

An Evaluation Report Prepared for the Virginia Department of Medical Assistance Services

# Addiction and Recovery Treatment Services

Access and Utilization During the Second Year (April 2018 – March 2019)

February 2020



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**Disclaimer:** The conclusions in this report are those of the authors, and no official endorsement by the Virginia Commonwealth University School of Medicine or Virginia Department of Medical Assistance Services is intended or should be inferred.

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## Executive Summary

To increase access to and quality of treatment and recovery services for Medicaid members with substance use disorders, Virginia implemented the Addiction and Recovery Treatment Services (ARTS) benefit in April 2017. On January 1, 2019, Virginia expanded Medicaid eligibility for adults with family incomes up to 138 percent of the federal poverty level, thereby increasing access to ARTS services and other Medicaid benefits to more low-income Virginians.

The Department of Medical Assistance Services (DMAS) contracted with Virginia Commonwealth University School of Medicine to conduct an independent evaluation of the ARTS benefit. Prior evaluation reports showed large gains in access to and utilization of addiction treatment services among Medicaid members in the year following implementation of ARTS, as well as decreases in emergency department visits and acute inpatient stays related to substance use disorders.

The objective of this report is to examine prevalence, treatment and utilization of substance use disorders among Medicaid members during the second year post implementation of ARTS (April 1, 2018, through March 31, 2019). The report examines changes in prevalence, treatment and utilization of ARTS services compared to the first year of ARTS, as well as the year prior to ARTS implementation. As the second year of ARTS coincides with Medicaid expansion, the report also provides estimates of the number of members enrolled through Medicaid expansion diagnosed with substance use disorders, as well as differences in characteristics of expansion members and other members with substance use disorders.

The major findings of the report include the following:

### ***Diagnosed prevalence of substance use disorders***

- There were more than 69,000 Medicaid members with a diagnosed substance use disorder during the second year of ARTS, including almost 30,000 with diagnosed opioid use disorder, and almost 24,000 with diagnosed alcohol use disorder.
- Diagnosed prevalence of substance use disorders continued to increase among base Medicaid members, from almost 51,000 in the first year of ARTS to more than 57,000 in the second year of ARTS (12 percent increase in prevalence between year 1 and 2 of ARTS).
- In the first three months of Medicaid expansion, 12,000 members with substance use disorder were enrolled through the new eligibility rules.

### ***Supply of addiction treatment providers continues to increase***

- During the second year of ARTS, more than 4,000 outpatient practitioners billed Medicaid for ARTS services, continuing to increase since the beginning of ARTS. The number of Preferred Office-Based Opioid Treatment programs has increased from 38 sites at the beginning of the ARTS program to 122 sites by September 2019.
- The number of practitioners authorized to prescribe buprenorphine – the most widely used form of pharmacotherapy for opioid use disorder – increased by 73 percent between 2016 and 2018. Two-thirds of these prescribers either reported accepting new Medicaid patients, or had a paid Medicaid claim in 2018.

### ***Treatment rates increase for substance use disorders***

- Among base Medicaid members, treatment rates for substance use disorders increased from 40 percent during the first year of ARTS to 49 percent during the second year of ARTS. Overall, treatment rates for substance use disorders have more than doubled since the year before ARTS.
- Treatment rates for opioid use disorders (64 percent) are higher than for alcohol use disorders (44 percent). However, there was a substantial increase in treatment rates for alcohol use disorders, from 30 percent in the first year of ARTS to 44 percent in the second year of ARTS. By contrast, treatment rates for opioid use disorder were largely unchanged in the second year of ARTS, after having increased by 37 percent in the first year of ARTS.

### ***Pharmacotherapy treatment on the rise in the second year of ARTS***

- Buprenorphine continues to be the most prevalent form of pharmacotherapy for members with opioid use disorders, accounting for 58 percent of members who received any pharmacotherapy in the second year of ARTS.
- However, methadone treatment rates more than doubled, from 6 percent of members receiving methadone treatment in the first year of ARTS to 15 percent of members in the second year of ARTS.

### ***Counseling and coordination with physical health and social needs increases***

- Among members receiving buprenorphine treatment, the percentage who also received counseling or psychotherapy for substance use disorders increased, from 61 percent in the first year of ARTS to 73 in the second year of ARTS.
- More than three-fourths of members receiving buprenorphine treatment also received urine drug screens, an increase from 53 percent in the first year of ARTS, and 35 percent in the year prior to ARTS.
- Almost half of members receiving buprenorphine are receiving case management or care coordination services, compared to only 18 percent in the first year of ARTS, and 4 percent in the year before ARTS.

### ***Greater utilization of short-term residential treatment***

- More than 1,500 members used short-term residential treatment services (ASAM level 3) in the second year of ARTS, an increase from about 500 members who used such services in the first year of ARTS. The number of members using medically managed intensive inpatient services (ASAM level 4) increased 34 percent between the first and second year of ARTS.
- Utilization of most other ARTS services increased substantially between the first and second year of ARTS, including Screening, Brief Intervention and Referral to Treatment (SBIRT) services (ASAM 0.5), peer recovery supports, and case management or care coordination services.

### ***Gaps remain following discharge from inpatient and residential treatment***

- Within 30 days of discharge from a residential treatment facility, about half of members received services at an intensive outpatient provider, partial hospitalization, Opioid Treatment Provider, Preferred Office-Based Opioid Treatment provider, or other outpatient treatment provider. One in four members with opioid use disorder were receiving pharmacotherapy within one month of a discharge from inpatient detoxification.
- About one in six discharges from residential treatment resulted in readmission to the same level of care or higher within 30 days of discharge. The 30-day readmission rate for inpatient detoxification is 19 percent.

### ***Acute emergency department use and inpatient hospital care use continues to decline***

- Emergency department use and acute inpatient admissions related to substance use disorders continued to decrease in the second year of ARTS. Overall, emergency department utilization related to all substance use disorders has decreased by 7 percent since the year before ARTS, while emergency department utilization related to opioid use disorder decreased by 32 percent in the same time period.
- The percentage of members with substance use disorders with an acute inpatient stay related to their condition decreased from 31 percent in the first year of ARTS to 26 percent in the second year of ARTS. For members with opioid use disorders, the percentage with an inpatient admission related to their condition decreased from 21 percent to 16 percent during the same time period.
- About one in three members (32 percent) with an emergency department visit for opioid use disorders received some type of ARTS service within seven days after the visit, and 47 percent received some type of treatment within 30 days of the visit.

### ***Prescribing for opioid pain medications continues to decrease***

- The number of members receiving prescriptions for opioid pain medications continued to decline, from 115,000 members in the first year of ARTS to 94,000 base Medicaid members in the second year. Overall, the number of prescriptions for opioid pain medications has decreased by 29 percent since the year before ARTS, while the number of members receiving such prescriptions decreased by 32 percent.

In sum, most of the gains in access to and use of substance use disorder treatment services observed in the first year of the ARTS program continued in the second year. Moreover, continued decreases in emergency department use and acute hospital utilization for substance use disorders during the second year of ARTS suggest that the increase in access to services is contributing to improved outcomes. Despite substantial evidence of improved access to addiction treatment services through the ARTS program, some gaps remain. Treatment rates for alcohol use disorders – although considerably higher than before ARTS – are lower than treatment rates for opioid use disorders. Disparities in diagnosed prevalence and treatment of substance use disorders by race/ethnicity treatment rates are of particular concern. In addition, lack of follow-up treatment following discharges from inpatient detoxification and short-term residential facilities may increase the risk of relapse and readmissions to these facilities. Assessing the impact of transitions along the continuum of treatment services on outcomes of treatment is a key goal for future evaluation of the ARTS program.

## Introduction

Substance use disorders – including dependence on or misuse of alcohol and other legal and illegal drugs – continues to be a major public health concern in the Commonwealth of Virginia, as it is for the U.S. overall. The number of fatal drug overdoses more than doubled in Virginia between 2007 and 2017, from 721 fatalities in 2007 to 1,526 in 2017.<sup>1</sup> After decreasing by 3 percent in 2018, the Virginia Department of Health reported an uptick in fatal drug overdoses during the first quarter of 2019.<sup>2</sup> More than 80 percent of fatal drug overdoses in 2018 were due to prescription or illicit opioids, with heroin and fentanyl driving the increase in fatalities in recent years. While national and state efforts often focus on opioid use disorders, fatal overdoses due to cocaine and methamphetamines have also risen sharply in Virginia in recent years.

Aside from overdose fatalities, substance use disorders exact a much broader human and societal cost, affecting the economic and social well-being of families and entire communities, as well as people's ability to lead productive and fulfilling lives.<sup>3</sup> The National Institute of Drug Abuse estimated the annual national costs associated with misuse of alcohol, illicit drugs, and prescription drugs to be \$520 billion, reflecting lost wages, foregone economic opportunities, and private and public sector spending to prevent and control substance use.<sup>4</sup> Social costs associated with substance use disorders include family breakup and other declines in family and personal well-being, increased involvement with the criminal justice system, and placement of children of parents with severe disorders in social services and foster care.<sup>5</sup>

Both nationally and in Virginia, Medicaid is more likely to cover members with substance use disorders compared to private insurance. In Virginia, Medicaid members are more than twice as likely to report dependence or misuse of alcohol or illicit drugs (13 percent) compared to people with private insurance (6 percent).<sup>6</sup> Also, Virginia Medicaid members are 2.75 times more likely to report dependence or misuse of opioids compared to Virginians with private insurance.

To increase access to substance use treatment services for Virginia Medicaid members, the Addiction and Recovery Treatment Services (ARTS) benefit was implemented in April 2017. ARTS expanded coverage of many addiction treatment services for Medicaid members, including community-based services, short-term residential treatment and inpatient detoxification services. To allow federal Medicaid payment for addiction treatment services provided in inpatient and short-term residential facilities, a Section 1115 Demonstration Waiver for substance use disorders was approved in December 2016 by the Centers for Medicare and Medicaid Services (CMS). 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 with behavioral and physical health by incentivizing increased use of care coordination activities. To further increase integration of addiction treatment services with other health services covered by Medicaid, substance use disorder services are administered by the six managed care organizations that manage medical and behavioral health benefits for all Medicaid members, offering a comprehensive care delivery system.

On January 1, 2019, Virginia expanded Medicaid eligibility for adults ages 19-64 with family incomes up to 138 percent of the federal poverty level. As of November 2019, more than 340,000 low-income Virginians were newly enrolled through Medicaid expansion.<sup>7</sup> Medicaid expansion increases access to ARTS services for many low-income adults who had substance use disorders prior to enrolling in Medicaid. Prior to Medicaid expansion, prevalence of substance use disorders among the uninsured in Virginia (18 percent) was higher than for Medicaid members (13 percent).<sup>8</sup> Among Virginians who reported dependence or misuse of opioids prior to Medicaid expansion, more than half were uninsured.

