Addiction and Recovery Treatment Services

Access, Utilization, and Spending for the Period of April 1 – August 31, 2017

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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

Virginia implemented the Addiction and Recovery Treatment Services (ARTS) program in April, 2017 to increase access to treatment for Medicaid members with opioid or other substance use disorders. The Department of Medical Assistance Services contracted with Virginia Commonwealth University School of Medicine to conduct an independent evaluation of the ARTS program.

The objective of this report is to describe changes in substance use disorder treatment utilization, expenditures, and access during the first 5 months of ARTS. The major findings from this report are as follows:

Supply of treatment providers

- There have been substantial increases in the number of practitioners and facilities providing addiction treatment services to Medicaid members, including residential treatment facilities, opioid treatment programs, and providers authorized to prescribe buprenorphine. The number of outpatient practitioners billing for ARTS services more than doubled.

- Gaps in access to some service providers – especially residential facilities and Office-Based Opioid Treatment clinics – remain in some areas of the state, including the Far Southwest and other rural areas.

Increased spending and utilization on addiction treatment services

- During the first 5 months of the ARTS program, almost 14,000 Medicaid members used addiction-related services, a 40 percent increase from the year before.

- Spending on paid claims for addiction-related services amounted to almost $10 million during the first 5 months of ARTS, a 32 percent increase from the prior year.

- Treatment rates for members with substance use or opioid use disorders increased by more than 50 percent. Treatment rates are higher for those with an opioid use disorder diagnosis (51 percent) than for those with alcohol use disorders (28 percent).

- ARTS added coverage for residential treatment and medically managed intensive inpatient services for substance use disorders, although outpatient treatment is by far the most frequently used service.

- The use of buprenorphine to treat opioid use disorders increased substantially during the first 5 months of ARTS, although many members using buprenorphine do not have any opioid use disorder diagnosis and are not getting other services consistent with professional guidelines.

Decreased hospital emergency department use related to substance use disorders

- The number of emergency department visits related to substance use disorders decreased by 31 percent during the first 5 months of ARTS while the number of members with a visit decreased by 14 percent.

- Total spending on emergency department visits related to substance use declined by 14 percent to about $16 million during the first 5 months of ARTS.

Decreased prescribing for opioid pain medications

- The number of prescriptions for opioid pain medications among Medicaid members decreased by 28 percent during the first 5 months of ARTS, while the number of prescriptions for non-opioid pain relievers increased by 2 percent.

Regional variation

- Spending on services related to substance use disorder treatment increased the most in the Southside region (77 percent), and increased the least in the Northern region (6 percent).

- The Far Southwest includes 52 percent of all buprenorphine prescriptions in the state despite having only 8 percent of Medicaid members. Yet, buprenorphine users in the Far Southwest are much less likely to be receiving other treatment services compared to buprenorphine users in other parts of the state.

- Emergency department visits and opioid prescribing rates are highest in the Far Southwest region, and lowest in the Northern region.

- Despite much lower increases in spending on substance use disorder treatment, Northern Virginia had the largest decrease in emergency department visits compared to other Virginia regions.

Workforce development and new models of care delivery

- Addiction disease management training sessions sponsored by the Virginia Department of Health led to increases in the provision of addiction treatment services after six months among those who attended the training, as well as improved prescribing patterns for controlled substances.

- New care delivery models through ARTS, especially the Office-Based Opioid Treatment program, seek to improve the quality and effectiveness of addiction treatment services, although utilization of such clinics has been low compared to other outpatient providers.

Introduction

This report shows changes in substance use disorder treatment services for Medicaid members during the first 5 months of the Addiction and Recovery Treatment Services (ARTS) program. ARTS is a major initiative by the Commonwealth of Virginia to expand access to treatment for substance use disorders among Medicaid members.

Addiction and Recovery Treatment Services (ARTS)

Over 1,100 Virginians died from opioid overdoses in 2016, nearly doubling since 2011.[1] Nationally, Medicaid members are four times more likely than people with private insurance to have ever used heroin or been dependent on pain relievers.[2]

Virginia implemented the Addiction and Recovery Treatment Services program in April, 2017 to increase access to treatment for Medicaid members with substance use disorders. ARTS benefits are based on American Society of Addiction Medicine's criteria and cover a wide range of addiction treatment services.[3] ARTS services include the following: inpatient withdrawal management, residential treatment, partial hospitalization, intensive outpatient programs, opioid treatment, peer recovery, and case management. ARTS services are carved into existing Medicaid managed care plans to support full integration of behavioral and physical health.

