution plans and in IRAs, but not in defined benefit pension plans.

Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of Survey of Consumer Finances 2019 microdata (Federal Reserve 2022a).

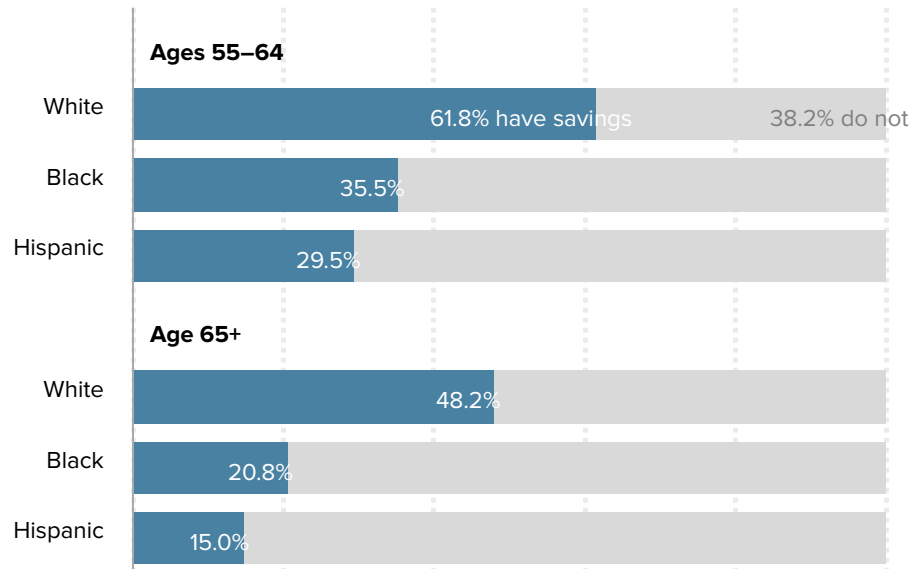
While older single women are more likely than older single men to have savings in a 401(k)-type account or an IRA, couples are more likely than either to have retirement account savings. Older couples and older single men with retirement accounts have more savings than older single women with retirement accounts.

Even among couples approaching retirement (ages 55–64), who are the most likely among all older age groups to have retirement accounts, the median account balance is only one and a half times their median income of \$133,373. (Income data, not shown in the chart, also come from the Survey of Consumer Finances.) There is no consensus among experts about how much money people need to save in retirement accounts, which depends, among other things, on what other resources they have. However, few experts would suggest that a

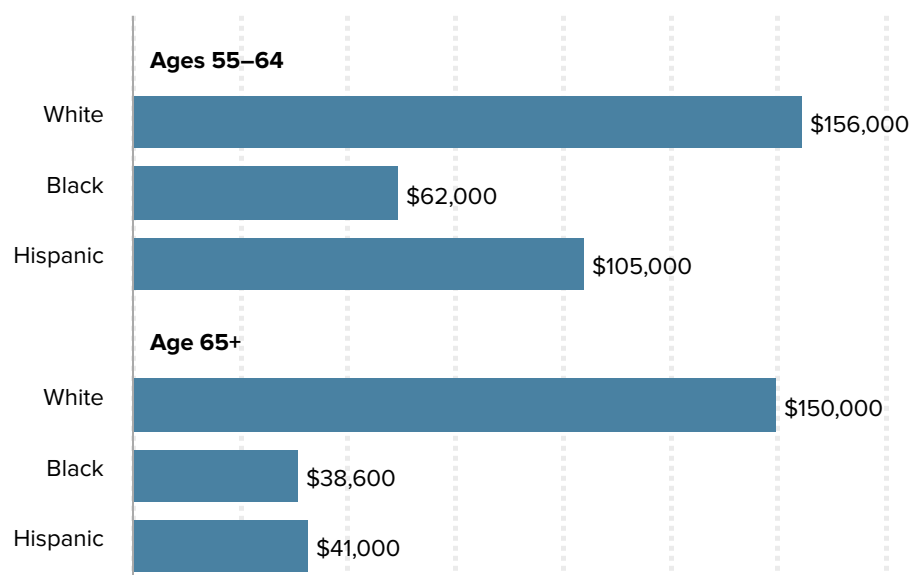
typical household will be able to maintain its standard of living in retirement with only one to two years' worth of income saved in a retirement account unless a household member has a traditional pension in addition to Social Security income.

Older Black and Hispanic households have much lower retirement account savings

Share of older households with retirement account savings, by race/ethnicity and age, 2019



Median account balance of older households with retirement account savings, by race/ethnicity and age, 2019



Notes: Retirement account savings include funds in 401(k)-style defined contribution plans and in IRAs, but not in defined benefit pension plans. Hispanic refers to Hispanic of any race, while white and Black refer to non-Hispanic whites and non-Hispanic Blacks.

Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of Survey of Consumer Finances 2019 microdata (Federal Reserve 2022a).

Older Black and Hispanic households are far less likely than older white households to have savings in a 401(k)-type account or an IRA. Only 15.0% of Hispanic households and 20.8% of Black households in the age 65 and older group have retirement account savings. Even among retirement savers in this age group, the typical (i.e., median or 50th percentile) account balance is much lower for Black households (\$38,600) and Hispanic households (\$41,000) than for white households (\$150,000).

Among households in the 55–64 age group with retirement account savings, the typical account balance for Hispanic households (\$105,000) is higher than the typical balance for Black households (\$62,000). But a lower share of Hispanic households have retirement savings in the first place. As with the 65 and older age group, white households in the 55–64 age group are much more likely to have retirement account savings (61.8%) than either Black households

(35.5%) or Hispanic households (29.5%). And white households with retirement account savings also have the highest median account balances (\$156,000).

The Older Workers and Retirement Chartbook

Chapter 3. Risk

By [Monique Morrissey](#), [Siavash Radpour](#), and [Barbara Schuster](#) • November 16, 2022

What economic risks do older Americans face?

Americans face increasing economic risks as they age, including risks associated with poor health, job loss, and financial market downturns. Aging increases the risk of developing health conditions that are expensive to treat, affect a person's ability to earn a living, or result in the need for assistance with daily activities (Tavares et al. 2022). Older workers are more likely than younger workers to assume caregiving responsibilities for aging family members that interfere with work. And older workers who lose their jobs are at greater risk of significant earnings losses than younger workers because they are likely to be unemployed longer, to accept a job with lower pay, or to take unplanned early retirement. The COVID-19 pandemic and the ensuing recession exacerbated many of these risks, though economic impact payments, expanded unemployment insurance benefits, and other temporary measures enacted by Congress helped cushion the financial blow.

Older households, especially those relying on 401(k) plans to fund retirement, are also exposed to risks associated with asset price volatility. Though older households may experience smaller percentage declines in net worth than younger households when stock and housing markets collapse, their losses are larger in dollar terms and have more of an impact on their future standard of living, which depends more on accrued assets and less on earnings than that of younger households (authors' analysis of Federal Reserve 2022a, 2022b).

Social insurance programs help shield older workers and retirees from economic risks associated with aging. Social Security provides inflation-adjusted lifetime benefits to retired and disabled workers, spouses, and survivors. Supplemental Security Income (SSI) and other means-tested programs help support low-income disabled and elderly Americans. Medicare provides health insurance to most Americans at age 65 and to some disabled workers, while Medicaid provides health insurance to many lower-income Americans and covers the cost of long-term care for those who have exhausted other resources. Workers' compensation pays for medical care and provides cash benefits for workers who are injured on the job or contract work-related illnesses, and unemployment insurance replaces a share of lost earnings for workers who are laid off. (This is not an exhaustive list.)

These programs offer critical protections, but they need to be strengthened. They can be difficult to access and often provide less generous benefits or less comprehensive coverage than programs in peer countries, mainly because the United States has historically relied on employers to offer retirement, disability, health, and other critical benefits (NASI, forthcoming; Hacker 2002, 2006; OECD 2020). Relying on employers to provide essential benefits leaves many workers uncovered and can cause employers to avoid hiring those who would be more expensive to insure.

The limitations of social insurance programs are the outcome of an age-old political tug-of-war over the proper role of government in the United States, not necessarily of problems inherent to social insurance (Hacker 2002, 2006). As demonstrated in countries with stronger social protections, government-provided or government-mandated social insurance has many potential advantages over voluntary private insurance, though whether these advantages are realized depends on public support and the government's administrative capabilities.

An obvious advantage of social insurance programs is that overhead costs and risks can be spread over larger groups and, in many cases, over citizens' lifetimes and across generations. Universal coverage also avoids the problem of adverse selection—the fact that people at higher risk are more likely to buy insurance. Adverse selection drives up costs and can make insuring against some risks, such as the need for long-term-care, unaffordable to most people (Sammon 2020).

Other potential advantages of government-sponsored social insurance programs may be less well known. Access to social insurance can encourage people to adopt behaviors that have broader societal benefits, such as getting vaccinated, or to take entrepreneurial risks in starting a business, knowing there is a safety net for them and their families (Frick 2015). Many forms of social insurance, including Social Security and unemployment insurance, help stabilize the economy by expanding government spending during recessions and contracting spending during recoveries (Ghilarducci, Saad-Lessler and Fisher 2011; Dolls, Fuest, and Peichl 2010). Government programs are also better equipped to withstand systemic risks such as demographic changes, financial crises, or pandemics, which can drive private companies into bankruptcy.

Social insurance programs can ease portability, lower administrative costs, and reduce the time users spend navigating the system. For example, health care users in Canada and other countries with single-payer systems have less paperwork to contend with than their U.S. counterparts, who need to be vigilant about whether providers, procedures, and prescriptions are covered by their insurance and often need to challenge denied claims. Similarly, U.S. health care providers must hire staff to negotiate with and bill multiple insurers (Santhanam 2020; Frakt 2019). The Congressional Budget Office has estimated that a single-payer system could save over half a trillion dollars in administrative costs annually, or 1.8% of GDP (Nelson 2022). In addition to being more efficient, social insurance takes the profit motive out of coverage and claims decisions and permits a more egalitarian allocation of health care resources than when they are apportioned based on ability to pay.

While Medicare and Medicaid offer some of the efficiency advantages of single-payer programs (CBO 2022a), these programs are not available to everyone. Among social insurance programs, universal or quasi-universal programs such as Medicare reduce administrative costs and barriers to access compared with means-tested programs such as Medicaid. However, determining eligibility is an inherent function of disability, workers' compensation, and some other social insurance programs.

No one disputes that consumer interest and competition have led to higher quality and lower prices for many goods and services, from smartphones to streaming media. But in sectors where knowledge and trust loom large and market power is concentrated, such as health care, consumer involvement has proven relatively ineffective at lowering costs, improving quality, or spurring technological advances compared with government action (CBO 2022b; Cleary, Jackson, and Ledley 2020). In such sectors, the size and expertise of government agencies can be leveraged to negotiate better-quality and cheaper products and services than what inexperienced and dispersed individual consumers can negotiate. Thus, for example, few dispute that the Thrift Savings Plan, a retirement plan for federal employees, offers more cost-effective and appropriate investment options than what most retirement savers have in their 401(k) accounts, which is why it has become a model for bipartisan reform proposals (Lunney 2016; Ghilarducci and Hassett 2021).

Single-payer health care and other features of a Canadian- or European-style social insurance system may not be politically realistic in the United States in the near future, but there should be room to expand efficient programs that already have strong support among voters. Of course, all this depends on effective governance. The potential advantages of social insurance may not materialize if government actors are overly bureaucratic, corrupt, or pay too much or too little attention to costs.

What do the charts tell us?

The American patchwork system of private insurance and social insurance leaves many without coverage and results in an inequitable distribution of care and costs. Our research finds that one in 10 older households pays \$13,800 or more in annual out-of-pocket medical expenses (Chart 3A). Nearly three in 10 seniors age 65 or older who live in poverty would not be poor absent medical expenses (Chart 3B). Black and Hispanic households—already at greater risk of poverty in old age—are more likely than white households to fall into poverty because of medical expenses (Chart 3C).

Older Americans needing long-term care at home or in institutional settings bear some of the highest costs. Most who need long-term services and supports for two or more years end up on the means-tested Medicaid program after exhausting most of their savings (Chart 3D). Though the lowest-income seniors are at greatest risk of needing long-term care, risks are elevated across the income spectrum because higher-income Americans, who tend to be healthier at younger ages, also tend to live longer and to develop cognitive impairments and other conditions associated with advanced old age (Chart 3E).

While most American households strengthened their ability to weather financial shocks in

the recovery that followed the Great Recession of 2008–2009 (Federal Reserve 2022c), older lower-income, Black, and Hispanic households saw an increase in financial fragility (Charts 3F and 3G). One factor contributing to the financial fragility of these older households was an increase in education debt (Chart 3H).

Thus, older households were ill-prepared for the pandemic recession in 2020, in which—unusually—older workers were more likely to lose their jobs (Chart 3I). These job losses persisted longer than job losses for younger workers and employment at older ages remains depressed, especially among those age 65 and older and non-college-educated workers (Charts 3J and 3K).

What can we do to better insure older Americans against financial risks?

As discussed earlier, Social Security retirement benefits replace a shrinking share of earnings even as fewer workers are covered by secure pensions. Expanding Social Security benefits is the most important action we can take to boost retirement security while strengthening older workers’ bargaining power and reducing their reliance on earnings from low-paid jobs.