## ***Objectives of the report***

The Department of Medical Assistance Services contracted with Virginia Commonwealth University School of Medicine to conduct an independent evaluation of the ARTS benefit. The evaluation is conducted by faculty and staff from the Department of Health Behavior and Policy, and the Department of Family Medicine and Population Health.

This report examines substance use treatment prevalence, access and utilization among Virginia Medicaid members during the second year of the ARTS benefit, corresponding to the period April 2018 through March 2019. This report updates and expands on a prior report that examined changes in access to and utilization of ARTS services in the year following implementation of ARTS.<sup>9</sup>

The findings from the evaluation of the first year of the ARTS benefit showed substantial gains in the number of addiction treatment providers serving the Medicaid population, as well as large increases in the percentage of members with substance use disorders receiving various types of treatment, including medications for opioid use disorder. Moreover, there were significant decreases in hospital emergency department and acute inpatient use for members with substance use disorders after ARTS relative to other Medicaid members, suggesting improved access to care.<sup>10</sup> In addition to increased access to treatment services through ARTS, substantial declines in opioid prescribing in Medicaid may have also contributed to improved outcomes among Medicaid members.<sup>11</sup>

This report shows that many of the gains in access to and use of substance use disorder treatment services continued in the second year of ARTS. As the second year of ARTS overlaps with the first three months of Medicaid expansion, the report also examines prevalence of substance use disorders among the Medicaid expansion population between January and March 2019, and how the characteristics of those with substance use disorders differ between the Medicaid expansion population and other adults enrolled through traditional eligibility criteria.

## ***How the analysis was conducted***

The findings in this report are based primarily on an analysis of Medicaid paid claims from the Department of Medical Assistance Services (DMAS). For most estimates of diagnosed prevalence, treatment, and utilization of services, we compare estimates of paid claims during the second year of ARTS (April 1, 2018 through March 31, 2019) to the same 12-month period during the first year of ARTS (April 1, 2017, through March 31, 2018) and the year preceding ARTS implementation (April 1, 2016, through March 31, 2017). These estimates exclude claims for services during the study period that had not yet been submitted or paid at the time of the analysis, unpaid claims and services not covered by Medicaid.

As mentioned previously, a major policy change during the second year of ARTS was expanding eligibility for Medicaid coverage, beginning January 2019. Due to Medicaid expansion, there were about 274,000 additional Medicaid members enrolled between January and March 2019, which also affects the number of members diagnosed and treated for substance use disorders during the second year of ARTS. In addition, members with substance use disorders enrolled through Medicaid expansion may differ from other members with substance use disorders in ways that affect their utilization of services, such as differences in age, gender, race/ethnicity and health status.

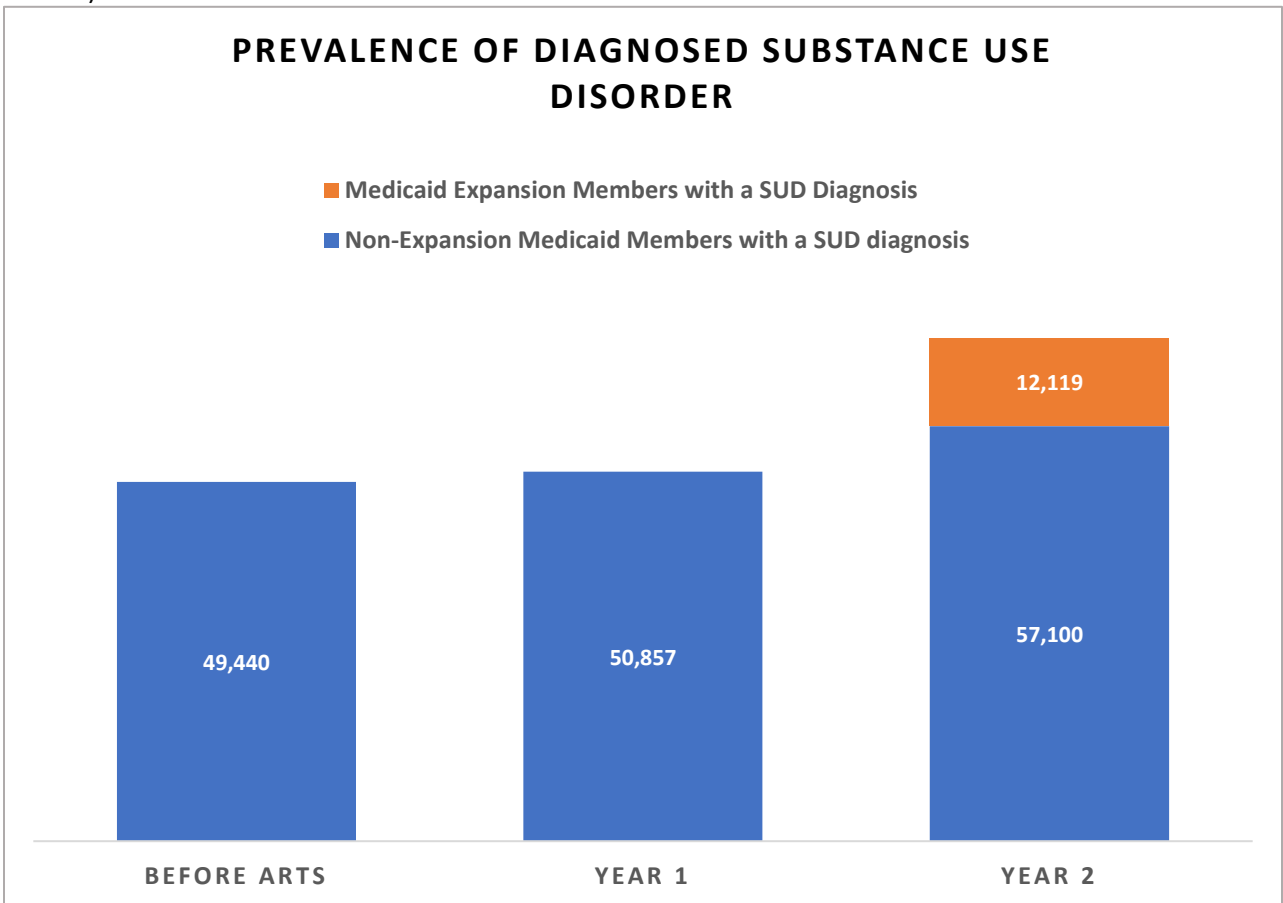
The report includes members newly enrolled in Medicaid expansion in estimates of the number of members with diagnosed substance use disorders and who used various treatment services during the second year of



ARTS. However, to ensure comparability with the years prior to Medicaid expansion, analyses that show *changes in rates of utilization and treatment* between the second year of ARTS and earlier years include only the base Medicaid population, that is, members enrolled in Medicaid through traditional eligibility criteria. For these analyses, we also include members enrolled through the Governor's Access Plan (GAP), even though most of these members were transitioned to full Medicaid coverage by March 2019. Prior to Medicaid expansion, GAP provided coverage for ARTS and other behavioral health services to people who did not qualify for full Medicaid benefits.

## Diagnosed Prevalence of Substance Use and Opioid Use Disorders

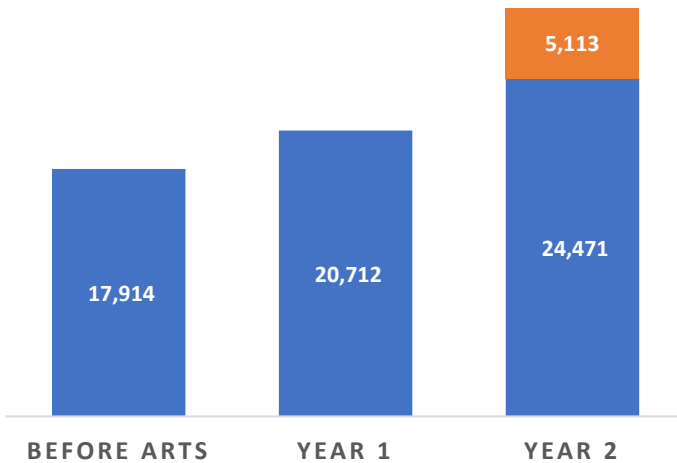
There were over 69,000 Medicaid members who had a diagnosis of a substance use disorder at some point during the second year of the ARTS program (between April 1, 2018, and March 31, 2019). This represents an increase of more than 18,000 members with diagnosed substance use disorder since the first year of ARTS (50,857 with diagnosed substance use disorder), and an increase of almost 20,000 members with diagnosed substance use disorder since the year prior to ARTS (49,440 with diagnosed substance use disorder).



Increased Medicaid enrollment through expansion accounts for some, but not all, of the increase in diagnosed substance use disorders between Year 1 and Year 2 of ARTS. Among the 69,219 members with diagnosed substance use disorder in Year 2 of ARTS, 12,119 enrolled through Medicaid expansion. However, there were 57,100 members with diagnosed substance use disorders enrolled through pre-expansion eligibility criteria, a 12 percent increase from Year 1.

## PREVALENCE OF DIAGNOSED OPIOID USE DISORDER

- Medicaid Expansion Members with an OUD Diagnosis
- Non-Expansion Medicaid Members with an OUD diagnosis



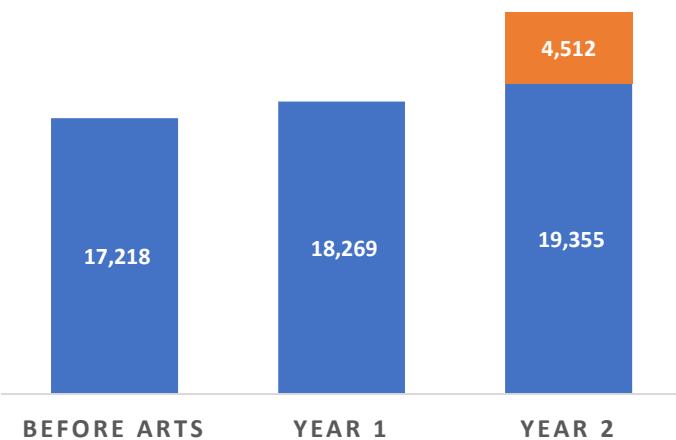
There were a total of 29,584 members with diagnosed opioid use disorder at some point during Year 2 of ARTS. This represents an increase of 8,872 members with diagnosed opioid use disorder since the first year of ARTS, and an increase of 11,670 members with diagnosed opioid use disorder since the year prior to ARTS.

