VCU School of Medicine
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Member Experiences with Opioid Use Disorder Treatment Services in the Virginia Medicaid Program

Results from a survey of Medicaid members receiving treatment services through the Addiction and Recovery Treatment Services program

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EXECUTIVE SUMMARY

This report presents findings from a survey of Virginia Medicaid members who received treatment for opioid use disorder (OUD) through the Addiction and Recovery Treatment Services (ARTS) benefit. ARTS was implemented in April, 2017 by the Virginia Department of Medical Assistance Services (DMAS). The survey is based on a stratified random sample of Medicaid members who were diagnosed and/or received treatment for OUD. The sample was identified through Medicaid enrollment and claims data, and was equally divided into the following four groups: (1) members who received treatment at Preferred Office-Based Opioid Treatment providers (OBOT) – a new model of care delivery created through the ARTS benefit; (2) members who received treatment through Opioid Treatment Programs (OTP), which provides methadone treatment for OUD; (3) members who received treatment at other outpatient providers which may include outpatient clinics or office-based providers that provide OUD treatment, and; (4) members who were diagnosed with OUD, but received no ARTS services based on paid claims.

The survey was conducted between January, 2020 and August, 2021, and therefore overlaps with the beginning of the COVID-19 pandemic. The survey was conducted by mail, and included $2 incentives. Out of a total 10,250 persons in the initial sample draw, about 1,845 returned completed surveys, for a survey response rate of 18%. Survey weights adjusted for differences between respondents and nonrespondents on age, sex, race/ethnicity, and Virginia region. In examining members' experiences with treatment, the analysis focuses on comparisons between the following subgroups, reflecting analytical priorities: (1) Differences between members using Preferred OBOT, OTP, other outpatient providers, and members receiving no treatment; (2) Differences by race/ethnicity, (3) Differences in treatment experiences between respondents interviewed prior to the onset of the COVID-19 pandemic, and those interviewed after the pandemic began and (4) Differences between members living in urban and rural areas. The results are summarized below.

Differences between treatment provider types.

- There were some differences in respondent experiences based on whether they received care at Preferred OBOT, OTP, or other outpatient providers. For example:
  - Respondents using Preferred OBOT providers were less likely to report any unmet need for treatment services, relative to other outpatient providers.
  - Respondents using Preferred OBOT and OTP providers were more likely to report receiving MOUD treatment compared to other outpatient providers.
  - Respondents using Preferred OBOT and other outpatient providers were more likely to receive help with other health or personal needs compared to OTP providers.
  - Respondents using OTP providers were less likely to report that they stopped treatment against the advice of doctors or counselors, compared to users of Preferred OBOT and other outpatient providers.
  - Respondents using Preferred OBOT and OTP providers were more likely to report that treatment helped them with a number of personal, social, and economic outcomes, compared to other outpatient providers.

Differences by race/ethnicity

- There were some notable differences between non-Hispanic White members and non-Hispanic Black members in experiences with treatment. Compared to non-Hispanic White members, non-Hispanic Black members:
  - Were more likely to have recently started treatment (within the past year).
  - Were less likely to receive help with other health or personal needs, a medical problem or a mental health problem from their treatment provider.
  - Had less favorable experiences with treatment providers, including being much less likely to believe they were able to refuse treatment.
  - Were less likely to agree that treatment had helped them with multiple personal, social, and economic outcomes.

Differences by urban/rural residence

- There were few differences between respondents living in urban and rural areas; some notable exceptions include:
  - Respondents who lived in rural areas were less likely to receive help with housing, food or employment, compared to those who lived in an urban classification.
  - The percent of respondents reporting unmet need for MOUD treatment was higher in rural areas compared to those in urban areas.
  - Respondents were less likely to use Alcoholics Anonymous or Narcotics Anonymous if they lived in a rural area, compared to urban areas.

Experiences during COVID

- Experiences with treatment did not differ greatly among respondents who completed the interview after the beginning of the COVID-19 pandemic, compared to respondents who were interviewed before the pandemic started. A few exceptions include:
  - Respondents who were interviewed during the pandemic were less likely to report needing treatment right away compared to those interviewed before the pandemic began.
  - Respondents who were interviewed during the pandemic were less likely to report receiving help with other health and personal needs compared to respondents interviewed before the pandemic.

- Among respondents surveyed after the pandemic began, the majority reported that the pandemic had not changed their ability to maintain treatment services and their recovery. In general, an equal or greater number of respondents reported that their treatment had improved during the pandemic, compared to the number reporting that their treatment had become "worse."

- Respondents generally had positive experiences using different modes of treatment, with only slightly less positive experiences among those having telephone or video calls with their providers.

Who are the diagnosed, untreated group?

One of the sampling strata in the survey included members who had received an OUD diagnosis in the year prior to the sample draw, but had no utilization of ARTS treatment services based on claims data. Survey findings about this "diagnosed, untreated" group reveal the following:

- The "diagnosed, untreated" group tend to be much older, not in the labor force, in poorer overall health, less likely to have serious mental illness (SMI), and less likely to be polysubstance users compared to sample persons who received ARTS treatment services. They are also much less likely to have spent time in jail or prison in the past 12 months compared to those receiving ARTS services.

- Overall, many in this group do no not perceive they are in need of treatment. Few of them self-reported receiving any type of treatment in the past 12 months. Also, they were less likely to report having any unmet need for drug or alcohol treatment compared to those who received treatment through other outpatient providers other than OBOT and OTP. This suggests that the main reason why they are not using treatment services is that they perceive less of a need for treatment, rather than they lack access or encounter barriers to treatment services.

Conclusion

The majority of survey respondents reported favorable experiences with their treatment, including their interactions with health care providers, and how treatment benefitted them personally, socially, and economically. A minority of respondents reported less favorable experiences with their treatment, including about 1 in 7 who reported unmet need for treatment in the past year. Even when there were differences in treatment experiences by provider type or race/ethnicity, the majority in each group reported favorable experiences. Differences between members living in urban and rural areas were minimal. Moreover, the onset of the COVID-19 pandemic did not appear to diminish these positive experiences with treatment, with few exceptions. Most survey respondents who completed the survey after COVID began reported that their ability to continue with various treatment services had either not changed since the pandemic, or had improved.

