

## Use of Health Care Services for Mental Health Disorders and Spending Trends

By Paul Fronstin, Ph.D., Employee Benefit Research Institute, and M. Christopher Roebuck, Ph.D., RxEconomics, LLC

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### AT A GLANCE

Approximately 1 in 5 adults and 1 in 6 youth experience mental illness each year, and these rates have been rising. Over 20 million Americans have a substance use disorder. The COVID-19 pandemic has exacerbated mental health issues nationally and in the workplace. With increases in both the number of individuals diagnosed with mental health disorders and use of health care services, higher spending is of great concern to plan sponsors of health benefit programs. In this study, we investigate trends in spending on mental health disorders. The study examines how diagnoses are changing and associated changes in use of health care services and spending.

#### Key findings:

- The percentage of the population under age 65 with employment-based health coverage diagnosed with a mental health disorder increased from 14.2 percent in 2013 to 18.5 percent in 2020.
- Use of mental health care services increased between 2013 and 2020. Use of outpatient services increased the most — the percentage of enrollees using outpatient services increased from 12 percent to 16 percent, a 32 percent increase. In contrast, use of prescription drugs increased from 19 percent to 21 percent, a 6 percent increase. Use of inpatient services was unchanged at 0.3 percent between 2013 and 2020.
- Overall spending on mental health care services as a percentage of total spending increased from 6.8 percent in 2013 to 8.2 percent in 2020. As expected, among diagnosed enrollees, spending on mental health care services as a percentage of total spending was higher — roughly 20 percent between 2013 and 2019, increasing to 20.5 percent in 2020. Enrollees with a mental health disorder also tend to have higher overall health care spending.
- Among enrollees with a mental health diagnosis, average annual spending on mental health care services increased from \$1,987 to \$2,380 between 2013 and 2020. It increased 20 percent, or an average of 3 percent per year, but examining overall trends buries some important findings. Spending on outpatient mental health services increased 37 percent, while spending on prescription drugs for mental health disorders fell 15 percent. In contrast, overall spending on health care services increased 20 percent overall, or 3 percent per year, suggesting that either use of health care services or prices are increasing faster for mental health care services than for other services.
- Outpatient mental health care services accounted for two-thirds of total spending in 2020, up from just over one-half in 2013. The share taken by outpatient spending increased in part because spending on prescription drugs fell and because the dollar amount of outpatient spending increased. The decline in the share taken by spending on prescription drugs, from 34 percent to 23 percent of total spending between 2013 and 2020, was due to lower average prices for drugs, which may be due to some medications becoming available in generic form.

- Although all ages saw increased prevalence over the study period, prevalence was lower for older ages and increasingly higher among younger adult categories. Overall, the percentage of enrollees with a diagnosis for any mental health disorder fell from 21.5 percent for those ages 18–24 to 16.7 percent for those ages 55–64. Diagnoses for children (enrollees under age 18) were at 14.9 percent, lower than any of the adult categories.
- Anxiety diagnoses have been trending up for all ages since 2013. Similarly, diagnoses for major depressive disorder (MDD) have also increased for all groups. In general, diagnosis rates have increased faster among younger enrollees than among older enrollees.
- Spending on mental health care services as a percentage of total spending increased for all but the oldest age groups. Such spending increased the most for younger enrollees.
- Traditionally, older people use more health care than younger people. As a result, health care spending is not evenly distributed across the population. The same pattern does not hold for spending on mental health care services. The distribution of spending on mental health care services is much closer to the distribution of the enrolled population.

The data presented in this paper for 2020 — the first year of the COVID-19 pandemic — may underrepresent the number of people with mental health disorders if enrollees were unable to receive care because of shortages of mental health providers or because they did not seek or were unable to receive care due to lockdowns. The COVID-19 pandemic appears to also have heightened employers' awareness and response to employees' mental health disorders. And policymakers have also been addressing the issue of access to mental health services through various forms of mental health parity legislation. Despite heightened employer awareness and response and public policy efforts to address access, with increases in both the number of individuals diagnosed with mental health disorders and use of health care services, higher spending will continue to be of great concern to plan sponsors. A healthier and more productive work force should be considered as employers seek to manage the cost of treating mental health disorders.

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Paul Fronstin is Director of Health Benefits Research at the Employee Benefit Research Institute (EBRI). M. Christopher Roebuck is President and CEO of RxEconomics, LLC. This *Issue Brief* was written with assistance from the Institute’s research and editorial staff. Any views expressed in this report are those of the authors, and should not be ascribed to the officers, trustees, or other sponsors of EBRI, EBRI-ERF, or their staff. Neither EBRI nor EBRI-ERF lobbies or takes positions on specific policy proposals. EBRI invites comment on this research.

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# Use of Health Care Services for Mental Health Disorders and Spending Trends

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## Introduction

Approximately 1 in 5 adults and 1 in 6 youth experience mental illness each year, and these rates have been rising.<sup>1</sup> And over 20 million Americans have a substance use disorder.<sup>2</sup> Mental health and substance use disorders are often collectively referred to as behavioral or mental health disorders. With increases in both the number of individuals diagnosed with mental health disorders and use of health care services, higher spending is of great concern to plan sponsors of health benefit programs.

The COVID-19 pandemic has exacerbated mental health issues nationally and in the workplace. Between August 2020 and February 2021, the proportion of adults showing symptoms of major depressive disorder (MDD) or anxiety increased from 36.4 percent to 41.5 percent (Vahratian, Blumberg, Terlizzi, & Schiller 2021). According to the 2021 EBRI/Greenwald Research Workplace Wellness Survey, one-half of workers are at least moderately concerned about their emotional well-being.<sup>3</sup> Most companies think they have a responsibility to make sure employees are mentally healthy and emotionally well (Copeland 2021).

The COVID-19 pandemic appears to have heightened employers' awareness and response to employee's mental health disorders. The availability of telemedicine benefits, which are often used to provide mental health services, was already trending upward prior to the pandemic, and by 2021, nearly all employers offered a telemedicine program.<sup>4</sup> Furthermore, among employers already offering telemedicine, they made several changes to enhance the program, ranging from reducing or eliminating cost sharing to increasing communication of telemedicine resources.<sup>5</sup>

Policymakers have also been addressing the issue of access to mental health services through various forms of mental health parity legislation. For example, the Mental Health Parity Act of 1996 (MHPA) provided that large group health plans cannot impose annual or lifetime dollar limits on mental health benefits that are less favorable than any such limits imposed on medical/surgical benefits. The Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act of 2008 (MHPAEA) prevents group health plans and health insurance issuers that provide mental health or substance use disorder benefits from imposing less favorable benefit limitations on those benefits than on medical/surgical benefits. MHPAEA preserved the MHPA protections and added new protections, such as extending the parity requirements to substance use disorders. The Patient Protection and Affordable Care Act (ACA) of 2010 built on MHPAEA by requiring coverage of mental health and substance use disorder services as 1 of 10 essential health benefits categories. Most recently, the Consolidated Appropriations Act (CAA) of 2021 amended MHPAEA to require plans and issuers to provide comparative analyses of their non-quantitative treatment limitations (NQTLs) to the Secretary of the Treasury, the Secretary of Labor, and the Secretary of HHS (collectively, the Secretaries) upon request and to authorize the Secretaries to determine whether those NQTLs comply with MHPAEA. NQTLs include plan provisions such as determinations of prior authorization and medical necessity, as well as network adequacy.

Employers and workers spent nearly \$77 billion on mental health disorders in 2020.<sup>6</sup> Employers are looking for ways to address the mental health needs of workers given the current economic climate. And they are especially interested in addressing mental health needs because of the connection between MDD and productivity losses (Goetzl et al. 2018). Taking responsibility for workers' mental health may not only reduce spending on health care but may increase worker productivity. It has been estimated that mental health conditions cost employers over 200 million lost work days each year (Leopold 2001). Mental health disorders continue to be at the forefront of media coverage as well and are often connected with other popular policy topics such as gun control, homelessness, incarceration, veterans, and abortion.

With prevalence rates rising, we would expect use of mental health care services and spending to rise as well. One question however is whether spending on mental health care services is rising on a per-diagnosed-member basis. In

this study, we investigate trends in spending on mental health disorders. The study examines how diagnoses are changing, associated changes in use of health care services, and spending, both per capita and as a percentage of total spending. We focus on workers and families with employment-based health coverage.

## Data and Methods

Our main data source for the study is the MarketScan® Commercial Claims and Encounters Database (CCAE). Enrollee health insurance eligibility information, as well as medical (inpatient and outpatient) and pharmacy claims, comprise the CCAE. The CCAE contains more than 20 million covered lives with private health insurance. For each of the years spanning 2013 through 2020, we included all full-time active employees and their dependents. We required that enrollees were continuously enrolled for an entire calendar year in a non-capitated health plan. We excluded enrollees whose carve-out claims for mental health (MH) and substance abuse (SA) treatment were not included in the dataset. The resulting analytical sample was made up of 10 to 14.5 million individuals depending on the year. We also captured age, gender, geographic region, relationship to policyholder, and health plan type. Sample averages for 2013 and 2020 are shown in Figure 1.

Figure 1 Sample Demographics,* by Year		
	<b>2013</b>	<b>2020</b>
<b>Gender</b>		
Male	49%	50%
Female	51%	50%
<b>Age, Years</b>	32.5	33.2
Less than 18	26%	24%
18–24	12%	12%
25–34	13%	14%
35–44	17%	17%
45–54	20%	18%
55–64	12%	15%
<b>Geographic Region</b>		
Northeast	17%	14%
Midwest	21%	24%
South	40%	42%
West	22%	19%
<b>Relationship to Policyholder</b>		
Self	44%	46%
Spouse	19%	18%
Child/other dependent	37%	36%
<b>Health Plan Type</b>		
HMO/EPO	16%	15%
PPO/POS	69%	52%
HRA	8%	15%
HSA-eligible health plan	6%	17%
Source: Employee Benefit Research Institute estimates based on administrative enrollment and claims data.		
*HMO = health maintenance organization. EPO = exclusive provider organization. PPO = preferred provider organization. POS = point-of-service plan. HRA = health reimbursement arrangement. HSA = health savings account.		

## Mental Health and Substance Use Disorders

We searched medical claims for the presence of ICD 9/10<sup>7</sup> diagnosis codes for any mental health disorder,<sup>8</sup> including substance use, anxiety, attention deficit hyperactivity disorder (ADHD), autism, bipolar and manic disorders, eating disorders, major depressive disorder, phobias, schizophrenia, delusional disorders, dissociative disorders, obsessive-compulsive disorder, and post-traumatic stress disorder (PTSD). Individuals were classified as having a mental health condition if they had claims for at least one inpatient admission or two outpatient visits on different dates within a given year with a candidate diagnosis code in the primary or secondary position. Finally, we calculated prevalence rates for each mental health disorder as the number of members identified with each condition divided by the total number of eligible lives in each year.

