



Mental and Substance Use Disorders Prevalence Study: Findings Report

MDPS

Mental and Substance Use
Disorders Prevalence Study

Citation

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Table of Contents

Executive Summary	1
1. Introduction	3
1.A Background	3
1.B Study Objectives and Research Questions	4
1.C Study Team	4
1.D Study Timeline	5
1.E Current Report	5
2. Methods	5
2.A Design Overview	5
Multiple Populations of Interest	5
Multistage Design	6
Multimode Design	7
Addressing the Nature of the MDPS Pilot Program	7
2.B Sample	8
Household Sample	8
Non-Household Sample	9
Sample Power, Sample Sizes, and Weighted Response Rates	10
2.C Instruments	11
The Household Roster	11
The Household Screening Interview	11
The Semi-Structured Clinical Interview	12
2.D Data Collection and Quality Control	13
Human Subjects Approval and Informed Consent	13
Data Collection Staffing and Timeline	14
Clinical Interviewers and Supervisors	15
Data Collection Outcomes	15
Quality Control	16
2.E Methods—Weighting and Estimation	16
Survey Analysis Weights	17
Estimation	18
Restricted-Use Data	19
3. Findings	19
3.A Sample Characteristics	19
3.B Research Question 1: What is the past-year prevalence rate of mental and substance use disorders among adults aged 18 to 65 in the United States?	21
Prevalence Rates of Mental Disorders	21
Prevalence Rates of Substance Use Disorders	25
3.C Research Question 2: What proportion of adults in the United States with mental and substance use disorders received treatment in the past year?	28
Mental Health Treatment Receipt	29
Substance Use Disorder Treatment Receipt	34
3.D Feasibility Study Preliminary Results	36
4. MDPS Lessons Learned	37

5. Conclusions	40
5.A Summary of Findings.....	40
5.B Methodological Differences Between the MDPS and Prior Studies.....	41
5.C Considering MDPS Findings in the Context of Prior Research.....	42
5.D Implications of Findings	43
5.E Study Limitations.....	44
5.F Recommendations for Future Research	44
References	46

Appendix

A. Tables of MDPS Disorder Prevalence Rates and Treatment Estimates	51
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Figures

Number		Page
<u>2.A.1</u>	<u>MDPS Household Three-Stage Design</u>	<u>7</u>
<u>3.B.1</u>	<u>Estimated Prevalence Rates of Past-Year MDPS Mental Disorders</u>	<u>22</u>
<u>3.B.2</u>	<u>Estimated Prevalence Rates of Past-Year MDPS Mental Disorders, by Age Group</u>	<u>22</u>
<u>3.B.3</u>	<u>Estimated Prevalence Rates of Past-Year MDPS Mental Disorders, by Gender Identity</u>	<u>23</u>
<u>3.B.4</u>	<u>Estimated Prevalence Rates of Any Past-Year MDPS Mental Disorder, by Race/Ethnicity</u>	<u>23</u>
<u>3.B.5</u>	<u>Estimated Prevalence Rates of Any Past-Year MDPS Mental Disorder, by Urbanicity</u>	<u>24</u>
<u>3.B.6</u>	<u>Estimated Prevalence Rates of Any Past-Year MDPS Substance Use Disorder, by Race/Ethnicity</u>	<u>27</u>
<u>3.B.7</u>	<u>Estimated Prevalence Rates of Any Past-Year MDPS Substance Use Disorder, by Urbanicity</u>	<u>27</u>
<u>3.C.1</u>	<u>Receipt of Outpatient Treatment, Inpatient Treatment, or Medication for a Past-Year MDPS Mental Disorder</u>	<u>30</u>
<u>3.C.2</u>	<u>Receipt of Outpatient Treatment, Inpatient Treatment, or Medication for a Past-Year MDPS Mental Disorder, by Age Group</u>	<u>31</u>
<u>3.C.3</u>	<u>Receipt of Outpatient Treatment, Inpatient Treatment, or Medication for a Past-Year MDPS Mental Disorder, by Gender Identity</u>	<u>32</u>
<u>3.C.4</u>	<u>Receipt of Outpatient Treatment, Inpatient Treatment, or Medication for a Past-Year MDPS Mental Disorder, by Race/Ethnicity</u>	<u>33</u>
<u>3.C.5</u>	<u>Receipt of Outpatient Treatment, Inpatient Treatment, or Medication for a Past-Year MDPS Mental Disorder, by Urbanicity</u>	<u>33</u>
<u>3.C.6</u>	<u>Receipt of Outpatient Treatment, Inpatient Treatment, or Medication for a Past-Year MDPS Substance Use Disorder</u>	<u>35</u>
<u>3.C.7</u>	<u>Receipt of Outpatient Treatment, Inpatient Treatment, or Medication for a Past-Year MDPS Substance Use Disorder, by Age Group</u>	<u>36</u>
<u>3.C.8</u>	<u>Receipt of Outpatient Treatment, Inpatient Treatment, or Medication for a Past-Year MDPS Substance Use Disorder, by Gender Identity</u>	<u>36</u>

Tables

Number		Page
<u>2.B.1</u>	<u>MDPS Sample Sizes and Weighted Response Rates, by Household and Non-Household Sample Components</u>	<u>10</u>
<u>2.C.1</u>	<u>Mental and Substance Use Disorders Measured by the SCID-5® Within the MDPS</u>	<u>13</u>
<u>3.A.1</u>	<u>Demographic Characteristics of MDPS Participants</u>	<u>20</u>
<u>3.B.1</u>	<u>Estimated Prevalence Rates of Past-Year MDPS Mental Disorders Among Adults Aged 18 to 65</u>	<u>21</u>
<u>3.B.2</u>	<u>Estimated Prevalence Rates of MDPS Substance Use Disorders Among Adults Aged 18 to 65</u>	<u>25</u>
<u>3.B.3</u>	<u>Estimated Prevalence Rates of Past-Year MDPS Substance Use Disorders Among Adults Aged 18 to 65, by Age Group and Gender Identity</u>	<u>26</u>
<u>3.C.1</u>	<u>Receipt of Outpatient Treatment, Inpatient Treatment, or Medication for a Past-Year MDPS Mental Disorder</u>	<u>30</u>
<u>3.C.2</u>	<u>Receipt of Outpatient Treatment, Inpatient Treatment, or Medication for a Past-Year MDPS Substance Use Disorder</u>	<u>35</u>

Executive Summary

The Mental and Substance Use Disorders Prevalence Study (MDPS) is a pilot program designed to determine the lifetime prevalence rates and past-year prevalence rates of schizophrenia spectrum disorders (defined as including schizophrenia, schizoaffective disorder, and schizophreniform disorder); past-year bipolar I disorder, major depressive disorder, generalized anxiety disorder, posttraumatic stress disorder, obsessive-compulsive disorder, and anorexia nervosa; and past-year alcohol, opioid, cannabis, stimulant, and sedative/hypnotic/anxiolytic use disorders. Schizophrenia spectrum disorders were of particular importance because they are especially disabling and costly to society (Hjorthøj et al., 2017; Lin et al., 2023; Weber et al., 2022; Wu et al., 2006). The MDPS was also designed to determine treatment rates among those with these mental and substance use disorders. The study sample included adults aged 18 to 65 residing in households, prisons, homeless shelters, and state psychiatric hospitals in the United States. The MDPS addresses two gaps in prior research: (1) the exclusion of institutionalized populations at high risk for disorders, and (2) the reliance on self-report measures or nonclinical interviews to assess mental and substance use disorders. Clinical interviews were conducted with 5,679 participants, virtually or in person, between October 2020 and October 2022. Prevalence rates and treatment estimates were combined for the household and non-household samples and weighted accordingly.

The MDPS provides the most up-to-date prevalence rates of specific mental disorders in the U.S. adult population. Substance use disorders are included within the MDPS design to provide a more comprehensive understanding of the co-occurrence of mental and substance use disorders. Importantly, the MDPS is the first study to estimate the national prevalence of schizophrenia spectrum disorders.

Key findings from the MDPS are highlighted as follows:

Schizophrenia Spectrum Disorders

- Approximately 3.7 million adults aged 18 to 65 (1.8 percent) had a lifetime history of schizophrenia spectrum disorders.
- A total of 1.2 percent of adults aged 18 to 65 (approximately 2.5 million adults) met diagnostic criteria for a schizophrenia spectrum disorder in the past year.

Other Mental Disorders in the Past Year

- The two most common mental disorders among adults aged 18 to 65 were major depressive disorder (15.5 percent, or approximately 31.4 million adults) and generalized anxiety disorder (10.0 percent, or approximately 20.2 million adults).
- A total of 4.1 percent of adults aged 18 to 65 had past-year posttraumatic stress disorder (approximately 8.2 million adults), 2.5 percent had obsessive-compulsive disorder

(approximately 5.0 million adults), and 1.5 percent had bipolar I disorder (approximately 3.1 million adults).

Substance Use Disorders in the Past Year

- The most common substance use disorder among adults aged 18 to 65 was alcohol use disorder. Approximately 13.4 million adults (6.7 percent) met criteria for alcohol use disorder in the past year.
- A total of 3.8 percent of adults aged 18 to 65 had cannabis use disorder (approximately 7.7 million adults), 1.6 percent had stimulant use disorder (approximately 3.2 million adults), and 0.5 percent had opioid use disorder (approximately 1.0 million adults).

Any Mental or Substance Use Disorder in the Past Year

- One in 4 adults aged 18 to 65 (25.1 percent) had one or more MDPS mental disorders. One in 12 (8.0 percent) had two or more MDPS mental disorders.
- One in 10 adults aged 18 to 65 (10.6 percent) had one or more MDPS substance use disorders, and 1.8 percent had two or more MDPS substance use disorders.
- One in 20 adults aged 18 to 65 (5.5 percent) had at least one MDPS mental disorder and at least one MDPS substance use disorder. This percentage represents approximately 11.0 million adults aged 18 to 65 with co-occurring mental and substance use disorders in the past year.

Treatment Receipt Among Those with Mental or Substance Use Disorders

- Past-year treatment receipt included any outpatient or inpatient treatment or medication for a mental or substance use disorder in the past year. “Any treatment” was defined as at least one visit with a specialty (e.g., psychiatrist) or non-specialty (e.g., primary care doctor) provider. Any treatment could also include the use of one or more medications.
- Among adults aged 18 to 65 with any MDPS mental disorder, 60.8 percent received any treatment in the past year.
- Among adults aged 18 to 65 with any MDPS substance use disorder, 12.2 percent received any treatment in the past year.

The MDPS supports the Substance Abuse and Mental Health Services Administration’s commitment to collecting, analyzing, and sharing data to help ensure that people with, affected by, or at risk for mental and substance use disorders receive treatment, thrive, and achieve well-being. The MDPS supports this commitment by providing prevalence rate estimates of specific mental and substance use disorders among U.S. adults and treatment rates among adults with these disorders. The MDPS dataset will be made available for restricted use upon approval through the Inter-university Consortium for Political and Social Research (<https://www.icpsr.umich.edu/web/pages/> ). Release is anticipated in fall 2023.

1. Introduction

1.A Background

Mental and substance use disorders are significant public health concerns that affect the lives of millions of Americans. In 2021, the National Survey on Drug Use and Health (NSDUH) estimated that, in the past year, 57.8 million adults aged 18 or older in U.S. households experienced mental illness, and 44.0 million adults had a substance use disorder (Substance Abuse and Mental Health Services Administration [SAMHSA], 2022). The Mental and Substance Use Disorders Prevalence Study (MDPS) is a pilot program designed to estimate the prevalence rates of specific mental and substance use disorders among U.S. adults aged 18 to 65. The MDPS is also designed to estimate the percentage of adults with these specific mental and substance use disorders who receive treatment. The study is funded by SAMHSA.

The MDPS expands upon prior studies that estimate the prevalence rates of specific mental and substance use disorders. NSDUH is an ongoing, annual population survey in the United States focused on mental illness and substance use. Although NSDUH does provide estimates of specific substance use disorders, it is not designed to provide estimates of most specific mental disorders such as schizophrenia spectrum disorders, bipolar I disorder, obsessive-compulsive disorder, and posttraumatic stress disorder. Other studies including the National Comorbidity Survey Replication (e.g., Kessler, Chiu, et al., 2005) and the National Epidemiologic Survey on Alcohol and Related Conditions-III (e.g., Hasin et al., 2018) provide national prevalence rates of specific mental and substance use disorders. However, these studies are more than a decade old and do not provide a prevalence rate of schizophrenia. Consequently, the MDPS provides the most up-to-date prevalence rates of specific mental disorders in the U.S. adult population. Substance use disorders are included within the MDPS design to provide a more comprehensive understanding of the co-occurrence of mental and substance use disorders. Importantly, the MDPS is the first study to estimate the national prevalence of schizophrenia spectrum disorders (defined as including schizophrenia, schizoaffective disorder, and schizophreniform disorder).

To estimate the prevalence rates of specific mental and substance use disorders, the MDPS design addresses two gaps in prior general population survey efforts: (1) the exclusion of institutionalized populations at high risk for disorders, and (2) the reliance on self-report measures or nonclinical interviews to estimate mental and substance use disorders. The specific disorders of interest measured in the MDPS are past-year and lifetime schizophrenia spectrum disorders; past-year bipolar I disorder, major depressive disorder (MDD), generalized anxiety disorder (GAD), posttraumatic stress disorder (PTSD), obsessive-compulsive disorder (OCD), and anorexia nervosa; and past-year alcohol, opioid, cannabis, stimulant, and sedative/hypnotic/anxiolytic use disorders. The MDPS assessed past-year and lifetime schizophrenia spectrum disorders because these disorders are especially disabling and costly to society (Hjorthøj et al., 2017; Lin et al., 2023; Weber et al., 2022; Wu et al., 2006). In

addition, past-year estimates alone would not include those adults who met criteria for a lifetime disorder but did not meet criteria for a past-year disorder because their symptoms were in remission from treatment.

The MDPS sample includes adults from both household and non-household settings, including those in state psychiatric hospitals, prisons, and homeless shelters. The MDPS also utilizes the Structured Clinical Interview for the Fifth Edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) (SCID-5®; First et al., 2015), which is delivered by trained mental health clinicians and is the gold standard for mental and substance use disorder diagnostic assessment. SAMHSA is committed to collecting, analyzing, and sharing data to help ensure that people with, affected by, or at risk for mental and substance use disorders receive treatment, thrive, and achieve well-being. The MDPS supports this commitment by providing prevalence rate estimates of specific mental and substance use disorders among U.S. adults and treatment rates among adults with these disorders. MDPS results will help researchers, clinicians, and the public to understand factors associated with mental and substance use disorders, and patterns of comorbidity, which are vital for improving prevention and treatment. MDPS findings will also provide guidance to SAMHSA on how to improve future mental and substance use disorder survey efforts.

1.B Study Objectives and Research Questions

The key objectives of the MDPS pilot program are as follows:

- Provide national prevalence rate estimates of mental and substance use disorders among U.S. adults aged 18 to 65.
- Determine what proportion of adults with these disorders received any treatment in the past year.
- Investigate research methods for conducting future studies like the MDPS.

The MDPS is designed to answer two research questions:

- What are the prevalence rates among U.S. adults aged 18 to 65 of past-year and lifetime schizophrenia spectrum disorders (defined as including schizophrenia, schizoaffective disorder, and schizophreniform disorder); past-year bipolar I disorder, MDD, GAD, PTSD, OCD, and anorexia nervosa; and past-year alcohol, opioid, cannabis, stimulant, and sedative/hypnotic/anxiolytic use disorders?
- What proportion of adults in the United States with these mental and substance use disorders received any treatment in the past year?

1.C Study Team

The MDPS is funded by SAMHSA through a cooperative agreement with RTI International. RTI leads this study, in partnership with Columbia University and the New York State

Psychiatric Institute, the University of Washington, Duke University, the University of Chicago, the Treatment Advocacy Center, TeleSage, and Adaptive Testing Technologies.

1.D Study Timeline

The MDPS is a 4-year project. In the first year (starting in October 2019), the study team designed the study and planned for its implementation. The next 2 years focused on data collection. The final year (ending in September 2023) focuses on data analysis, report preparation, and the creation of datasets for public use.

Data collection for the MDPS occurred from October 2020 to October 2022. This data collection effort occurred during the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) or coronavirus disease 2019 (COVID-19) pandemic. To reduce the impact of the COVID-19 pandemic on data collection, much of the MDPS data collection occurred virtually.

1.E Current Report

This report provides results for the MDPS's two research questions outlined earlier. Study outcomes are presented by sex assigned at birth, current gender identity, race/ethnicity, age group, geographic region, and urbanicity. The report summarizes the MDPS design and preliminary results of several feasibility studies that inform methods for future studies. Finally, the report summarizes lessons learned and recommendations for future research.

2. Methods

2.A Design Overview

The MDPS employed a complex design with multiple populations, stages of data collection, and interview modes. This design helped to support the generation of unbiased estimates for disorders and treatment receipt. The MDPS also included feasibility studies to investigate optimal research methods for future population surveys.

Multiple Populations of Interest

The goal of the MDPS was to estimate disorder prevalence rates for the U.S. adult population. Approximately 98 percent of the U.S. population lives in households (Koerber & Wilson, 2021). Thus, the primary population of interest was adults aged 18 to 65¹ living in households.

¹ Adults older than 65 were excluded from the MDPS sample because of the difficulty of differentiating mental disorders (like schizophrenia or MDD) from symptoms of dementia. The need for an efficient MDPS assessment protocol did not support this type of differential diagnosis.

Although only a small proportion of U.S. adults reside in non-household settings, they have a higher prevalence rate of mental and substance use disorders than adults living in households. For this reason, the MDPS sample also included adults living in prisons, state psychiatric hospitals, and homeless shelters.

The two largest MDPS populations of focus—adults living in households and prisons—were sampled using probability-based methods at all stages of the MDPS design. Probability-based methods mean that each eligible person has a known, nonzero probability of being selected for study participation. This method allows for the calculation of population estimates.

The two smallest MDPS populations of focus—adults living in state psychiatric hospitals and homeless shelters—were sampled differently from adults living in households and prisons. Non-household facilities were selected with nonprobability-based methods. In other words, these facilities were not randomly selected from a national list of facilities but were selected as convenience samples. Next, adults living within selected facilities were selected with probability-based methods. The extent to which the sheltered homeless and state psychiatric hospital samples are representative was enhanced by including a diverse set of facilities that cover different types of geography (e.g., urban, suburban, rural) and different populations served (e.g., male- and female-only homeless shelters) (U.S. Census Bureau, 2021).

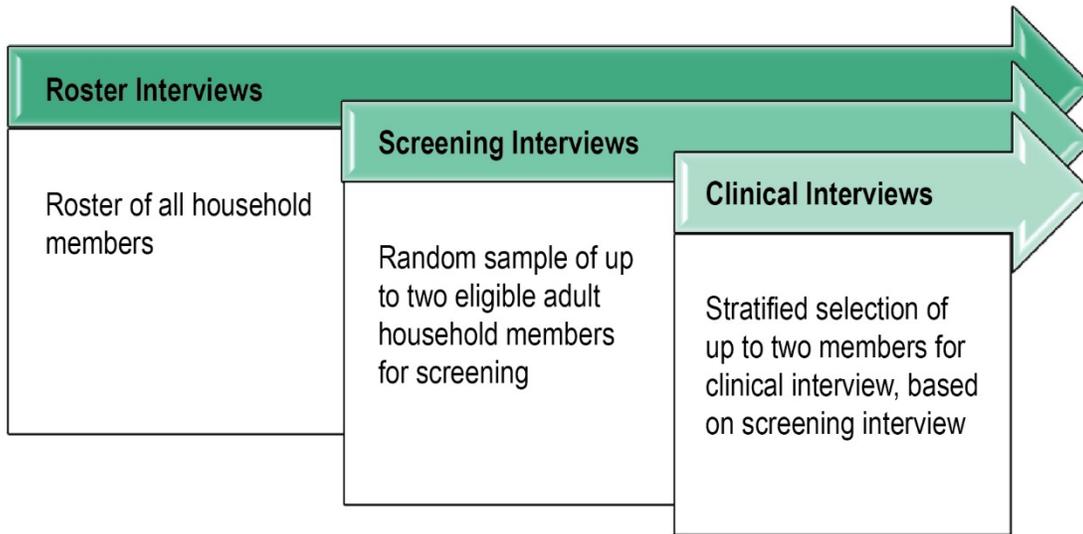
The MDPS sampling design for each population is described in Section 2.B, the study instruments are described in Section 2.C, the data collection is described in Section 2.D, and the statistical weighting used to combine the data is noted in Section 2.E.

Multistage Design

The MDPS used a three-stage design for the household survey to increase the study's efficiency and to oversample those who might meet criteria for a mental or substance use disorder, especially schizophrenia spectrum disorders (see [Figure 2.A.1](#)).² This study design consisted of a roster to establish eligibility and select adults for participation, a mental health screening survey that was used to disproportionately select those with a higher likelihood of disorders, and a clinical interview that included the SCID-5[®] and questions about treatment receipt. The SCID-5[®] was used to determine the presence or absence of each mental or substance use disorder based on DSM-5 criteria.

² These stages in data collection should not be confused with the stages in the sampling design, which are described in the following section.

Figure 2.A.1 MDPS Household Three-Stage Design



Because adults living in non-household settings were expected to have higher rates of disorders, a single-stage data collection design was used for these populations. Those living in prisons, state psychiatric hospitals, and homeless shelters received only a clinical interview.

Multimode Design

The MDPS design allowed adults to complete the household roster and screener in multiple modes. To reduce the impact of the COVID-19 pandemic on data collection, a high priority was placed on conducting virtual, as opposed to in-person, data collection. The study maximized the percentage of rostered households and screenings completed online and by phone, by starting with mailed invitations and sequentially adding options to complete the household rostering and screening on paper and in person. To aid participation rates, incentives were used at each stage: a \$2 prepaid and \$10 promised household roster incentive, a \$20 promised household screening incentive, and a \$30 clinical interview incentive.³ The clinical interviews used a combination of video, phone, and in-person modes depending on the population (see Section 2.D).