INTRODUCTION

In April 2017, the Department of Medical Assistance Services (DMAS) implemented the Addiction and Recovery Treatment Services (ARTS) benefit in order to increase access to treatment for substance use disorders (SUD) for Medicaid members. ARTS expanded coverage of many addiction treatment services for Medicaid members, including community-based services, short-term residential treatment and inpatient detoxification services. The Centers for Medicare and Medicaid Services (CMS) approved a Section 1115 Demonstration Waiver for SUD in December 2016 to allow federal Medicaid payment for addiction treatment services provided in inpatient and short-term residential facilities. ARTS also increased provider reimbursement rates for many existing services and introduced a new care delivery model, the Preferred Office-Based Opioid Treatment (OBOT) provider, which integrated medications for opioid use disorder (MOUD) with behavioral and physical health by incentivizing increased use of care coordination activities. The six Medicaid managed care organizations, which oversee medical and behavioral health benefits for all Medicaid members, administer SUD services, offering a comprehensive care delivery system that further increases integration of addiction treatment services with other health services covered by Medicaid.

DMAS contracted with Virginia Commonwealth University School of Medicine to conduct an independent evaluation of the ARTS benefit. Based largely on analyses of Medicaid claims data, the evaluation to-date has shown a large increase in access to and utilization of SUD treatment services for Medicaid members.[1] Use of many ARTS services more than doubled in 2019 following the expansion of Medicaid eligibility to 138% of the federal poverty level, as allowed under the Patient Protection and Affordable Care Act (ACA). Additional analyses related to the capacity of the SUD treatment system, SUD prevalence, and utilization of SUD services for vulnerable subpopulations were also conducted through a grant received by DMAS from the Center for Medicare and Medicaid Services (CMS) as part of the Substance Use-Disorder Prevent that Promotes Opioid Recovery and Treatment (SUPPORT) for Patients and Communities Act.

As part of the ARTS evaluation and SUPPORT Act, a survey was conducted in 2020 and 2021 to assess experiences in receiving ARTS services among Virginia Medicaid members with opioid use disorder (OUD). The results of the survey are presented in this report. Included in the survey were questions on unmet needs related to SUD treatment; other unmet health needs; utilization of various types of treatment services, including those not covered by Medicaid; assessment of quality of care from treatment providers; and assessments of how treatment affects members' personal, family, and social lives, as well as their ability to find employment and obtain stable housing. As the survey field period overlapped with the beginning of the COVID-19 pandemic, the survey also ascertained barriers to care as a result of COVID-19, as well as experiences with different treatment modes such as telehealth.

SURVEY METHODOLOGY

Sample Design. The ARTS member survey is based on a stratified random sample of Virginia Medicaid members who received treatment for OUD. Survey respondents ages 21 and over were randomly selected from Medicaid enrollment files based on their utilization of ARTS services (identified through Medicaid claims data). Sample selection was stratified to reflect analytical goals and priorities in comparing member experiences in using the new model of treatment delivery – Preferred OBOT providers – with use of Opioid Treatment Programs (OTPs), and other outpatient treatment providers. In addition, to better understand why some members with OUD diagnoses do not receive ARTS services, an additional sampling stratum selected Medicaid members with an OUD diagnosis, but no claims for SUD treatment services. Specifically, the four sampling strata were defined as follows:

1. **Utilized services at Preferred OBOT providers.** Members with OUD who had 2 or more claims at Preferred OBOT providers in the six months prior to sample selection.

2. **Utilized services at Opioid Treatment Programs (OTP).** Members with OUD who did not utilize Preferred OBOT providers, but had 2 or more claims at OTP providers in the six months prior to sample selection.

3. **Utilized other outpatient providers.** Members with OUD who did not utilize Preferred OBOT or OTP providers, but had 2 or more claims for other outpatient treatment services with a primary diagnosis of OUD in the six months prior to sample selection.

4. **Diagnosed, not treated.** Members with any primary or secondary diagnosis of OUD on any claim in the 12 months prior to sample selection, but with no claim for ARTS services, including outpatient, residential, intensive outpatient, or Medications for Opioid Use Disorder (MOUD) treatment.

Sampling criteria were based on paid claims only. Members under the age of 21, living in correctional facilities or other institutional settings, or deceased were excluded from the sample frame. Within each sampling strata, 2,500 members were randomly selected, for a total initial sample of 10,250 members. About half of the sample was drawn at the beginning of January, 2020, based on utilization of treatment services between July and December, 2019 as reported in claims data. The second half of the sample was drawn in January, 2021, and was based on utilization of treatment services between July and December, 2020.

Questionnaire Design. Survey questions were adapted from a number of sources, including the CAHPS Experience of Care & Health Outcomes (ECHO) Survey, a version of the CAHPS developed for assessing patient experience with behavioral health care,[2] and the National Survey of Drug Use and Health, conducted by the Substance Abuse and Mental Health Services Administration.[3] In addition, we obtained questions that ask patients to assess the impact of treatment on their lives from a survey of patients receiving services at Centers for Excellence treatment centers in Pennsylvania.[4]

Data Collection. The survey field period extended from January, 2020 through August, 2021, with a pause in data collection between May and August, 2020 due to COVID-19 pandemic related restrictions. Paper surveys were completed by mail, based on the mailing addresses included in Medicaid enrollment files. Questionnaires were mailed to sample persons on a rolling basis throughout the field period, comprising 13 separate waves of about 800 sample persons per wave. A $5 incentive was included with all surveys. Follow-up reminders were sent to sample persons who did not initially respond. Out of 10,250 surveys sent, there were a total of 1,845 responses, reflecting a response rate of 18.0%. As described in greater detail below, survey weights were developed to correct for potential nonresponse bias.

ANALYSIS FOR THIS REPORT

This report shows the overall findings from the ARTS member survey. Findings include characteristics of ARTS member survey respondents, including their demographic, health, and social needs regarding housing and food insecurity. Findings are also reported with respect to questions on access to care, types of treatment received, attributes of treatment, assessment of the quality of care received from providers, and the effectiveness of treatment related to personal, social, and socioeconomic outcomes. In addition, the report shows findings related to experiences receiving treatment during the COVID-19 pandemic for members who were surveyed between August, 2020 and August, 2021.

Major findings on treatment experiences are stratified by four factors that reflect key survey or evaluation goals. Consistent with the goal of the stratified sampling strategy, the analysis compares members who received treatment in Preferred OBOT, OTP, and other outpatient settings, as well as those with a diagnosis of OUD who did not receive any treatment (diagnosed, not treated). Second, the analysis is stratified by race/ethnicity in order to identify potential disparities in experiences with treatment. Third, because treatment experiences may have changed due to COVID-19 mitigation efforts as well as new treatment options becoming available – such as telehealth -- during the pandemic, the analysis is stratified based on whether the survey was completed before or after the beginning of COVID-19, defined based on whether surveys were returned before or after April, 2020. The fourth factor is whether the respondent lived in an urban or rural area, based on Rural-Urban Commuting Area (RUCA) classification developed by the federal government.