ARTS evaluation

The Department of Medical Assistance Services contracted with Virginia Commonwealth University School of Medicine to conduct an independent evaluation of the ARTS program. 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.

How the analysis was conducted

The findings in this report are based on analysis of Medicaid paid claims, surveys of physicians who attended addiction disease management trainings sponsored by the Virginia Department of Health, and a review of applications of health care providers aiming to become certified as Office-Based Opioid Treatment programs.

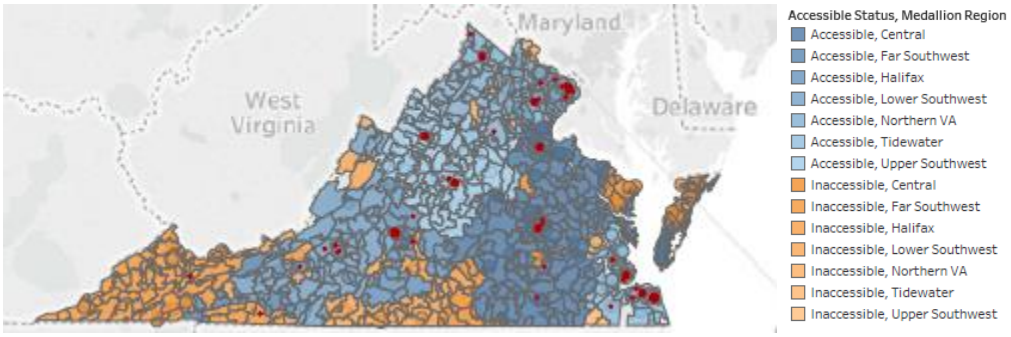
For estimates of utilization and expenditures related to the treatment of substance use disorders, we compare estimates of paid claims during the first 5 months of the ARTS program (April 1 through August 31, 2017) to the same 5 month period in 2016. These estimates exclude claims for services during 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.

[1] Data extracted from Kaiser Family Foundation Opioid Overdose Deaths, http://www.kff.org/other/state-indicator/opioid-overdose-deaths-by-raceethnicity and the Virginia Department of Health's Office of the Chief Medical Examiner, http://www.vdh.virginia.gov/medical-examiner/forensic-epidemiology/.
[2] MACPAC June 2017 Report to Congress on Medicaid and CHIP. Chapter 2: Medicaid and the opioid epidemic.
[3] American Society of Addiction Medicine (ASAM). What is ASAM criteria? https://www.asam.org/resources/the-asam-criteria/about.2017

The Supply of Addiction Treatment Providers Increases After ARTS

- The number of residential treatment programs increased from 4 facilities before ARTS to 78 facilities after ARTS. Except in the Far Southwest and other rural areas in the West and Southside, most Medicaid members have access to residential treatment programs within 30 miles of urban areas or 60 miles for rural areas (see map below).

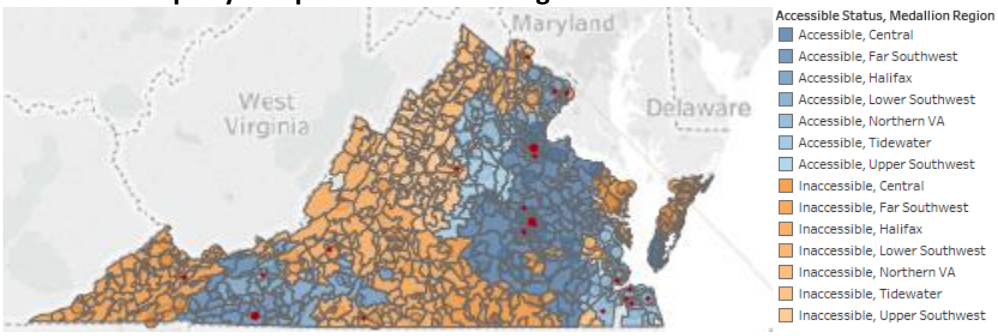
Network Adequacy of Residential Treatment Programs



Note: Map provided by the Department of Medical Assistance Services and reflect providers as of November 2017. The map is based on zip codes that have at least two providers within 30 miles driving of an urban area or 60 miles driving of a rural area.

- The number of opioid treatment programs (OTPs) increased from 6 programs before ARTS to 29 programs after ARTS. Nevertheless, there are still large areas of the Commonwealth where OTPs are not accessible (see map below).