Addressing the Nature of the MDPS Pilot Program

Because of its design complexity, populations, and topic of focus, the MDPS required features that, in combination, have not been used in previous studies. This resulting methodological uncertainty was addressed by embedding three feasibility studies within the study design:

³ Participants from the non-household sample were also offered an incentive for their completion of the clinical interview. However, the incentive varied across settings. Participants within prisons received a small snack, participants in state psychiatric hospitals received \$30 in their hospital account to be used in the store or cafeteria, and participants in homeless shelters received a \$30 gift card.

- *Household screening.* We assessed the feasibility of using either one of two screeners within the household arm of the MDPS: (1) the Computerized Adaptive Test for Mental Health (CAT-MH[®]), or (2) a non-adaptive survey instrument that included items selected from the Composite International Diagnostic Interview (CIDI[®]) (Kessler & Ustün, 2004).
- *Use of proxy participants.* We assessed the degree to which proxy participants would be necessary when the selected household or state psychiatric hospital participant was unable to provide reliable information. We also assessed the feasibility of interviewing these proxy participants.
- *Use of administrative health records.* We investigated the feasibility of gathering primary diagnostic codes from administrative health records among participants in state psychiatric hospitals.

2.B Sample

The core of the MDPS was a national probability-based household sample of sufficient size to generate national prevalence rate estimates with acceptable precision. Another key feature of the MDPS was the combination of the household sample with sample members living in prisons, state psychiatric hospitals, and homeless shelters. Although the number of adults living in such facilities is a relatively small proportion of the overall population, the inclusion of these non-household populations can provide more complete coverage of the full U.S. adult population.

Household Sample

The household sample was drawn via a multistage, clustered, and stratified area sampling scheme to form a nationally representative sample of adults. At the first stage, the household sample consisted of 100 primary sampling units (PSUs) defined as individual counties or groups of counties (for counties with small populations). The PSUs were randomly selected with probabilities proportional to the population estimate of adults aged 18 to 64 based on the 2018 American Community Survey 5-year population estimates.⁴ This sampling process is known as probability-proportional-to-size (PPS) sampling and was used to ensure that every eligible adult in the household population had approximately equal probability of being included in the study. Within each PSU, at the second stage, 16 secondary sampling units (SSUs) defined by census block group were selected with PPS sampling. At the third stage, address-based sampling was used to implement a random sample of addresses within the sampled SSUs from residential addresses in the U.S. Postal Service Computerized Delivery Sequence file. Because of the large sample size and long data collection period, the selected addresses were released in replicates (or batches) within each SSU to control the data collection workloads over time by providing interviewers with a manageable number of cases.

⁴ The American Community Survey provides population estimates for the 18 to 64 age group but not for the 18 to 65 age group. The population estimates of adults aged 18 to 64 are assumed to be distributed in a way similar to that used for the population estimates of adults aged 18 to 65 across all the counties in the United States, and thus can be considered as an appropriate size measure for the sample design.

Releasing the sample in replicates also provides additional opportunities to optimize the study design by trying new approaches in later releases to facilitate or increase participation.

Each sampled household was sent a letter explaining the study and offering the option to complete the household roster online, by phone, or by mail. In the roster, participants were asked to list all individuals living in their household. Some nonresponding households were selected and followed up via in-person interviewing to complete the roster (i.e., nonresponse follow-up). Among those households that completed the roster, up to two adults aged 18 to 65 in the household were randomly selected to complete a screening interview. Adults who completed the screening interview were randomly selected to complete the clinical interview.

Participants who completed the screening interview were divided into one of three groups based on their responses:

- *Group 1.* Those who reported experiencing psychotic symptoms or receiving disability payments because of schizophrenia
- *Group 2.* Those who reported experiencing symptoms of other MDPS mental or substance use disorders (e.g., MDD, GAD, alcohol use disorder)
- *Group 3.* Those who reported no mental or substance use disorder symptoms

The proportion of cases selected within each group was set to 100 percent for Group 1 (i.e., all invited to complete a clinical interview), 80 percent for Group 2, and 20 percent for Group 3. This strategy helped increase the number of adults completing clinical interviews who might meet criteria for a mental or substance use disorder, especially schizophrenia spectrum disorders. This stratified sample selection procedure based on the screening results provided an enriched MDPS sample designed to reduce the variance and increase the precision of prevalence rate estimates.

Non-Household Sample

The MDPS prison sample consisted of a nationally representative sample of prisons. The Bureau of Justice Statistics provided a national list of prisons, and the MDPS team selected 50 prisons via random PPS sampling. Twenty-two of the 50 sampled prisons chose to participate in the study. Unlike prisons, the MDPS state psychiatric hospitals and homeless shelters were not selected from national lists. Instead, these facilities were recruited with the help of MDPS collaborative partners and co-investigators. For this reason, the hospital and homeless shelter samples are considered convenience samples, which are not selected using random sampling methods, but rather, based on accessibility and availability. Four state psychiatric hospitals and 23 homeless shelters were successfully recruited.

Each participating facility (prison, hospital, or shelter) submitted a roster of current individuals meeting the study eligibility criteria (e.g., aged 18 to 65). Then, the roster was sorted by key characteristics of the individuals, such as age and time since admission, and a random probability sample was then selected from the sorted roster via a systematic sampling scheme.

This sampling process is known as implicit stratified sampling, which can ensure that the selected sample is balanced by the characteristics used in the sorting.

Sample Power, Sample Sizes, and Weighted Response Rates

The target sample size for the MDPS was determined by power calculations that established the approximate number of completed clinical interviews necessary to produce a precise population prevalence rate for schizophrenia spectrum disorders. Power calculations focused on schizophrenia spectrum disorders because they are understudied in prior population surveys, have an expected low prevalence rate, and cause significant functional impairment. Because most of the sample included household participants, the target number of completed clinical interviews determined the needed number of households to be sampled.

[Table 2.B.1](#) presents an overview of the final sample sizes. It also shows weighted response rates for the household and prison samples. In total, the MDPS completed 5,679 clinical interviews, 4,764 from the household sample and 915 from the non-household sample.

Table 2.B.1 MDPS Sample Sizes and Weighted Response Rates, by Household and Non-Household Sample Components

Household and Non-Household Sample Components	Unweighted Count	Weighted Conditional Response Rate (%)
Household Population		
Sampled households for rosters	234,270	-
Completed household rosters ¹	25,752	17.4
Sampled adults for screeners	41,868	-
Completed screeners—adults rostered ²	29,084	67.4
Selected adults for clinical interviewing	12,906	-
Completed clinical interviews—adults screened ²	4,764	31.2
Non-Household Populations		
Prisons		
Sampled institutions	50	-
Responding institutions ²	22	43.5
Sampled adults (from responding institutions)	606	-
Completed clinical interviews—adults ³	321	49.6
State Psychiatric Hospitals		
Responding institutions	4	-
Sampled adults (from responding institutions)	646	-
Completed clinical interviews—adults	171	Not applicable
Homeless Shelters		
Responding institutions	23	-
Sampled adults (from responding institutions)	1,233	-

(continued)

Table 2.B.1 MDPS Sample Sizes and Weighted Response Rates, by Household and Non-Household Sample Components (continued)

Household and Non-Household Sample Components	Unweighted Count	Weighted Conditional Response Rate (%)
<i>Completed</i> clinical interviews—adults	423	Not applicable
Combined Household and Non-Household Populations		
<i>Completed</i> clinical interviews—adults	5,679	-

¹ The American Association for Public Opinion Research (AAPOR) (2016) RR3 formula and base weights were used for the weighted response rate calculation.

² The AAPOR (2016) RR1 formula and person-level base weights adjusted for nonresponse follow-up were used for the weighted response rate calculation.

³ The AAPOR (2016) RR1 formula and person-level base weights were used for the weighted response rate calculation.

Note: Weighted conditional response rates are included for only the household and prison samples because those two samples were selected using probability-based sampling methods.

2.C Instruments

The MDPS utilized three separate instruments: (1) the household roster, (2) the household screening interview (which used one of two screening protocols), and (3) the semi-structured clinical interview.

The Household Roster

The household roster identified eligible adults residing in sampled households. The roster collected only information needed to identify members of the household aged 18 to 65. Up to two adults aged 18 to 65 per household were randomly selected to participate in the subsequent screening interview.

The Household Screening Interview

The screening interview helped the research team oversample adults at increased risk for mental and substance use disorders. Large population surveys often do not screen for a variety of specific mental disorders. As a result, the MDPS tested the feasibility of using two screening interviews. Adults were randomly selected to receive one of these two screening interviews.

The first screening interview used items from the CIDI[®] (Kessler & Üstün, 2004), developed by the World Health Organization (Direk & Tiemeier, 2010) and used in the National Comorbidity Survey Replication (NCS-R) study (Kessler et al., 2004). It included items assessing depression, GAD, mania, PTSD, psychosis, and substance use disorders.

The second screening interview, the CAT-MH[®], is a brief adaptive test of mental disorders. The CAT-MH[®] modules used in the MDPS are quantitative measures of the severity of

depression (Gibbons et al., 2012), anxiety (Gibbons et al., 2014), mania/hypomania (Achtyes et al., 2015), PTSD (Brenner et al., 2021), psychosis (Guinart et al., 2021), and substance use disorders (Gibbons et al., 2020). These quantitative severity measures are predictive of underlying disorders such as MDD, GAD, bipolar I disorder, PTSD, schizophrenia, and substance use disorders and have all been validated. The adaptive approach of the CAT-MH[®] uses the participant's answers to initial items to determine which items are subsequently administered. Maximally informative follow-up items are selected from a large (1,461 symptom items) "bank" of items to efficiently complete the assessment with as little response burden as possible.

The Semi-Structured Clinical Interview

Many population surveys use self-administered surveys or fully structured interviews delivered by lay interviewers to assess symptoms of mental and substance use disorders. These fully structured interviews are not well suited to assess schizophrenia, schizoaffective disorder, and schizophreniform disorder (collectively referred to as schizophrenia spectrum disorders; these were high priorities for the MDPS). Consequently, the MDPS used the SCID-5[®] (First et al., 2015). The SCID-5[®] is a semi-structured clinical interview for psychiatric diagnosis. It is designed to be delivered by trained clinicians (e.g., social workers, psychologists, and psychiatrists) who are familiar with diagnostic interviewing and the DSM-5. A version of the SCID-5[®] specifically tailored to assess MDPS disorders of interest (SCID-5-NSMH [National Study of Mental Health]) was administered by the clinical interviewers.

Other modifications were made to simplify the SCID-5[®] instrument and shorten its administration time. For example, the MDPS focused on primary psychotic disorders, irrespective of accompanying mood disturbances. Thus, the SCID-5-NSMH did not differentiate schizophrenia from schizoaffective disorder or schizoaffective disorder from schizophreniform disorder. Instead, the MDPS SCID-5-NSMH assessed the past-year and lifetime prevalence rates of schizophrenia spectrum disorders with symptom duration of 6 months or longer (i.e., schizophrenia and schizoaffective disorder) and schizophrenia spectrum disorders with symptom duration of fewer than 6 months (i.e., schizophreniform disorder). Mood disorders (i.e., depression, bipolar I) were differentiated from schizoaffective disorder.

The SCID-5[®] and its previous versions have very good to excellent reliability and validity for assessing mental and substance use disorders (Gerdner et al., 2015; Lobbestael et al., 2011; Osório et al., 2019; Shankman et al., 2018; Zanarini et al., 2000; Zanarini & Frankenburg, 2001). The MDPS used a computerized version of the SCID-5-NSMH, the NetSCID (Brodey et al., 2016). In a validation study of the NetSCID, researchers found that the NetSCID reduced data entry and branching errors when compared with the paper version of the SCID-5[®] (Brodey et al., 2016; First et al., 2015).

The clinical interview assessed the past-year prevalence rates of all mental and substance use disorders in [Table 2.C.1](#). Lifetime prevalence rate was also assessed for schizophrenia

spectrum disorders. Stimulant use disorder included substances such as cocaine, prescription stimulants, and methamphetamine. In the opioid use disorder module, adults were initially asked if they had used drugs like heroin, methadone, or prescription pain relievers such as morphine, codeine, Percocet[®], Percodan[®], OxyContin[®], Tylox[®] or oxycodone, Vicodin[®], Lortab[®], Lorcet[®] or hydrocodone, or Suboxone[®] or buprenorphine. In the sedative/hypnotic/anxiolytic use disorder module, adults were asked about past-year use of “any pills to calm you down, help you relax, or help you sleep” such as Valium[®], Xanax[®], Ativan[®], Klonopin[®], Ambien[®], Sonata[®], or Lunesta[®].

Table 2.C.1 Mental and Substance Use Disorders Measured by the SCID-5[®] Within the MDPS

MDPS Mental Disorders	MDPS Substance Use Disorders
Schizophrenia Spectrum Disorders (past year)	Alcohol Use Disorder
Schizophrenia Spectrum Disorders (lifetime)	Opioid Use Disorder
Major Depressive Disorder	Stimulant Use Disorder
Generalized Anxiety Disorder	Sedative/Hypnotic/Anxiolytic Use Disorder
Bipolar I Disorder	Cannabis Use Disorder
Posttraumatic Stress Disorder	
Obsessive-Compulsive Disorder	
Anorexia Nervosa	

The clinical interview was conducted among household and non-household participants. The version of the clinical interview used with the prison sample omitted the module on substance use. This omission avoided the possibility of an inmate disclosing information that could lead to their being charged with an infraction of prison rules.

The clinical interview also included items assessing demographic characteristics, cigarette and e-cigarette use, suicidal ideation and behavior, treatment (inpatient, outpatient, and medication) for mental and substance use disorders, and disability status (e.g., receipt of Supplemental Security Income or Social Security Disability Insurance). Because the MDPS data collection occurred during the COVID-19 pandemic, the study included items to assess impacts of the pandemic on access to mental and substance use disorder treatment and medical care.

All instruments were available in English and Spanish.

2.D Data Collection and Quality Control

Human Subjects Approval and Informed Consent

MDPS protocols, instruments, and consent forms were reviewed and approved by the Advarra Institutional Review Board. RTI and all partner sites entered into reliance agreements with Advarra. Informed consent was obtained before each phase of interviewing. A key information

statement that summarized the purpose, risks, and benefits of the MDPS was read to each participant at the start of the interview when obtaining informed consent. Each participant was provided the opportunity to read the consent form in full and ask any questions or have the consent form read to them. A knowledge check was administered before conducting the clinical interview to ensure that participants were informed and understood the purpose of the study and had the opportunity to ask questions. The knowledge check included questions like “True or False: You can refuse to answer any questions.” If the participant was unable to correctly answer the knowledge check questions after several attempts, it was determined that the participant lacked the ability to consent, and the interview ended. Additionally, the Short Blessed Test was administered by the clinical interviewer if it appeared that the participant did not understand the questions, provided conflicting information, or did not appear to be able to complete the interview on their own (Davis et al., 1990; Katzman et al., 1983).

If the participant did not pass the Short Blessed Test or failed the knowledge test, the interview ended. In total, 181 (26 household, 155 non-household) such interviews were terminated, and results from these interviews were not used for prevalence rate calculations.

Data Collection Staffing and Timeline

MDPS data collection began in October 2020. Five experienced clinical interviewers were trained on the study protocols and instruments, and a small sample of households was released to test study protocols. Household rostering and screening interviews were completed online, by phone, or by mail, and clinical interviews were completed by video.

Following this preliminary test of study protocols, the training content and instruments were updated to include expanded study protocols and additional practice interview scenarios. A second training and certification session was held with a larger group of 63 clinical interviewers and 11 clinical supervisors on the MDPS systems, protocols, and instruments in November 2020. Because the data collection period was extended as a result of the COVID-19 pandemic, a third cohort of 26 clinical interviewers was recruited and completed training in October 2021. In total, 94 clinical interviewers and 11 clinical supervisors received training on MDPS data collection protocols, systems, and instruments. Forty clinical interviewers also received training on conducting clinical interviews with non-household participants from each of the sample types (i.e., prisons, homeless shelters, and state psychiatric hospitals).

All household rostering and screening activities were completed online, by phone, or by mail through June 2021, because of restrictions on in-person interviewing as a result of the COVID-19 pandemic. In-person rostering and screening were conducted between June 2021 and June 2022. Household clinical interviews began in full in January 2021 and continued through July 2022. Engagement with non-household facility administrators began in April 2020 and continued for the duration of data collection. Clinical interviews within the non-household facilities were conducted between April 2021 and October 2022.

MDPS data collectors included the following:

- Eight telephone interviewers were hired and trained to conduct household rostering and screening by phone. Trainings occurred in October 2020, January 2021, and January 2022.
- A total of 157 field interviewers were hired and trained to conduct in-person household rostering and screening. Five trainings occurred between May 2021 and January 2022.
- Ninety-four clinical interviewers were hired and trained to conduct the MDPS structured clinical interview by video with the household population and by video, by phone, or in person with the non-household populations. Training consisted of review of study protocols and systems, review of the SCID-5-NSMH, and multiple practice interviews. A standardized certification interview was conducted with all clinical interviewers upon completion of training. Certification was done by the clinical supervisors. Of those who received training, 60 became certified, and all the certified clinical interviewers administered at least one clinical interview.
- Eleven clinical supervisors were hired and trained to provide oversight to the clinical interviewers, conduct certification interviews with the clinical interviewers, conduct quality reviews of completed interviews, hold regular meetings with their clinical interviewer teams, attend supervisor quality circle meetings, and conduct retraining on components of the clinical interview as needed.

Clinical Interviewers and Supervisors

Interviews were conducted by a team of highly trained clinical interviewers who were required to have at least a master's degree in clinical or counseling psychology, social work, or a similar field, or a medical degree with a specialty in psychiatry. In addition, all clinical interviewers had to have experience conducting clinical assessments. Initially, 63 clinical interviewers were hired and then trained on the NetSCID over a 2-week period. After 1 year of data collection, additional clinical interviewers were hired to replenish the workforce, accounting for expected attrition. These clinical interviewers were supervised by 11 clinical supervisors who all had PhDs in one of the aforementioned fields, experience with the SCID-5[®], and experience supervising others in conducting clinical interviews. Clinical interviewers were required to commit between 6 and 12 hours per week to the project. Clinical supervisors met with their clinical interviewers regularly to review case content and ensure ongoing agreement on clinical ratings throughout the project.

Data Collection Outcomes

Household rostering interviews were completed with 25,752 participants, and household screening interviews were completed with 29,084 participants between October 2020 and June 2022. The average screening interview length was 16.1 minutes. Of the screening interviews, 71.0 percent were completed online, 20.0 percent in person, 8.0 percent by phone, and 0.4 percent by mail.

In total, 5,679 clinical interviews were completed in households, prisons, homeless shelters, and state psychiatric hospitals during the 2-year data collection period.

Household clinical interviews were completed with 4,764 participants. The average interview length was 77 minutes. Two-thirds of household clinical interviews were completed by video, and the remaining third were conducted by phone.

Non-household clinical interviews were completed among 915 participants. This total included 171 participants in 4 state psychiatric hospitals, 423 participants in 23 homeless shelters, and 321 participants in 22 prisons. The average clinical interview length varied by population, and some sites had restrictions on interview duration or content (e.g., prison facilities restricting the use of questions on substance use). The duration of the average clinical interview was 70.9 minutes in state psychiatric hospitals, 72.4 minutes in homeless shelters, and 59.2 minutes in prisons. Data collection was conducted in person in half of the facility sites and by video or phone in the other half.

[Table 2.B.1](#) in Section 2.B provides the number of eligible and interviewed participants at each stage and for each sample type and the weighted response rates.

Quality Control

Quality control was conducted at each step of the data collection process. The roster data were evaluated for completeness and duplicate entries. Screening interviews were reviewed for completeness, duplicate entries within households, correct randomization of the screening instrument (CIDI[®] or CAT-MH[®]), expected versus actual screening group outcomes, and selection rate by group. The GPS coordinates of the location of completion were compared with the sample address for the selected roster and screening interviews completed in person to verify the legitimacy of the interview location. Verification calls were made to confirm key information. Clinical interviews were reviewed for completeness and consistency. Recordings were reviewed to ensure accurate delivery of the interview script, input of data, and clinical assessment of mental and substance use diagnostic variables. Clinical supervisors provided feedback as needed to clinical interviewers to maintain high quality. Quarterly calibration exercises were also conducted with the clinical interviewers to ensure consistency in coding the clinical interview. Agreement at the disorder level (i.e., presence or absence of a disorder) remained at or above 90 percent for all SCID-5[®] disorders, across all calibration exercises.

2.E Methods—Weighting and Estimation

The MDPS estimates presented in this report were calculated using survey analysis weights. Survey analysis weights are needed to produce MDPS estimates that represent the U.S. adult population aged 18 to 65, along with the estimates' measure of precision (e.g., confidence intervals [CIs]). Unweighted data represent only the MDPS sample; unweighted data do not align with the U.S. adult population.

Survey analysis weights were calculated independently for each of the four MDPS population samples: residential households, prisons, state psychiatric hospitals, and homeless shelters. Each weight reflects the design used to identify and recruit each population sample type and

the relative size of that population within the entire U.S. adult population. For example, almost all U.S. adults live in residential households. Consequently, adults living in residential households make up 99.2 percent of the MDPS target population. The remaining 0.8 percent of the combined MDPS target population includes the federal/state prison population (0.6 percent), the state psychiatric hospital population (0.02 percent), and the sheltered homeless population (0.2 percent). Designing methods for non-household population data collection was an MDPS pilot program goal. For this reason, the MDPS sample size for each non-household population was deliberately designed to be larger than what would have been necessary to reflect each sample's representation within the entire U.S. adult population. For final MDPS estimates to accurately represent all U.S. adults, the household and non-household population data were weighted to reflect the relative size of each population within the United States. Weights also accounted for the different probabilities of being selected for and participating in the survey. As a result, the weighted MDPS estimates calculated with the combined household and non-household survey data reflect all U.S. adults aged 18 to 65.

Additional highlights of the weighting and estimation methodology are provided as follows.

Survey Analysis Weights

Multistage probability sampling was employed for the household population. The person-level household analysis weights used to analyze the clinical interview data incorporated adjustments for (1) the selection probability at each design stage—geography, household, within-household, and clinical interview post-screening; (2) subsampling for an in-person nonresponse follow-up; (3) nonresponse to the household rostering, screening, and clinical interviews; and (4) adjustments to align estimates for select characteristics with those from the 2019 American Community Survey 1-year Public Use Microdata Sample file, the most recent information available at the time for the population of interest. See, for example, Valliant, Dever, and Kreuter (2018) and Valliant and Dever (2018) for additional information on calculation of survey analysis weights. Consequently, the weighted estimates from the person-level residential household data cover U.S. adults aged 18 to 65 and comprise 99.2 percent of the MDPS total sample estimates.