Increased enrollment through Medicaid expansion accounts for much of the increase in diagnosed opioid use disorder between Year 1 and Year 2 of the ARTS program. Among the 29,584 members with diagnosed opioid use disorder, 5,113 were Medicaid expansion enrollees, and 24,471 were enrolled through other pre-expansion eligibility criteria. Among base Medicaid members, the number with opioid use disorders increased by 11 percent since the first year of ARTS, and 12 percent since the year before ARTS.

The number of members with diagnosed alcohol use disorder increased by more than 5,500 between Year 1 and Year 2 of ARTS. Increased enrollment through Medicaid expansion accounts for almost all of this increase (4,512 members with diagnosed alcohol use disorder enrolled through Medicaid expansion). Among base Medicaid members, the number of members with alcohol use disorder has increased by 12 percent since ARTS began, from 17,218 members with alcohol use disorder in the year before ARTS to 19,355 members in the year after ARTS.

## PREVALENCE OF DIAGNOSED ALCOHOL USE DISORDER

- Medicaid Expansion Members with an AUD Diagnosis
- Non-Expansion Medicaid Members with an AUD diagnosis



## Percent of Members with Diagnosed Substance Use Disorders

Of the 1.6 million people who were enrolled in Medicaid at some point during the second year of ARTS, 4.3 percent had a diagnosed substance use disorder, compared to 3.5 percent during the first year after ARTS implementation (findings not shown). Also, 1.8 percent of Medicaid members had a diagnosed opioid use disorder during the second year of ARTS, compared to 1.4 percent during the first year of ARTS.

Prevalence of diagnosed substance use disorders is somewhat higher for males (4.6 percent) compared to females (4.0 percent). Members in the 45-64 age group had by far the highest diagnosed prevalence compared to other ages, while adolescents (ages 12-17) had the lowest diagnosed prevalence. Variation in diagnosed prevalence of opioid use disorders by demographic characteristics was similar, except that females have a somewhat higher diagnosed prevalence (2.0 percent) compared to males (1.6 percent).

Among racial/ethnic groups, prevalence of diagnosed substance use disorders is lower among individuals identifying as black (3.8 percent), Hispanic (1.4 percent) and other racial/ethnic minorities (1.8 percent) compared to whites (5 percent). This differs from national data, which indicates that self-reported prevalence of substance use disorders across racial and ethnic groups is more similar.<sup>12</sup> As treatment rates are also considerably lower for blacks and other racial/ethnic minorities (see below), it is possible that substance use disorders are underdiagnosed for these groups.

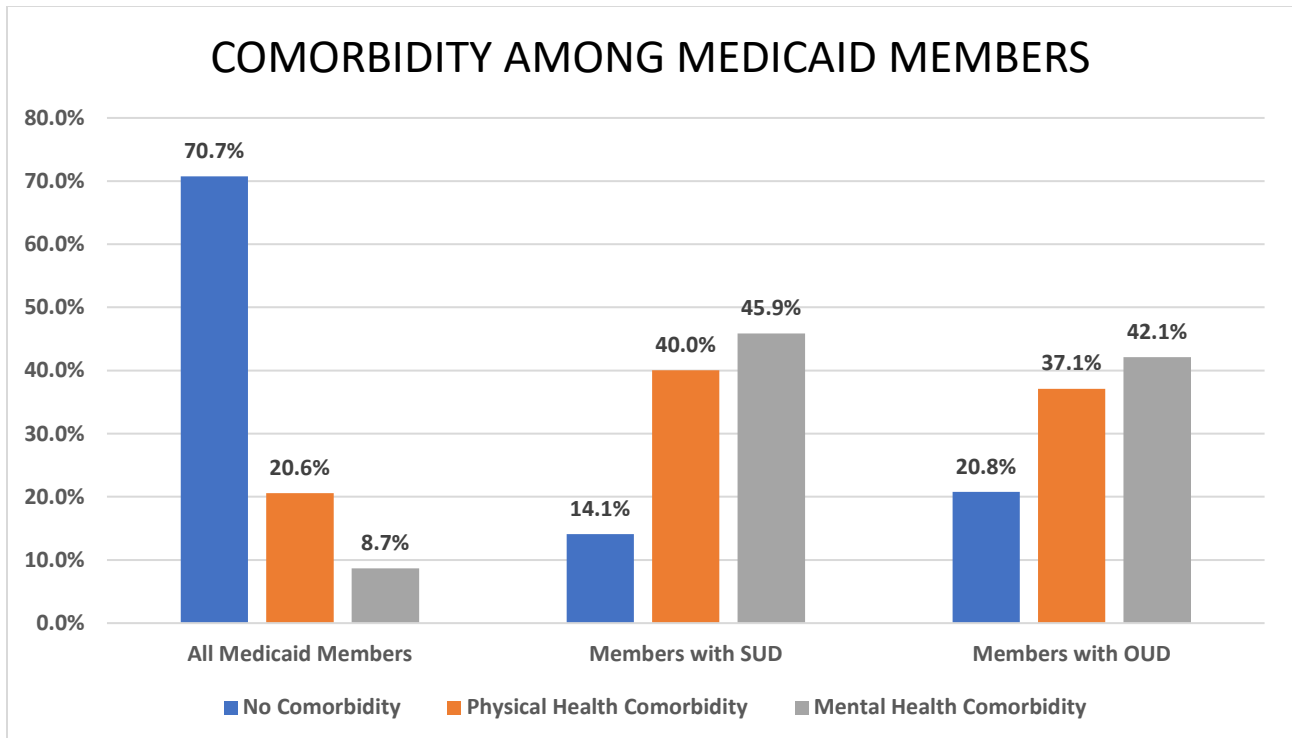
### Percent of Medicaid members with diagnosed substance use disorders, April 2018 through March 2019

Member Characteristics	Percentage of members with any substance use disorder	Percentage of members with opioid use disorder
All members	4.3%	1.8%
Gender		
Male	4.6%	1.6%
Female	4.0%	2.0%
Race/Ethnicity		
White	5.0%	2.5%
Black	3.8%	1.1%
Hispanic	1.4%	0.3%
Other	1.8%	0.6%
Age		
12-17	1.7%	0.1%
18-44	7.7%	3.8%
45-64	10.1%	4.0%
65 years and higher	3.2%	1.1%

Source: Paid Medicaid claims data from the Department of Medical Assistance Services.

## Co-occurrence of Substance Use Disorders with Physical and Mental Health Problems

Substance use disorders are often accompanied by other co-occurring physical conditions and mental health disorders. These conditions may both contribute to addiction among members as well as complicate effective treatment of substance use disorders.<sup>13</sup> We examine co-occurring conditions using the Elixhauser Comorbidity Index, one of the most widely used indicators of comorbidity in studies involving administrative data.<sup>14</sup> The index includes a list of 30 health conditions, including both chronic diseases, substance use disorders and mental disorders.



Compared to all Medicaid members, those with substance use disorders are more likely to have other comorbid conditions, including other mental health disorders. Among Medicaid members with substance use disorders, 40 percent had a physical health comorbidity, while 45.9 percent had a mental health comorbidity. Only 14.1 percent of members with substance use disorders had no comorbidities based on the Elixhauser Index. Rates of comorbidities are also high among members with opioid use disorder, although they were somewhat lower compared to members with any substance use disorder.

### Members with Substance Use Disorders Enrolled Through Medicaid Expansion

Among the 274,000 members enrolled in Medicaid expansion during the first three months of 2019, 4.4 percent had a diagnosed substance use disorder, and 1.9 percent were diagnosed with opioid use disorder. This is somewhat higher than for other nondisabled adults enrolled through traditional Medicaid (3.6 percent), but much lower than the prevalence among disabled adults (16.9 percent) and members previously enrolled in the Governor’s Access Plan (GAP) (32 percent).

**Prevalence of diagnosed substance use disorders for adult Medicaid members, by eligibility group**

	Percent with substance use disorder	Percent with opioid use disorder
Medicaid expansion	4.4%	1.9%
Nondisabled adults	3.6%	1.6%
Disabled adults	16.9%	6.4
Governor’s Access Plan (GAP)	32%	19.8%

Expansion members with substance use disorders differ somewhat from other adult nonelderly members. Compared to base Medicaid members, expansion members with substance use disorders are more likely to be male (56 percent), Hispanic or other racial/ethnic groups (9 percent), and less likely to be in the 55-64 age group. Expansion members with substance use disorders are also less likely to have a mental health comorbidity (31 percent) than traditional Medicaid members with SUD, but slightly more likely to have other physical health comorbidities (32 percent).

**Characteristics of Medicaid members ages 19-64 with substance use disorders, April 2018 – March, 2019**

	Members enrolled through Medicaid expansion	Other Medicaid members
All members with substance use disorders	12,119	54,717
Percent of all members with SUD	4.4%	4.2%
<b>Gender</b>		
Male	56%	44%
Female	44%	56%
<b>Race/Ethnicity</b>		
White	63%	65%
Black	28%	33%
Hispanic	0%	0.2%
Other	9%	3%
<b>Age</b>		
19-25	12%	10%
26-34	27%	26%
35-54	47%	44%
55-64	15%	20%
<b>Comorbidity</b>		
No comorbidity	37%	21%
Mental health comorbidity	31%	49%
Other comorbidity	32%	30%

## The Supply of Addiction Treatment Providers Increased After ARTS

A broad range of addiction treatment facilities and practitioners are available to Medicaid members along the continuum of care, as defined by the American Society of Addiction Medicine (ASAM) placement criteria (ASAM).<sup>15</sup> These include hospital-based intensive inpatient facilities, residential treatment centers, and outpatient providers of varying types and treatment intensity. The ARTS program also introduced a new model of care delivery, the Preferred Office-Based Opioid Treatment program that pays significantly higher reimbursement rates to qualified providers for medication-assisted treatment (including pharmacotherapy and behavioral health therapy) and coordination with other medical and social needs. Since ARTS was implemented in April 2017, Virginia has seen substantial increases across all types of addiction treatment providers and facilities that serve Medicaid members.