Means and proportions related to the stratified analysis are adjusted to control for other factors that may be correlated with treatment experiences, including age, gender, general perceived health, mental health co-morbidity, polysubstance use, and whether they had been in prison or jail in the past 12 months. Adjusted percentages are based on predicted probabilities derived from logistic regression analysis.

Use of survey weights. All analyses in this report are weighted to reflect the actual distribution of Medicaid members in the population defined to be in-scope for the survey. Survey weights were constructed specifically to make two adjustments: (1) to correct for differences between survey respondents and nonrespondents based on age, sex, race/ethnicity, rural/urban residence, and region; (2) to rebalance the four sampling strata to reflect the actual distribution of Medicaid members.

Survey nonresponse may lead to biased estimates to the extent that survey respondents differ from nonrespondents in ways that affect survey estimates. To partially correct for this, survey weights rebalance the sample of respondents to account for differences between respondents and nonrespondents on known characteristics. Because the sample was obtained from member enrollment data, data for age, sex, race/ethnicity, rural/residence, and region were available for both survey respondents and nonrespondents (see Appendix Table 1). Survey weights adjust survey estimates to reflect the distribution of the total sample, correcting for differences between respondents and nonrespondents on age, gender, race/ethnicity, urban/rural residence, and region. The propensity cell method was used to construct an initial weight for this purpose.

A second adjustment to the weight was performed so that the four sampling strata were rebalanced to reflect their actual distribution in the population. As shown in Appendix table 2, groups that were under-sampled relative to their actual proportion in the population (for example, the diagnosed untreated group) are weighted more heavily in estimates that involved the entire sample, while groups that were oversampled receive a lower weight value.

Section 1. Characteristics of survey respondents

A. Sociodemographic Characteristics

- Survey respondents who were in the "diagnosed, not treated" group tended to be older and likely retired compared to respondents who had received ARTS services in the past year. They were much more likely to be ages 55 and over (40.5% compared to 9.0% of Preferred OBOT respondents), not in the labor force (52.6%, compared to 25.3% for Preferred OBOT respondents), and less likely to have been in prison or jail in the past year (9.3% compared to 23.2% for Preferred OBOT respondents).

- Respondents who used Preferred OBOT providers were more likely to be female (51.5%) and non-Hispanic White (81.1%) compared to respondents who used OTP providers (42.6% female and 64.7% non-Hispanic White).

		OUD treatment location			
	Total Sample	Preferred OBOT	OTP	Other outpatient	Diagnosed, not treated
	n (%)				
n (%)	1,845 (100)	444 (100)	428 (100)	452 (100)	521 (100)
Age					
21-34	513 (31.3%)	39.2%	33.8%	46.6%	21.6%
35-54	860 (44.9%)	53.8%	53.8%	46.7%	37.9%
55+	472 (23.8%)	9.0%	12.4%	6.8%	40.5%
Gender					
Male	763 (44.7%)	48.5%	57.4%	39.0%	40.0%
Female	1,082 (55.3%)	51.5%	42.6%	61.0%	60.0%
Race/ethnicity					
Non-Hispanic White	1,377 (71.4%)	81.1%	64.7%	84.9%	65.2%
Non-Hispanic Black	338 (21.0%)	12.0%	27.7%	8.7%	26.5%
Other	75 (4.4%)	3.1%	4.5%	5.3%	4.7%
Missing	55 (3.1%)	3.8%	3.0%	1.1%	3.6%
Employment status					
Employed	406 (20.7%)	29.2%	24.5%	29.7%	12.4%
Unemployed	604 (33.3%)	40.1%	46.0%	39.7%	23.1%
Not in labor force	683 (37.2%)	25.3%	22.7%	24.0%	52.6%
Missing	152 (8.8%)	5.3%	6.8%	6.6%	11.9%
Jail/prison in past year					
Yes	310 (16.7%)	23.2%	18.9%	27.4%	9.3%
No	1,496 (81.4%)	74.8%	79.1%	72.1%	88.4%
Missing	39 (1.9%)	2.1%	2.0%	0.6%	2.3%

B. Health Status

- Survey respondents have high prevalence of co-occurring health problems, including 48.4% who reported "fair or poor" overall health, and 30.6% who reported a serious mental illness (SMI) based on the Kessler 6 scale of psychological distress. Respondents in the "no treatment" group were much more likely to report fair or poor health (58.9%) and less likely to report SMI (28.1%) compared to other respondents who received OUD treatment.

- Just under half of survey respondents (45.0%) reported that they had used multiple substances (including alcohol) in the past year and 13.3% had received Narcan or Naloxone in the past year to prevent or reverse an overdose. The "diagnosed, not treated" group were less likely to report polysubstance use (35.2%) and that they had received Narcan or Naloxone in the past year (13.3%) compared to those in the other treatment groups.

		OUD treatment location			
	Total Sample	Preferred OBOT	OTP	Other outpatient	Diagnosed, not treated
	n (%)				
Self-reported general health					
Excellent, very good	284 (16.1%)	20.1%	17.7%	20.5%	12.2%
Good	604 (31.6%)	35.1%	36.5%	39.2%	25.4%
Fair or poor	881 (48.4%)	40.4%	41.3%	35.8%	58.9%
Missing	76 (4.0%)	4.4%	4.6%	4.4%	3.4%
Had serious mental illness (based on K6)[1]					
Yes	552 (30.6%)	34.6%	30.4%	32.9%	28.1%
No	1165 (62.3%)	60.3%	62.6%	62.8%	62.9%
Missing	128 (7.1%)	5.1%	7.0%	4.4%	9.0%
Polysubstance user					
Yes	860 (45.0%)	51.8%	54.0%	54.6%	35.2%
No	985 (55.0%)	48.2%	46.0%	45.4%	64.8%
Received Narcan or Naloxone in the past 12 months to prevent or reverse an overdose					
Yes	256 (13.3%)	16.5%	12.0%	17.6%	11.0%
No	1537 (84.0%)	80.9%	84.7%	79.7%	86.5%
Missing	52 (2.7%)	2.7%	3.3%	2.7%	2.5%

[1]Based on having a score of 13 or higher on the Kessler 6 index of psychological distress, consistent with previous research. For more information, see Kessler, R.C., Barker, P.R., Colpe, L.J., Epstein, J.F., Gfroerer, J.C., Hiripi, E., Howes, M.J, Normand, S-L.T., Manderscheid, R.W., Walters, E.E., Zaslavsky, A.M. (2003). Screening for serious mental illness in the general population **Archives of General Psychiatry**. 60(2), 184-189.

