



Disability Policy Issue Brief

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The RETAIN Demonstration: Stay-at-Work and Return-to-Work Experiences of RETAIN Enrollees with Behavioral Health Conditions

The Retaining Employment and Talent After Injury/Illness Network (RETAIN) demonstration, a joint initiative of the U.S. Department of Labor and the Social Security Administration, aims to help workers with recently acquired injuries and disabilities remain in the labor force. Following a pilot phase, the U.S. Department of Labor 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 at risk of exiting the labor force and applying for Social Security Disability Insurance and Supplemental Security Income. All the RETAIN programs serve people with behavioral health conditions, including mental health conditions and substance use disorders, along with other types of health conditions. The Social Security Administration contracted with Mathematica to conduct the RETAIN evaluation. The evaluation relies on a random assignment study design, under which each program randomly assigned enrollees to a treatment group (eligible to receive services through RETAIN) or a control group (ineligible for RETAIN services).

In this brief, we investigate how the characteristics, challenges, and experiences of enrollees with behavioral health conditions differ from those of other enrollees. We focus on enrollees assigned to the treatment group who enrolled into RETAIN on or before June 30, 2023. The share of treatment enrollees with behavioral health conditions varied widely across RETAIN programs, likely reflecting the differences in their eligibility criteria and recruitment strategies. Treatment enrollees with behavioral health conditions were more likely to be female and were on average younger than other treatment enrollees. At the time of enrollment in RETAIN, treatment enrollees with behavioral health conditions had lower employment rates and recent earnings, had worked less recently, and had shorter tenures at their current or most recent job compared with other treatment enrollees.

We also examined the experiences enrollees with behavioral health conditions had with the RETAIN programs as they worked toward their stay-at-work or return-to-work goals. RETAIN programs varied in their infrastructure and resources available to support RETAIN staff in serving treatment enrollees with behavioral health conditions. Program staff described several unique challenges that these treatment enrollees faced, including stigma associated with their condition, a more complex pathway to recovery than enrollees with physical

diagnoses, inadequate access to needed care, and non-health challenges such as housing insecurity. Despite these challenges, data recorded by the RETAIN projects indicated that treatment enrollees with behavioral health conditions generally used program services to a similar extent as other treatment enrollees. Many treatment enrollees with behavioral health conditions also described the value of the services they received through the RETAIN project.

Introduction

The Retaining Employment and Talent after Injury/Illness Network (RETAIN) demonstration is a collaborative effort between the U.S. Department of Labor and the Social Security Administration 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 (SAW)/return-to-work (RTW) strategies to help people who develop a potentially disabling condition improve their employment outcomes and avoid the need to apply for disability programs such as Social Security Disability Insurance (SSDI) and Supplemental Security Income (SSI).

The U.S. Department of Labor funded RETAIN demonstration programs in Kansas, Kentucky, Minnesota, Ohio, and Vermont to identify, enroll, and serve people with recent injuries or illnesses at risk of exiting the workforce. The RETAIN programs began enrolling participants in late 2021 and early 2022 and are expected to continue enrollment through mid-May 2024. The programs randomly assigned enrollees to a treatment group (eligible to receive services through RETAIN) and a control group (ineligible for RETAIN services). Although the five programs have slightly different eligibility criteria and recruitment approaches (Croake et al. 2023), all programs serve people with behavioral health (BH) conditions, including mental health conditions and substance use disorders, along with other types of health conditions.

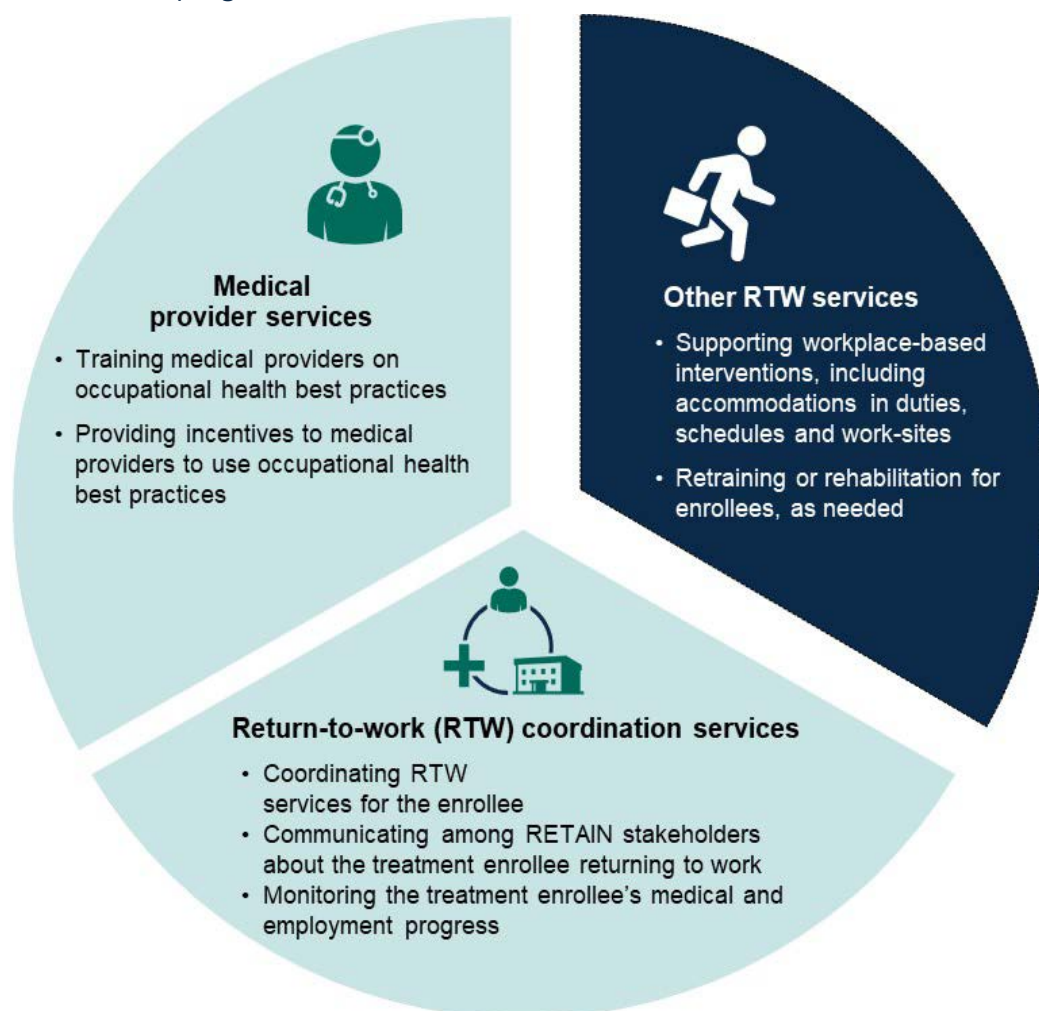
The RETAIN programs focus on early coordination of health care and employment-related supports and services with the goal of helping injured or ill workers remain in the workforce (Exhibit 1). The core service components for all RETAIN program models are medical provider services and SAW/RTW coordination services. States can provide other RTW services beyond the core services and develop models with service providers to meet the differing needs of the target populations in their states. RETAIN program services ideally begin shortly after the onset of an injury or illness.

In this brief, we focus on enrollees assigned to the treatment group and examine the extent to which the characteristics, challenges, and experiences of treatment enrollees with BH conditions differ from those of other treatment enrollees. People with mental disorders comprise the largest share of SSDI recipients compared to other diagnostic categories (SSA 2022), so understanding their experiences could help provide insight for programs and policies that seek to help them remain in the labor force.

As of June 30, 2023, the five RETAIN programs had enrolled a total of 2,847 treatment enrollees, of which 938 had BH conditions. We defined enrollees as having a BH condition if the primary injury/illness (hereafter “primary diagnosis”) that made them eligible for RETAIN was a BH condition or if program records indicated they had a new or existing mental health condition or substance use disorder that was not the primary injury/illness (hereafter “secondary diagnosis”). Our analysis draws on qualitative data from site visits and enrollee interviews from all five RETAIN programs as well as enrollment, service use, and enrollee survey data from the Kentucky, Minnesota, and Ohio programs, which had the largest numbers of treatment enrollees with BH conditions (351, 278, and 198, respectively). We did not analyze

quantitative data from Kansas or Vermont because of their small sample sizes.¹ See Appendix A for details about the data we used.

Exhibit 1. RETAIN program model



In each RETAIN program, the characteristics of treatment enrollees with BH conditions could differ from those of other treatment enrollees because of differences across demographic and socio-economic groups in the prevalence or risk of experiencing BH conditions as well as the likelihood of seeking treatment for them. In addition, treatment enrollees with BH conditions could engage differently with RETAIN services and experience different outcomes than other treatment enrollees. Such differences could arise from various differences between enrollees with and without BH conditions, including in their needs related to staying at work or returning to work, the ability of RETAIN services to meet these needs, stigma, willingness to take up service offerings, and inherent differences between BH and non-BH conditions, such as the potential for health improvement in the short term. The findings from this study shed light on the extent to which RETAIN is serving people with BH conditions and supporting their SAW/RTW

¹ Kansas and Vermont each had fewer than 75 treatment enrollees with BH conditions. We excluded these states from any comparison analyses because the small sample sizes would have led to the suppression of many statistics because of small cell sizes. Further, the small sample sizes would likely have prevented us from detecting small but meaningful differences between treatment enrollees with BH conditions and other treatment enrollees.

experiences and could inform how RETAIN and other similar programs could improve outreach and service provision to—as well as the outcomes of—people with BH conditions.

Background

BH conditions are prevalent among U.S. adults and in the U.S. workforce. Nearly one in five U.S. adults lives with a mental illness (National Institute of Mental Health 2020), and more than three-quarters of U.S. workers reported at least one symptom of a mental health condition in 2021 (HHS 2023). Overall rates of mental health conditions and substance use disorders vary by race and gender in the United States. Although Black and Hispanic adults are less likely to report having a mental health condition or substance use disorder than their White peers, this difference may be attributed to the lack of culturally appropriate screening tools and the structural barriers that lead to the underdiagnosis of BH conditions among people of color (Panchal et al. 2023). In addition, the prevalence of mental health conditions is higher among females than males; females are also more likely to receive mental health services in the United States. (National Institute of Mental Health 2020).

Mental health conditions frequently co-occur with physical health conditions; in 2014, 84 percent of the 1.8 million hospital inpatient stays for a mental health condition, substance use disorder, or both had a co-occurring physical health condition (Owens et al. 2018).² Mental and physical health are intertwined; better mental health leads to better physical health and vice versa (Ohrnberger et al. 2017; Owens et al. 2018), implying that policies meant to improve one aspect of health should attend to other aspects too.

Substance use disorders are also common among U.S. adults and increased during the COVID-19 pandemic. In 2021, 46.3 million people age 12 and older, representing 16.5 percent of that population, met the DSM-5 criteria for having a substance use disorder in the past year (HHS 2023). Mental health conditions and substance use disorders often co-occur; more than one in four adults who have a serious mental health condition, such as depression, anxiety, schizophrenia, or personality disorder, also has a substance use disorder (SAMHSA 2023).

Employment is associated with improved health for people with mental health conditions and substance use disorders. An experimental study found evidence that employment improved the health and quality of life of people with mental health conditions (Drake et al. 2013). These benefits have spurred researchers and policymakers to consider employment itself as a critical mental health intervention, even for people with the most severe mental illnesses (Knapp and Wong 2020; Drake and Wallach 2020). Similarly, studies have found that unemployment can negatively affect mental health (Andersen et al. 2012) and is associated with and increased risk of substance abuse and suicide (Phillips et al. 2014; Reeves et al. 2012; Azagba et al. 2021). A similar relationship exists between employment and substance use disorders. Work is an important predictor of positive outcomes for people with substance use disorder; employment is associated with lower rates of relapse and higher rates of abstinence from substances among this population (Aklin et al. 2014; Duffy and Baldwin 2013; McHugo et al. 2012), and unemployment and economic hardship can increase rates of substance use disorder (Azagba et al. 2021).

² In addition, 42 percent of 27.8 million hospital inpatient stays for a physical health condition had a co-occurring mental and/or substance use disorder.

Despite the benefits of employment, BH conditions can pose challenges that make it difficult to work. The symptoms of BH conditions, side effects of medications, adverse co-occurring physical health conditions, poor impulse control or risk of drug use relapse, and social stigma are frequently cited barriers to working for people with BH conditions (Nirmila et al. 2020; Brouwers 2020; Laudet et al. 2000). Consistent with this, studies indicate that employment rates are lower among those with BH conditions relative to the general population. (OECD 2014; Bray et al. 2000; McCoy et al. 2007). People with severe mental health conditions are six to seven times more likely to be unemployed than people with no mental health condition. Those with a mild-to-moderate condition are two to three times more likely to be unemployed (OECD 2014).

Mental health conditions are a significant risk factor for use of disability insurance (van Rijn et al. 2014; Zaidel et al. 2018). After musculoskeletal disorders and injuries, short-term disability insurance claims for mental health conditions are the most common and have the longest duration (Zaidel et al. 2018). Mental health conditions, such as depression and post-traumatic stress disorder, are also positively associated with the probability of exhausting short-term disability insurance (Contreary et al. 2018) which could lead people who exhaust their benefits to transition into long-term disability insurance, including SSDI. A quarter of disabled workers receiving SSDI have a primary impairment related to a mental disorder, and mental disorders are the second most common impairment among this group (after musculoskeletal and connective tissue conditions) (SSA 2022).

People with BH conditions experience unique challenges when returning to work after they exit the workforce. One synthesis of qualitative research on employees with common mental health conditions returning to work found that only 50 percent of people who took long-term sick leave for more than six months because of poor mental health ultimately returned to work (Andersen et al. 2012). The stigma, unpredictability, and invisible nature of many mental health conditions present challenges for employees and employers in their successful promotion and implementation of SAW/RTW strategies for employees with mental health diagnoses (Charette-Dussault and Corbière 2019; Gould-Werth et al. 2018; Brouwers 2020). The presence of a BH condition can also affect RTW outcomes for people who exited the work force because of a primary diagnosis of a physical condition. For example, one systematic review of studies found that depression was associated with negative RTW outcomes for people with cardiac disease or who have experienced cardiac events (Cancelliere et al. 2016).

There are several best practices for helping workers with BH conditions keep their jobs. Providing accommodations, such as a gradual increase in workload and responsibility, adaptation of job content and work hours (for example, reducing hours and discontinuing night shifts), and job shadowing, are associated with enabling people with mental health diagnoses to stay at or return to work (Andersen et al. 2012). Support and genuine understanding from one's supervisor and colleagues can also facilitate SAW/RTW outcomes among employees with mental health conditions (Andersen et al. 2012). For people with substance use disorders, individual case management shows promise for supporting employees' ability to stay at work or return to work (Von der Warth et al. 2022). In general, multipronged approaches that involve service coordination, psychosocial support for employees, work accommodations, and collaboration with health care providers are most successful at promoting SAW/RTW outcomes among people with mental health conditions (Cullen et al. 2017; Andersen et al. 2012).