Other top priorities are expanding benefits for low-income older adults and making it quicker and easier for workers with disabilities to access benefits. Many low-income disabled and elderly adults are unable to meet SSI’s stringent and outdated eligibility requirements, yet SSI benefits are so meager that half of beneficiaries live in poverty (Nuñez 2022; CBPP 2022b). Eligibility rules should be changed and benefits increased as proposed in the Supplemental Security Income (SSI) Restoration Act (Romig 2021).

Disabled workers applying for Social Security Disability Insurance (SSDI) benefits must demonstrate that they have severe impairments that preclude them from engaging in “substantial gainful activity” anywhere in the country—generally, the ability to earn \$1,350 per month in 2022—regardless of whether such work is realistically available to them. The time-consuming and complicated process of accessing benefits discourages many from applying, a problem that disproportionately affects less-educated workers and has gotten worse with budget cuts, especially during the pandemic (CBPP 2021; Deshpande and Li 2019; Weaver 2021; Romig 2022b). Delays caused by a lengthy application process and administrative backlogs are compounded by a five-month waiting period for SSDI benefits to start and an additional two-year waiting period after applicants begin receiving SSDI benefits for Medicare coverage. Many applicants in poor health get sicker without health coverage and do not live long enough to receive benefits (Nin 2015). The Social Security Administration should receive more administrative funding, and Congress should take steps to ensure timely and equitable access to benefits, including eliminating unnecessary waiting periods (Romig 2021; Gronniger 2022; Lilly 2022; Vallas 2022).

Medicare and Medicaid provide affordable health care coverage for many older workers and retirees. These programs are especially important for older women of color, who confront multiple and compounding forms of discrimination over their lifetime, with

devastating impacts on their health and economic security at older ages (NWLC & Justice in Aging 2021). The Affordable Care Act of 2010 and the Families First Coronavirus Response Act of 2020 expanded Medicaid eligibility to more low- and moderate-income Americans, and the Inflation Reduction Act of 2022 took steps to limit drug costs for Medicare beneficiaries, including by allowing the federal government to negotiate directly with providers for some drug prices.

We should defend and build on these successes. Some state lawmakers have resisted Medicaid expansion under the Affordable Care Act, the pandemic health emergency expansion is set to expire, and some Republicans have vowed to roll back the Inflation Reduction Act (Cubanski, Neuman, and Freed 2022; Choi 2022; Wagner and Erzuqi 2022). The Medicaid coverage gap currently leaves 2.2 million low-income people in 12 states without coverage, and most people are not eligible for Medicare until age 65 (Ammula and Rudowitz 2022). And because Medicare does not limit out-of-pocket expenses, beneficiaries must purchase supplemental coverage or they might find themselves having to choose between going into medical debt or forgoing expensive and needed care (Kaiser Family Foundation 2019; Madden et al. 2021).

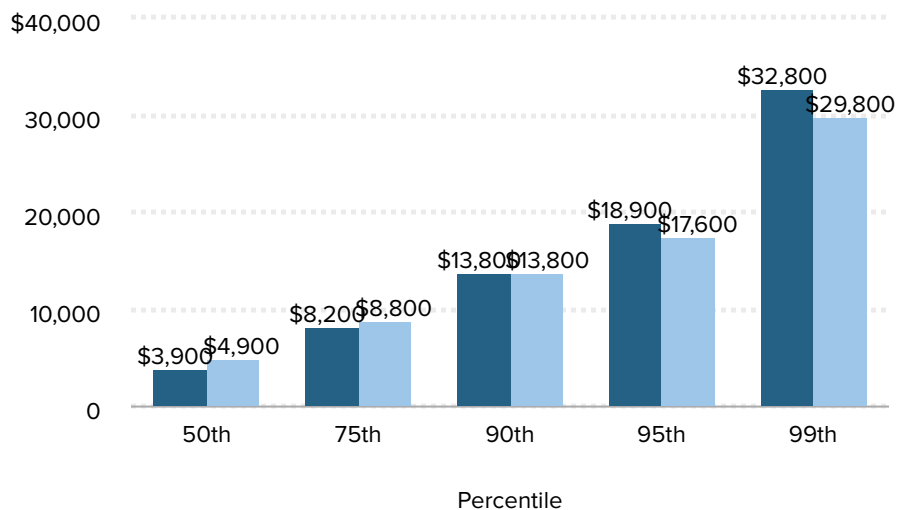
Lowering the Medicare eligibility age and closing the Medicaid coverage gap would expand affordable coverage, increasing health care utilization and reducing health care costs by offering access to preventative and screening services and reducing the incidence of conditions caused or worsened by postponing treatment (Garfield, Rae, and Rudowitz 2021; Kilbourne 2005).

Medicaid is not a substitute for long-term care insurance since it is only available to people who have drawn down other resources or had low incomes and savings to begin with. Public long-term care insurance schemes such as Washington state's new WA Cares Fund allow costs to be spread across an individual's working life and pool the risk across generations (Veghte 2021; LTSS Trust Commission 2022). Reforms should also make it easier for people to receive home- and community-based services and should provide more support to family caregivers so that people can stay in their homes as they age or when they need long-term care for other reasons.

Last, we should address employment risks faced by older workers. Many unemployed workers are not covered by unemployment insurance or receive inadequate benefits—a problem due in part to wide variations in eligibility rules and benefits across states (Bivens et al. 2021). Similarly, cutbacks to workers' compensation programs in many states have had severe consequences for many workers who are injured or fall ill on the job (Grabell 2015).

Older Americans face the risk of high medical costs—even when covered by Medicare

Medical expenses by age and expenditure percentile, 2021



Notes: Households are ranked by the amount they spent on health insurance premiums and out-of-pocket medical expenses in 2021. The 50th percentile, or median, is the amount the typical household spends (50% spend less and 50% spend more). Medical expenses are based on estimates used for the Supplemental Poverty Measure (SPM), an alternative poverty measure published by the Census Bureau since 2010. This measure includes health insurance premiums, co-pays, prescriptions, medical supplies, and over-the-counter expenditures such as vitamins and pain relievers (Creamer 2022).

Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of IPUMS Current Population Survey microdata (Flood et al. 2021).

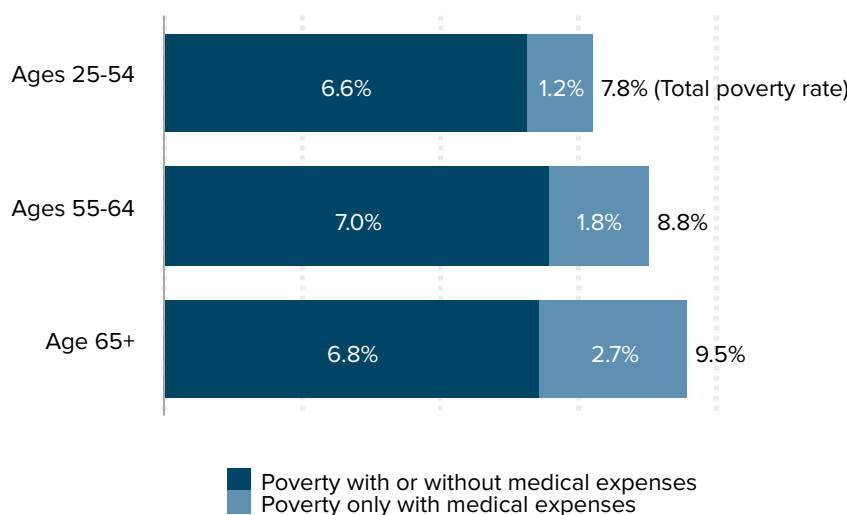
Americans of all ages, including older Americans, are underinsured against medical expenses, including premiums, co-pays, and other out-of-pocket costs. Most Americans are eligible for Medicare at age 65, leaving only 1.2% in the 65+ age group uninsured in 2021 (Keisler-Starkey and Bunch 2022). But Medicare coverage is no guarantee against high out-of-pocket costs. A typical Medicare-eligible senior still spends nearly \$5,000 on health care in a year; 10% spend \$13,800 or more; and the unluckiest 1% spend \$29,800 or more.

Older Americans ages 55–64 have similarly high out-of-pocket costs. The average amount this group spends is \$6,100, versus \$6,600 for Medicare-eligible seniors (averages not shown in chart). Those with expensive conditions actually spend more than seniors—\$18,900 or more for the unluckiest 10%, versus \$17,600 or more for their 65 and older counterparts.

Older Americans ages 55–64 are healthier on average than those age 65 and older but are less likely to have government-provided health insurance. Most do not qualify for Medicare, and while the expansion of Medicaid eligibility under the Affordable Care Act reduced uninsured rates among lower-income older Americans, 9.4% of Americans ages 55–64 remained uninsured in 2021 (Katch, Wagner, and Aron-Dine 2018; Keisler-Starkey and Bunch 2022; authors' analysis of IPUMS Current Population Survey microdata [Flood et al. 2021]). Though most out-of-pocket costs are capped for those with insurance (Rae, Amin, and Cox 2022), some still face high costs.

Among seniors in poverty, nearly 3 in 10 have been driven into poverty by medical expenses

Poverty rates by age, with and without medical expenses, 2021



Notes: “Poverty only with medical expenses” is the share whose medical expenses push them into poverty (who would not otherwise be in poverty). “Poverty with or without medical expenses” is the share who are in poverty even without their medical expenses. Medical expenses are based on estimates of health insurance premiums and out-of-pocket health costs used to estimate the Supplemental Poverty Measure (SPM). The SPM is an alternative poverty measure published by the U.S. Census Bureau since 2010.

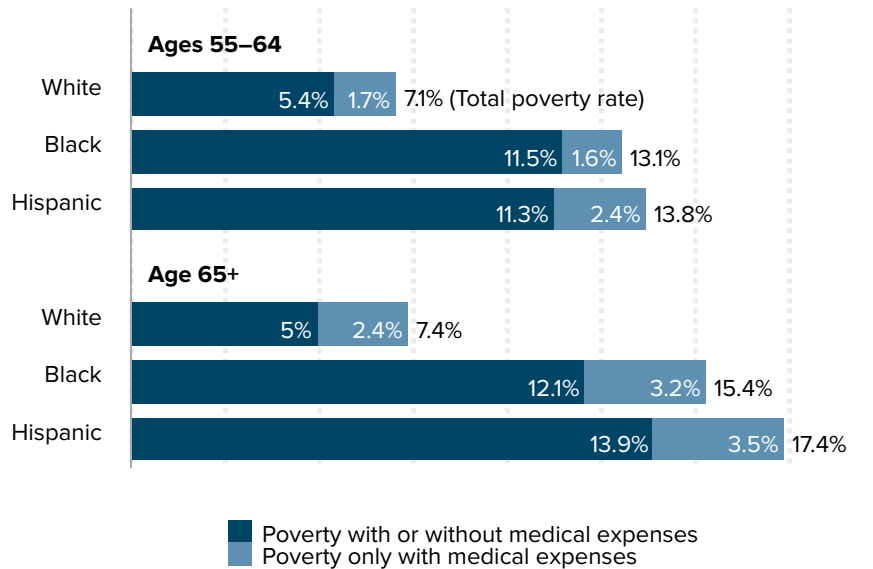
Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of IPUMS Current Population Survey data (Flood et al. 2021).

Higher medical expenses explain much of the higher poverty experienced by older Americans, based on the Census Bureau’s Supplemental Poverty Measure (see chart note). About 2% of Americans ages 55–64 fall into poverty after paying their health insurance premiums and other out-of-pocket medical expenses. The effects of health expenses are more severe for older Americans, as many retirees live on near-poverty incomes. Nearly three in 10 poor seniors age 65 and older are poor because of medical expenses.

Despite near-universal Medicare coverage, medical expenses have a big impact on senior poverty because aging is associated with an increase in conditions requiring medical attention and Medicare does not cap out-of-pocket expenses. Younger Americans ages 25–54 are less likely to experience poverty as a result of medical expenses as they are more likely to be healthy, to have sufficient income to keep them out of poverty, or to postpone costly health care which, while reducing expenses temporarily, can impact their health and financial status at older ages (Montero et al. 2022).

Medical expenses drive many Black and Hispanic seniors into poverty

Poverty rates by age, race, and ethnicity, with and without medical expenses, 2021



Notes: “Poverty only with medical expenses” is the share whose medical expenses push them into poverty (who would not otherwise be in poverty). “Poverty with or without medical expenses” is the share who are in poverty regardless of their medical expenses. Medical expenses are based on estimates of health insurance premiums and out-of-pocket health costs used to estimate the Supplemental Poverty Measure (SPM). The SPM is an alternative poverty measure published by the U.S. Census Bureau since 2010.

Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of IPUMS Current Population Survey data (Flood et al. 2021).

Medical expenses contribute to very high poverty rates experienced by older Black and Hispanic Americans, based on the U.S. Census Bureau’s Supplemental Poverty Measure (see chart note). Black and Hispanic seniors age 65 and older are more than twice as likely to live in poverty as white seniors due to a combination of lower incomes and high medical expenses.

