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The RETAIN Demonstration: Comparing RETAIN Enrollees with Other Populations

The Retaining Employment and Talent After Injury/Illness Network (RETAIN) demonstration, a joint initiative of the U.S. Department of Labor (DOL) and the Social Security Administration (SSA), aims to help workers with recently acquired injuries and disabilities remain in the labor force. Following a pilot phase, DOL awarded cooperative agreements to state agencies in Kansas, Kentucky, Minnesota, Ohio, and Vermont to fully implement RETAIN services. These five RETAIN programs aim to identify and recruit a subset of workers who could be at risk of exiting the labor force and applying for Social Security Disability Insurance (SSDI) and Supplemental Security Income (SSI).

In this brief, we compare the characteristics of people who enrolled in RETAIN in 2022 with all workers and with applicants for SSDI and SSI, in their respective states. Characteristics of RETAIN enrollees differed substantially from those of the two comparison populations. On average, RETAIN enrollees had lower recent earnings than workers in their state but higher earnings than applicants for disability benefits. We also found significant differences between RETAIN enrollees and the comparison populations in sociodemographic characteristics, such as gender, age, race and ethnicity, and education. The findings illustrate how RETAIN enrollees differ from the states' worker populations and the extent to which the RETAIN demonstration projects are reaching people who might be at greatest risk of applying for disability benefits.

Introduction

Millions of workers in the United States leave the labor force each year after experiencing an injury or an illness (Hollenbeck 2015). Many of these workers are left to navigate uncoordinated service providers and programs that are not adequately equipped to deal with their situations (Ben-Shalom 2016). Unable to find necessary supports for maintaining employment, many workers might exit the labor force permanently. Exiting the labor force could lead to adverse effects on their standard of living (Ben-Shalom and Burak 2016; Schimmel and Stapleton 2012) and well-being (Waddell and Burton 2006; Strully 2009; Whitley and Popham

2017). Without a steady paycheck, these workers and their families could turn to public supports, such as SSDI and SSI.

The RETAIN demonstration is a collaborative effort by DOL and SSA to help workers with recently acquired injuries and illnesses remain in the labor force. The demonstration aims to build evidence on the effectiveness of early stay-at-work/return-to-work strategies to help those who develop a potentially disabling condition. Following an initial pilot, five state programs—in Kansas, Kentucky, Minnesota, Ohio, and Vermont—are providing coordinated early intervention services to workers experiencing new or worsening medical conditions that



challenge their ability to work. These programs serve adult workers with recently acquired injuries or illnesses, with the goal of helping them remain in the labor force and reducing their need for federal disability programs such as SSDI and SSI. Programs began enrolling participants in late 2021 and early 2022 and are expected to continue enrolling through mid-May 2024.

In this brief, we compare the socioeconomic characteristics of RETAIN enrollees to adult workers¹ and to SSDI/SSI applicants² in their respective states. The goal of these analyses is twofold. The first goal is to understand how RETAIN enrollees who might be at risk of leaving the labor force differ from the worker population at large, revealing the extent to which RETAIN enrollees are a distinct subset of states' worker populations. The second goal is to understand whether the RETAIN demonstration is reaching people who look similar to SSDI/SSI applicants. This comparison will provide insights into whether RETAIN programs are reaching workers who could benefit from supports to remain in the labor force and avoid relying on disability benefits. The two sets of comparisons will also shed light on the potential generalizability of the RETAIN demonstration findings to other populations of interest.

Characteristics of RETAIN Enrollees Relative to Comparison Populations

Several factors could contribute to differences between the demographic and socioeconomic characteristics of RETAIN enrollees and those of the comparison populations:

/ RETAIN programs have established eligibility criteria that might lead to a sample of

enrollees that is not representative of the general worker or disability applicant populations. In particular, all RETAIN enrollees have had recent onset or exacerbation of an injury or illness, and some state programs established additional eligibility criteria, such as having a musculoskeletal or cardiovascular disease (Croake et al. 2023).

- / Workers eligible for RETAIN must have a recent injury or illness that challenge their ability to work, and the risk of such injury or illness varies across subgroups of workers. For example, workers in some industries, such as agriculture, forestry, fishing, construction, manufacturing, and transportation face a higher risk of occupational injury compared with workers in other industries (Abdalla et al. 2017).
- / RETAIN programs' recruitment strategies, some of which rely on referrals or identification through health care systems (Croake et al. 2023), might be more effective at reaching certain subgroups of the service population than others.
- / Enrollment in RETAIN is voluntary, and research suggests that the people who choose to participate in a demonstration can have different characteristics relative to the entire eligible population (Nichols et al. 2021; Patnaik et al. 2022).

Exhibit 1 lists the characteristics we analyze for the comparisons. For SSDI/SSI applicants, we have information on only age, sex, educational attainment, and employment and earnings in the past year. Some characteristics are measured differently for the RETAIN and two comparison populations because of differences in the underlying data (see Appendix A for more details).

¹ The comparison group of workers comprises people ages 18–64 whose households responded to the 2021 American Community Survey and who were in the labor force at the time of the survey.

² The comparison group of SSDI/SSI applicants comprises people ages 18–64 who applied to one or both of these programs in 2022.

Exhibit 1. Key characteristics for population comparisons

Characteristics	
<ul style="list-style-type: none"> • Sex • Age • Race and ethnicity^a • Language preference^a • Educational attainment • Type of health insurance^a 	<ul style="list-style-type: none"> • Employment at enrollment or interview^a • Employment in the past year^b • Earnings in the past year^b • Industry^a • Occupation^a

^a This variable is not available for SSDI/SSI applicants.

^b Employment and earnings in the past year are measured over the preceding 12 months for workers and over the prior calendar year for RETAIN enrollees and SSDI/SSI applicants.

SSDI = Social Security Disability Insurance; SSI = Supplemental Security Income.

We begin by comparing employment characteristics of the three groups, which are important because eligibility for RETAIN depends on being recently employed. Moreover, job characteristics can affect the risk of having an injury and illness, as well as the extent to which workers face challenges with staying at work or returning to work once they experience an injury or illness. Next, we consider the sociodemographic and other characteristics of the three groups. Although eligibility for RETAIN is not predicated on such characteristics, they might indirectly influence the probability of enrollment in RETAIN (for example, because they are associated with working in occupations with greater risk of injury or illness). In the following sections, we focus on themes that are common across states and note findings that substantially differ across them. Basing our discussion on program features and eligibility criteria, we provide possible explanations for the differences between RETAIN enrollees and the two comparison groups. Appendix A describes our sample, methods, and data sources. Appendix B presents the results of comparing RETAIN enrollees with all workers and with SSDI/SSI applicants in their state.

Employment characteristics

RETAIN enrollees’ employment rates and average earnings in the past year were lower than those of state workers but higher than those of SSDI/SSI applicants.

About 98 percent of workers in each state had been employed in the past year, as might be expected given how the study defined workers.³ In comparison, a smaller share of RETAIN enrollees in each state had been employed in 2021, ranging from 85 percent in Vermont to 94 percent in Kansas (Exhibit 2; Appendix B, Exhibits B.1–B.5). Average earnings in the past year were also lower among RETAIN enrollees than for all state workers (Exhibit 3), with the relative difference in earnings compared with all state workers ranging from 16 percent in Ohio to 42 percent in Kentucky. RETAIN enrollees have lower employment and earnings relative to all state workers, potentially because their recent injury or illness affected their ability to work. They might also have had lower earnings on average before their injury or illness, because, for example, occupations with a higher risk of injury and illness tend to pay less than the median wage (Dorman and Boden 2021).

³ We obtained information on state workers from the IPUMS USA version of the 2021 one-year American Community Survey (ACS). The ACS measures employment in the 12 months preceding the survey.

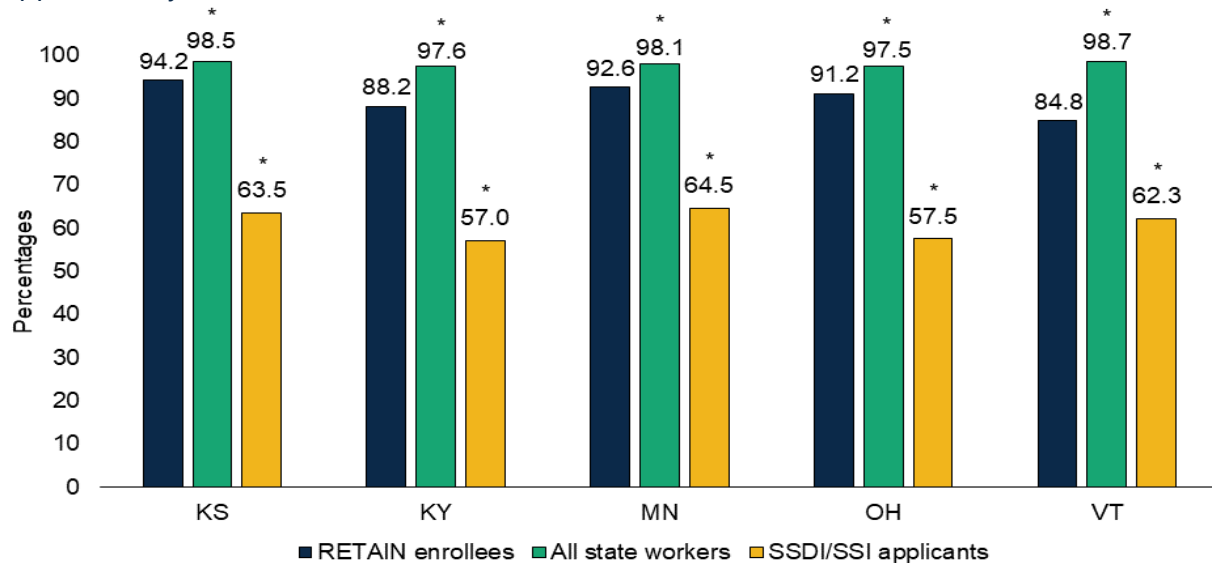
See Appendix A for more information on data sources and variable definitions.

RETAIN enrollees were more likely to have been employed and had higher average earnings in 2021 compared with SSDI/SSI applicants (Exhibits 2 and 3). While at least 85% of RETAIN enrollees in each of the five states were employed in 2021, the employment rates among SSDI/SSI applicants ranged between 57 percent (Kentucky) and 65 percent (Minnesota). RETAIN enrollees also had higher average earnings in 2021 than SSDI/SSI applicants, with the relative difference in earnings compared with applicants ranging from 86 percent in Kentucky to 242 percent in Ohio. The higher employment rates and average earnings among RETAIN enrollees than SSDI/SSI applicants are likely the result of the RETAIN programs' eligibility requirements and the incentives related to SSDI/SSI application. To enroll in RETAIN, all programs required that RETAIN enrollees had worked

recently or were in the labor force. In contrast, SSDI/SSI applicants need not have worked recently to qualify for SSDI/SSI and are likely disincentivized from working because recent employment can make it less likely that their SSDI/SSI application is approved.⁴

Looking across the three groups being compared, RETAIN enrollees appear to be somewhere in the middle between workers and SSDI/SSI applicants in terms of average earnings and employment rates. This finding is consistent with the motivation of the overall RETAIN demonstration, which is to intervene shortly after workers have experienced an injury or illness that is posing employment challenges but before they have decided to exit the labor market and apply for SSA benefit programs.