### Medicaid addiction treatment providers before and after ARTS implementation

Addiction Provider Type	# of Providers before ARTS	# of Providers after ARTS
Inpatient Detox (ASAM 4.0)	N/A	103
Residential Treatment (ASAM 3.1, 3.3, 3.5, 3.7)	4	88
Partial Hospitalization Programs (ASAM 2.5)	N/A	22
Intensive Outpatient Programs (ASAM 2.1)	49	137
Opioid Treatment Programs	6	38
Preferred Office-Based Opioid Treatment Providers	N/A	122

Source: Department of Medical Assistance Services

### Medically Managed Intensive Inpatient Programs (ASAM Level 4)

Also referred to as inpatient detoxification, ASAM level 4 facilities provide medically directed acute withdrawal management along with other intensive medical and psychiatric services. Services are typically provided in an acute care general hospital or psychiatric unit of a general hospital, or an addiction treatment specialty hospital.

### Short-term Residential Treatment Services (ASAM Level 3)

ASAM level 3 facilities provide a range of intensities of treatment services in a structured setting staffed 24 hours daily. Service level intensity (identified by ASAM levels 3.1, 3.3, 3.5, and 3.7) varies depending on the severity of the addiction problem and the patient's other medical, emotional or behavioral needs. Medicaid coverage of limited group home/residential services prior to ARTS was available only to pregnant women and adolescents and was limited by federal restrictions on payment for institutions for mental diseases. The section 1115 demonstration waiver requested authority to waive these limitations and expand access to these services

The number of providers serving Medicaid members increased from four providers before ARTS to 88 providers following implementation of ARTS. This additional coverage is an objective of the Section 1115 Demonstration Waiver permitting federal Medicaid payment for these services in facilities with greater than 16 beds, as well as ARTS expanding coverage of short-term residential treatment services to include all members. In addition, ARTS substantially increased reimbursement for the group home level residential treatment services.

### **Partial Hospitalization and Intensive Outpatient Programs (ASAM Level 2)**

ASAM level 2 programs provide a higher level of treatment intensity for patients whose conditions are less stable than for patients receiving outpatient treatment, and involve a team of counselors, psychologists, physicians, and other credentialed addiction treatment providers. Intensive outpatient programs (ASAM level 2.1) provide an average of 9-19 hours per week of treatment, while partial hospitalization programs provide 20 hours or more of treatment per week.

Medicaid coverage of partial hospitalization services began with the ARTS program, and there are now 22 such providers. While Medicaid covered intensive outpatient programs prior to ARTS, Medicaid payment for these services increased substantially through ARTS. The number of intensive outpatient Medicaid providers increased from 49 before ARTS to 137 currently.

### **Opioid Treatment Programs**

Opioid Treatment Programs are the main providers of methadone treatment for patients with opioid use disorder. Regulated by both federal and state agencies, opioid treatment programs directly administer medication-assisted treatment to patients on a daily basis, and include care coordination and other services. While Virginia Medicaid previously covered methadone treatment at opioid treatment programs, ARTS increased reimbursement rates for the service. In addition, opioid treatment programs are now allowed to bill for other services similar to Office-Based Opioid Treatment programs, such as care coordination services. The number of opioid treatment programs participating in Medicaid has increased from six clinics prior to ARTS, to 38 clinics.

### **Preferred Office-Based Opioid Treatment Programs**

To expand access to high quality treatment for opioid use disorders in the community, ARTS initiated Preferred Office-Based Opioid Treatment programs. Comprised of Community Service Boards, Federally Qualified Health Centers, private outpatient addiction treatment centers, private psychiatric clinics and primary care clinics, Preferred OBOTs are incentivized to provide high quality evidenced-based medications for opioid use disorder through higher rates for individual and group opioid counseling, a per member per month rate for coordinating addiction treatment services with other medical and social needs, and other services such as peer recovery supports. Providers must be certified as Preferred OBOTs by meeting staffing and facility requirements set by DMAS. The number of Preferred OBOT providers has increased from 38 sites at the beginning of ARTS (April 2017) to 122 sites at the time of this report.

### **Other Outpatient Providers (ASAM level 1)**

Many other practitioners provide outpatient addiction treatment services to Medicaid members, including counselors, social workers, psychologists, physicians who specialize in addiction disorders, as well as primary care physicians. During Year 2 of the ARTS program, there were more than 4,000 practitioners who billed Medicaid for outpatient services related to substance use disorders. This reflects a 275 percent increase in the number of practitioners billing for addiction treatment services since the year prior to ARTS and a 38 percent increase since the first year of ARTS. The increases were largest for physicians and nurse practitioners.

Similarly, there were almost 1,900 practitioners who billed Medicaid for outpatient services related to the treatment of opioid use disorders, a 229 percent increase since the year before ARTS, and a 39 percent increase since the first year of ARTS.

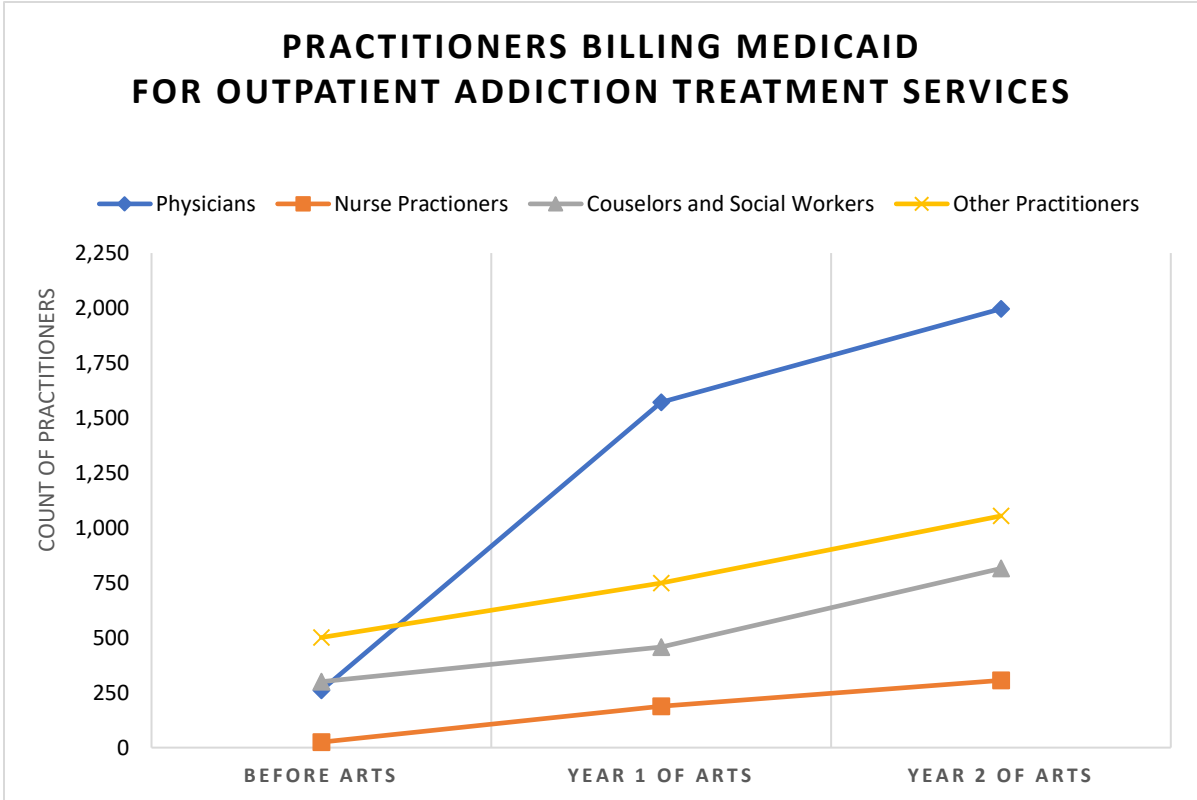


### Practitioners Billing Medicaid for Outpatient Addiction Treatment Services

	Before ARTS Apr 2016 - Mar 2017	Year 1 of ARTS Apr 2017 - Mar 2018	Year 2 of ARTS Apr 2018 - Mar 2018
<b>Substance use disorder (SUD) Outpatient Practitioners</b>			
Total	1,087	2,965	4,079
Physicians	261	1,571	1,996
Nurse practitioners	25	188	306
Counselors and social workers	300	457	815
Other	501	749	1,054
<b>Opioid use disorder (OUD) Outpatient Practitioners</b>			
Total	570	1,352	1,877
Physicians	128	586	834
Nurse practitioners	13	66	120
Counselors and social workers	142	236	428
Other	287	464	550

Source: Paid Medicaid claims data from the Department of Medical Assistance Services.

Note: Outpatient practitioners refer to ASAM Level 1 practices, which are defined as outpatient services that consist of less than 9 hours of treatment per week.