Share and Characteristics of RETAIN Treatment Enrollees with BH Conditions

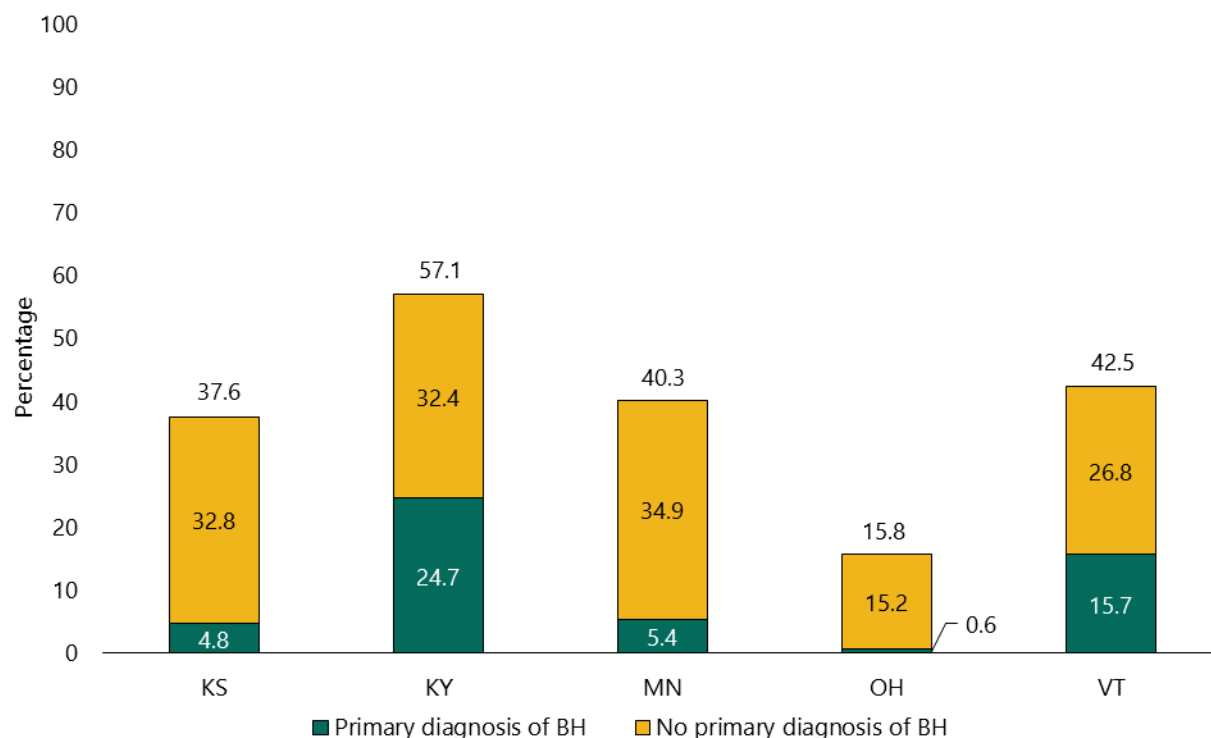
In this section, we first examine the prevalence of BH conditions among treatment enrollees in each RETAIN program. We then compare the characteristics of treatment enrollees with and without BH conditions. The characteristics we examine include demographics, education, employment characteristics, and benefit receipt. In analyzing the differences between enrollees with and without BH conditions, we focus the analysis on enrollees in Kentucky, Ohio, and Minnesota, which have relatively large numbers of treatment enrollees with BH conditions.

Prevalence of BH conditions among RETAIN treatment enrollees

The share of treatment enrollees with BH conditions varied across RETAIN programs, from 16 percent in Ohio to 57 percent in Kentucky (Exhibit 2). Differences in states' worker populations, RETAIN program eligibility criteria, and recruitment strategies could explain some of the variation observed across programs. For example, Ohio initially focused on recruiting workers with nonwork-related musculoskeletal conditions or cardiovascular diagnoses, and other RETAIN programs recruited from a broader worker population. In addition, RETAIN programs used various outreach and recruitment strategies to connect with historically underserved communities, such as communities of color, which tend to have lower prevalence of diagnosed BH conditions than other communities (Panchal et al. 2023). As part of their recruitment efforts to reach underserved communities, the Kansas and Vermont RETAIN programs partnered with Federally Qualified Health Centers that serve medically underserved areas and populations. All five RETAIN programs had recruitment and enrollment materials available in at least one language other than English to promote more inclusive outreach efforts, and nearly all RETAIN programs developed partnerships with community-based organizations in underserved communities as part of their outreach and recruitment strategies. The comprehensiveness and success of each state's strategy for recruiting from underserved communities could also explain some of the variation in the prevalence of BH conditions among treatment enrollees.

Across the five RETAIN programs, most treatment enrollees with BH conditions had a primary diagnosis that was not related to BH. Program staff noted during site visit interviews that many of the treatment enrollees with BH conditions they worked with experienced BH challenges because of their physical health conditions. Others may have had an existing BH condition. RETAIN programs varied in the share of treatment enrollees with a primary versus secondary BH diagnosis. In Ohio, only 0.6 percent of treatment enrollees had a primary diagnosis of a BH condition compared with 15.2 percent who had a BH condition as a secondary diagnosis. This finding is consistent with Ohio only enrolling people with musculoskeletal or cardiovascular injury or illness until March 2023, when the state expanded its eligibility criteria to include people with a primary diagnosis of BH. In comparison, other RETAIN programs do not limit eligibility to people with specific conditions.

Exhibit 2. Share of treatment enrollees with any BH conditions, by state



Source: Based on authors' calculations using data from RETAIN enrollment forms.

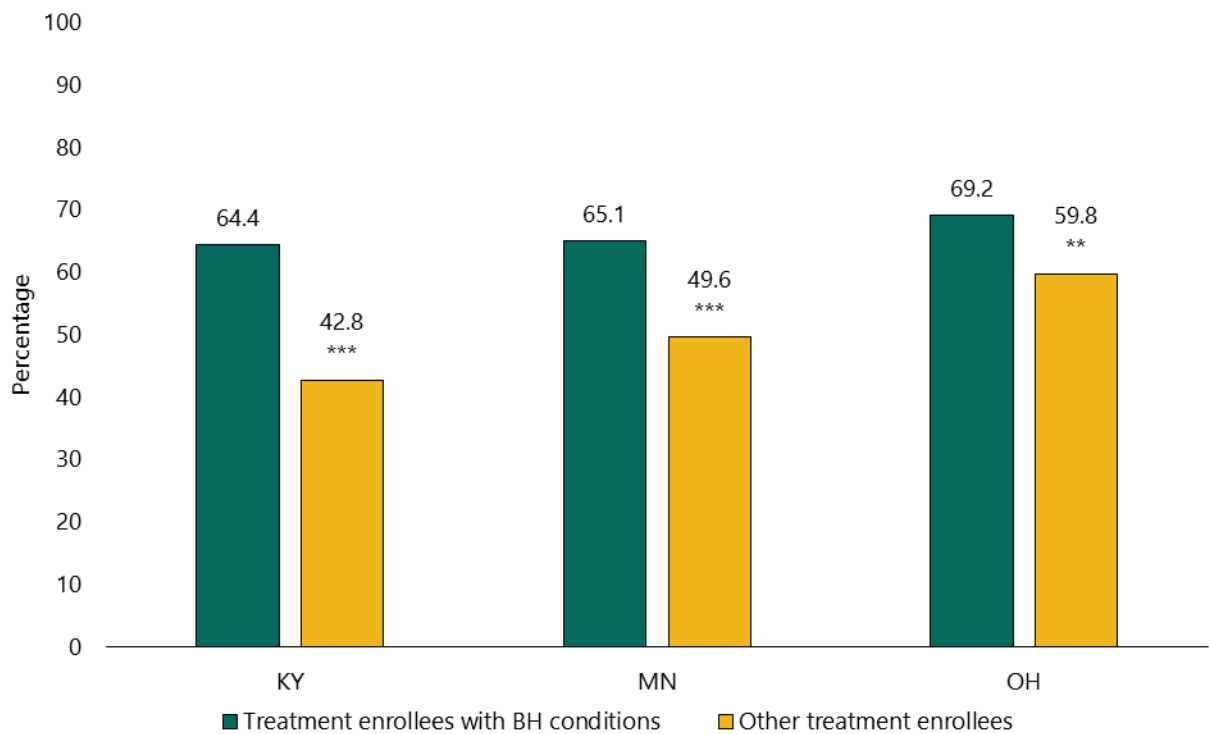
Note: See Appendix A for more detail. As of June 30, 2023, there were 189 treatment enrollees in Kansas, 615 treatment enrollees in Kentucky, 691 treatment enrollees in Minnesota, 1,258 treatment enrollees in Ohio and 94 treatment enrollees in Vermont.

BH = behavioral health

Characteristics of RETAIN treatment enrollees with and without BH conditions

Treatment enrollees with BH conditions were more likely to be female and younger than other treatment enrollees. Treatment enrollees with BH conditions were much more likely to be female than those with no BH conditions (Exhibit 3). The share of female treatment enrollees was 9 (Ohio) to 22 percentage points (Kentucky) greater among treatment enrollees with BH conditions. Treatment enrollees with BH conditions were four to six years younger than other treatment enrollees on average (Exhibit 4). The results could reflect gender differences in the prevalence of some BH conditions in the general population (for example, studies suggest women are more likely to experience anxiety) (Remes et al. 2016; Eaton et al. 2012). Research also suggests young people are more likely to experience certain BH conditions (for example, people younger than age 35 are disproportionately affected by anxiety disorders) (Baxter et al. 2013, 2014). It could, however, also reflect gender or age differences in enrollees' willingness to report BH conditions because of stigma or concerns of discrimination.

Exhibit 3. Share of females among treatment enrollees, by whether they had BH conditions



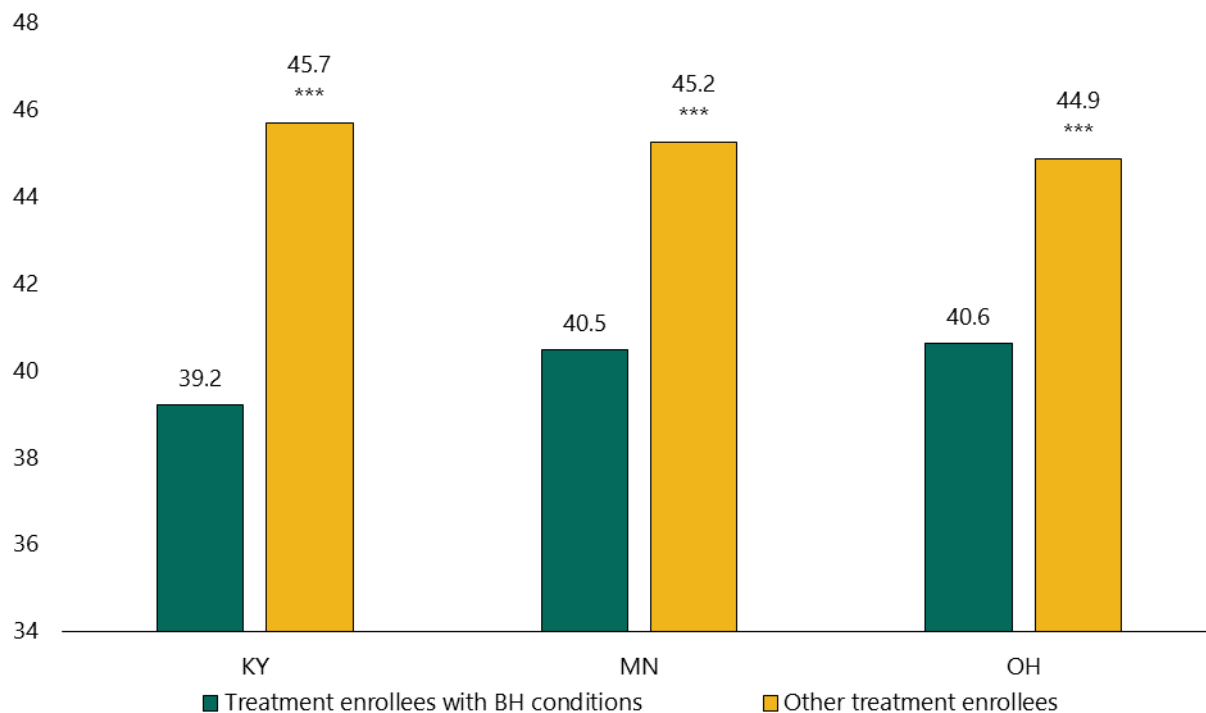
Source: Based on authors’ calculations using data from RETAIN enrollment forms.

Note: See Appendix A for more detail.

*/**/** Difference between the mean outcomes of treatment enrollees with BH conditions and other treatment enrollees is significantly different from zero (*p*-value is less than 0.10/0.05/0.01) using a two-tailed t-test.

BH = behavioral health.

Exhibit 4. Average age of treatment enrollees, by whether they had BH conditions



Source: Based on authors' calculations using data from RETAIN enrollment forms.

Note: See Appendix A for more detail.

*/**/** Difference between the mean outcomes of treatment enrollees with BH conditions and other treatment enrollees is significantly different from zero (p -value is less than 0.10/0.05/0.01) using a two-tailed t -test.

BH = behavioral health.

Treatment enrollees with BH conditions were more likely to be non-Hispanic White and to report their preferred language is English compared with other treatment enrollees.