Participants from the non-household populations were identified through a mix of protocols. Weights for the federal/state prison sample selected from a probability-based design include factors for (1) the two-stage selection probability of prison facilities and participants within each prison, (2) nonresponse at both levels, and (3) calibration to information obtained from the statistical tables for prisoners in 2020 by the Bureau of Justice Statistics.⁵ Consequently, the weighted federal/state prison data comprise 0.6 percent of the MDPS total sample population estimates.

⁵ The tables are published at <https://bjs.ojp.gov/library/publications/prisoners-2020-statistical-tables>. The total numbers for sentenced prisoners under the jurisdiction of state or federal correctional authorities by demographic characteristics were used as control totals in the calibration procedure.

Weights for the state psychiatric hospital and sheltered homeless samples (with facilities chosen from select areas of the United States without a probability-based sampling mechanism) were created to enhance generalizability of the data to the intended populations. This goal was addressed by creating adjustments to approximate a probability-based sampling design, to account for differential probabilities of selection and participation by the facility residents, and to address differences between the sample characteristics and available population information.⁶ Specifically, the weights included components for (1) the within-facility selection probability, (2) nonresponse within each facility, and (3) adjustments to align weighted estimates to the most recent available population distributions across MDPS facility state locations from the 2018 National Mental Health Services Survey estimates for psychiatric hospital residents (Lutterman, 2022)⁷ and the 2020 U.S. Department of Housing and Urban Development Point-in-Time estimates⁸ for homeless shelter residents. Consequently, the weighted state psychiatric hospital data and the weighted sheltered homeless data comprise 0.02 percent and 0.2 percent, respectively, of the MDPS total sample population estimates.

Estimation

The findings described within Chapter 3 of this report include U.S. adult population estimates that have been calculated from the weighted MDPS clinical interview data. These estimates include data generated from all four independent MDPS samples (households, prisons, state psychiatric hospitals, and homeless shelters). The analysis tables in the report and in Appendix A contain weighted prevalence rate estimates overall and, where relevant, by certain key characteristics. Unweighted participant counts are shown to describe the sample characteristics. Weighted counts of adults (in millions) are provided for all study estimates. These weighted counts illustrate the number of adults in the United States affected by a disorder of focus. Weighted 95 percent CIs are provided to quantify the measure of precision for each estimate. Estimates and CIs are suppressed from the report (i.e., not presented) due to low precision if the scaled relative standard error—defined as the standard error divided by the prevalence rate estimate—exceeds 30 percent, or if the number of adults used in the numerator of the disorder by characteristic prevalence estimate is fewer than 20.⁹ Select estimates with adequate precision are shown in graphical form for ease of interpretation.

All analyses were conducted in SUDAAN[®] (Research Triangle Institute, 2012), software developed by RTI that accounts for complex sampling designs such as the MDPS.

⁶ See for example, Valliant, Dever, and Kreuter (2018) and Valliant and Dever (2018) for additional information on nonprobability survey weights.

⁷ The total number of adult hospital residents was used as a control total in the calibration procedure.

⁸ The total numbers of sheltered adults in 2020 were used as control totals in the calibration procedure and are found at <https://www.hudexchange.info/resource/3031/pit-and-hic-data-since-2007/>.

⁹ The scaled relative standard error is calculated as $[(SE / P) / -\log(P)]$, where SE is the standard error of the prevalence estimate; and P equals the prevalence estimate for values less than or equal to 0.5, or 1 minus the prevalence estimate for values greater than 0.5 (Center for Behavioral Health Statistics and Quality, 2020, Section 3.2.2). A scaled relative standard error is used to account for the presence of P in the numerator and denominator.

Restricted-Use Data

The MDPS dataset will be made available for restricted use upon approval through the Inter-university Consortium for Political and Social Research (<https://www.icpsr.umich.edu/web/pages/>). Release is anticipated in fall 2023. Additional details on MDPS weighting and estimation are found in the restricted-use data file documentation.

3. Findings

Chapter 3 presents the prevalence rates of MDPS mental and substance use disorders. In this chapter, unweighted counts refer to the raw numbers of participants in the MDPS sample who fall into a given category such as aged 18 to 25, male gender identity, or having a past-year disorder. In contrast, weighted counts and percentages refer to numbers that represent the total U.S. population based on census demographics. Tables in Chapter 3 show the percentage of adults and the estimated total number of adults aged 18 to 65 in the U.S. population meeting criteria for each disorder. Following these estimates, Chapter 3 also presents the percentage and number of U.S. adults with mental and substance use disorders who received treatment in the year before the interview. These percentages are represented by the bars in the bar graphs and are broken down by disorder and by demographic characteristics.

The graphs in Chapter 3 are scaled to represent 100 percent of the sample with the exception of categories where no subgroup reached 50 percent (e.g., certain race/ethnicity categories). In the latter case, y-axes are set to less than 100 percent for clarity of presentation. The sample for graphs illustrating treatment receipt corresponds to those participants with a past-year MDPS disorder. In other words, treatment receipt is reported for only adults meeting criteria for a mental or substance use disorder in the past year.

All estimates presented in the graphs are provided in detailed tables found in Appendix A. These detailed tables illustrate the prevalence rate of each mental and substance use disorder by age group, sex assigned at birth, current gender identity, race/ethnicity, geographic region, and urbanicity. Detailed tables in Appendix A also illustrate rates of treatment receipt by each MDPS disorder. Chi-square statistics were run for demographic group comparisons, and p-values are shown in the Appendix A tables. Significant differences should be interpreted at the overall group level (e.g., across all racial categories, across all age categories).

3.A Sample Characteristics

The demographic characteristics of the total sample are shown in [Table 3.A.1](#). More than 80.0 percent of the sample participants were aged 26 to 65. Gender identity was split almost evenly between male and female, with about 1.0 percent of the sample identifying as transgender or gender diverse. Adults reporting their race as non-Hispanic Black or African American are subsequently referred to as non-Hispanic Black in the text. Adults reporting their ethnicity as Hispanic or Latino are subsequently referred to as Hispanic in the text. The

majority of the participants self-identified as non-Hispanic White (59.5 percent), 12.6 percent self-identified as non-Hispanic Black, and 18.4 percent self-identified as Hispanic. Among geographic regions, the South was most heavily represented (38.0 percent), and the majority of participants lived in urban areas (82.0 percent).

Table 3.A.1 Demographic Characteristics of MDPS Participants

Demographic Characteristics	Total Sample		
	Count ¹	Weighted Percent ²	95% Confidence Interval ²
Overall	5,679	-	-
Age Group			
18–25	691	16.8	(14.1, 19.9)
26–44	2,694	42.1	(38.9, 45.3)
45–65	2,294	41.1	(37.6, 44.8)
Sex Assigned at Birth			
Male	2,371	49.2	(45.3, 53.1)
Female	3,308	50.8	(46.9, 54.7)
Current Gender Identity			
Male	2,318	48.6	(44.7, 52.4)
Female	3,226	50.2	(46.4, 54.0)
Transgender/Gender Diverse	90	0.9	(0.5, 1.4)
Missing	45	0.4	(0.2, 0.7)
Race/Ethnicity			
Hispanic/Latino	882	18.4	(13.8, 24.3)
NH White	3,451	59.5	(53.8, 64.9)
NH Black/African American	706	12.6	(10.0, 15.8)
NH Asian	272	4.4	(3.3, 6.0)
NH American Indian/Alaska Native	56	0.5	(0.3, 0.8)
NH Native Hawaiian/Other Pacific Islander	20	0.2	(0.1, 0.3)
NH Multiracial	257	4.4	(3.4, 5.7)
Missing ³	35	0.0	(0.0, 0.1)
Region⁴			
Midwest	1,192	20.6	(17.8, 23.7)
Northeast	1,024	17.4	(14.3, 21.0)
South	1,890	38.0	(33.3, 42.9)
West	1,573	24.1	(19.7, 29.0)
Urbanicity⁵			
Urban	4,092	82.0	(74.2, 87.9)
Rural	672	18.0	(12.1, 25.8)

NH = not Hispanic/Latino.

¹ Unweighted number of participants. Counts may not sum to overall total due to question nonresponse.

² Weighted estimates were calculated with analysis weights and account for the complex MDPS sampling design.

³ Includes those (1) with missing Hispanic/Latino status, and (2) with missing racial group among those reporting not being Hispanic/Latino.

⁴ Mapping of states to census regions is provided by the U.S. Census Bureau (see, e.g., https://www2.census.gov/geo/pdfs/maps-data/maps/reference/us_regdiv.pdf).

⁵ Urbanicity data are presented for the household sample only. The definition of urban versus rural areas is provided in https://www.census.gov/content/dam/Census/library/publications/2020/acs/acs_rural_handbook_2020.pdf.

3.B Research Question 1: What is the past-year prevalence rate of mental and substance use disorders among adults aged 18 to 65 in the United States?

The prevalence rates of mental and substance use disorders assessed in the MDPS are described in the following tables and figures and in [Tables A.3 to A.9](#) in Appendix A. The past-year prevalence rate of each disorder, any disorder, and the co-occurrence of mental and substance use disorders is presented for the full study population. Comparisons are also illustrated by age group, sex assigned at birth, current gender identity, race/ethnicity, geographic region, and urbanicity.

As shown in [Table 3.B.1](#), MDD was the most common MDPS mental disorder (15.5 percent in the past year), followed by GAD (10.0 percent in the past year), PTSD (4.1 percent in the past year), and OCD (2.5 percent in the past year). An estimated 1.8 percent had a lifetime diagnosis of a schizophrenia spectrum disorder, and 1.2 percent had a past-year diagnosis of a schizophrenia spectrum disorder. The estimated prevalence rate of anorexia nervosa in the past year was suppressed (i.e., not shown) due to low precision. [Figure 3.B.1](#) shows these same estimates in a bar chart.

Prevalence Rates of Mental Disorders

Table 3.B.1 Estimated Prevalence Rates of Past-Year MDPS Mental Disorders Among Adults Aged 18 to 65

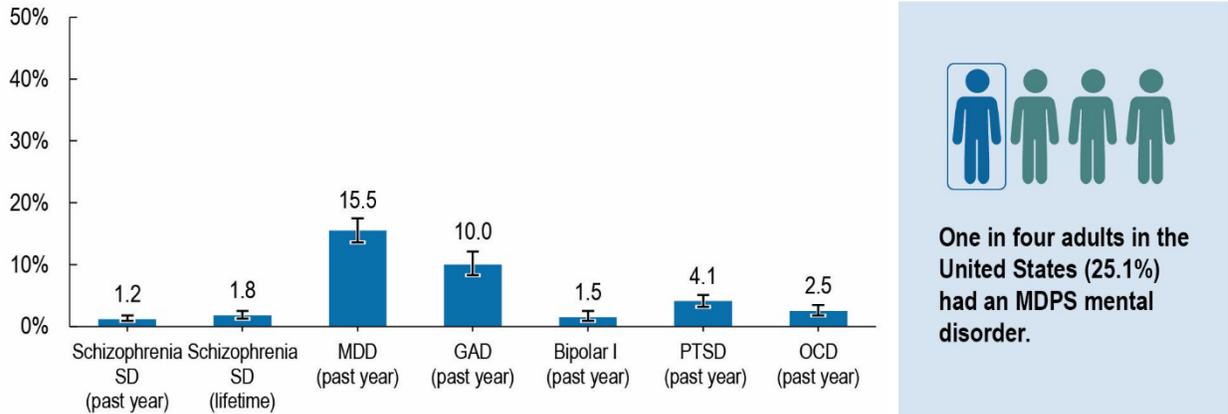
MDPS Mental Disorder	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²
Schizophrenia Spectrum Disorders (past year)	2.5	1.2	(0.9, 1.8)
Schizophrenia Spectrum Disorders (lifetime)	3.7	1.8	(1.3, 2.5)
Major Depressive Disorder (past year)	31.4	15.5	(13.6, 17.5)
Generalized Anxiety Disorder (past year)	20.2	10.0	(8.3, 12.1)
Bipolar I Disorder (past year)	3.1	1.5	(0.9, 2.5)
Posttraumatic Stress Disorder (past year)	8.2	4.1	(3.2, 5.1)
Obsessive-Compulsive Disorder (past year)	5.0	2.5	(1.8, 3.5)
Anorexia Nervosa (past year)	<0.5	0.1	(0.1, 0.3)
Any MDPS Mental Disorder (including lifetime schizophrenia spectrum disorders)	50.7	25.1	(22.7, 27.6)
Two or More MDPS Mental Disorders ³	16.2	8.0	(6.9, 9.3)

¹ Weighted number of participants (i.e., population size) in millions.

² Weighted estimates were calculated with analysis weights and account for the complex MDPS sampling design.

³ Includes lifetime schizophrenia spectrum disorders if past-year schizophrenia spectrum disorders are not present.

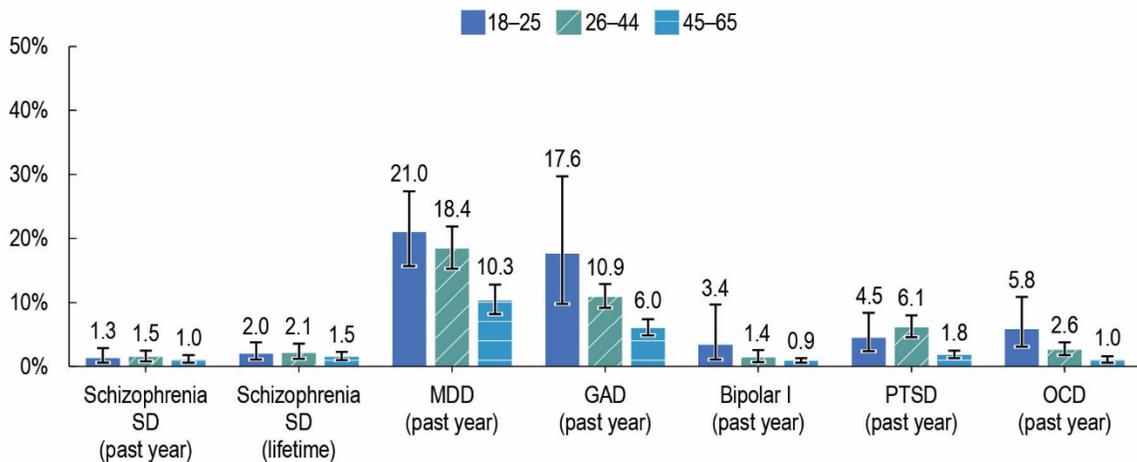
Figure 3.B.1 Estimated Prevalence Rates of Past-Year MDPS Mental Disorders



SD = spectrum disorder; MDD = major depressive disorder; GAD = generalized anxiety disorder; PTSD = posttraumatic stress disorder; OCD = obsessive-compulsive disorder.

As shown in [Figure 3.B.2](#), the most common disorders, MDD and GAD, along with OCD and bipolar I disorder, occurred the most frequently in young adults aged 18 to 25. Adults aged 45 to 65 had the lowest past-year prevalence rates across all MDPS mental disorders.

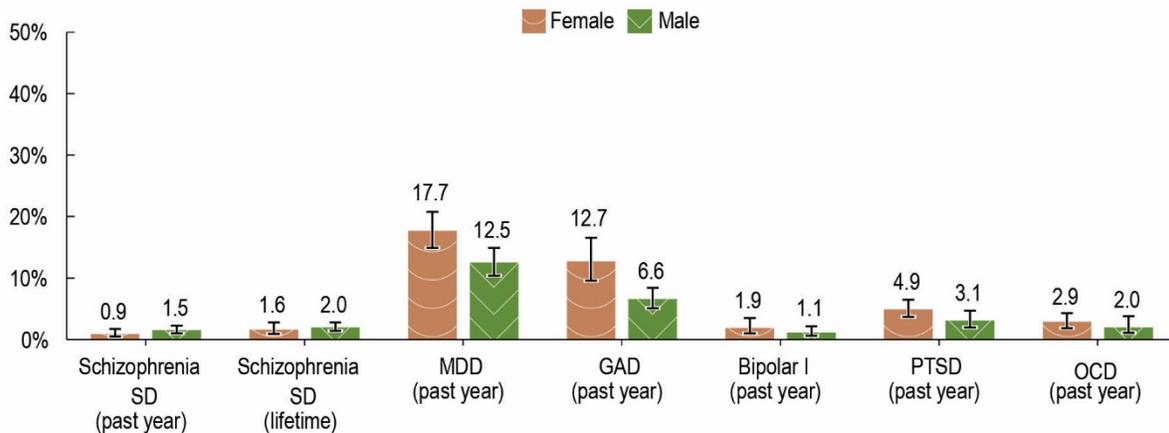
Figure 3.B.2 Estimated Prevalence Rates of Past-Year MDPS Mental Disorders, by Age Group



SD = spectrum disorder; MDD = major depressive disorder; GAD = generalized anxiety disorder; PTSD = posttraumatic stress disorder; OCD = obsessive-compulsive disorder.

As shown in [Figure 3.B.3](#), past-year and lifetime schizophrenia spectrum disorders tended to be more common in people identifying as male, whereas other MDPS mental disorders tended to be more common in people identifying as female.

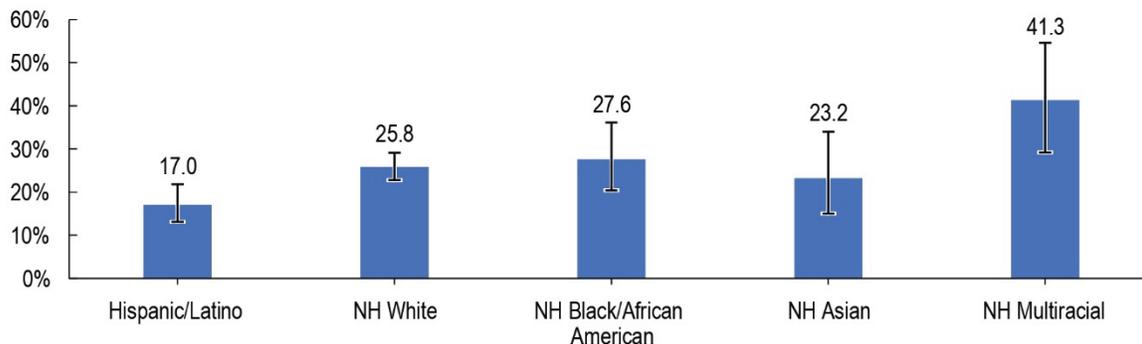
Figure 3.B.3 Estimated Prevalence Rates of Past-Year MDPS Mental Disorders, by Gender Identity



SD = spectrum disorder; MDD = major depressive disorder; GAD = generalized anxiety disorder; PTSD = posttraumatic stress disorder; OCD = obsessive-compulsive disorder.
 Note: Estimates for adults identifying as transgender/gender diverse are suppressed (i.e., not shown) due to low precision.

As shown in [Figure 3.B.4](#), people who were non-Hispanic Multiracial had the highest percentage of any MDPS mental disorder (41.3 percent), followed by people who were non-Hispanic Black (27.6 percent). Estimates are suppressed (i.e., not shown) due to low precision for some racial/ethnic groups.

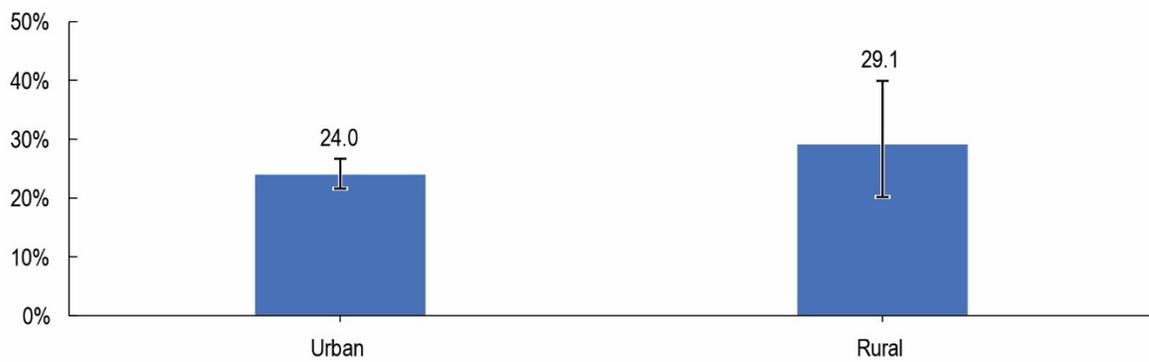
Figure 3.B.4 Estimated Prevalence Rates of Any Past-Year MDPS Mental Disorder, by Race/Ethnicity



NH = not Hispanic/Latino.
 Note: Estimates for NH Native Hawaiian/Other Pacific Islander and NH American Indian/Alaska Native are suppressed (i.e., not shown) due to low precision.

As shown in [Figure 3.B.5](#), the percentage of any MDPS mental disorder was highest among those household participants living in rural areas (29.1 percent) compared with those living in urban areas (24.0 percent).

Figure 3.B.5 Estimated Prevalence Rates of Any Past-Year MDPS Mental Disorder, by Urbanicity¹

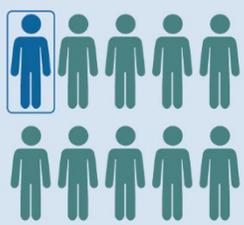


¹ Urbanicity data are presented for the household sample only. The definition of urban versus rural areas is provided in https://www.census.gov/content/dam/Census/library/publications/2020/acs/acs_rural_handbook_2020.pdf.

Prevalence Rates of Substance Use Disorders

As shown in [Table 3.B.2](#), alcohol use disorder was the most common MDPS substance use disorder (6.7 percent), followed by cannabis use disorder (3.8 percent). An estimated 1.6 percent of people had stimulant use disorder, and 0.5 percent of people had opioid use disorder.