Exhibit 2. Employment rates in the past year among RETAIN enrollees, all workers, and SSDI/SSI applicants, by state



Note: Based on authors' calculations using data from RETAIN enrollment forms, the American Community Survey, and SSA administrative records. See Appendix A for technical details.

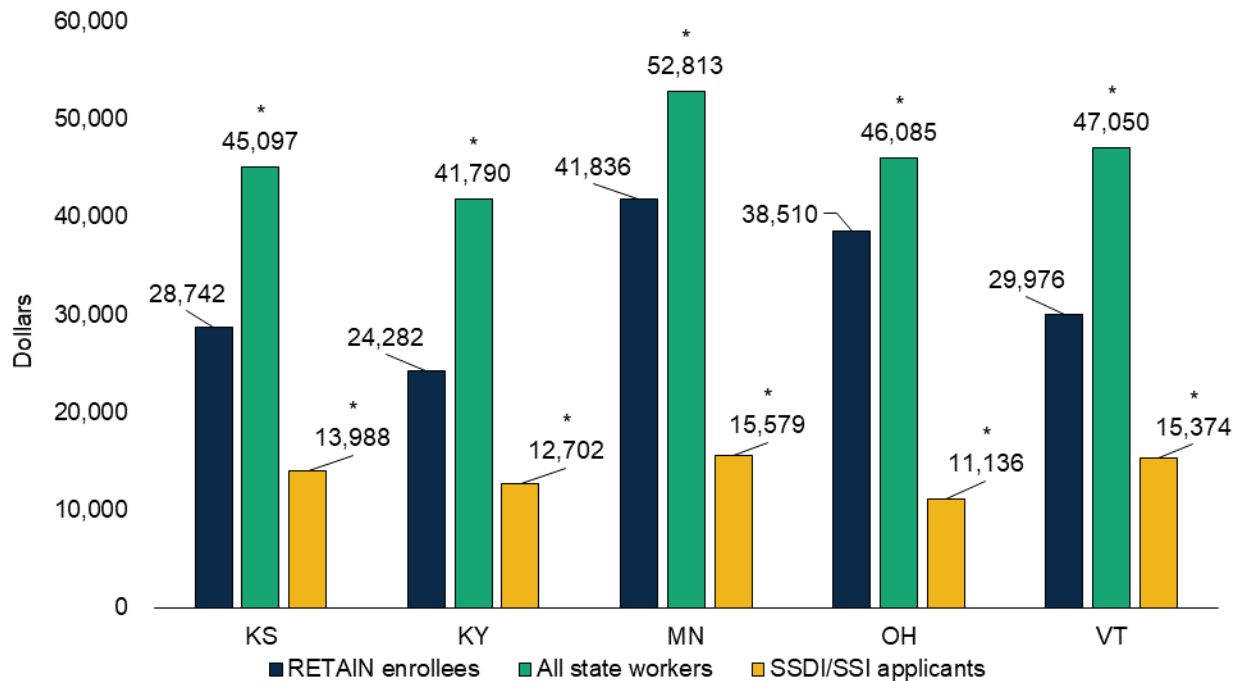
* Difference between the mean outcomes of RETAIN enrollees and the comparison population is significantly different from zero (p -value < 0.05) using a two-tailed t -test.

SSA = Social Security Administration; SSDI = Social Security Disability Insurance; SSI = Supplemental Security Income.

⁴ For a person to meet the definition of a qualifying disability for SSDI, SSA must determine that a person cannot work or engage in substantial gainful activity because of their medical condition for at least 12 months. As such, recent employment would reduce

the odds an SSDI application is approved. In addition, SSI applicants do not have to have work history to qualify for SSI.

Exhibit 3. Average earnings in the past year among RETAIN enrollees, all workers, and SSDI/SSI applicants, by state



Note: Based on authors' calculations using data from RETAIN enrollment forms, the American Community Survey, and SSA administrative records. See Appendix A for technical details.

* Difference between the mean outcomes of RETAIN enrollees and the comparison population is significantly different from zero (p-value < 0.05) using a two-tailed t-test.

SSA = Social Security Administration; SSDI = Social Security Disability Insurance; SSI = Supplemental Security Income.

RETAIN enrollees were more likely to be employed in service occupations and less likely to be employed in management or professional occupations compared with all workers.

In all five states, a larger share of RETAIN enrollees than all state workers had been employed in service occupations, with statistically significant differences in these shares of at least 15 percentage points (Exhibit 4). The largest such difference was in Ohio, where 39 percent of RETAIN enrollees had worked in service occupations compared with 15 percent of all state workers. In contrast, in all five states, a smaller share of RETAIN enrollees than all state workers had been employed in management, professional, or related occupations and sales and office occupations (Exhibit 5); the differences range in size from 8 to 27

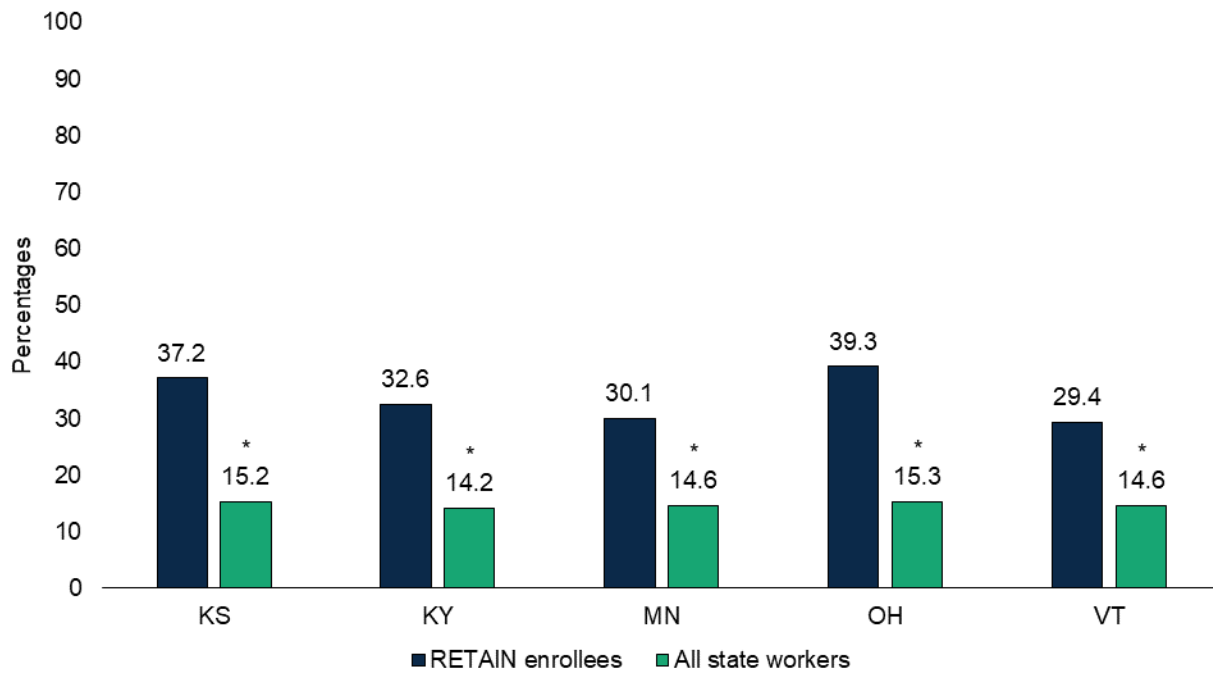
percentage points, with the largest difference occurring in Kansas. We present group differences for additional occupation categories as well as industries in Appendix B, Tables B.1–B.5.

The differences in occupations between RETAIN enrollees and all state workers are likely in part the result of occupational differences in the following factors: (1) incidence of injury or illness that are directly or indirectly work related and (2) barriers to staying at or returning to work after the onset of injury or illness. Occupations differ in their risk of work-related injury and illness; for example, among all nonfatal occupational injuries and illnesses involving days away from work in private sector jobs in 2020, about 28 percent occurred in service occupations, and less than 10 percent occurred in sales and office occupations (U.S. Bureau of Labor Statistics

2021a). Further, some occupations might pose a greater risk of injury or illness that is not directly work related (for example, through differences in stress levels and exposure to trauma that can have a detrimental impact on health). Occupational characteristics also influence how easy it is for a worker to stay at or return to work once they have an injury or illness. For example,

compared with service jobs, jobs in management, professional, or related occupations might better lend themselves to working from home, schedule flexibility, or use of assistive technology, such that they have less need for RETAIN-like services (Hansen et al. 2023).

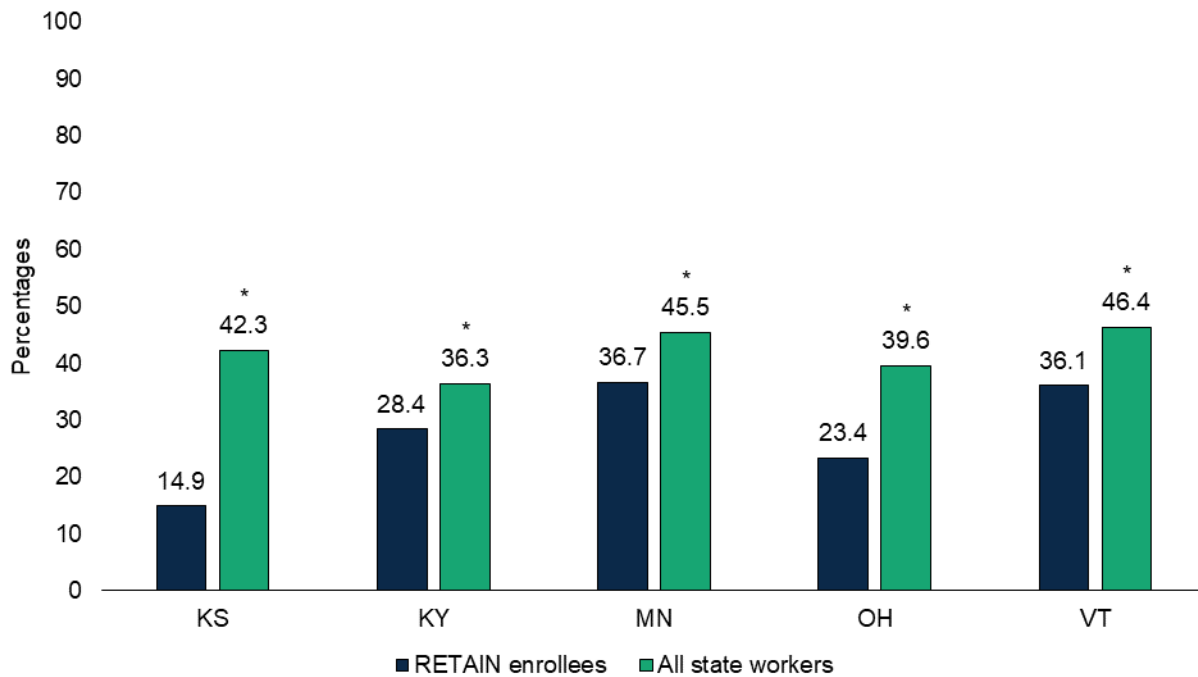
Exhibit 4. Percentage of RETAIN enrollees and all workers who were employed in service occupations, by state



Note: Based on authors' calculations using data from RETAIN enrollment forms and the American Community Survey. See Appendix A for technical details.