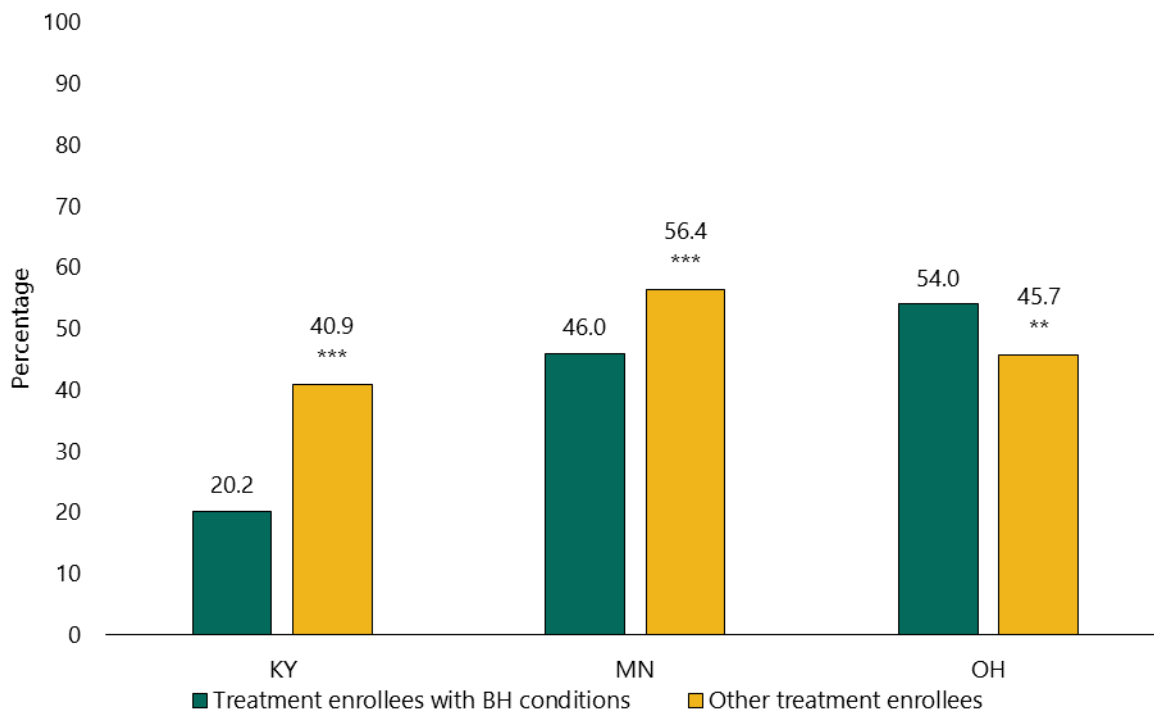
In Kentucky and Minnesota, treatment enrollees with BH conditions were less likely to be non-Hispanic Black and more likely to be non-Hispanic White compared with other treatment enrollees (Appendix B, Exhibits B.1 and B.4). This finding could reflect racial differences in the prevalence or diagnosis of BH conditions, or racial differences in willingness to report them. Almost all treatment enrollees reported that their preferred language is English (Appendix B, Exhibits B.1, B.4 and B.7). In Minnesota and Ohio, treatment enrollees with BH conditions were slightly more likely than other treatment enrollees to report their preferred language was English (0.3 and 2.2 percentage points more likely, respectively).

There was no consistent pattern across the RETAIN programs in differences in the educational attainment of treatment enrollees with BH conditions and other treatment enrollees.

In Minnesota and Kentucky, there were few differences in the educational attainment of treatment enrollees with and without BH conditions (Appendix B, Exhibits B.1 and B.4). In Ohio, treatment enrollees with BH conditions had lower education levels than other enrollees. For example, the share of enrollees with a four-year college or postgraduate degree was 12 percent among those with BH conditions and 26 percent among other treatment enrollees (Appendix B, Exhibit B.7).

Treatment enrollees with BH conditions differed from other treatment enrollees in the nature of their primary diagnosis (that is, the injury or illness that made them eligible for RETAIN). As might be expected, treatment enrollees with BH conditions were more likely to have a primary diagnosis of a mental condition than other treatment enrollees (Appendix B, Exhibits B.1, B.4 and B.7). Treatment enrollees with BH conditions in Kentucky and Minnesota were also less likely to report that their primary injury or illness was new at the time of enrollment in RETAIN compared with other treatment enrollees (Exhibit 5). This is likely because mental health conditions tend to be chronic while many physical health conditions may be acute, such as a recent physical injury sustained at a job. Treatment enrollees with BH conditions in Ohio were more likely to report their condition is new relative to other treatment enrollees. This is likely because almost all treatment enrollees with BH conditions in OH have a primary diagnosis that is physical rather than mental health related. Treatment enrollees with BH conditions in Kentucky and Minnesota were also less likely to report that their primary injury or illness resulted from an accident (Appendix B, Exhibits B.1 and B.4).

Exhibit 5. Share of treatment enrollees who reported their primary diagnosis was new, by whether they had BH conditions



Source: Based on authors' calculations using data from RETAIN enrollment forms.

Note: See Appendix A for more detail.

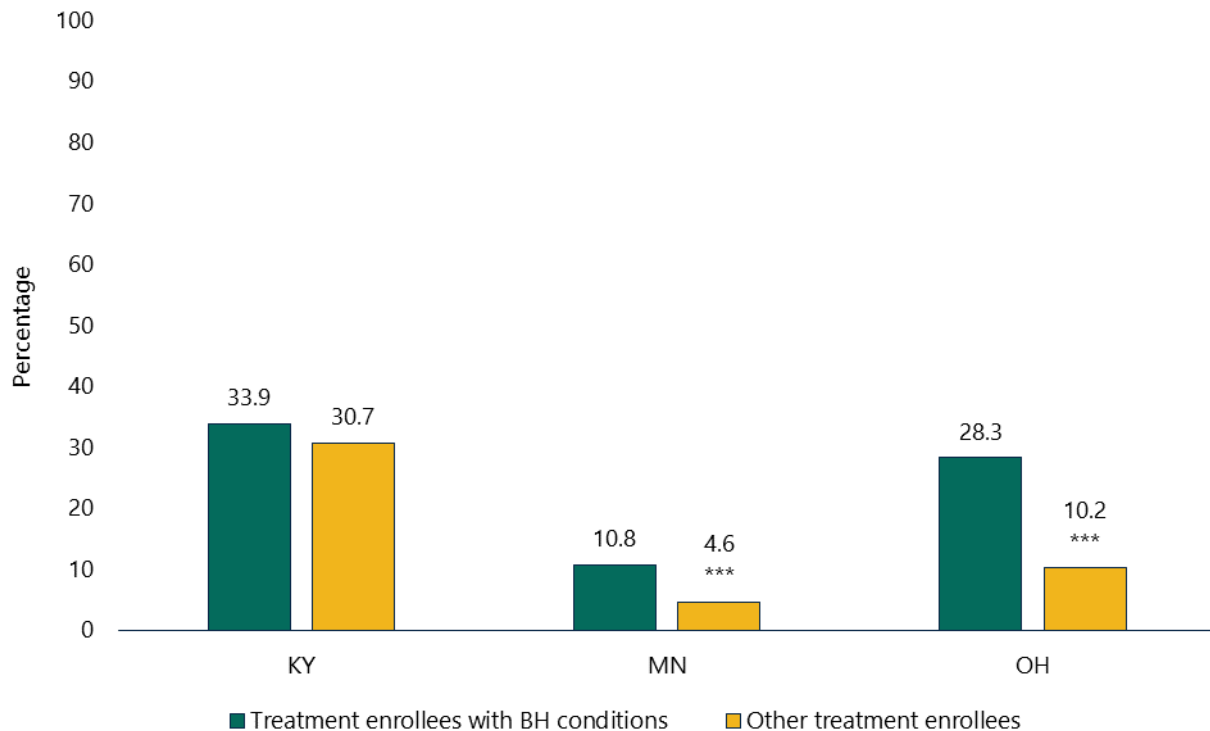
*/**/** Difference between the mean outcomes of treatment enrollees with BH conditions and other treatment enrollees is significantly different from zero (p -value is less than 0.10/0.05/0.01) using a two-tailed t-test.

BH = behavioral health.

Treatment enrollees with BH conditions had lower employment rates and earnings at the time of enrollment than other treatment enrollees. They also worked less recently and had shorter job tenures, on average. In Minnesota and Ohio, treatment enrollees with BH conditions were less likely to be employed at the time of RETAIN enrollment (Exhibit 6), and, in all three RETAIN programs, treatment enrollees with BH conditions were less likely to have worked at a job that paid at least \$1,000 a month in the past year than other treatment enrollees (Exhibit 7).

In Minnesota and Ohio, treatment enrollees with BH conditions had worked less recently than other treatment enrollees (Appendix B, Exhibits B.4 and B.7). They were more likely to have last worked more than three months ago than other treatment enrollees and less likely to be currently working or have last worked during the week before enrollment. This was not true in Kentucky, however, where treatment enrollees with BH conditions were more likely to have last worked during the week before enrollment and less likely to have last worked one to three months before enrollment than treatment enrollees without BH conditions (Appendix B, Exhibit B.1).

Exhibit 6. Share of treatment enrollees who were not employed at the time of enrollment, by whether they had BH conditions



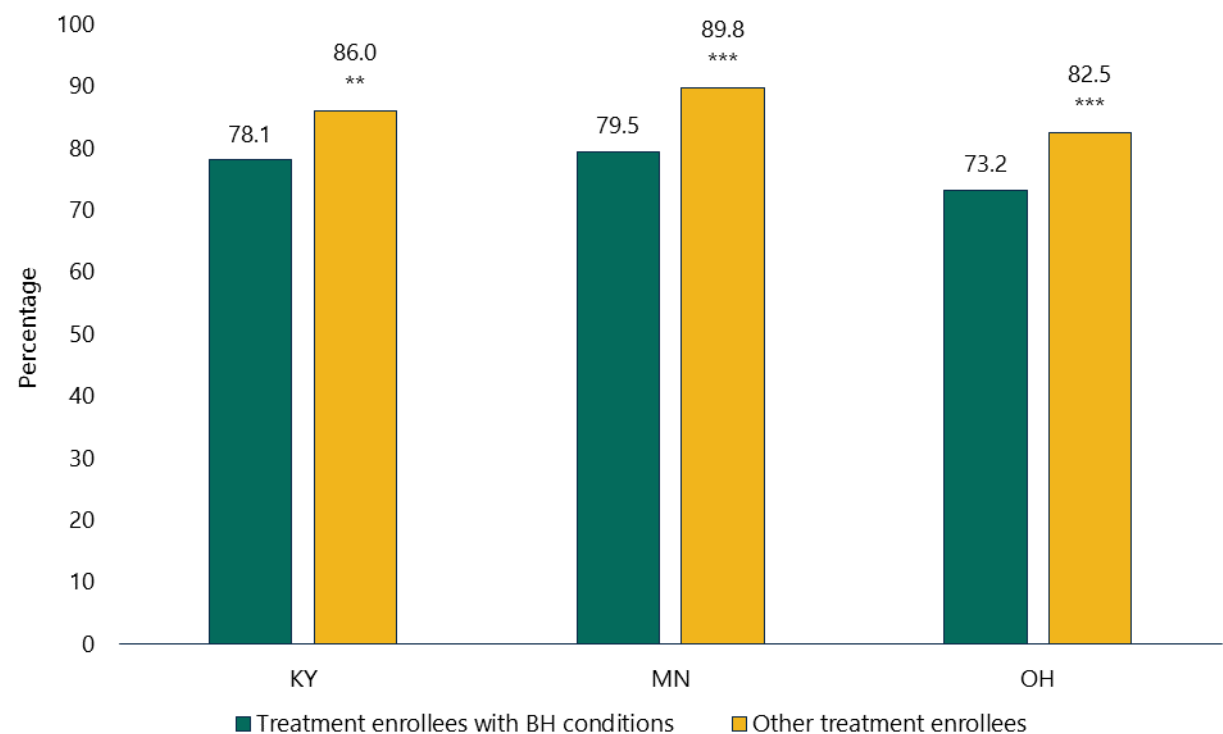
Source: Based on authors' calculations using data from RETAIN enrollment forms.

Note: See Appendix A for more detail.

*/**/** Difference between the mean outcomes of treatment enrollees with BH conditions and other treatment enrollees is significantly different from zero (p -value is less than 0.10/0.05/0.01) using a two-tailed t -test.

BH = behavioral health.

Exhibit 7. Share of treatment enrollees who worked at a job that paid at least \$1,000 a month in the year before enrollment, by whether they had BH conditions



Source: Based on authors’ calculations using data from RETAIN enrollment forms.

Note: See Appendix A for more detail.

*/**/** Difference between the mean outcomes of treatment enrollees with BH conditions and other treatment enrollees is significantly different from zero (*p*-value is less than 0.10/0.05/0.01) using a two-tailed t-test.

BH = behavioral health.

Treatment enrollees with BH conditions had a shorter job tenure at their current or most recent job than other treatment enrollees (Exhibit 8). In all three RETAIN programs, those with BH conditions were more likely than others to have a job tenure of less than six months and less likely to have a job tenure of more than five years (Exhibit 8; Appendix B, Exhibits B.1, B.4 and B.7). The latter finding could possibly result from the younger age of treatment enrollees with BH conditions compared with other treatment enrollees. These findings align with perspectives from program staff gathered during site visits. Some of the staff we interviewed shared the perception that treatment enrollees with BH conditions were less likely than other treatment enrollees to be employed or to be able to fully return to work at the end of their time in RETAIN. Some program staff shared observations that treatment enrollees with BH conditions often experience persistent mental health symptoms that might lead them to miss work frequently, struggle to show up to work on time, or experience instability in other parts of their lives, all of which could affect their ability to maintain employment in the long-term. The findings are also consistent with those from prior studies that people with BH conditions face unique barriers to work such as the symptoms of mental illness, the side effects of medications,

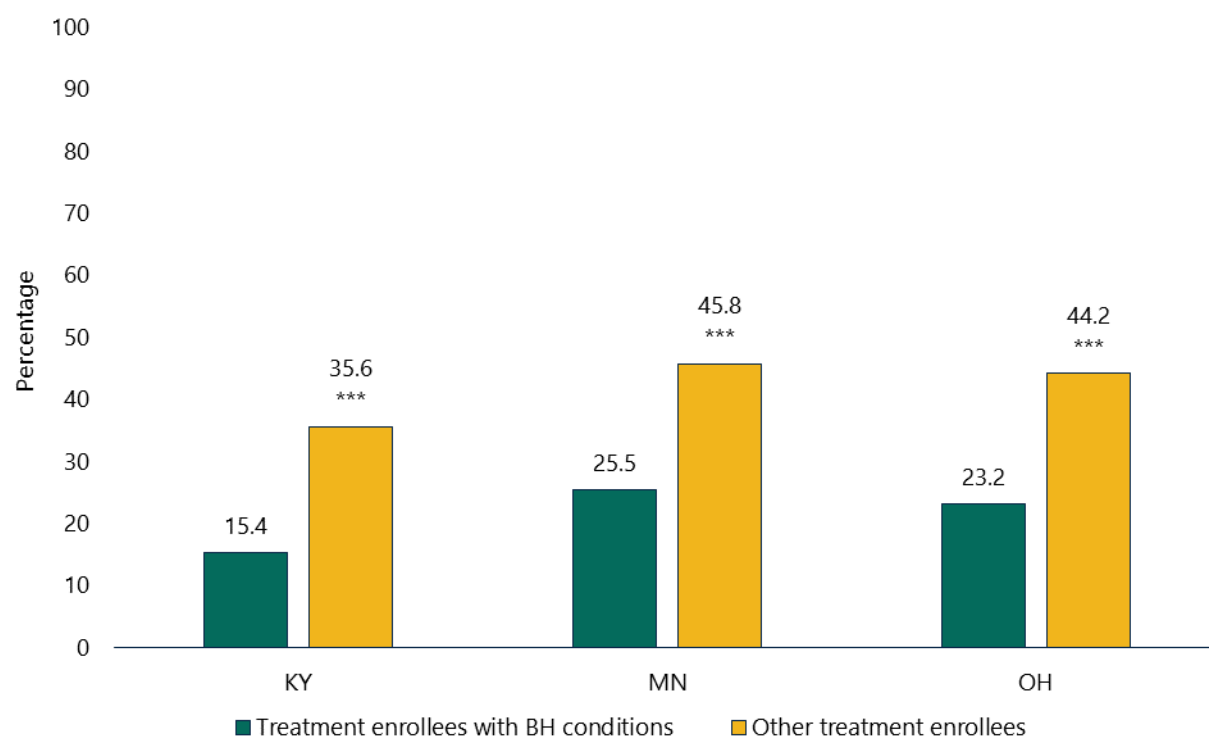
“...A lot of the individuals that I have that have mental health and substance abuse currently are individuals that are unemployed... I've had almost 100 people now. I can't think of a ton of mine with mental health or substance abuse that have completely went back to work.”