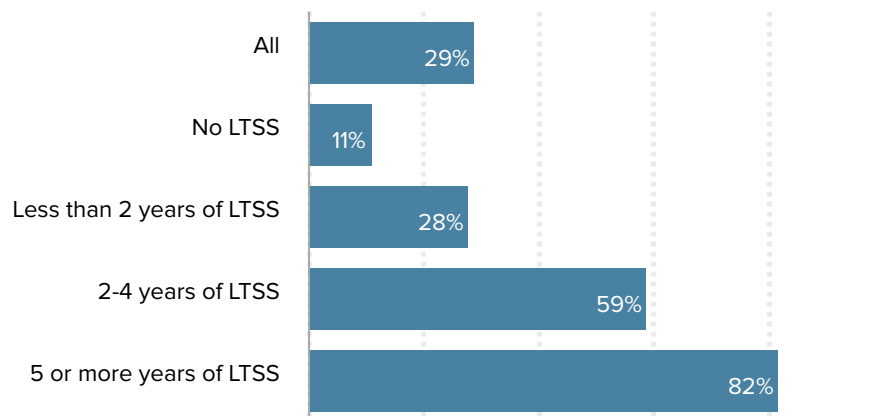
Among those ages 55–64, medical expenses have a larger impact on poverty for Hispanic Americans than for white or Black Americans because Hispanic

Americans are more likely to be uninsured (Keisler-Starkey and Bunch 2022). Black Americans are more likely to have near-poverty incomes than white Americans, but higher Medicaid eligibility limits the impact of health expenses on the share of Black Americans living in poverty because Medicaid caps out-of-pocket costs (Guth, Ammula, and Hinton 2021).

Black and Hispanic Americans are more likely than white Americans to qualify for social insurance in the form of Medicare eligibility before age 65 (due to a long-term disability) and dual eligibility for Medicare and Medicaid (which covers some costs not covered by Medicare) (Ochieng et al. 2021). This helps to offset some—but not all—of the higher costs associated with poorer health.

Medicaid enrollment after age 65 is driven by long-term care needs

Percentage of adults who enroll in Medicaid after age 65, by number of years they receive long-term services and supports (LTSS)



Notes: Simulated results for adults born between 1941 and 1975. Long-term services and supports (LTSS), also referred to as long-term care, are health and social services for seniors and others whose age or health conditions limit their ability to care for themselves. LTSS include services provided in people's homes, in community-based settings, and in nursing facilities. Estimates do not include unpaid care provided by family members and other caregivers.

Source: Johnson and Favreault (2020), Table 8.

Medicaid pays for nursing home care and other long-term services and supports (LTSS) for seniors with limited resources, including those who have drawn down their savings to pay for such care. High rates of Medicaid coverage therefore serve as a measure of the financial risks associated with the need for LTSS.

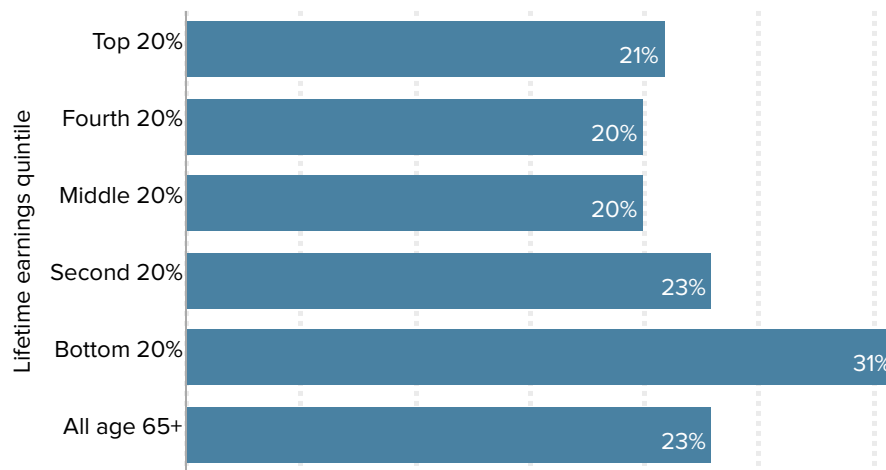
LTSS expenses are generally not covered by Medicare (Medicare.gov 2022). Private long-term care insurance, meanwhile, is often inaccessible and expensive while offering limited protection (Sammon 2020). Even among the small number of seniors with private insurance, about a quarter will let their policies lapse, often due to cognitive impairments that make them more likely to need the long-term care that the insurance would have paid for (Friedberg et al.

2017).

While only 11% of seniors without long-term care needs enroll in Medicaid after age 65, most seniors who require long-term care for two or more years end up in the means-tested program. An estimated 59% of seniors requiring two to four years of LTSS, and 82% of those requiring five or more years of LTSS, will end up on Medicaid. Nursing home care is particularly expensive, with 77% of seniors who require nursing home care for two or more years enrolling in Medicaid (Johnson and Favreault 2020; not shown in chart).

Low-income seniors are most likely to need long-term care, but all seniors are at risk

Share of adults receiving two or more years of long-term services and supports after age 65, by lifetime earnings quintile



Notes: Long-term services and supports (LTSS), also referred to as long-term care, are health and social services for seniors and others whose age or health conditions limit their ability to care for themselves. LTSS include services provided in people's homes, in community-based settings, and in nursing facilities. Estimates do not include unpaid care provided by family members and other caregivers.

Source: Johnson and Favreault (2020), Table 5.

Low earners face a greater risk than higher earners of requiring long-term care due to well-documented disparities in health and disability by socioeconomic status (Isaacs et al. 2021). Among seniors age 65 and older in the lowest lifetime earnings fifth, more than 3 in 10 (31%) will require two or more years of long-term services and supports (LTSS). Among seniors in the four higher earnings quintiles, roughly two in 10 will need two-plus years of LTSS.

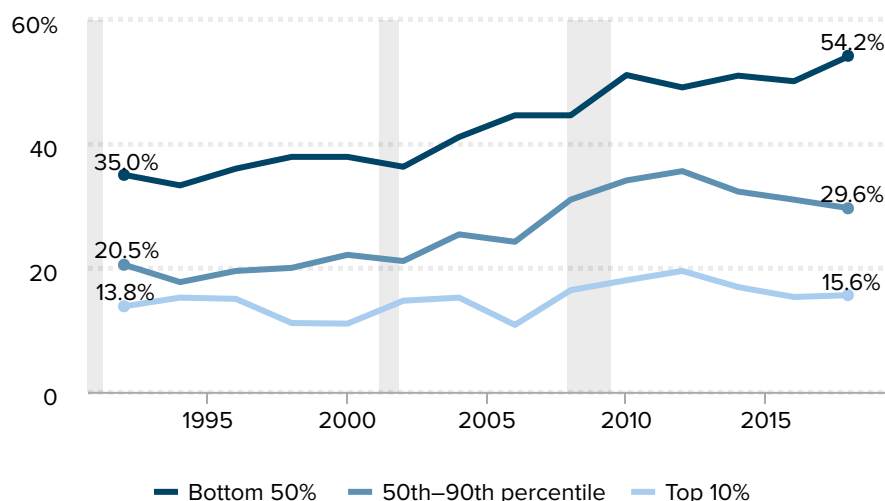
Note that there is little difference in risk of needing LTSS among the latter four groups. This is likely because higher earners are more likely to live long enough to develop health conditions associated with advanced old age, offset-

ting their other health advantages relative to lower earners (Johnson 2019). Unlike individuals in the top four lifetime earnings groups, however, the adverse health effects of living in or near poverty for the bottom fifth of lifetime earners are not offset by their shorter lifespans and they face a higher risk of LTSS needs.

Though low earners are most affected, all seniors face a significant risk of needing to pay for LTSS for two or more years, with a concomitant increased likelihood of needing Medicaid to help with costs (see Chart 3D). Seniors 65 and older who need expensive nursing home care are at especially high risk of exhausting their resources. Even among those in the top earnings quintile, 43% of those who need nursing home care for two or more years end up on Medicaid (Johnson 2019; not shown in chart).

Low-income older households had little capacity to cope with financial shocks even before the COVID-19 pandemic and recession

Share of working households ages 55–64 that are financially fragile, by income group, 1992–2018



Notes: A household is deemed financially fragile if it exceeds at least one of four thresholds: a home mortgage loan-to-value ratio above 80%; a ratio of nonhousing debt to liquid assets above 50%; less than three months' worth of income in liquid assets; or rent exceeding 30% of income. Sample includes households with at least one working member and one member age 55–64. For married and partnered households, income percentiles are determined based on total household income divided by 1.7 to account for the fact that living expenses for couples are higher than—but less than double—the expenses of single householders.

Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of Health and Retirement Study (HRS) microdata (RAND and University of Michigan 1992–2018).

Many older working American households were struggling financially before COVID hit. These households therefore had less of a financial cushion to protect them from the economic fallout of the pandemic.

Over half (54%) of lower-income (bottom 50%) households ages 55–64 were financially fragile before the COVID-19 pandemic, based on their debt burdens,

housing costs, and the savings they had available to access in an emergency. This is an increase in financial fragility from a third (35%) of such households in 1992.

In the wake of the Great Recession, rising mortgage debt, credit card balances, auto loans, and student debt hurt older households' finances (GAO 2021; Butrica and Mudrazija 2020). As seen in the chart, older households across the income distribution experienced growing financial fragility between 2008 and 2012.

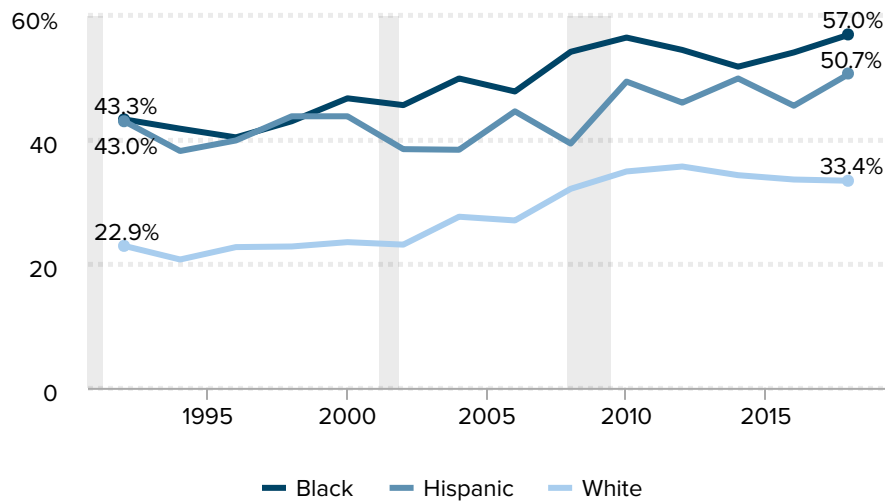
Wealthier older households—those in the top 10% of the income distribution—have roughly recovered to their 2008 levels. Households in the 50th–90th percentiles have also recovered to their 2008 levels but still face much higher rates of financial fragility than those in the top 10%; they are also much more financially fragile than their counterparts were in 1992. Households in the bottom half of the income distribution did not recover well from the Great Recession, and by 2018 they had reached historically high rates of financial fragility.

Other studies have found similar trends. A recent study by the Government Accountability Office (GAO) found that older households are more likely to be indebted than they were three decades ago, and a typical older household age 50 or older held roughly three times as much debt in 2016 as it did in 1989, adjusted for inflation (GAO 2021, not shown in chart). Butrica and Mudrazija (2020) found a significant increase in debt and falling credit scores, signs of deteriorating financial stability, among households age 70 and older, mostly due to increases in mortgage debt.

Rising debt levels are not necessarily cause for concern if they reflect rising homeownership or access to higher education among older households. However, a closer look at trends in indebtedness—such as rising home mortgage loan-to-value ratios among older homeowners—cautions against such a rosy view.

Older Black and Hispanic working households were stretched thin before the COVID-19 pandemic and recession hit

Share of working households ages 55–64 that are financially fragile, by race and ethnicity, 1992–2018



Notes: A household is deemed financially fragile if it exceeds at least one of four thresholds: a home mortgage loan-to-value ratio above 80%; a ratio of nonhousing debt to liquid assets above 50%; less than three months' worth of income in liquid assets; or rent exceeding 30% of income. Sample includes households with at least one working member and one member age 55–64. For married and partnered households, income percentiles are determined based on total household income divided by 1.7 to account for the fact that living expenses for couples are higher than—but less than double—the expenses of single householders.

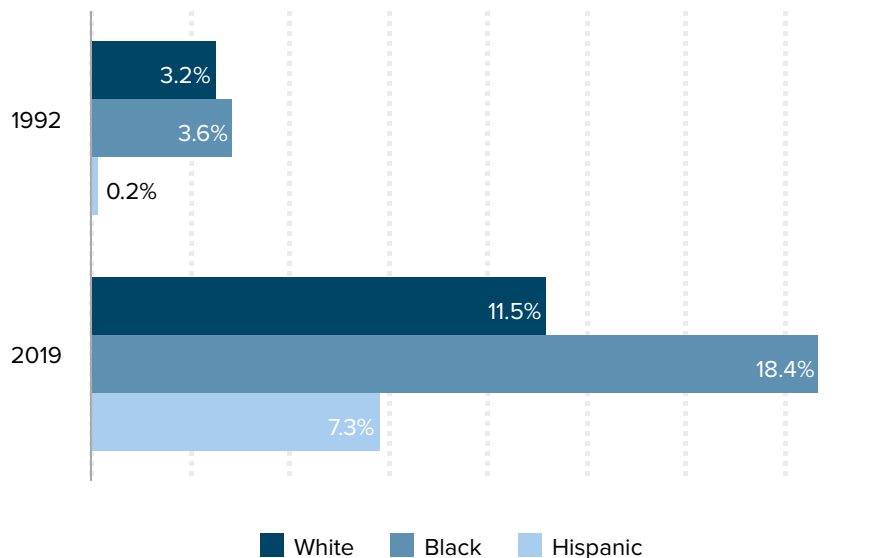
Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of Health and Retirement Study (HRS) microdata (RAND and University of Michigan 1992–2018).