* Difference between the mean outcomes of RETAIN enrollees and the comparison population is significantly different from zero (p -value < 0.05) using a two-tailed t-test.

Exhibit 5. Percentage of RETAIN enrollees and all workers working in management, professional, or related occupations, by state



Note: Based on authors' calculations using data from RETAIN enrollment forms and the American Community Survey. See Appendix A for technical details.

* Difference between the mean outcomes of RETAIN enrollees and the comparison population is significantly different from zero (p -value < 0.05) using a two-tailed t-test.

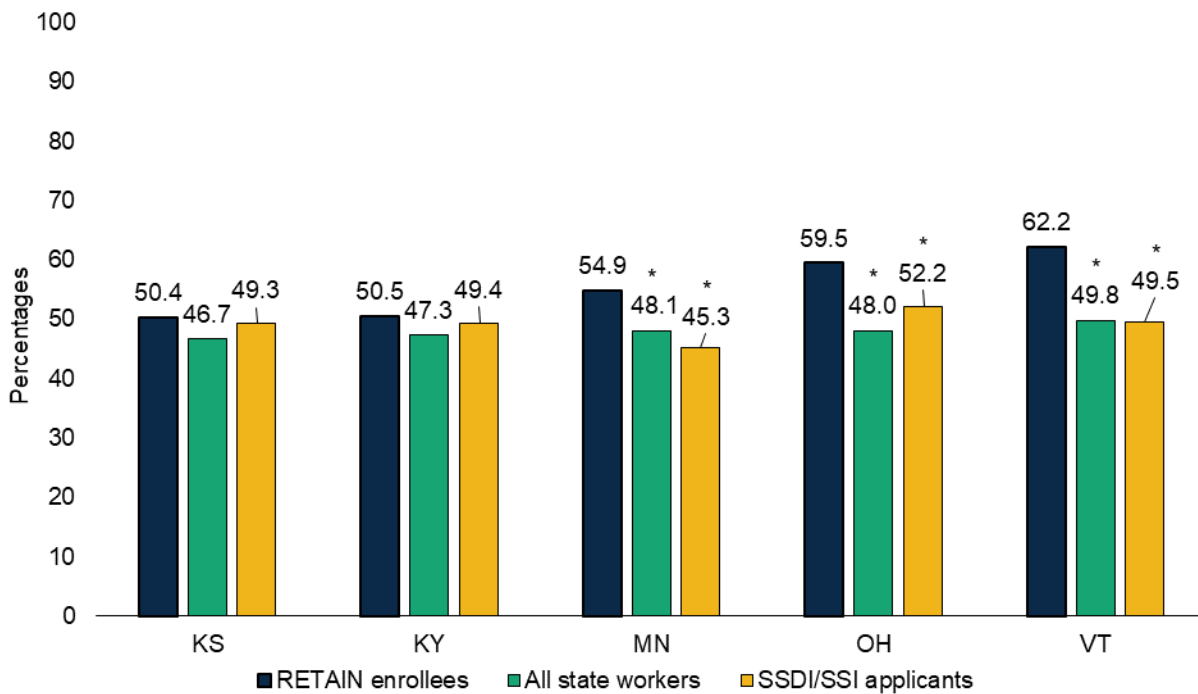
Sociodemographic and other characteristics

In Minnesota, Ohio, and Vermont, more than half the RETAIN enrollees were female, and this share was greater than among all state workers and SSDI/SSI applicants; in Kansas and Kentucky, females comprised approximately half of all three groups.

In all five states, roughly half of all state workers and SSDI/SSI applicants were female (Exhibit 6). In Kansas and Kentucky, a similar share of RETAIN enrollees were female (50 and 51 percent, respectively). However, in Minnesota, Ohio, and Vermont, the share of females was significantly larger among RETAIN enrollees than

among all state workers and SSDI/SSI applicants, with females comprising 55, 60, and 62 percent of RETAIN enrollees, respectively. One possible explanation for the higher share of females in these three states is their recruitment practices. Staff in Ohio and Minnesota review information in electronic medical records to identify potentially eligible workers; in Vermont, patients at participating health care clinics self-refer by completing a pre-screener for RETAIN. If, as other studies have found (Bertakis et al. 2000; Thompson et al. 2016), females are more likely to seek early medical care in the event of an injury or illness, the recruitment pipelines in these three states might be more likely to identify eligible females.

Exhibit 6. Percentage of RETAIN enrollees, all workers, and SSDI/SSI applicants who are female, by state



Note: Based on authors' calculations using data from RETAIN enrollment forms, the American Community Survey, and SSA administrative records. See Appendix A for technical details.

* Difference between the mean outcomes of RETAIN enrollees and the comparison population is significantly different from zero (p -value < 0.05) using a two-tailed t-test.

SSA = Social Security Administration; SSDI = Social Security Disability Insurance; SSI = Supplemental Security Income.

RETAIN enrollees were generally older than state workers and younger than SSDI/SSI applicants on average, except in Kansas and Vermont.

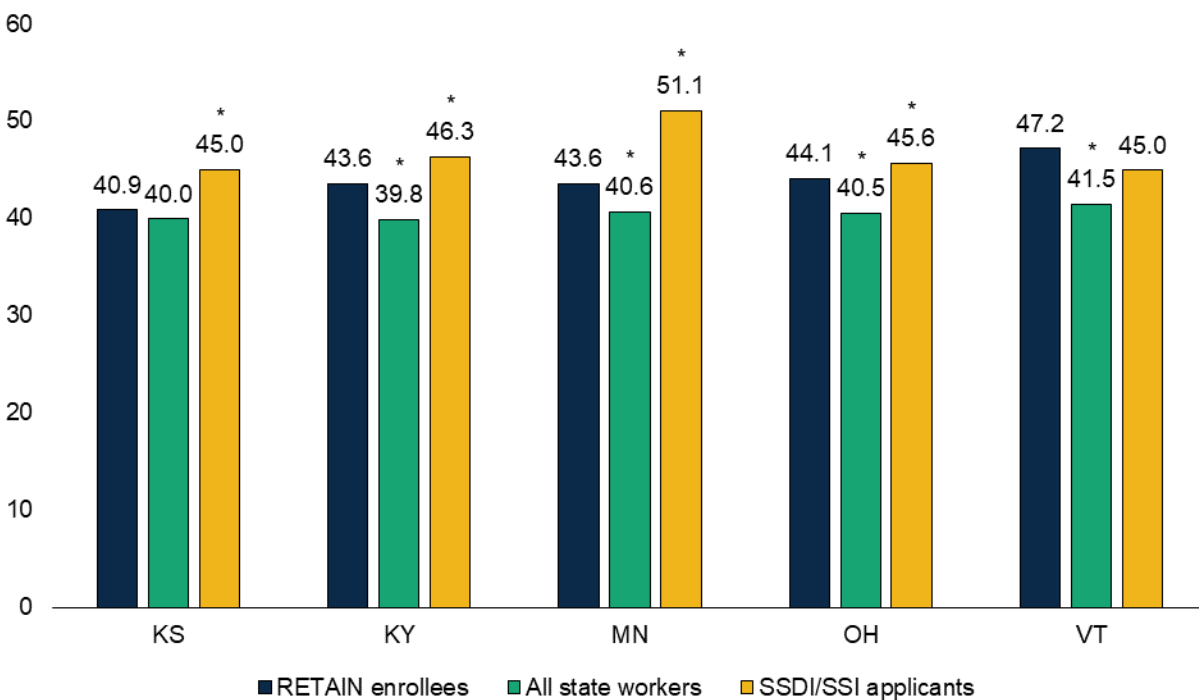
In all states but Kansas, RETAIN enrollees were a few years older than all state workers on average (Exhibit 7); the age differences between the two groups ranged from 3 years (Kentucky) to 6 years (Vermont). The older ages of RETAIN enrollees compared with all state workers might be because age is a risk factor for injury or illness; all else being equal, a younger worker is less likely to experience a lengthy work-limiting injury or illness. For example, 41 percent of workers ages 55 to 64 who were on the job in 2018 reported a work-related health issue, compared with only 22 percent of workers ages 18 to 24 (Free et al. 2020).

In all states but Vermont, RETAIN enrollees were younger than SSDI/SSI applicants, on average; the differences in ages between the two groups ranged from 1 year (Ohio) to 8 years (Minnesota). In Vermont, RETAIN enrollees were an average of 2 years older than SSDI/SSI applicants; this finding is consistent with Vermont having slightly older RETAIN enrollees compared with the other states. There are several potential explanations for why RETAIN enrollees were younger on average than SSDI/SSI applicants in most states. First, RETAIN is an early intervention strategy that seeks to identify potential enrollees early in their disabling condition, whereas SSDI/SSI applicants might have experienced the onset of their disabling condition less recently and thus could be older. Second, applying for SSDI/SSI benefits might be more attractive to older workers, because SSDI benefits increase if they earn more

as they age.⁵ Further, SSDI/SSI benefits tend to be modest amounts, and workers nearer to the end of their careers might be more willing to rely on SSDI/SSI because it will be a shorter period of time before they can transition to Social Security or private retirement benefits. Third, among workers who experience an injury or illness, young workers might be less likely to experience severe challenges staying at or returning to work compared with older workers. Age can affect the physical ability of the body to recover from an

injury or illness, and younger workers might be less likely to experience the types of injuries or illnesses (such as strokes) that pose greater challenges to staying at or returning to work. Among all nonfatal occupational injuries and illnesses of private industry workers in 2020, only 13 percent of cases involving workers aged 20 to 24 resulted in more than 30 days away from work, whereas this share was 29 percent among workers aged 55 to 64 (U.S. Bureau of Labor Statistics. 2021b).

Exhibit 7. Average age of RETAIN enrollees, all workers, and SSDI/SSI applicants, by state



Note: Based on authors' calculations using data from RETAIN enrollment forms, the American Community Survey, and SSA administrative records. See Appendix A for technical details.

* Difference between the mean outcomes of RETAIN enrollees and the comparison population is significantly different from zero (p -value < 0.05) using a two-tailed t-test.

SSA = Social Security Administration; SSDI = Social Security Disability Insurance; SSI = Supplemental Security Income.

⁵ In addition to meeting SSA's definition of disability, qualifying disabled worker applicants must be "disability insured," a status they attain after earning a required number of Social Security quarters of coverage (QCs) by working and paying Social Security payroll taxes. Disability-insured status requires one to

be both fully insured (having 1 QC per year after age 21) and to have at least 20 QCs during the last 10 years or, if younger than 31, half the number of quarters that have elapsed since attainment of age 21, with a minimum of 6 QCs (SSA n.d.)