—RETAIN RTW coordinator

poor impulse control or risk of drug use relapse, and social stigma (Nirmala et al. 2020; Brouwers 2020; Laudet et al. 2000).

There were no differences in the occupations of treatment enrollees with BH conditions relative to other treatment enrollees.

Exhibit 8. Share of treatment enrollees who worked at their current or most recent job for more than five years, by whether they had BH conditions



Source: Based on authors' calculations using data from RETAIN enrollment forms.

Note: See Appendix A for more detail.

*/**/** Difference between the mean outcomes of treatment enrollees with BH conditions and other treatment enrollees is significantly different from zero (p -value is less than 0.10/0.05/0.01) using a two-tailed t -test.

BH = behavioral health.

Treatment enrollees with and without BH conditions were similarly likely to report receiving income from sources other than earnings. Few treatment enrollees regardless of whether they had a BH condition received income from other sources besides earnings at the time of enrollment in RETAIN (Appendix B, Exhibits B.1, B.4 and B.7). In Kentucky and Minnesota, treatment enrollees with BH conditions were more likely to receive income from public programs, not including veterans' benefits, SSI, or SSDI. In Ohio, however, treatment enrollees with BH conditions were less likely to receive income from other public programs. In addition, in Ohio, treatment enrollees with BH conditions were less likely to receive veterans' benefits and less likely to receive employer-provided or other private disability insurance than other treatment enrollees.

SAW/RTW Experiences and the Challenges of RETAIN Treatment Enrollees with BH Conditions

In this section, we describe the experiences and service use of treatment enrollees with BH conditions and compare them with those of other treatment enrollees when possible. We also describe the RETAIN program infrastructure and the activities that program staff undertake to better serve treatment enrollees with BH conditions as well as these enrollees' perceptions of the services and supports provided to them. In addition, we describe the unique challenges treatment enrollees with BH conditions face that could hinder them from staying at work, returning to work, or engaging in RETAIN services.

RETAIN programs' approach to serving people with BH conditions

The RETAIN programs varied in the resources and infrastructure they had to serve treatment enrollees with BH conditions. Although some programs had dedicated training opportunities to help staff provide responsive services to treatment enrollees with BH conditions, others did not have BH-specific trainings or relied on their health system partners' BH-related trainings. Most programs had at least one staff member who specialized in BH and could consult with RTW coordinators on cases of treatment enrollees with BH conditions. The Ohio RETAIN program employed several social workers who were responsible for working with treatment enrollees with BH conditions to help address their BH and social needs. Several RETAIN programs introduced screening tools that RTW coordinators used to screen treatment enrollees for BH symptoms and psychosocial needs and to then connect treatment enrollees who screened positive with BH services and social support, as needed. In addition, the Kansas RETAIN program modified its RTW plan to better capture BH diagnoses and associated needs, and the Vermont RETAIN program had plans to develop a training for employers to teach them how to cultivate BH-friendly workplaces.³

RTW coordinators provide medical, social, and employment-related support to help treatment enrollees stay at work or return to work. Though the role varies slightly among RETAIN programs, RTW coordinators are generally responsible for working with treatment enrollees to develop RTW plans; coordinating with treatment enrollees' medical providers, employers, and employment counselors; and referring treatment enrollees to psychosocial supports, as needed.

Program staff developed their own strategies to better serve and meet the unique needs of treatment enrollees with BH conditions. During site visit interviews, program staff said that, as they became more familiar with the needs and challenges of treatment enrollees with BH conditions, they discovered approaches that helped them provide responsive services to such enrollees. RTW coordinators found that it was crucial to connect treatment enrollees with BH conditions to the psychosocial supports those enrollees needed soon after they began working together because doing so improved the ability of these treatment enrollees to focus on SAW/RTW goals. RTW coordinators noted that treatment enrollees with BH conditions also benefit from having their goals broken down into smaller milestones to make them more manageable, which promoted treatment enrollees' engagement in RETAIN.

³ A forthcoming RETAIN Process Analysis Report will contain more detailed information on state approaches to provide services to all treatment enrollees.

Program staff said that the RTW coordinators also found it helpful to make “soft hand-offs” of treatment enrollees with BH conditions to the workforce partners and other RETAIN contacts. Through these “soft hand-offs,” RTW coordinators directly connected treatment enrollees who have BH conditions with partner staff or other RETAIN contacts through emails or phone calls rather than just providing these treatment enrollees with contact information for the resources and expecting the treatment enrollees to follow up independently. This helped treatment enrollees with BH conditions follow through, particularly among those treatment enrollees who had difficulty maintaining consistent communication with RETAIN program staff.

"I think a big part of successful care management that we found is just distilling things down to their most simple and identifying the most salient goals and working in just very clear order of priorities. And so, some participants might come to us, and they have 10 things that we would love to help them with... but that might be an overwhelming approach. And so rather than doing that, saying, "Okay, we have six months and so what's realistic within that six months? What are the most important things to you and how can we like laser focus on those things?"

—RETAIN RTW coordinator

During site visit interviews, program staff also noted the importance of RTW coordinators communicating with the medical providers of treatment enrollees with BH conditions to support their progression toward SAW/RTW goals. RTW coordinators worked with treatment enrollees with BH conditions and their medical providers to help the providers better understand the symptoms of treatment enrollees with BH conditions and to ensure they were prescribed appropriate medications. For those treatment enrollees with BH conditions not connected to a mental health provider, RTW coordinators played a role in connecting treatment enrollees to mental health counselors and therapists, as they were available.

"I've had people that say that they don't want to take their medicine. They look at all the side effects and go through that. And so, I help them learn to advocate for themselves with their providers: "If there's a medicine that didn't work for you, talk to your provider about it, tell them why you didn't like that, tell them what your need is..."

—RETAIN RTW coordinator

RETAIN service use and barriers to program engagement

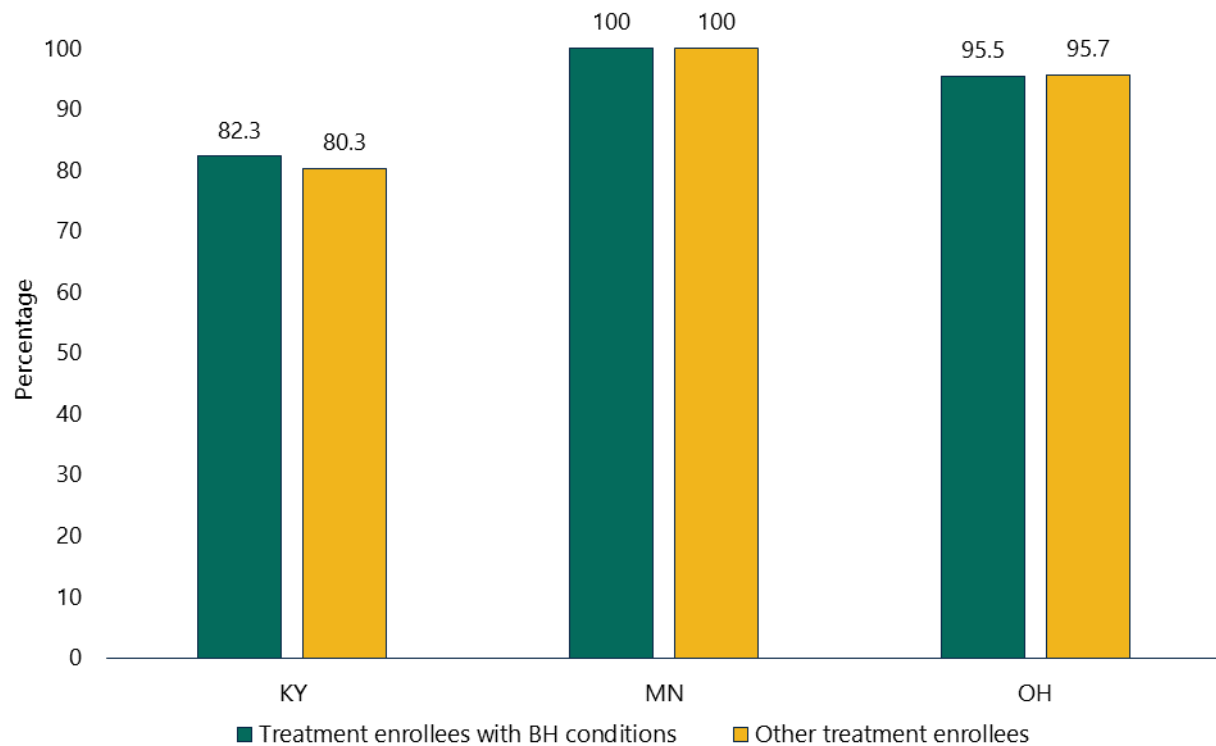
The service use patterns of treatment enrollees with and without BH conditions were similar, though BH enrollees were more likely to use employment-related services. There were few differences between the two groups in the use of any services after enrollment (Exhibit 9), rates of establishing an RTW plan, the use of workplace-based interventions, and the use of retraining or rehabilitation services.

In Kentucky and Ohio, RETAIN program data indicate that treatment enrollees with BH conditions were less likely than other treatment enrollees to use a workplace accommodation. Although we do not definitively know the reasons for these differences, we can speculate that they might have arisen from differences in the types of workplace accommodations that employees are willing to ask for, that employers are willing to provide, or that RETAIN staff are likely to record in program data.

Treatment enrollees with BH conditions in Kentucky and Minnesota self-reported greater use of employment-related support services in the two-month follow-up survey (Exhibit 10). For example, in Minnesota, 39 percent of treatment enrollees with BH conditions who responded to the survey reported that they had used any employment-related support services since enrolling in RETAIN, compared with only 22 percent of other treatment enrollees. This could potentially reflect greater referrals to and more use of services outside of RETAIN among treatment enrollees with BH conditions. This is consistent with

data gathered during interviews with enrollees, in which many treatment enrollees with BH conditions reported receiving services from other programs, such as vocational rehabilitation agencies or community-based organizations, during their time in RETAIN.

Exhibit 9. Share of treatment enrollees who received any services beyond enrollment, by whether they had BH conditions



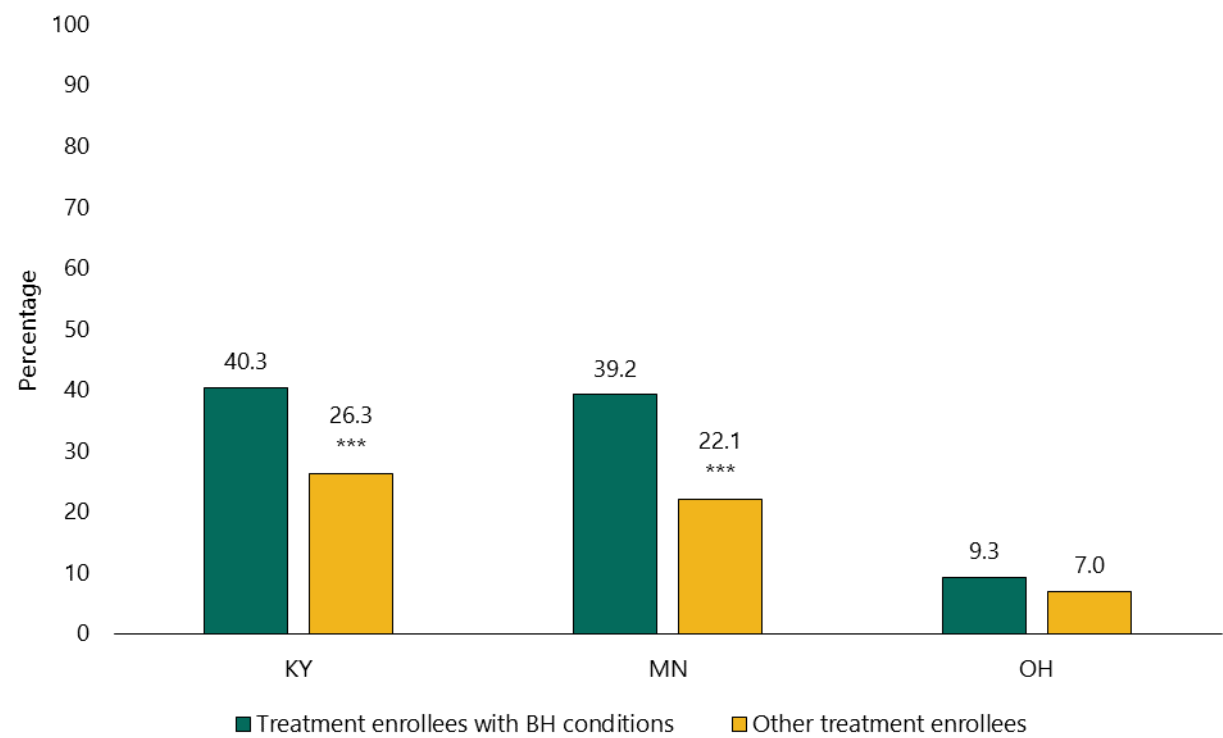
Source: Based on authors' calculations using data from RETAIN service use data.

Note: We examined service use data for the period between October 2021 and September 30, 2023, and limited the sample to people who enrolled on June 30, 2023, or before. Therefore, we had at least a three-month follow-up period for all enrollees in the sample. See Appendix A for more detail.

*/**/** Difference between the mean outcomes of treatment enrollees with BH conditions and other treatment enrollees is significantly different from zero (p -value is less than 0.10/0.05/0.01) using a two-tailed t -test.

BH = behavioral health.