## Classification of Health Care Costs

Using inpatient, outpatient, and prescription drug claims, we grouped health care spending into distinct categories using the coding schemes described below.

*Inpatient Spending* — Hospitalization spending was classified into spending on inpatient care for mental health diagnoses and spending on inpatient care for substance use based on Diagnosis-Related Group (DRG) Codes.<sup>9</sup>

*Outpatient Spending* — Categorizing outpatient spending was more complicated as it required several different coding schemes, sometimes in combination. We made use of the MarketScan® proprietary Procedure Group variable, which assembles many specific, yet similar, procedures into more general categories. Health Care Common Procedure Coding System (HCPCS) codes,<sup>10</sup> provider type, and ICD9/10 codes were also utilized. A total of 10 categories were constructed as shown in Appendix Figure 1.

*Prescription Drug Spending* — Six prescription drug categories were created using the proprietary American Hospital Formulary Service (AHFS) Pharmacologic-Therapeutic Classification® system, as shown in Appendix Figure 2.<sup>11</sup>

For each spending category, we calculated the average annual enrollee out-of-pocket cost (deductible, coinsurance, and/or copayment), plan paid amount, and total allowed amount. We also calculated the percentage of all health care spending represented by these amounts. Finally, in addition to reporting on all individuals in aggregate, we also present these averages by age group.

## Classification of Health Care Utilization

In addition to costs, use of health care services was also examined. For inpatient, outpatient, and prescription drug services, we derived the proportion of individuals using any of the service (i.e., the extensive margin) and the average use (i.e., days, visits, or fills) of the service utilized conditional on using any service (i.e., the intensive margin). Note that the product of these two averages represents the average number of units utilized across the full sample. As with spending, we present these averages by age group, in addition to reporting on all individuals in aggregate. Not all findings are presented in the paper.

On a final note, in addition to reporting all of these spending and utilization averages based on the sample of all enrollees, in some cases, we present them among enrollees diagnosed with a mental health or substance use disorder as previously defined (e.g., ICD9: 290.xx–319.xx; ICD10: Fxx.xx).

*Limitations* — There are several limitations with our analysis. First, we are unable to examine racial disparities in use of mental health services as there is no data for race/ethnicity in the MarketScan® database. Prior work has found that people of color are more likely to need mental health care services, are less likely to access them, and are more likely to have poor clinical outcomes.<sup>12</sup> Second, our estimates for 2020 — the first year of the COVID-19 pandemic — may underrepresent the number of people with symptoms of anxiety and depression if enrollees were unable to receive care because of shortages of mental health providers or because they did not seek or were unable to receive care due to lockdowns. Treatment estimates are also underreported to the degree that enrollees are using out-of-network providers, where the health care claim is not being submitted for adjudication. A recent report found that enrollees

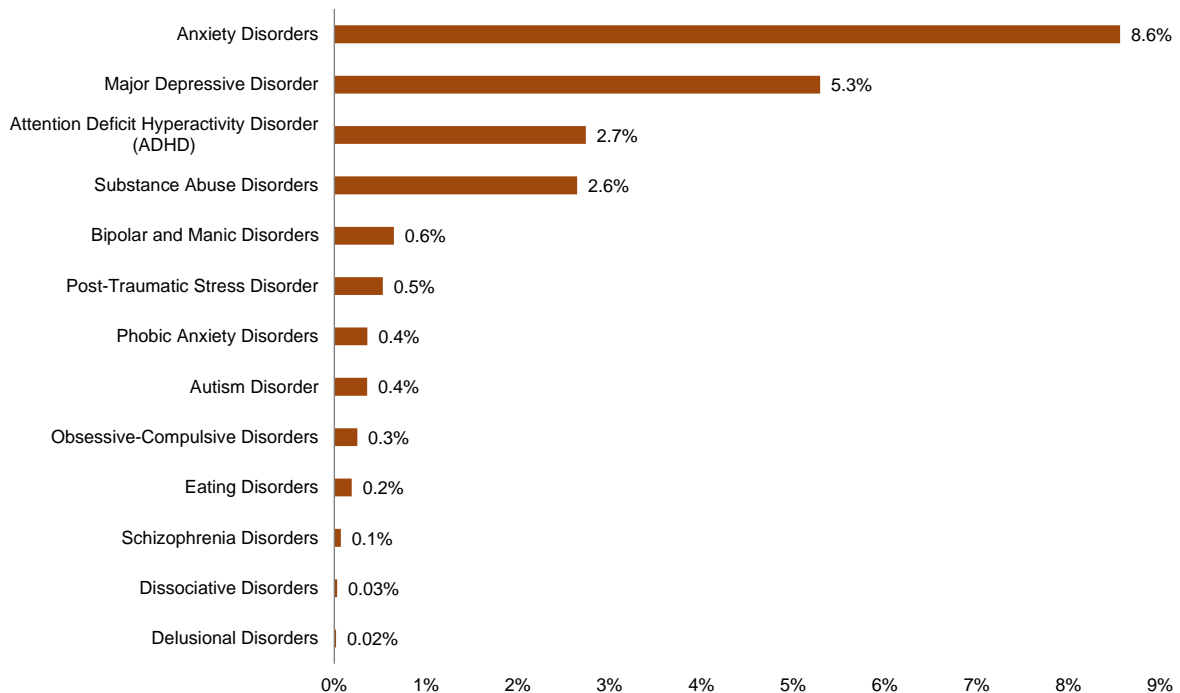
were more than five times as likely to have to use out-of-network providers for behavioral health care than for analogous medical services (Melek, Davenport, and Gray 2019). Finally, our estimates on health care spending do not include costs that are not directly related to health care services, such as lower productivity and missed work days.

## Prevalence of Mental Health Disorders

Diagnosis rates for the 13 mental health disorders are shown in Figure 2. Anxiety disorders are the most prevalent, with 8.6 percent of the population under age 65 with employment-based health coverage treated for it in 2020. MDD is second most prevalent with 5.3 percent receiving treatment. Attention deficit hyperactivity disorder (ADHD), which affects mainly younger people, was seen in 2.7 percent of the population. Substance use disorders accounted for 2.6 percent of the population. Otherwise, fewer than 1 percent were diagnosed with any of the other mental health disorders.

Overall, the percentage of the population under age 65 with employment-based health coverage diagnosed with a mental health disorder increased from 14.2 percent in 2013 to 18.5 percent in 2020 (Figure 3). Despite the COVID-19 pandemic that started in 2020, nearly all the increase in diagnosis rates occurred between 2013 and 2019. The prevalence of anxiety and MDD accounted for the bulk of the increase in overall mental health disorder prevalence rates between 2013 and 2020 (Figure 4). Rates of anxiety jumped from 4.4 percent to 8.6 percent. MDD rates increased from 3.8 percent to 5.3 percent, and ADHD rates increased from 2.3 percent to 2.7 percent. Substance use disorders increased from 2.2 percent to 2.6 percent.

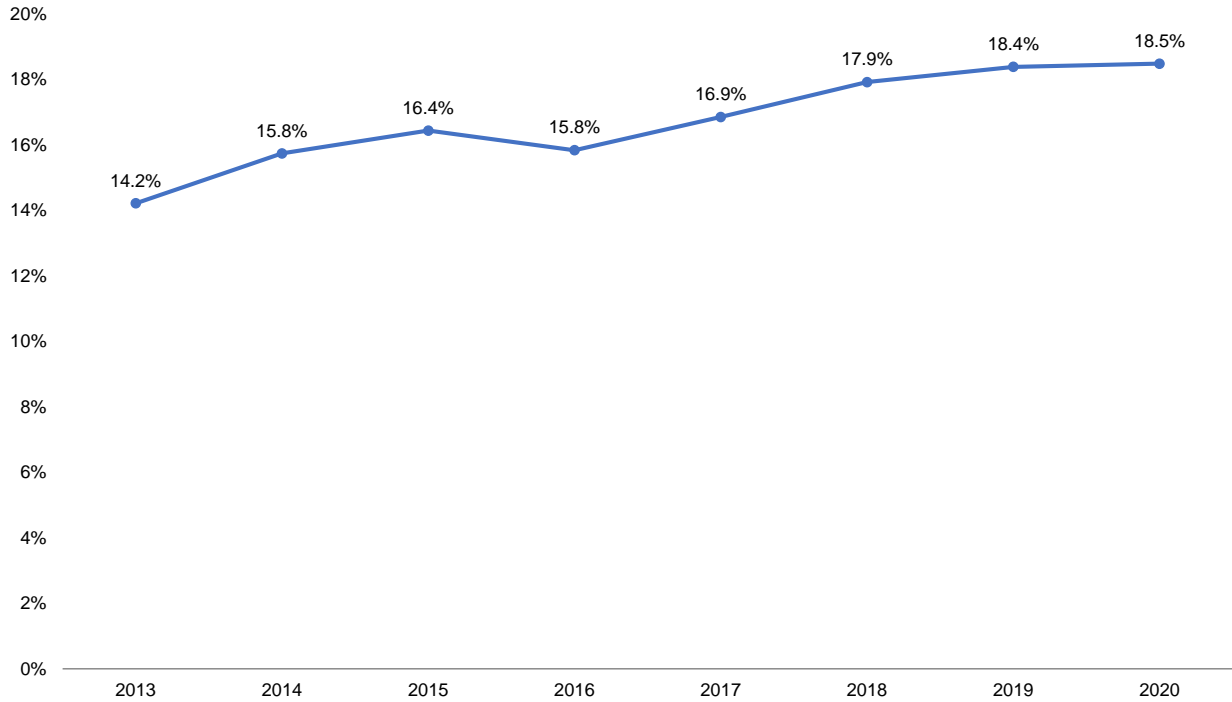
Figure 2  
Percentage of Population Under Age 65 Diagnosed With Various Mental Health Disorders, 2020



Source: Employee Benefit Research Institute estimates based on administrative enrollment and claims data.