Table 3.B.2 Estimated Prevalence Rates of MDPS Substance Use Disorders Among Adults Aged 18 to 65

 <p data-bbox="272 888 490 1014">One in 10 U.S. adults (10.6%) had an MDPS substance use disorder.</p>	MDPS Substance Use Disorder¹	Weighted Count (million)²	Weighted Percent³	95% Confidence Interval³
	Alcohol Use Disorder (past year)	13.4	6.7	(5.5, 8.0)
Opioid Use Disorder (past year)	1.0	0.5	(0.3, 0.8)	
Stimulant Use Disorder (past year)	3.2	1.6	(1.1, 2.3)	
Sedative/Hypnotic/Anxiolytic Use Disorder (past year)	<0.5	0.2	(0.1, 0.3)	
Cannabis Use Disorder (past year)	7.7	3.8	(2.6, 5.4)	
Any MDPS Substance Use Disorder (past year)	21.4	10.6	(8.7, 12.9)	
Two or More MDPS Substance Use Disorders (past year)	3.5	1.8	(1.2, 2.5)	
Comorbidity of Any MDPS Substance Use Disorder (past year) and Any MDPS Mental Disorder	11.0	5.5	(3.9, 7.6)	

¹ Excludes prison sample because questions about substance use disorders were not asked.

² Weighted number of participants (i.e., population size) in millions.

³ Weighted estimates were calculated with analysis weights and account for the complex MDPS sampling design.

As shown in [Table 3.B.3](#), alcohol use disorder occurred most frequently among adults aged 26 to 44 (9.0 percent). Cannabis use disorder occurred most frequently among young adults aged 18 to 25 (8.1 percent). Estimated past-year prevalence rates of some MDPS substance use disorders are suppressed (i.e., not shown) due to low precision and therefore unavailable for some age groups.

MDPS substance use disorders tended to be more common in people identifying as male except for cannabis use disorder, which was more common in people identifying as female (3.8 percent). Estimated past-year prevalence rates of MDPS substance use disorder are suppressed (i.e., not shown) due to low precision and therefore unavailable for the people identifying as transgender or gender diverse.

Table 3.B.3 Estimated Prevalence Rates of Past-Year MDPS Substance Use Disorders Among Adults Aged 18 to 65, by Age Group and Gender Identity

Past-Year Substance Use Disorder ¹	Age Group ²			Gender Identity ²	
	18–25	26–44	45–65	Female	Male
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Alcohol Use Disorder	5.1 (2.5, 10.1)	9.0 (6.9, 11.7)	4.9 (3.6, 6.7)	5.8 (4.4, 7.7)	7.4 (5.5, 9.8)
Opioid Use Disorder	*	0.7 (0.4, 1.3)	0.3 (0.1, 0.7)	0.4 (0.2, 0.7)	0.6 (0.3, 1.2)
Stimulant Use Disorder	*	1.8 (1.1, 2.9)	1.7 (0.9, 3.1)	1.0 (0.6, 1.5)	2.2 (1.3, 3.7)
Cannabis Use Disorder	8.1 (3.6, 17.2)	4.2 (2.7, 6.3)	1.6 (0.9, 3.1)	3.8 (2.0, 7.0)	3.4 (2.3, 5.0)

CI = confidence interval.

* Estimates for young adults aged 18–25 for opioid use disorder and stimulant use disorder are suppressed (i.e., not shown) due to low precision.

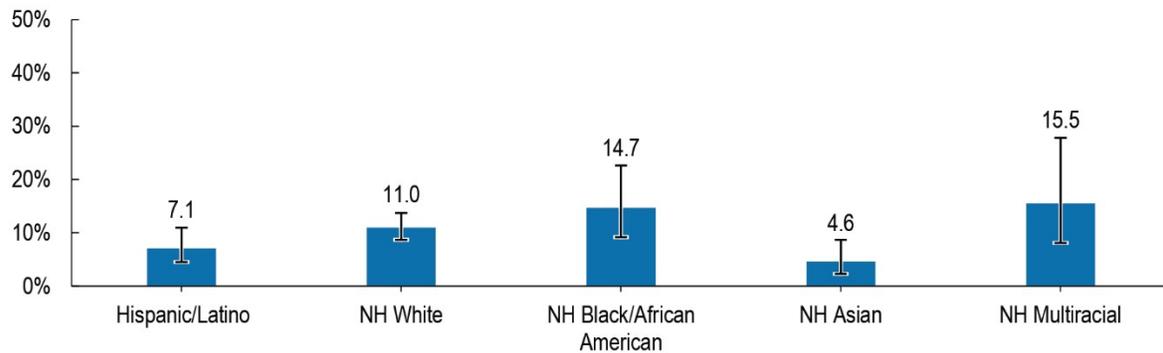
¹ Excludes prison sample because questions about substance use disorders were not asked.

² Weighted estimates were calculated with analysis weights and account for the complex MDPS sampling design.

Note: Estimates for adults identifying as transgender/gender diverse are suppressed (i.e., not shown) due to low precision.

As shown in [Figure 3.B.6](#), people who identified as non-Hispanic Multiracial had the highest prevalence rate of any substance use disorder in the past year (15.5 percent), followed by people who identified as non-Hispanic Black (14.7 percent).

Figure 3.B.6 Estimated Prevalence Rates of Any Past-Year MDPS Substance Use Disorder, by Race/Ethnicity

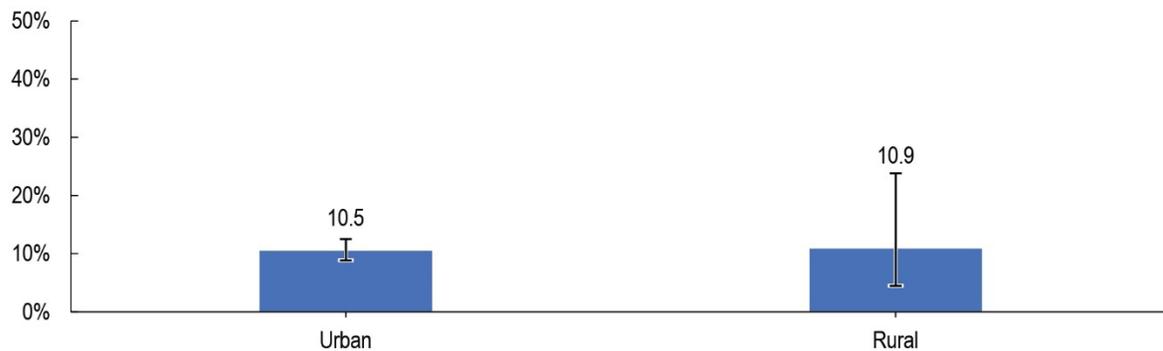


NH = not Hispanic/Latino.

Note: Estimates for NH American Indian/Alaska Native, and NH Native Hawaiian/Other Pacific Islander are suppressed (i.e., not shown) due to low precision.

As shown in [Figure 3.B.7](#), the prevalence rates of any MDPS substance use disorder were similar across household participants living in urban and rural areas.

Figure 3.B.7 Estimated Prevalence Rates of Any Past-Year MDPS Substance Use Disorder, by Urbanicity¹



¹ Urbanicity data are presented for the household sample only. The definition of urban versus rural areas is provided in https://www.census.gov/content/dam/Census/library/publications/2020/acs/acs_rural_handbook_2020.pdf.

3.C Research Question 2: What proportion of adults in the United States with mental and substance use disorders received treatment in the past year?

All MDPS participants were asked about the mental health and substance use treatment they may have received in the past year. Section 3.C presents findings of treatment received by MDPS participants with MDPS mental and substance use disorders. Comparisons are also illustrated by age group, current gender identity, race/ethnicity, geographic region, and urbanicity. The corresponding data can also be found in [Tables A.10](#) to [A.16](#) in Appendix A.

Treatment questions within the MDPS instrument did not focus on treatments for specific symptoms or disorders. Instead, treatment rates indicate that adults received some type of mental health or substance use treatment in the past year. Thus, the treatment rates presented in this section for adults with PTSD should not be interpreted to mean that adults received treatment specifically for PTSD symptoms. However, in clinical practice, treatments for various disorders often overlap. For example, antidepressants can be prescribed for disorders apart from MDD, such as GAD, OCD, and PTSD. Because questions focus on past-year treatment, MDPS estimates do not present treatments received before this period. Questions used to determine outpatient treatment, inpatient treatment, and medication use among those with mental disorders are presented in the text box titled “Mental Health Treatment: Questions Included in the MDPS Instrument.” Although they are not presented in this report, the MDPS also contains questions on the number of visits, the actual medication used, and any lifetime treatment.

Mental Health Treatment Receipt

Mental Health Treatment: Questions Included in the MDPS Instrument

Have you **ever** received professional counseling, medication or other treatment to help with your mental health, emotions, or behavior?

If yes:

During the **past 12 months**, have you received **inpatient or residential treatment**, that is have you stayed overnight or longer to receive **professional counseling, medication, or other treatment** for your mental health, emotions, or behavior at any of these places?

- a hospital,
- a residential mental health treatment center,
- a residential drug or alcohol treatment or rehab center,
- or some other place.

Treatment can also be provided without needing to stay overnight. This type of care is called **outpatient treatment**. During the **past 12 months**, have you received **outpatient** professional counseling, medication, or other treatment for your mental health, emotions, or behavior at any of these places?

- a mental health treatment center;
- a drug or alcohol treatment or rehab center;
- the office of a therapist, psychologist, psychiatrist, mental health professional, or doctor;
- a school, college, or a university clinic;
- a shelter for the homeless;
- a jail, prison, or juvenile detention facility;
- phone, text, video, telemedicine; or
- some other place.

During the **past 12 months**, did you take any **medication** that was prescribed by a doctor or health care professional to help with your mental health, emotions, behavior, energy, concentration, or ability to cope with stress?

Table 3.C.1 gives the weighted percentage and count of adults with each MDPS mental disorder who received any mental health treatment in the past year.

Table 3.C.1 Receipt of Outpatient Treatment, Inpatient Treatment, or Medication for a Past-Year MDPS Mental Disorder

MDPS Mental Disorder	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence interval ²
Schizophrenia Spectrum Disorders (past year)	1.8	72.9	(51.3, 87.3)
Schizophrenia Spectrum Disorders (lifetime)	2.6	72.8	(56.4, 84.7)
Major Depressive Disorder (past year)	18.4	59.6	(52.8, 66.0)
Generalized Anxiety Disorder (past year)	13.2	65.9	(59.8, 71.5)
Bipolar I Disorder (past year)	*	*	*
Posttraumatic Stress Disorder (past year)	5.9	71.7	(59.1, 81.6)
Obsessive-Compulsive Disorder (past year)	3.7	73.5	(61.4, 82.9)
Anorexia Nervosa (past year)	*	*	*
Any MDPS Mental Disorder (past year)	30.4	60.8	(55.7, 65.6)

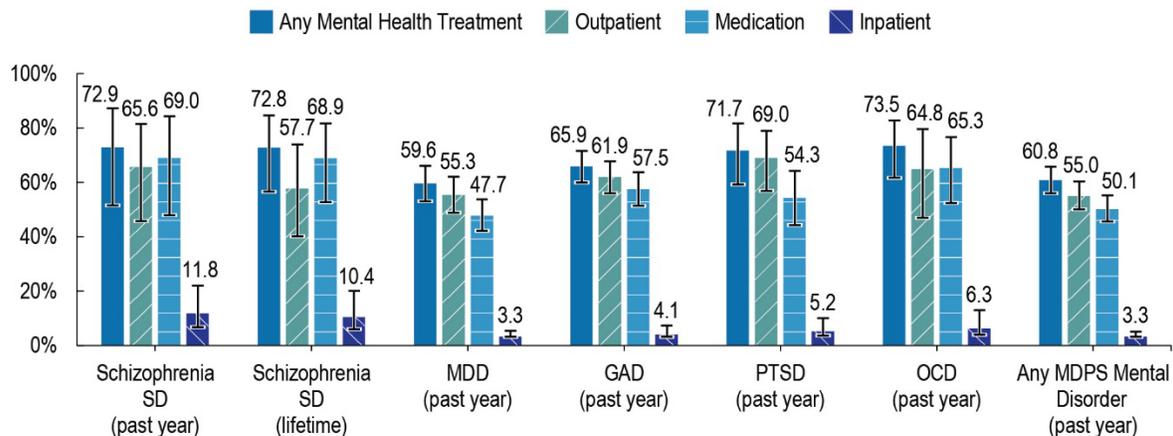
* Estimates are suppressed (i.e., not shown) due to low precision.

¹ Weighted number of participants (i.e., population size) in millions.

² Weighted estimates were calculated with analysis weights and account for the complex MDPS sampling design.

Figure 3.C.1 shows that adults with schizophrenia spectrum disorders were most likely to receive any treatment. Individuals with MDD were least likely to receive any treatment. Differences across disorders were not large. Among individuals with any MDPS mental disorder, only about 6 in 10 received at least some treatment, usually outpatient treatment or medications, which may overlap. Four in 10 received no treatment at all.

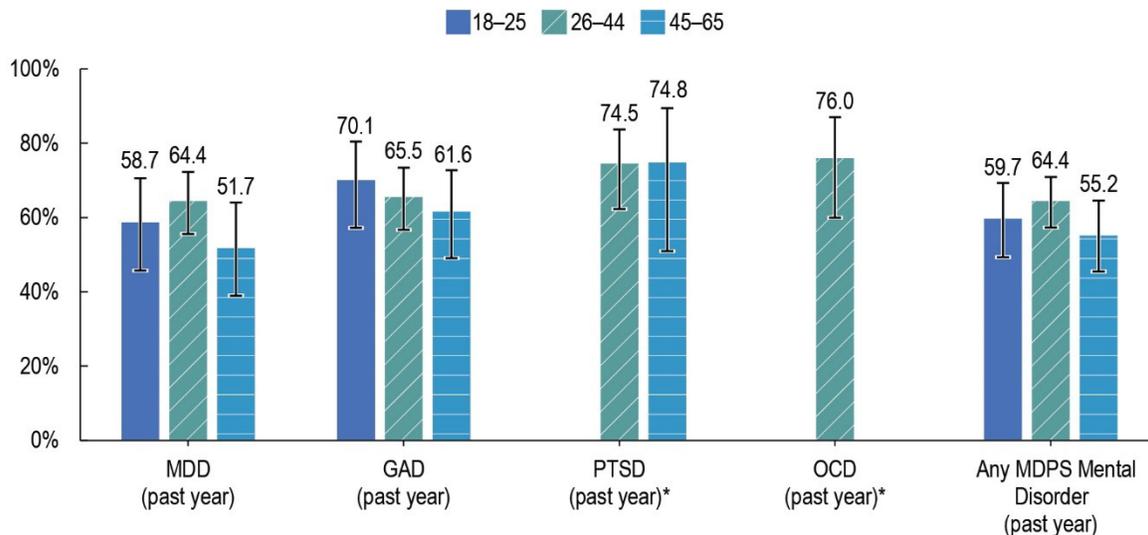
Figure 3.C.1 Receipt of Outpatient Treatment, Inpatient Treatment, or Medication for a Past-Year MDPS Mental Disorder



SD = spectrum disorder; MDD = major depressive disorder; GAD = generalized anxiety disorder; PTSD = posttraumatic stress disorder; OCD = obsessive-compulsive disorder.

Figure 3.C.2 shows the rates of treatment use for past-year MDPS mental disorders across age groups. Although more than half of adults reported that they received treatment across all MDPS mental disorders, it is notable that unmet need remains high. Forty percent of adults with an MDPS mental disorder received no treatment at all.

Figure 3.C.2 Receipt of Outpatient Treatment, Inpatient Treatment, or Medication for a Past-Year MDPS Mental Disorder, by Age Group



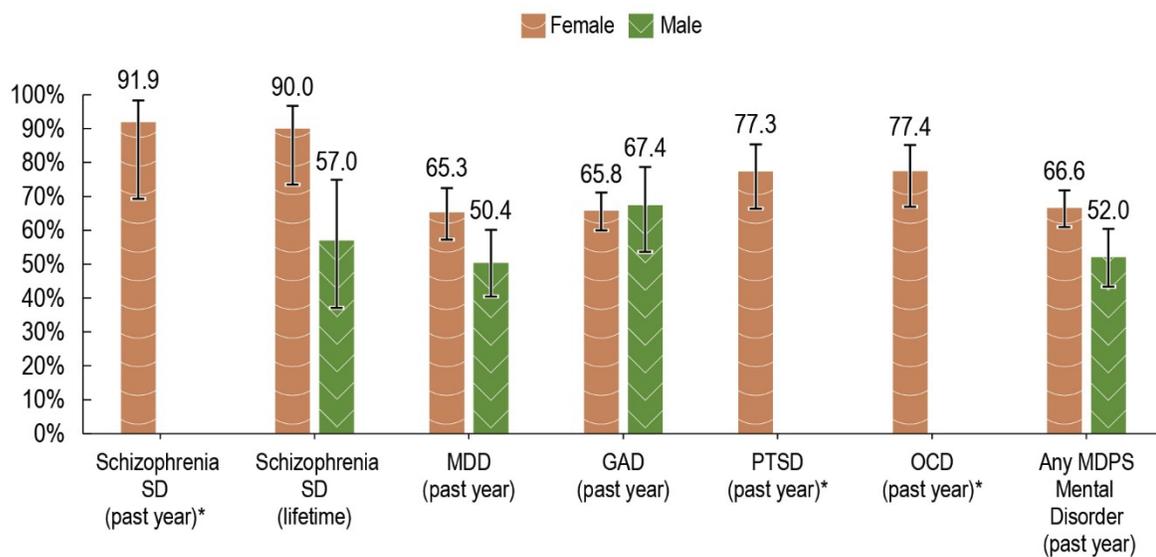
MDD = major depressive disorder; GAD = generalized anxiety disorder; PTSD = posttraumatic stress disorder; OCD = obsessive-compulsive disorder.

* Estimates for young adults aged 18–25 for PTSD and OCD and for adults aged 45–65 for OCD are suppressed (i.e., not shown) due to low precision.

Note: Estimates for schizophrenia spectrum disorders (past year and lifetime) are suppressed (i.e., not shown) due to low precision.

Figure 3.C.3 shows that the rates of any treatment use among adults who identified as female were above 60 percent for all disorders and greater than 90 percent for past-year schizophrenia spectrum disorders. Treatment receipt for adults who identified as male was above 50 percent for the MDPS mental disorders shown. Estimated past-year prevalence rates of mental health treatment use are suppressed (i.e., not shown) due to low precision and therefore unavailable for some disorders for males and transgender or gender diverse participants.

Figure 3.C.3 Receipt of Outpatient Treatment, Inpatient Treatment, or Medication for an MDPS Mental Disorder, by Gender Identity



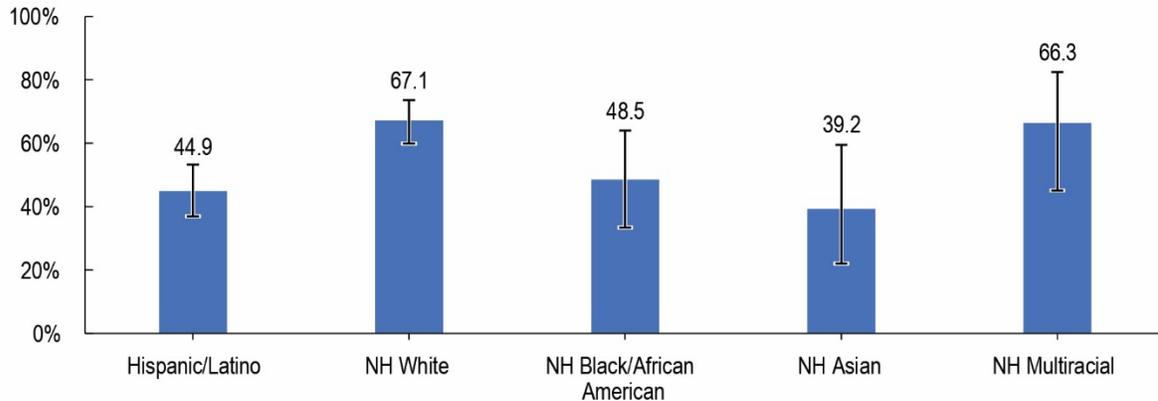
SD = spectrum disorder; MDD = major depressive disorder; GAD = generalized anxiety disorder; PTSD = posttraumatic stress disorder; OCD = obsessive-compulsive disorder.

* Estimates for adults identifying as male are suppressed (i.e., not shown) due to low precision.

Note: Estimates for adults identifying as transgender/gender diverse are suppressed (i.e., not shown) due to low precision.

As shown in [Figure 3.C.4](#), adults identifying as non-Hispanic White were the most likely to receive treatment (67.1 percent), followed by those who identified as non-Hispanic Multiracial (66.3 percent).

Figure 3.C.4 Receipt of Outpatient Treatment, Inpatient Treatment, or Medication for a Past-Year MDPS Mental Disorder, by Race/Ethnicity

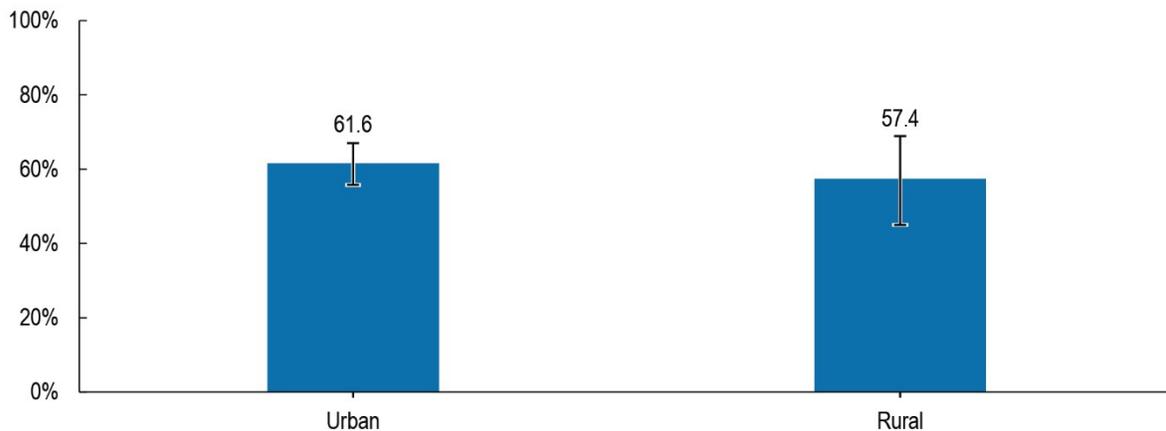


NH = not Hispanic/Latino.