Among working households ages 55–64, over half of Black (57.0%) and Hispanic (50.7%) households were financially fragile before the COVID-19 pandemic, based on their debt burdens, housing costs, and savings they could access in an emergency. In contrast, only a third (33.4%) of older white households were stretched too thin to weather a financial shock.

These findings are in line with previous research showing that debt burdens have risen more for Black and Hispanic households than for white households. Between 1989 and 2016, the debt-to-asset ratio of the typical household age 50 or older increased from 8% to 17% for white households, from 16% to 35% for Black households, and from 17% to 37% for Hispanic households (GAO 2021).

Older Black households are much more likely than white or Hispanic households to have education debt

Percentage of households ages 55–64 with education loan debt, by race and ethnicity, 1992 and 2019



Note: In the Survey of Consumer Finances, age and other household characteristics are based on the reference person, defined as the individual for a single householder, the male in a mixed-sex couple, and the older person in a same-sex couple.

Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of Survey of Consumer Finances microdata (Federal Reserve 2022a).

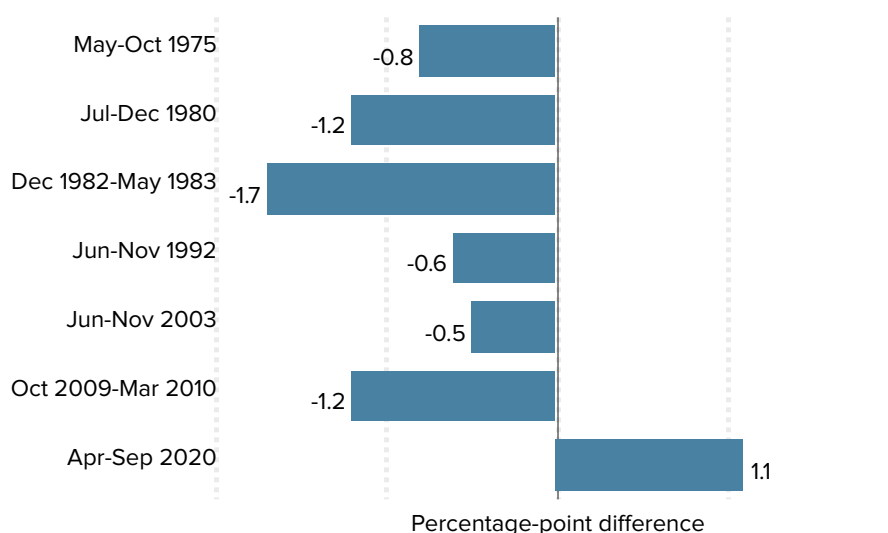
Student loan debt is the fastest-growing type of debt among older American households. More than four times as many households ages 55–64 had student loan debt in 2019 compared with 30 years ago (12.2% in 2019 vs. 2.9% in 1992; not shown in the chart). At the same time, their debt burden has increased: The median education debt-to-earnings ratio (total student loan debt to annual earnings) almost doubled, from 15.8% in 1992 to 28.4% in 2019 (Schuster 2021).

Ballooning student loan debt among households ages 55–64 is only partly explained by an increase in the share of older Americans with bachelor’s degrees, which rose from 17.9% to 32.4% over this period (authors’ analysis of Current Population Survey microdata [Flood et al. 2021]; not shown in the chart). Some of the increase in older households’ student debt reflects parents borrowing to help pay for their children’s educations (Looney and Lee 2018). College costs have risen rapidly (Jackson and Saenz 2021), while many Americans are burdened with student loans despite not obtaining—or their children not obtaining—degrees (Siegel Bernard 2022).

Black households have seen the fastest increase in student loan debt. As shown in the chart, the share of Black households ages 55–64 with student loan debt grew fivefold between 1992 and 2019, while the share of Black Americans in this age group with bachelor’s degrees roughly doubled, from 8.1% to 17.9% (authors’ analysis of Current Population Survey microdata [Flood et al. 2021]; not shown in chart). This suggests that many of these households took on student loan debt for their children or grandchildren, or that the student loans are for their own education but college costs rose faster than earnings and fewer former students were able to pay off their debts before age 55. In either case, the higher debt puts additional pressure on these older households’ finances.

Older workers experienced higher unemployment than mid-career workers in the pandemic recession

Percentage-point difference in average unemployment rate between older workers (age 55+) and mid-career workers (ages 35–54), 1975–2020 recessions



Notes: Chart shows the percentage-point difference (how much higher or lower the average unemployment rate of older workers age 55+ is relative to that of mid-career workers ages 35–54) over six-month periods beginning in the month of peak unemployment in each recession.

Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of Current Population Survey microdata (Flood et al. 2021).

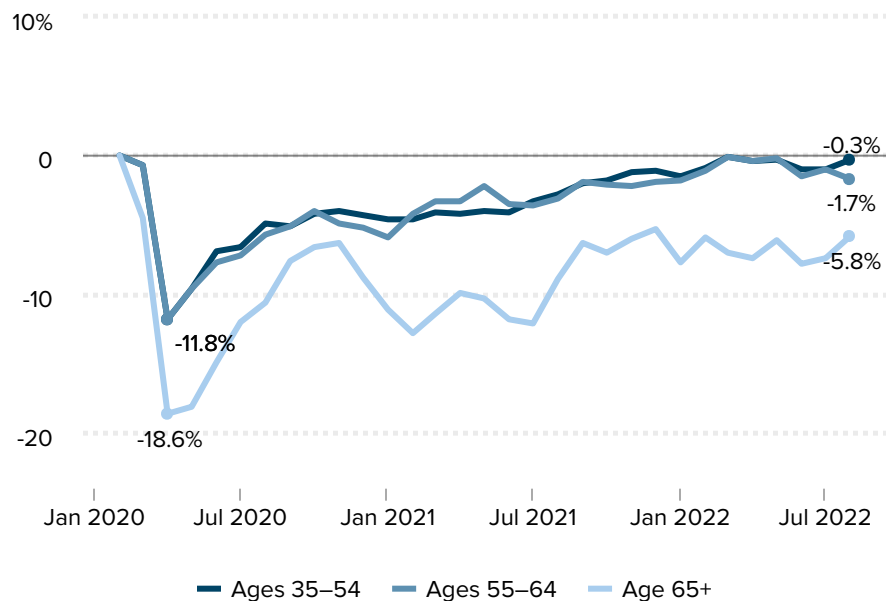
The recession triggered by the COVID-19 pandemic was highly unusual in that older workers suffered greater job losses than mid-career workers. In the six-month period from April to September 2020, the unemployment rate for workers age 55 and older averaged 9.7% (not shown in the chart), more than a percentage point higher (+1.1 pts) than the 8.6% unemployment rate for workers ages 35–54. In contrast, from October 2009 to May 2010, the peak unemployment months of the Great Recession, the unemployment rate of older workers

averaged 7.0%, 1.2 percentage points *lower* than the 8.2% unemployment rate of mid-career workers.

In typical recessions, older workers are less likely to be laid off than mid-career workers because they usually have more work experience and seniority. These factors offered less protection during the pandemic, since pandemic job losses were driven by the mass shutdown of nonessential sectors and a shift in consumer spending from services to goods.

Pandemic job losses among workers 65 and older were steep and persistent

Percentage changes in employment rates from pre-pandemic peaks, by age group, February 2020–August 2022



Note: Chart shows percentage changes in employment-to-population ratios relative to February 2020, the peak month of economic activity before the pandemic recession.

Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of Current Population Survey microdata (Flood et al. 2021).

The employment rate of seniors age 65 and older plummeted 18.6% between February and April 2020, an even steeper drop than that experienced by mid-career workers ages 35–54 and older workers ages 55–64, who both experienced 11.8% declines in employment rates.

Employment losses among workers age 65 and older were also more persistent than those of younger workers. The employment rate of mid-career workers had essentially recovered by August 2022; that of older workers ages 55–64 was only slightly below its pre-pandemic level (-1.7%). However, the em-

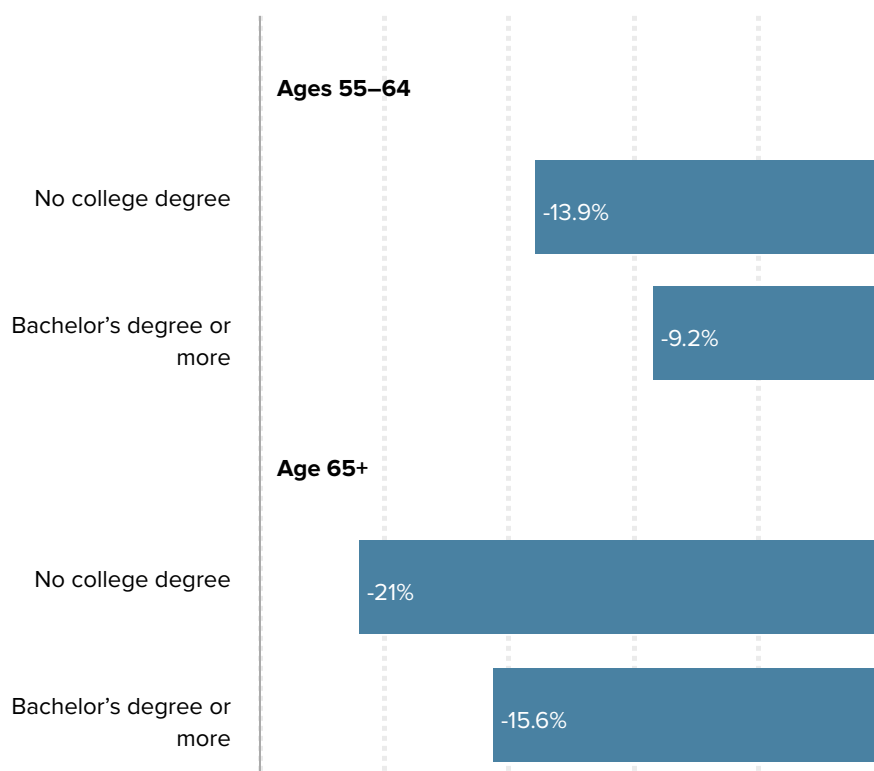
ployment rate of seniors remained -5.8% below its pre-pandemic level two and a half years later.

Some of the employment decline among older workers reflected an increase in retirements. Older workers in part-time jobs, or in occupations characterized by high physical proximity to other workers or to customers, were especially likely to call it quits (Davis 2021). For these workers, COVID disruptions, health and safety concerns, caregiving responsibilities, rising net worth, or other factors tipped the balance in favor of retirement. But for the majority of older workers, leaving the labor force was triggered by job loss (Davis and Radpour 2021).

Most unemployed older workers returned to the workforce, aided by a rapid recovery brought about by stimulus checks, expanded unemployment insurance, and other timely countercyclical measures enacted by Congress (CBPP 2022). Though the pandemic recession had an unusually severe impact on older workers, these workers would likely have fared much worse in a slower recovery with fewer supports for unemployed workers and their families, especially since unemployed workers in their 50s and older tend to remain out of work longer than young or mid-career workers (Johnson and Butrica 2012; Johnson and Gosselin 2018).

Non-college-educated older workers saw greater job losses than their college-educated counterparts during the pandemic recession

Percentage changes in employment rates by age and education, February–April 2020



Note: Chart shows the percentage change in the employment-to-population ratio from February 2020, the month before the pandemic recession, to April 2020, the trough of the recession.

Source: Economic Policy Institute (EPI) and Schwartz Center for Economic Policy Analysis (SCEPA) analysis of Current Population Survey microdata (Flood et al. 2021).

When the pandemic recession hit in early 2020, older workers without bachelor's degrees experienced greater job losses than their college-educated coun-

terparts. The most affected were workers over 65 without college degrees, one in five (21.0%) of whom found themselves out of work.

While many white-collar workers have been able to work from home during the pandemic, most non-college-educated workers in service-sector jobs did not have that option (Gould 2020a). Many of these workers were laid off or furloughed. Those who remained in the workforce were more likely to be exposed to COVID-19 health risks. These risks were particularly acute for older workers in meatpacking, caregiving, and other low-paid service jobs often deemed “essential” but not adequately compensated or protected (Hassan 2021; Farmand et al. 2020; Lewis 2021).

Though job losses were highest among workers 65 and older and among older workers without college degrees, some professional occupations, including teachers and nurses, have seen waves of early retirements due to deteriorating working conditions during the pandemic (Barnes 2022; Zhavoronkova et al. 2022).