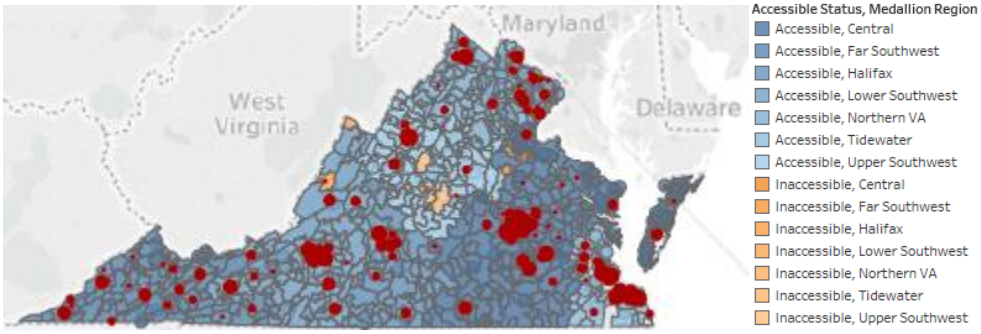
Network Adequacy of Opioid treatment Programs



Note: Map provided by the Department of Medical Assistance Services and reflect providers as of November 2017. The map is based on zip codes that have at least two providers within 30 miles driving of an urban area or 60 miles driving of a rural area.

- Overall, 526 providers prescribed buprenorphine to Medicaid members during the first 5 months of the ARTS program, a 7 percent increase from the previous year. The vast majority of Medicaid members now have access to buprenorphine prescribers that are part of a Medicaid health plan network (see map below).

Network Adequacy of Buprenorphine Waivered Practitioners



Note: Map provided by the Department of Medical Assistance Services and reflect providers as of November 2017. The map is based on zip codes that have at least two providers within 30 miles driving of an urban area or 60 miles driving of a rural area.

- The number of outpatient practitioners billing for addiction treatment services increased by 139% during the first 5 months of ARTS, compared to a similar time period in 2016. The increases were especially large for physicians and nurse practitioners (see table below).

Number and type of outpatient practitioners providing SUD and OUD treatment before and after ARTS implementation

	Before ARTS April-August 2016	After ARTS April-August 2017	Percent Change
Substance use disorder (SUD) outpatient practitioners			
Total	758	1,815	139%
Physicians	162	934	477%
Nurse practitioners	9	106	1078%
Counselors and social workers	215	274	27%
Other	372	501	35%
Opioid use disorder (OUD) outpatient practitioners			
Total	389	819	111%
Physicians	81	339	319%
Nurse practitioners	4	31	675%
Counselors and social workers	99	154	56%
Other	205	295	44%

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.

Large Increases in Service Utilization and Spending Related to Substance Use Disorders after ARTS Implementation

- During the first 5 months of the ARTS program, 13,903 Medicaid members used a substance use disorder-related service – a 40 percent increase from the year before.
- The number of Medicaid members with opioid use disorders using services increased by 39 percent during the first 5 months of the ARTS program.
- Total spending on service utilization for any substance use or opioid use disorder increased by about one-third during the first 5 months of the ARTS program.

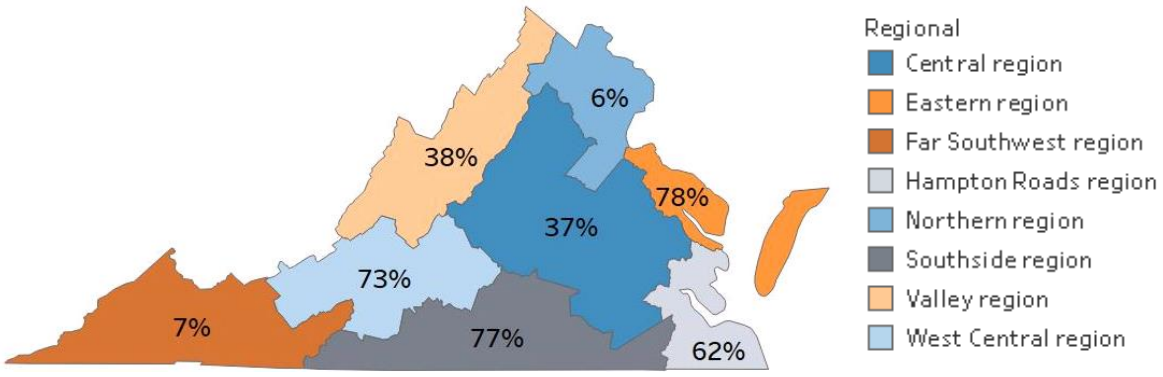
Spending and utilization of services related to substance use disorders