Note: Estimates for NH American Indian/Alaska Native and NH Native Hawaiian/Other Pacific Islander are suppressed (i.e., not shown) due to low precision.

As shown in [Figure 3.C.5](#), rates of mental health treatment use were similar across household participants living in urban and rural areas.

Figure 3.C.5 Receipt of Outpatient Treatment, Inpatient Treatment, or Medication for a Past-Year MDPS Mental Disorder, by Urbanicity¹



¹ Urbanicity data are presented for the household sample only. The definition of urban versus rural areas is provided in https://www.census.gov/content/dam/Census/library/publications/2020/acs/acs_rural_handbook_2020.pdf.

Substance Use Disorder Treatment Receipt

This section presents treatment received by MDPS participants with substance use disorders. Comparisons are also illustrated by age group, current gender identity, race/ethnicity, and geographic region. Questions used to determine outpatient treatment, inpatient treatment, and medication use among those with substance use disorders are presented in the text box titled “Substance Use Treatment: Questions Included in the MDPS Instrument.” Although they are not presented in this report, the MDPS also contains questions on the number of visits; the actual medication used, such as methadone and buprenorphine; and any lifetime treatment.

Substance Use Treatment: Questions Included in the MDPS Instrument

The next questions ask about treatment such as professional counseling, medication, or other treatment you may have received for **use of alcohol or drugs, not including cigarettes**. These treatment types can be received during an overnight stay, outpatient visit, or over the phone or internet.

Have you **ever** received professional counseling, medication or other treatment for your alcohol or drug use?

If Yes:

During the **past 12 months**, have you received **inpatient or residential treatment**, that is have you stayed overnight or longer to receive **professional counseling, medication, or other treatment** for your alcohol or drug use at any of these places?

- a residential drug or alcohol treatment or rehab center,
- a hospital,
- a residential mental health treatment center, or
- some other place.

Treatment can also be provided without needing to stay overnight. This type of care is called **outpatient treatment**. During the **past 12 months**, have you received **outpatient** professional counseling, medication, or other treatment for your alcohol or drug use at any of these places?

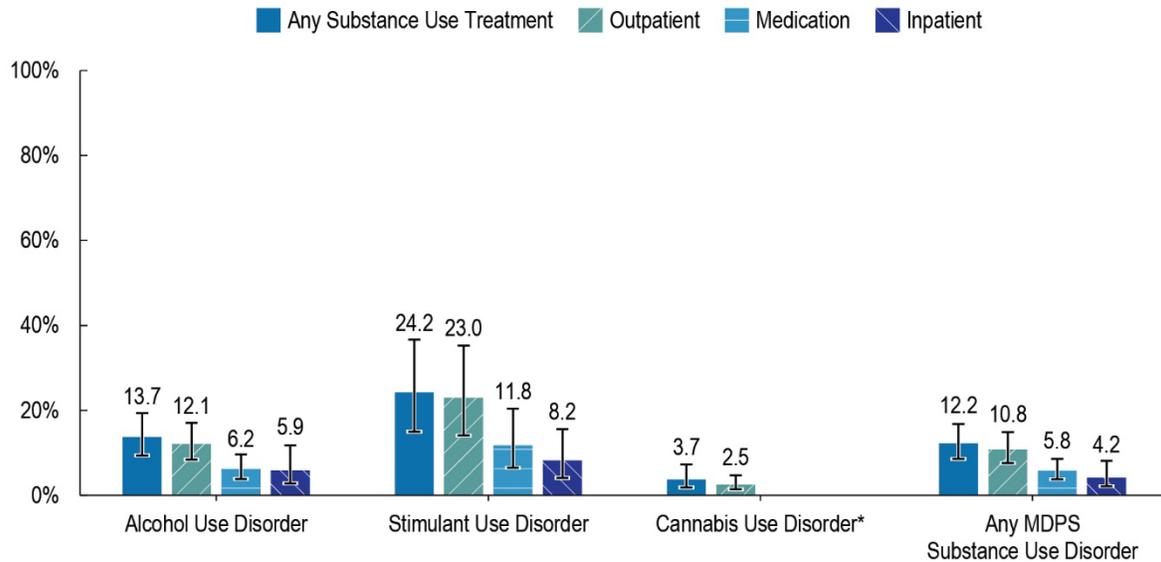
- a drug or alcohol treatment or rehab center;
- a mental health treatment center;
- the office of a therapist, psychologist, psychiatrist, mental health professional, or doctor;
- a school, college, or a university clinic;
- a shelter for the homeless;
- a jail, prison, or juvenile detention facility;
- phone, text, video, telemedicine; or
- some other place.

The next questions are about **prescription medication** you may have used to cut back or stop your alcohol or drug use. These medications are different from medications given to stop an overdose. **During the past 12 months**, did you use any medication prescribed by a doctor or health care professional to help cut back or stop your alcohol or drug use?

Please, answer ‘yes’ even if you took them only once. For medications that you take currently, you can also look at your prescription bottles if necessary. Did you take any of the following (list of medications provided within instrument for all participants, such as methadone, Antabuse, etc.)?

As shown in [Figure 3.C.6](#), rates of substance use treatment were low, especially among adults with stimulant use disorders, alcohol use disorders, and cannabis use disorders. Estimated past-year rates of substance use treatment are suppressed (i.e., not shown) due to low precision and therefore unavailable for some treatment types.

Figure 3.C.6 Receipt of Outpatient Treatment, Inpatient Treatment, or Medication for a Past-Year MDPS Substance Use Disorder



* Estimates for medication and inpatient treatment are suppressed (i.e., not shown) due to low precision. Note: Estimates for opioid use disorder are suppressed (i.e., not shown) due to low precision. Excludes prison sample because questions about substance use disorders were not asked.

[Table 3.C.2](#) shows these findings, including weighted percentages and weighted counts of adults who received past-year treatment for an MDPS substance use disorder.

Table 3.C.2 Receipt of Outpatient Treatment, Inpatient Treatment, or Medication for a Past-Year MDPS Substance Use Disorder

Substance Use Disorder	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval
Alcohol Use Disorder (past year)	1.8	13.7	(9.4, 19.4)
Opioid Use Disorder (past year)	*	*	*
Stimulant Use Disorder (past year)	0.7	24.2	(15.0, 36.7)
Sedative/Hypnotic/Anxiolytic Use Disorder (past year)	*	*	*
Cannabis Use Disorder (past year)	<0.5	3.7	(1.9, 7.3)
Any MDPS Substance Use Disorder (past year)	2.6	12.2	(8.6, 16.8)

* Estimates are suppressed (i.e., not shown) due to low precision.

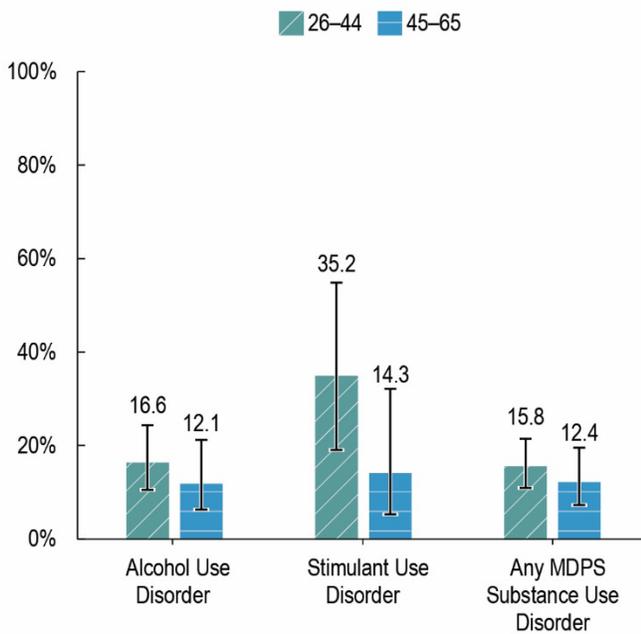
¹ Weighted number of participants (i.e., population size) in millions.

² Weighted estimates were calculated with analysis weights and account for the complex MDPS sampling design.

Note: Excludes prison sample because questions about substance use disorders were not asked.

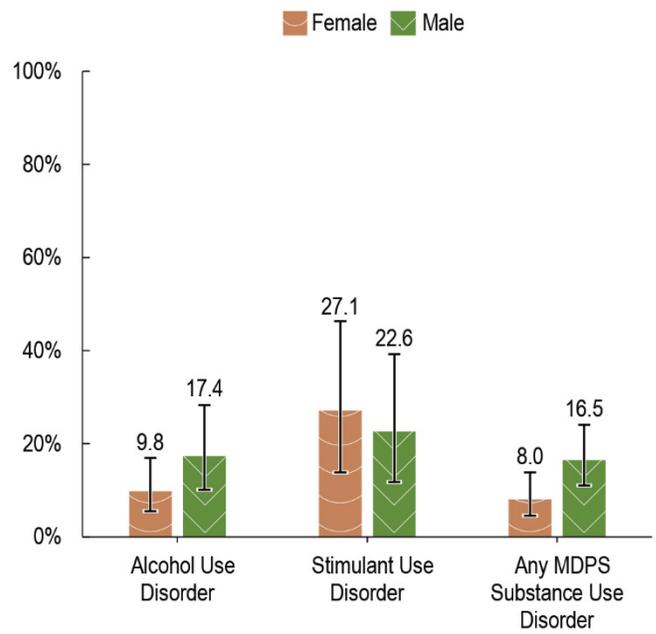
As shown in [Figure 3.C.7](#), across all age groups and substance use disorders, most adults received no treatment at all. Similarly, as shown in [Figure 3.C.8](#), across gender identities and substance use disorders, most adults received no treatment at all.

Figure 3.C.7 Receipt of Outpatient Treatment, Inpatient Treatment, or Medication for a Past-Year MDPS Substance Use Disorder, by Age Group



Note: Estimates for young adults aged 18–25 are suppressed (i.e., not shown) due to low precision.

Figure 3.C.8 Receipt of Outpatient Treatment, Inpatient Treatment, or Medication for a Past-Year MDPS Substance Use Disorder, by Gender Identity



Note: Estimates for adults identifying as transgender/gender diverse are suppressed (i.e., not shown) due to low precision.

3.D Feasibility Study Preliminary Results

The MDPS included three feasibility studies: (1) testing the performance of two types of mental health household screening instruments, (2) acquiring administrative records from state psychiatric hospitals, and (3) contacting proxy participants to complete interviews on behalf of household and state psychiatric hospital participants who lacked the ability to consent for study participation. The MDPS team developed protocols for each of these feasibility studies, and preliminary feasibility study results are described as follows.

Household Screening Instruments. The administration of adaptive and non-adaptive screening instruments within the multistage household study design was feasible. The adaptive screening instrument adapted, or tailored, items in real time based on participant responses.

The non-adaptive instrument included the same items for every participant. Each MDPS screening instrument was helpful, especially for uncommon disorders. For example, screening resulted in the MDPS sample including an adequate number of cases to generate a precise prevalence rate of schizophrenia spectrum disorders. Screening was also efficient; household participants completed each instrument in 15 minutes on average. This time included administration of the mental health screening instrument as well as questions on demographic characteristics. Future MDPS analyses will assess the agreement (or concordance) between individual participants' screening instrument and clinical interview results for the specific MDPS disorders, and ways to optimize the screeners.

State Psychiatric Hospital Administrative Records. All four participating hospitals agreed to provide the MDPS team with primary diagnostic codes from administrative records. Each hospital provided a spreadsheet that included the case ID, the primary diagnosis, and the secondary diagnosis. Approximately 70 percent of hospital participants provided consent for the study team to receive information from their hospital record. These feasibility study results suggest that future studies might be able to use information from administrative records to shorten clinical interviews, or possibly eliminate the need for clinical interviews, within hospital samples. Future MDPS analyses will assess the degree to which diagnoses from the hospital records agree with disorders indicated by participant responses to the MDPS clinical interview.

Proxy Participants. The MDPS team developed protocols for identifying and interviewing proxy participants in households and state psychiatric hospitals. Proxy participants were determined to be necessary when a selected participant did not sufficiently understand study protocols (and so could not provide consent to participate) or showed cognitive impairment that limited their ability to participate. In the hospital sample, 9 percent of the selected sample (58 participants) needed a proxy participant. The study team received contact information for only 16 (approximately 28 percent) of these hospital sample proxy participants. In the household sample, less than 1 percent (29 participants) of those selected for a clinical interview needed a proxy participant. Hospital and household proxy participants were difficult to engage—only four proxy participants completed a clinical interview. To increase the feasibility of using proxy interviews in future studies like the MDPS, more work will be necessary to develop protocols to increase proxy participant engagement.

4. MDPS Lessons Learned

The MDPS required novel approaches to provide prevalence rates of mental and substance use disorders and treatment in the U.S. adult population. One goal of the MDPS pilot program was to investigate research methods to inform future studies. These methods focused on including household and non-household populations within the same study and facilitating participant

engagement across all study populations. The MDPS team carefully considered strategies to support the conduct of clinical interviews within a large population survey, virtual interviewer training and supervision, virtual data collection, non-household facility engagement, and data collection protocols appropriate for adults from non-household settings. Lessons learned over the course of the study's implementation are summarized here.

- **The SCID-5[®] clinical interview, originally developed for use in clinical settings, can be tailored for efficient use in a large-scale population survey.**

Lay person-administered interviews are not well suited to assess schizophrenia spectrum disorders because their assessment requires clinical judgment. The SCID-5[®] is the gold standard for measuring such disorders. It is used extensively in clinical studies but not in large-scale population surveys. The SCID-5[®] administration may take several hours, which is not feasible within household or non-household settings. Working with the SCID-5[®] developer, the MDPS team created an efficient instrument designed to assess MDPS disorders of interest. The average administration time for the SCID-5[®] portion of the MDPS interview was less than 1 hour in every household and non-household study population. To achieve efficiency and maintain interview quality, interviewers received extensive training, ongoing supervision, reviews of their work, and calibration exercises to confirm their knowledge of the instrument.

- **Virtual clinical interviewer training and ongoing supervision are possible and can result in high interview quality.**

All clinical interviewer training was conducted virtually through video conference calls. Interviewers completed pretraining reading and video assignments. Virtual trainings were spaced over 10 days (4 hours per day). Training included viewing didactic presentations, viewing and scoring prerecorded interviews, conducting supervised mock interviews, and holding group discussions to attain consistency across interviewers. All interviewers were required to complete a standardized certification interview to demonstrate competence.

Clinical interview supervision meetings were conducted regularly to help maintain high interview quality. Ten percent of MDPS clinical interviews were reviewed by supervisors who watched the video and independently scored the interview. Providing feedback about reviewed interviews improved the quality of interviewers' skills and corrected errors. During the study, only a small proportion of reviewed interviews required supervisors to correct miscoded items or diagnostic codes. SCID-5[®] interrater reliability exercises were periodically conducted across interviews. Interrater reliability was consistently high.

- **Recruiting homeless shelters requires continued communication and special attention to the shelter organizational structure, context, and size.**

Continued proactive communication with homeless shelter staff was necessary to successfully recruit shelters to participate in the MDPS. Selected shelters varied considerably in organizational structure, context, and size. Different approaches were required to inform and engage the administrators who approve study participation. For example, the large, publicly

funded, and bureaucratically operated facilities required a lengthy and formal contracting process to obtain county or municipal government approval. Here, the key to success was learning local regulatory requirements, understanding the review and approval processes, allowing sufficient time for review, and having sheer persistence. In smaller shelters, sometimes operated by faith-based entities, typically the shelter director could approve the facility's participation. Here, the key was establishing and maintaining a relationship with the shelter director. In all shelters, it was important to offer as much flexibility as possible around the study recruitment and interviewing logistics.

- **It is helpful to offer various tokens of appreciation in non-household settings for facilities and study participants.**

MDPS procedures added burden to staff at non-household facilities who were already overburdened. The MDPS team found that tokens of appreciation were appreciated and helped to recognize facility staff and participant effort. The MDPS offered facilities \$250 in appreciation for their participation and provided a tablet computer for video-based interviews (when needed). Prison facilities could not accept this token of appreciation. Non-household participants were offered tokens of appreciation for their time, but the tokens differed by setting. Prisoner participants could not accept monetary payments and instead received a snack. State psychiatric hospital participants received a credit to their hospital store account. Meanwhile, homeless shelter participants received a \$30 gift card.

- **To support non-household data collection, it is important to have a site coordinator from the study team as well as two facility points of contact.**

Having an MDPS team member to act as a site coordinator working directly with facility points of contact helped to reduce and, at times eliminate, facility staff members' burden associated with the study. For example, several state psychiatric hospitals and prisons requested an on-site study coordinator to assist with tablet setup to support virtual clinical interviews. Clinical supervisors were ideal site coordinators because they understood the study goals, the interviewer's job, the instruments, and the equipment. The study team also learned that it was helpful to request two facility points of contact (primary and secondary) for the study. Then, it was important to schedule meetings with these facility points of contact at least 1 week before data collection began to ensure that facility staff understood their roles and had appropriate plans to support the data collection.

- **During in-person data collection, the clinical interviewer should be the first to contact a non-household participant.**

MDPS protocols requested that clinical interviewers introduce the study to eligible facility participants. But sometimes non-household facilities requested that their staff initially approach eligible participants. Response rates were higher within facilities where MDPS interviewers first approached participants compared with those where facility staff initiated contact. The MDPS team concluded that interviewers were better prepared to respond to participants' questions and concerns. This technique encouraged participation and promoted

research subject protections. Facility staff engagement was still important, especially in responding to questions about the study's legitimacy.

- **Virtual technology can support the effective administration of clinical interviews in non-household settings.**

A novel feature of the MDPS was the conduct of video-based interviews with participants in prisons, homeless shelters, and state psychiatric hospitals. This strategy was implemented because of the COVID-19 pandemic and the limited ability of facilities to allow on-site visitors. Facilities were given the option for virtual or in-person data collection; eight prisons, four homeless shelters, and one state psychiatric hospital facility participated in virtual MDPS data collection. Virtual data collection was feasible when supported by facility staff. Success was dependent on working with these facility staff to minimize the burden of teleconferencing or videoconferencing and providing tailored technical and logistical support.

- **Methods to assess participants' ability to understand study protocols are especially important to include in state psychiatric hospitals and homeless shelters.**

The MDPS research protocol included two methods to assess participants' ability to understand study protocols and complete research interviews: (1) a knowledge check; and (2) a short, standardized test of cognitive impairment, the Short Blessed Test. This protocol was used for household and non-household populations. The study team learned that these protocols were especially important with the state psychiatric hospital and homeless shelter populations. Although less than 1.0 percent of the eligible household population and 2.3 percent of selected prison participants failed the knowledge check or the Short Blessed Test, 8.0 percent of selected state psychiatric hospital participants and 7.0 percent of homeless shelter participants failed one of these tests. Having the checks of participant capacity within the MDPS helped to ensure that potentially vulnerable adults were able to participate in the research study while also receiving appropriate protections.

5. Conclusions

5.A Summary of Findings

The MDPS was designed to answer two research questions related to the prevalence rates of mental and substance use disorders and their treatment (as follows). Because schizophrenia spectrum disorders are understudied in population surveys, a key goal for the MDPS design was to determine a prevalence rate of schizophrenia spectrum disorders.

1. What are the prevalence rates among U.S. adults aged 18 to 65 of past-year and lifetime schizophrenia spectrum disorders (defined as including schizophrenia, schizoaffective disorder, and schizophreniform disorder); past-year bipolar I disorder, MDD, GAD, PTSD, OCD, and anorexia nervosa; and past-year alcohol, opioid, cannabis, stimulant, and sedative/hypnotic/anxiolytic use disorders?

2. What proportion of adults in the United States with these mental or substance use disorders received any treatment in the past year?

Study findings show that the prevalence rates of past-year and lifetime schizophrenia spectrum disorders among U.S. adults aged 18 to 65 were 1.2 percent (95 percent CI: 0.9 to 1.8 percent) and 1.8 percent (95 percent CI: 1.3 to 2.5 percent), respectively. Past-year prevalence rates for the other mental disorders assessed in the MDPS were bipolar I disorder, 1.5 percent (95 percent CI: 0.9 to 2.5 percent); MDD, 15.5 percent (95 percent CI: 13.6 to 17.5 percent); GAD, 10.0 percent (95 percent CI: 8.3 to 12.1 percent); PTSD, 4.1 percent (95 percent CI: 3.2 to 5.1 percent); OCD, 2.5 percent (95 percent CI: 1.8 to 3.5 percent); and anorexia nervosa, 0.1 percent (95 percent CI: 0.1 to 0.3 percent). Twenty-five percent of the sample had at least one MDPS mental disorder in the past year (95 percent CI: 22.7 to 27.6 percent), and 8.0 percent (95 percent CI: 6.9 to 9.3 percent) had two or more.

Past-year prevalence rates for each substance use disorder were alcohol, 6.7 percent (95 percent CI: 5.5 to 8.0 percent); cannabis, 3.8 percent (95 percent CI: 2.6 to 5.4 percent); stimulants, 1.6 percent (95 percent CI: 1.1 to 2.3 percent); and opioids, 0.5 percent (95 percent CI: 0.3 to 0.8 percent). Eleven percent of the MDPS sample had at least one substance use disorder (95 percent CI: 8.7 to 12.9 percent), and 1.8 percent (95 percent CI: 1.2 to 2.5 percent) had two or more. Six percent of the MDPS sample had a co-occurring MDPS mental disorder and a substance use disorder (95 percent CI: 3.9 to 7.6 percent).

Among those with an MDPS mental disorder, 60.8 percent (95 percent CI: 55.7 to 65.6 percent) received some form of treatment in the past year. Among those with an MDPS substance use disorder, 12.2 percent (95 percent CI: 8.6 to 16.8 percent) received some form of treatment in the past year.