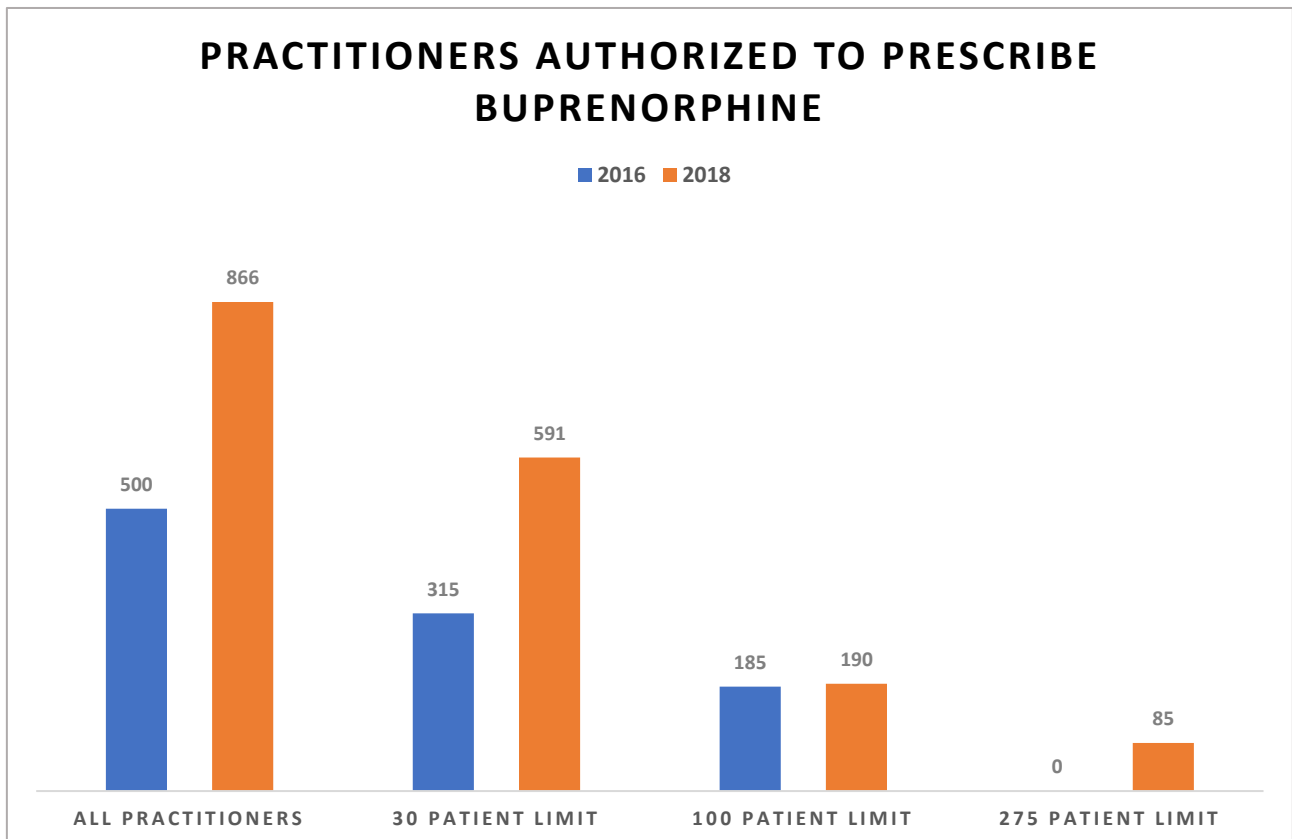
### Buprenorphine Waivered Prescribers

In order to prescribe buprenorphine, one of the main medications used to treat opioid use disorders, prescribers must obtain a waiver from the Substance Abuse and Mental Health Services Administration (SAMHSA). Newly waived physicians can treat a maximum of 30 patients. After one year, physicians can request to increase their patient limit, up to a maximum of 275 patients. Effective as of July 2017, the federal Comprehensive Addiction and Recovery Act permits nurse practitioners and physician assistants to seek authorization to prescribe buprenorphine for up to 30 patients.

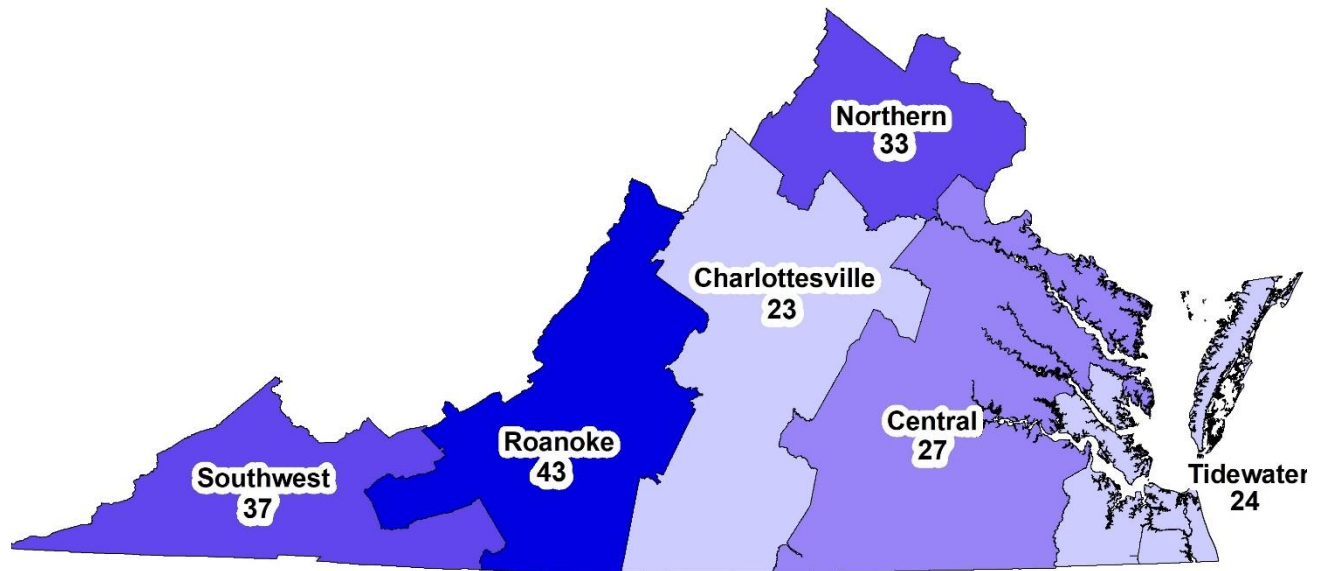
A goal of the ARTS program is to expand access to medication-assisted treatment by increasing the number of practitioners who are authorized to prescribe buprenorphine. As of 2018, there were a total of 866 waived prescribers in Virginia, including 165 nurse practitioners and physician assistants. This reflects a 73 percent increase in the number of prescribers in 2016, the year before ARTS.

Among physicians authorized to prescribe buprenorphine, about two-thirds (476 physicians) reported accepting Medicaid patients or had a paid Medicaid claim in 2018.

The Roanoke and Southwest regions have the largest number of prescribers (43 and 37 per 100,000 members, respectively), while the Charlottesville and Tidewater regions have the fewest prescribers (23 and 24 per 100,000 members, respectively).



## Number of Physicians Authorized to Prescribe Buprenorphine Who Accept Medicaid Patients, per 100,000 Medicaid Members



## Medicaid Members Treated for Substance Use Disorders

Coverage of substance use disorder services provided by ARTS is based on the American Society of Addiction Medicine (ASAM) National Practice Guidelines, which comprise a continuum of care from Screening, Brief Intervention, and Referral to Treatment (SBIRT / Level 0.5) to medically managed intensive inpatient services (Level 4).<sup>16</sup> ARTS also emphasizes evidence-based treatment for opioid use disorder, which combines pharmacotherapy and counseling. Peer support services, which facilitate recovery from substance use disorders, are also covered through ARTS. Care coordination services provided by Preferred Office-Based Opioid Treatment (OBOT) and Opioid Treatment Programs facilitate integration of addiction treatment services with physical health and social service needs.

In the second year of ARTS, almost 34,000 members – 49 percent of those with substance use disorders -- received some type of treatment for substance use disorders. About 19,000 members – 64 percent of those with opioid use disorder – received treatment for an opioid use disorder. More than 10,000 members received treatment for alcohol use disorder, for a treatment rate of 44 percent (findings not shown).

Treatment rates for substance use disorder tend to be highest among those in the 18-44 age group, Whites, those with no comorbidities, and those in the Southwest region of the Commonwealth. Variation in treatment rates for opioid use disorder are generally similar.

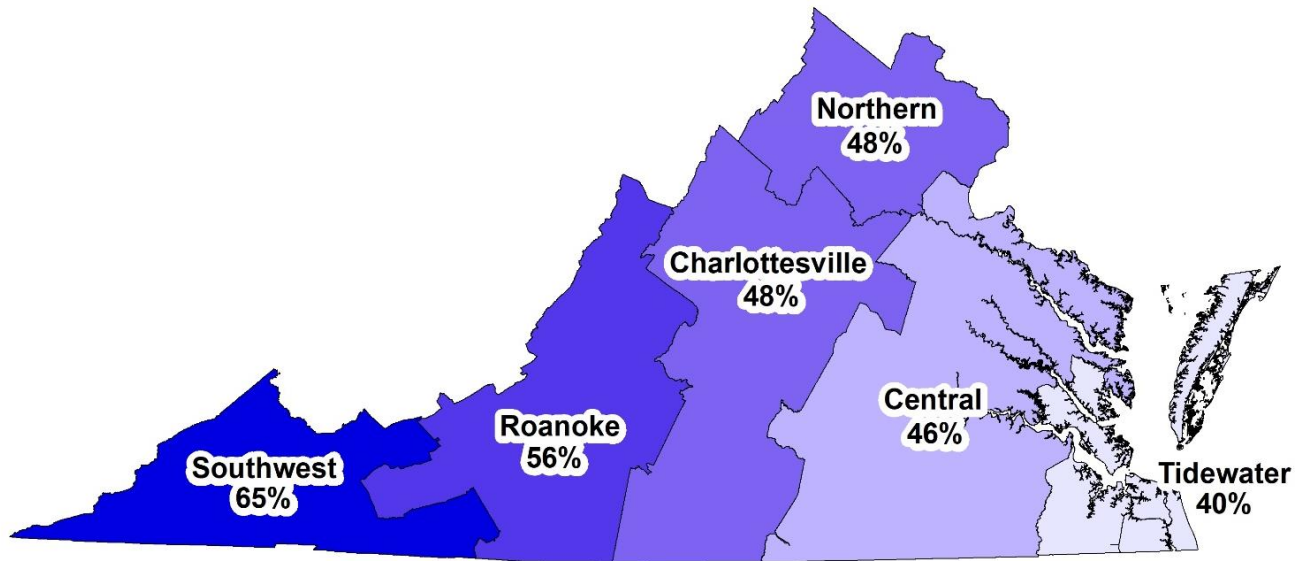
### Substance use disorder treatment rates by member characteristics, April 2018 – March 2019

Member Characteristics	SUD treatment rate <sup>1</sup>	OUD treatment rate <sup>1</sup>
All members	49%	64%
Gender		
Male	47%	64%
Female	51%	65%
Race/Ethnicity		
White	55%	67%
Black	38%	54%
Hispanic	51%	45%
Other	46%	61%
Age		
12-17	39%	28%
18-44	57%	72%
45-64	44%	56%
65 years and higher	21%	27%
Comorbidity		
No comorbidity	77%	75%
Mental health comorbidity	48%	62%
Other comorbidity	41%	60%