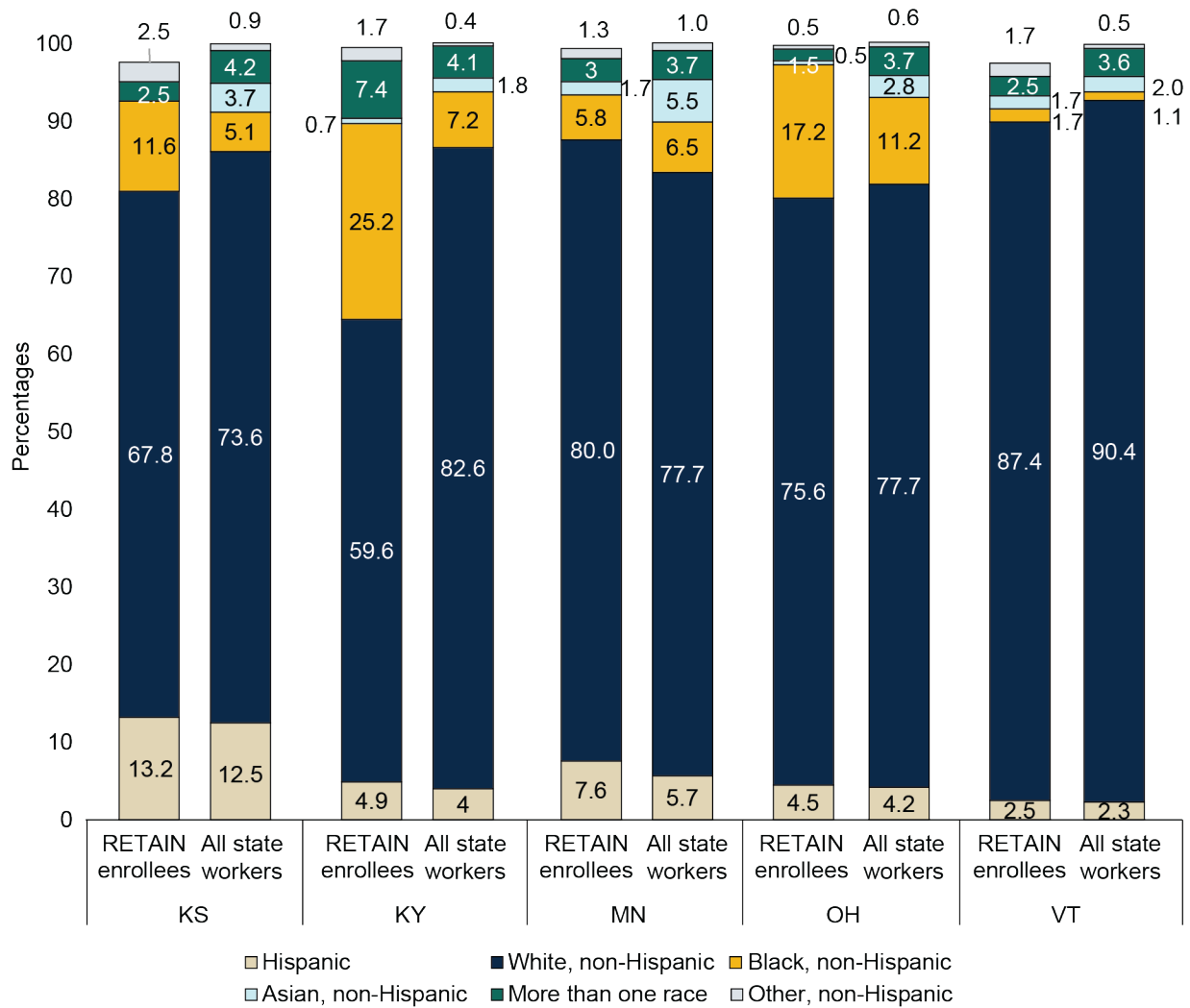
The racial and ethnic composition of RETAIN enrollees differed from that of all state workers.

A majority of RETAIN enrollees in each state were non-Hispanic White, with this share ranging from 60 percent in Kentucky to 87 percent in Vermont. Across all five states, the racial and ethnic composition of RETAIN enrollees differed from that of workers. In Kansas, Kentucky, and Ohio, these differences were substantial. Notably, RETAIN enrollees in these states were more likely to be non-Hispanic Black relative to all state workers (Exhibit 8). The racial and ethnic composition of RETAIN enrollees in Minnesota and Vermont was more similar to that of all state workers. However, in Minnesota, RETAIN enrollees were less likely to be non-Hispanic Asian and more likely to be Hispanic than all state workers.

Several factors could explain the racial and ethnic differences between RETAIN enrollees and all state workers. First, there are well-documented racial and ethnic inequalities in the social determinants of health, such as housing and access to health care; for example,

compared with their White counterparts, racial minorities are much less likely to have health insurance, receive a flu vaccine, and receive mental health services if diagnosed with a mental illness. (CDC 2022; Hill et al. 2023). Research also suggests that the risk of workplace injuries and the prevalence of work-related disabilities is greater among workers of color, especially Black workers, compared with non-Hispanic White workers (Stanbury and Rosenman 2014; Seabury et al. 2017; Smith et al. 2023). These systemic disparities might lead to workers of color being more likely to become eligible for enrollment in RETAIN, relative to non-Hispanic White workers. Features of each RETAIN program might also influence the composition of enrollees. Each program's recruitment sources, processes, and catchment areas can influence the composition of their enrollees. In addition, RETAIN programs employ diverse strategies to intentionally recruit historically underserved populations, such as workers of color, which could contribute to the relatively smaller share of non-Hispanic Whites (Croake et al. 2023).

Exhibit 8. Racial distribution of RETAIN enrollees and all workers, by state



Note: Based on authors' calculations using data from RETAIN enrollment forms, the American Community Survey, and administrative records from the Social Security Administration. See Appendix A for technical details.

RETAIN enrollees were more likely than state workers to indicate that English is their preferred language.

Although more than 96 percent of RETAIN enrollees in each state reported that their preferred language was English, the share of all state workers reporting the same varied from 87 percent (Kansas) to 94 percent (Vermont) across the states (Exhibit 9). Further, because the American Community Survey is conducted in a limited number of languages, the American Community Survey data likely overestimate the share of a state's workers that prefers English.

That nearly all RETAIN enrollees indicated English is their preferred language might reflect the languages referral organizations used, those in programs' outreach materials, and the linguistic capabilities of recruitment staff.

Exhibit 9. Percentage of RETAIN enrollees and all workers with English as their preferred language, by state



Note: Based on authors' calculations using data from RETAIN enrollment forms and the American Community Survey. See Appendix A for technical details.

* Difference between the mean outcomes of RETAIN enrollees and the comparison population is significantly different from zero (p -value < 0.05) using a two-tailed t -test.

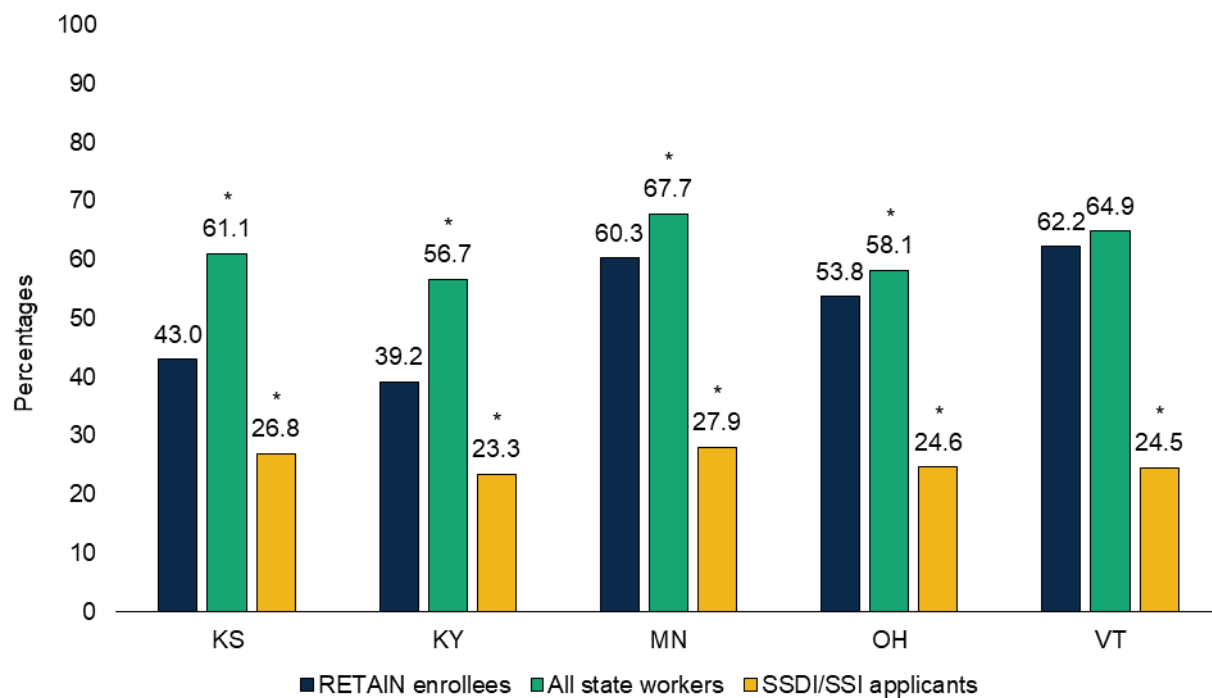
In most states, RETAIN enrollees had lower educational levels than all state workers and higher educational levels than SSDI/SSI applicants, on average.

In Kansas, Kentucky, Minnesota, and Ohio, a smaller share of RETAIN enrollees had any postsecondary education, compared with state workers (Exhibit 10). The educational differences between the two groups were largest in Kansas and Kentucky; RETAIN enrollees in both states were 18 percentage points less likely to have any postsecondary education. In Minnesota, RETAIN enrollees were less educated than all state workers in general, although a larger share had received at least a high school diploma or equivalent certification relative to all state workers (Appendix B, Exhibit B.3). Studies indicate that adults with lower educational attainment experience poorer health than other populations (Cutler and Lleras-Muney 2008;

Fletcher 2015), so it is not surprising that RETAIN enrollees had less education than all state workers in most states. Jobs with greater risk of injury and illness might have lower educational requirements on average, and more educated workers might have more choice over jobs such that they can avoid jobs with greater risk.

In all five states, RETAIN enrollees were more likely than SSDI/SSI applicants to have any postsecondary education. Less-educated workers might be more likely to experience greater challenges staying at or returning to work and thus drop out of the labor force and apply for SSDI/SSI at higher rates. In addition, because less educated workers earn less on average than more educated workers, applying for SSDI and SSI might be more appealing because the opportunity cost of forgone earnings would likely be lower.

Exhibit 10. Percentage of RETAIN enrollees, all workers, and SSDI/SSI applicants with any postsecondary education, by state



Note: Based on authors' calculations using data from RETAIN enrollment forms, the American Community Survey, and SSA administrative records. See Appendix A for technical details.

* Difference between the mean outcomes of RETAIN enrollees and the comparison population is significantly different from zero (p -value < 0.05) using a two-tailed t -test.