Exhibit 10. Share of treatment enrollees who used any employment-related support services, by whether they had BH conditions



Source: Based on authors’ calculations using data from the RETAIN two-month survey.

Note: See Appendix A for more detail.

*/**/** Difference between the mean outcomes of treatment enrollees with BH conditions and other treatment enrollees is significantly different from zero (*p*-value is less than 0.10/0.05/0.01) using a two-tailed t-test.

BH = behavioral health.

Treatment enrollees with BH conditions saw the support from RTW coordinators they received to be beneficial to their recovery. During interviews we conducted with treatment enrollees, several enrollees with BH conditions referenced the usefulness of social services to which their RTW coordinators had referred them. Notably, in contrast with most treatment enrollees who participated in qualitative interviews, many treatment enrollees with BH conditions reported receiving services from outside programs (for example, vocational rehabilitation programs, Goodwill, or community-based organizations). These services included life skills training; job coaching; and financial support for bills, food, and other things such as computers and bicycles that would help them apply and travel to their jobs. Many of the enrollees were referred to these services by their RTW coordinators.

“[The RTW coordinator] helped connect me with organizations that helped me pay my water bill, my electric bill, and get a Walmart gift card for food. He helped connect me with an org to pay the hospital. Those organizations sent checks to me. I was also struggling mentally and he would tell me ‘the battle is not over.’ He was encouraging. He was like a mentor. He had gone through similar experiences.”

—RETAIN treatment enrollee with a BH condition

A few treatment enrollees with BH conditions noted that their RTW coordinators were able to help the enrollees’ medical providers better understand enrollees’ experiences, symptoms, and needs—particularly

in relation to their ability to stay at work or return to work. RETAIN service use data indicate that, for nearly all treatment enrollees in Minnesota and Ohio (those with and without BH conditions), the RTW coordinator communicated with the medical provider at least once. Other treatment enrollees with BH conditions mentioned that they appreciated how their RTW coordinators would listen to and encourage them. Several treatment enrollees with BH conditions also expressed their appreciation of RETAIN staff's efforts to provide inclusive services (for example, by affirming a treatment enrollee's gender identity and sexual orientation or accommodating a language barrier).

Analysis of treatment enrollees' service use data shows that, in Minnesota and Ohio, RTW coordinators of treatment enrollees with BH conditions were more likely to communicate with a workforce professional at least once compared with RTW coordinators of other treatment enrollees (Appendix B, Exhibits B.6 and B.9).

Despite treatment enrollees with BH conditions' perception of the usefulness of RTW coordination services, treatment enrollees with BH conditions faced unique barriers to engaging with RETAIN.

"I think some of it is especially if it's a mental health diagnosis, they don't...want that stigma, so they don't want their employer [to know], but that in turn makes it more difficult trying to help them. It's hard to get the employer to understand modifications needed if they don't know what it's for."

—RETAIN RTW coordinator

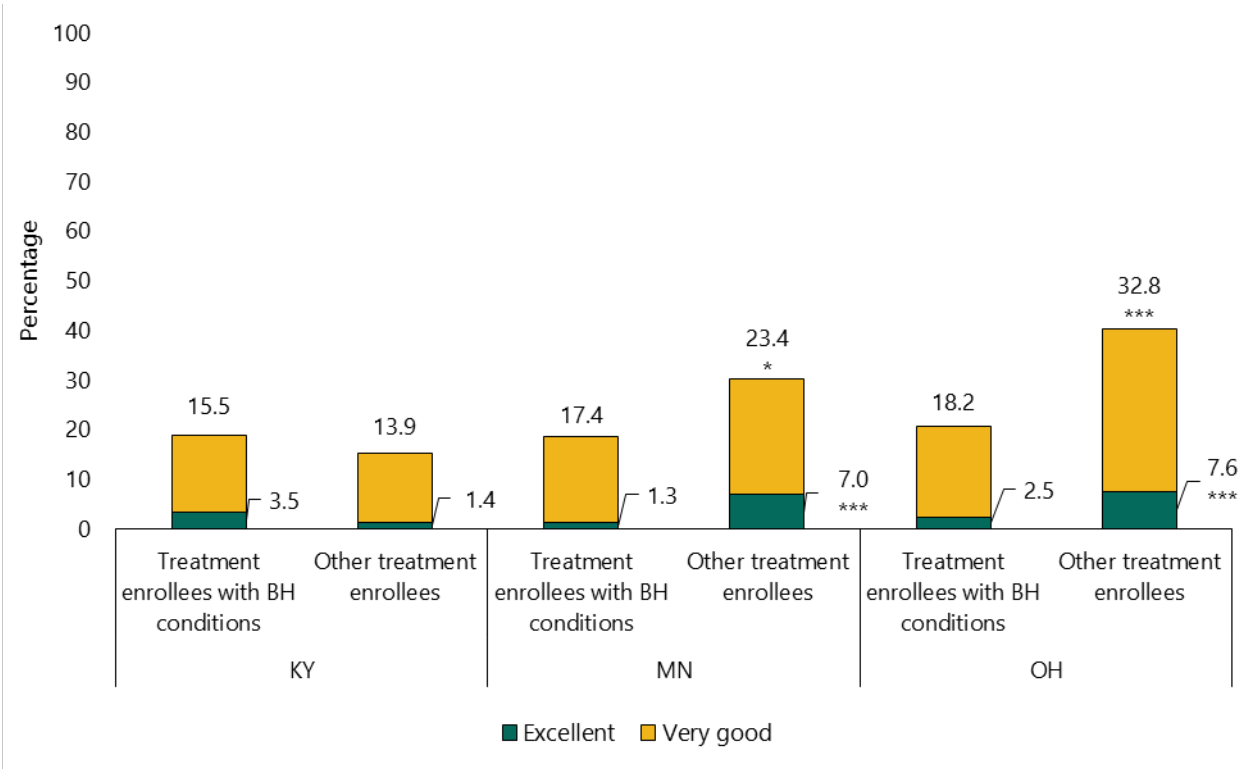
Stigma associated with BH conditions can prevent some enrollees from effectively engaging with services. During site visits, program staff indicated that because of the stigma of BH conditions, some enrollees were more reluctant to allow their RTW coordinators to communicate with their employers. Program staff also noted that it could be difficult for workforce partners to deliver responsive and appropriate workforce services to treatment enrollees with BH conditions. This is because they often received limited medical information for treatment enrollees, and some treatment

enrollees with BH conditions were not willing to disclose their specific diagnoses or needs to workforce staff.

Treatment enrollees with BH conditions were more likely than other treatment enrollees to self-report poor health two months after enrolling in RETAIN. In Ohio and Minnesota, treatment enrollees with BH conditions were less likely to report that their health is excellent or very good and were more likely to report that their health is fair or poor (Exhibit 11). As might be expected, in all three RETAIN programs, treatment enrollees with BH conditions reported a higher number of days that their mental health was not good in the past month; they reported six to eight more days of poor mental health than other treatment enrollees (Appendix B, Exhibits B.2, B.5 and B.8). Program staff noted that the symptoms of some treatment enrollees with BH conditions made it more difficult at times for those enrollees to gather the energy or motivation to take steps such as engaging in mental health counseling or a job search in their recovery.

In Minnesota and Kentucky, treatment enrollees with BH conditions were less likely than others to self-report that they had been given a prescription for opioid pain relievers (Appendix B, Exhibits B.2 and B.5). This was not the case in Ohio, where treatment enrollees with BH conditions reported greater pain on average than other treatment enrollees and were more likely to report that pain interfered with their work in the past two months (Appendix B, Exhibit B.8). This may be because, of the three RETAIN programs, Ohio had the largest share of treatment enrollees with BH conditions that had a non-BH primary diagnosis.

Exhibit 11. Share of treatment enrollees who reported their health is very good or excellent, by whether they had BH conditions



Source: Based on authors’ calculations using data from the RETAIN two-month survey.

Note: See Appendix A for more detail.

*/**/*** Difference between the mean outcomes of treatment enrollees with BH conditions and other treatment enrollees is significantly different from zero (*p*-value is less than 0.10/0.05/0.01) using a two-tailed t-test.

BH = behavioral health.

Program staff perceived that treatment enrollees with BH conditions often had less linear pathways to return to work than other treatment enrollees.

Treatment enrollees with only physical health conditions usually had estimated recovery timelines, provided by their surgeons or providers, which they could use for their SAW/RTW plans. Similarly, these treatment enrollees had more defined steps to complete to progress in their recovery, such as attending physical therapy appointments, adhering to a non-weightbearing order, or taking bed rest for a set amount of time. Treatment enrollees with BH conditions typically did not have predefined steps or milestones to recovery. Program staff noted that the lack of tangible milestones made it more difficult for RTW coordinators to help navigate treatment enrollees with BH conditions’ progress toward SAW/RTW goals. They believed that treatment enrollees with BH conditions were less likely than other treatment enrollees to be employed or able to fully return to work at the end of their time in RETAIN. Program staff also indicated that treatment enrollees with BH conditions frequently exhausted their allowed duration of RETAIN service receipt (six months). Consistent with this, service use data indicate that, in Ohio, among treatment enrollees who exited the program, those with BH conditions had a longer duration of services

"I think mental health and substance use is really tricky in getting them back to work. I would say more times than not, they're probably hitting their six-month maximum in the program when they're enrolling with those diagnoses."

—RETAIN RTW coordinator

and were more likely than other treatment enrollees to be referred to services beyond RETAIN after six months.

Treatment enrollees with BH conditions often faced barriers to accessing needed care. During site visits, program staff said that one specific challenge that treatment enrollees with BH conditions faced in achieving SAW/RTW goals was higher barriers to the care they needed compared with other treatment enrollees. Program staff described how some treatment enrollees with BH conditions would choose not to seek care or would stop their treatment because of prohibitively high costs for BH care. In some RETAIN programs, program staff noted that treatment enrollees with BH conditions could face wait times of more than a year to see a mental health counselor if they were not already connected to one. These barriers to care made it more difficult for treatment enrollees with BH conditions to make progress on their SAW/RTW goals.

“For enrollees that experience mental health struggles... getting those pieces together to get back to work becomes more of a mountain.”

—RETAIN RTW coordinator

Non-health-related barriers, such as housing insecurity and criminal justice system involvement, posed barriers to staying at work or returning to work. During interviews with RETAIN treatment enrollees, those with BH conditions described significant barriers to employment, in addition to the health

“[The RTW coordinator] tried to call me a million times, but I just have not been able to focus on anything, because of my situation... Whenever we couldn't get a [house] with that money, I just lost it, I just let go of everything.”

—RETAIN treatment enrollee
with a BH condition

condition that qualified them for RETAIN. These barriers included housing insecurity, past criminal justice system involvement, and experiences of domestic violence. Although these barriers created obstacles to employment, treatment enrollees with BH conditions facing these barriers described how they also made it more challenging for them to fully engage with the RETAIN program. In site visit interviews, program staff said that this kind of instability experienced by treatment enrollees with BH conditions made it difficult for RTW coordinators to communicate and engage with enrollees consistently.

Discussion

Here, 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 interpretation of this study's results.

Summary of findings

In this brief, we examined the prevalence of BH conditions among treatment group enrollees and compared how the characteristics, challenges, and experiences of RETAIN treatment enrollees who have BH conditions differed from treatment enrollees who have other types of health conditions. We drew on qualitative data from all five RETAIN programs as well as quantitative data from Ohio, Kentucky, and Minnesota.

We found that the share of treatment enrollees with BH conditions varied widely across RETAIN programs, likely reflecting differences in eligibility criteria and recruitment strategies across sites. Among treatment enrollees with BH conditions, most had a primary diagnosis that was not BH-related. Treatment enrollees with BH conditions were more likely to be female and were younger on average than other treatment enrollees. Those with BH conditions were less likely than other treatment enrollees to report their condition was new at the time of RETAIN enrollment. Treatment enrollees with BH conditions had lower

employment rates and earnings at the time of RETAIN enrollment than other treatment enrollees. They also had worked less recently and had shorter tenures at their current or most recent job.

Program staff noted unique challenges faced by treatment enrollees with BH conditions, including stigma associated with their condition, a more complex pathway to recovery than physical diagnoses, lack of access to needed care, and non-health challenges such as housing insecurity. Despite these challenges, service use data recorded by the programs indicated that treatment group enrollees in Ohio, Kentucky, and Minnesota generally used services to a similar extent as other treatment enrollees. During interviews, treatment enrollees with BH conditions indicated they found the services provided by RETAIN or service referrals to be helpful.

Our findings have several policy and program implications that we discuss below.

Implications for policy and practice

The results have several implications for policy and practice:

Policies that aim to improve physical health and capacity to work should address co-occurring BH conditions. More than half of treatment enrollees with BH conditions had a primary condition that was physical rather than BH related. Program staff noted that many of the treatment enrollees with BH conditions experienced BH challenges as a result of their physical health condition. This observation is in line with the literature, which documents that physical and mental health are intertwined. Enrollees that have co-occurring physical and mental health conditions could be among the most vulnerable, and more research is needed to better understand their unique needs and the effects of programs such as RETAIN on their economic outcomes.

Treatment enrollees with BH conditions might have different needs than other enrollees related to staying at work or returning to work. Treatment enrollees with BH conditions had weaker connections to employment at the time of enrolling in RETAIN. Compared with other enrollees, they were less likely to be employed, have had a job that paid at least \$1,000 a month in the past year, or have had a long-tenured job. This suggests that their position in the labor market is weaker on average than other enrollees and that they are potentially at greater risk of exiting the workforce entirely and entering the SSDI and SSI programs. Treatment enrollees with BH conditions were also less likely to report than other treatment enrollees that their primary injury or illness was new at the time of enrollment in RETAIN, and treatment enrollees with BH conditions self-reported worse health on average two months after enrolling in RETAIN. For these reasons, it is possible that treatment enrollees with BH conditions are at greater risk of exiting the workforce and entering the SSDI and SSI programs and thus could particularly benefit from effective SAW/RTW services.

BH conditions can impose barriers to engaging with SAW/RTW services, which programs must mitigate to effectively serve people with those conditions. Enrollees with BH conditions face some of the same barriers to achieving SAW/RTW goals as enrollees with other types of health conditions, but they also experience other challenges that may be less common among enrollees who do not have BH conditions. For example, compared with people who have physical injuries or illnesses, treatment enrollees with BH conditions typically do not have predefined steps or milestones to recovery. This made it more difficult for RTW coordinators to help them navigate progress toward SAW/RTW goals for treatment enrollees with BH conditions. The stigma of BH conditions made some enrollees more reluctant to allow their RTW coordinators to communicate with their employers and thus effectively advocate for workplace accommodations, but program staff can mitigate these types of challenges by taking an

intentional and tailored approach to service delivery for this population. During interviews, RETAIN program staff shared helpful strategies for supporting enrollees in their progress to return to work, including connecting enrollees with psychosocial supports as soon as possible, breaking down goals into smaller milestones, and providing soft hand-offs to RETAIN contacts to maximize follow-through. Lessons learned from the RETAIN program in how to effectively support these enrollees could be codified into program components and strategies in future initiatives that promote staying at work or returning to work among people experiencing BH conditions.