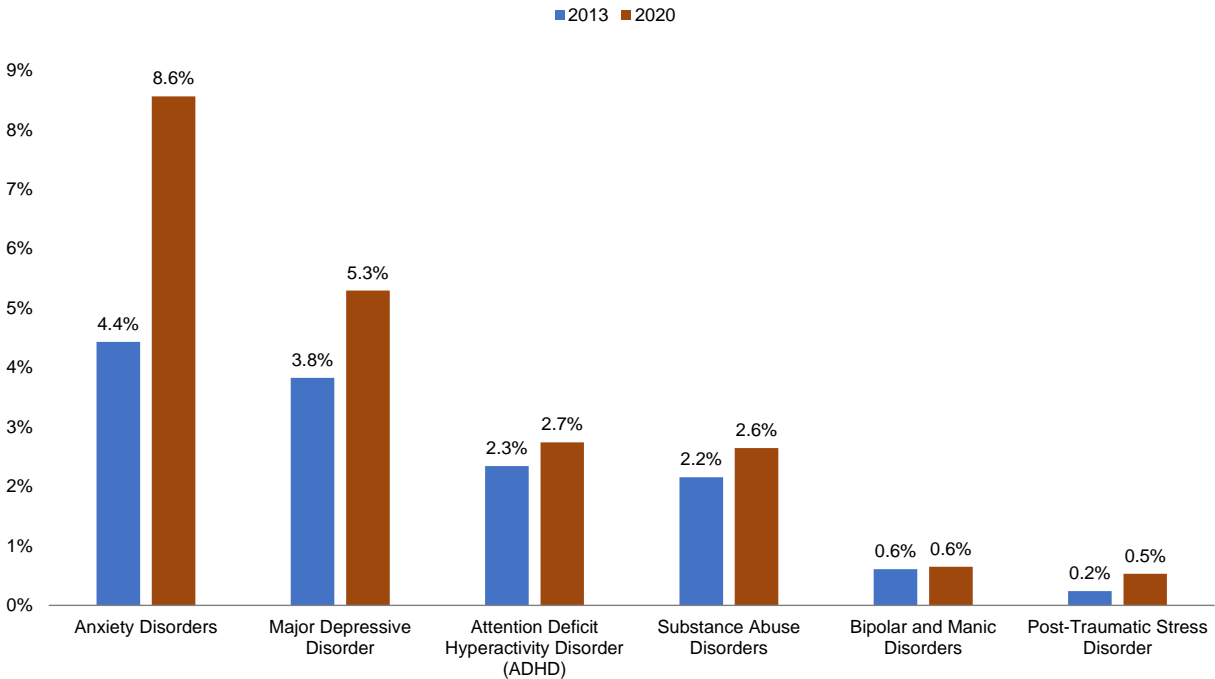


Figure 3  
**Percentage of Population Under Age 65 Diagnosed With Any Mental Health or Substance Abuse Disorder, 2013–2020**



Source: Employee Benefit Research Institute estimates based on administrative enrollment and claims data.

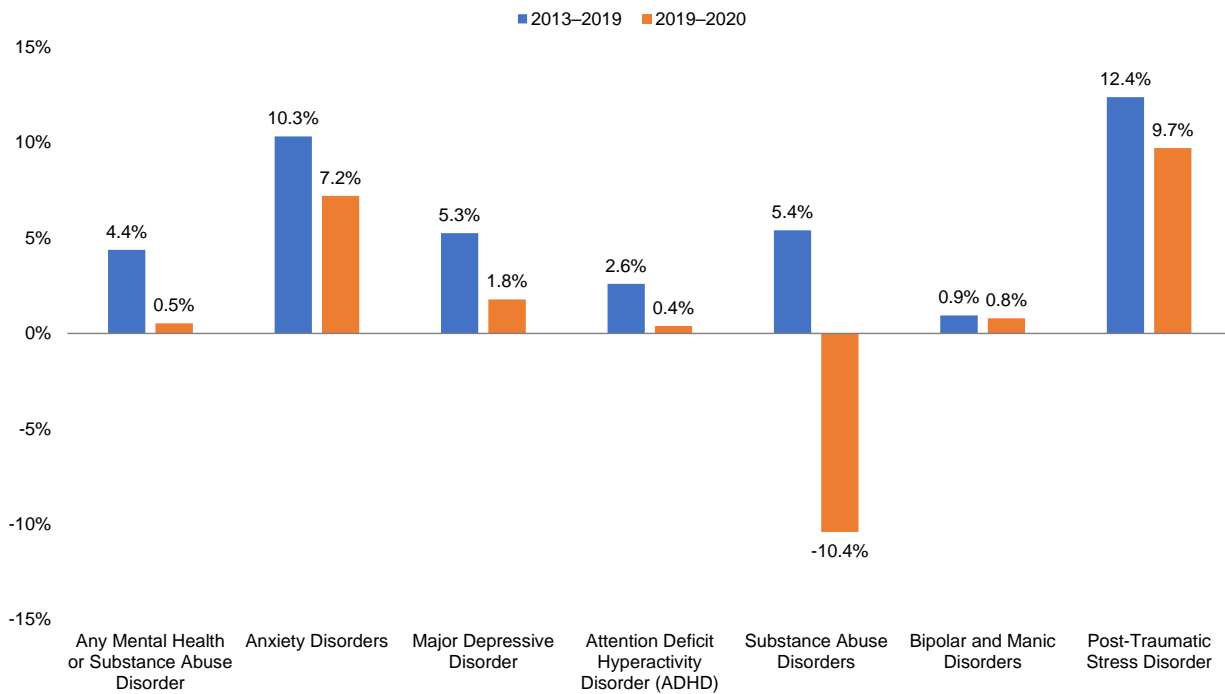
Figure 4  
**Percentage of Population Under Age 65 Diagnosed With Various Mental Health or Substance Abuse Disorders, 2013 and 2020**



Source: Employee Benefit Research Institute estimates based on administrative enrollment and claims data.

In order to isolate the impact of the COVID-19 pandemic on diagnosis rates, we examined the average annual change in diagnosis rates from 2013-2019 and compared it to the change between 2019-2020 (Figure 5). Despite everything that has been said about the pandemic contributing to mental health challenges, it does not appear to be showing up in claims any more than in the past. Overall, diagnosis rates increased an average of 4.4 percent per year between 2013 and 2019 but only 0.5 percent between 2019 and 2020. The prevalence of anxiety disorders increased at an average annual rate of 10.3 percent between 2013 and 2019 but increased only 7.2 percent between 2019 and 2020. Similar trends can be seen for other mental health disorders. With respect to substance use disorders, the diagnosis rate increased at an average of 5.4 percent between 2013 and 2019 but fell 10.4 percent in 2020. This may be related to fewer enrollees seeking or being able to receive care due to lockdowns.

**Figure 5**  
**Average Annual Change in Percentage of Population Under Age 65 Diagnosed With Various Mental Health Disorders, 2013–2020**



Source: Employee Benefit Research Institute estimates based on administrative enrollment and claims data.

## Use of Mental Health Care Services

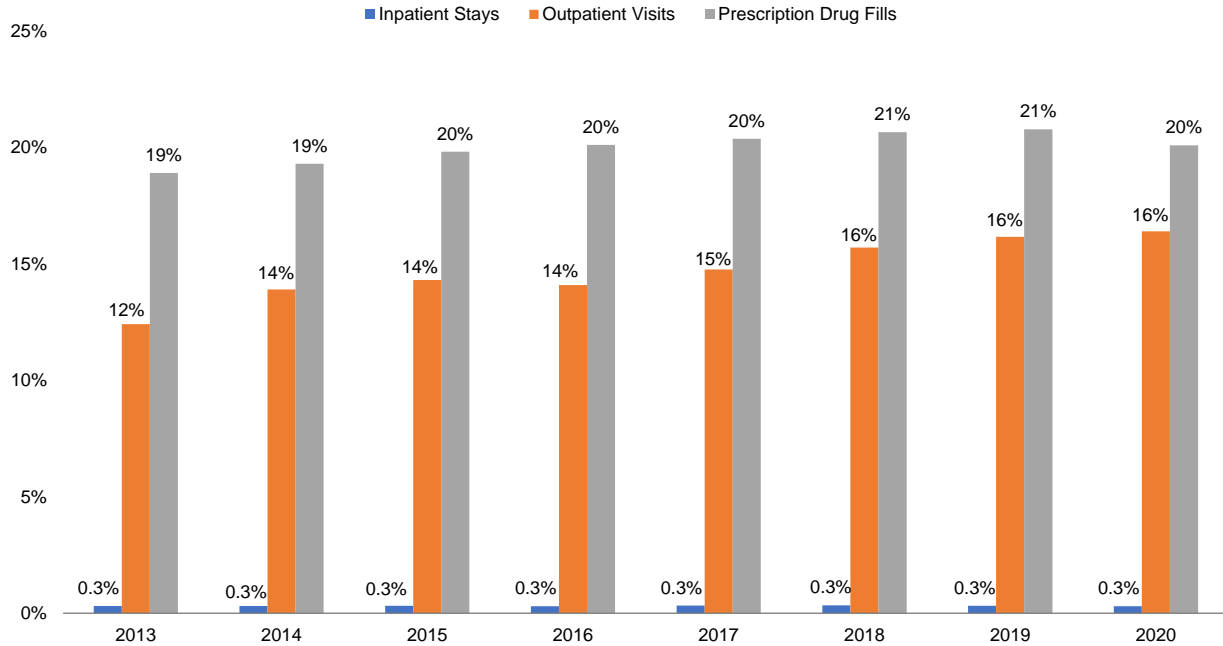
Commensurate with the increase in diagnosis rates, use of mental health care services increased between 2013 and 2020 (Figure 6). Use of outpatient services increased the most — the percentage of enrollees using outpatient services increased from 12 percent to 16 percent, a 32 percent increase. In contrast, use of prescription drugs increased from 19 percent to 21 percent, a 6 percent increase. In fact, use of prescription drugs reached 21 percent in 2019, before falling to 20 percent. Use of inpatient services was a constant 0.3 percent between 2013 and 2020.

Among enrollees with a mental health diagnosis, the propensity to use mental health services was mostly unchanged from 2013–2020 (Figure 7). Use of outpatient services increased from 86 percent to 87 percent. Use of prescription drugs increased from 63 percent to 65 percent. And use of inpatient services remained at 2 percent from 2013–2020.