C. Social needs.

- About one-fourth of survey respondents (26.0%) reported that it was sometimes or often true that the food they bought didn't last and they didn't have money to get more food (food insecurity). About one-third of respondents (34.0%) reported that they either do not have housing or they are worried about losing their housing in the future (housing insecure).

- One in five survey respondents (21.3%) lived alone, while 8.6% reported no social support (i.e. having no one close to them). Respondents in the "no treatment" group were more likely to live alone (27.8%) compared to respondents who received OUD treatment.

		OUD treatment location			
	Total Sample	Preferred OBOT	OTP	Other outpatient	Diagnosed, not treated
	n (%)				
Food insecure					
Yes	470 (26.0%)	25.6%	32.0%	24.9%	24.3%
No	1,332 (71.3%)	72.1%	65.6%	74.8%	72.1%
Missing	43 (2.6%)	2.3%	2.4%	0.4%	3.6%
Housing insecure					
Yes	632 (34.0%)	36.3%	46.3%	34.5%	28.0%
No	1,165 (63.2%)	61.6%	50.9%	64.3%	68.4%
Missing	48 (2.8%)	2.1%	2.8%	1.2%	3.7%
Current living arrangements					
Alone	389 (21.3%)	17.7%	14.4%	14.7%	27.8%
Partner	476 (24.6%)	28.7%	25.7%	26.7%	21.8%
Family/relative	626 (34.6%)	36.6%	38.8%	41.7%	29.7%
Friend or other nonrelative	210 (11.3%)	9.6%	14.6%	9.0%	11.6%
Community residential facility	77 (4.4%)	3.2%	3.0%	6.2%	4.7%
Missing	67 (3.8%)	4.3%	3.6%	1.8%	4.4%
Number of people close to you (social support)					
None	171 (8.6%)	12.2%	8.3%	7.6%	7.5%
1-2	920 (49.6%)	50.6%	53.6%	51.6%	46.9%
3-5	487 (27.2%)	23.5%	26.1%	28.7%	28.7%
5 or more	231 (12.6%)	12.3%	9.6%	11.2%	14.4%
Missing	36 (2.0%)	1.5%	2.4%	0.8%	2.4%

Section 2. SUD treatment service access and utilization.

A. Unmet need for SUD treatment and other health services.

- About 15 percent of survey respondents reported that they needed but did not receive some type of treatment for drug or alcohol use in the past year. This is a lower percentage than unmet need for other health services, including mental health counseling, prescription drugs, and medical care.
- Unmet need for SUD treatment was lower among the Preferred OBOT group followed by "diagnosed, no treatment group", at values of 8.1% and 8.4% respectively.
- Unmet need for SUD treatment was higher among the Non-Hispanic Black group and other races when compared to the Non-Hispanic White group.
- Unmet need for various health services did not differ between those who completed the survey prior to the COVID19 pandemic and those who completed the survey after the pandemic had started.

	Percent with unmet need in the past year for health services				
	Drug or alcohol counseling	Mental health counseling	Prescription drugs	Medical care	Dental care
All (n=1,845)	14.7%	22.5%	29.9%	27.8%	50.8%
Adjusted percentages[2]					
OUD treatment location					
Preferred OBOT	8.1%*	15.6%	24.0%	23.0%	56.9%*
OTP	10.7%	18.8%	28.6%	29.6%	53.7%
Other outpatient	13.6%	19.6%	27.8%	26.0%	49.1%
Diagnosed, not treated	8.4%*	20.9%	31.2%	27.4%	51.0%*
Race					
Non-Hispanic White	8.6%	18.9%	28.4%	27.1%	53.2%
Non-Hispanic Black	13.0%*	20.7%	29.7%	24.3%	50.5%
Other	12.1%*	16.7%	27.1%	30.3%	46.3%*
Survey period					
Before COVID	10.3%	19.3%	30.7%	28.5%	51.4%
During COVID	8.9%	19.0%	27.1%	25.3%	53.0%
RUCA Classification					
Urban	9.0%	19.5%	28.3%	26.5%	52.7%
Rural	10.9%	18.3%	29.2%	27.0%	51.4%

*Difference with reference groups (other outpatient, Non-Hispanic White, Before COVID, Urban classification) is statistically significant at .05 level.

[1]Adjusted percentages are derived from logistic regression analysis that included the following independent variables: sample group, race/ethnicity, survey period, age, gender, general perceived health, mental health co-morbidity, polysubstance use, rural/urban residence, and whether they had been in prison or jail in the past 12 months.

B. Self-reported receipt of treatment for drug or alcohol use in the past year.

- Overall, 57.3% of survey respondents self-reported that they received treatment for drug or alcohol use in the past year. Not surprisingly, those with claims experience for treatment were much more likely to self-report receiving treatment (between 73-77%) compared to those with no claims experience for treatment (16.1%)

		OUD Treatment Location			
	Total Sample	Preferred OBOT	OTP	Other outpatient	Diagnosed, not treated
Received treatment for drug or alcohol use in past year (n=1,845)					
Yes	1,057 (57.3%)	77.4%	72.7%	76.5%	16.1%
No	709 (38.4%)	16.3%	23.2%	20.3%	79.4%
Missing	79 (4.3%)	6.3%	4.2%	3.3%	4.4%

- The remaining analysis in Sections 2-6 is based on the sample of persons who self-reported receiving treatment. Consistent with the methodology used in the CAHPS and other surveys, individuals who self-reported that they did not receive treatment were not asked other questions on the details of their treatment. As only 64 respondents in the "no treatment" group reported receiving treatment, this group is excluded from the remaining analysis in Sections 2-6.