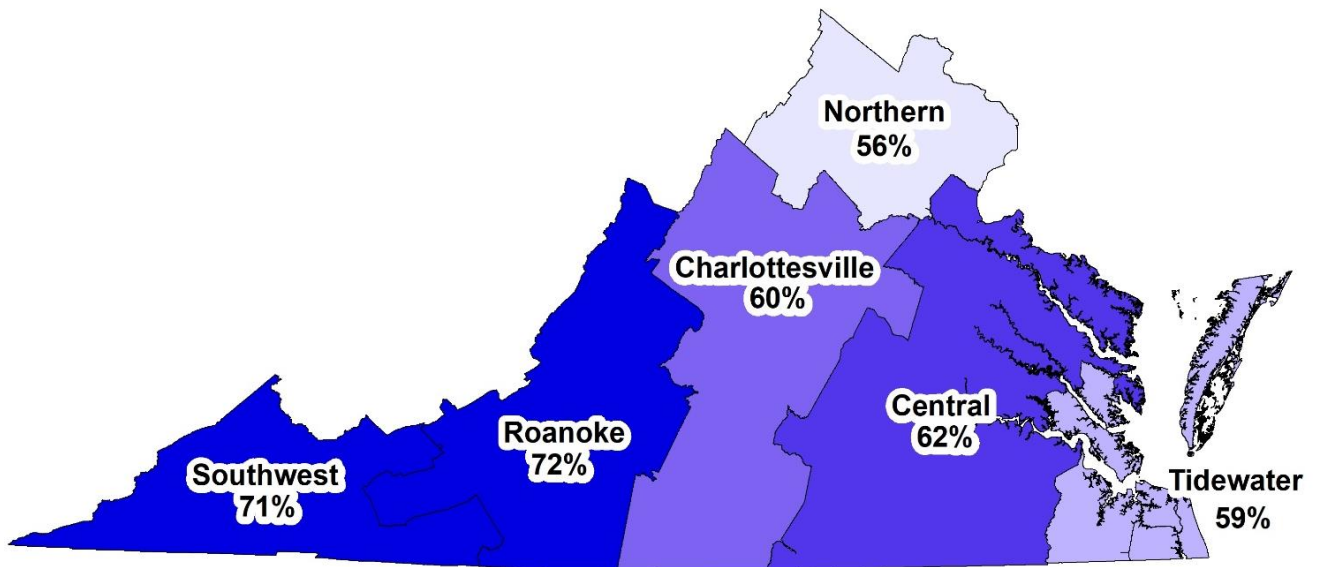
<sup>1</sup>Reflects the percentage of members with SUD (or OUD) who received any ARTS treatment services for that condition. Note: Services include those performed in an OBOT or Opioid Treatment Program setting, psychotherapy or counseling, physician evaluation or management, intensive outpatient, partial hospitalization, residential treatment, medically managed intensive inpatient services, and pharmacotherapy.

Similar to diagnosed prevalence, treatment rates among Blacks (38 percent) are considerably lower than for Whites (55 percent). Treatment rates for Hispanics (51 percent) and other racial/ethnic groups (46 percent) are also lower than for Whites. Among Virginia regions, the Southwest and Roanoke regions have the highest treatment rates for substance use disorders (65 and 56 percent, respectively), and the Tidewater region has the lowest treatment rates (40 percent).

SUD treatment rates for members during the 2<sup>nd</sup> year of ARTS, April 2018 through March 2019



OUD treatment rates for members during the 2<sup>nd</sup> year of ARTS, April 2018 through March 2019



## Treatment Rates Continue to Increase in Year 2 of ARTS

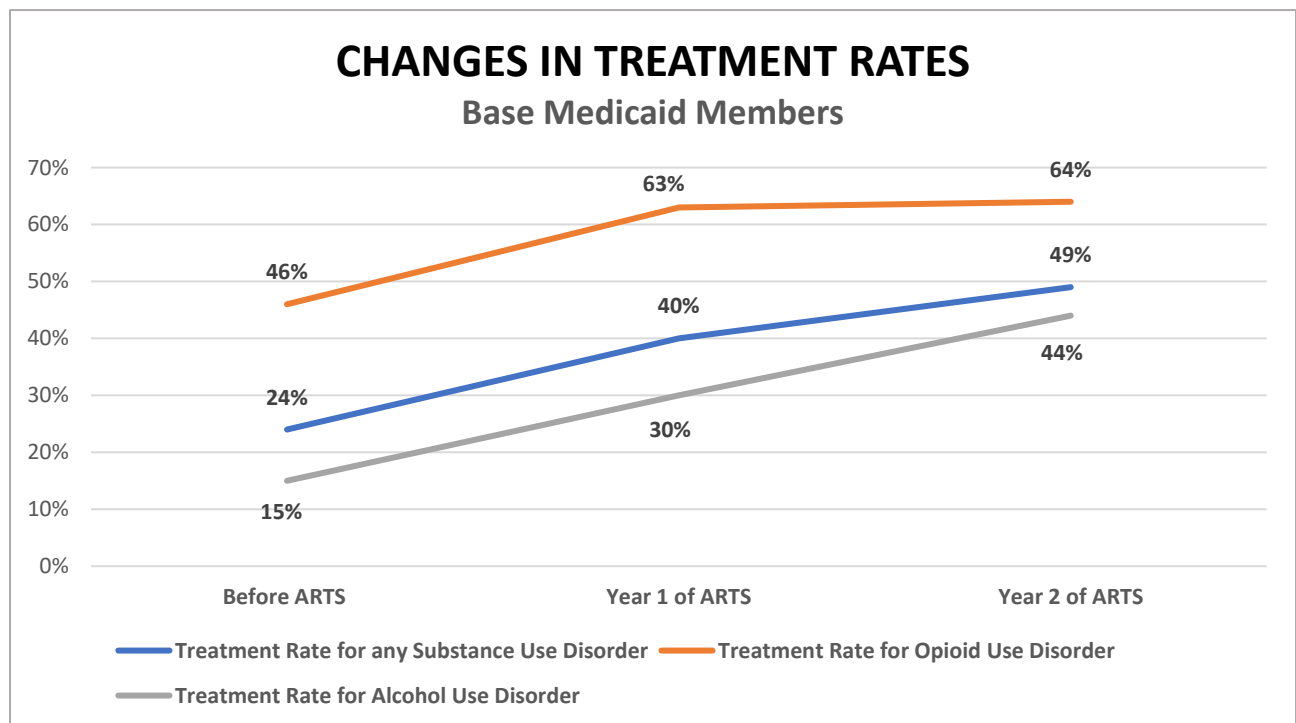
Prior ARTS evaluation reports showed large increases in treatment rates for substance use disorders in the year following implementation of ARTS.<sup>17</sup> Treatment rates continued to increase during the second year of ARTS. Among members with any substance use disorder who did not enroll through Medicaid expansion, treatment rates increased from 40 percent in Year 1 of ARTS to 49 percent in Year 2. Most of this increase was accounted for by increases in treatment for alcohol use disorder, from 30 percent in Year 1 of ARTS to 44 percent in Year 2. Treatment rates for opioid use disorder – though considerably higher than for alcohol use disorder – held steady at 64 percent.

### Changes in treatment rates for substance use disorders among base Medicaid Medicaid members.<sup>1</sup>

	Before ARTS Apr 2016 - Mar 2017	Year 1 of ARTS Apr 2017 - Mar 2018	Year 2 of ARTS Apr 2018 – Mar 2019	Percentage change in treatment rate since before ARTS
Treatment rate for any substance use disorder	24%	40%	49%	104%
Treatment rate for opioid use disorder	46%	63%	64%	37%
Treatment rate for alcohol use disorder	15%	30%	44%	193%

<sup>1</sup>Members enrolled through Medicaid expansion are excluded to maintain comparability with prior years

Note: Services include those performed in an OBOT or Opioid Treatment Program setting, psychotherapy or counseling, physician evaluation or management, intensive outpatient, partial hospitalization, residential treatment, medically managed intensive inpatient services, and pharmacotherapy.



## Service Utilization by ASAM Levels of Care for Substance Use Disorders

Use of services in the second year of ARTS increased greatly across all ASAM levels of care. Overall, in the second year of ARTS, 31,860 members used a treatment service categorized within an ASAM level of care, a 27 percent increase from the first year of ARTS. Increased utilization was even higher for some specific ASAM services.

- Screening, Brief Intervention, and Referral to Treatment (SBIRT/ASAM Level 0.5) is used to screen for substance use disorders in any health care setting, including primary care settings. During the second year of ARTS, 1,274 members had screenings for substance use disorders, a 21 percent increase from the first year of ARTS.
- In the second year of ARTS, 5,190 members received services through Preferred Office-Based Opioid Treatment or Opioid Treatment Programs. This is more than 2.7 times the number of members receiving these services since the first year of ARTS.
- Outpatient services (ASAM Level 1), such as psychotherapy and counseling or physician evaluation, are by far the most frequently used services. During the second year of ARTS, 22,476 members with a primary diagnosis of a substance use disorder had psychotherapy, counseling or a physician evaluation, a 28 percent increase from the first year of ARTS.
- ASAM Level 2 includes partial hospitalization and intensive outpatient services. During the second year of ARTS, 2,245 members used these services, almost twice the number seen during the first year of ARTS.
- ARTS added coverage for short-term residential treatment services (ASAM Level 3) and medically managed inpatient services (ASAM Level 4), which was made possible by a Section 1115 Demonstration Waiver for substance use disorders that permits federal Medicaid payments for residential facilities with greater than 16 beds. During the second year of ARTS, 5,756 members used medically managed inpatient services for substance use disorders, a 34 percent increase from the first year of ARTS. About 1,500 members used short-term residential treatment services in the second year of ARTS, four times the number using such services in the first year of ARTS.
- ARTS also covered new services, including peer recovery supports, case management and care coordination for substance use. During the second year of ARTS, 7,851 members use substance use case management services, more than double the number from the first year of ARTS. More than 1,500 members used care coordination services at Preferred OBOTs and opioid treatment programs, four times the number using these services in the first year of ARTS. There is still relatively little use of or billing for peer recovery support services, despite a large increase from the second year of ARTS.

### Members who used treatment services for substance use disorders during the first two years of ARTS

	Year 1 of ARTS, Apr 2017 – March 2019	Year 2 of ARTS, Apr 2018 – March 2019	Percentage change, Year 1 to Year 2 of ARTS
<b>Members who had any ASAM level of service</b>	<b>25,021</b>	<b>31,860</b>	<b>27%</b>
ASAM Level 0.5, Early Intervention	1,049	1,274	21%
Office-Based Opioid Treatment/ Outpatient Treatment Providers	1,947	5,190	167%
ASAM Level 1, Outpatient Services	17,528	22,476	28%
ASAM Level 2, Intensive Outpatient/Partial Hospitalization	1,199	2,245	87%
ASAM Level 3, Residential/Inpatient Services	504	1,508	199%
ASAM Level 4, Medically Managed Intensive Inpatient Services	4,290	5,756	34%
Peer Recovery Support	132	383	190%
Substance Use Case Management	3,645	7,851	115%
Substance Use Care Coordination at Preferred OBOTs	379	1,540	306%

<sup>1</sup>Members enrolled through Medicaid expansion are excluded to maintain comparability with prior years

### Pharmacotherapy for Treatment of Opioid Use Disorders

Medications for opioid use disorder include the use of buprenorphine, methadone and naltrexone as part of evidence-based care. This method is considered the gold standard of care for treating opioid use disorder. During the second year of ARTS, almost 15,000 members – 51 percent of those with opioid use disorder – received some type of pharmacotherapy for opioid use disorder. This reflects a 75 percent increase in the number of members with opioid use disorder receiving pharmacotherapy since the first year of ARTS, and a 133 percent increase since the year before ARTS.