In contrast, among enrollees who accessed mental health care, utilization increased over the study period. These enrollees used an average of 5.4 prescription drugs, 6.7 outpatient visits, and 21.6 inpatient stays (per 100 patients) in 2020 (Figure 8). Use of prescription drugs trended up between 2013 and 2020, increasing from 4.4 fills to 5.4 fills. In

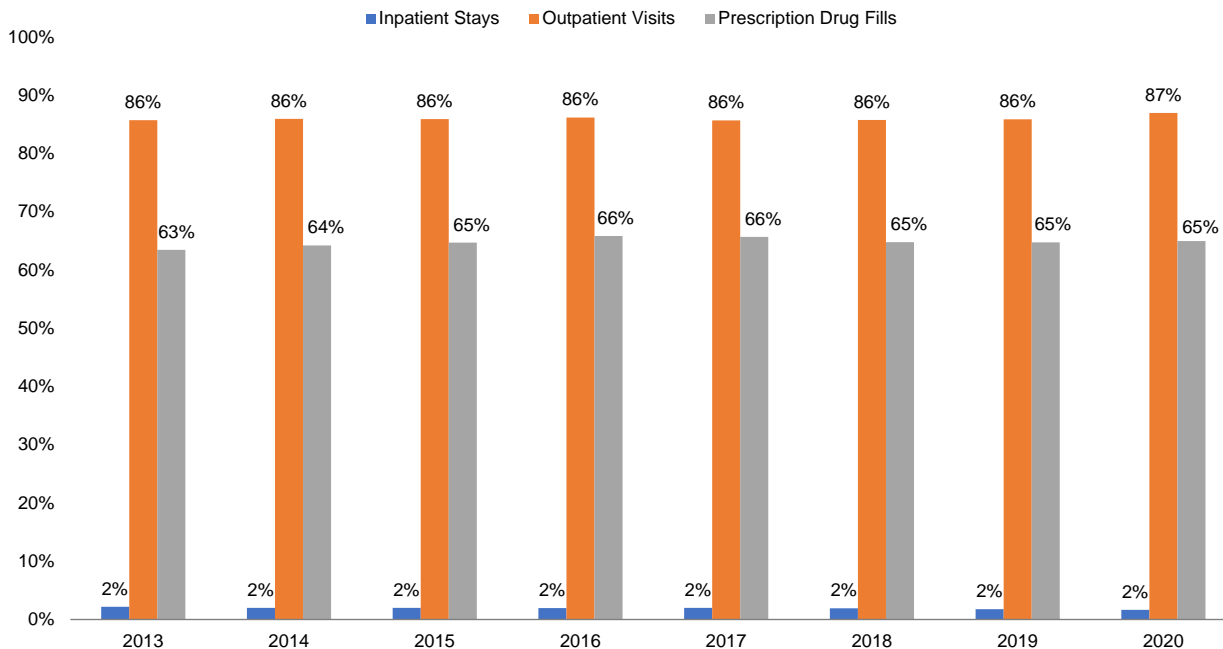
contrast, outpatient visits initially fell and then increased between 2017 and 2020. The number of inpatient visits fell between 2013 and 2014, increased between 2014 and 2017, and fell between 2017 and 2020.

**Figure 6**  
**Probability of Use of Any Mental Health or Substance Abuse Services, by Type of Health Care Service, All Enrollees, 2013–2020**



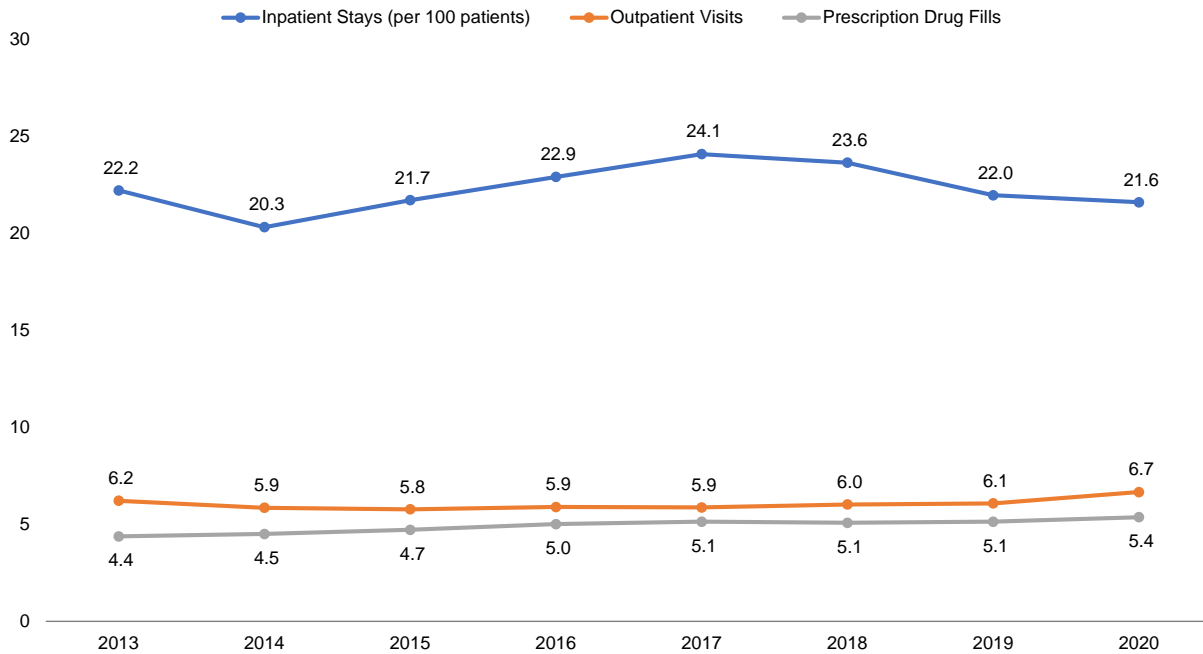
Source: Employee Benefit Research Institute estimates based on administrative enrollment and claims data.

**Figure 7**  
**Probability of Use of Any Mental Health or Substance Abuse Services, by Type of Health Care Service, All Diagnosed Enrollees, 2013–2020**



Source: Employee Benefit Research Institute estimates based on administrative enrollment and claims data.

Figure 8  
**Amount of Use, Among Those Using Mental Health or Substance Abuse Services, by Type of Health Care Service, Diagnosed Enrollees, 2013–2020**



Source: Employee Benefit Research Institute estimates based on administrative enrollment and claims data.

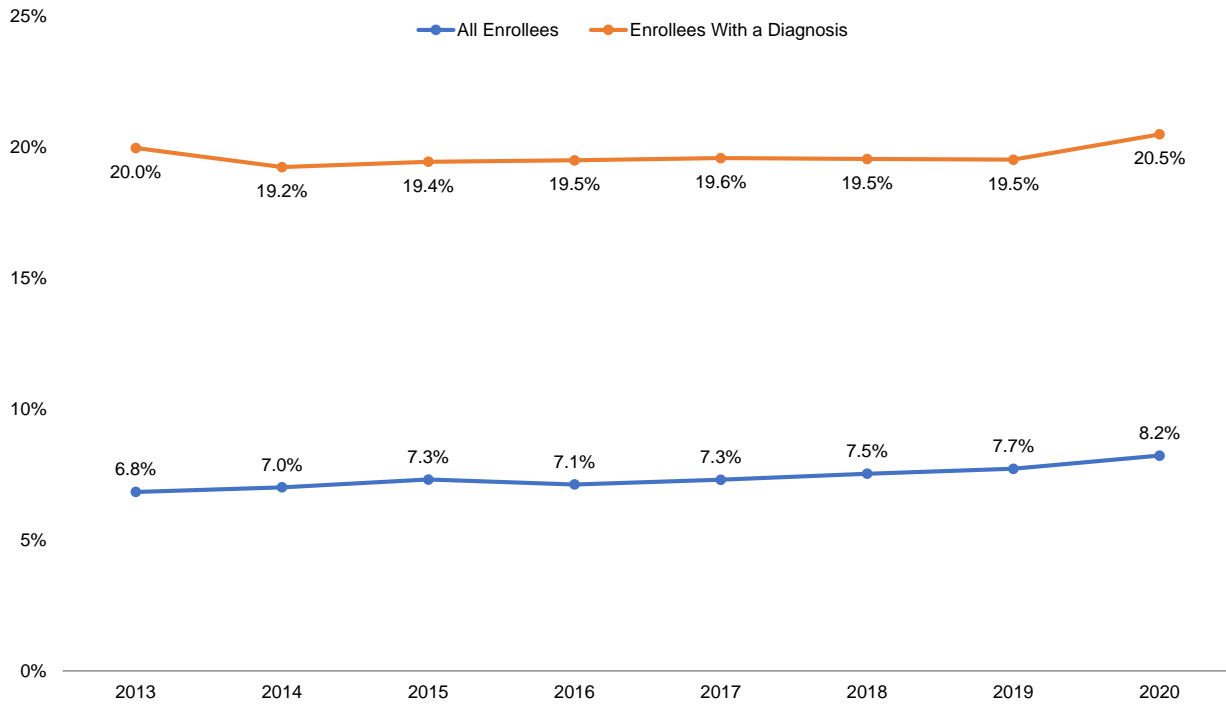
## Spending on Mental Health Care Services

Overall spending on mental health care services as a percentage of total spending increased between 2013 and 2020 (Figure 9). In 2013, 6.8 percent of health care spending was attributable to mental health care services. By 2020, it was 8.2 percent, a 20 percent increase over 2013 spending. Among diagnosed enrollees, spending on mental health care services as a percentage of total spending was much higher — roughly 20 percent between 2013 and 2019, increasing to 20.5 percent in 2020. This increase might have been due to reductions in use of other health care services as a result of the COVID-19 pandemic.

Among enrollees with a mental health diagnosis, average annual spending on mental health care services increased from \$1,987 to \$2,380 between 2013 and 2020 (Figure 10). It increased 20 percent, or an average of 3 percent per year, but examining overall trends buries some important findings. Spending on outpatient mental health services increased 37 percent, while spending on prescription drugs for mental health disorders fell 15 percent. In contrast, overall spending on health care services increased 20 percent overall, or 3 percent per year, suggesting that either use of health care services or prices are increasing faster for mental health care services than for other services.