5.B Methodological Differences Between the MDPS and Prior Studies

The MDPS methodology differed from past population surveys and prior psychiatric epidemiological studies in two key ways. First, the MDPS surveyed adults residing in prisons, homeless shelters, and state psychiatric hospitals, along with those living in households. This survey methodology was adopted to make the MDPS sample more representative of the U.S. adult population aged 18 to 65. This feature is important because past research suggests that adults residing in these facilities have significantly higher rates of mental and substance use disorders. Second, rather than utilizing a fully structured diagnostic interview administered by trained lay interviewers or self-administered surveys, the MDPS design included the semi-structured SCID-5[®], which was administered by trained mental health clinicians. A semi-structured interview was selected for use in the MDPS because fully structured interviews are not well suited to assess schizophrenia spectrum disorders, which were high priorities for the MDPS. In particular, the SCID-5[®] allows clinicians to probe on each mental and substance use disorder symptom, using their clinical judgment, while still strictly adhering to DSM-5 criteria.

5.C Considering MDPS Findings in the Context of Prior Research

This MDPS findings report provides the first national estimates of schizophrenia spectrum disorders from a study where trained clinicians administered a DSM-5–based diagnostic interview. The lifetime prevalence rate of schizophrenia spectrum disorders among U.S. adults aged 18 to 65 was 1.8 percent, with a 95 percent CI of 1.3 to 2.5 percent. Prior studies have estimated the national prevalence rate of schizophrenia primarily by screening for psychotic symptoms or by examining health insurance claim records (e.g., Desai et al., 2013; Hasin & Grant, 2015; Kessler, Birnbaum, et al., 2005). These prior studies suggested that the lifetime prevalence rate of schizophrenia ranged from 0.25 percent to 1.0 percent (Desai et al., 2013; Kessler, Birnbaum, et al., 2005). MDPS results suggest that schizophrenia spectrum disorders among U.S. adults may be more prevalent than previously assumed.

The prevalence rates of many other nonpsychotic disorders within the MDPS were generally within an expected range based on findings from prior research. There were three exceptions—MDD, GAD, and OCD. The MDPS prevalence rates for MDD (15.5 percent) and GAD (10.0 percent) were substantially higher than rates in past nationally representative studies. The most obvious explanation is that the MDPS was conducted during the COVID-19 pandemic. Social isolation, financial problems, business and school closures, death and hospitalization of family and friends, and the general stress of living during the COVID-19 pandemic could all cause greater anxiety and depression. A systematic review conducted by the World Health Organization estimated that the prevalence rates of MDD and GAD increased approximately 25 percent after the onset of the COVID-19 pandemic (COVID-19 Mental Disorders Collaborators, 2021). The elevated prevalence rate may also be the result of a temporal trend, as studies suggest MDD is increasing over time, with a prevalence rate of 5.3 percent in the NESARC-I and -II (conducted in 2001–2002 and 2004–2005) (Hasin & Grant, 2015), 6.7 percent in the NCS-R (conducted in 2003) (Kessler, Chiu, et al., 2005), and 10.4 percent in the NESARC-III (conducted in 2012) (Hasin et al., 2018). In NSDUH, the past-year prevalence rate of major depressive episode was relatively stable between 2005 and 2016, ranging from 6.5 percent to 6.9 percent (SAMHSA, 2020). But since 2016, the past-year prevalence rate has increased from 6.7 percent to 7.8 percent in 2019 (SAMHSA, 2022).

Unlike GAD and MDD, the prevalence of OCD has not been well studied in past surveys. The MDPS past-year prevalence rate was 2.0 percent, twice that of the NCS-R: 1.0 percent. This result is important because OCD is especially disabling and difficult to treat (Macy et al., 2013). It has been suggested that the prevalence rate of OCD has also been particularly affected by the COVID-19 pandemic (Maye et al., 2022).

The prevalence rates of substance use disorders in the MDPS were consistently lower than the corresponding rates from other studies. For example, the prevalence rate of past-year substance use disorder in the MDPS was 10.6 percent, compared with 17.3 percent from the 2021 NSDUH (SAMHSA, 2022). The rate of alcohol use disorder in the MDPS (6.7 percent) was lower than those found in the 2021 NSDUH (11.3 percent; SAMHSA, 2022) and in the

NESARC-III (13.9 percent; Olfson et al., 2019). The reasons for these discrepancies are unclear. The MDPS, the 2021 NSDUH, and the NESARC-III all utilized DSM-5 criteria. The MDPS and the 2021 NSDUH were conducted during the COVID-19 pandemic; the NESARC-III was conducted before the COVID-19 pandemic. All three surveys were nationally representative. The surveys did use different instruments and data collection techniques; these methodological differences between studies are likely important. The influence of study methods on substance use disorder prevalence rates should be further investigated.

The MDPS also examined the rates of treatment among those with specific mental and substance use disorders. For all MDPS mental disorders, treatment rates were higher than those reported in prior studies. Among adults with any MDPS mental disorder, 60.8 percent received some type of treatment. The questions within the MDPS instrument ask about any outpatient treatment, inpatient treatment, or medication use in the year before the interview. Any treatment could include one or more contacts in the past year with a specialty (e.g., psychiatrist) or non-specialty (e.g., primary care doctor) provider. Any treatment could also include use of one or more medications in the past year. NSDUH uses a similarly broad definition of “any treatment,” but treatment results are presented for all U.S. adults aged 18 or older who meet criteria for “any mental illness” (defined differently from “any MDPS mental disorder”). With those methodological considerations in mind, in 2021, the NSDUH estimate of the percentage of U.S. adults with any mental illness who received mental health services was 47.2 percent (SAMHSA, 2022). The NESARC-III estimate of mental health treatment received among those with mental disorders was even lower (Olfson et al., 2019). The MDPS finding that 60.8 percent of adults with a mental disorder received any treatment is encouraging. This finding suggests that more U.S. adults may be accessing treatment than in the past. This increase may in part be because of the increasing availability of and access to telehealth services, prompted by the COVID-19 pandemic (Palzes et al., 2022). However, several factors temper this enthusiasm. Many adults with mental disorders continue to receive no treatment at all. For example, 40.4 percent of adults with MDD did not report any past-year treatment, and 34.1 percent of adults with GAD did not report any past-year treatment. Furthermore, past research suggests that among individuals who receive any treatment, many do not receive treatment consistent with recommended best practices for their condition (Young et al., 2001, 2008).

Finally, the MDPS found that only 12.2 percent of adults with substance use disorders receive any treatment, a figure consistent with findings from other studies (Olfson et al., 2019; SAMHSA, 2022).

5.D Implications of Findings

Consistent with previous research, the MDPS continues to demonstrate that many U.S. adults experience mental and substance use disorders (Hasin & Grant, 2015; Kessler, Chiu, et al., 2005). Importantly, the study suggests that more adults may be experiencing depression and

anxiety than in the past. The increased numbers of adults with MDD and GAD will require a commensurate increase in resources to treat these disorders. If the increased prevalence rates of MDD and GAD are a result of the COVID-19 pandemic, this greater need for resources may decrease as the impact of the pandemic dissipates. But, for now, increased resources may be necessary to meet current needs for the treatment of depression and anxiety.

The study also suggests that rates of schizophrenia spectrum disorders may be two, or even three, times higher than previously assumed. These disorders place a disproportionate burden on patients, family members, and society. Treatment of these disorders depends heavily on federal/state funding, which in turn is partially based on the number of individuals estimated to have these disorders. Increased funding may be necessary to sufficiently meet the demands faced by the public mental health service system to adequately meet the treatment needs of individuals with schizophrenia spectrum disorders.

5.E Study Limitations

The MDPS provides the most recent national estimates to date for the prevalence rates of specific mental disorders among U.S. adults. The pilot nature of the MDPS also supported several lessons learned that are relevant to future research. However, the study also had limitations. First, the study's scope was focused on providing estimates that represent the total U.S. adult population. The MDPS was not designed to provide prevalence rates of disorders within any one specific non-household population. For the homeless population, the MDPS focused on developing data collection methods to assess mental and substance use disorders and their treatment among adults in homeless shelters. The study did not include adults who are homeless but not in shelters. Second, the MDPS included a very limited assessment of treatment. The study was not designed to assess treatment quantity and quality specific to the disorder or the trajectory of adults' treatment use over time. Third, the MDPS was not designed to provide prevalence rates with acceptable precision for various demographic subpopulations (e.g., for certain racial/ethnic groups). And finally, the COVID-19 pandemic affected the study's implementation. In-person data collection was limited in households, which reduced participant response rates. Several non-household facilities refused to participate in the MDPS because of the burden placed on their facilities by the COVID-19 pandemic.

5.F Recommendations for Future Research

The MDPS goals, scope, design, lessons learned, and limitations led to several recommendations for future research:

- The MDPS provided several lessons about conducting studies of this nature in prisons, homeless shelters, and state psychiatric hospitals. These lessons could be applied to future studies designed to specifically derive probability-based estimates for any one of these non-household populations. Future studies designed to estimate the national prevalence

rates of mental and substance use disorders and their treatment rates among adults in homeless shelters or prisons would especially be valuable.

- Future studies should utilize the lessons learned from the MDPS to develop scalable methods for estimating mental and substance use disorder prevalence rates and their treatment rates among the unsheltered homeless population. Future research should include the implementation of a large-scale study to examine the national prevalence rates of mental and substance use disorders among the sheltered and the unsheltered homeless populations.
- Few population study samples include a large enough number of individuals with uncommon but seriously impairing disorders to support a detailed examination of treatment received. Consequently, future research is necessary to provide information on the quantity and quality of treatments received by individuals with disorders such as schizophrenia spectrum disorders, bipolar I disorder, and OCD.
- The MDPS used a multistage design for the household sample that included rostering, screening, and clinical interviews. This design allowed for the identification and inclusion of a higher proportion of participants with disorders of interest. However, this design also results in lower response rates (because multiple stages require participant participation) and higher costs than those of a single-stage design. A multistage design may not be necessary to accurately estimate all types of mental and substance use disorders. Future studies should assess the costs and benefits of one-stage versus multistage designs because the optimal approach may depend on the mental and substance use disorders of interest.
- There is increased interest in understanding behavioral health disparities across populations defined by race/ethnicity, gender identity, age group, and geographic area. To estimate the impact of less prevalent but impairing disorders among high-priority subpopulations, future studies will need to include a sufficiently large sample size from which to generate precise estimates for those subpopulations of interest.
- The MDPS was conducted during the COVID-19 pandemic, which offered an opportunity to understand the prevalence rates of mental and substance use disorders within this unprecedented historical context. The pandemic likely influenced study outcomes. Future research should examine the generalizability of MDPS findings beyond a COVID-19 pandemic context.
- The MDPS dataset will be available for public use. The dataset will provide rich opportunities for future analyses such as determining the association between demographic factors and mental and substance use disorders in multivariate models, examining patterns of comorbidity between disorders, and investigating types of medication received by individuals with different mental or substance use disorders.

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Appendix A. Tables of MDPS Disorder Prevalence Rates and Treatment Estimates

Table A.1 MDPS Sample Sizes and Weighted Response Rates, by Household and Non-Household Sample Components

Household and Non-Household Sample Components	Count	Weighted Response Rate
Household Population		
Sampled households for rosters	234,270	-
<i>Completed</i> household rosters ¹	25,752	17.4
Sampled adults for screeners	41,868	-
<i>Completed</i> screeners—adults rostered ²	29,084	67.4
Selected adults for clinical interviewing	12,906	-
<i>Completed</i> clinical interviews—adults screened ²	4,764	31.2
Non-Household Populations		
Prisons		
Sampled institutions	50	-
Responding institutions ²	22	43.5
Sampled adults (from responding institutions)	606	-
<i>Completed</i> clinical interviews—adults ³	321	49.6
State Psychiatric Hospitals		
Responding institutions	4	-
Sampled adults (from responding institutions)	646	-
<i>Completed</i> clinical interviews—adults	171	Not applicable
Homeless Shelters		
Responding institutions	23	-
Sampled adults (from responding institutions)	1,233	-
<i>Completed</i> clinical interviews—adults	423	Not applicable
Combined Household and Non-Household Populations		
<i>Completed</i> clinical interviews—adults	5,679	-

¹ The American Association for Public Opinion Research (AAPOR) (2016) RR3 formula and base weights were used for the weighted response rate calculation.

² The AAPOR (2016) RR1 formula and person-level base weights adjusted for nonresponse follow-up were used for the weighted response rate calculation.

³ The AAPOR (2016) RR1 formula and person-level base weights were used for the weighted response rate calculation.

Note: Weighted conditional response rates are included for only the household and prison samples because those two samples were selected using probability-based sampling methods.

Table A.2 Demographic Characteristics of MDPS Participants

Demographic Characteristics	Total Sample		
	Count ¹	Weighted Percent ²	95% Confidence Interval ²
Overall	5,679	-	-
Age Group			
18–25	691	16.8	(14.1, 19.9)
26–44	2,694	42.1	(38.9, 45.3)
45–65	2,294	41.1	(37.6, 44.8)
Sex Assigned at Birth			
Male	2,371	49.2	(45.3, 53.1)
Female	3,308	50.8	(46.9, 54.7)
Current Gender Identity			
Male	2,318	48.6	(44.7, 52.4)
Female	3,226	50.2	(46.4, 54.0)
Transgender/Gender Diverse	90	0.9	(0.5, 1.4)
Missing	45	0.4	(0.2, 0.7)
Race/Ethnicity			
Hispanic/Latino	882	18.4	(13.8, 24.3)
NH White	3,451	59.5	(53.8, 64.9)
NH Black/African American	706	12.6	(10.0, 15.8)
NH Asian	272	4.4	(3.3, 6.0)
NH American Indian/Alaska Native	56	0.5	(0.3, 0.8)
NH Native Hawaiian/Other Pacific Islander	20	0.2	(0.1, 0.3)
NH Multiracial	257	4.4	(3.4, 5.7)
Missing ³	35	0.0	(0.0, 0.1)
Region⁴			
Midwest	1,192	20.6	(17.8, 23.7)
Northeast	1,024	17.4	(14.3, 21.0)
South	1,890	38.0	(33.3, 42.9)
West	1,573	24.1	(19.7, 29.0)
Urbanicity⁵			
Urban	4,092	82.0	(74.2, 87.9)
Rural	672	18.0	(12.1, 25.8)

NH = not Hispanic/Latino.

¹ Unweighted number of participants. Counts may not sum to overall total due to question nonresponse.

² Weighted estimates were calculated with analysis weights and account for the complex MDPS sampling design.

³ Includes those (1) with missing Hispanic/Latino status, and (2) with missing racial group among those reporting not being Hispanic/Latino.

⁴ Mapping of states to census regions is provided by the U.S. Census Bureau (see, e.g., https://www2.census.gov/geo/pdfs/maps-data/maps/reference/us_regdiv.pdf).

⁵ Urbanicity data are presented for the household sample only. The definition of urban versus rural areas is provided in https://www.census.gov/content/dam/Census/library/publications/2020/acs/acs_rural_handbook_2020.pdf.

Table A.3 Estimated Prevalence Rates of MDPS Disorders Among Adults Aged 18–65 in the United States

MDPS Disorder (past year unless otherwise indicated)	Total Sample		
	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²
Mental Disorders			
Schizophrenia Spectrum Disorders	2.5	1.2	(0.9, 1.8)
Schizophrenia Spectrum Disorders (lifetime)	3.7	1.8	(1.3, 2.5)
Major Depressive Disorder	31.4	15.5	(13.6, 17.5)
Generalized Anxiety Disorder	20.2	10.0	(8.3, 12.1)
Bipolar I Disorder	3.1	1.5	(0.9, 2.5)
Posttraumatic Stress Disorder	8.2	4.1	(3.2, 5.1)
Obsessive-Compulsive Disorder	5.0	2.5	(1.8, 3.5)
Anorexia Nervosa	<0.5	0.1	(0.1, 0.3)
Any MDPS Mental Disorder	50.7	25.1	(22.7, 27.6)
Two or More MDPS Mental Disorders ³	16.2	8.0	(6.9, 9.3)
Substance Use Disorders⁴			
Alcohol Use Disorder	13.4	6.7	(5.5, 8.0)
Opioid Use Disorder	1.0	0.5	(0.3, 0.8)
Stimulant Use Disorder	3.2	1.6	(1.1, 2.3)
Sedative/Hypnotic/Anxiolytic Use Disorder	<0.5	0.2	(0.1, 0.3)
Cannabis Use Disorder	7.7	3.8	(2.6, 5.4)
Any MDPS Substance Use Disorder	21.4	10.6	(8.7, 12.9)
Two or More MDPS Substance Use Disorders	3.5	1.8	(1.2, 2.5)
Comorbidity of Any MDPS Mental Disorder and Any MDPS Substance Use Disorder⁴	11.0	5.5	(3.9, 7.6)

¹ Weighted number of participants (i.e., population size) in millions.

² Weighted estimates were calculated with analysis weights and account for the complex MDPS sampling design.

³ Includes lifetime schizophrenia spectrum disorders if past-year schizophrenia spectrum disorders are not present.

⁴ Excludes prison sample because questions about substance use disorders were not asked.

Table A.4 Prevalence Rates of MDPS Disorders, by Participant Age Group

MDPS Disorder (past year unless otherwise indicated)	18–25			26–44			45–65			P-value ³
	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²	
Mental Disorders										
Schizophrenia Spectrum Disorders	<0.5	1.3	(0.6, 2.9)	1.2	1.5	(0.8, 2.5)	0.8	1.0	(0.6, 1.8)	0.63
Schizophrenia Spectrum Disorders (lifetime)	0.7	2.0	(1.1, 3.8)	1.8	2.1	(1.2, 3.6)	1.2	1.5	(1.0, 2.3)	0.54
Major Depressive Disorder	7.1	21.0	(15.7, 27.4)	15.7	18.4	(15.3, 21.9)	8.6	10.3	(8.2, 12.8)	0.00
Generalized Anxiety Disorder	5.9	17.6	(9.8, 29.7)	9.3	10.9	(9.2, 12.9)	5.0	6.0	(4.9, 7.4)	0.00
Bipolar I Disorder	1.2	3.4	(1.1, 9.7)	1.2	1.4	(0.7, 2.6)	0.7	0.9	(0.6, 1.3)	0.22
Posttraumatic Stress Disorder	1.5	4.5	(2.4, 8.4)	5.2	6.1	(4.6, 8.0)	1.5	1.8	(1.3, 2.5)	0.00
Obsessive-Compulsive Disorder	2.0	5.8	(3.1, 10.9)	2.2	2.6	(1.8, 3.8)	0.8	1.0	(0.6, 1.6)	0.00
Anorexia Nervosa	*	*	*	*	*	*	*	*	*	
Any MDPS Mental Disorder	12.4	36.9	(27.7, 47.1)	24.8	29.1	(25.5, 33.0)	13.5	16.2	(13.8, 18.9)	0.00
Two or More MDPS Mental Disorders ⁴	4.9	14.5	(10.1, 20.2)	7.7	9.1	(7.6, 10.9)	3.5	4.3	(3.5, 5.2)	0.00
Substance Use Disorders⁵										
Alcohol Use Disorder	1.7	5.1	(2.5, 10.1)	7.6	9.0	(6.9, 11.7)	4.1	4.9	(3.6, 6.7)	0.03
Opioid Use Disorder	*	*	*	0.6	0.7	(0.4, 1.3)	<0.5	0.3	(0.1, 0.7)	0.23
Stimulant Use Disorder	*	*	*	1.5	1.8	(1.1, 2.9)	1.4	1.7	(0.9, 3.1)	0.08
Sedative/Hypnotic/Anxiolytic Use Disorder	*	*	*	*	*	*	*	*	*	
Cannabis Use Disorder	2.7	8.1	(3.6, 17.2)	3.5	4.2	(2.7, 6.3)	1.4	1.6	(0.9, 3.1)	0.01
Any MDPS Substance Use Disorder	4.2	12.4	(5.5, 25.6)	11.4	13.5	(11.0, 16.5)	5.7	6.9	(5.2, 9.1)	0.00
Two or More MDPS Substance Use Disorders	*	*	*	1.8	2.2	(1.2, 3.7)	1.1	1.3	(0.7, 2.7)	0.53
Comorbidity of Any MDPS Mental and Any MDPS Substance Use Disorder⁵	3.1	9.1	(3.0, 24.8)	5.7	6.8	(5.3, 8.7)	2.2	2.7	(1.8, 3.9)	0.00

* Estimates are suppressed (i.e., not shown) due to low precision.

¹ Weighted number of participants (i.e., population size) in millions.

² Weighted estimates were calculated with analysis weights and account for the complex MDPS sampling design.

³ P-values represent statistical testing results of weighted chi-square tests. Weighted chi-square tests account for MDPS sampling design but not other participant characteristics. Bold values are significant at p<0.05.

⁴ Includes lifetime schizophrenia spectrum disorders if past-year schizophrenia spectrum disorders are not present.

⁵ Excludes prison sample because questions about substance use disorders were not asked.

Table A.5 Prevalence Rates of MDPS Disorders, by Participant Sex Assigned at Birth

MDPS Disorder (past year unless otherwise indicated)	Male			Female			P-value ³
	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²	
Mental Disorders							
Schizophrenia Spectrum Disorders	1.5	1.5	(1.0, 2.3)	1.0	1.0	(0.5, 1.8)	0.18
Schizophrenia Spectrum Disorders (lifetime)	2.0	2.0	(1.4, 2.9)	1.7	1.7	(1.0, 2.8)	0.51
Major Depressive Disorder	12.6	12.7	(10.6, 15.0)	18.7	18.2	(15.4, 21.3)	0.00
Generalized Anxiety Disorder	7.0	7.1	(5.5, 9.0)	13.2	12.9	(9.8, 16.8)	0.01
Bipolar I Disorder	1.1	1.1	(0.6, 2.2)	1.9	1.9	(1.0, 3.5)	0.29
Posttraumatic Stress Disorder	3.0	3.0	(1.9, 4.6)	5.2	5.1	(3.9, 6.7)	0.03
Obsessive-Compulsive Disorder	2.0	2.0	(1.1, 3.8)	3.0	2.9	(2.0, 4.3)	0.29
Anorexia Nervosa	*	*	*	*	*	*	
Any MDPS Mental Disorder	20.7	20.8	(18.0, 23.8)	30.1	29.3	(25.4, 33.5)	0.00
Two or More MDPS Mental Disorders ⁴	5.9	5.9	(4.3, 8.0)	10.3	10.1	(8.5, 11.9)	0.00
Substance Use Disorders⁵							
Alcohol Use Disorder	7.4	7.5	(5.6, 10.0)	6.0	5.8	(4.4, 7.7)	0.25
Opioid Use Disorder	0.6	0.6	(0.3, 1.2)	<0.5	0.4	(0.2, 0.7)	0.33
Stimulant Use Disorder	2.2	2.2	(1.3, 3.6)	1.0	1.0	(0.6, 1.5)	0.03
Sedative/Hypnotic/Anxiolytic Use Disorder	*	*	*	*	*	*	
Cannabis Use Disorder	3.6	3.6	(2.5, 5.3)	4.1	4.0	(2.2, 7.1)	0.82
Any MDPS Substance Use Disorder	11.2	11.3	(9.0, 14.2)	10.2	9.9	(7.0, 13.9)	0.53
Two or More MDPS Substance Use Disorders	2.2	2.2	(1.3, 3.7)	1.3	1.3	(0.7, 2.4)	0.21
Comorbidity of Any MDPS Mental and Any MDPS Substance Use Disorder⁵	4.3	4.4	(3.3, 5.8)	6.7	6.5	(3.8, 11.0)	0.28

* Estimates are suppressed (i.e., not shown) due to low precision.