People with BH conditions can face significant barriers to employment, some of which SAW/RTW programs might be unable to directly focus on but could instead address through effective referrals. The high costs of and long wait times for health care for BH conditions can sometimes lead to treatment enrollees with BH conditions not receiving the care they need to make progress toward improved health and employment. During interviews, treatment enrollees with BH conditions shared that they faced additional non-health barriers to employment, such as housing insecurity, past criminal justice system involvement, and experiences of domestic violence. These factors are outside the scope of RETAIN and other similar SAW/RTW programs, but programs could still help address these challenges by, for example, proactively screening for such barriers at intake and then at regular intervals, identifying effective services in the community to refer participants to and strengthening referrals to those services.

Study context and considerations

Readers should keep in mind several contextual factors and considerations when interpreting the findings of this study. First, we investigated the experiences and challenges of treatment enrollees with BH conditions among those who enrolled into RETAIN on or before June 30, 2023. Enrollment into RETAIN is expected to continue through mid-May 2024, and people who enroll in RETAIN on or after July 1, 2023, may differ from those who enrolled earlier in the study. Second, we defined enrollees with BH conditions as (1) those who have a primary diagnosis of BH based on information from medical providers or electronic medical record systems or (2) those for which program records indicated they were experiencing a secondary diagnosis of a mental health condition or substance use disorder; program records could underestimate the true prevalence of primary and secondary BH conditions if people do not always report or seek treatment for them.

The data we used for this brief were also limited in two ways. First, when conducting comparative analyses of quantitative data, we excluded Kansas and Vermont because the numbers of enrollees with BH conditions in those RETAIN programs were not large enough to support a meaningful statistical comparison between treatment enrollees with and without BH conditions. Second, at the time of report writing, we only had data from programs on enrollees' service use up to September 30, 2023. Therefore, these data cover varying follow-up periods depending on the date of enrollment, and, for those who enrolled in late June, we can observe at most three months of their service use.

References

- Andersen, M., K. Nielsen, and S. Brinkmann. "Meta-Synthesis of Qualitative Research on Return to Work Among Employees with Common Mental Disorders." *Scandinavian Journal of Work, Environment & Health*, 2012.
- Aklin, Will M., Conrad J. Wong, Jacqueline Hampton, Dace S. Svikis, Maxine L. Stitzer, George E. Bigelow, and Kenneth Silverman. "A Therapeutic Workplace for the Long-Term Treatment of Drug Addiction and Unemployment: Eight-Year Outcomes of a Social Business Intervention." *Journal of Substance Abuse Treatment*, vol. 47, no. 5, 2014, pp. 329–338.
- Azagba, S., L. Shan, F. Qeadan, and M. Wolfson. "Unemployment Rate, Opioids Misuse and Other Substance Abuse: Quasi-Experimental Evidence from Treatment Admissions Data." *BMC Psychiatry*, 2021.
- Baxter, A.J., K.M. Scott, T. Vos, and H.A. Whiteford. "Global Prevalence of Anxiety Disorders: A Systematic Review and Meta-Regression." *Psychological Medicine*, vol. 4, 2013, pp. 897–910.
- Baxter, A.J., K.M. Scott, A.J. Ferrari, R.E. Norman, T. Vos, and H.A. Whiteford. "Challenging the Myth of an 'Epidemic' of Common Mental Disorders: Trends in the Global Prevalence of Anxiety and Depression Between 1990 and 2010." *Depression and Anxiety*, vol. 31, 2014, pp. 506–516.
- Bray, J.W., G.A. Zarkin, M.L. Dennis, and M.T. French. "Symptoms of Dependence, Multiple Substance Use, and Labor Market Outcomes." *American Journal of Drug and Alcohol Abuse*, vol. 26, 2000, pp. 77–95.
- Brouwers, Evelien P.M. "Social Stigma is an Underestimated Contributing Factor to Unemployment in People with Mental Illness or Mental Health Issues: Position Paper and Future Directions." *BMC Psychology*, vol. 8, 2020, pp. 1–7.
- Cancelliere, Carol, James Donovan, Mette Jensen Stochkendahl, Melissa Biscardi, Carlo Ammendolia, Corrie Myburgh, and J. David Cassidy. "Factors Affecting Return to Work After Injury or Illness: Best Evidence Synthesis of Systematic Reviews." *Chiropractic & Manual Therapies*, vol. 24, 2016, pp. 1–23.
- Charette-Dussault, É, and M. Corbière. "An Integrative Review of the Barriers to Job Acquisition for People with Severe Mental Illness." *The Journal of Nervous and Mental Disease*, 2019.
- Contreary, K., Y. Ben-Shalom and B. Gifford. "Using Predictive Analytics for Early Identification of Short-Term Disability Claimants Who Exhaust Their Benefits." *Journal of Occupational Rehabilitation*, 2018.
- Croake, S., M. Bauman, Y. Ben-Shalom, J. Berk and M. Agrer. "The RETAIN Demonstration: State programs' approaches to recruiting potential enrollees." Disability Policy Issue Brief. Washington, DC: Mathematica Policy Research, 2023.
- Cullen, K., E. Irvin, A. Collie, F. Clay, U. Gensby, P.A. Jennings, S. Hogg-Johnson, V. Kristman, M. Laberge, D. McKenzie, S. Newnam, A. Palagyi, R. Ruseckaite, D.M. Sheppard, S. Shourie, I. Steenstra, D. Van Eerd, and B. Amick. "Effectiveness of Workplace Interventions in Return-to-Work for Musculoskeletal, Pain-Related and Mental Health Conditions: An Update of the Evidence and Messages for Practitioners." *Journal of Occupational Rehabilitation*, 2017.
- U.S. Department of Health and Human Services (HHS). "U.S. Surgeon General Releases New Framework for Mental Health & Well-Being in the Workplace." 2022.

- HHS. "SAMHSA Announces National Survey on Drug Use and Health (NSDUH) Results Detailing Mental Illness and Substance Use Levels in 2021." Updated January 4, 2023. <https://www.hhs.gov/about/news/2023/01/04/samhsa-announces-national-survey-drug-use-health-results-detailing-mental-illness-substance-use-levels-2021.html>.
- Drake, R.E., W. Frey, G.R. Bond, H.H. Goldman, D. Salkever, A. Miller, T.A. Moore, J. Riley, M. Karakus, and R. Milfort. "Assisting Social Security Disability Insurance Beneficiaries with Schizophrenia, Bipolar Disorder, or Major Depression in Returning to Work." *American Journal of Psychiatry*, vol. 170, no. 12, 2013, pp. 1433–1441.
- Drake, R., and M. Wallach. "Employment is a Critical Mental Health Intervention." *Epidemiology and Psychiatric Sciences*, 2014 <https://pubmed.ncbi.nlm.nih.gov/33148366/>.
- Duffy, Paul, and Helen Baldwin. "Recovery Post Treatment: Plans, Barriers and Motivators." *Substance Abuse Treatment, Prevention, and Policy*, vol. 8, no. 1, 2013, pp. 1–12.
- Eaton, Nicholas R., Katherine M. Keyes, Robert F. Krueger, Steve Balsis, Andrew E. Skodol, Kristian E. Markon, Bridget F. Grant, Deborah S. Hasin. "An Invariant Dimensional Liability Model of Gender Differences in Mental Disorder Prevalence: Evidence from a National Sample." *Journal of Abnormal Psychology*, vol. 121, no. 1, 2012, p. 282.
- Gould-Werth, A., K. Morrison, and Y. Ben-Shalom. "Employers' Perspectives on Accommodating and Retaining Employees with Newly Acquired Disabilities." *Journal of Occupational Rehabilitation*, 2018.
- Healthcare.gov. "SSI Disability & Medicaid Coverage." n.d. <https://www.healthcare.gov/people-with-disabilities/ssi-and-medicaid/#:~:text=People%20with%20disabilities&text=If%20you%20have%20Supplemental%20Security,you%20may%20have%20to%20apply>.
- Knapp, M., and G. Wong. "Economics and Mental Health: The Current Scenario." *World Psychiatry*, vol. 19, 2020, pp. 3–14.
- Laudet, Alexandre B., S. Magura, H.S. Vogel, and E. Knight. "Recovery Challenges Among Dually Diagnosed Individuals." *Journal of Substance Abuse Treatment*, vol. 18, no. 4, 2000, pp. 321–329.
- McCoy, C.B., M. Comerford, and L.R. Metsch. "Employment Among Chronic Drug Users at Baseline and 6-Month Follow-Up." *Substance Use & Misuse*, vol. 42, 2007, pp. 1055–1067.
- McHugo, Gregory J., Robert E. Drake, Haiyi Xie, and Gary R. Bond. "A 10-Year Study of Steady Employment and Non-Vocational Outcomes Among People with Serious Mental Illness and Co-Occurring Substance Use Disorders." *Schizophrenia Research*, vol. 138, no. 2-3, 2012, pp. 233–239.
- National Institute of Mental Health. "Mental Illness." 2020. <https://www.nimh.nih.gov/health/statistics/mental-illness>.
- Nirmala, Bergai Parthasarathy, Tania Roy, Vidya Naik, and Pallerla Srikanth. "Employability of People with Mental Illness and Substance Use Problems: Field Realities." *Journal of Family Medicine and Primary Care*, vol. 9, no. 7, 2020, p. 3405.
- Ohrnberger, Julius, Eleonora Fichera, and Matt Sutton. "The Relationship Between Physical and Mental Health: A Mediation Analysis." *Social Science & Medicine*, vol. 195, 2017, pp. 42–49.
- Organization for Economic Co-Operation and Development (OECD). *Making Mental Health Count*. OECD Publishing, 2014.

- Owens, Pamela L., K. Heslin, K. Fingar, and Audrey J. Weiss. "Co-Occurrence of Physical Health Conditions and Mental Health and Substance Use Conditions Among Adult Inpatient Stays, 2010 Versus 2014." Statistical Brief #240. Agency for Healthcare Research and Quality, 2018.
- Panchal, N., H. Saunders, and N. Ndugga. "Five Key Findings on Mental Health and Substance Use Disorders by Race/Ethnicity." 2023. <https://www.kff.org/mental-health/issue-brief/five-key-findings-on-mental-health-and-substance-use-disorders-by-race-ethnicity/>.
- Phillips, Julie A., and Colleen N. Nugent. "Suicide and the Great Recession of 2007–2009: The Role of Economic Factors in the 50 US States." *Social Science & Medicine*, vol. 116, 2014, pp. 22–31.
- Reeves, Aaron, David Stuckler, Martin McKee, David Gunnell, Shu-Sen Chang, and Sanjay Basu. "Increase in State Suicide Rates in the USA During Economic Recession." *The Lancet*, vol. 380, no. 9856, 2012, pp. 1813–1814.
- Remes, Olivia, Carol Brayne, Rianne van der Linde, and Louise Lafortune. "A Systematic Review of Reviews on the Prevalence of Anxiety Disorders in Adult Populations." *Brain and Behavior*, vol. 6, no. 7, 2016, p. e00497.
- Social Security Administration. "Annual Statistical Report on the Social Security Disability Insurance (SSDI) Program, 2021." 2022.
- Substance Abuse and Mental Health Services Administration (SAMHSA). "Mental Health and Substance Use Co-Occurring Disorders." Updated April 24, 2023. <https://www.samhsa.gov/mental-health/mental-health-substance-use-co-occurring-disorders>.
- Van Rijn, R., S. Robroek, S. Brouwer, and A. Burdorf. "Influence of Poor Health on Exit from Paid Employment: A Systematic Review." *BMJ Journals*, 2014.
- Von der Warth, Rieka, Franziska Kessemeier, and Erik Farin-Glattacker. "Barriers, Facilitators and Experiences Linked to a Work-Related Case Management in Individuals with Substance Abuse Disorders." *International Journal of Environmental Research and Public Health*, vol. 19, no. 14, 2022, p. 8657.
- Zaidel, Catherine S., Rajesh K. Ethiraj, Manijeh Berenji, and Fraser W. Gaspar. "Health Care Expenditures and Length of Disability Across Medical Conditions." *Journal of Occupational and Environmental Medicine*, vol. 60, no. 7, 2018, p. 631.

Appendix A: Data and Methods

Data and samples

The data sources we used for this brief are RETAIN enrollment forms, two-month enrollee survey data, qualitative data collected during site visits, and qualitative data collected during interviews with treatment enrollees. With all data sources, we focused on treatment enrollees. We describe these data sources below.

- / **RETAIN enrollment forms.** The U.S. Department of Labor requires RETAIN programs to collect information about participants who enroll in the evaluation. These data include baseline information about demographic characteristics, the qualifying injury or illness, and recent employment. We limited the sample to people who enrolled in RETAIN programs on or before June 30, 2023.
- / **Service use data.** Each RETAIN program tracks the provision of services to treatment enrollees. These data document treatment enrollees' interactions with RTW coordinators and use of other services. Each program submits data quarterly to Mathematica. We examined service use data for the period between October 2021 and September 30, 2023, and limited the sample to people who enrolled before or on June 30, 2023. Therefore, we had at least a three-month follow-up period for all enrollees in the sample.
- / **Two-month survey data.** Mathematica surveyed enrollees two months after enrollment to capture more detailed enrollee information on RETAIN outcomes of interest.⁴ Enrollee survey topics included employment and earnings, training and services, and health and functioning. We limited the sample to people who enrolled before or on June 30, 2023.
- / **Interviews with RETAIN staff and partners.** To learn about RETAIN programs' implementation progress, barriers, and facilitators, we conducted semistructured interviews with each state's RETAIN program leaders, staff, and partners in spring 2023. We conducted 15 to 18 interviews in each state. When applicable, we asked program staff questions about their experiences working with treatment enrollees with BH conditions as well as about the resources and training available to RETAIN staff for working with treatment enrollees with BH conditions.
- / **Interviews with treatment enrollees.** To learn about treatment enrollees' experiences with RETAIN, we conducted 67 semistructured interviews with treatment enrollees in late 2022. We conducted outreach to representative samples of treatment enrollees in each of the five state RETAIN programs based on enrollment data submitted from the RETAIN programs through June 2022. We oversampled enrollees who were non-White or Hispanic to better include their experiences and perspectives. Of the 67 treatment enrollees interviewed, 20 treatment enrollees had a recorded BH condition.