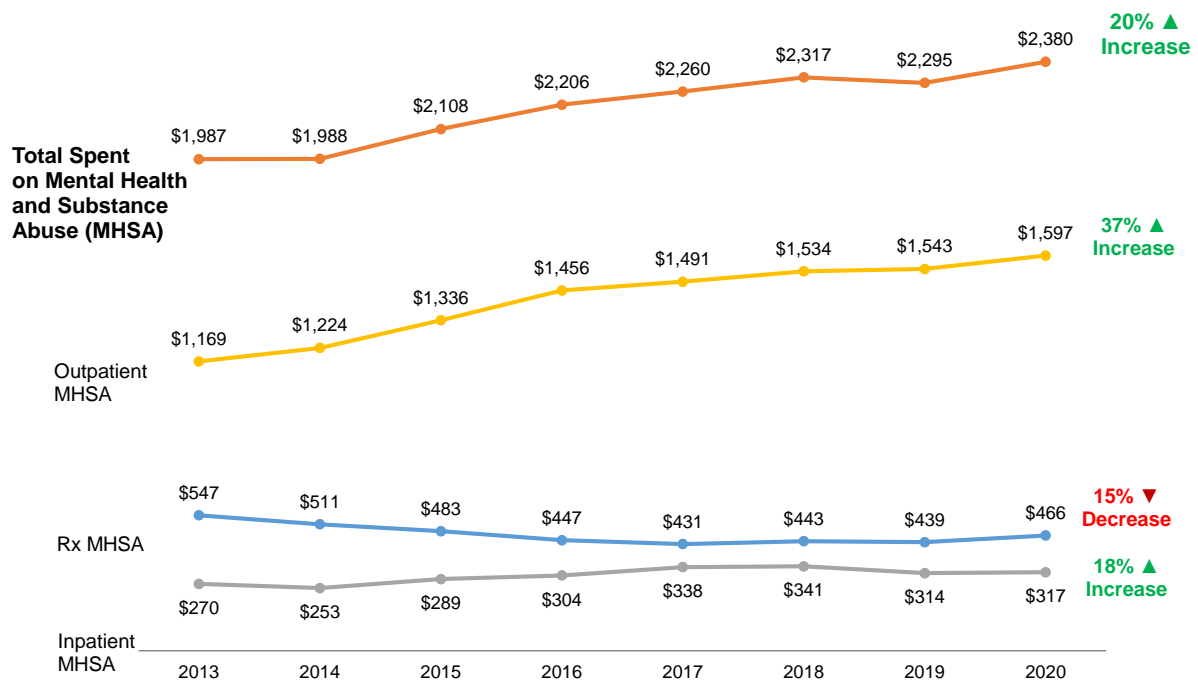
Outpatient mental health care services accounted for two-thirds of total spending in 2020, up from just over one-half in 2013 (Figure 11). The share taken by outpatient spending increased in part because spending on prescription drugs fell and because the dollar amount of outpatient spending increased. The decline in the share taken by spending on prescription drugs, from 34 percent to 23 percent of total spending between 2013 and 2020, may have been due to some medications having moved off patent and becoming available as generic drug equivalents.<sup>13</sup> This same phenomenon occurred between 2002 and 2005 (Mark, Levit, Vandivort-Warren, Buck, and Coffey 2011). Spending on inpatient services was in the 12 to 14 percent range, and neither trended upward or downward.

**Figure 9**  
**Proportion of Total Spending on Mental Health or Substance Abuse, 2013–2020**



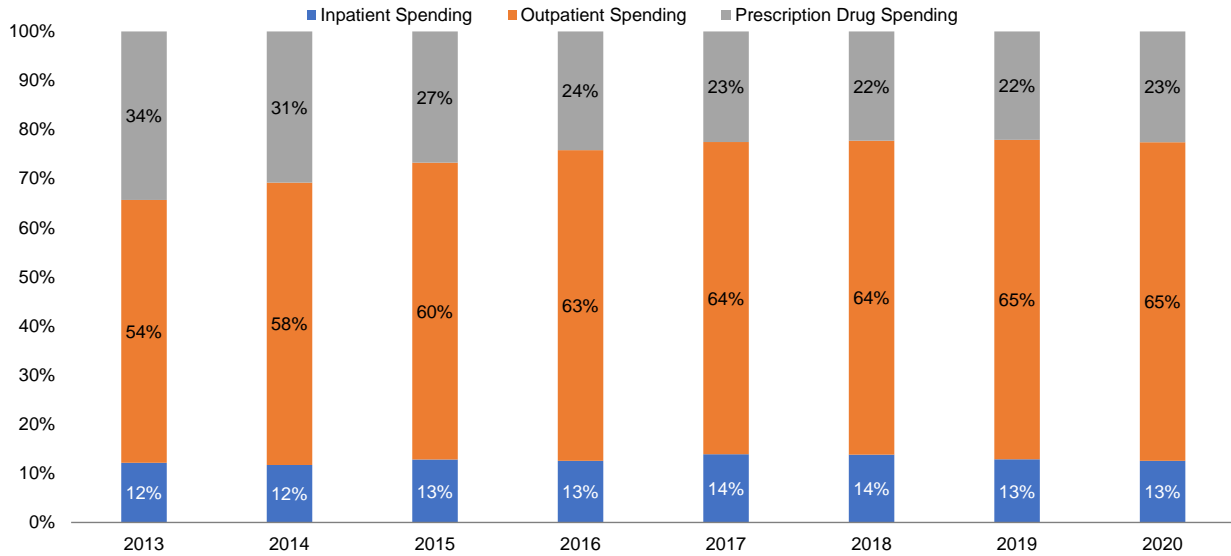
Source: Employee Benefit Research Institute estimates based on administrative enrollment and claims data.

**Figure 10**  
**Total Annual Spending on Mental Health Disorders per Diagnosed Enrollee, 2013–2020**



Source: Employee Benefit Research Institute estimates based on administrative enrollment and claims data.

Figure 11  
**Mental Health and Substance Abuse Spending, by Type of Health Care Service, 2013–2020**

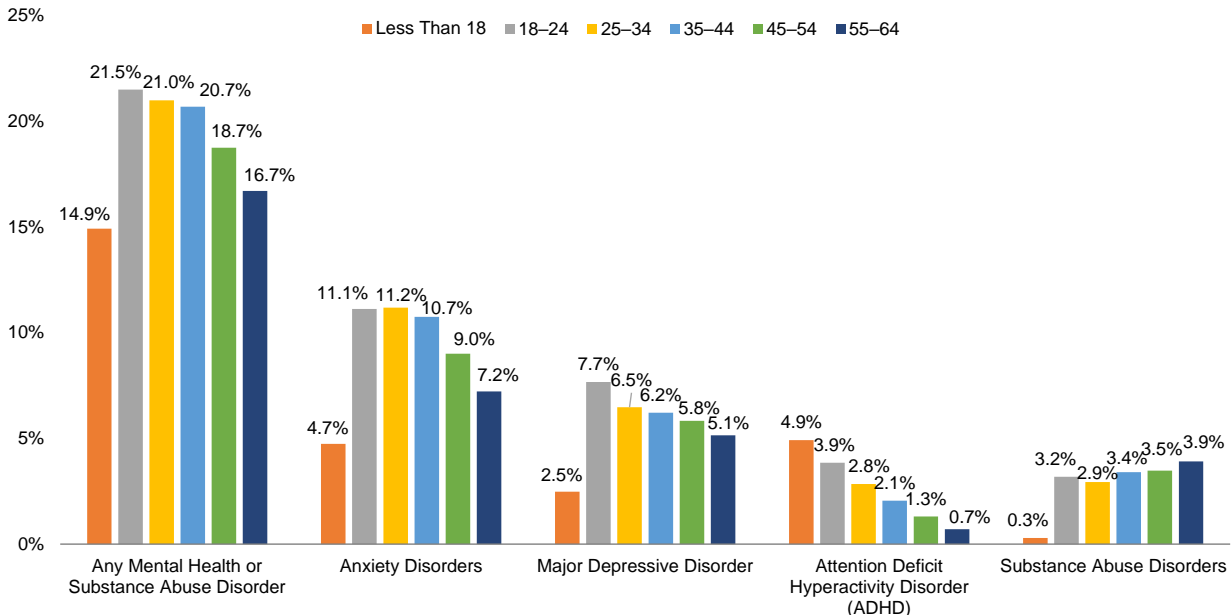


Source: Employee Benefit Research Institute estimates based on administrative enrollment and claims data.

### Mental Health Diagnoses by Enrollee Age

The prevalence of mental health diagnoses tended to decrease with age (Figure 12). The percentage of enrollees with a diagnosis for any mental health disorder ranged from 21.5 percent for those ages 18–24 to 16.7 percent for those ages 55–64. The exception to this age-related pattern is that diagnoses were lowest for children (enrollees under age 18) at 14.9 percent. We saw the same pattern when examining anxiety disorders and MDD. However, when we examined ADHD, we found that enrollees under age 18 were the most likely age group to have such a diagnosis, which is to be expected as ADHD is usually first diagnosed when a person is in school. There is a question as to whether diagnosis rates fall with age because enrollees no longer have mental health disorders or because they are less likely to seek treatment as they get older. In contrast to anxiety disorder, MDD, and ADHD, diagnoses for substance use disorders tend to increase slightly with age.

Figure 12  
**Percentage of Population Under Age 65 Diagnosed With Various Mental Health Disorders, by Age, 2020**



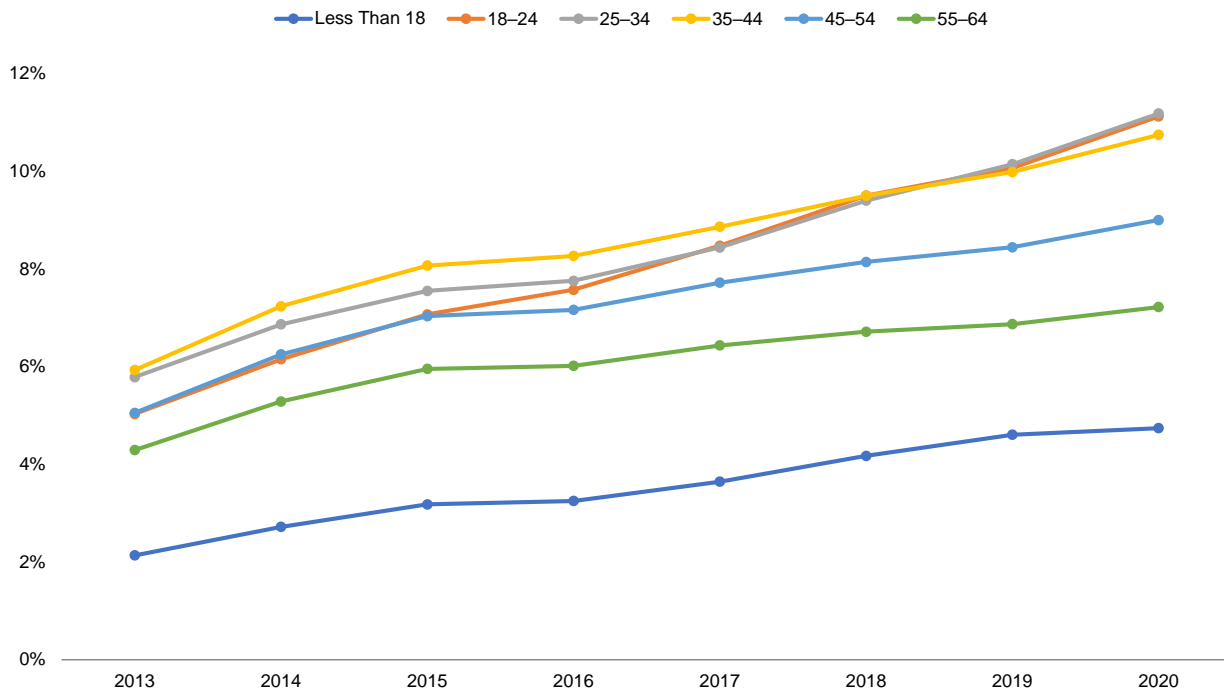
Source: Employee Benefit Research Institute estimates based on administrative enrollment and claims data.