Buprenorphine treatment was the most common form of pharmacotherapy, accounting for 58 percent (about 8,700 members) of those receiving such treatment. However, methadone treatment has increased dramatically since the ARTS program began – more than eight times as many members with opioid use disorder received methadone treatment in the second year of ARTS compared to the year before ARTS. The number of members treated by naltrexone has more than doubled since before ARTS.



### Medicaid members with opioid use disorders who used pharmacotherapy

	Before ARTS Apr 2016 - Mar 2017	ARTS Year 1 Apr 2017 - Mar 2018	ARTS Year 2 Apr 2018 - Mar 2018	Percentage change since before ARTS
Members who received any pharmacotherapy for opioid use disorder	6,444	8,616	14,990	133%
Members who received buprenorphine treatment	5,215	6,376	8,729	67%
Members who received methadone treatment	517	1,305	4,855	839%
Members who received naltrexone or other medication treatment	757	1,063	1,905	152%

<sup>1</sup>Members enrolled through Medicaid expansion are excluded to maintain comparability with prior years

Among base Medicaid Medicaid members, treatment rates for pharmacotherapy for members with opioid use disorder increased, from 42 percent in the first year of ARTS to 49 percent in the second year of ARTS. Overall, pharmacotherapy rates have increased by 36 percent since before ARTS. While the the number of members receiving buprenorphine has increased and a majority of the members receiving pharmacotherapy receive buprenorphine, the increase in the rates of pharmacotherapy was driven primarily by increases in methadone treatment rates, from 3 percent of base Medicaid members with opioid use disorder in the year prior to ARTS to 15 percent by Year 2 (a 400 percent increase). By contrast, the number of members receiving buprenorphine has increased at the same rate as the increase in diagnosed prevalence of opioid use disorder, resulting in no net change in buprenorphine treatment rates between the first and second year of ARTS.

### Pharmacotherapy rates for opioid use disorder among base Medicaid members.<sup>1</sup>

Base Medicaid members with OUD receiving pharmacotherapy	Before ARTS Apr 2016 - Mar 2017	ARTS Year 1 Apr 2017 - Mar 2018	ARTS Year 2 Apr 2018 - Mar 2019	Percentage change since before ARTS
Percent who received any pharmacotherapy for opioid use disorder	36%	42%	49%	36%
Percent received any buprenorphine treatment	29%	31%	29%	0%
Percent received any methadone treatment	3%	6%	15%	400%
Percent received naltrexone or other medication treatment	4%	5%	7%	75%

<sup>1</sup>Members enrolled through Medicaid expansion are excluded to maintain comparability with prior years

## Quality of Treatment for Opioid Use Disorder Continues to Improve

Per the American Society of Addiction Medicine’s National Practice Guidelines, treatment of opioid use disorders is most effective when medication is combined with other treatment services, such as psychotherapy and counseling. The ARTS program was developed on these best practice principles.

During the second year of ARTS, almost three out of four Medicaid members who received buprenorphine pharmacotherapy also received outpatient counseling or psychotherapy, an increase from 61 percent in Year 1 of ARTS, and 37 percent in the year before ARTS.

Urine drug screens help monitor the effectiveness of treatment and to alert treatment providers to possible relapses. Among those receiving buprenorphine, the percentage receiving urine drug screens increased from 53 percent in the first year of ARTS to 75 percent in the second year of ARTS, and more than doubled since the year prior to ARTS.

ARTS included enhanced reimbursement for care coordination services at Preferred OBOTS in order to integrate addiction treatment with members’ other health and social needs. While these services were used by only 18 percent of members receiving buprenorphine treatment in the first year of ARTS, almost half of buprenorphine users received care coordination or case management services in the second year of ARTS.

### Base Medicaid members who received buprenorphine and other services for opioid disorder<sup>1</sup>

	Before ARTS Apr 2016 - Mar 2017	ARTS Year 1 Apr 2017 - Mar 2018	ARTS Year 2 Apr 2018 - Mar 2019	Percentage change since before ARTS
Base Medicaid members with OUD who received buprenorphine pharmacotherapy	5,215	6,379	7,132	37%
Percent also received counseling or psychotherapy	37%	61%	73%	97%
Percent also received a urine drug screen	35%	53%	75%	114%
Percent also received case management or care coordination services	4%	18%	46%	1050%

<sup>1</sup>Members enrolled through Medicaid expansion are excluded to maintain comparability with prior years

## Emergency Department Use Related to Substance Use Disorders

Previous ARTS evaluation reports have shown a substantial decrease in utilization of emergency departments related to substance use disorders, particularly for opioid use disorder.<sup>18</sup> Emergency department visits related to substance use disorders are an important indicator of treatment access and outcomes as they may be related to drug overdoses, of drug withdrawal symptoms, and other acute care emergencies for which drug and alcohol use are contributing factors.

Among base Medicaid members with substance use disorders, the number of substance use disorder-related emergency department visits continued to decrease, from 54 visits per 100 members with substance use disorders in the first year of ARTS to 52 visits in the second year of ARTS. Since the year prior to ARTS implementation, emergency departments visits have decreased by 7 percent for any substance use disorder, and 32 percent for opioid use disorders. On the other hand, emergency departments visits for members with alcohol use disorder increased slightly in the second year of ARTS, although use remains lower than the year prior to ARTS.

**Number of substance use disorder-related ED visits per 100 base Medicaid members with SUD<sup>1</sup>**

	Before ARTS Apr 2016 - Mar 2017	ARTS Year 1 Apr 2017 - Mar 2018	ARTS Year 2 Apr 2018 - Mar 2019	Percentage change since before ARTS
All SUD-related ED visits per 100 members with SUD	56	54	52	-7.1%
OUD related ED visits per 100 members with OUD	31	24	21	-32.3%
AUD related ED visits per 100 members with AUD	75	70	73	-2.7%

<sup>1</sup>Members enrolled through Medicaid expansion are excluded to maintain comparability with prior years

**ARTS Service Use After Emergency Department Visits**

It is important that patients with an emergency department visit related to substance use disorder either obtain treatment or continue with ongoing treatment in order to avoid overdoses, relapses, or return visits to emergency departments. Emergency departments are also increasingly becoming key points of entry into the addiction treatment system, either by referring patients to residential treatment or other providers, or by starting patients on medications for opioid use disorder. One study showed that medications for opioid use disorder initiated in the emergency department increased engagement in addiction treatment services within 30 days and reduced self-reported illicit drug use, compared to those who were not started on this treatment while at the hospital.<sup>19</sup> Some hospitals in the Commonwealth have started to initiate pharmacotherapy treatment in the emergency department for people presenting with an opioid overdose or withdrawal symptoms, and then connected patients to outpatient treatment. Such programs – known as ED-Bridge programs – are being heavily promoted in other states.<sup>20</sup>

Treatment within seven or 30 days of a ED visit is a commonly used threshold.<sup>21</sup> Among Virginia Medicaid members who had an emergency department visit with a principal diagnosis of a substance use disorder, about one-third had any type of ARTS service within seven days of the visit. Treatment rates increased to 47 percent within 30 days of the emergency department visit. Treatment rates after an emergency department visit for opioid use disorder were somewhat lower – 28 percent received some type of treatment within seven days of the visit, and 38 percent within 30 days of the visit. Most follow-up care occurred at some type of outpatient treatment provider or medically managed intensive inpatient service. Among members with opioid use disorder, 10 percent received pharmacotherapy within seven days of the emergency department visit, and 18 percent within 30 days of the visit.

Return visits to the emergency department following an earlier visit are not uncommon for members with a substance use disorder, but less so for those with opioid use disorder. Ten percent had another SUD-related emergency department visit within seven days of a prior visit, while 19 percent had another emergency department visit within 30 days of a previous visit. Return visit rates related to opioid use disorder are much rarer – only 2 percent had a return visit within seven days, and 4 percent within 30 days of the original visit.

### Use of ARTS services after emergency department visits related to substance use disorders<sup>1</sup>

	Within 7 days after ED visit	Within 30 days after ED visit
<b>ARTS service use after ED visit with principal diagnosis of SUD</b>		
Any use of ARTS services	32%	47%
Pharmacotherapy	4%	8%
Outpatient (ASAM 1, OBOT or OTP)	11%	24%
Intensive outpatient or partial hospitalization (ASAM 2)	0%	2%
Residential treatment (ASAM 3)	2%	4%
Medically managed intensive inpatient (ASAM 4)	13%	19%
<b>Had SUD-related ED visit following previous visit</b>	<b>10%</b>	<b>19%</b>
<b>ARTS service use after ED visit with principal diagnosis of OUD</b>		
Any use of ARTS services	28%	38%
Pharmacotherapy	10%	18%
Outpatient (ASAM 1, OBOT or OTP)	14%	23%
Intensive outpatient or partial hospitalization (ASAM 2)	0%	3%
Residential treatment (ASAM 3)	3%	5%
Medically managed intensive inpatient (ASAM 4)	7%	9%
<b>Had OUD-related ED revisit following previous visit</b>	<b>2%</b>	<b>4%</b>

<sup>1</sup>Includes ED visits for which there were no overnight hospital stays, a principal diagnosis of SUD/OUD, and the member did not disenroll from Medicaid in the month after the visit.

## Decrease in Acute Inpatient Admissions Related to Substance Use Disorders

Some members who experience overdoses or other conditions related to substance use disorders may also require overnight stays in an acute care hospital. Similar to emergency department visits, previous analyses showed a decrease in acute inpatient admissions among members with substance use disorders following implementation of the ARTS benefit relative to Medicaid members who did not have substance use disorders.<sup>22</sup> These decreases continued in the second year of ARTS.

The number of acute inpatient admissions increased by 12 percent among all base Medicaid Medicaid members in the two years since the ARTS benefit began. By contrast, inpatient admissions for substance use disorders decreased, with most of the decrease occurring between the first and second years of the ARTS benefit. Among members with substance use disorders, the percent with an inpatient admission for substance disorders decreased from 31 percent in the first year of ARTS, to 26 percent in the second year of ARTS.

Decreases in inpatient admissions related to opioid use disorder were even greater. Among members with an opioid use disorder, the percentage with an inpatient admission related to opioid use disorder decreased from 23 percent in the year before ARTS to 16 percent in the second year of ARTS, with most of the decrease occurring between the first and second year of ARTS. Inpatient admissions related to alcohol use disorders exhibited similar trends.