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References

AARP and National Alliance for Caregiving. 2020. *Caregiving in the U.S.*. May 2020.

Abraham, Katharine G., and Susan N. Houseman. 2020. *Policies to Improve Workforce Services for Older Americans*. Brookings Institution, November 2020.

Abrams, Leah R., Kristen Harknett, and Daniel Schneider. 2022. “Older Workers with Unpredictable Schedules: Implications for Well-Being and Job Retention.” *Gerontologist*, May 18, 2022. <https://doi.org/10.1093/geront/gnac067>.

AFL-CIO. 2021a. “Family Leave” (web page).

AFL-CIO. 2021b. “Paid Sick Days” (web page).

AFL-CIO. 2021c. “The Workers First Agenda: 5 Priorities for 2021” (web page).

Altman, Nancy. 2022. “Republicans Want to ‘Reform’ Social Security Behind Closed Doors — Beware!” *The Hill*, June 15, 2022.

American Academy of Actuaries. 2020. “Immigration and Social Security.” *Issue Brief*, November 2020.

Ammula, Meghana, and Robin Rudowitz. 2022. *Fate of Medicaid Expansion and Filling the Coverage Gap May Once Again Depend on the Outcome of State Elections*. Kaiser Family Foundation, August 17, 2022.

Antonelli, Angela M. 2020. *What Are the Potential Benefits of Universal Access to Retirement Savings? An Analysis of National Options to Expand Coverage*. Georgetown University Center for Retirement Initiatives, December 2020.

Badgett, M.V. Lee, Christopher S. Carpenter, and Dario Sansone. 2021. “LGBTQ Economics.” *Journal of Economic Perspectives* 35, no. 2 (Spring), 141–170. <https://doi.org/10.1257/jep.35.2.141>.

Badgett, M.V. Lee, Soon Kyu Choi, and Bianca D.M. Wilson. 2019. *LGBT Poverty in the United States: A Study of Differences Between Sexual Orientation and Gender Identity Groups*. UCLA School of Law Williams Institute, October 2019.

Bahn, Kate. 2020. *How Monopsony Impacts Older Women Workers*. Washington Center for Equitable Growth, February 12, 2020.

- Baker, Dean. 2018. *Can Work Sharing Bring the US Workplace into the 20th Century?* Center for Economic and Policy Research, June 2018.
- Barnes, Adam. 2022. “Here’s What’s Driving the Nationwide Teacher Shortage.” *The Hill*, April 21, 2022.
- Barney, Lee. 2020. “SECURE Act Dictates Long-Term, Part-Time Employees Be Included in Retirement Plans.” *Plan Adviser*, December 17, 2020.
- Batchelder, Lily L., Fred T. Goldberg, Jr., and Peter R. Orszag. 2006. “Efficiency and Tax Incentives: The Case for Refundable Tax Credits.” *Stanford Law Review* 59, no. 1.
- Berkman, Lisa F., and Beth C. Truesdale. 2022. *Overtime: America’s Aging Workforce and the Future of Working Longer*. Cambridge: Harvard University Press.
- Bhutta, Neil, Jesse Bricker, Andrew C. Chang, Lisa J. Dettling, Sarena Goodman, Joanne W. Hsu, Kevin B. Moore, Sarah Reber, Alice Henriques Volz, and Richard Windle. 2020. “Changes in U.S. Family Finances from 2016 to 2019: Evidence from the Survey of Consumer Finances.” *Federal Reserve Bulletin* 106, no. 5.
- Bivens, Josh, and Asha Banerjee. 2022. *Inequality’s Drag on Aggregate Demand: The Macroeconomic and Fiscal Effects of Rising Income Shares of the Rich*. Economic Policy Institute, May 24, 2022.
- Bivens, Josh, Melissa Boteach, Rachel Deutsch, Francisco Díez, Rebecca Dixon, Brian Galle, Alix Gould-Werth, Nicole Marquez, Lily Roberts, Heidi Shierholz, and William Spriggs. 2021. *Reforming Unemployment Insurance: Stabilizing a System in Crisis and Laying the Foundation for Equity*. A joint report of the Center for American Progress, Center for Popular Democracy, Economic Policy Institute, Groundwork Collaborative, National Employment Law Project, National Women’s Law Center, and Washington Center for Equitable Growth. June 2021.
- Bivens, Josh, Lora Engdahl, Elise Gould, Teresa Kroeger, Celine McNicholas, Lawrence Mishel, Zane Mokhiber, Heidi Shierholz, Marni von Wilpert, Valerie Wilson, and Ben Zipperer. 2017. *How Today’s Unions Help Working People: Giving Workers the Power to Improve Their Jobs and Unrig the Economy*. Economic Policy Institute, August 2017.
- Bivens, Josh, Elise Gould, Lawrence Mishel, and Heidi Shierholz. 2014. *Raising America’s Pay: Why It’s Our Central Economic Policy Challenge*. Economic Policy Institute, June 4, 2014.
- Bond, Tyler, Joelle Saad-Lessler, and Christian E. Weller. 2020. *Still Shortchanged: An Update on Women’s Retirement Preparedness*. National Institute on Retirement Security, May 2020.
- Brainard, Keith, and Alex Brown. 2018. *Significant Reforms to State Retirement Systems*. National Association of State Retirement Administrators, December 2018.
- BrightScope and Investment Company Institute (ICI). 2022. *The BrightScope/ICI Defined*

Contribution Plan Profile: A Close Look at 401(k) Plans, 2019. September 2022.

Bruder, Jessica. 2017. *Nomadland: Surviving America in the Twenty-first Century*. New York, NY: W.W. Norton.

Bucknor, Cherrie, and Dean Baker. 2016. *Still Working Hard: An Update on the Share of Older Workers in Physically Demanding Jobs*. Center for Economic and Policy Research, March 2016.

Bureau of Labor Statistics (BLS). 2019. *National Compensation Survey: Employee Benefits in the United States, March 2019*. September 2019.

Bureau of Labor Statistics (BLS). 2020. *National Compensation Survey: Retirement Plan Provisions in Private Industry in the United States, 2019*. Bulletin 2792, April 2020.

Bureau of Labor Statistics (BLS). 2022a. *National Compensation Survey*. 2022 data accessed October 4, 2022.

Bureau of Labor Statistics (BLS). 2022b. “Unemployment Rate” (online chart). Retrieved from FRED, Federal Reserve Bank of St. Louis, <https://fred.stlouisfed.org/series/UNRATE>, July 27, 2022.

Burn, Ian, Daniel Firoozi, David Ladd, and David Neumark. 2022. “Help Really Wanted? The Impact of Age Stereotypes in Job Ads on Applications from Older Workers.” National Bureau of Economic Research Working Paper no. 30287, July 2022.

Butrica, Barbara A., and Nadia S. Karamcheva. 2018. “The Impact of Informal Caregiving on Older Adults’ Labor Supply and Economic Resources.” Proceedings, Annual Conference on Taxation and Minutes of the Annual Meeting of the National Tax Association, vol. 111, 1–27.

Butrica, Barbara A., and Stipica Mudrazija. 2020. “Financial Security at Older Ages.” Center for Retirement Research at Boston College Working Paper 2020-19.

Cahill, Kevin E., and Joseph F. Quinn. 2020. “The Importance of Gradual Retirement in America Today.” *Public Policy & Aging Report* 30, no. 3: 107–112. <https://doi.org/10.1093/ppar/praa013>.

Center on Budget and Policy Priorities (CBPP). 2021. *Chart Book: Social Security Disability Insurance*. February 2021.

Center on Budget and Policy Priorities (CBPP). 2022a. *Chart Book: Tracking the Recovery from the Pandemic Recession*. September 2022.

Center on Budget and Policy Priorities (CBPP). 2022b. *Policy Basics: Supplemental Security Income*. Updated August 12, 2022.

Center on Budget and Policy Priorities (CBPP). 2022c. *Robust COVID Relief Achieved Historic Gains Against Poverty and Hardship, Bolstered Economy*. February 24, 2022.

- Centers for Disease Control and Prevention (CDC). 2022. “Risk for COVID-19 Infection, Hospitalization, and Death by Age Group” (table). Updated September 16, 2022.
- Chiteji, Ngina. 2020. “Wealth and Retirement: Pondering the Fate of Formerly Incarcerated Men During the Golden Years.” *The Review of Black Political Economy* 48, no. 2 (October): 151–189. <https://doi.org/10.1177/0034644620964914>.
- Choi, Joseph. 2022. “Senate Republican Bill Would Repeal Democratic Drug Pricing Law.” *The Hill*, October 7, 2022.
- Choi, Soon Kyu, and Ilan H. Meyer. 2016. *LGBT Aging: A Review of Research Findings, Needs, and Policy Implications*. The Williams Institute, UCLA School of Law, August 2016.
- Clark, Robert L., and John B. Shoven. 2019. *Enhancing Work Incentives for Older Workers: Social Security and Medicare Proposals to Reduce Work Disincentives*. Brookings Institution, January 2019.
- Cleary, Ekaterina, Matthew J. Jackson, and Fred Ledley. 2020. “Government as the First Investor in Biopharmaceutical Innovation: Evidence from New Drug Approvals 2010–2019.” Institute for New Economic Thinking Working Paper Series no. 133, August 5, 2020.
- Cloyd, Stacy. 2021. *Social Security Disability Insurance and Retirement Benefits*. National Center on Law and Elder Rights, February 2021.
- Coalition on Human Needs. 2022. *The Inflation Reduction Act of 2022 with Some Important Human Needs Provisions Clears the Senate*. August 9, 2022.
- Colvin, Alexander J.S. 2018. *The Growing Use of Mandatory Arbitration; Access to the Courts Is Now Barred for More Than 60 Million American Workers*. Economic Policy Institute, April 6, 2018.
- Congressional Budget Office (CBO). 2022a. *Policy Approaches to Reduce What Commercial Insurers Pay for Hospitals’ and Physicians’ Services*. September 2022.
- Congressional Budget Office (CBO). 2022b. *The Prices That Commercial Health Insurers and Medicare Pay for Hospitals’ and Physicians’ Services*. January 20, 2022.
- Cooper, David, and Teresa Kroeger. 2017. *Employers Steal Billions from Workers’ Paychecks Each Year: Survey Data Show Millions of Workers Are Paid Less Than the Minimum Wage, at Significant Cost to Taxpayers and State Economies*. Economic Policy Institute, May 10, 2017.
- Cooper, David, Zane Mokhiber, and Ben Zipperer. 2021. *Raising the Federal Minimum Wage to \$15 by 2025 Would Lift the Pay of 32 Million Workers*. Economic Policy Institute, March 9, 2021.
- Copeland, Craig. 2020. *EBRI IRA Database: IRA Balances, Contributions, Rollovers, Withdrawals, and Asset Allocation, 2017 Update*. Issue Brief no. 513. Employee Benefit Research Institute, September 2020.

- Copeland, Craig. 2022. *The Perfect Storm — Factors Contributing to Lower Retirement Confidence Among Women Who Are Not Married*. Issue Brief no. 567. Employee Benefit Research Institute, September 2022.
- Copeland, Craig, and Lisa Greenwald. 2021. *2021 Retirement Confidence Survey: A Closer Look at Black and Hispanic Americans*. Issue Brief no. 530. Employee Benefit Research Institute, June 2021.
- Copeland, Craig, and Lisa Greenwald. 2022. *Retirement Confidence Survey and the LGBTQ Community*. Issue Brief no. 560. Employee Benefits Research Institute, June 2022.
- Creamer, John. 2022. “Examining the Impact of Medical Expenses on Supplemental Poverty Rates.” U.S. Census Bureau Working Paper no. 2022-13, June 2022.
- Cubanski, Juliette, Tricia Neuman, and Meredith Freed. 2022. *Explaining the Prescription Drug Provisions in the Inflation Reduction Act*. Kaiser Family Foundation, September 22, 2022.
- Data for Progress. 2022. “Survey of Likely Voters Conducted June 17–21, 2022” (data set).
- Davis, Owen. 2021. *A Tale of Two Retirements*. Schwartz Center for Economic Policy Analysis, December 2021.
- Davis, Owen, and Siavash Radpour. 2021. “Dissecting the Pandemic Retirement Surge.” *Research Note* 2021-03. Schwartz Center for Economic Policy Analysis and Department of Economics, The New School for Social Research, December 2021.
- Dean, Adam, Jamie McCallum, Simeon D. Kimmel, and Atheendar S. Venkataramani. 2022. “Resident Mortality and Worker Infection Rates from COVID-19 Lower in Union Than Nonunion US Nursing Homes, 2020–21.” *Health Affairs* 41, no. 5 (May): 751–759. <https://doi.org/10.1377/hlthaff.2021.01687>.
- Deshpande, Manasi, and Yue Li. 2019. “Who Is Screened Out? Application Costs and the Targeting of Disability Programs.” *American Economic Journal: Economic Policy* 11, no. 4 (November): 213–48. <https://doi.org/10.1257/pol.20180076>.
- Dolby, Teon. 2021. “10 Things to Know about the Expanded EITC” (blog post). Center for Law and Social Policy, December 1, 2021.
- Dolls, Mathias, Clemens Fuest, and Andreas Peichl. 2010. “Social Protection as an Automatic Stabilizer.” *IZA Policy Paper* no. 18, September 2010.
- Dube, Arindrajit. 2021. *A Plan to Reform the Unemployment Insurance System in the United States*. The Hamilton Project, Brookings Institution, April 12, 2021.
- Dushi, Irena, and Brad Trenkamp. 2021. “Improving the Measurement of Retirement Income of the Aged Population.” Social Security Office of Research, Evaluation, and Statistics (ORES) Working Paper no. 116, January 2021.
- Economic Policy Institute (EPI). 2018. “Policy Agenda” (web page). Updated December 5,

2018.