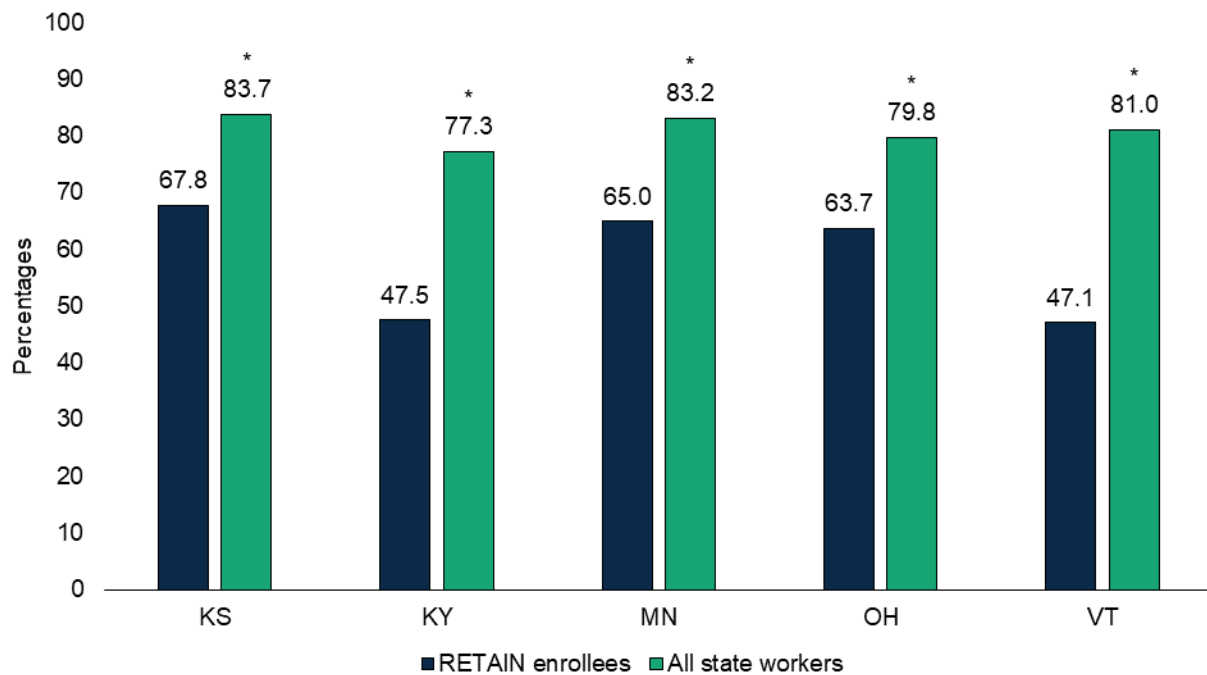
SSA = Social Security Administration; SSDI = Social Security Disability Insurance; SSI = Supplemental Security Income.

RETAIN enrollees were less likely to have private health insurance coverage than state workers.

Although private insurance is the most common coverage type among RETAIN enrollees (Exhibit 11), smaller shares of RETAIN enrollees in all states had private insurance compared with all state workers; the differences range from 16 percentage points (Kansas and Ohio) to 34 percentage points (Vermont). In contrast, larger

shares of RETAIN enrollees had Medicaid coverage compared with all state workers, with the differences in shares ranging from 8 percentage points in Kansas to 30 percentage points in Kentucky (Appendix B, Exhibits B.1–B.5). Because private health insurance is more common among higher earners—and because Medicaid is means tested—these findings are consistent with the finding of lower average earnings among RETAIN enrollees than all state workers.

Exhibit 11. Percentage of RETAIN enrollees and all workers with private health insurance, by state



Note: Based on authors' calculations using data from RETAIN enrollment forms and the American Community Survey. See Appendix A for technical details.

* Difference between the mean outcomes of RETAIN enrollees and the comparison population is significantly different from zero (p -value < 0.05) using a two-tailed t -test.

Discussion

In this section, we summarize the main findings and discuss their implications for policy and practice. We also describe the policy context and other considerations that might affect the interpretation of the results.

Summary of findings

In this brief, we compared the characteristics of RETAIN enrollees with those of workers in the same state to understand how RETAIN enrollees at risk of leaving the labor force differ from the worker population at large. We also compared RETAIN enrollees with SSDI/SSI applicants to better understand whether the programs are reaching people who could potentially apply for SSDI/SSI in the future and for whom RETAIN services could provide needed supports for remaining in the labor force.

Compared with all state workers, RETAIN enrollees had lower employment and earnings and were less likely to be in managerial or sales jobs or in professional, management, or administrative service industries. They were also older and less educated compared with all state workers and more likely to be people of color. These patterns are not surprising given that RETAIN enrollees are likely working in occupations with greater risk of injury or illness; employees in these jobs might have lower education levels, lower earnings, and be more likely to be people of color. Moreover, the fact that RETAIN enrollees had a recent onset of illness and injury that hinders their ability to work could contribute to their lower earnings relative to all state workers. Finally, several RETAIN programs tried to recruit historically underserved populations, which could also have contributed to the greater racial and ethnic diversity of enrollees compared with all workers in the state (Croake et al. 2023).

Compared with SSDI/SSI applicants, RETAIN enrollees had higher employment rates and average earnings and were younger and more educated. This finding likely reflects that RETAIN enrollees must have worked recently to qualify for RETAIN, while SSDI/SSI applicants need not have worked recently. In addition, in general, age is associated with ability to recover from injury and education is associated with a higher opportunity cost of not working, which could make younger and more educated workers less likely to apply to SSDI or SSI, all else equal, relative to older and less-educated workers.

Differences in characteristics between RETAIN enrollees and the comparison populations varied across states. This finding might reflect differences in the five RETAIN programs' eligibility criteria, recruiting strategies, and initial recruitment catchment areas. Although most findings were common to all RETAIN states, a few differences were unique to some states. For example, a smaller share of RETAIN enrollees had any postsecondary education compared with all state workers in every state except Vermont, where the shares were similar.

Implications for policy and practice

The results have two main policy implications:

Differences between RETAIN enrollees and SSDI/SSI applicants inform the generalizability of findings from the RETAIN demonstration.

RETAIN enrollees had higher levels of education, recent employment, and average earnings compared with SSDI/SSI applicants, which could indicate that the findings from the RETAIN demonstration might not apply to all potential SSDI/SSI applicants. Moreover, the degree to which the findings from the RETAIN demonstration are relevant to potential SSDI/SSI applicants could differ by state. For example, in Ohio and Minnesota, RETAIN enrollees looked less similar to SSDI/SSI applicants in terms of their 2021 earnings, whereas enrollees in Kentucky and Vermont were more similar to

SSDI/SSI applicants than to the worker populations in their state.

The characteristics of RETAIN enrollees could look more similar to those of SSDI/SSI applicants in the longer term. RETAIN programs require that enrollees have worked recently and that the onset or exacerbation of the illness or injury is also recent. As more time passes since RETAIN enrollees' injury or illness, their earnings and employment rates might decrease and more closely resemble those of SSDI/SSI applicants, especially for the control group members who are not receiving RETAIN services. However, the differences between RETAIN enrollees and SSDI/SSI applicants in the shares with any postsecondary education suggest that the two groups' average earnings are unlikely to converge. It will be important to benchmark the employment rates and average earnings of control group enrollees after more time has passed since their injury or illness. If the control group's employment rates become more similar to those of SSDI/SSI applicants in the longer term, and a sizable share of them apply for SSDI/SSI, the findings of the RETAIN demonstration might generalize more broadly to potential SSDI/SSI applicants.

Differences between RETAIN enrollees and all state workers suggest lessons for programs' outreach and recruitment practices.

RETAIN enrollees in all states were more likely than all state workers to indicate that English is their preferred language. This finding likely reflects the languages used in RETAIN programs' outreach materials as well as the languages recruitment staff speak. States have already adopted some strategies to broaden referral sources and increase accessibility (for example, by translating program material). States can consider continuing and expanding these efforts by recruiting more bilingual staff, which could help increase the share of non-English speakers among RETAIN enrollees. Most RETAIN programs already recruit populations that are more diverse in race and ethnicity than the

workers in their state; including more non-English speaking workers could further help states achieve the program's goals of reaching historically underserved communities.

RETAIN's goal is to support workers to remain in the labor force after experiencing an injury or illness, and workers with lower education and earnings might be in the greatest need of such supports—both because of the types of jobs they work in and because they face lower opportunity costs from exiting the labor force. Across the five states, RETAIN enrollees in Ohio and Minnesota had the highest average earnings and outearned SSDI/SSI applicants in their states by 242 and 166 percent, respectively. The programs' recruitment strategies can influence the economic profile of enrollees; for example, Ohio and Minnesota use data from electronic medical records to identify potential enrollees, and workers with lower earnings might be less likely to seek medical care (or seek care through the specific health care systems that some RETAIN programs rely on for referrals and recruitment) and thus appear in these data. RETAIN programs in Ohio and Minnesota could consider approaches for recruiting eligible people with lower earnings, such as expanding recruitment efforts to less-wealthy geographic areas and expanding their referral sources to include Federally Qualified Health Centers and free health clinics. These findings may also suggest insights for other stay-at-work/return-to-work programs that have similar goals to RETAIN so that they can refine their recruitment approaches if needed to reach the populations that need services the most.

Study context and considerations

Readers should keep in mind several contextual factors and considerations when interpreting the findings from this study. First, the RETAIN enrollee sample in this study comprises people who enrolled in the programs through December 31, 2022, and therefore does not represent everyone who will enroll in RETAIN. Since 2022, programs have implemented

innovative approaches to improve and accelerate enrollment. For example, Kentucky began a targeted digital advertising campaign in spring 2023 that has led to a substantial increase in enrollments; similarly, Vermont enrolls new practices on a rolling basis, and practices that enrolled later may draw from different catchment areas. As programs' recruiting practices and processes evolve, the differences between RETAIN enrollees' characteristics and comparison populations' characteristics could change over time. Nonetheless, conducting these analyses during the enrollment period provides DOL, SSA, and RETAIN programs a snapshot of the kinds of workers who enroll in RETAIN and enables the programs to adjust and refine their recruiting practices to better reach populations that are under-enrolling in their programs.

As described in Appendix A, data limitations prevent us from defining a few of the measures for economic and demographic characteristics exactly the same way across all three populations. For RETAIN enrollees and SSDI applicants, employment and earnings in the past year capture the prior calendar year, while they capture the 12 months preceding the survey for all state workers. In addition, the educational attainment categories in the SSA program data do not align perfectly with RETAIN enrollee measures of educational attainment. Finally, we cannot observe the population that RETAIN programs are trying to reach (that is, people with a recent injury or illness who need supports to help them remain in the labor force) in the data sources we used for this brief. Some members of the intended service population might not apply for SSDI/SSI even in the absence of any RETAIN-like interventions. Therefore, SSDI/SSI applicants provide an imperfect approximation for the service population. Comparisons of RETAIN enrollees with SSDI/SSI applicants provide suggestive rather than definitive evidence on the extent to which RETAIN programs are able to reach their intended service populations.