**Acute inpatient admissions for substance use disorders among base Medicaid Medicaid members<sup>1</sup>**

	Before ARTS Apr 2016 - Mar 2017	Year 1 of ARTS Apr 2017 - Mar 2018	Year 2 of ARTS Apr 2018 – Mar 2019 <sup>1</sup>	Percentage change since before ARTS
Total number of members with acute inpatient admission	120,819	129,721	135,499	+12%
<b>Substance use disorders</b>				
Members with inpatient admission related to substance use disorder	15,390	16,022	14,839	-4%
As a percent of all members with substance use disorder	31%	31%	26%	-16%
<b>Opioid use disorders</b>				
Members with inpatient admission related to opioid use disorder	4,080	4,270	3,964	-3%
As a percent of all members with opioid disorder	23%	21%	16%	-30%
<b>Alcohol use disorders</b>				
Members with inpatient admission related to alcohol use disorder	6,696	6,685	6,194	-7%
As a percent of all members with alcohol use disorder	39%	37%	32%	-18%

<sup>1</sup>Members enrolled through Medicaid expansion are excluded to maintain comparability with prior years

**Services Received Following Discharge From Inpatient and Residential Treatment**

For members with substance use disorders who require inpatient detoxification or short-term residential treatment (ASAM Levels 3 and 4), it is important that treatment continues following discharge from these facilities. Otherwise, lack of follow-up care may increase the risk of relapse and readmission to high-intensity service utilization, as well as acute hospital utilization.

Analysis of service utilization received within 30 days of a discharge from an ASAM 3 or ASAM 4 facility shows that many members are not receiving other ARTS services soon after discharge. Among those discharged from residential treatment centers (ASAM 3 stays), 9 percent received a lower level of ASAM 3 services within 30 days of discharge, 21 percent received intensive outpatient or partial hospital services (21 percent) and 37 percent received ARTS outpatient services. About one-third (30 percent) were receiving pharmacotherapy within 30 days of discharge.

ARTS service utilization following discharge from ASAM 4 stays was even lower. Most of these stays are related to substances other than opioids, especially alcohol (findings not shown). For the smaller number of ASAM 4 stays related to opioid use disorder, use of ARTS services within 30 days of discharge is higher, but not universal. Only about one-fourth (27 percent) discharged from ASAM 4 stays with opioid use disorders were receiving pharmacotherapy within 30 days of discharge. Overall, only 41 percent of all discharges from ASAM 4 facilities, and 49 percent of members with opioid use disorder, received any type of ARTS services within 30 days of discharge (findings not shown).

**Treatment following discharge from residential treatment centers among members with substance use disorders**

	ASAM 3 stays, all SUD	ASAM 4 stays, all SUD	ASAM 4 stays, OUD only
<b>All stays</b>	<b>3,007</b>	<b>8,332</b>	<b>1,471</b>
Services received within 30 days of discharge			
ASAM 3 (lower level)	9%	4%	7%
ASAM 2	21%	3%	6%
ASAM 1, Opioid treatment provider, Office-based Opioid Treatment provider	37%	24%	33%
Pharmacotherapy	30%	11%	27%
Readmission to same ASAM or higher-level care	15%	19%	15%
SUD-related ED visit within 30 days of discharge	9%	14%	4%
SUD-related acute inpatient stay within 30 days of discharge	5%	15%	7%

Some members also require readmission to high-intensity ARTS services or use acute hospital care following discharge. Among discharges from residential treatment centers (ASAM 3), 15 percent are readmitted to the same level of care or higher within 30 days of discharge; 9 percent had an emergency department visit related to substance use disorders, and 5 percent had an acute inpatient stay. Readmissions to high-intensity care or acute hospital use is higher among discharges from ASAM 4 facilities for all substance use disorders, but lower among these discharges related to opioid use disorders.

A key evaluation question that requires further analysis is the extent to which receipt of ARTS treatment services following discharge from ASAM 3 and 4 facilities results in fewer readmissions to high-intensity treatment and lower acute hospital utilization relative to members who did not receive ARTS services following discharge. Other factors that could affect readmissions and hospital use include differences in the acuity and comorbid conditions of patients receiving ASAM 3 and 4 services, and the extent to which they are using services not covered by the ARTS program, such as abstinence-based treatment and recovery programs.

## Decrease in Prescriptions for Opioid Pain Medications

The Department of Medical Assistance Services has taken a number of actions to limit opioid prescribing for pain management consistent with guidelines issued by the U.S. Centers for Disease Control and Prevention and the Virginia Board of Medicine.<sup>23,24</sup> These include prior authorization requirements and quantity limits for new opioid prescriptions beginning in December 2016 in the Medicaid Fee-for-Service program, and implemented across all the Medicaid health plans beginning July 1, 2017.

Prior reports showed a sharp decrease in opioid prescribing since 2016, likely in part due to the stricter guidelines and prior authorization requirements.<sup>25</sup> Among the base Medicaid population, the number of members receiving opioid prescriptions decreased to about 94,000 during the second year of ARTS, while the total number of prescriptions decreased to about 391,000. This represents a 32 percent and 29 percent decrease, respectively, since the year before ARTS.

### Number of pain medication prescriptions among base Medicaid members<sup>1</sup>

	Before ARTS Apr 2016 - Mar 2017	ARTS Year 1 Apr 2017 - Mar 2018	ARTS Year 2 Apr 2018 - Mar 2019	Percentage change since before ARTS
<b>Opioid pain medications</b>				
Total number of prescriptions	549,442	399,678	390,693	-29%
Number of members who received prescriptions	137,847	115,096	94,017	-32%
Number of prescriptions per 10,000 members	3,811	2,761	2,411	-37%

<sup>1</sup>Members enrolled through Medicaid expansion are excluded to maintain comparability with prior years

## Conclusion

Access to and use of addiction treatment services among Medicaid members continued to increase during the second year of ARTS. Almost half of Medicaid members with substance use disorders now receive some type of treatment, more than double the treatment rate in the year prior to ARTS implementation. An increase in treatment rates for alcohol use disorders during the second year of ARTS was especially notable.

The second year of ARTS also saw increases in utilization of treatment services across the ASAM continuum of care. Increases were especially notable for some services that were little used in the first year of ARTS, such as short-term residential treatment, peer recovery, care coordination services, and Preferred Office-Based Opioid Treatment and Outpatient Treatment Providers. Almost half of members with opioid use disorders now receive pharmacotherapy, an increase from 42 percent during the first year of ARTS, and 36 percent in the year prior to ARTS. Moreover, the quality of treatment for opioid use disorder continues to increase, as most members who receive buprenorphine treatment are also receiving psychotherapy or counseling, urine drug tests and case management services.

While access, utilization and quality of treatment services continues to increase, some gaps in treatment remain. Lower diagnosed prevalence and treatment rates for racial/ethnic minorities were similar to such disparities reported in the first year of ARTS. Regional disparities in treatment rates for substance use disorders also persist, with the heavily populated Tidewater region having the lowest treatment rates.

In addition, many members receiving inpatient detoxification and short-term residential treatment do not receive followup care at a lower level of treatment within 30 days of discharge. Even fewer members who have emergency department visits related to substance use disorders receive follow-up treatment within one week or month following their visit, although it is important to note that the analysis did not include treatment providers who do not submit claims to Medicaid, such as some recovery and abstinence-based providers. Such care transitions are important in order to prevent relapse and readmission to high-intensity treatment. Interviews with addiction treatment providers in the Richmond and Roanoke areas cite a number of causes for lack of follow-up, including lack of communication between providers, transportation barriers to and from different providers, and low patient motivation in following up with recommended treatment.<sup>26</sup>

Evidence of improved outcomes of treatment after ARTS implementation is increasingly compelling. There were further decreases in emergency department visits and acute inpatient admissions related to substance disorders between the first and second years of ARTS. Additional analysis shows that the decrease in acute hospital use for members with substance use disorders was significantly larger than for other Medicaid members following ARTS implementation, even after accounting for differences in member characteristics and health status.<sup>27</sup>

With more than 300,000 members newly enrolled in Medicaid expansion, the impact of Medicaid and the ARTS benefit on the treatment of substance use disorders in the Commonwealth of Virginia will increase. During the first three months of Medicaid expansion, more than 12,000 newly enrolled members received a diagnosis of substance use disorders, and over 5,000 received a diagnosis of opioid use disorders. As more than half of Virginians with self-reported problems with opioids were uninsured prior to expansion, Medicaid coverage of people with opioid and other substance use disorders is likely to increase further. In sum, the expansion of treatment services through ARTS combined with the expansion of eligibility through Medicaid is a major advance in the Commonwealth's ability to address substance use disorders, as more low-income people will now have access to the full continuum of treatment services through the ARTS benefit.



## Endnotes

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- <sup>1</sup> Virginia Department of Health. Fatal Drug Overdose Quarterly Report: First quarter 2019 (July, 2019). <http://www.vdh.virginia.gov/content/uploads/sites/18/2019/07/Quarterly-Drug-Death-Report-FINAL-Q1-2019.pdf>
- <sup>2</sup> *Ibid*
- <sup>3</sup> Snell LM,\* Barnes AJ, Cunningham P. Epidemiology of Substance Use Disorders: Opioid Use Disorder Epidemic. *Primer on Substance Use Disorder*. Moeller GF, Terplan M (Eds.), Oxford University Press, forthcoming.
- <sup>4</sup> National Institute on Drug Abuse. Trends and Statistics. <https://www.drugabuse.gov/related-topics/trends-statistics>
- <sup>5</sup> Snell et al, *op cit*
- <sup>6</sup> Analysis of National Survey of Drug Use and Health, 2016-17, through the Restricted-use Data Analysis System. Substance Abuse and Mental Health Services Administration. <https://www.datafiles.samhsa.gov/info/analyze-data-nid6>
- <sup>7</sup> Department of Medical Assistance Services. Expansion Dashboard. <https://www.dmas.virginia.gov/#/dashboard>
- <sup>8</sup> Analysis of National Survey of Drug Use and Health, *op cit*.
- <sup>9</sup> VCU Department of Health Behavior and Policy. *Addiction and Recovery Treatment Services (ARTS): Access and Utilization During the First Year (April 2017 – March 2018)*. [https://hbp.vcu.edu/media/hbp/policybriefs/pdfs/ARTSone-yearreport\\_8.9.18\\_Final.pdf](https://hbp.vcu.edu/media/hbp/policybriefs/pdfs/ARTSone-yearreport_8.9.18_Final.pdf)
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