Economic Policy Institute (EPI). 2022. “[The Productivity–Pay Gap](#)” (web page). Updated October 2022.

Emlet, Charles A. 2016. “[Social, Economic, and Health Disparities Among LGBT Older Adults](#).” *Generations* 40, no. 2 (Summer): 16–22.

Employee Benefits Security Administration (EBSA). 2021. *Private Pension Plan Bulletin Historical Tables and Graphs 1975–2019*. September 2021.

Enda, Grace, and William G. Gale. 2020. *How Does Gender Equality Affect Women in Retirement?* Brookings Institution, July 2020.

Entmacher, Joan, and Amy Matsui. 2013. “[Addressing the Challenges Women Face in Retirement: Improving Social Security, Pensions, and SSI](#).” *John Marshall Law Review* 46, no. 3: 749–793.

Entmacher, Joan, Mikki Waid, and Benjamin Veghte. 2016. *Overcoming Barriers to Retirement Security for Women: The Role of Social Security*. National Academy of Social Insurance, December 2016.

Fahle, Sean, and Kathleen McGarry. 2018. “[Women Working Longer: Labor Market Implications of Providing Family Care](#).” In *Women Working Longer: Increased Employment at Older Ages*, edited by Claudia Goldin and Lawrence F. Katz, 157–181. Chicago: University of Chicago Press.

Farber, Henry S. 2017. “[Employment, Hours, and Earnings Consequences of Job Loss: US evidence from the Displaced Workers Survey](#).” *Journal of Labor Economics* 35, no. S1 (July): 235–272. <https://doi.org/10.1086/692353>.

Farber, Henry S., Chris M. Herbst, Daniel Silverman, and Till von Wachter. 2019. “[Whom Do Employers Want? The Role of Recent Employment and Unemployment Status and Age](#).” *Journal of Labor Economics* 37, no. 2 (April): 323–49. <https://doi.org/10.1086/700184>.

Farmand, Aida, and Teresa Ghilarducci. 2019. “[Why American Older Workers Have Lost Bargaining Power](#).” Schwartz Center for Economic Policy Analysis and Department of Economics, The New School for Social Research Working Paper no. 2019-2, updated May 2022.

Farmand, Aida, and Teresa Ghilarducci. 2022. “[Monopsony Power, Race, and Gender](#).” Economics and Finance, Oxford Research Encyclopedias. <https://doi.org/10.1093/acrefore/9780190625979.013.740>.

Farmand, Aida, Teresa Ghilarducci, Siavash Radpour, and Bridget Fisher. 2020. *Older Women and Older Black Workers Are Overrepresented in High-Risk Jobs*. Policy Note, Schwartz Center for Economic Policy Analysis, July 2020.

Farooq, Ammar, Adriana D. Kugler, and Umberto Muratori. 2022. “[Do Unemployment Insurance Benefits Improve Match and Employer Quality? Evidence from Recent U.S.](#)

Recessions.” National Bureau of Economic Research Working Paper no. 27574, May 2020, revised April 2022.

Federal Reserve System Board of Governors (Federal Reserve). 2022a. Survey of Consumer Finances (SCF), 2019 SCF full public microdata. Last updated March 2022.

Federal Reserve Board of Governors (Federal Reserve). 2022b. “**Distributional Financial Accounts. Defined Benefit Pension Entitlements and Defined Contribution Pension Entitlements by Wealth Percentile Group, 1989Q3–2022Q2**” (interactive charts and tables). Accessed October 16, 2022.

Federal Reserve Board of Governors (Federal Reserve). 2022c. *Economic Well-Being of U.S. Households in 2021*. May 2022.

Feigenbaum, James, Alexander Hertel-Fernandez, and Vanessa Williamson. 2019. “**From the Bargaining Table to the Ballot Box: Political Effects of Right to Work Laws**.” Cambridge, Mass.: National Bureau of Economic Research Working Paper no. 24259, January 2019.

Fisher, Bridget, and Teresa Ghilarducci. 2017. *State Retirement Reform: Lifting Up Best Practices*. Schwartz Center for Economic Policy Analysis, December 2017.

Flood, Sarah, Miriam King, Renae Rodgers, Steven Ruggles, J. Robert Warren, and Michael Westberry. 2021. *Integrated Public Use Microdata Series, Current Population Survey: Version 9.0*. Minneapolis, MN: IPUMS, 2021. Accessed September 2022. <https://doi.org/10.18128/D030.V9.0>.

Frakt, Austin. 2019. “**The Huge Waste in the U.S. Health System**.” *The New York Times*, October 7, 2019.

Fredriksen-Goldsen, Karen I., Amanda E. B. Bryan, Sarah Jen, Jayn Goldsen, Hyun-Jun Kim, and Anna Muraco. 2017. “**The Unfolding of LGBT Lives: Key Events Associated with Health and Well-being in Later Life**.” *Gerontologist* 57, suppl. 1: 15–29. <https://doi.org/10.1093/geront/gnw185>.

Frick, Walter. 2015. “**Welfare Makes America More Entrepreneurial**.” *The Atlantic*, March 26, 2015.

Friedberg, Leora, Wenliang Hou, Wei Sun, and Anthony Webb. 2017. “**Lapses in Long-Term Care Insurance**.” Schwartz Center for Economic Policy Analysis and Department of Economics, The New School for Social Research, Working Paper no. 2017-8.

Garfield, Rachek, Matthew Rae, and Robin Rudowitz. 2021. *Coverage Implications of Policies to Lower the Age of Medicare Eligibility*. Kaiser Family Foundation, May 21, 2021.

Gatta, Mary, and Jessica Horning. 2022. “**Dying with Your Boots On: The Realities of Working Longer in Low-Wage Work**.” In *Overtime: America’s Aging Workforce and the Future of Working Longer*, edited by Lisa F. Berkman and Beth C. Truesdale. Cambridge, Mass.: Harvard University Press.

Georgetown University Center for Retirement Initiatives (Georgetown CRI). 2021. “**State-**

Facilitated Retirement Savings Programs: A Snapshot of Program Design Features.” *State Brief* no. 21–02, October 31, 2021.

Ghilarducci, Teresa. 2008. *Guaranteed Retirement Accounts: Toward Retirement Income Security*. Economic Policy Institute Briefing Paper no. 204, March 3, 2008.

Ghilarducci, Teresa. 2021. “Why We Need an Older Workers Bureau.” Schwartz Center for Economic Analysis Insights Blog, August 4, 2021.

Ghilarducci, Teresa, Bridget Fisher, Kyle Moore, and Anthony Webb. 2016. *Gender and Racial Disparities in Physical Job Demands of Older Workers*. Schwartz Center for Economic Policy Analysis *Policy Note*, October 2016.

Ghilarducci, Teresa, and Kevin Hassett. 2021. *What If Low-Income American Workers Had Access to Wealth Building Vehicles Like the Federal Employees’ Thrift Savings Plan?* Economic Innovation Group, March 25, 2021.

Ghilarducci, Teresa, Martha Susana Jaimes, and Anthony Webb. 2018. *Old-Age Poverty: Single Women and Widows and a Lack of Retirement Security*. *Policy Note*, Schwartz Center for Economic Policy Analysis, August 2018.

Ghilarducci, Teresa, Michael Papadopoulos, Bridget Fisher, and Anthony Webb. 2021. *Working Longer Cannot Solve the Retirement Income Crisis*. *Policy Note*, Schwartz Center for Economic Policy Analysis, February 2021.

Ghilarducci, Teresa, Michael Papadopoulos, and Anthony Webb. 2022. “The Illusory Benefit of Working Longer on Retirement Financial Preparedness: Rethinking Advice That Working Longer Increases Retirement Income.” *Journal of Retirement* 10, no. 1 (Summer): 7–27. <https://doi.org/10.3905/jor.2022.1.104>.

Ghilarducci, Teresa, Joelle Saad-Lessler, and Eloy Fisher. 2011. “The Automatic Stabilizing Effects of Social Security and 401(k) Plans.” Schwartz Center for Economic Policy Analysis Working Paper no. 2011-2, The New School for Social Research, December 2011.

Godbout, Ted. 2022. *Which Industry Has the Best 401(k) Plan?* National Association of Plan Advisors, April 8, 2022.

Golden, Lonnie. 2020. *Part-Time Workers Pay a Big-Time Penalty: Hourly Wages-and-Benefits Penalties for Part-Time Work Are Largest for Those Seeking Full-Time Jobs and for Men, but Affect More Women*. Economic Policy Institute, February 27, 2020.

Goodman, Nanette, Michael Morris, and Kelvin Boston. 2019. *Financial Inequality: Disability, Race and Poverty in America*. National Disability Institute.

Goss, Stephen C. 2022. “Saving Social Security: Expanding Benefits and Demanding the Wealthy Pay Their Fair Share or Cutting Benefits and Increasing Retirement Anxiety.” Testimony before the U.S. Senate Committee on the Budget, June 9, 2022.

Gould, Elise. 2020a. “Older Workers Can’t Work From Home and Are at a Higher Risk for COVID-19.” *Working Economics Blog* (Economic Policy Institute), March 31, 2020.

Gould, Elise. 2020b. “Union Workers Are More Likely to Have Paid Sick Days and Health Insurance: COVID-19 Sheds Light on Least-Empowered Workers.” *Working Economics Blog* (Economic Policy Institute), March 12, 2020.

Government Accountability Office (GAO) 2021. *Retirement Security: Debt Increased for Older Americans over Time, but the Implications Vary by Debt Type*. April 2021.

Grabell, Michael. 2015. “OSHA Report Echoes ProPublica and NPR’s Workers’ Comp Findings.” *ProPublica*, March 6, 2015.

Gronniger, Tracey. 2022. “Hearing on SSA Customer Service.” Testimony before the U.S. House of Representatives, Committee on Ways and Means, Subcommittee on Social Security, May 17, 2022.

Guth, Madeline, Meghana Ammula, and Elizabeth Hinton. 2021. “Understanding the Impact of Medicaid Premiums & Cost-Sharing: Updated Evidence from the Literature and Section 1115 Waivers.” Kaiser Family Foundation, September 9, 2021.

Hacker, Jacob. 2002. *The Divided Welfare State: The Battle over Public and Private Social Benefits in the United States*. Cambridge, UK: Cambridge University Press.

Hacker, Jacob. 2006. *The Great Risk Shift: The Assault on American Jobs, Families, Health Care and Retirement and How You Can Fight Back*. New York, NY: Oxford University Press.

Harris, Seth D. 2020. *Increasing Employment for Older Workers with Effective Protections Against Employment Discrimination*. Brookings Institution, November 2020.

Harrison, Will. 2021. “Supreme Court’s Attack on Age Discrimination Protections Remains Unfixed.” *Alliance for Justice Blog*, June 22, 2021.

Hassan, Adeel. 2021. “Coronavirus Cases and Deaths Were Vastly Underestimated in U.S. Meatpacking Plants, a House Report Says.” *New York Times*, October 28, 2021.

Heidkamp, Maria, Carl Van Horn, Michele Martin, and Kathy Krepcio. 2022. *Helping Older, Long-Term Unemployed Job Seekers: A Report on the Heldrich Center’s New Start Career Network*. Heldrich Center for Workforce Development at Rutgers University. July 2022.

Hipple, Steven F. 2016. “Labor Force Participation: What Has Happened Since the Peak?” *Monthly Labor Review*, Bureau of Labor Statistics, September 2016.

Hou, Wenliang, and Geoffrey T. Sanzenbacher. 2020. “Measuring Racial/Ethnic Retirement Wealth Inequality.” Center for Retirement Research at Boston College Working Paper no. 2020-2, January 2020.

Huston, Barry F. 2019. *Social Security: Demographic Trends and the Funding Shortfall*. Congressional Research Service, November 4, 2019.

Isaacs, Katelin P., Zhe Li, Sharmila Choudhury, and Isaac A. Nicchitta. 2021. *The Growing Gap in Life Expectancy by Income: Recent Evidence and Implications for the Social*

Security Retirement Age. Congressional Research Service, July 2021.

Jackson, Victoria, and Matt Saenz. 2021. *States Can Choose Better Path for Higher Education Funding in COVID-19 Recession*. Center on Budget and Policy Priorities, February 2021.

Johnson, Richard W. 2004. “Trends in Job Demands Among Older Workers, 1992–2002.” *Monthly Labor Review*, Bureau of Labor Statistics, July: 48–56.

Johnson, Richard W. 2019. *What Is the Lifetime Risk of Needing and Receiving Long-Term Services and Supports?* U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation, April 2019.

Johnson, Richard W. 2020. *How Can Policymakers Close the Racial Gap in Retirement Security?* Urban Institute, October 2020.