C. Specific services and other supports utilized in the 12 months prior to the survey

- Among those who reported receiving treatment, the most frequently used treatment service was MOUD (87.2%) followed by treatment in a doctor's office or clinic (81.4%). About one-third of survey respondents used Alcoholics Anonymous or Narcotics Anonymous.
- Users of Preferred OBOT and OTP providers, 92.6% and 95.6% respectively, were more likely to have received MOUD treatment compared to users of other outpatient providers (87.0%).
- Non-Hispanic Black members were less likely to receive treatment in a doctor's office or clinic (63.6%) compared to non-Hispanic White members (86.2%)/
- There were no statistically significant differences in services used before or during COVID-19.
- Respondents were less likely to use Alcoholics Anonymous or Narcotics Anonymous if they lived in a rural classification, compared to urban classification.

	Percent utilizing treatment sites or other supports in the past 12 months							
	AA/NA, self-help	Church or religious	Doctor's office/ clinic	Inpatient hosp.	Emergency dept.	Residential treatment	Prison/jail	MOUD
All (n=1,057)	31.1%	9.1%	81.4%	12.5%	8.4%	16.3%	5.7%	87.2%
Adjusted percentages[2]								
OUD treatment location								
Preferred OBOT	31.8%	6.1%	85.9%	9.1%	6.3%	16.9%	1.9%	92.6%*
OTP	28.5%	7.0%	84.4%	6.0%*	5.0%	15.8%	2.0%	95.6%*
Other outpatient	34.4%	9.9%	83.5%	11.7%	9.1%	15.5%	1.2%	87.0%
Race								
Non-Hispanic White	30.3%	9.0%	86.2%	10.7%	7.4%	15.7%	1.4%	91.4%
Non-Hispanic Black	32.3%	4.6%	63.6%*	5.5%	4.4%	14.9%	3.8%	88.0%
Other	41.7%	7.3%	88.3%	6.8%	1.2%*	20.3%	5.0%	84.8%
Survey period								
Before COVID	28.8%	7.8%	83.4%	8.4%	5.6%	13.7%	1.8%	91.8%
During COVID	32.7%	8.1%	83.9%	10.3%	7.0%	17.3%	1.7%	89.8%
RUCA Classification								
Urban	33.3%	8.0%	84.3%	9.6%	7.1%	16.3%	1.7%	90.7%
Rural	25.0%*	7.9%	81.9%	9.2%	4.6%	14.1%	1.8%	90.6%

*Difference with reference groups (other outpatient, Non-Hispanic White, Before COVID, Urban classification) is statistically significant at .05 level.

[1]Adjusted percentages are derived from logistic regression analysis that included the following independent variables: sample group, race/ethnicity, survey period, age, gender, general perceived health, mental health co-morbidity, polysubstance use, rural/urban residence, and whether they had been in prison or jail in the past 12 months.

D. Specific services needed or wanted to use, but not received.

- More than one-fourth of survey respondents (28.5%) reported that there was a specific service that they wanted or needed to use in the past year, but did not receive. MOUD treatment was the most frequently cited service that was needed but not received (15.9%).
- The percent of respondents who needed or wanted to use MOUD treatment was higher in rural areas (15.6%) compared to those in urban areas.
- The percent with unmet need for a specific service was higher among survey respondents during COVID-19 (25.6%) compared to those before COVID-19, but the difference was not statistically significant.

	Needed or wanted to use service, but not able to						
	AA/NA, self-help (%)	Church or religious (%)	Doctor's office/ clinic (%)	Inpatient hosp. (%)	Residential treatment (%)	MOUD (%)	Any of the above (%)
All (n=1,057)	5.9%	3.8%	10.1%	3.6%	6.2%	15.9%	28.5%
Adjusted percentages[2]							
OUD treatment location							
Preferred OBOT	3.9%	2.1%	11.2%	0.9%	4.4%	9.7%	23.3%
OTP	2.7%	3.2%	9.0%	2.9%	4.1%	12.3%	26.3%
Other outpatient	1.8%	1.1%	8.5%	1.2%	4.0%	11.6%	20.6%
Race							
Non-Hispanic White	2.4%	1.9%	9.5%	1.2%	3.6%	11.3%	23.1%
Non-Hispanic Black	3.5%	1.8%	6.2%	3.5%	5.3%	11.7%	25.2%
Other	12.2%	7.6%	15.1%	3.1%	9.8%	16.0%	31.6%
Survey period							
Before COVID	3.8%	1.7%	8.9%	1.2%	3.4%	12.0%	21.9%
During COVID	2.0%	2.3%	9.3%	1.8%	4.5%	11.0%	25.6%
RUCA Classification							
Urban	2.2%	1.5%	8.2%	1.2%	4.2%	10.1%	21.9%
Rural	4.5%	3.6%	11.8%	2.4%	3.4%	15.6%*	28.5%

*Difference with reference groups (other outpatient, Non-Hispanic White, Before COVID, Urban classification) is statistically significant at .05 level.

[1]Adjusted percentages are derived from logistic regression analysis that included the following independent variables: sample group, race/ethnicity, survey period, age, gender, general perceived health, mental health co-morbidity, polysubstance use, urban/rural residence, and whether they had been in prison or jail in the past 12 months.

E. Need for treatment right away

- 69.3% of survey respondents reported that there was a time in the past 12 months when they needed treatment for drug or alcohol use right away. Among those who needed treatment right away, 68.3% reported that they usually or always were able to see someone as soon as they wanted.

- Respondents interviewed during COVID-19 were less likely to report needing treatment right away (67.6%) compared to pre-COVID respondents.

	Percent needed treatment right away (n = 1,057)	Percent usually or always able to see someone as soon as wanted (n = 733)
All	69.3%	68.3%
Adjusted percentages[2]		
OUD treatment location		
Preferred OBOT	69.6%	74.0%
OTP	76.5%	71.3%
Other outpatient	71.0%	76.2%
Race		
Non-Hispanic White	69.9%	72.3%
Non-Hispanic Black	74.8%	63.3%
Other	77.3%	72.2%
Survey period		
Before COVID	75.5%	68.3%
During COVID	67.6%*	72.7%
RUCA Classification		
Urban	71.3%	70.7%
Rural	70.3%	71.1%

*Difference with reference groups (other outpatient, Non-Hispanic White, Before COVID, Urban classification) is statistically significant at .05 level.

[1]Adjusted percentages are derived from logistic regression analysis that included the following independent variables: sample group, race/ethnicity, survey period, age, gender, general perceived health, mental health co-morbidity, polysubstance use, urban/rural residence, and whether they had been in prison or jail in the past 12 months.

Section 3. Other characteristics of OUD treatment received

A. Length of time in treatment and out-of-pocket expenses

- Just under half of survey respondents (46.8%) had been in treatment for less than one year, while 29.8% had been in treatment for 2 or more years.