## Trends in Diagnoses by Enrollee Age

Anxiety diagnoses have trended up for all ages since 2013 (Figure 13). They more than doubled for enrollees under age 18 and those ages 18–24, increasing from 2.1 percent to 4.7 percent for enrollees under age 65, and increasing from 5 percent to 11.1 percent for those 18–24 between 2013 and 2020. They almost doubled for enrollees ages 25–34, increasing from 5.8 percent to 11.2 percent. The increases for enrollees ages 35–44, 45–54, and 55–64 were smaller.

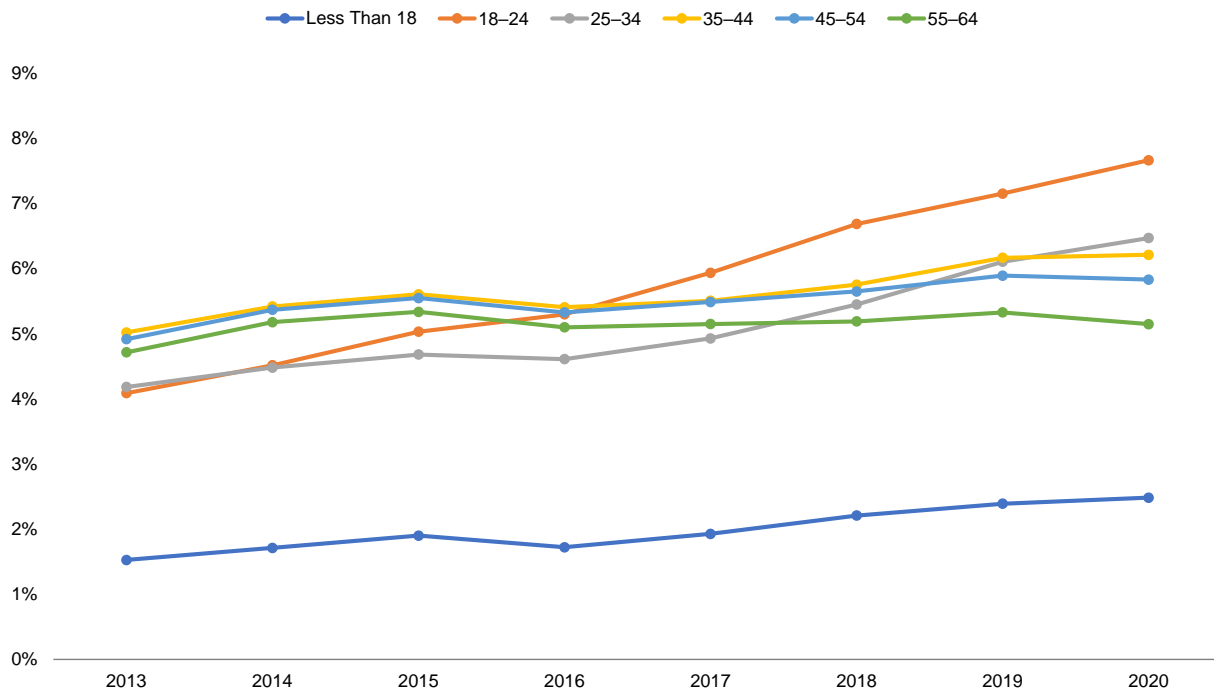
Diagnoses for MDD also increased for all groups, but the diagnosis rates tended to be lower than anxiety rates, and they did not increase as fast as anxiety rates (Figure 14). Enrollees ages 18–24 experienced the largest increase in MDD rates. The rate of MDD among 18–24-year-old enrollees increased from 4.1 percent to 7.7 percent, an 87 percent increase. Similarly, enrollees under age 18 saw their MDD rates increase from 1.5 percent to 2.5 percent, a 62 percent increase. Enrollees 25–34 years old saw their MDD rates increase from 4.2 percent to 6.5 percent, a 55 percent increase. In contrast, MDD rates among enrollees ages 35–44 increased from 5 percent to 6.2 percent, a 24 percent increase. They increased from 4.9 percent to 5.8 percent among 45–54-year-old enrollees, a 19 percent increase. And they increased from 4.7 percent to 5.1 percent among 55–64-year-old enrollees, a 9 percent increase.

Figure 13  
Percentage of Population Under Age 65 Diagnosed With Anxiety, by Age, 2013–2020



Source: Employee Benefit Research Institute estimates based on administrative enrollment and claims data.

Figure 14  
**Percentage of Population Under Age 65 Diagnosed With Depression, by Age, 2013–2020**



Source: Employee Benefit Research Institute estimates based on administrative enrollment and claims data.

## Trends in Use of Mental Health Care Services and Spending by Enrollee Age

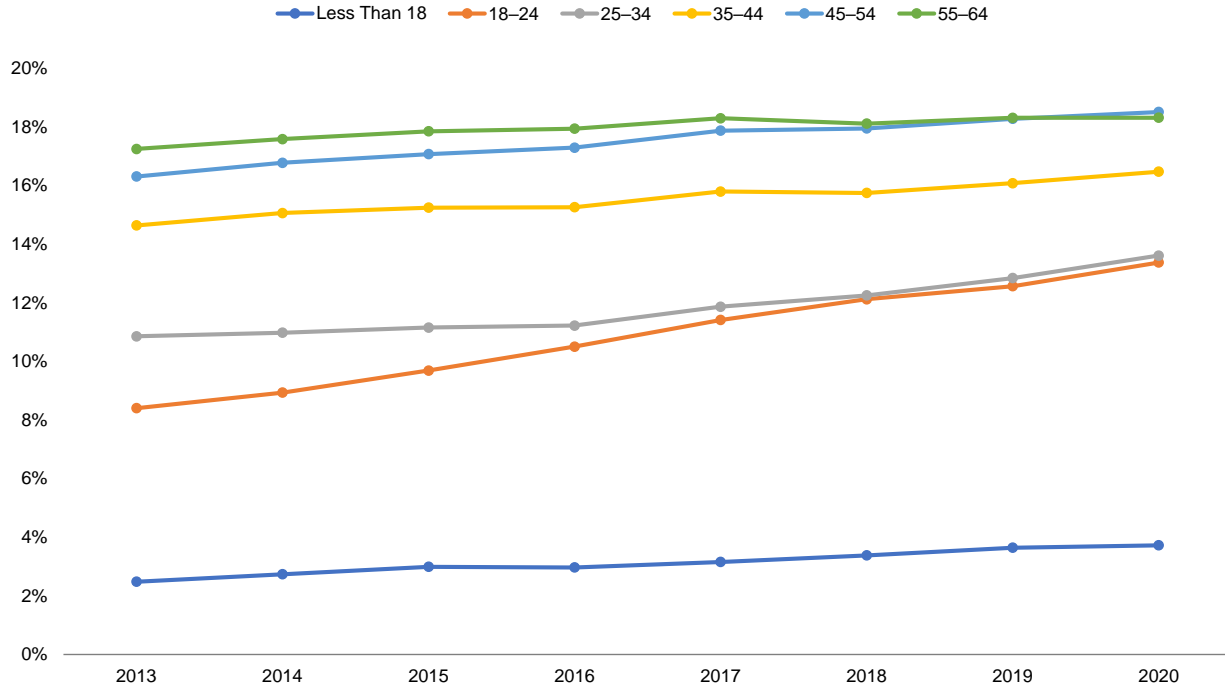
Following the upward trends in anxiety and depression, use of health mental care services increased commensurate with the various age groups. For example, all age groups experienced an increase in the percentage with an antidepressant drug fill (Figure 15). Furthermore, increases were higher for younger ages. Similarly, the number of drug fills for antidepressants increased for each age group (Figure 16). While they increased the most for younger age groups, the differences were as pronounced as they were for the percentage of enrollees with such a drug fill.

The likelihood of having an outpatient psychotherapy visit increased for nearly all age groups and increased the most for younger age groups (Figure 17). Enrollees ages 55–64 were the exception. They saw a slight decrease in the percentage with a psychotherapy visit. The number of psychotherapy visits increased as well, and the increases generally followed the previously observed age pattern — younger enrollees experienced a greater increase than older enrollees in use of psychotherapy visits (Figure 18).

Spending on mental health care services as a percentage of total spending increased for all but the oldest age groups (Figure 19). Spending on mental health care services increased the most for enrollees under age 18, increasing from 12 percent of total spending in 2013 to 18 percent in 2020, a 55 percent increase. For enrollees ages 18–24, spending increased from 16 percent to 18 percent, a 15 percent increase. Those ages 25–34 experienced a 50 percent increase in spending, increasing from 7 percent to 10 percent. Enrollees ages 45–54 experienced a 3 percent increase in spending, while those ages 55–64 experienced a 5 percent decrease when looking at spending on mental health care services as a percentage of total health care spending.