Johnson, Richard W., and Barbara A. Butrica. 2012. *Age Disparities in Unemployment and Reemployment During the Great Recession and Recovery*. Urban Institute, May 2012.

Johnson, Richard W., and Melissa M. Favreault. 2021. *Economic Hardship and Medicaid Enrollment in Later Life: Assessing the Impact of Disability, Health, and Marital Status Shocks*. U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation, January 2021.

Johnson, Richard W., and Peter Gosselin. 2018. *How Secure Is Employment at Older Ages?* Urban Institute, December 2018.

Johnson, Richard W., and Janette Kawachi. 2007. “Job Changes at Older Ages: Effects on Wages, Benefits, and Other Job Attributes.” Urban Institute Working Paper no. 2007-4. February 2007.

Johnson, Richard W., Janette Kawachi, and Eric K. Lewis. 2009. *Older Workers on the Move: Recareering in Later Life*. AARP Public Policy Institute, April 2009.

Johnson, Richard W., Gordon B.T. Mermin, and Matthew Resseger. 2007. *Employment at Older Ages and the Changing Nature of Work*. AARP Public Policy Institute, November 2007.

Johnson, Richard W., Stipica Mudrazija, and Claire Xiaozhi Wang. 2016. *Hispanics’ Retirement Security*. Urban Institute, December 2016.

Justice in Aging. 2020a. *Medicaid and Medicare Home and Community Based Services Policy Priorities for the New Administration*. December 2020.

Justice in Aging. 2020b. *Older Women and Poverty*.

Kaiser Family Foundation. 2019. *An Overview of Medicare*. February 13, 2019.

Katch, Hannah, Jennifer Wagner, and Aviva Aron-Dine. 2018. *Taking Medicaid Coverage Away from People Not Meeting Work Requirements Will Reduce Low-Income Families’*

Access to Care and Worsen Health Outcomes. Center on Budget and Policy Priorities, August 2018.

Keisler-Starkey, Katherine, and Lisa N. Bunch. 2022. *Health Insurance Coverage in the United States: 2021*. U.S. Census Bureau.

Kilbourne, Amy M. 2005. “Care Without Coverage: Too Little, Too Late.” *Journal of the National Medical Association* 97, no. 11: 1578.

Koenig, Gary, Jason J. Fichtner, and William G. Gale. 2021. *Supplemental Transition Accounts for Retirement: A Proposal to Increase Retirement Income Security and Reform Social Security*. AARP Public Policy Institute.

Koenig, Gary, Lori Trawinski, and Sara Rix. 2015. *The Long Road Back: Struggling to Find Work after Unemployment*. AARP, March 2015.

Kolhatkar, Sheelah. 2022. “McKinsey Is a Consulting Powerhouse. But Is It a Force for Good?” *New York Times*, September 29, 2022.

Kristal, Tali, Yinon Cohen, and Edo Navot. 2018. “Benefit Inequality among American Workers by Gender, Race, and Ethnicity, 1982–2015.” *Sociological Science*, July 19, 2018. <https://doi.org/10.15195/v5.a20>.

Krueger, Alan. 2017. “Where Have All the Workers Gone? An Inquiry into the Decline of the U.S. Labor Force Participation Rate.” *Brookings Papers on Economic Activity*, Fall 2017 edition.

Lahey, Joanna N. 2008. “Age, Women, and Hiring: An Experimental Study.” *Journal of Human Resources* 43, no. 1 (Winter), 30–56. <https://doi.org/10.3368/jhr.43.1.30>.

Lahey, Joanna N. 2018. “Understanding Why Black Women Are Not Working Longer.” In Claudia Goldin and Lawrence F. Katz (eds.) *Women Working Longer: Increased Employment at Older Ages*. Chicago, IL: University of Chicago Press.

Lewis, Tanya. 2021. “Nursing Home Workers Had One of the Deadliest Jobs of 2020.” *Scientific American*, February 2021.

LGBT Movement Advancement Project and Services and Advocacy for Gay, Lesbian, Bisexual and Transgender Elders (LGBT MAP and SAGE). 2010. *Improving the Lives of LGBT Older Adults*. March 2010.

Li, Zhe, and Joseph Dalaker. 2021. *Poverty Among the Population Aged 65 and Older*. Congressional Research Service, April 14, 2021.

Lilly, Bethany. 2022. “Strengthening Social Security’s Customer Service.” Testimony before the U.S. House of Representatives, Committee on Ways and Means, Subcommittee on Social Security, May 17, 2022.

Lin, I-Fen, and Susan L. Brown. 2021. “The Economic Consequences of Gray Divorce for Women and Men.” *The Journals of Gerontology: Series B* 76, no. 10 (December):

2073–2085. <https://doi.org/10.1093/geronb/gbaa157>.

Long-Term Services and Supports Trust Commission (LTSS Trust Commission). 2022. *LTSS Trust Commission Recommendations Report*. Washington State Department of Social and Health Services RCW 50B.04.030 (4), January 2022.

Looney, Adam, and Vivien Lee. 2018. *Parents Are Borrowing More and More to Send Their Kids to College—and Many Are Struggling to Repay*. Brookings Institution, November 2018.

Lunney, Kellie. 2016. “Members of Congress Really Seem to Like the TSP: Lawmakers Put Forward Yet Another Proposal to Create a Retirement Account for American Workers Modeled After Feds’ Thrift Savings Plan.” *Government Executive*, June 28, 2016.

Madden, Jeanne M., Susmitha Bayapureddy, Becky A. Briesacher, Fang Zhang, Dennis Ross-Degnan, Stephen B. Soumerai, Jerry H. Gurwitz, and Alison A. Galbraith. 2021. “Affordability of Medical Care Among Medicare Enrollees.” *JAMA Health Forum* 2021;2.12:e214104, December 10, 2021. <https://doi.org/10.1001/jamahealthforum.2021.4104>.

Madowitz, Michael, Anne Price, and Christian E. Weller. 2020. *Public Work Provides Economic Security for Black Families and Communities*. Center for American Progress, October 23, 2020.

Maestas, Nicole. 2018. “The Return to Work and Women’s Employment Decisions.” In Claudia Goldin and Lawrence F. Katz (eds.) *Women Working Longer: Increased Employment at Older Ages*. Chicago, IL: University of Chicago Press.

Maestas, Nicole, and Xiaoyan Li. 2006. “Discouraged Workers? Job Search Outcomes of Older Workers.” University of Michigan Retirement Research Center Working Paper 2006-133, October 2006.

Maestas, Nicole, Kathleen J. Mullen, David Powell, Till von Wachter, and Jeffrey B. Wenger. 2017. *Working Conditions in the United States: Results of the 2015 American Working Conditions Survey*. RAND Corporation.

Maestas, Nicole, Kathleen J. Mullen, and Alexander Strand. 2013. “Does Disability Insurance Receipt Discourage Work? Using Examiner Assignment to Estimate Causal Effects of SSDI Receipt.” *American Economic Review*, 103 (5): 1797–1829. <https://doi.org/10.1257/aer.103.5.1797>.

Marr, Chuck, Nathaniel Frentz, and Chye-Ching Huang. 2013. *Retirement Tax Incentives Are Ripe for Reform: Current Incentives Are Expensive, Inefficient, and Inequitable*. Center on Budget and Policy Priorities, December 13, 2013.

Matsui, Amy K. 2021. “Gaps in Retirement Savings Based on Race, Ethnicity and Gender.” Written Statement for the U.S. Department of Labor’s Advisory Council on Employee Welfare and Benefit Pension Plans, August 20, 2021.

McLaughlin, Joanne Song. 2019. “Age Discrimination Laws, Physical Challenges, and Work

Accommodations for Older Adults.” *Generations* 43 no. 3: 59-62.

Medicare.gov. 2022. “Long-Term Care” (web page). Accessed October 2022.

Michaels, David, and Gregory R. Wagner. 2020. “Occupational Safety and Health Administration (OSHA) and Worker Safety During the COVID-19 Pandemic.” *JAMA* vol. 324, no. 14: 1389–1390. <https://doi.org/10.1001/jama.2020.16343>.

Mishel, Lawrence, Lynn Rhinehart, and Lane Windham. 2020. *Explaining the Erosion of Private-Sector Unions: How Corporate Practices and Legal Changes Have Undercut the Ability of Workers to Organize and Bargain*. Economic Policy Institute, November 2020.

Mitchell, David. 2022. *Retirement Tax Incentives Supercharge the Fortunes of Wealthy Americans*. Washington Center for Equitable Growth, March 17, 2022.

Mitchell, Olivia S., and Annamaria Lusardi. 2015. “Financial Literacy and Economic Outcomes: Evidence and Policy Implications.” Pension Research Council Working Paper no. 2015-01, January 2015.

Montero, Alex, Audrey Kearney, Liz Hamel, and Mollyann Brodie. 2022. *Americans’ Challenges with Health Care Costs*. Kaiser Family Foundation, July 2022.

Morrissey, Monique. 2009. *Toward a Universal, Secure, and Adequate Retirement System*. Retirement USA Conference Report, October 21, 2009.

Morrissey, Monique. 2015. “Do Disability Benefits Reduce Work Effort?” *Working Economics Blog* (Economic Policy Institute), July 8, 2015.

Morrissey, Monique. 2019. *Steady Contributions, Affordability, and Lifetime Income Are the Building Blocks of a Retirement System That Works for Working Families: Expanding Social Security Is the Most Important Step*. Economic Policy Institute, December 2019.

Munnell, Alicia H. 2015. “The Average Retirement Age—An Update.” *Issue in Brief* 15-4. Center for Retirement Research at Boston College, March 2015.

Munnell, Alicia H., Jean-Pierre Aubry, and Caroline V. Crawford. 2015. “How Has the Shift to Defined Contribution Plans Affected Saving?” *Issue in Brief* 15-16. Center for Retirement Research at Boston College, September 2015.

Munnell, Alicia H., Anqi Chen, and Robert L. Siliciano. 2021. “The National Retirement Risk Index: An Update from the 2019 SCF.” *Issue in Brief* 21-2, Center for Retirement Research at Boston College, January 2021.

Munnell, Alicia H., and Laura Quinby. 2009. “Pension Coverage and Retirement Security.” *Issue in Brief* 9-26. Center for Retirement Research at Boston College, December 2009.

Munnell, Alicia H., Matthew S. Rutledge, and Geoffrey T. Sanzenbacher. 2019. “Retiring Earlier Than Planned: What Matters Most?” *Issue in Brief* 19-3. Center for Retirement Research at Boston College, February 2019.

- Munnell, Alicia H., Abigail N. Walters, Anek Belbase, and Wenliang Hou. 2020. “Are Homeownership Patterns Stable Enough to Tap Home Equity?” Center for Retirement Research at Boston College Working Paper no. 2020-7, January 2020.
- Naidu, Suresh, and Michael Carr. 2022. “If You Don’t Like Your Job, Can You Always Quit? Pervasive Monopsony Power and Freedom in the Labor Market.” *Journal of Law and Political Economy* 3, no. 1: 131–159. <https://doi.org/10.5070/LP63159035>.
- National Academies of Sciences, Engineering and Medicine (National Academies). 2015. *The Growing Gap in Life Expectancy by Income; Implications for Federal Programs and Policy Responses*. Washington, D.C.: National Academies Press.
- National Academy of Social Insurance (NASI). Forthcoming. *Older U.S. Workers in Arduous Jobs Need Stronger Social Supports*.
- National Council on Aging (NCOA). 2022. *About the Senior Community Service Employment Program (SCSEP)*. July 2022.
- National Employment Law Project (NELP). 2020. *Unemployment Insurance Provisions in the Coronavirus Aid, Relief, and Economic Security (CARES) Act*. March 2020.
- National Employment Law Project (NELP) and Center for Law and Social Policy (CLASP). 2016. *Work Sharing: An Alternative to Layoffs*. July 2016.
- National Women’s Law Center (NWLCC) and Justice in Aging. 2021. *Supporting the Economic Security and Health of Older Women of Color*. September 2021.
- Nelson, Jaeger. 2022. “Economic Effects of Five Illustrative Single-Payer Health Care Systems.” Congressional Budget Office Working Paper no. 2022-02, February 2022.
- Neumark, David, Ian Burn, and Patrick Button. 2019. “Is It Harder for Older Workers to Find Jobs? New and Improved Evidence from a Field Experiment.” *Journal of Political Economy* 127, no. 2 (April), 922–970. <https://doi.org/10.1086/701029>.
- Neumark, David, Ian Burn, Patrick Button, and Nanneh Chehras. 2019. “Do State Laws Protecting Older Workers from Discrimination Reduce Age Discrimination in Hiring? Evidence from a Field Experiment.” *Journal of Law and Economics* 62, no. 2 (May): 373–402. <https://doi.org/10.1086/704008>.
- Nin, Ya. 2015. “Sicker and Poorer: The Consequences of Being Uninsured for People with Disability During the Medicare Waiting Period.” *Health Services Research and Managerial Epidemiology*, February 15, 2015. <https://doi.org/10.1177/2333392815571583>.
- Nuñez, Luis. 2022. “SSI’s 50th Anniversary Highlights Need for Reform Following Decades of Stagnation.” *Off the Charts* (Center on Budget and Policy Priorities blog), October 27, 2022.
- Ochieng, Nancy, Juliette Cubanski, Tricia Neuman, Samantha Artiga, and Anthony Damico. 2021. *Racial and Ethnic Health Inequities and Medicare*. Kaiser Family Foundation, February 16, 2021.