- Respondents who used Preferred OBOT, compared to "other outpatient" providers, were less likely to have recently started treatment (less than 1 year). Non-Hispanic Black members (compared to Non-Hispanic White) were more likely to have recently started treatment (less than 1 year).

- 18.7% of respondents reported that they had stopped treatment against the advice of doctors or counselors in the past year. Those using OTP providers were less likely to have stopped treatment, compared to "other outpatient" providers.

- Although ARTS services do not require copayments among members, almost 30% reported that they had paid out-of-pocket for some aspect of treatment, likely for services not covered through the ARTS benefit. Fewer respondents during COVID reported having out-of-pocket expenses (22.4%) compared to respondents prior to COVID (35.6%).

	In treatment for less than 1 year	In treatment for 2 or more years	Stopped treatment against advice of doctor or counselor	Paid out-of-pocket for treatment
All (n=1,057)	46.8%	29.8%	18.7%	28.8%
Adjusted percentages[2]				
OUD treatment location				
Preferred OBOT	42.6%*	28.1%	15.6%	21.6%*
OTP	50.8%	24.5%	11.7%*	28.9%
Other outpatient	49.8%	23.7%	17.4%	31.2%
Race				
Non-Hispanic White	44.8%	30.1%	16.1%	28.9%
Non-Hispanic Black	57.2%*	18.8%*	13.6%	21.2%*
Other	38.5%*	26.7%	14.3%	26.4%
Survey period				
Before COVID	47.6%	29.7%	14.4%	35.6%
During COVID	45.7%	26.6%	16.5%	22.4%*
RUCA Classification				
Urban	45.5%	28.3%	16.3%	27.1%
Rural	49.5%	26.7%	13.8%	28.4%

*Statistically significant difference at .05 level with reference groups (other outpatient, Non-Hispanic White, Before COVID, urban classification).

[1]Adjusted percentages are derived from logistic regression analysis that included the following independent variables: sample group, race/ethnicity, survey period, age, gender, general perceived health, serious mental illness, polysubstance use, urban/rural residence, and whether they had been in prison or jail in the past 12 months.

B. Assistance with other health and personal needs at treatment provider

- 59.6% of respondents received help with other health or personal needs at their treatment provider. Respondents received help with a mental health problem most frequently (38.2%), followed by help with a medical problem (25.6%), and assistance with social needs (17.9%).
- Respondents receiving treatment at OTP providers were less likely to receive assistance with other health or personal needs (49.1%), compared to respondents using "other outpatient" providers (69.1%).
- Non-Hispanic Black respondents were less likely to receive assistance with other health or personal needs (55.0%), receive help for a medical problem (21.3%) and receive help with a mental health problem (33.1%), compared to non-Hispanic White members.
- Members in the "other" racial/ethnic group were more likely to receive help with social needs (26.4%), compared to non-Hispanic White members (16.3%).
- Respondents were more likely to receive assistance with other health or personal needs before the COVID-19 pandemic (64.7%), compared to during the pandemic (57.2%).
- Respondents who lived in a rural classification were less likely to receive help with housing, food or employment (9.2%), compared to those who lived in an urban classification (19.7%).

	Received help with other health and social needs			
	Received any help with other health or personal needs	Received help for a medical problem	Received help with a mental health problem	Received help with housing, food, or employment
All (n=1,057)	59.6%	25.6%	38.2%	17.9%
Adjusted percentages[2]				
OUD treatment location				
Preferred OBOT	64.3%	30.6%	42.6%	17.1%
OTP	49.1%*	16.9%*	28.5%*	14.9%
Other outpatient	69.1%	29.4%	44.7%	13.7%
Race				
Non-Hispanic White	60.8%	25.8%	38.3%	16.3%
Non-Hispanic Black	55.0%*	21.3%*	33.1%*	14.9%
Other	71.7%*	16.1%*	39.6%	26.4%*
Survey period				
Before COVID	64.7%	24.8%	39.0%	15.7%
During COVID	57.2%*	24.4%	36.5%	16.9%
RUCA Classification				
Urban	60.2%	24.1%	37.3%	19.7%
Rural	60.8%	26.0%	38.1%	9.2%*

*Statistically significant difference at .05 level with reference groups (other outpatient, Non-Hispanic White, Before COVID, urban classification).

[1]Adjusted percentages are derived from logistic regression analysis that included the following independent variables: sample group, race/ethnicity, survey period, age, gender, general perceived health, serious mental illness, polysubstance use, urban/rural residence, and whether they had been in prison or jail in the past 12 months.

Section 4. Assessment of the quality of treatment

A. Assessment of treatment setting and interaction with providers.

- In general, respondents had positive assessments regarding their communication with providers and level of involvement and control over treatment. There were few differences in assessment of treatment quality by sample group. Treatment experiences during COVID-19 were also similar to treatment experiences before COVID-19.

- Assessments by non-Hispanic White members were generally higher than assessments by non-Hispanic Black members and members from other racial/ethnic groups. The largest difference occurred for perception of their ability to refuse treatment: 78.4% of non-Hispanic White members felt able to refuse treatment compared to 60.7% of non-Hispanic Black members.

	Perceptions of practitioners where treatment received					
	Explained things in a way you can understand[1]	Showed respect for what you had to say[1]	Often felt safe at place of treatment[1]	Involved as much as you wanted in your treatment[1]	Provided information on different kinds of counseling or treatment[2]	Felt able to refuse treatment[2]
All (n=1,057)	83.7%	85.2%	88.8%	84.4%	72.0%	74.2%
Adjusted percentages[3]						
OUD treatment location						
Preferred OBOT	87.0%	90.5%	93.0%	90.2%	76.0%	73.6%
OTP	84.4%	82.7%*	92.3%	86.7%	71.8%	75.3%
Other outpatient	86.7%	90.2%	93.1%	88.9%	74.0%	76.5%
Race						
Non-Hispanic White	86.9%	88.9%	92.6%	89.3%	75.4%	78.4%
Non-Hispanic Black	80.2%*	85.5%*	92.4%	83.0%*	68.2%*	60.7%*
Other	85.9%	74.4%	83.8%*	81.7%*	65.7%*	68.1%*
Survey period						
Before COVID	85.8%	86.5%	91.8%	87.7%	74.5%	74.3%
During COVID	86.1%	89.4%	92.8%	88.7%	73.6%	77.1%
RUCA Classification						
Urban	84.9%	87.7%	92.4%	88.2%	74.3%	76.7%
Rural	88.3%	88.9%	92.3%	88.4%	73.3%	73.5%

*Statistically significant difference at .05 level with reference groups (other outpatient, Non-Hispanic White, Before COVID, urban classification).