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Appendix A. Data and Methods

Data and samples

The data sources we used for this brief are the Retaining Employment and Talent After Injury/Illness Network (RETAIN) enrollment forms, the American Community Survey (ACS), and Social Security Administration (SSA) program data, including information on earnings reported to the Internal Revenue Service (IRS).

/ **RETAIN enrollment forms.** The U.S. Department of Labor (DOL) requires RETAIN programs to collect information about participants who enroll in the evaluation. This data includes baseline information about demographic characteristics, the qualifying injury or illness, and recent employment. We obtained this information for people who enrolled into RETAIN between October 2021 and December 31, 2022.

/ **ACS.** We used information from the IPUMS USA version of the 2021 one-year ACS file (Ruggles et al. 2023). The ACS includes information about individual and household characteristics, including demographics, employment, earnings and labor force participation, and schooling and educational attainment. The 2022 one-year ACS file has not yet been released. We used the 2021 one-year ACS file, which aligns most closely with the timing of enrollment of the sample of RETAIN participants.

/ **SSA program data on Social Security Disability Insurance (SSDI) and Supplemental Security Income (SSI)**

applications. We used information from SSA's structured data repository (SDR) to identify applications for SSDI or SSI in 2022. The SDR also contains information about applicants' sex, age, and educational attainment. We excluded "Disabled Widower" and "Disabled Spouse" applications, wherein potential eligibility for benefits derives from one's spouse. We also excluded applications from "Disabled Adult Children," because their qualifying disability has to have occurred before age 22.

/ **IRS data.** Through SSA staff, we used data in SSA's Master Earnings File to analyze the 2021 earnings of RETAIN enrollees and SSDI/SSI applicants. We requested and analyzed the data in September 2023. These data represent all earnings reported to the IRS. We constructed two measures. The first measure (Employment in the Past Year) captures whether the worker reported any earnings to the IRS in the calendar year before enrollment for RETAIN enrollees and the year before application for SSDI/SSI applicants. The second measure (Earnings in the Past Year) captures the amount of earnings over that period. We removed extreme outliers of earnings in the past year for RETAIN enrollees and SSDI/SSI applicants and winsorized the distribution.⁶

For each RETAIN state, we compared the characteristics of RETAIN enrollees with two populations:

⁶ Winsorizing involves removing or transforming extreme values in a data distribution to reduce the effect of outliers. We winsorized earnings in the past year for each group, RETAIN enrollees and SSDI/SSI applicants, in each state. We took the following steps for all populations with 100 or more nonzero values: first, we calculated the 99th percentile, excluding zeroes and outlier values (values more than three times the inter-quartile range above the 75th percentile of nonzero values). We then top-coded

values above the 99th percentile of the program-specific distribution of nonzero and non-outlier values at the 99th percentile of the program-specific distribution of nonzero and non-outlier values. After implementing this top-coding approach, less than 1.5 percent of each group's earnings were top-coded, with the exception of RETAIN enrollees in Minnesota; 2.4 percent of their earnings were top-coded.

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1. All workers ages 18–64 in the state (working-age people whose households responded to the 2021 ACS and who were in the labor force at the time of the survey)
2. Recent applicants to SSDI and SSI programs (people ages 18–64 in the SDR who filed applications in 2022)

Exhibit A.1 shows the sample sizes of RETAIN enrollees and the two comparison groups by state.

Exhibit A.1. RETAIN enrollee, ACS, and SSDI/SSI applicant sample sizes, by state

Sample	Kansas	Kentucky	Minnesota	Ohio	Vermont
RETAIN enrollees	121	408	701	1,584	119
All state workers (unweighted)	12,507	18,691	26,108	52,080	2,862
SSDI/SSI applicants	12,088	32,197	51,125	81,808	2,957

ACS = American Community Survey; SSDI = Social Security Disability Income; SSI = Supplemental Security Income.

Analysis methods

For each of the five RETAIN states, we calculated the average characteristics of RETAIN enrollees and those of the comparison populations. We used ACS person weights to account for the ACS sample design. We also estimated the difference in characteristics and used statistical testing to assess whether differences were statistically significant. For categorical variables, we used chi-square tests, and for binary and continuous variables, we used two-sided *t*-tests to determine whether the difference in two group means was statistically significantly different from zero.⁷ One, two, or three asterisks denote that the difference is significantly different from zero; that is the *p*-value from the *t*-test, or the chi-square test is less than 0.10/0.05/0.01, respectively.

The characteristics of interest included employment, education, and demographic characteristics. For SSDI/SSI applicants, we have information on only age, sex, educational attainment, employment, and earnings in the past year. Some characteristics are measured differently for the three comparison populations because of differences in the underlying data:

- / The measurements of RETAIN enrollees' and SSI/SSDI applicants' employment and earnings

cover the prior calendar year, but the measurements of all state workers cover the 12 months preceding the survey.

- / The educational attainment categories in the SSA program data do not align perfectly with RETAIN enrollee measures of educational attainment. In particular, SSA program data has information on the number of years of education applicants attained but does not indicate whether and which degrees or certifications they obtained. On the other hand, we have information on the highest degree each RETAIN enrollee obtained and no information on total number of years of education. We created aggregated categories for educational attainment (less than high school, high school completion or GED, and postsecondary education) to best align the two data sources.

- / Industry and occupation information is missing for all state workers who have not worked in the past five years. For RETAIN enrollees, this information is missing if the enrollee did not respond to the relevant questions.

Readers should keep these differences in measures in mind when interpreting the results for the employment, earnings and education comparisons.

⁷ We tested whether the variances of our binary and continuous variables were equal between RETAIN enrollees and comparison populations. We report the

results of the Satterthwaite *t*-test, which does not assume equal variances between groups.

Appendix B. Additional Exhibits

Exhibit B.1 Kansas: Characteristics of RETAIN enrollees and comparison populations

	RETAIN enrollees (N = 121)	ACS Workers (N = 12,507)			SSI or SSDI applicants (N = 12,088)		
	Mean (A)	Mean (B)	Difference (A-B)	p-value	Mean (C)	Difference (A-C)	p-value
Characteristics of recent employment							
Employed at interview	58.7	96.1	-37.4***	0.000	NA	NA	NA
Employed in the past year ^a	94.2	98.5	-4.3**	0.047	63.5	30.7***	0.000
Earnings in the past year ^a	\$28,742	\$45,097	-\$16,355***	0.000	\$13,988	\$14,754***	0.000
Occupation			++	0.000			
Management, professional, or related	14.9	42.3	-27.4***	0.000	NA	NA	NA
Service	37.2	15.2	22.0***	0.000	NA	NA	NA
Sales and office	6.6	19.0	-12.4***	0.000	NA	NA	NA
Natural resources, construction, or maintenance	6.6	9.2	-2.6	0.254	NA	NA	NA
Production, transportation, and material moving	33.9	14.0	19.9***	0.000	NA	NA	NA
Missing	s	0.3	s	s	NA	NA	NA
Industry			++	0.000			
Agriculture or mining	0.0	2.9	-2.9***	0.000	NA	NA	NA
Construction or utilities	8.3	7.2	1.1	0.667	NA	NA	NA
Manufacturing	17.4	11.9	5.5	0.117	NA	NA	NA
Retail trade or wholesale trade	18.2	12.6	5.6	0.116	NA	NA	NA
Transportation	6.6	4.4	2.2	0.344	NA	NA	NA
Information	s	1.7	s	s	NA	NA	NA
Finance or real estate	4.1	6.5	-2.3	0.207	NA	NA	NA
Professional, management, or administrative services	5.0	9.9	-4.9**	0.016	NA	NA	NA
Education	2.5	10.5	-8.0***	0.000	NA	NA	NA
Health care	19.0	14.5	4.5	0.213	NA	NA	NA
Accommodation and food services or arts and entertainment	7.4	7.7	-0.3	0.916	NA	NA	NA
Other services	9.9	3.8	6.1**	0.028	NA	NA	NA
Public administration	s	5.0	s	s	NA	NA	NA
Other or Missing	0.0	1.5	-1.5***	0.000	NA	NA	NA

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	RETAIN enrollees (N = 121)	ACS Workers (N = 12,507)			SSI or SSDI applicants (N = 12,088)		
	Mean (A)	Mean (B)	Difference (A-B)	p-value	Mean (C)	Difference (A-C)	p-value
Socio-demographic and other characteristics							
Female	50.4	46.7	3.7	0.425	49.3	1.1	0.816
Average age	40.9	40.0	0.9	0.414	45.0	-4.1***	0.000
Age group				0.415		†††	0.001
18–29	21.5	26.5	-5.0	0.184	18.1	3.4	0.368
30–49	49.6	44.9	4.7	0.307	36.3	13.3***	0.004
50 and older	28.9	28.6	0.3	0.937	45.7	-16.7***	0.000
Race			††	0.000			
Hispanic	13.2	12.5	0.7	0.828	NA	NA	NA
White, non-Hispanic	67.8	73.6	-5.8	0.179	NA	NA	NA
Black, non-Hispanic	11.6	5.1	6.5**	0.028	NA	NA	NA
Asian, non-Hispanic	0.0	3.7	-3.7***	0.000	NA	NA	NA
More than one race	2.5	4.2	-1.7	0.225	NA	NA	NA
Other, non-Hispanic	2.5	0.9	1.6	0.258	NA	NA	NA
Missing	2.5	0.0	2.5*	0.083	NA	NA	NA
Preferred language is English	99.2	86.8	12.4***	0.000	NA	NA	NA
Education level							
Less than high school diploma	7.4	7.2	0.2	0.919	17.3	-9.9***	0.000
12 years of education, high school diploma or GED	49.6	31.7	17.9***	0.000	50.5	-0.9	0.842
Post-secondary education	43.0	61.1	-18.1***	0.000	26.8	16.2***	0.001
Missing	0.0	0.0	0.0	NA	5.4	-5.4***	0.000
Health insurance coverage							
Private	67.8	83.7	-15.9***	0.000	NA	NA	NA
Medicaid	13.2	5.3	7.9**	0.012	NA	NA	NA
Medicare	3.3	0.9	2.4	0.143	NA	NA	NA
Other	2.5	0.2	2.3	0.113	NA	NA	NA

Source: RETAIN enrollee intake data; 2020 ACS data; SSA data

Note: This table shows the average characteristics of 2021-2022 RETAIN enrollees and two comparison populations: (1) all ACS workers, and (2) SSI or SSDI applicants in 2022. It also shows differences in the outcomes between RETAIN and the comparison populations and the results of t-tests investigating whether the differences in group means are statistically significant. We weighted the statistics for ACS workers to account for the ACS sample design.

s = We suppressed estimates representing fewer than 10 observations.

* Employment and earnings in the past year are measured over the preceding 12 months for ACS workers and during 2021 for RETAIN enrollees and SSI or SSDI applicants.

*/**/*** Difference is significantly different from zero (p-value is less than .10/.05/.01) using a two-tailed t-test.

†/††/††† Difference is significantly different from zero (p-value is less than .10/.05/.01) using a chi-square test.

ACS = American Community Survey; NA = not available; SSA = Social Security Administration; SSI = Supplemental Security Income; SSDI = Social Security Disability Insurance.