Analysis methods

We limited analyses of quantitative data to the RETAIN programs in Ohio, Kentucky, and Minnesota because Kansas and Vermont had fewer than 75 enrollees with BH conditions during the study period. For each of the three RETAIN programs, we calculated the average characteristics of RETAIN enrollees with and without BH conditions. The characteristics of interest included demographic characteristics, education, employment, economic well-being, health, and service use. For variables based on the two-month survey, we used nonresponse weights that account for the potential different characteristics of those who responded to the survey and those who did not. For each characteristic examined, we

⁴ The survey response rate was 79 percent in Kentucky, 84 percent in Minnesota, and 83 percent in Ohio.

calculated the difference in mean characteristics between enrollees with BH conditions and other enrollees and then used statistical testing to assess whether these 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. We focus the discussion on findings that are common to two or more RETAIN programs to avoid giving too much credence to a potentially spurious finding.

We analyzed qualitative data collected from interviews with treatment group enrollees and program staff across all five RETAIN programs. To do this, we reviewed the transcripts of interviews conducted with enrollees who had BH conditions (either a primary or secondary diagnosis) at enrollment to extract common themes and experiences from their time in RETAIN. For site visit interviews with program staff, we analyzed excerpts from interview transcripts that were assigned to a designated code, which was used to identify interview segments in which staff discussed working with RETAIN treatment enrollees with BH conditions, training and resources available to help staff work with treatment enrollees with BH conditions, or both.

Appendix B: Additional Exhibits

Exhibit B.1. Kentucky: Baseline characteristics of RETAIN treatment group enrollees with and without behavioral health conditions

	Enrollees with a behavioral health condition (A)	Enrollees without a behavioral health condition (B)	Difference (A - B)	p-value
Sample size	351	264	NA	
Demographic characteristics, education, and health insurance				
Female	64.4	42.8	21.6***	0.000
Average age	39.2	45.7	-6.5***	0.000
Race and ethnicity				0.186
Hispanic	5.7	4.2	1.5	0.381
White, non-Hispanic	73.5	66.3	7.2*	0.055
Black, non-Hispanic	15.1	23.9	-8.8***	0.007
Asian, non-Hispanic	s	1.1	s	s
More than one race	4.0	3.8	0.2	0.899
Other, non-Hispanic	s	s	s	s
Missing	s	s	s	s
Preferred language is English	99.1	98.5	0.7	0.463
Education level				0.214
Less than high school diploma	5.4	6.1	-0.6	0.734
High school diploma, GED, or certificate of completion	48.4	53.8	-5.4	0.189
Occupational certificate, license, or two-year college degree	22.2	15.5	6.7**	0.034
Four-year college degree or post-graduate degree	23.9	24.6	-0.7	0.844
Characteristics of primary injury or illness				
Primary diagnosis based on ICD-10 codes			†††	0.000
Musculoskeletal, back	8.8	10.6	-1.8	0.466
Musculoskeletal, non-back	10.5	18.9	-8.4***	0.004
Mental	51.6	2.3	49.3***	0.000
Long COVID	1.1	s	s	s
Other	27.9	67.0	-39.1***	0.000
New condition	20.2	40.9	-20.7***	0.000
Injury or illness as a result of an accident	14.8	22.7	-7.9**	0.014
Work-related injury or illness	10.0	4.9	5.0**	0.016
Injury or illness as part of a workers' compensation claim	0.0	0.0	0.0	0.177

	Enrollees with a behavioral health condition (A)	Enrollees without a behavioral health condition (B)	Difference (A - B)	p-value
Time between injury or illness and enrollment				0.727
4 weeks or less	27.1	30.3	-3.2	0.382
5 to 12 weeks	38.5	35.6	2.9	0.468
13 to 24 weeks	9.7	11.0	-1.3	0.603
More than 24 weeks	24.8	23.1	1.7	0.629
Missing	0.0	0.0	0.0	NA
Characteristics of recent employment				
Employment status				0.694
Not employed	33.9	30.7	3.2	0.398
Self-employed	4.6	4.5	0.0	0.994
Employed	61.5	64.8	-3.2	0.411
Time since last worked			†††	0.002
Currently working	24.5	19.7	4.8	0.153
Last worked less than one week ago	24.2	14.4	9.8***	0.002
Last worked one to four weeks ago	16.2	19.7	-3.5	0.272
Last worked one to three months ago	16.8	26.9	-10.1***	0.003
Last worked more than three months ago	18.2	19.3	-1.1	0.734
Hours per week usually worked before injury or illness	37.1	38.6	-1.6**	0.044
Tenure at most recent job			†††	0.000
Less than six months	36.5	23.5	13.0***	0.000
Six months to one year	16.5	13.3	3.3	0.258
One to two years	14.8	11.0	3.8	0.158
Two to five years	16.8	16.7	0.1	0.963
More than five years	15.4	35.6	-20.2***	0.000
Missing	0.0	0.0	0.0	NA
Occupational classification of pre-injury or illness job			†	0.057
Management, professional, or related	28.2	27.7	0.6	0.880
Service	37.3	33.7	3.6	0.355
Sales and office	7.7	3.4	4.3**	0.018
Natural resources, construction, or maintenance	4.6	7.2	-2.6	0.176
Production, transportation, and material moving	22.2	28.0	-5.8	0.102
Missing	0.0	0.0	0.0	NA

	Enrollees with a behavioral health condition (A)	Enrollees without a behavioral health condition (B)	Difference (A - B)	p-value
Economic well-being				
Worked at a job that paid at least \$1,000 per month in the past year	78.1	86.0	-7.9**	0.010
Current receipt of income other than earnings				
SSDI or SSI	1.7	1.5	0.2	0.850
Veterans' benefits	2.3	1.1	1.1	0.268
Workers' compensation	0.0	s	s	s
Employer-provided or other private disability insurance	6.6	9.8	-3.3	0.146
Other public programs	5.4	2.7	2.8*	0.078
Applied for or received SSDI or SSI in the past three years	4.6	3.4	1.1	0.467

Source: RETAIN enrollee intake data.

Note: This table shows the average baseline characteristics of RETAIN enrollees with and without behavioral health conditions and the differences in the baseline characteristics between the two populations. The sample comprises RETAIN enrollees who enrolled through June 2023.

s = We suppressed estimates representing fewer than 3 observations.

*/**/** 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.

RETAIN = Retaining Employment and Talent After Injury/Illness Network; Social Security Disability Insurance SSI = Supplemental Security Income; SSDI = Social Security Disability Insurance.

Exhibit B.2. Kentucky: Health and well-being of RETAIN treatment group enrollees with and without behavioral health conditions two months after enrollment.

	Enrollees with a behavioral health condition (A)	Enrollees without a behavioral health condition (B)	Difference (A - B)	p-value
Sample size	260	209	NA	
Self-reported health status				0.559
Excellent	3.5	1.4	2.1	0.140
Very good	15.5	13.9	1.6	0.618
Good	39.7	41.1	-1.5	0.749
Fair	30.3	32.1	-1.8	0.670
Poor	11.1	11.5	-0.4	0.890
Number of days that physical health was “not good” during the past 30 days	12.3	13.1	-0.7	0.494
Average pain in the past seven days (on a scale from one to 10)	4.3	4.5	-0.2	0.425
During the past two months, pain interfered with normal work (both work outside the home and housework) all or most of the time	46.1	46.4	-0.3	0.955
In the past two months, was given a prescription for opioid pain relievers	13.5	19.6	-6.1*	0.084
Number of days that mental health was “not good” during the past 30 days	15.8	10.1	5.7***	0.000

Source: RETAIN enrollee two-month follow-up survey.

Note: This table shows the average health and well-being outcomes of RETAIN enrollees with and without behavioral health conditions and the differences between the two populations. The sample comprises people who enrolled in RETAIN through June 2023 and were randomly assigned to the treatment group.

s = We suppressed estimates representing fewer than three observations.

*/**/** 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.

RETAIN = Retaining Employment and Talent After Injury/Illness Network.

Exhibit B.3. Kentucky: Service use of RETAIN treatment group enrollees with and without behavioral health conditions

	Enrollees with behavioral health condition (A)	Enrollees without a behavioral health condition (B)	Difference (A - B)	p-value
Sample size	351	264	NA	
Used any services after enrollment ^a	82.3	80.3	2.0	0.524
Established RTW plan	80.6	79.5	1.1	0.741
Time elapsed between enrollment and established RTW plan (days)	4.6	4.6	-0.1	0.896
Exited RETAIN	91.7	91.3	0.5	0.843
Duration of services (if exited) (days)	83.5	81.7	1.8	0.675
Referred to services beyond RETAIN after six months	4.6	4.5	0.0	0.994
Use of workplace-based interventions				
Used on-site job analysis	0.9	1.5	-0.7	0.463
Used ergonomic assessment	2.3	4.9	-2.6*	0.090
Used workplace accommodation	7.7	12.1	-4.4*	0.073
Used any of the above workplace-based interventions	8.8	13.3	-4.4*	0.087
Use of retraining or rehabilitation services				
Used job search services	13.4	12.9	0.5	0.853
Used any training services	3.4	3.4	0.0	0.995
Participated in a transitional work opportunity ^a	1.7	1.9	-0.2	0.866
Used other employment services	6.6	7.2	-0.6	0.756
Used any of the above retraining or rehabilitation services	16.8	18.6	-1.8	0.575
RTW coordinator communication with other parties involved in treatment enrollees' RTW				
RTW coordinator communicated with employer at least once	2.3	3.4	-1.1	0.411
RTW coordinator communicated with medical provider at least once	23.1	26.1	-3.1	0.386
RTW coordinator communicated with workforce professional at least once	15.1	16.3	-1.2	0.690
RTW coordinator communicated with any of the above parties	32.2	34.1	-1.9	0.622
Self-reported use of services or help in the past two months^b				
Used any employment-related support services	40.3	26.3	14.0***	0.001
Enrolled in a job training program	12.5	9.6	3.0	0.306
Worked with a care or other service coordinator	32.6	27.4	5.2	0.219

	Enrollees with behavioral health condition (A)	Enrollees without a behavioral health condition (B)	Difference (A - B)	<i>p</i> -value
Talked with health care provider about how injury or illness affects ability to work	67.7	65.8	1.9	0.669

Source: RETAIN service use data; RETAIN two-month enrollee survey.

Note: This table shows average service use rates of RETAIN enrollees with and without behavioral health conditions and the differences in the rates between the two populations. The sample comprises RETAIN enrollees who enrolled through June 2023 and who were randomly assigned to the treatment group.

s = We suppressed estimates representing fewer than three observations.

^a Any services beyond enrollment includes establishing an RTW plan or receiving an employment service such as job search assistance, training, on-site job analysis, ergonomic assessment, or transitional work opportunities.

^b These variables are derived from the 2-month survey, to which 467 of the 615 treatment group enrollees responded.

*/**/*** 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.

RETAIN = Retaining Employment and Talent After Injury/Illness Network; RTW = return to work.

Exhibit B.4. Minnesota: Baseline characteristics of RETAIN treatment group enrollees with and without behavioral health conditions

	Enrollees with a behavioral health condition (A)	Enrollees without a behavioral health condition (B)	Difference (A - B)	p-value
Sample size	278	413	NA	
Demographic characteristics, education, and health insurance				
Female	65.1	49.6	15.5***	0.000
Average age	40.5	45.2	-4.8***	0.000
Race and ethnicity			†	0.063
Hispanic	5.4	8.5	-3.1	0.111
White, non-Hispanic	85.6	76.3	9.3***	0.002
Black, non-Hispanic	4.7	7.7	-3.1*	0.093
Asian, non-Hispanic	1.1	1.2	-0.1	0.873
More than one race	2.5	2.9	-0.4	0.757
Other, non-Hispanic	s	2.4	s	s
Missing	0.0	1.0	-1.0**	0.045
Preferred language is English	97.8	95.6	2.2*	0.099
Education level				0.790
Less than high school diploma	4.0	2.7	1.3	0.361
High school diploma, GED, or certificate of completion	35.3	35.6	-0.3	0.927
Occupational certificate, license, or two-year college degree	29.1	30.8	-1.6	0.650
Four-year college degree or post-graduate degree	31.7	31.0	0.7	0.854
Characteristics of primary injury or illness				
Primary diagnosis based on ICD-10 codes			†††	0.000
Musculoskeletal, back	10.8	13.8	-3.0	0.233
Musculoskeletal, non-back	39.6	55.7	-16.1***	0.000
Mental	13.3	0.0	13.3***	0.000
Long COVID	6.1	2.2	3.9**	0.015
Other	30.2	28.3	1.9	0.594
New condition	46.0	56.4	-10.4***	0.007
Injury or illness as a result of an accident	33.1	44.1	-11.0***	0.003
Work-related injury or illness	18.0	12.3	5.6**	0.046
Injury or illness as part of a workers' compensation claim	0.1	0.1	-0.0	0.225
Time between injury or illness and enrollment			††	0.010
4 weeks or less	36.3	42.9	-6.5*	0.085

	Enrollees with a behavioral health condition (A)	Enrollees without a behavioral health condition (B)	Difference (A - B)	p-value
5 to 12 weeks	25.2	25.4	-0.2	0.942
13 to 24 weeks	12.9	8.7	4.2*	0.085
More than 24 weeks	18.0	11.1	6.8**	0.014
Missing	7.6	11.9	-4.3*	0.056
Characteristics of recent employment				
Employment status			+++	0.002
Not employed	10.8	4.6	6.2***	0.004
Self-employed	4.0	7.3	-3.3*	0.057
Employed	85.3	88.1	-2.9	0.279
Time since last worked				0.102
Currently working	20.9	22.5	-1.7	0.604
Last worked less than one week ago	11.2	16.2	-5.1*	0.054
Last worked one to four weeks ago	36.3	34.1	2.2	0.556
Last worked one to three months ago	23.7	23.0	0.7	0.823
Last worked more than three months ago	7.9	4.1	3.8**	0.046
Hours per week usually worked before injury or illness	38.1	40.5	-2.4**	0.011
Tenure at most recent job			+++	0.000
Less than six months	29.1	9.7	19.5***	0.000
Six months to one year	15.1	11.9	3.2	0.226
One to two years	14.0	14.5	-0.5	0.854
Two to five years	16.2	18.2	-2.0	0.499
More than five years	25.5	45.8	-20.2***	0.000
Missing	0.0	0.0	0.0	NA
Occupational classification of pre-injury or illness job				0.242
Management, professional, or related	37.1	37.5	-0.5	0.898
Service	34.9	27.6	7.3**	0.044
Sales and office	6.1	7.0	-0.9	0.636
Natural resources, construction, or maintenance	9.0	12.1	-3.1	0.186
Production, transportation, and material moving	12.9	15.7	-2.8	0.302
Missing	0.0	0.0	0.0	NA
Economic well-being				
Worked at a job that paid at least \$1,000 per month in the past year	79.5	89.8	-10.3***	0.000
Current receipt of income other than earnings				
SSDI or SSI	0.0	0.0	0.0	NA

	Enrollees with a behavioral health condition (A)	Enrollees without a behavioral health condition (B)	Difference (A - B)	<i>p</i> -value
Veterans' benefits	s	1.0	s	s
Workers' compensation	s	1.0	s	s
Employer-provided or other private disability insurance	2.9	4.4	-1.5	0.298
Other public programs	11.5	6.3	5.2**	0.021
Applied for or received SSDI or SSI in the past three years	1.4	1.2	0.2	0.799

Source: RETAIN enrollee intake data.