[1]Estimates reflect percent who responded "usually" or "always" to statement.

[2]Estimates reflect percent who responded "yes" to statement.

[3]Adjusted percentages are derived from logistic regression analysis that included the following independent variables: sample group, race/ethnicity, survey period, age, gender, general perceived health, mental health co-morbidity, polysubstance use, urban/rural residence, and whether they had been in prison or jail in the past 12 months.

Section 5. Outcomes of treatment

A. Personal outcomes.

- The majority of respondents had positive perceptions of how treatment benefitted them personally. About 79% were confident they were no longer dependent on alcohol or drugs, were able to deal more effectively with daily problems, and felt better about themselves. 72.8% of respondents believed they were better able to deal with a crisis.

- There were some differences in treatment outcomes by sample group, with users of OTP providers having slightly more positive experiences with outcomes of treatment compared to Preferred OBOT and other outpatient providers.

- There were some racial/ethnic differences in perceptions of treatment outcomes. In particular, non-Hispanic Black members were less likely to agree that they were able to deal more effectively with daily problems (74.5%) compared to non-Hispanic White members (84.2%).

	Respondent perceptions of how they were helped by treatment			
	Confident no longer dependent on alcohol or drugs[1]	Deal more effectively with daily problems[1]	Feel better about myself[1]	Better able to deal with a crisis[1]
All (n=1,057)	79.2%	79.2%	77.9%	72.8%
Adjusted percentages[2]				
OUD treatment location				
Preferred OBOT	86.1	83.3	85.1*	80.1*
OTP	84.6	86.5*	87.0*	83.5*
Other outpatient	81.9	78.6	78.9	70.6
Race				
Non-Hispanic White	84.8	84.2	84.2	78.3
Non-Hispanic Black	83.7	74.5*	79.8*	77.0
Other	80.2*	82.4	86.8	84.0*
Survey period				
Before COVID	86.0	83.7	84.4	77.9
During COVID	82.9	82.1	83.0	78.7
RUCA Classification				
Urban	84.4	82.0	83.3	77.0
Rural	84.8	85.0	84.8	81.3

*Statistically significant difference at .05 level with reference groups (other outpatient, Non-Hispanic White, Before COVID, urban classification).

[1]Estimates reflect percent who "strongly agree" or "agree" with statement.

[2]Adjusted percentages are derived from logistic regression analysis that included the following independent variables: sample group, race/ethnicity, survey period, age, gender, general perceived health, mental health co-morbidity, polysubstance use, urban/rural residence, and whether they had been in prison or jail in the past 12 months.

B. Social and economic outcomes.

- Most respondents also reported positive social and economic outcomes as a result of treatment, including 79.2% who were able to get along better with family, 65% doing better in social situations, 71.6% who were able to enjoy leisure activities, 60.1% with improved housing, and 43% with improved employment.

- In general, respondents who used Preferred OBOT or OTP providers reported more favorable social and economic outcomes, compared to respondents who used other outpatient providers.

- In general, non-Hispanic White members reported more favorable social and economic outcomes, compared to non-Hispanic Black members.

	Perceptions of how members were helped by counseling or treatment				
	Able to get along better with family[1]	Did better in social situations[1]	Able to enjoy leisure activities[1]	Housing situation improved[1]	Employment situation improved[1]
All (n=1,057)	79.2%	65.0%	71.6%	60.1%	43.0%
Adjusted percentages[2]					
OUD treatment location					
Preferred OBOT	82.6%*	71.0%*	76.4%	65.1%*	44.0%*
OTP	86.6%*	69.9%*	78.3%*	64.7%*	39.9%
Other outpatient	76.9%	62.3%	72.6%	53.8%	35.4%
Race					
Non-Hispanic White	84.4%	68.1%	76.5%	61.5%	40.1%
Non-Hispanic Black	72.9%*	64.4%*	73.6%	60.0%	38.3%
Other	82.3%	75.1%	74.7%	54.1%*	33.3%*
Survey period					
Before COVID	83.9%	67.9%	75.5%	59.1%	36.1%
During COVID	81.9%	67.9%	76.5%	62.8%	43.0%*
RUCA Classification					
Urban	83.7%	68.8%	73.8%	60.4%	40.8%
Rural	80.8%	65.8%	80.8%*	62.5%	36.8%

*Statistically significant difference at .05 level with reference groups (other outpatient, Non-Hispanic White, Before COVID, urban classification).

[1]Estimates reflect percent who "strongly agree" or "agree" with statement.

[2]Adjusted percentages are derived from logistic regression analysis that included the following independent variables: sample group, race/ethnicity, survey period, age, gender, general perceived health, mental health co-morbidity, polysubstance use, urban/rural residence, and whether they had been in prison or jail in the past 12 months.

Section 6. Experiences with treatment during COVID-19

A. Change in face-to-face meetings with providers after COVID-19 began

- Among those who responded to the questions on COVID-19, 46.3% were prohibited from meeting providers face-to-face after the pandemic started. Among these, 27.8% reported that the lack of a face-to-face meeting had a negative impact on their treatment.

	Total sample who responded to COVID-19 questions
n	437
Prohibited from meeting providers face-to-face after pandemic started	
Yes	46.3%
No	51.3%
Missing	2.4%
No face-to-face meeting had negative impact on treatment (sample restricted to "yes" above, n = 188)	
Yes	27.8%
No	62.8%
Missing	9.4%

B. Perceived change in treatment since COVID-19 pandemic began

- Most respondents reported that their ability to obtain various types of treatment had not changed since the beginning of the COVID-19 pandemic. Among those who reported a change, at least an equal number reported that their treatment was "better" as the number who reported that their treatment was "worse" than before the COVID-19 pandemic began. More respondents reported that their ability to fill prescriptions (20.8%) and maintain recovery (24.0%) had improved after the pandemic started than the number of respondents who reported that it had become worse (15.7% and 17.3%, respectively).