Exhibit B.2 Kentucky: Characteristics of RETAIN enrollees and comparison populations

	RETAIN enrollees (N=408)	ACS Workers (N=18,691)			SSI or SSDI applicants (N=32,197)		
	Mean (A)	Mean (B)	Difference (A-B)	p-value	Mean (C)	Difference (A-C)	p-value
Characteristics of recent employment							
Employed at interview	32.6	94.4	-61.8***	0.000	NA	NA	NA
Employed in the past year ^a	88.2	97.6	-9.4***	0.000	57.0	31.2***	0.000
Earnings in the past year ^a	\$24,282	\$41,790	-\$17,509***	0.000	\$12,702	\$11,580***	0.000
Occupation			+++	0.000			
Management, professional, or related	28.4	36.3	-7.9***	0.001	NA	NA	NA
Service	32.6	14.2	18.4***	0.000	NA	NA	NA
Sales and office	6.1	20.0	-13.8***	0.000	NA	NA	NA
Natural resources, construction, or maintenance	5.1	8.9	-3.8***	0.001	NA	NA	NA
Production, transportation, and material moving	27.7	20.0	7.7***	0.001	NA	NA	NA
Missing	0.0	0.6	-0.6***	0.000	NA	NA	NA
Industry			+++	0.000			
Agriculture or mining	0.7	1.5	-0.8*	0.065	NA	NA	NA
Construction or utilities	5.9	7.4	-1.5	0.198	NA	NA	NA
Manufacturing	21.6	14.6	7.0***	0.001	NA	NA	NA
Retail trade or wholesale trade	11.8	13.8	-2.0	0.210	NA	NA	NA
Transportation	4.2	6.1	-2.0*	0.051	NA	NA	NA
Information	1.7	1.4	0.4	0.581	NA	NA	NA
Finance or real estate	0.7	5.7	-5.0***	0.000	NA	NA	NA
Professional, management, or administrative services	2.9	9.2	-6.2***	0.000	NA	NA	NA
Education	5.9	8.9	-3.0**	0.012	NA	NA	NA
Health care	20.8	13.8	7.0***	0.001	NA	NA	NA
Accommodation and food services or arts and entertainment	10.5	7.3	3.3**	0.033	NA	NA	NA
Other services	10.5	4.7	5.8***	0.000	NA	NA	NA
Public administration	2.7	4.1	-1.4*	0.079	NA	NA	NA
Other or Missing	0.0	1.5	-1.5***	0.000	NA	NA	NA

	RETAIN enrollees (N=408)	ACS Workers (N=18,691)			SSI or SSDI applicants (N=32,197)		
	Mean (A)	Mean (B)	Difference (A-B)	p-value	Mean (C)	Difference (A-C)	p-value
Socio-demographic and other characteristics							
Female	50.5	47.3	3.2	0.198	49.4	1.1	0.671
Average age	43.6	39.8	3.8***	0.000	46.3	-2.7***	0.000
Age group			†††	0.000		†††	0.000
18–29	17.2	27.2	-10.0***	0.000	13.5	3.6*	0.055
30–49	45.6	44.9	0.7	0.777	37.1	8.5***	0.001
50 and older	37.3	27.9	9.3***	0.000	49.4	-12.1***	0.000
Race			†††	0.000			
Hispanic	4.9	4.0	0.9	0.401	NA	NA	NA
White, non-Hispanic	59.6	82.6	-23.1***	0.000	NA	NA	NA
Black, non-Hispanic	25.2	7.2	18.1***	0.000	NA	NA	NA
Asian, non-Hispanic	0.7	1.8	-1.1**	0.014	NA	NA	NA
More than one race	7.4	4.1	3.3**	0.012	NA	NA	NA
Other, non-Hispanic	1.7	0.4	1.4**	0.036	NA	NA	NA
Missing	s	0.0	s	s	NA	NA	NA
Preferred language is English	98.3	93.4	4.9***	0.000	NA	NA	NA
Education level							
Less than high school diploma	7.8	6.6	1.3	0.340	21.9	-14.1***	0.000
12 years of education, high school diploma or GED	52.9	36.7	16.2***	0.000	50.8	2.2	0.383
Post-secondary education	39.2	56.7	-17.5***	0.000	23.3	15.9***	0.000
Missing	0.0	0.0	0.0	NA	4.0	-4.0***	0.000
Health insurance coverage							
Private	47.5	77.3	-29.8***	0.000	NA	NA	NA
Medicaid	47.3	17.1	30.2***	0.000	NA	NA	NA
Medicare	5.4	1.1	4.3***	0.000	NA	NA	NA
Other	4.4	0.3	4.1***	0.000	NA	NA	NA

Source: RETAIN enrollee intake data; 2020 ACS data; SSA data

Note: This table shows the average characteristics of 2021-2022 RETAIN enrollees and two comparison populations: (1) all ACS workers, and (2) SSI or SSDI applicants in 2022. It also shows differences in the outcomes between RETAIN and the comparison populations and the results of t-tests investigating whether the differences in group means are statistically significant. We weighted the statistics for ACS workers to account for the ACS sample design.

s = We suppressed estimates representing fewer than 10 observations.

* Employment and earnings in the past year are measured over the preceding 12 months for ACS workers and during 2021 for RETAIN enrollees and SSI or SSDI applicants.

*/**/** Difference is significantly different from zero (p-value is less than .10/.05/.01) using a two-tailed t-test.

†/††/††† Difference is significantly different from zero (p-value is less than .10/.05/.01) using a chi-square test.

ACS = American Community Survey; NA = not available; SSA = Social Security Administration; SSI = Supplemental Security Income; SSDI = Social Security Disability Insurance.

Exhibit B.3 Minnesota: Characteristics of RETAIN enrollees and comparison populations

	RETAIN enrollees (N=701)	ACS Workers (N=26,108)			SSI or SSDI applicants (N=51,125)		
	Mean (A)	Mean (B)	Difference (A-B)	p-value	Mean (C)	Difference (A-C)	p-value
Characteristics of recent employment							
Employed at interview	31.0	95.2	-64.2***	0.000	NA	NA	NA
Employed in the past year ^a	92.6	98.1	-5.5***	0.000	64.5	28.0***	0.000
Earnings in the past year ^a	\$41,836	\$52,813	-\$10,976***	0.000	\$15,579	\$26,258***	0.000
Occupation			++	0.000			
Management, professional, or related	36.7	45.5	-8.8***	0.000	NA	NA	NA
Service	30.1	14.6	15.5***	0.000	NA	NA	NA
Sales and office	7.8	18.1	-10.3***	0.000	NA	NA	NA
Natural resources, construction, or maintenance	9.0	8.2	0.8	0.489	NA	NA	NA
Production, transportation, and material moving	16.4	13.2	3.2**	0.023	NA	NA	NA
Missing	0.0	0.3	-0.3***	0.000	NA	NA	NA
Industry			++	0.000			
Agriculture or mining	3.4	2.0	1.5**	0.034	NA	NA	NA
Construction or utilities	8.1	7.8	0.3	0.774	NA	NA	NA
Manufacturing	12.4	13.7	-1.2	0.326	NA	NA	NA
Retail trade or wholesale trade	10.7	12.9	-2.2*	0.060	NA	NA	NA
Transportation	7.4	4.1	3.3***	0.001	NA	NA	NA
Information	1.3	1.4	-0.1	0.768	NA	NA	NA
Finance or real estate	6.6	6.9	-0.3	0.721	NA	NA	NA
Professional, management, or administrative services	3.3	10.9	-7.6***	0.000	NA	NA	NA
Education	9.4	8.6	0.8	0.448	NA	NA	NA
Health care	16.8	17.1	-0.3	0.856	NA	NA	NA
Accommodation and food services or arts and entertainment	9.0	6.3	2.7**	0.012	NA	NA	NA
Other services	9.7	4.1	5.6***	0.000	NA	NA	NA
Public administration	1.9	3.8	-1.9***	0.000	NA	NA	NA
Other or Missing	0.0	0.5	-0.5***	0.000	NA	NA	NA

	RETAIN enrollees (N=701)	ACS Workers (N=26,108)			SSI or SSDI applicants (N=51,125)		
	Mean (A)	Mean (B)	Difference (A-B)	p-value	Mean (C)	Difference (A-C)	p-value
Socio-demographic and other characteristics							
Female	54.9	48.1	6.8***	0.000	45.3	9.6***	0.000
Average age	43.6	40.6	3.0***	0.000	51.1	-7.5***	0.000
Age group			†††	0.000		†††	0.000
18–29	15.3	24.9	-9.6***	0.000	7.3	8.0***	0.000
30–49	47.6	45.4	2.2	0.249	19.7	28.0***	0.000
50 and older	37.1	29.7	7.4***	0.000	73.0	-35.9***	0.000
Race			†††	0.000			
Hispanic	7.6	5.7	1.9*	0.059	NA	NA	NA
White, non-Hispanic	80.0	77.7	2.3	0.127	NA	NA	NA
Black, non-Hispanic	5.8	6.5	-0.7	0.448	NA	NA	NA
Asian, non-Hispanic	1.7	5.5	-3.8***	0.000	NA	NA	NA
More than one race	3.0	3.7	-0.7	0.306	NA	NA	NA
Other, non-Hispanic	1.3	1.0	0.3	0.444	NA	NA	NA
Missing	0.6	0.0	0.6**	0.045	NA	NA	NA
Preferred language is English	96.3	86.9	9.4***	0.000	NA	NA	NA
Education level							
Less than high school diploma	2.6	5.2	-2.6***	0.000	16.5	-13.9***	0.000
12 years of education, high school diploma or GED	37.1	27.2	9.9***	0.000	51.2	-14.2***	0.000
Post-secondary education	60.3	67.7	-7.3***	0.000	27.9	32.5***	0.000
Missing	0.0	0.0	0.0	NA	4.4	-4.4***	0.000
Health insurance coverage							
Private	65.0	83.2	-18.2***	0.000	NA	NA	NA
Medicaid	29.8	12.8	17.1***	0.000	NA	NA	NA
Medicare	0.9	1.0	-0.1	0.719	NA	NA	NA
Other	0.6	0.2	0.3	0.258	NA	NA	NA

Source: RETAIN enrollee intake data; 2020 ACS data; SSA data

Note: This table shows the average characteristics of 2021–2022 RETAIN enrollees and two comparison populations: (1) all ACS workers, and (2) SSI or SSDI applicants in 2022. It also shows differences in the outcomes between RETAIN and the comparison populations and the results of t-tests investigating whether the differences in group means are statistically significant. We weighted the statistics for ACS workers to account for the ACS sample design.

s = We suppressed estimates representing fewer than 10 observations.

^a Employment and earnings in the past year are measured over the preceding 12 months for ACS workers and during 2021 for RETAIN enrollees and SSI or SSDI applicants.

*/**/*** Difference is significantly different from zero (p-value is less than .10/.05/.01) using a two-tailed t-test.

†/††/††† Difference is significantly different from zero (p-value is less than .10/.05/.01) using a chi-square test.

ACS = American Community Survey; NA = not available; SSA = Social Security Administration; SSI = Supplemental Security Income; SSDI = Social Security Disability Insurance.