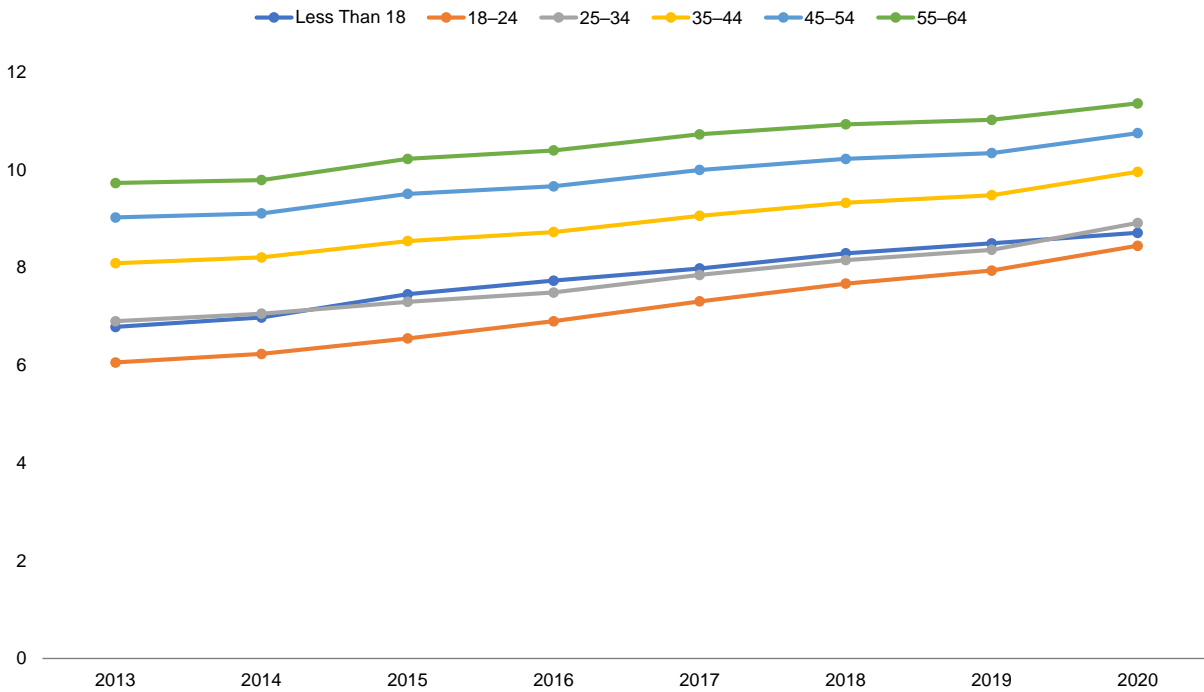


Figure 15  
**Percentage of Population Under Age 65 With Antidepressant Drug Fill, by Age, 2013–2020**



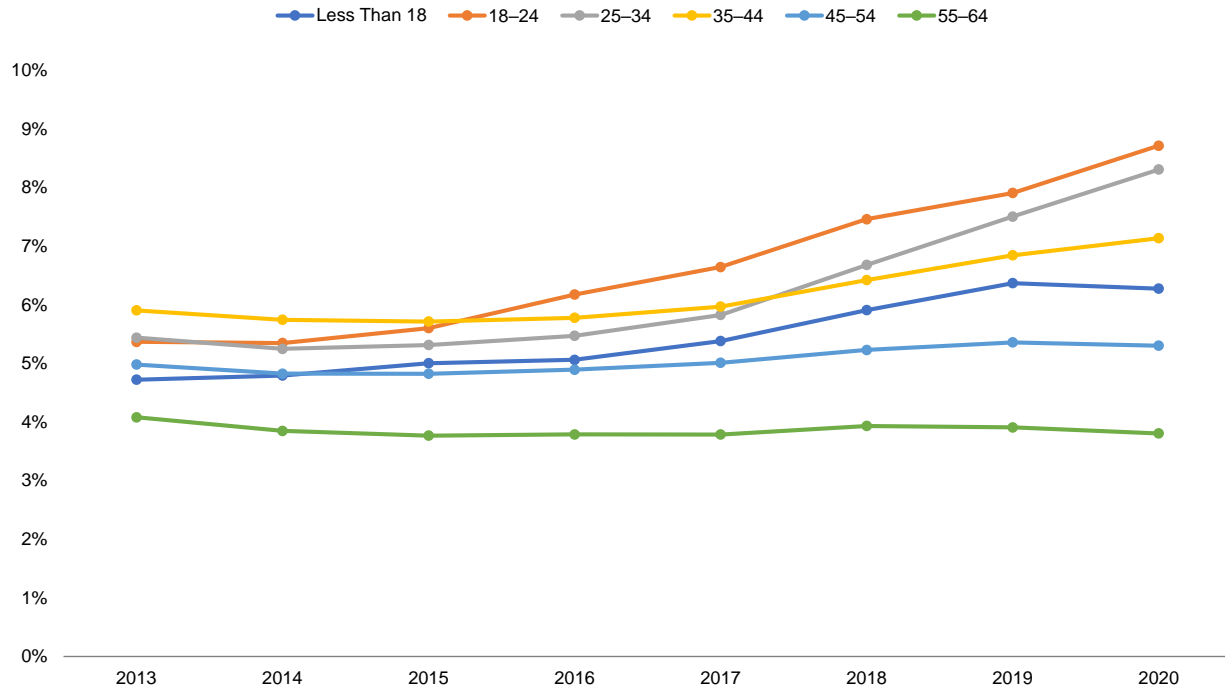
Source: Employee Benefit Research Institute estimates based on administrative enrollment and claims data.

Figure 16  
**Average Annual Number of Antidepressant Drug Fills, Among Those With a Drug Fill, by Age, 2013–2020**



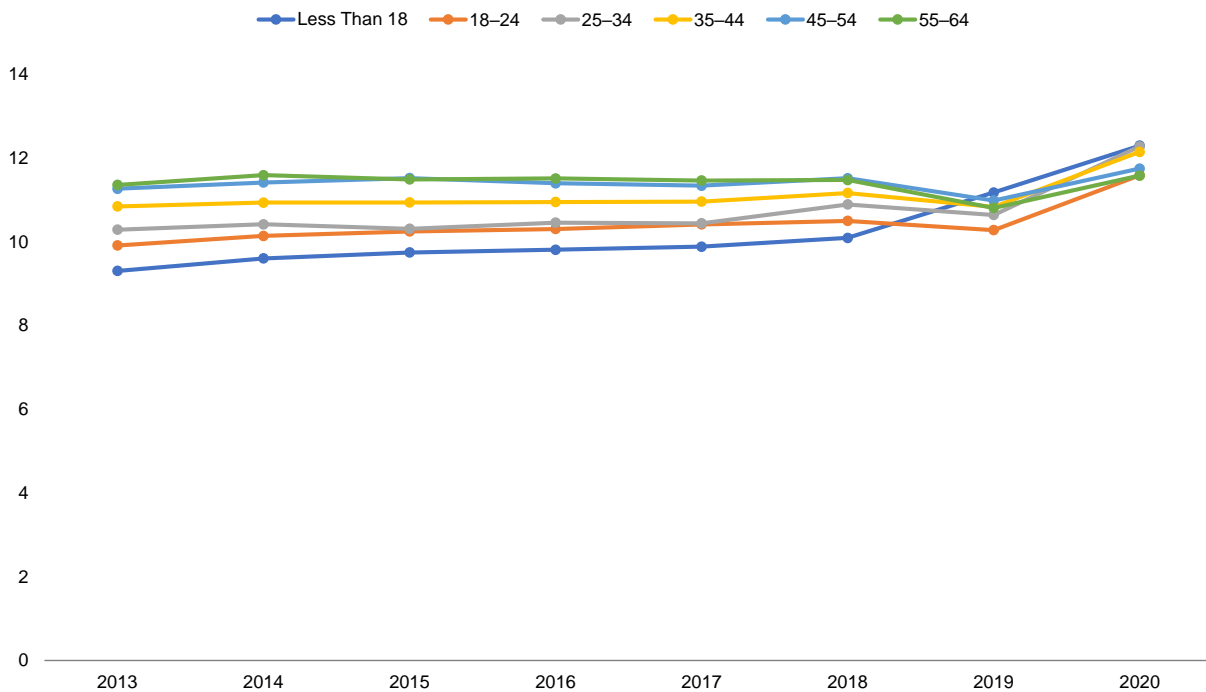
Source: Employee Benefit Research Institute estimates based on administrative enrollment and claims data.

Figure 17  
**Percentage of Population Under Age 65 With Psychotherapy Visit, by Age, 2013–2020**



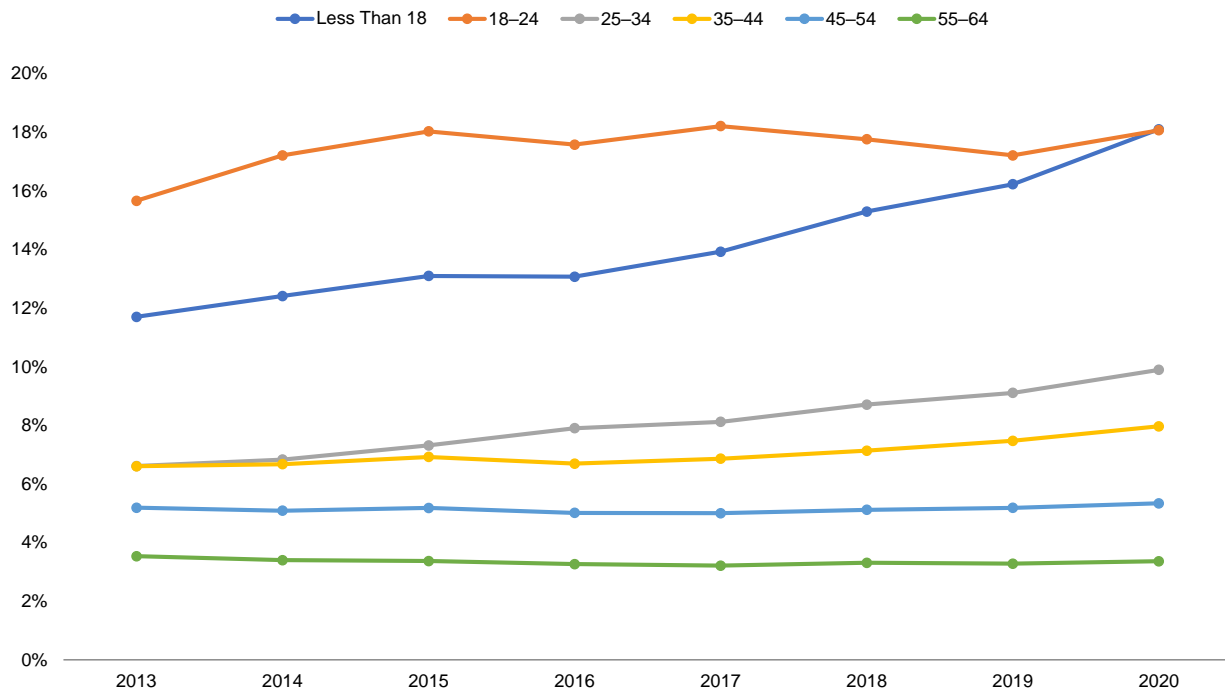
Source: Employee Benefit Research Institute estimates based on administrative enrollment and claims data.

Figure 18  
**Average Annual Number of Psychotherapy Visits, Among Those With a Visit, by Age, 2013–2020**



Source: Employee Benefit Research Institute estimates based on administrative enrollment and claims data.