¹ Weighted number of participants (i.e., population size) in millions.

² Weighted estimates were calculated with analysis weights and account for the complex MDPS sampling design.

³ P-values represent statistical testing results of weighted chi-square tests. Weighted chi-square tests account for MDPS sampling design but not other participant characteristics. Bold values are significant at p<0.05.

⁴ Includes lifetime schizophrenia spectrum disorders if past-year schizophrenia spectrum disorders are not present.

⁵ Excludes prison sample because questions about substance use disorders were not asked.

Table A.6 Prevalence Rates of MDPS Disorders, by Participant Current Gender Identity

MDPS Disorder (past year unless otherwise indicated)	Male			Female			Transgender/Gender Diverse			P-value ³
	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²	
Mental Disorders										
Schizophrenia Spectrum Disorders	1.5	1.5	(1.0, 2.3)	0.9	0.9	(0.5, 1.7)	*	*	*	0.19
Schizophrenia Spectrum Disorders (lifetime)	1.9	2.0	(1.4, 2.8)	1.6	1.6	(0.9, 2.8)	*	*	*	0.36
Major Depressive Disorder	12.3	12.5	(10.4, 14.9)	18.0	17.7	(14.9, 20.8)	*	*	*	0.00
Generalized Anxiety Disorder	6.4	6.6	(5.1, 8.4)	12.9	12.7	(9.6, 16.6)	0.8	46.0	(27.6, 65.5)	0.00
Bipolar I Disorder	1.1	1.1	(0.6, 2.2)	1.9	1.9	(1.0, 3.5)	*	*	*	0.36
Posttraumatic Stress Disorder	3.0	3.1	(2.0, 4.7)	5.0	4.9	(3.7, 6.5)	*	*	*	0.06
Obsessive-Compulsive Disorder	2.0	2.0	(1.1, 3.8)	2.9	2.9	(1.9, 4.3)	*	*	*	0.25
Anorexia Nervosa	*	*	*	*	*	*	*	*	*	*
Any MDPS Mental Disorder	20.0	20.3	(17.6, 23.3)	29.1	28.7	(24.8, 32.9)	1.3	75.1	(56.3, 87.6)	0.00
Two or More MDPS Mental Disorders ⁴	5.6	5.7	(4.2, 7.8)	9.9	9.8	(8.2, 11.6)	0.5	30.3	(18.0, 46.2)	0.00
Substance Use Disorders⁵										
Alcohol Use Disorder	7.2	7.4	(5.5, 9.8)	5.9	5.8	(4.4, 7.7)	*	*	*	0.43
Opioid Use Disorder	0.6	0.6	(0.3, 1.2)	<0.5	0.4	(0.2, 0.7)	*	*	*	0.01
Stimulant Use Disorder	2.2	2.2	(1.3, 3.7)	1.0	1.0	(0.6, 1.5)	*	*	*	0.05
Sedative/Hypnotic/Anxiolytic Use Disorder	*	*	*	*	*	*	*	*	*	*
Cannabis Use Disorder	3.3	3.4	(2.3, 5.0)	3.9	3.8	(2.0, 7.0)	*	*	*	0.39
Any MDPS Substance Use Disorder	11.0	11.3	(9.0, 14.2)	9.8	9.7	(6.7, 13.7)	*	*	*	0.45
Two or More MDPS Substance Use Disorders	1.9	1.9	(1.1, 3.3)	1.3	1.3	(0.7, 2.4)	*	*	*	0.42
Comorbidity of Any MDPS Mental and Any MDPS Substance Use Disorder⁵	4.1	4.2	(3.2, 5.5)	6.4	6.3	(3.6, 10.9)	*	*	*	0.21

* Estimates are suppressed (i.e., not shown) due to low precision.

¹ Weighted number of participants (i.e., population size) in millions.

² Weighted estimates were calculated with analysis weights and account for the complex MDPS sampling design.

³ P-values represent statistical testing results of weighted chi-square tests. Weighted chi-square tests account for MDPS sampling design but not other participant characteristics. Bold values are significant at p<0.05.

⁴ Includes lifetime schizophrenia spectrum disorders if past-year schizophrenia spectrum disorders are not present.

⁵ Excludes prison sample because questions about substance use disorders were not asked.

Table A.7 Prevalence Rates of MDPS Disorders, by Participant Race/Ethnicity

MDPS Disorder (past year unless otherwise indicated)	Hispanic/Latino			NH White			NH Black/African American			NH Asian		
	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²
Mental Disorders												
Schizophrenia Spectrum Disorders	<0.5	0.6	(0.2, 1.4)	1.2	1.0	(0.6, 1.7)	0.5	2.0	(1.1, 3.5)	*	*	*
Schizophrenia Spectrum Disorders (lifetime)	<0.5	1.1	(0.5, 2.1)	1.5	1.2	(0.8, 2.0)	1.1	4.2	(2.0, 8.5)	*	*	*
Major Depressive Disorder	4.4	11.8	(8.4, 16.3)	19.9	16.5	(13.9, 19.4)	3.7	14.3	(10.0, 20.1)	1.2	13.7	(7.7, 23.2)
Generalized Anxiety Disorder	2.2	6.0	(4.6, 7.7)	13.0	10.8	(8.7, 13.4)	2.5	9.7	(5.5, 16.6)	0.7	7.6	(3.9, 14.2)
Bipolar I Disorder	<0.5	0.7	(0.4, 1.4)	1.9	1.6	(1.0, 2.4)	*	*	*	*	*	*
Posttraumatic Stress Disorder	1.1	3.0	(2.0, 4.5)	5.5	4.6	(3.5, 6.1)	1.1	4.3	(2.6, 7.1)	*	*	*
Obsessive-Compulsive Disorder	1.0	2.7	(1.6, 4.7)	2.4	2.0	(1.5, 2.6)	0.8	3.0	(1.2, 7.1)	*	*	*
Anorexia Nervosa	*	*	*	*	*	*	*	*	*	*	*	*
Any MDPS Mental Disorder	6.3	17.0	(13.1, 21.8)	31.1	25.8	(22.8, 29.1)	7.0	27.6	(20.4, 36.1)	2.1	23.2	(15.0, 34.0)
Two or More MDPS Mental Disorders ³	2.4	6.6	(4.5, 9.4)	9.5	7.9	(6.5, 9.6)	2.5	9.8	(5.7, 16.4)	<0.5	2.1	(1.2, 3.7)
Substance Use Disorders⁴												
Alcohol Use Disorder	1.6	4.3	(2.6, 7.0)	7.9	6.5	(5.2, 8.2)	2.7	10.7	(5.8, 18.9)	*	*	*
Opioid Use Disorder	*	*	*	0.8	0.7	(0.4, 1.2)	*	*	*	*	*	*
Stimulant Use Disorder	0.9	2.4	(1.1, 5.0)	1.7	1.4	(0.8, 2.3)	<0.5	1.6	(0.7, 3.8)	*	*	*

(continued)

Table A.7 Prevalence Rates of MDPS Disorders, by Participant Race/Ethnicity (continued)

MDPS Disorder (past year unless otherwise indicated)	Hispanic/Latino			NH White			NH Black/African American			NH Asian		
	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²
Sedative/Hypnotic/Anxiolytic Use Disorder	*	*	*	*	*	*	*	*	*	*	*	*
Cannabis Use Disorder	1.1	3.0	(1.2, 7.2)	4.5	3.7	(2.2, 6.4)	1.3	5.2	(2.7, 9.9)	*	*	*
Any MDPS Substance Use Disorder	2.6	7.1	(4.5, 11.0)	13.2	10.9	(8.7, 13.7)	3.7	14.7	(9.2, 22.6)	<0.5	4.6	(2.3, 8.7)
Two or More MDPS Substance Use Disorders	0.7	1.9	(0.8, 4.5)	1.7	1.4	(1.0, 2.1)	0.7	2.9	(1.0, 8.0)	*	*	*
Comorbidity of Any MDPS Mental and Any MDPS Substance Use Disorder⁴	0.8	2.3	(1.2, 4.2)	6.8	5.7	(3.9, 8.2)	2.0	7.9	(3.7, 16.2)	<0.5	3.3	(1.5, 7.1)

(continued)

Table A.7 Prevalence Rates of MDPS Disorders, by Participant Race/Ethnicity (continued)

MDPS Disorder (past year unless otherwise indicated)	NH American Indian/Alaska Native			NH Native Hawaiian/Other Pacific Islander			NH Multiracial			P-value ⁵
	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²	
Mental Disorders										
Schizophrenia Spectrum Disorders	*	*	*	*	*	*	*	*	*	0.07
Schizophrenia Spectrum Disorders (lifetime)	*	*	*	*	*	*	<0.5	5.6	(2.3, 12.8)	0.17
Major Depressive Disorder	*	*	*	*	*	*	1.8	20.0	(12.6, 30.2)	0.36
Generalized Anxiety Disorder	*	*	*	*	*	*	1.8	19.8	(9.9, 35.9)	0.03
Bipolar I Disorder	*	*	*	*	*	*	*	*	*	0.02
Posttraumatic Stress Disorder	*	*	*	*	*	*	<0.5	4.1	(1.8, 9.0)	0.00
Obsessive-Compulsive Disorder	*	*	*	*	*	*	*	*	*	0.25
Anorexia Nervosa	*	*	*	*	*	*	*	*	*	
Any MDPS Mental Disorder	*	*	*	*	*	*	3.7	41.3	(29.2, 54.6)	0.01
Two or More MDPS Mental Disorders ³	*	*	*	*	*	*	1.4	15.5	(6.7, 32.0)	0.00
Substance Use Disorders⁴										
Alcohol Use Disorder	*	*	*	*	*	*	0.9	10.6	(4.4, 23.4)	0.01
Opioid Use Disorder	*	*	*	*	*	*	*	*	*	0.02
Stimulant Use Disorder	*	*	*	*	*	*	*	*	*	0.06
Sedative/Hypnotic/Anxiolytic Use Disorder	*	*	*	*	*	*	*	*	*	
Cannabis Use Disorder	*	*	*	*	*	*	*	*	*	0.04
Any MDPS Substance Use Disorder	*	*	*	*	*	*	1.4	15.5	(8.1, 27.8)	0.02
Two or More MDPS Substance Use Disorders	*	*	*	*	*	*	*	*	*	0.01
Comorbidity of Any MDPS Mental and Any MDPS Substance Use Disorder⁴	*	*	*	*	*	*	1.1	12.3	(6.2, 22.7)	0.02

NH = not Hispanic/Latino.

* Estimates are suppressed (i.e., not shown) due to low precision.

¹ Weighted number of participants (i.e., population size) in millions.

² Weighted were estimates calculated with analysis weights and account for the complex MDPS sampling design.

³ Includes lifetime schizophrenia spectrum disorders if past-year schizophrenia spectrum disorders are not present.

⁴ Excludes prison sample because questions about substance use disorders were not asked.

⁵ P-values represent statistical testing results of weighted chi-square tests. Weighted chi-square tests account for MDPS sampling design but not other participant characteristics. Bold values are significant at p<0.05.

Table A.8 Prevalence Rates of MDPS Disorders, by Participant Geographic Region

MDPS Disorder (past year unless otherwise indicated)	Midwest			Northeast			South			West			P-value ³
	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²	
Mental Disorders													
Schizophrenia Spectrum Disorders	<0.5	1.2	(0.6, 2.3)	<0.5	0.9	(0.3, 2.7)	1.3	1.7	(0.9, 3.0)	<0.5	0.9	(0.4, 1.7)	0.57
Schizophrenia Spectrum Disorders (lifetime)	0.7	1.7	(1.1, 2.7)	<0.5	1.1	(0.4, 3.3)	1.6	2.1	(1.3, 3.3)	1.1	2.2	(1.1, 4.4)	0.64
Major Depressive Disorder	6.8	16.3	(13.2, 20.0)	5.7	16.1	(12.2, 20.9)	12.3	15.9	(12.3, 20.3)	6.6	13.6	(10.9, 16.9)	0.65
Generalized Anxiety Disorder	4.8	11.6	(9.1, 14.6)	3.1	8.8	(6.7, 11.5)	8.9	11.6	(7.9, 16.8)	3.4	7.0	(5.3, 9.2)	0.05
Bipolar I Disorder	0.6	1.5	(0.9, 2.8)	<0.5	0.8	(0.4, 1.5)	1.8	2.3	(1.1, 5.0)	<0.5	0.7	(0.4, 1.3)	0.18
Posttraumatic Stress Disorder	1.8	4.3	(2.9, 6.4)	1.0	2.8	(1.8, 4.3)	3.8	5.0	(3.5, 7.2)	1.6	3.3	(1.7, 6.0)	0.18
Obsessive-Compulsive Disorder	0.8	2.0	(1.3, 3.0)	0.5	1.6	(1.0, 2.5)	2.8	3.7	(2.0, 6.6)	0.9	1.8	(1.2, 2.5)	0.32
Anorexia Nervosa	*	*	*	*	*	*	*	*	*	*	*	*	*
Any MDPS Mental Disorder	10.6	25.3	(21.6, 29.5)	8.1	23.2	(19.2, 27.7)	21.5	27.9	(23.2, 33.2)	10.6	21.7	(17.5, 26.7)	0.30
Two or More MDPS Mental Disorders ⁴	3.7	8.9	(6.5, 11.9)	2.3	6.6	(4.9, 8.7)	7.5	9.8	(7.6, 12.5)	2.6	5.4	(4.2, 7.0)	0.02
Substance Use Disorders⁵													
Alcohol Use Disorder	2.3	5.5	(3.5, 8.4)	2.0	5.6	(3.4, 9.0)	5.6	7.4	(5.7, 9.5)	3.6	7.3	(4.8, 11.0)	0.52
Opioid Use Disorder	*	*	*	*	*	*	*	*	*	*	*	*	0.35
Stimulant Use Disorder	0.7	1.7	(0.8, 3.6)	0.7	2.0	(0.7, 5.4)	0.9	1.2	(0.7, 1.9)	0.9	1.8	(0.9, 3.5)	0.68
Sedative/Hypnotic/Anxiolytic Use Disorder	*	*	*	*	*	*	*	*	*	*	*	*	*
Cannabis Use Disorder	1.2	3.0	(2.1, 4.2)	1.0	2.7	(1.4, 5.4)	3.8	5.0	(2.6, 9.3)	1.7	3.4	(2.0, 5.9)	0.65
Any MDPS Substance Use Disorder	3.8	9.1	(6.6, 12.5)	2.9	8.1	(5.5, 11.9)	9.1	11.9	(8.1, 17.1)	5.6	11.6	(8.6, 15.5)	0.37
Two or More MDPS Substance Use Disorders	<0.5	1.2	(0.5, 2.9)	0.8	2.2	(0.8, 6.0)	1.5	1.9	(1.2, 3.0)	0.8	1.6	(0.6, 4.0)	0.71
Comorbidity of Any MDPS Mental and Any MDPS Substance Use Disorder⁵	2.0	4.8	(3.3, 6.8)	1.0	2.8	(1.8, 4.2)	5.5	7.3	(3.9, 13.1)	2.5	5.2	(3.4, 7.9)	0.08

* Estimates are suppressed (i.e., not shown) due to low precision.

¹ Weighted number of participants (i.e., population size) in millions.

² Weighted estimates were calculated with analysis weights and account for the complex MDPS sampling design.

³ P-values represent statistical testing results of weighted chi-square tests. Weighted chi-square tests account for MDPS sampling design but not other participant characteristics. Bold values are significant at p<0.05.

⁴ Includes lifetime schizophrenia spectrum disorders if past-year schizophrenia spectrum disorders are not present.

⁵ Excludes prison sample because questions about substance use disorders were not asked.

Table A.9 Prevalence Rates of MDPS Disorders, by Household Participant Urbanicity¹

MDPS Disorder (past year unless otherwise indicated)	Urban			Rural			P-value ⁴
	Weighted Count (million) ²	Weighted Percent ³	95% Confidence Interval ³	Weighted Count (million) ²	Weighted Percent ³	95% Confidence Interval ³	
Mental Disorders							
Schizophrenia Spectrum Disorders	1.8	1.1	(0.7, 1.6)	*	*	*	0.34
Schizophrenia Spectrum Disorders (lifetime)	2.9	1.8	(1.2, 2.5)	*	*	*	0.85
Major Depressive Disorder	26.2	15.8	(13.7, 18.2)	4.9	13.4	(10.5, 17.1)	0.26
Generalized Anxiety Disorder	14.7	9.0	(7.9, 10.2)	5.3	14.7	(7.4, 27.1)	0.26
Bipolar I Disorder	2.0	1.2	(0.8, 1.9)	*	*	*	0.41
Posttraumatic Stress Disorder	6.0	3.6	(2.9, 4.6)	2.1	5.7	(3.2, 9.9)	0.19
Obsessive-Compulsive Disorder	3.5	2.1	(1.6, 2.7)	1.4	4.0	(1.5, 10.3)	0.31
Anorexia Nervosa	*	*	*	*	*	*	
Any MDPS Mental Disorder	39.6	24.0	(21.6, 26.7)	10.5	29.1	(20.2, 39.9)	0.34
Two or More MDPS Mental Disorders ⁵	12.1	7.4	(6.4, 8.5)	3.8	10.6	(6.5, 16.7)	0.20
Substance Use Disorders⁶							
Alcohol Use Disorder	11.3	6.8	(5.5, 8.4)	2.2	5.9	(3.4, 10.2)	0.64
Opioid Use Disorder	0.8	0.5	(0.3, 0.8)	*	*	*	0.82
Stimulant Use Disorder	2.8	1.7	(1.1, 2.5)	*	*	*	0.13
Sedative/Hypnotic/Anxiolytic Use Disorder	*	*	*	*	*	*	
Cannabis Use Disorder	5.9	3.6	(2.6, 4.8)	*	*	*	0.68

(continued)

Table A.9 Prevalence Rates of MDPS Disorders, by Household Participant Urbanicity¹ (continued)

MDPS Disorder (past year unless otherwise indicated)	Urban			Rural			P-value ⁶
	Weighted Count (million) ²	Weighted Percent ³	95% Confidence Interval ³	Weighted Count (million) ²	Weighted Percent ³	95% Confidence Interval ³	
Any MDPS Substance Use Disorder	17.4	10.5	(8.9, 12.5)	3.9	10.9	(4.5, 23.8)	0.94
Two or More MDPS Substance Use Disorders	3.0	1.8	(1.2, 2.8)	*	*	*	0.45
Comorbidity of Any MDPS Mental and Any MDPS Substance Use Disorder⁶	8.3	5.1	(4.1, 6.2)	2.6	7.3	(2.0, 23.8)	0.64

* Estimates are suppressed (i.e., not shown) due to low precision.

¹ Urbanicity data are presented for the household sample only. The definition of urban versus rural areas is provided in https://www.census.gov/content/dam/Census/library/publications/2020/acs/acs_rural_handbook_2020.pdf.

² Weighted number of participants (i.e., population size) in millions.

³ Weighted estimates were calculated with analysis weights and account for the complex MDPS sampling design.

⁴ P-values represent statistical testing results of weighted chi-square tests. Weighted chi-square tests account for MDPS sampling design but not other participant characteristics. Bold values are significant at p<0.05.

⁵ Includes lifetime schizophrenia spectrum disorders if past-year schizophrenia spectrum disorders are not present.

⁶ Excludes prison sample because questions about substance use disorders were not asked.

Table A.10 Prevalence Rates of Past-Year Treatment Use Among MDPS Participants with a Past-Year Disorder

Proportion of Adults with MDPS Disorders Who Received Treatment in the Past Year	Any Outpatient Treatment (not disorder specific)			Any Inpatient Treatment (not disorder specific)			Any Medication (not disorder specific)			Any Treatment (not disorder specific)		
	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²	Weighted Count (million) ¹	Weighted Percent ²	95% Confidence Interval ²
Mental Disorders												
Schizophrenia Spectrum Disorders	1.6	65.6	(45.4, 81.5)	<0.5	11.8	(6.1, 21.5)	1.7	69.0	(47.7, 84.4)	1.8	72.9	(51.3, 87.3)
Schizophrenia Spectrum Disorders (lifetime)	2.1	57.7	(39.7, 73.9)	<0.5	10.4	(5.3, 19.5)	2.5	68.9	(52.4, 81.7)	2.6	72.8	(56.4, 84.7)
Major Depressive Disorder	17.1	55.3	(48.6, 61.9)	1.0	3.3	(2.4, 4.7)	14.7	47.7	(41.9, 53.5)	18.4	59.6	(52.8, 66.0)
Generalized Anxiety Disorder	12.3	61.9	(55.8, 67.6)	0.8	4.1	(2.5, 6.7)	11.5	57.5	(51.1, 63.6)	13.2	65.9	(59.8, 71.5)
Bipolar I Disorder	*	*	*	<0.5	5.7	(2.5, 12.5)	*	*	*	*	*	*
Posttraumatic Stress Disorder	5.6	69.0	(56.7, 79.0)	<0.5	5.2	(2.9, 9.3)	4.4	54.3	(44.0, 64.2)	5.9	71.7	(59.1, 81.6)
Obsessive-Compulsive Disorder	3.2	64.8	(46.6, 79.5)	<0.5	6.3	(3.2, 12.3)	3.3	65.3	(52.2, 76.5)	3.7	73.5	(61.4, 82.9)
Anorexia Nervosa	*	*	*	*	*	*	*	*	*	*	*	*
Any MDPS Mental Disorder	27.5	55.0	(49.8, 60.1)	1.7	3.3	(2.5, 4.4)	25.1	50.1	(45.3, 55.0)	30.4	60.8	(55.7, 65.6)
Substance Use Disorders³												
Alcohol Use Disorder	1.6	12.1	(8.4, 17.1)	0.8	5.9	(2.8, 11.8)	0.8	6.2	(3.9, 9.6)	1.8	13.7	(9.4, 19.4)
Opioid Use Disorder	*	*	*	*	*	*	*	*	*	*	*	*
Stimulant Use Disorder	0.7	23.0	(14.1, 35.3)	<0.5	8.2	(4.1, 15.6)	<0.5	11.8	(6.5, 20.4)	0.7	24.2	(15.0, 36.7)
Sedative/Hypnotic/Anxiolytic Use Disorder	*	*	*	*	*	*	*	*	*	*	*	*
Cannabis Use Disorder	<0.5	2.5	(1.4, 4.7)	*	*	*	*	*	*	<0.5	3.7	(1.9, 7.3)
Any MDPS Substance Use Disorder	2.3	10.8	(7.6, 14.9)	0.9	4.2	(2.2, 8.1)	1.2	5.8	(3.8, 8.6)	2.6	12.2	(8.6, 16.8)

* Estimates are suppressed (i.e., not shown) due to low precision.