Exhibit B.4 Ohio: Characteristics of RETAIN enrollees and comparison populations

	RETAIN enrollees (N=1,584)	ACS Workers (N=52,080)			SSI or SSDI applicants (N=81,808)		
	Mean (A)	Mean (B)	Difference (A-B)	p-value	Mean (C)	Difference (A-C)	p-value
Sample size	1,584	5,464,249	NA		81,808	NA	
Characteristics of recent employment							
Employed at interview	40.8	94.6	-53.8***	0.000	NA	NA	NA
Employed in the past year ^a	91.2	97.5	-6.4***	0.000	57.5	33.7***	0.000
Earnings in the past year ^a	\$38,510	\$46,085	-\$7,575***	0.000	\$11,136	\$27,374***	0.000
Occupation			†††	0.000			
Management, professional, or related	23.4	39.6	-16.1***	0.000	NA	NA	NA
Service	39.3	15.3	24.0***	0.000	NA	NA	NA
Sales and office	9.7	19.5	-9.8***	0.000	NA	NA	NA
Natural resources, construction, or maintenance	7.0	7.7	-0.7	0.274	NA	NA	NA
Production, transportation, and material moving	20.6	17.5	3.1***	0.003	NA	NA	NA
Missing	0.0	0.5	-0.5***	0.000	NA	NA	NA
Industry			†††	0.000			
Agriculture or mining	1.2	0.9	0.3	0.330	NA	NA	NA
Construction or utilities	7.8	7.1	0.6	0.355	NA	NA	NA
Manufacturing	11.6	15.3	-3.7***	0.000	NA	NA	NA
Retail trade or wholesale trade	10.9	13.4	-2.6***	0.001	NA	NA	NA
Transportation	5.8	5.3	0.5	0.433	NA	NA	NA
Information	1.5	1.3	0.2	0.539	NA	NA	NA
Finance or real estate	4.0	6.7	-2.7***	0.000	NA	NA	NA
Professional, management, or administrative services	6.4	10.2	-3.7***	0.000	NA	NA	NA
Education	7.3	8.3	-1.0	0.139	NA	NA	NA
Health care	19.1	15.2	3.9***	0.000	NA	NA	NA
Accommodation and food services or arts and entertainment	12.9	7.7	5.3***	0.000	NA	NA	NA
Other services	8.2	4.0	4.2***	0.000	NA	NA	NA
Public administration	3.2	3.7	-0.6	0.210	NA	NA	NA
Other or Missing	0.0	0.7	-0.7***	0.000	NA	NA	NA

	RETAIN enrollees (N=1,584)	ACS Workers (N=52,080)			SSI or SSDI applicants (N=81,808)		
	Mean (A)	Mean (B)	Difference (A-B)	p-value	Mean (C)	Difference (A-C)	p-value
Socio-demographic and other characteristics							
Female	59.5	48.0	11.5***	0.000	52.2	7.3***	0.000
Average age	44.1	40.5	3.6***	0.000	45.6	-1.5***	0.000
Age group			†††	0.000		†††	0.000
18–29	16.1	25.5	-9.4***	0.000	15.9	0.2	0.790
30–49	43.4	44.4	-0.9	0.459	35.3	8.1***	0.000
50 and older	40.5	30.1	10.3***	0.000	48.9	-8.4***	0.000
Race			†††	0.000			
Hispanic	4.5	4.2	0.4	0.493	NA	NA	NA
White, non-Hispanic	75.6	77.7	-2.0*	0.062	NA	NA	NA
Black, non-Hispanic	17.2	11.2	6.1***	0.000	NA	NA	NA
Asian, non-Hispanic	0.5	2.8	-2.3***	0.000	NA	NA	NA
More than one race	1.5	3.7	-2.2***	0.000	NA	NA	NA
Other, non-Hispanic	0.5	0.6	-0.0	0.794	NA	NA	NA
Missing	s	0.0	s	s	NA	NA	NA
Preferred language is English	99.4	91.8	7.5***	0.000	NA	NA	NA
Education level							
Less than high school diploma	5.2	5.8	-0.5	0.368	19.5	-14.2***	0.000
12 years of education, high school diploma or GED	41.0	36.1	4.9***	0.000	52.0	-11.0***	0.000
Post-secondary education	53.8	58.1	-4.3***	0.001	24.6	29.2***	0.000
Missing	0.0	0.0	0.0	NA	3.9	-3.9***	0.000
Health insurance coverage							
Private	63.7	79.8	-16.1***	0.000	NA	NA	NA
Medicaid	35.1	13.2	21.9***	0.000	NA	NA	NA
Medicare	s	1.0	s	s	NA	NA	NA
Other	0.8	0.3	0.5**	0.029	NA	NA	NA

Source: RETAIN enrollee intake data; 2020 ACS data; SSA data

Note: This table shows the average characteristics of 2021-2022 RETAIN enrollees and two comparison populations: (1) all ACS workers, and (2) SSI or SSDI applicants in 2022. It also shows differences in the outcomes between RETAIN and the comparison populations and the results of t-tests investigating whether the differences in group means are statistically significant. We weighted the statistics for ACS workers to account for the ACS sample design.

s = We suppressed estimates representing fewer than 10 observations.

^a Employment and earnings in the past year are measured over the preceding 12 months for ACS workers and during 2021 for RETAIN enrollees and SSI or SSDI applicants.

*/**/*** Difference is significantly different from zero (p-value is less than .10/.05/.01) using a two-tailed t-test.

†/††/††† Difference is significantly different from zero (p-value is less than .10/.05/.01) using a chi-square test.

ACS = American Community Survey; NA = not available; SSA = Social Security Administration; SSI = Supplemental Security Income; SSDI = Social Security Disability Insurance.

Exhibit B.5 Vermont: Characteristics of RETAIN enrollees and comparison populations

	RETAIN enrollees (N=119)	ACS Workers (N=2,862)			SSI or SSDI applicants (N=2,957)		
	Mean (A)	Mean (B)	Difference (A-B)	p-value	Mean (C)	Difference (A-C)	p-value
Characteristics of recent employment							
Employed at interview	53.8	95.8	-42.0***	0.000	NA	NA	NA
Employed in the past year ^a	84.8	98.7	-13.8***	0.000	62.3	22.5***	0.000
Earnings in the past year ^a	\$29,976	\$47,050	-\$17,074***	0.000	\$15,374	\$14,601***	0.000
Occupation			+++	0.000			
Management, professional, or related	36.1	46.4	-10.3**	0.025	NA	NA	NA
Service	29.4	14.6	14.9***	0.001	NA	NA	NA
Sales and office	7.6	16.5	-9.0***	0.001	NA	NA	NA
Natural resources, construction, or maintenance	10.1	11.0	-0.9	0.756	NA	NA	NA
Production, transportation, and material moving	13.4	11.4	2.0	0.527	NA	NA	NA
Missing	3.4	0.1	3.2*	0.053	NA	NA	NA
Industry			+++	0.000			
Agriculture or mining	5.9	2.5	3.4	0.120	NA	NA	NA
Construction or utilities	10.1	8.9	1.2	0.679	NA	NA	NA
Manufacturing	6.7	10.9	-4.2*	0.078	NA	NA	NA
Retail trade or wholesale trade	9.2	12.6	-3.3	0.228	NA	NA	NA
Transportation	s	2.8	s	s	NA	NA	NA
Information	4.2	1.7	2.5	0.174	NA	NA	NA
Finance or real estate	4.2	4.8	-0.6	0.761	NA	NA	NA
Professional, management, or administrative services	6.7	9.5	-2.8	0.237	NA	NA	NA
Education	10.1	13.6	-3.5	0.215	NA	NA	NA
Health care	22.7	15.6	7.1*	0.072	NA	NA	NA
Accommodation and food services or arts and entertainment	8.4	7.7	0.7	0.786	NA	NA	NA
Other services	6.7	4.5	2.2	0.343	NA	NA	NA
Public administration	0.0	4.2	-4.2***	0.000	NA	NA	NA
Other or Missing	3.4	0.8	2.6	0.121	NA	NA	NA

	RETAIN enrollees (N=119)	ACS Workers (N=2,862)			SSI or SSDI applicants (N=2,957)		
	Mean (A)	Mean (B)	Difference (A-B)	p-value	Mean (C)	Difference (A-C)	p-value
Socio-demographic and other characteristics							
Female	62.2	49.8	12.4***	0.007	49.5	12.7***	0.006
Average age	47.2	41.5	5.8***	0.000	45.0	2.2*	0.061
Age group			†††	0.000		†††	0.001
18–29	6.7	23.4	-16.7***	0.000	18.0	-11.2***	0.000
30–49	50.4	43.0	7.5	0.115	36.4	14.1***	0.003
50 and older	42.9	33.6	9.2**	0.049	45.7	-2.8	0.543
Race			†††	0.000			
Hispanic	2.5	2.3	0.2	0.903	NA	NA	NA
White, non-Hispanic	87.4	90.4	-3.0	0.337	NA	NA	NA
Black, non-Hispanic	s	1.1	s	s	NA	NA	NA
Asian, non-Hispanic	s	2.0	s	s	NA	NA	NA
More than one race	2.5	3.6	-1.1	0.463	NA	NA	NA
Other, non-Hispanic	s	0.5	s	s	NA	NA	NA
Missing	2.5	0.0	2.5*	0.083	NA	NA	NA
Preferred language is English	99.2	94.3	4.9***	0.000	NA	NA	NA
Education level							
Less than high school diploma	5.0	4.4	0.6	0.772	15.5	-10.5***	0.000
12 years of education, high school diploma or GED	32.8	30.7	2.1	0.635	53.0	-20.3***	0.000
Post-secondary education	62.2	64.9	-2.7	0.555	24.5	37.7***	0.000
Missing	0.0	0.0	0.0	NA	7.0	-7.0***	0.000
Health insurance coverage							
Private	47.1	81.0	-34.0***	0.000	NA	NA	NA
Medicaid	41.2	14.7	26.5***	0.000	NA	NA	NA
Medicare	10.1	1.7	8.4***	0.003	NA	NA	NA
Other	s	0.2	s	s	NA	NA	NA

Source: RETAIN enrollee intake data; 2020 ACS data; SSA data

Note: This table shows the average characteristics of 2021–2022 RETAIN enrollees and two comparison populations: (1) all ACS workers, and (2) SSI or SSDI applicants in 2022. It also shows differences in the outcomes between RETAIN and the comparison populations and the results of t-tests investigating whether the differences in group means are statistically significant. We weighted the statistics for ACS workers to account for the ACS sample design.

s = We suppressed estimates representing fewer than 10 observations.

^a Employment and earnings in the past year are measured over the preceding 12 months for ACS workers and during 2021 for RETAIN enrollees and SSI or SSDI applicants.

*/**/*** Difference is significantly different from zero (p-value is less than .10/.05/.01) using a two-tailed t-test.

†/††/††† Difference is significantly different from zero (p-value is less than .10/.05/.01) using a chi-square test.

ACS = American Community Survey; NA = not available; SSA = Social Security Administration; SSI = Supplemental Security Income; SSDI = Social Security Disability Insurance.