	Perceived change since COVID-19 started
Ability to talk to a doctor or counselor when you needed to:	
Better than before COVID-19	19.4%
Worse than before COVID-19	20.8%
Same	59.8%
Ability to keep appointments for treatment or counseling	
Better than before COVID-19	19.9%
Worse than before COVID-19	23.3%
Same	56.8%
Ability to fill prescription medications	
Better than before COVID-19	20.8%
Worse than before COVID-19	15.7%
Same	63.5%
Support from family, friends, peer counselors	
Better than before COVID-19	22.4%
Worse than before COVID-19	17.3%
Same	60.3%
Ability to maintain recovery	
Better than before COVID-19	24.0%
Worse than before COVID-19	18.6%
Same	57.4%

C. Experiences with different modes of treatment

- Respondents reported using multiple treatment modes during the pandemic, including over half who received treatment by telephone (55.2%) and video (56.9%). The majority of respondents (60.0%) preferred in-person visits, while about one-fifth preferred visits by video.

- In general, most respondents were very satisfied with treatment received in-person (66.5%), by telephone (54.7%), or video call (54.9%). A somewhat higher percentage of respondents were not satisfied with telephone calls (15.2%) or video calls (14.5%) compared to in-person visits (11.4%).

Treatment mode used in past 12 months (all that apply)	
Telephone	55.2%
Video by Zoom or other apps	56.9%
Email	9.1%
In-person	75.6%
Treatment mode preference	
Telephone	10.6%
Video	20.7%
Email	6.0%
In-person	60.0%
Missing	2.7%
Experiences with different treatment modes (among non-missing responses)	
In-person visit at doctor or counselor	
Very satisfied	66.5%
Somewhat satisfied	22.4%
Not satisfied	11.4%
Telephone call with doctor or counselor	
Very satisfied	54.7%
Somewhat satisfied	30.1%
Not satisfied	15.2%
Video call by Zoom or other internet apps	
Very satisfied	54.9%
Somewhat satisfied	30.6%
Not satisfied	14.5%

Conclusion

The ARTS benefit and Medicaid expansion has led to a large increase in the number of Virginia Medicaid members receiving treatment for OUD.[1] The ARTS member survey was designed to assess the patient experience with treatment, and to identify potential gaps and disparities in the patient experience by treatment setting, race/ethnicity, urban-rural residence, and other factors. In addition, the timing of the survey field period coincided with the beginning of the COVID-19 pandemic, allowing for an assessment of how the pandemic has affected member experiences with treatment. The major conclusions from this analysis are:

- Overall, member experiences with ARTS treatment services were favorable. A majority of members reported positive assessments of their interactions with treatment providers, and that treatment provided a number of positive personal, social, and economic benefits.

- Members using Preferred OBOTs and OTPs generally experienced better treatment outcomes regarding personal and family relationships, as well as more favorable social and economic outcomes compared to members using other outpatient providers. Members using Preferred OBOTs were also more likely to report receiving help with other health and personal needs, as well fewer unmet treatment needs relative to members using OTP and other outpatient providers.

- Racial/ethnic differences in assessment of treatment providers were identified, with non-Hispanic Black members reporting somewhat less favorable experiences in their interaction with providers and treatment outcomes compared to non-Hispanic White members on a number of measures. One especially large difference was that non-Hispanic Black members felt much less able to refuse treatment compared to non-Hispanic White members. This may suggest lower levels of trust with the treatment system among non-Hispanic Black members.

- Despite fears that COVID-19 would negatively impact treatment for members, there were few differences in treatment experiences between those surveyed before COVID and those surveyed after the onset of the pandemic. Increased access to telehealth and other measures taken to offset COVID-related barriers to care may have helped to prevent serious disruptions in treatment.

- There were few differences between urban and rural areas in experiences with treatment. Respondents in rural areas were more likely to experience unmet need for MOUD treatment, and were less likely to receive help with housing, food or employment compared to urban residents.

- Members who had been diagnosed with an OUD based on Medicaid claims data, but had no ARTS service utilization were distinctly different in a number of ways compared to members with OUD who used treatment services. Specifically, those “diagnosed, not treated” tend to be much older, likely retired, in generally poorer health, but with fewer mental health co-morbidities relative to members using treatment services.

References

1. Cunningham P, Mueller M, Britton E, Pham H, Guerra L, Saunders H, Zhao X, Barnes A, Dihwa V. Addiction and Recovery Treatment Services: Access, Utilization, and Quality of Care 2016-2019. July 2021. Available at: https://hbp.vcu.edu/media/hbp/policybriefs/pdfs/FinalARTS3yearcomprehensivereportforPublishing_07142021(1).pdf.

2. Agency for Healthcare Research and Quality. Development of the CAHPS-ECHO Survey. https://www.ahrq.gov/cahps/surveys-guidance/echo/about/Development-ECHO-Survey.html#:~:text=The%20CAHPS%20%C2%AE%20Experience%20of%20Care%20%26%20Health,input%20from%20behavioral%20health%20care%20experts%20and%20consumers

3. Substance Abuse and Mental Health Services Administration. National Survey of Drug Use and Health. https://www.samhsa.gov/data/data-we-collect/nsduh-national-survey-drug-use-and-health

4. Pennsylvania Department of Human Services. Centers of Excellence. https://www.dhs.pa.gov/Services/Assistance/Pages/Centers-of-Excellence.aspx.

Appendix table 1. Characteristics of total sample, survey respondents, and nonrespondents.

	Total sample	Responders	Nonresponders
	12,250	1,845	10,405
Age			
21-34	37.1%	27.8%	39.2%
35-54	47.8%	46.6%	48.0%
55 and over	15.2%	25.6%	12.8%
Sex			
Female	54.2%	58.7%	53.2%
Male	45.8%	41.4%	46.8%
Race/ethnicity			
Non-Hispanic White	76.7%	77.7%	76.4%
Non-Hispanic Black	20.2%	19.4%	20.3%
Other	3.2%	2.9%	3.2%
Urban/rural residence			
Urban	72.3%	69.4%	73.7%
Rural	27.1%	30.4%	26.3%
Region			
Central	26.2%	23.3%	26.8%
Charlottesville/Western	10.7%	11.2%	10.6%
Northern/Winchester	12.0%	12.0%	12.0%
Roanoke/Alleghany	15.3%	15.9%	15.2%
Southwest	18.7%	21.4%	18.2%
Tidewater	16.8%	16.2%	16.9%

Appendix Table 2. Distribution of four sampling strata in sampling frame and survey sample.

	Sample frame	Sample
Total	21,557	10,250
	Percent distribution	
Preferred OBOT	20.1%	25.0%
OTP	18.0%	25.0%
Other outpatient	15.8%	25.0%
Diagnosed, not treated	46.1%	25.0%