Note: This table shows the average baseline characteristics of RETAIN enrollees with and without behavioral health conditions and the differences in the baseline characteristics between the two populations. The sample comprises RETAIN enrollees who enrolled through June 2023.

s = We suppressed estimates representing fewer than 3 observations.

*/**/** 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.

RETAIN = Retaining Employment and Talent After Injury/Illness Network; Social Security Disability Insurance SSI = Supplemental Security Income; SSDI = Social Security Disability Insurance.

Exhibit B.5. Minnesota: Health and well-being of RETAIN treatment group enrollees with and without behavioral health conditions two months after enrollment.

	Enrollees with a behavioral health condition (A)	Enrollees without a behavioral health condition (B)	Difference (A - B)	p-value
Sample size	234	353	NA	
Self-reported health status			†††	0.000
Excellent	1.3	7.0	-5.7***	0.000
Very good	17.4	23.4	-6.0*	0.076
Good	42.5	42.1	0.4	0.930
Fair	29.5	19.3	10.2***	0.005
Poor	9.3	8.3	1.1	0.655
Number of days that physical health was “not good” during the past 30 days	13.5	12.6	0.9	0.352
Average pain in the past seven days (on a scale from one to 10)	4.0	3.9	0.1	0.561
During the past two months, pain interfered with normal work (both work outside the home and housework) all or most of the time	50.6	53.1	-2.5	0.548
In the past two months, was given a prescription for opioid pain relievers	23.0	30.6	-7.6**	0.040
Number of days that mental health was “not good” during the past 30 days	15.7	8.1	7.6***	0.000

Source: RETAIN enrollee two-month follow-up survey.

Note: This table shows the average health and well-being outcomes of RETAIN enrollees with and without behavioral health conditions and the differences between the two populations. The sample comprises people who enrolled in RETAIN through June 2023 and were randomly assigned to the treatment group.

s = We suppressed estimates representing fewer than three observations.

*/**/*** 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.

RETAIN = Retaining Employment and Talent After Injury/Illness Network.

Exhibit B.6. Minnesota: Service use of RETAIN treatment group enrollees with and without behavioral health conditions

	Enrollees with behavioral health condition (A)	Enrollees without a behavioral health condition (B)	Difference (A - B)	p-value
Sample size	278	413	NA	
Used any services after enrollment ^a	100.0	100.0	0.0	NA
Established RTW plan	97.8	97.6	0.3	0.820
Time elapsed between enrollment and established RTW plan (days)	1.2	1.6	-0.4	0.427
Exited RETAIN	89.6	88.6	0.9	0.694
Duration of services (if exited) (days)	125.5	117.3	8.2	0.101
Referred to services beyond RETAIN after six months	0.0	s	s	s
Use of workplace-based interventions				
Used on-site job analysis	0.0	0.0	0.0	NA
Used ergonomic assessment	0.0	0.0	0.0	NA
Used workplace accommodation	0.0	0.0	0.0	NA
Used any of the above workplace-based interventions	0.0	0.0	0.0	NA
Use of retraining or rehabilitation services				
Used job search services	s	1.7	s	s
Used any training services	2.2	2.2	-0.0	0.985
Participated in a transitional work opportunity ^a	0.0	s	s	s
Used other employment services	99.6	100.0	-0.4	0.318
Used any of the above retraining or rehabilitation services	99.6	100.0	-0.4	0.318
RTW coordinator communication with other parties involved in treatment enrollees' RTW				
RTW coordinator communicated with employer at least once	38.5	43.1	-4.6	0.226
RTW coordinator communicated with medical provider at least once	98.2	98.1	0.1	0.895
RTW coordinator communicated with workforce professional at least once	82.4	64.6	17.7***	0.000
RTW coordinator communicated with any of the above parties	99.6	98.8	0.9	0.189
Self-reported use of services or help in the past two months^b				
Used any employment-related support services	39.2	22.1	17.2***	0.000
Enrolled in a job training program	10.3	7.3	3.1	0.209
Worked with a care or other service coordinator	46.5	36.1	10.4**	0.014

	Enrollees with behavioral health condition (A)	Enrollees without a behavioral health condition (B)	Difference (A - B)	<i>p</i> -value
Talked with health care provider about how injury or illness affects ability to work	85.1	77.4	7.7**	0.017

Source: RETAIN service use data; RETAIN two-month enrollee survey.

Note: This table shows average service use rates of RETAIN enrollees with and without behavioral health conditions and the differences in the rates between the two populations. The sample comprises RETAIN enrollees who enrolled through June 2023 and who were randomly assigned to the treatment group.

s = We suppressed estimates representing fewer than three observations.

^a Any services beyond enrollment includes establishing an RTW plan or receiving an employment service such as job search assistance, training, on-site job analysis, ergonomic assessment, or transitional work opportunities.

^b These variables are derived from the 2-month survey, to which 587 of the 691 treatment group enrollees responded.

*/**/*** 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.

RETAIN = Retaining Employment and Talent After Injury/Illness Network; RTW = return to work.

Exhibit B.7. Ohio: Baseline characteristics of RETAIN treatment group enrollees with and without behavioral health conditions

	Enrollees with a behavioral health condition (A)	Enrollees without a behavioral health condition (B)	Difference (A - B)	p-value
Sample size	198	1,060	NA	
Demographic characteristics, education, and health insurance				
Female	69.2	59.8	9.4**	0.010
Average age	40.6	44.9	-4.2***	0.000
Race and ethnicity				0.184
Hispanic	7.1	3.9	3.2*	0.097
White, non-Hispanic	72.7	77.1	-4.3	0.205
Black, non-Hispanic	15.7	16.7	-1.0	0.713
Asian, non-Hispanic	s	0.4	s	s
More than one race	3.0	1.3	1.7	0.180
Other, non-Hispanic	s	0.5	s	s
Missing	0.0	s	s	s
Preferred language is English	100.0	99.7	0.3*	0.083
Education level			+++	0.000
Less than high school diploma	8.1	3.7	4.4**	0.031
High school diploma, GED, or certificate of completion	53.5	40.1	13.4***	0.001
Occupational certificate, license, or two-year college degree	26.3	30.0	-3.7	0.278
Four-year college degree or post-graduate degree	12.1	26.2	-14.1***	0.000
Characteristics of primary injury or illness				
Primary diagnosis based on ICD-10 codes			+++	0.000
Musculoskeletal, back	10.6	9.1	1.5	0.513
Musculoskeletal, non-back	70.7	71.7	-1.0	0.779
Mental	3.5	0.0	3.5***	0.008
Long COVID	0.0	0.0	0.0	NA
Other	15.2	19.2	-4.1	0.149
New condition	54.0	45.7	8.4**	0.031
Injury or illness as a result of an accident	58.1	54.1	4.0	0.295
Work-related injury or illness	8.1	1.9	6.2***	0.002
Injury or illness as part of a workers' compensation claim	0.0	0.0	0.0	NA
Time between injury or illness and enrollment				0.579
4 weeks or less	76.8	73.2	3.6	0.282
5 to 12 weeks	22.7	24.7	-2.0	0.543

	Enrollees with a behavioral health condition (A)	Enrollees without a behavioral health condition (B)	Difference (A - B)	p-value
13 to 24 weeks	s	1.7	s	s
More than 24 weeks	0.0	s	s	s
Missing	0.0	s	s	s
Characteristics of recent employment				
Employment status			+++	0.000
Not employed	28.3	10.2	18.1***	0.000
Self-employed	3.5	2.5	1.0	0.482
Employed	68.2	87.3	-19.1***	0.000
Time since last worked			+++	0.000
Currently working	15.7	30.8	-15.1***	0.000
Last worked less than one week ago	16.7	14.4	2.2	0.437
Last worked one to four weeks ago	35.4	34.6	0.7	0.844
Last worked one to three months ago	14.1	11.7	2.4	0.361
Last worked more than three months ago	18.2	8.5	9.7***	0.001
Hours per week usually worked before injury or illness	39.0	39.1	-0.1	0.871
Tenure at most recent job			+++	0.000
Less than six months	29.8	13.3	16.5***	0.000
Six months to one year	14.6	11.2	3.4	0.206
One to two years	16.7	13.5	3.2	0.267
Two to five years	15.7	17.8	-2.2	0.445
More than five years	23.2	44.2	-20.9***	0.000
Missing	0.0	0.0	0.0	NA
Occupational classification of pre-injury or illness job			+	0.064
Management, professional, or related	16.2	25.1	-8.9***	0.003
Service	40.9	39.2	1.8	0.645
Sales and office	11.6	9.9	1.7	0.488
Natural resources, construction, or maintenance	5.6	5.8	-0.3	0.869
Production, transportation, and material moving	25.8	20.0	5.8*	0.087
Missing	0.0	0.0	0.0	NA
Economic well-being				
Worked at a job that paid at least \$1,000 per month in the past year	73.2	82.5	-9.3***	0.006
Current receipt of income other than earnings				
SSDI or SSI	0.0	0.0	0.0	NA

	Enrollees with a behavioral health condition (A)	Enrollees without a behavioral health condition (B)	Difference (A - B)	p-value
Veterans' benefits	0.0	0.8	-0.8***	0.003
Workers' compensation	0.0	s	s	s
Employer-provided or other private disability insurance	11.6	28.2	-16.6***	0.000
Other public programs	0.0	0.7	-0.7***	0.008
Applied for or received SSDI or SSI in the past three years	s	0.5	s	s

Source: RETAIN enrollee intake data.

Note: This table shows the average baseline characteristics of RETAIN enrollees with and without behavioral health conditions and the differences in the baseline characteristics between the two populations. The sample comprises RETAIN enrollees who enrolled through June 2023.

s = We suppressed estimates representing fewer than 3 observations.

*/**/** 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.

RETAIN = Retaining Employment and Talent After Injury/Illness Network; Social Security Disability Insurance SSI = Supplemental Security Income; SSDI = Social Security Disability Insurance.

Exhibit B.8. Ohio: Health and well-being of RETAIN treatment group enrollees with and without behavioral health conditions two months after enrollment.

	Enrollees with a behavioral health condition (A)	Enrollees without a behavioral health condition (B)	Difference (A - B)	p-value
Sample size	160	885	NA	
Self-reported health status			†††	0.000
Excellent	2.5	7.6	-5.1***	0.001
Very good	18.2	32.8	-14.6***	0.000
Good	38.3	40.6	-2.3	0.583
Fair	31.5	16.6	14.8***	0.000
Poor	9.5	2.3	7.2***	0.003
Number of days that physical health was “not good” during the past 30 days	13.2	11.2	2.1**	0.050
Average pain in the past seven days (on a scale from one to 10)	4.8	3.5	1.3***	0.000
During the past two months, pain interfered with normal work (both work outside the home and housework) all or most of the time	60.7	48.4	12.4***	0.004
In the past two months, was given a prescription for opioid pain relievers	39.1	37.8	1.3	0.753
Number of days that mental health was “not good” during the past 30 days	14.4	7.5	6.9***	0.000

Source: RETAIN enrollee two-month follow-up survey.

Note: This table shows the average health and well-being outcomes of RETAIN enrollees with and without behavioral health conditions and the differences between the two populations. The sample comprises people who enrolled in RETAIN through June 2023 and were randomly assigned to the treatment group.

s = We suppressed estimates representing fewer than three observations.

*/**/** 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.

RETAIN = Retaining Employment and Talent After Injury/Illness Network.

Exhibit B.9. Ohio: Service use of RETAIN treatment group enrollees with and without behavioral health conditions

	Enrollees with behavioral health condition (A)	Enrollees without a behavioral health condition (B)	Difference (A - B)	p-value
Sample size	198	1,060	NA	
Used any services after enrollment ^a	95.5	95.7	-0.2	0.898
Established RTW plan	93.4	95.2	-1.8	0.352
Time elapsed between enrollment and established RTW plan (days)	19.8	21.0	-1.1	0.393
Exited RETAIN	76.8	81.8	-5.0	0.121
Duration of services (if exited) (days)	127.4	116.3	11.1**	0.011
Referred to services beyond RETAIN after six months	18.7	12.8	5.9**	0.049
Use of workplace-based interventions				
Used on-site job analysis	0.0	0.0	0.0	NA
Used ergonomic assessment	0.0	0.0	0.0	NA
Used workplace accommodation	26.3	33.8	-7.5**	0.031
Used any of the above workplace-based interventions	26.3	33.8	-7.5**	0.031
Use of retraining or rehabilitation services				
Used job search services	5.1	2.1	3.0*	0.068
Used any training services	0.0	s	s	s
Participated in a transitional work opportunity ^a	0.0	0.0	0.0	NA
Used other employment services	s	0.4	s	s
Used any of the above retraining or rehabilitation services	6.1	2.4	3.7**	0.037
RTW coordinator communication with other parties involved in treatment enrollees' RTW				
RTW coordinator communicated with employer at least once	64.6	75.8	-11.1***	0.003
RTW coordinator communicated with medical provider at least once	100.0	100.0	0.0	NA
RTW coordinator communicated with workforce professional at least once	17.2	8.6	8.6***	0.003
RTW coordinator communicated with any of the above parties	100.0	100.0	0.0	NA
Self-reported use of services or help in the past two months^b				
Used any employment-related support services	9.3	7.0	2.3	0.362
Enrolled in a job training program	5.2	3.6	1.6	0.385
Worked with a care or other service coordinator	25.4	23.2	2.2	0.556

	Enrollees with behavioral health condition (A)	Enrollees without a behavioral health condition (B)	Difference (A - B)	<i>p</i> -value
Talked with health care provider about how injury or illness affects ability to work	64.1	71.2	-7.1*	0.084

Source: RETAIN service use data; RETAIN two-month enrollee survey.

Note: This table shows average service use rates of RETAIN enrollees with and without behavioral health conditions and the differences in the rates between the two populations. The sample comprises RETAIN enrollees who enrolled through June 2023 and who were randomly assigned to the treatment group.

s = We suppressed estimates representing fewer than three observations.

^a Any services beyond enrollment includes establishing an RTW plan or receiving an employment service such as job search assistance, training, on-site job analysis, ergonomic assessment, or transitional work opportunities.

^b These variables are derived from the 2-month survey, to which 1,047 of the 1,258 treatment group enrollees responded.

*/**/*** 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.

RETAIN = Retaining Employment and Talent After Injury/Illness Network; RTW = return to work.