¹ Weighted number of participants (i.e., population size) in millions.

² Weighted estimates were calculated with analysis weights and account for the complex MDPS sampling design.

³ Excludes prison sample because questions about substance use disorders were not asked.

Table A.11 Prevalence Rates of Past-Year Treatment Use Among MDPS Participants with a Past-Year Disorder, by Participant Age Group

Proportion of Adults with MDPS Disorders Who Received Treatment in the Past Year ¹	18–25			26–44			45–65			P-value ⁴
	Weighted Count (million) ²	Weighted Percent ³	95% Confidence Interval ³	Weighted Count (million) ²	Weighted Percent ³	95% Confidence Interval ³	Weighted Count (million) ²	Weighted Percent ³	95% Confidence Interval ³	
Mental Disorders										
Schizophrenia Spectrum Disorders	*	*	*	*	*	*	*	*	*	
Schizophrenia Spectrum Disorders (lifetime)	*	*	*	*	*	*	*	*	*	
Major Depressive Disorder	4.1	58.7	(45.7, 70.6)	9.8	64.4	(55.6, 72.3)	4.4	51.7	(39.0, 64.1)	0.34
Generalized Anxiety Disorder	4.2	70.1	(57.2, 80.4)	5.9	65.5	(56.7, 73.4)	3.1	61.6	(49.1, 72.7)	0.60
Bipolar I Disorder	*	*	*	1.0	88.9	(70.2, 96.4)	0.7	94.0	(82.6, 98.1)	0.24
Posttraumatic Stress Disorder	*	*	*	3.9	74.5	(62.3, 83.7)	1.1	74.8	(51.0, 89.4)	0.76
Obsessive-Compulsive Disorder	*	*	*	1.7	76.0	(60.0, 87.0)	*	*	*	0.76
Anorexia Nervosa	*	*	*	*	*	*	*	*	*	
Any MDPS Mental Disorder	7.4	59.7	(49.3, 69.3)	15.6	64.4	(57.3, 70.9)	7.4	55.2	(45.5, 64.6)	0.36
Substance Use Disorders⁵										
Alcohol Use Disorder	*	*	*	1.3	16.6	(10.8, 24.7)	<0.5	12.1	(6.5, 21.5)	0.14
Opioid Use Disorder	*	*	*	*	*	*	*	*	*	
Stimulant Use Disorder	*	*	*	0.5	35.2	(19.3, 55.3)	<0.5	14.3	(5.5, 32.5)	0.05
Sedative/Hypnotic/Anxiolytic Use Disorder	*	*	*	*	*	*	*	*	*	
Cannabis Use Disorder	*	*	*	*	*	*	*	*	*	
Any MDPS Substance Use Disorder	*	*	*	1.8	15.8	(11.2, 21.7)	0.7	12.4	(7.5, 19.8)	0.06

* Estimates are suppressed (i.e., not shown) due to low precision.

¹ Includes any outpatient, inpatient or residential treatment, or medication received in the past year (not disorder specific).

² Weighted number of participants (i.e., population size) in millions.

³ Weighted estimates were calculated with analysis weights and account for the complex MDPS sampling design.

⁴ P-values represent statistical testing results of weighted chi-square tests. Weighted chi-square tests account for MDPS sampling design but not other participant characteristics. Bold values are significant at p<0.05.

⁵ Excludes prison sample because questions about substance use disorders were not asked.

Table A.12 Prevalence Rates of Past-Year Treatment Use Among MDPS Participants with a Past-Year Disorder, by Participant Sex Assigned at Birth

Proportion of Adults with MDPS Disorders Who Received Treatment in the Past Year ¹	Male			Female			P-value ⁴
	Weighted Count (million) ²	Weighted Percent ³	95% Confidence Interval ³	Weighted Count (million) ²	Weighted Percent ³	95% Confidence Interval ³	
Mental Disorders							
Schizophrenia Spectrum Disorders	*	*	*	0.8	92.8	(72.6, 98.4)	0.04
Schizophrenia Spectrum Disorders (lifetime)	1.2	58.7	(38.8, 76.1)	1.5	90.6	(75.4, 96.8)	0.02
Major Depressive Disorder	6.3	50.7	(40.9, 60.3)	12.1	65.6	(57.8, 72.7)	0.02
Generalized Anxiety Disorder	4.5	65.9	(52.1, 77.4)	8.6	65.9	(60.1, 71.3)	0.99
Bipolar I Disorder	1.0	83.9	(60.0, 94.7)	*	*	*	0.36
Posttraumatic Stress Disorder	*	*	*	4.1	78.0	(67.7, 85.7)	0.26
Obsessive-Compulsive Disorder	*	*	*	2.3	77.7	(67.4, 85.4)	0.40
Anorexia Nervosa	*	*	*	*	*	*	
Any MDPS Mental Disorder	10.6	51.8	(43.4, 60.1)	19.8	67.0	(61.5, 72.0)	0.00
Substance Use Disorders⁵							
Alcohol Use Disorder	1.2	17.0	(9.9, 27.6)	0.6	9.6	(5.4, 16.5)	0.20
Opioid Use Disorder	*	*	*	*	*	*	
Stimulant Use Disorder	<0.5	22.9	(12.0, 39.4)	<0.5	26.8	(13.7, 45.9)	0.72
Sedative/Hypnotic/Anxiolytic Use Disorder	*	*	*	*	*	*	
Cannabis Use Disorder	*	*	*	*	*	*	
Any MDPS Substance Use Disorder	1.8	16.3	(10.8, 23.7)	0.8	7.7	(4.4, 13.2)	0.05

* Estimates are suppressed (i.e., not shown) due to low precision.

¹ Includes any outpatient, inpatient or residential treatment, or medication received in the past year (not disorder specific).

² Weighted number of participants (i.e., population size) in millions.

³ Weighted estimates were calculated with analysis weights and account for the complex MDPS sampling design.

⁴ P-values represent statistical testing results of weighted chi-square tests. Weighted chi-square tests account for MDPS sampling design but not other participant characteristics. Bold values are significant at p<0.05.

⁵ Excludes prison sample because questions about substance use disorders were not asked.

Table A.13 Prevalence Rates of Past-Year Treatment Use Among MDPS Participants with a Past-Year Disorder, by Participant Current Gender Identity

Proportion of Adults with MDPS Disorders Who Received Treatment in the Past Year ¹	Male			Female			Transgender/Gender Diverse			P-value ⁴
	Weighted Count (million) ²	Weighted Percent ³	95% Confidence Interval ³	Weighted Count (million) ²	Weighted Percent ³	95% Confidence Interval ³	Weighted Count (million) ²	Weighted Percent ³	95% Confidence Interval ³	
Mental Disorders										
Schizophrenia Spectrum Disorders	*	*	*	0.7	91.9	(69.3, 98.3)	*	*	*	0.11
Schizophrenia Spectrum Disorders (lifetime)	1.1	57.0	(37.1, 74.9)	1.4	90.0	(73.5, 96.7)	*	*	*	0.04
Major Depressive Disorder	6.2	50.4	(40.5, 60.2)	11.5	65.3	(57.3, 72.5)	0.6	81.7	(68.7, 90.1)	0.01
Generalized Anxiety Disorder	4.3	67.4	(53.6, 78.7)	8.4	65.8	(60.0, 71.2)	*	*	*	0.92
Bipolar I Disorder	0.9	83.4	(59.0, 94.6)	*	*	*	*	*	*	0.37
Posttraumatic Stress Disorder	*	*	*	3.9	77.3	(66.4, 85.4)	*	*	*	0.23
Obsessive-Compulsive Disorder	*	*	*	2.2	77.4	(67.0, 85.2)	*	*	*	0.40
Anorexia Nervosa	*	*	*	*	*	*	*	*	*	
Any MDPS Mental Disorder	10.3	52.0	(43.4, 60.4)	19.0	66.6	(61.0, 71.8)	*	*	*	0.02
Substance Use Disorders⁵										
Alcohol Use Disorder	1.2	17.4	(10.1, 28.3)	0.6	9.8	(5.5, 16.9)	*	*	*	0.31
Opioid Use Disorder	*	*	*	*	*	*	*	*	*	
Stimulant Use Disorder	<0.5	22.6	(11.7, 39.2)	<0.5	27.1	(13.8, 46.3)	*	*	*	0.56
Sedative/Hypnotic/Anxiolytic Use Disorder	*	*	*	*	*	*	*	*	*	
Cannabis Use Disorder	*	*	*	*	*	*	*	*	*	
Any MDPS Substance Use Disorder	1.8	16.5	(11.0, 24.0)	0.8	8.0	(4.5, 13.8)	*	*	*	0.07

* Estimates are suppressed (i.e., not shown) due to low precision.

¹ Includes any outpatient, inpatient or residential treatment, or medication received in the past year (not disorder specific).

² Weighted number of participants (i.e., population size) in millions.

³ Weighted estimates were calculated with analysis weights and account for the complex MDPS sampling design.

⁴ P-values represent statistical testing results of weighted chi-square tests. Weighted chi-square tests account for MDPS sampling design but not other participant characteristics. Bold values are significant at p<0.05.

⁵ Excludes prison sample because questions about substance use disorders were not asked.

Table A.14 Prevalence Rates of Past-Year Treatment Use Among MDPS Participants with a Past-Year Disorder, by Participant Race/Ethnicity

Proportion of Adults with MDPS Disorders Who Received Treatment in the Past Year ¹	Hispanic/Latino			NH White			NH Black/African American			NH Asian		
	Weighted Count (million) ²	Weighted Percent ³	95% Confidence Interval ³	Weighted Count (million) ²	Weighted Percent ³	95% Confidence Interval ³	Weighted Count (million) ²	Weighted Percent ³	95% Confidence Interval ³	Weighted Count (million) ²	Weighted Percent ³	95% Confidence Interval ³
Mental Disorders												
Schizophrenia Spectrum Disorders	<0.5	99.8	(98.6, 100.0)	*	*	*	*	*	*	*	*	*
Schizophrenia Spectrum Disorders (lifetime)	*	*	*	*	*	*	*	*	*	*	*	*
Major Depressive Disorder	1.8	42.2	(33.0, 52.1)	13.0	66.3	(57.0, 74.4)	1.6	43.8	(29.5, 59.2)	*	*	*
Generalized Anxiety Disorder	1.2	54.8	(42.8, 66.2)	9.6	74.9	(66.2, 81.9)	*	*	*	*	*	*
Bipolar I Disorder	<0.5	97.6	(83.5, 99.7)	1.7	88.5	(76.2, 94.9)	*	*	*	*	*	*
Posttraumatic Stress Disorder	0.8	69.7	(51.4, 83.4)	4.1	73.6	(56.8, 85.5)	*	*	*	*	*	*
Obsessive-Compulsive Disorder	<0.5	39.3	(22.6, 58.9)	2.0	83.6	(69.8, 91.8)	*	*	*	*	*	*
Anorexia Nervosa	*	*	*	*	*	*	*	*	*	*	*	*
Any MDPS Mental Disorder	2.8	44.9	(36.9, 53.2)	20.7	67.1	(59.9, 73.6)	3.3	48.5	(33.4, 64.0)	0.8	39.2	(22.0, 59.5)
Substance Use Disorders⁴												
Alcohol Use Disorder	*	*	*	1.2	15.4	(10.7, 21.7)	*	*	*	*	*	*
Opioid Use Disorder	*	*	*	*	*	*	*	*	*	*	*	*
Stimulant Use Disorder	*	*	*	0.6	37.0	(22.1, 54.8)	*	*	*	*	*	*
Sedative/Hypnotic/Anxiolytic Use Disorder	*	*	*	*	*	*	*	*	*	*	*	*
Cannabis Use Disorder	*	*	*	*	*	*	*	*	*	*	*	*
Any MDPS Substance Use Disorder	<0.5	8.6	(4.0, 17.5)	1.8	13.9	(9.6, 19.7)	*	*	*	*	*	*

(continued)

Table A.14 Prevalence Rates of Past-Year Treatment Use Among MDPS Participants with a Past-Year Disorder, by Participant Race/Ethnicity (continued)

Proportion of Adults with MDPS Disorders Who Received Treatment in the Past Year ¹	NH American Indian/Alaska Native			NH Native Hawaiian/Other Pacific Islander			NH Multiracial			P-value ⁵
	Weighted Count (million) ²	Weighted Percent ³	95% Confidence Interval ³	Weighted Count (million) ²	Weighted Percent ³	95% Confidence Interval ³	Weighted Count (million) ²	Weighted Percent ³	95% Confidence Interval ³	
Mental Disorders										
Schizophrenia Spectrum Disorders	*	*	*	*	*	*	*	*	*	0.36
Schizophrenia Spectrum Disorders (lifetime)	*	*	*	*	*	*	*	*	*	
Major Depressive Disorder	*	*	*	*	*	*	1.2	69.8	(47.8, 85.4)	0.00
Generalized Anxiety Disorder	*	*	*	*	*	*	*	*	*	0.08
Bipolar I Disorder	*	*	*	*	*	*	*	*	*	0.50
Posttraumatic Stress Disorder	*	*	*	*	*	*	*	*	*	0.20
Obsessive-Compulsive Disorder	*	*	*	*	*	*	*	*	*	0.04
Anorexia Nervosa	*	*	*	*	*	*	*	*	*	
Any MDPS Mental Disorder	*	*	*	*	*	*	2.4	66.3	(45.1, 82.5)	0.00
Substance Use Disorders⁴										
Alcohol Use Disorder	*	*	*	*	*	*	*	*	*	0.15
Opioid Use Disorder	*	*	*	*	*	*	*	*	*	
Stimulant Use Disorder	*	*	*	*	*	*	*	*	*	0.08
Sedative/Hypnotic/Anxiolytic Use Disorder	*	*	*	*	*	*	*	*	*	
Cannabis Use Disorder	*	*	*	*	*	*	*	*	*	
Any MDPS Substance Use Disorder	*	*	*	*	*	*	*	*	*	0.25

NH = not Hispanic/Latino.

* Estimates are suppressed (i.e., not shown) due to low precision.

¹ Includes any outpatient, inpatient or residential treatment, or medication received in the past year (not disorder specific).

² Weighted number of participants (i.e., population size) in millions.

³ Weighted estimates were calculated with analysis weights and account for the complex MDPS sampling design.

⁴ Excludes prison sample because questions about substance use disorders were not asked.

⁵ P-values represent statistical testing results of weighted chi-square tests. Weighted chi-square tests account for MDPS sampling design but not other participant characteristics. Bold values are significant at p<0.05.

Table A.15 Prevalence Rates of Past-Year Treatment Use Among MDPS Participants with a Past-Year Disorder, by Participant Geographic Region

Proportion of Adults with MDPS Disorders Who Received Treatment in the Past Year ¹	Midwest			Northeast			South			West			P-value ⁴
	Weighted Count (million) ²	Weighted Percent ³	95% Confidence Interval ³	Weighted Count (million) ²	Weighted Percent ³	95% Confidence Interval ³	Weighted Count (million) ²	Weighted Percent ³	95% Confidence Interval ³	Weighted Count (million) ²	Weighted Percent ³	95% Confidence Interval ³	
Mental Disorders													
Schizophrenia Spectrum Disorders	*	*	*	*	*	*	*	*	*	*	*	*	*
Schizophrenia Spectrum Disorders (lifetime)	*	*	*	<0.5	77.5	(53.1, 91.3)	*	*	*	*	*	*	0.72
Major Depressive Disorder	4.1	60.4	(47.4, 72.1)	*	*	*	7.2	59.9	(49.6, 69.4)	3.9	59.8	(50.5, 68.4)	1.00
Generalized Anxiety Disorder	3.1	65.1	(51.9, 76.4)	2.4	79.4	(69.3, 86.8)	5.6	63.4	(52.8, 72.9)	2.0	61.1	(50.5, 70.8)	0.04
Bipolar I Disorder	0.6	99.0	(92.8, 99.9)	*	*	*	*	*	*	*	*	*	0.22
Posttraumatic Stress Disorder	1.2	64.9	(44.6, 80.9)	0.9	92.3	(77.7, 97.6)	2.9	76.0	(61.5, 86.3)	*	*	*	0.11
Obsessive-Compulsive Disorder	*	*	*	<0.5	83.4	(68.8, 92.0)	2.0	72.6	(52.9, 86.2)	0.6	65.4	(45.8, 80.8)	0.33
Anorexia Nervosa	*	*	*	*	*	*	*	*	*	*	*	*	
Any MDPS Mental Disorder	6.3	60.6	(51.6, 68.9)	5.0	61.6	(44.3, 76.5)	13.0	61.7	(53.6, 69.3)	6.1	58.3	(50.2, 66.0)	0.94
Substance Use Disorders⁵													
Alcohol Use Disorder	*	*	*	*	*	*	0.7	13.6	(8.7, 20.7)	<0.5	9.4	(4.3, 19.5)	0.72
Opioid Use Disorder	*	*	*	*	*	*	*	*	*	*	*	*	
Stimulant Use Disorder	*	*	*	*	*	*	<0.5	28.3	(15.0, 47.1)	*	*	*	0.89
Sedative/Hypnotic/Anxiolytic Use Disorder	*	*	*	*	*	*	*	*	*	*	*	*	
Cannabis Use Disorder	*	*	*	*	*	*	*	*	*	*	*	*	
Any MDPS Substance Use Disorder	*	*	*	0.5	19.4	(9.0, 37.0)	0.9	9.7	(5.5, 16.6)	0.7	11.9	(6.2, 21.4)	0.68

* Estimates are suppressed (i.e., not shown) due to low precision.

¹ Includes any outpatient, inpatient or residential treatment, or medication received in the past year (not disorder specific).

² Weighted number of participants (i.e., population size) in millions.

³ Weighted estimates were calculated with analysis weights and account for the complex MDPS sampling design.

⁴ P-values represent statistical testing results of weighted chi-square tests. Weighted chi-square tests account for MDPS sampling design but not other participant characteristics. Bold values are significant at p<0.05.

⁵ Excludes prison sample because questions about substance use disorders were not asked.

Table A.16 Prevalence Rates of Past-Year Treatment Use Among MDPS Participants with a Past-Year Disorder, by Household Participant Urbanicity¹

Proportion of Adults with MDPS Disorders Who Received Treatment in the Past Year ²	Urban			Rural			P-value ⁵
	Weighted Count (million) ³	Weighted Percent ⁴	95% Confidence Interval ⁴	Weighted Count (million) ³	Weighted Percent ⁴	95% Confidence Interval ⁴	
Mental Disorders							
Schizophrenia Spectrum Disorders	1.4	81.7	(57.2, 93.7)	*	*	*	0.16
Schizophrenia Spectrum Disorders (lifetime)	2.2	77.7	(60.7, 88.7)	*	*	*	0.23
Major Depressive Disorder	15.7	60.8	(53.3, 67.9)	2.5	52.3	(39.3, 65.1)	0.28
Generalized Anxiety Disorder	9.6	66.6	(59.7, 72.8)	3.4	64.2	(49.5, 76.6)	0.76
Bipolar I Disorder	1.7	84.9	(70.8, 92.9)	*	*	*	0.24
Posttraumatic Stress Disorder	4.6	76.2	(66.4, 83.9)	1.2	58.2	(28.8, 82.7)	0.31
Obsessive-Compulsive Disorder	2.5	72.7	(60.7, 82.1)	1.1	75.6	(35.7, 94.5)	0.87
Anorexia Nervosa	*	*	*	*	*	*	
Any MDPS Mental Disorder	24.0	61.6	(55.8, 67.0)	6.0	57.4	(45.0, 68.9)	0.54
Substance Use Disorders⁶							
Alcohol Use Disorder	1.5	13.3	(8.7, 19.8)	*	*	*	0.77
Opioid Use Disorder	*	*	*	*	*	*	
Stimulant Use Disorder	0.7	24.8	(15.0, 38.2)	*	*	*	0.62
Sedative/Hypnotic/Anxiolytic Use Disorder	*	*	*	*	*	*	
Cannabis Use Disorder	*	*	*	*	*	*	
Any MDPS Substance Use Disorder	2.2	12.6	(9.0, 17.5)	*	*	*	0.67

* Estimates are suppressed (i.e., not shown) due to low precision.

¹ Urbanicity data are presented for the household sample only. The definition of urban versus rural areas is provided in https://www.census.gov/content/dam/Census/library/publications/2020/acs/acs_rural_handbook_2020.pdf.

² Includes any outpatient, inpatient or residential treatment, or medication received in the past year (not disorder specific).

³ Weighted number of participants (i.e., population size) in millions.

⁴ Weighted estimates were calculated with analysis weights and account for the complex MDPS sampling design.

⁵ P-values represent statistical testing results of weighted chi-square tests. Weighted chi-square tests account for MDPS sampling design but not other participant characteristics. Bold values are significant at p<0.05.

⁶ Excludes prison sample because questions about substance use disorders were not asked.