Figure 19  
**Proportion of Total Spending on Mental Health or Substance Abuse, by Age, 2013–2020**



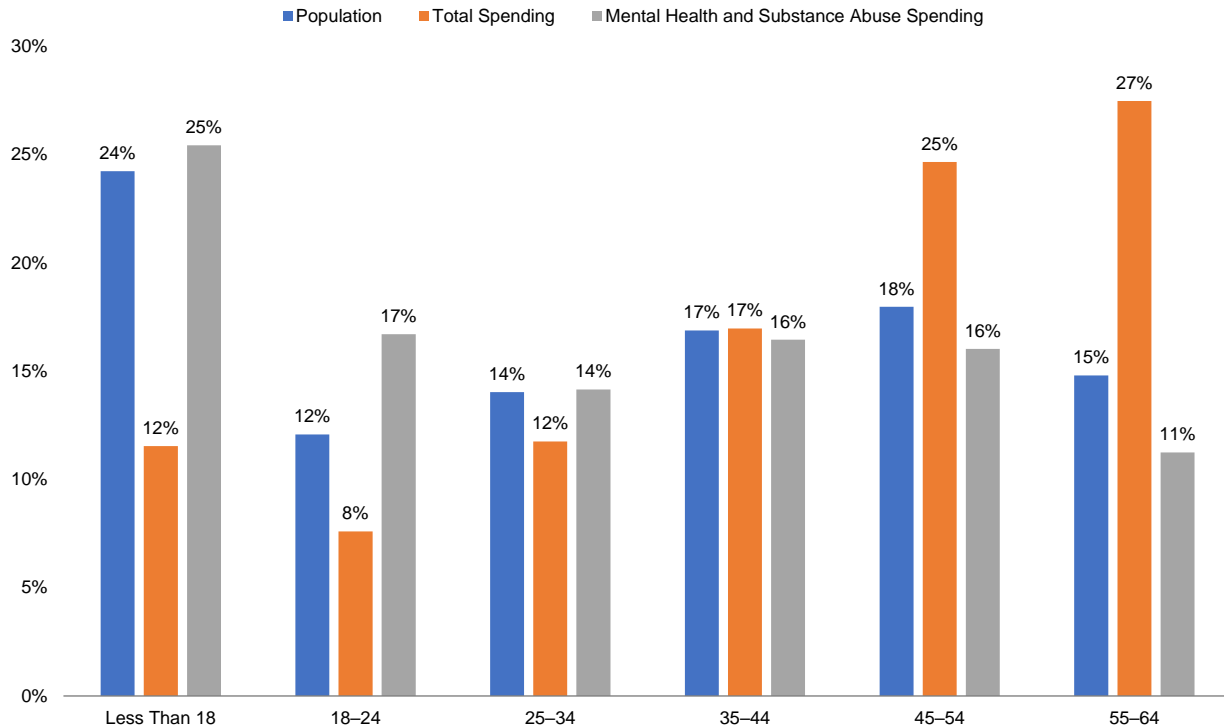
Source: Employee Benefit Research Institute estimates based on administrative enrollment and claims data.

## Spending on Mental Health Care Services vs. Other Health Care Services

It is common knowledge that older people use more health care than younger people. As a result, health care spending is not evenly distributed across the population. For example, individuals under age 18 accounted for 24 percent of the enrolled population, but only 12 percent of total spending (Figure 20). In contrast, individuals ages 55–64 accounted for 15 percent of the enrolled population, but they accounted for 27 percent of health care spending.

The same pattern does not hold for spending on mental health care services. The distribution of spending on mental health care services is much closer to the distribution of the enrolled population. For instance, individuals under age 18 accounted for 24 percent of the population and 25 percent of mental health care spending. Similarly, individuals ages 55–64 accounted for 15 percent of the population and 11 percent of mental health care spending.

Figure 20  
**Distribution of Population and Health Care Spending, 2020**



Source: Employee Benefit Research Institute estimates based on administrative enrollment and claims data.

## Discussion

It is important to understand the underlying factors driving the increase in the number of people diagnosed with and seeking treatment for mental health disorders. Use of mental health services may be increasing because more people have mental health disorders than in the past. It is possible that diagnoses are more accurate, like with other medical conditions. However, if diagnosis rates are increasing, an important question to ask is what is driving the underlying growth? One may surmise that the stresses associated with the COVID-19-related pandemic are to blame. Yet, we found that most of the growth in diagnoses occurred between 2013 and 2019. Access issues during the pandemic may have artificially reduced the growth rate in mental health diagnoses between 2019 and 2020, even while the availability of telemedicine was increasing.

The increase may be attributable to lower stigma associated with mental health disorders. Many people with mental illness do not receive help for their disorder because of the stigma. They may be in fear of their employer finding out and losing their job. Or they may be in fear of how their friends and colleagues may react. A recent survey found that mental health stigma is a major challenge in the workplace. Only about one-half of workers are comfortable talking about their mental health at work, and about one-third are worried about their job if they seek mental health care.<sup>14</sup> To the degree that there is less stigma around mental illness, more people will seek care for the help they need. The fact that diagnosis rates are increasing for young individuals may support the different views on stigma. Recent research has found that college-aged adults have more accepting views of mental health than older adults.<sup>15</sup>

The various mental health parity laws that have taken effect since the mid-1990s may have also contributed to increased use of mental health services. Despite these laws, unlike the recent past, spending on mental health services declined as a share of total health care spending between 1986 and 2005 (Mark, Levit, Vandivort-Warren, Buck, and Coffey 2011). More recently, increased demand for mental health care services is expected to play a larger-than-historical role when it comes to premium increases in 2023 (American Academy of Actuaries 2022).

## **Conclusion**

A significant number of Americans suffer from mental illness or a substance use disorder each year, and the COVID-19 pandemic has exacerbated such issues. The COVID-19 pandemic appears to also have heightened employers' awareness and response to employees' mental health disorders. And policymakers have also been addressing the issue of access to mental health services through various forms of mental health parity legislation. Despite heightened employer awareness and response and public policy efforts to address access, with increases in both the number of individuals diagnosed with mental health disorders and use of health care services, higher spending will continue to be of great concern to plan sponsors. A healthier and more productive work force should be considered as employers seek to manage the cost of treating mental health disorders. Further research on the interaction between health care spending and worker productivity would help guide employer decisions.

## Appendix

Appendix Figure 1 Outpatient Spending Categorization				
Category	Procedure Group	Health Care Common Procedure Coding System	Provider Type	ICD9/10
Emergency Department for Mental Health and Substance Abuse (MHSA) Diagnoses	111			<b>AND</b> 290.xx–319.xx/Fxx. xx
Psychotherapy	135, 136, 137			
Outpatient MHSA Treatment	139			
Outpatient Evaluation and Management by MHSA Providers	101, 104, 109, 110, 113, 114		<b>AND</b> 365, 458, 860, 20, 21, 22, 23	
Outpatient Evaluation and Management by Other Providers for MHSA Diagnoses	101, 104, 109, 110, 113, 114			<b>AND</b> 290.xx–319.xx/Fxx. xx <b>AND</b> not classified above
Psychiatric Diagnostic Services	124			
Speech & Hearing Therapy	149			
Drug Testing	302			
Medication-Assisted Treatment (Medical- Adjudicated)		J1230, J2315, J0592, Q9991, Q9992, J2310, G0128, J0570, J0571, J0572, J0573, J0574, J0575		
Other Outpatient for MHSA Diagnoses				290.xx–319.xx/Fxx. xx <b>AND</b> not classified above

Appendix Figure 2 Prescription Drug Spending Categorization	
Category	American Hospital Formulary Service (AHFS) Therapeutic Class
Antidepressants	28:16.0
Antipsychotics	28:16.08, 28:28
Amphetamines and Stimulants	28:20.04, 28:20.32, 28:20.80
Benzodiazepines	28:12.1
Other Anxiolytics, Sedatives, and Hypnotics	28:24:00
Medication-Assisted Treatment (Pharmacy-Adjudicated)	28:10, 28:08.12

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## Endnotes

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<sup>1</sup> National Association of Mental Illness. See <https://www.nami.org/mhstats>.

<sup>2</sup> Substance Abuse and Mental Health Services Administration. See <https://www.samhsa.gov>.

<sup>3</sup> See <https://www.ebri.org/docs/default-source/wbs/www-2021/2021-workplace-wellness-short-report.pdf>.

<sup>4</sup> See Figure 13.3 in <https://www.kff.org/report-section/ehbs-2021-section-13-employer-practices-telehealth-and-employer-responses-to-the-pandemic/>.

<sup>5</sup> See Figure 13.6 in <https://www.kff.org/report-section/ehbs-2021-section-13-employer-practices-telehealth-and-employer-responses-to-the-pandemic/>.

<sup>6</sup> Unpublished author estimates.

<sup>7</sup> ICD-9-CM = International Classification of Diseases, 9th Revision, Clinical Modification, and ICD-10-CM = International Classification of Diseases, 10th Revision, Clinical Modification.

<sup>8</sup> We included the following ICD-9 and ICD-10 codes: ICD9: 290.xx–319.xx; ICD10: Fxx.xx.

<sup>9</sup> DRGs are a statistical system used to classify inpatient stays into groups for purposes of payment. We used DRGs 876-887 for mental health diagnoses and DRGs 894-897 for substance abuse diagnoses.

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<sup>10</sup> The HCPCS is a collection of standardized codes that represent medical procedures, supplies, products and services. The codes are used to facilitate the processing of health insurance claims by Medicare and other insurers.

<sup>11</sup> AHFS® Pharmacologic/Therapeutic Classification® used with permission. © 2022, the American Society of Health-System Pharmacists, Inc. (ASHP). The Data are a part of the AHFS Drug Information®; ASHP is not responsible for the accuracy of transpositions from the original context.

<sup>12</sup> See <https://www.milbank.org/2022/06/addressing-inequities-in-the-quality-of-mental-health-care-immediate-term-policy-solutions/>.

<sup>13</sup> Examples of prescription drugs for mental health care and substance abuse becoming available as a generic include Campral, Cymbalta, and Subutex in 2013; Abilify in 2015; Seroquel in 2016; and Strattera and Vivitrol in 2017. These drugs are used to treat depression, schizophrenia, bipolar disorder, ADHD, and substance use disorders.

<sup>14</sup> See <https://www.psychiatry.org/News-room/News-Releases/about-half-of-workers-are-concerned-about-discussi>.

<sup>15</sup> See <https://adaa.org/college-aged-adults-face-less-mental-health-stigma>.

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