- Olen, Helaine. 2019. “Age Discrimination Is More Common Than You’d Think.” *Washington Post*, January 6, 2019.
- Olen, Helaine. 2021. “Home Health Care Belongs in the Infrastructure Package. We All Pay for It Anyway.” *Washington Post*, July 7, 2021.
- Organisation for Economic Co-operation and Development (OECD). 2020. *Social Spending Makes Up 20% of OECD GDP*. November 2020.
- Organisation for Economic Co-operation and Development (OECD). 2021a. *Health at a Glance 2021; OECD Indicators*. November 9, 2021. <https://doi.org/10.1787/ae3016b9-en>.
- Organisation for Economic Co-operation and Development (OECD). 2021b. *Pensions at a Glance 2021; OECD and G20 Indicators*. December 8, 2021. <https://doi.org/10.1787/ca401ebd-en>.
- Organisation for Economic Co-operation and Development (OECD). 2021c. *OECD Employment Outlook: Hours Worked, 2021 or latest available*.
- Organisation for Economic Co-operation and Development (OECD). 2021d. *Pensions at a Glance 2021: Country Profiles – United States*.
- Organisation for Economic Co-operation and Development (OECD). 2022. *OECD Employment Outlook: Employment rate by age group, 55-64 year-olds, 2022 Q3 or latest available*.
- Pew Charitable Trusts. 2016. *How States Are Working to Address the Retirement Savings Challenge: An Analysis of State-Sponsored Initiatives to Help Private Sector Workers Save*. The Pew Charitable Trusts, June 2016.
- Purcell, Patrick J. 2015. “Income Taxes on Social Security Benefits.” *Social Security Issue Paper* no. 2015-02, December 2015.
- Quinby, Laura, and Gal Wettstein. 2021. “Are Older Workers Capable of Working Longer?” *Issue in Brief* 21-12. Center for Retirement Research at Boston College, July 2021.
- Quinnell, Kenneth. 2014. “11 Ways the ‘Schedules That Work’ Act Would Make the Lives of Working Families Better” (blog). AFL-CIO, July 23, 2014.
- Radpour, Siavash, Michael Papadopoulos, and Teresa Ghilarducci. 2021. “Trends in Employer-Sponsored Retirement Plan Access and Participation Rates: Reconciling Different Data Sources.” *Research Note* 2021-01. Schwartz Center for Economic Policy Analysis and Department of Economics, The New School for Social Research, January 2021.
- Rae, Matthew, Krutika Amin, and Cynthia Cox. 2022. *ACA’s Maximum Out-of-Pocket Limit Is Growing Faster Than Wages*. Kaiser Family Foundation, July 20, 2022.
- Rahman-Davies, Abibat. 2022. *Where Do We Go from Here on the Child Tax Credit and Earned Income Tax Credit?* Friends Committee on National Legislation, August 17, 2022.

- RAND Center for the Study of Aging (RAND). 2022. *RAND HRS Longitudinal File 2018*, Version 2. Produced with funding from the National Institute on Aging and the Social Security Administration, July 2022.
- Retirement Equity Lab (RELAB). 2020. *Older Workers Know They Face an Unfriendly Labor Market*. *Status of Older Workers Report*, Schwartz Center for Economic Policy Analysis at The New School for Social Research, February 2020.
- Rhee, Nari. 2021a. “*Examining Pathways to Build a Stronger More Inclusive Retirement System*.” Testimony before the Health, Employment, Labor and Pensions Subcommittee, House Committee on Education and Labor, June 23, 2021.
- Rhee, Nari. 2021b. “*Gaps in Retirement Savings Based on Race, Ethnicity and Gender*.” Written Statement for the U.S. Department of Labor’s Advisory Council on Employee Welfare and Benefit Pension Plans, June 24, 2021.
- Rhee, Nari, and William B. Forna. 2014. *Still a Better Bang for the Buck: An Update on the Economic Efficiencies of Defined Benefit Pensions*. National Institute on Retirement Security, December 2014.
- Rho, Hye Jin. 2010. *Hard Work? Patterns in Physically Demanding Labor Among Older Workers*. Center for Economic Policy Research, August 2010.
- Richman, Karen, Teresa Ghilarducci, Roger Knight, Erin Jelm, and Joelle Saad-Lesser. 2012. *Confianza, Savings, and Retirement: A Study of Mexican Immigrants*. University of Notre Dame Institute for Latino Studies, February 2012.
- Richter, Alexander W., Daniel Chapman, and Emil Mihaylov. 2018. “*Declining U.S. Labor Force Participation Rates Stand Out*.” *Federal Reserve Bank of Dallas Economic Letter* 13, no. 6, April 2018.
- Risher, Howard. 2022. “*The Case for Creating an Older Workers Bureau*.” *Government Executive*, July 1, 2022.
- Romig, Kathleen. 2021. “*The Case for Updating and Simplifying Supplemental Security Income*.” Testimony before the Senate Finance Committee, Subcommittee on Social Security, Pensions, and Family Policy, September 21, 2021.
- Romig, Kathleen. 2022a. “*COVID Surge Illustrates Urgent Need for Paid Leave*.” *Off the Charts* (Center on Budget and Policy Priorities blog), February 1, 2022.
- Romig, Kathleen. 2022b. *Social Security Administration Cuts Hurt Every State*. Center on Budget and Policy Priorities, May 26, 2022.
- Rothstein, Richard. 2017. *The Color of Law: A Forgotten History of How Our Government Segregated America*. New York, NY: Liveright.
- Rutledge, Matthew S. 2018a. “*How Is the Mortality Gap Affecting Social Security Progressivity?*” *Issue in Brief* 18-16. Center for Retirement Research at Boston College, September 2018.

- Rutledge, Matthew S. 2018b. “What Explains the Widening Gap in Retirement Ages by Education?” *Issue in Brief* 18-10. Center for Retirement Research at Boston College, May 2018.
- Sabelhaus, John, and Jeffrey P. Thompson. 2021. “Racial Wealth Disparities: Reconsidering the Roles of Human Capital and Inheritance.” Federal Reserve Bank of Boston Working Paper no. 22-3.
- Sabelhaus, John, and Alice Henriques Volz. 2020. “Social Security Wealth, Inequality, and Lifecycle Saving.” National Bureau of Economic Research Working Paper no. 27110, May 2020.
- SAGE and National Resource Center on LGBT Aging. n.d. *Facts on LGBT Aging*.
- Sammon, Alexander. 2020. “The Collapse of Long-Term Care Insurance.” *American Prospect*, October 20, 2020.
- Santhanam, Laura. 2020. “How Canada Got Universal Health Care and What the U.S. Could Learn.” *PBS News Hour*, August 31, 2020.
- Schmidt, John. 2022. “Retirement Guide for LGBTQ Americans.” *Forbes*, updated June 3, 2022.
- Schmitt, John, and Jori Kandra. 2021. “The Carceral State and the Labor Market.” *Working Economics Blog* (Economic Policy Institute), April 29, 2021.
- Schuster, Barbara. 2021. “Student Debt Weakens Retirement Security; COVID-19 Aggravates the Situation.” *Generations Today* 42, no. 5, Sept–Oct 2021.
- Schwing, Emily. 2020. “How OSHA Has Failed to Protect America’s Workers From COVID-19.” *Reveal*, April 4, 2020.
- Shah Goda, Gopi, and Evan J. Soltas. 2022. “The Impacts of Covid-19 Illnesses on Workers.” National Bureau of Economic Research Working Paper no. 30435, September 2022.
- Shvedov, Maxim, and Jennifer Schramm. 2020. *Making the Earned Income Tax Credit Work for Workers Ages 65 and Older*. AARP Public Policy Institute, March 31, 2020.
- Siegel Bernard, Tara. 2022. “They Got the Debt, but Not the Degree.” *New York Times*, June 1, 2022.
- Smalligan, Jack, and Chantel Boyens. 2020. *Paid Medical Leave Research: What We Know and What We Need to Know to Improve Health and Economic Well-Being in the United States*. Washington Center for Equitable Growth, April 30, 2020.
- Smith, Sean M., and Stephen M. Pegula, “Fatal Occupational Injuries to Older Workers.” *Monthly Labor Review*, U.S. Bureau of Labor Statistics, January 2020. <https://doi.org/10.21916/mlr.2020.2>.

- Social Security Administration (SSA). 2020. *[SSI Program] Recipients by Sex and Age*. December 2020.
- Social Security Administration (SSA). n.d. “*Same-Sex Couples*.” Website accessed October 24, 2022.
- Stein, Norman. 2021. “*Gaps in Retirement Savings Based on Race, Ethnicity and Gender*.” Written Statement for the U.S. Department of Labor’s Advisory Council on Employee Welfare and Benefit Pension Plans, June 24, 2021.
- Tavares, Jane L., Marc A. Cohen, Susan Silberman, and Lauren Popham. 2022. *Chronic Inequities: Measuring Disease Cost Burden among Older Adults in the U.S.* LeadingAge LTSS Center and National Council on Aging, April 2022.
- Tax Policy Center. 2020. “*T20-0142 – Eliminate Tax Expenditures for Retirement Saving Plans (Present Value Method), Baseline: Current Law with TCJA Permanently Extended, Distribution of Federal Tax Change by Expanded Cash Income Percentile, 2020*” (table). Updated May 7, 2020.
- Thompson, Jeffrey P., and Alice Henriques Volz. 2021. “*A New Look at Racial Disparities Using a More Comprehensive Wealth Measure*.” Federal Reserve Bank of Boston Current Policy Perspectives, August 16, 2021.
- Toossi, Mitra, and Elka Torpey. 2017. “*Older Workers: Labor Force Trends and Career Options*.” *Career Outlook*, Bureau of Labor Statistics, May 2017.
- Townsend Kiernan, Katherine, and Sarah Miller. 2021. “*The Importance of Addressing Long-Term Unemployment for Economic Recovery*.” *Workforce Currents* 2021-06. Federal Reserve Bank of Atlanta, August 5, 2021. <https://doi.org/10.29338/wc2021-06>.
- United for ALICE. 2022. *Financial Hardship Among People with Disabilities: United States*. National Research Brief, October 18, 2022.
- University of Michigan. 2022. Health and Retirement Study, 2012–2018 (public use dataset). Produced and distributed with funding from the National Institute on Aging (grant number NIA U01AG009740).
- Vallas, Rebecca. 2022. “*Hearing on Strengthening Social Security’s Customer Service*.” Testimony before the U.S. House of Representatives, Committee on Ways and Means, Subcommittee on Social Security, May 17, 2022.
- Vallas, Rebecca, Kim Knackstedt, Hayley Brown, Julie Cai, Shawn Fremstad, and Andrew Stettner. 2022. *Economic Justice Is Disability Justice*. The Century Foundation and the Disability Economic Justice Collaborative, April 21, 2022.
- Veghte, Benjamin W. 2021. *Designing Universal Long-Term Services and Supports Programs: Lessons from Germany and Other Countries*. National Academy of Social Insurance, May 2021.
- Wagner, Jennifer, and Farah Erzouki. 2022. *Time to Get It Right: State Actions Now Can*

Preserve Medicaid Coverage When Public Health Emergency Ends. Center on Budget and Policy Priorities, May 18, 2022.

Wamhoff, Steve. 2021. *When Tax Breaks for Retirement Savings Enrich the Already Rich.* Institute for Taxation and Economic Policy, June 25, 2021.

Weaver, David. 2020. “Social Security Disability Benefits: Characteristics of the Approved and Denied Populations.” *Journal of Disability Policy Studies* 32, no. 1: 51–62. <https://doi.org/10.1177/1044207320933538>.

Weaver, David. 2021. “At Social Security, the Deck Is Stacked Against the Disabled.” *The Hill*, June 16, 2021.

Weller, Christian. 2020. “Unemployed Older Workers Often Face Discrimination, Making A Bad Situation Much Worse.” *Forbes*, December 19, 2020.

Weller, Christian E., Joelle Saad-Lessler, and Tyler Bond. 2020. *Still Shortchanged: An Update on Women’s Retirement Preparedness.* National Institute on Retirement Security, May 2020.

Wiehe, Meg, Aidan Davis, Carl Davis, Matt Gardner, Lisa Christensen Gee, and Dylan Grundman. 2018. *Who Pays? A Distributional Analysis of the Tax Systems in All 50 States.* Institute on Taxation and Economic Policy, October 2018.

Wilson, Valerie, and William Darity Jr. 2022. *Understanding Black-White Disparities in Labor Market Outcomes Requires Models That Account for Persistent Discrimination and Unequal Bargaining Power.* Economic Policy Institute, March 25, 2022.

Wolff, Edward N. 2018. “The Decline of African-American and Hispanic Wealth Since the Great Recession.” National Bureau of Economic Research Working Paper no. 25198, October 2018.

Zhavoronkova, Marina, Bradley D. Custer, Anona Neal, Justin Schweitzer, and Marcella Bombardieri. 2022. *How to Ease the Nursing Shortage in America.* Center for American Progress, May 23, 2022.