	Before ARTS April-August 2016	After ARTS April-August 2017	Percent Change
All substance use disorders (SUDs)			
Total number of members using SUD-related services	9,898	13,903	40%
Total spending on SUD-related services	$7,354,254	$9,743,899	32%
Opioid use disorders (OUD)			
Total number of members using OUD-related services	6,268	8,697	39%
Total spending on OUD-related services	$5,932,824	$7,797,881	31%
Alcohol use disorders (AUD)			
Total number of members using AUD-related services	2,080	3,194	54%
Total spending on AUD-related services	$952,679	$1,529,412	61%

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, pharmacotherapy, peer support, lab tests, and case management. Substance use disorder services and spending are counted using claims paid by plans to providers, (rather than the capitated rates that DMAS paid to health plans). Results are based on claims submitted between April and November, 2017 for services occurring between April 1 and August 31, 2017. As some claims may not have been submitted or paid at the time of analysis, actual utilization and spending may be higher than the estimates shown.

- Total spending on opioid use disorder services increased the most in the Southside region (77 percent) during the first 5 months of ARTS compared to a year earlier, while spending increased the least in the Northern region (6 percent) (see map below).

Percent change in total spending for OUD services between April-August, 2016 and April-August, 2017



- Over one-third (34 percent) of all spending on services related to the treatment of opioid use disorders occurred in the Far Southwest region, although this region includes only 8 percent of all Medicaid members and 20 percent of members with an opioid use disorder.
- By contrast, only 7 percent of all spending on services related to the treatment of opioid use disorders occurred in the Hampton Roads region, although this region includes 22 percent of all Medicaid members in the state and 16 percent of members with an opioid use disorder.

Spending on opioid-related services by region, April-August, 2017

	Total spending on OUD services	Share of spending on OUD services by region	Share of members with OUD by region	Share of all members by region
Virginia total	$7,797,881	100%	100%	100%
Central	$1,209,130	16%	22%	21%
Eastern	$119,997	2%	2%	2%
Hampton Roads	$577,337	7%	16%	22%
Northern	$601,484	8%	9%	22%
Southside	$359,319	5%	7%	8%
Far Southwest	$2,665,793	34%	20%	8%
Valley	$430,097	6%	6%	6%
West Central	$1,834,724	24%	18%	10%

Note: Results are based on claims submitted between April and November, 2017 for services occurring between April 1 and August 31, 2017. As some claims may not have been submitted or paid at the time of analysis, actual spending may be higher than the estimates shown.

ARTS Narrows the Treatment Gap for Members With Substance Use Disorders

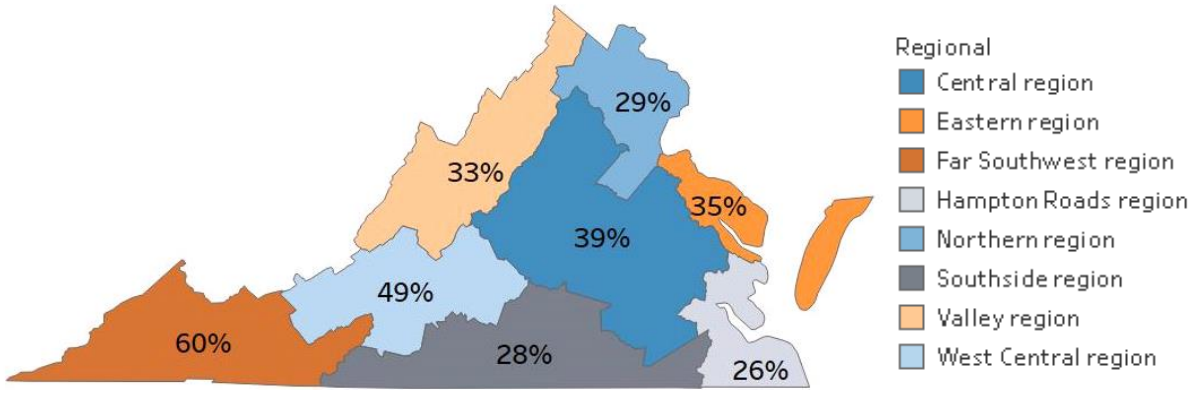
- About one-third of members with a diagnosis for substance use disorders received treatment during the first 5 months of ARTS, up from 22 percent in the prior year.
- More than half (52 percent) of members with a diagnosis of opioid use disorder received treatment during the first 5 months of ARTS, up from 40 percent the year before.
- Fewer people with an alcohol use disorder received treatment compared to those with an opioid use disorder, although treatment for alcohol use disorders increased substantially after ARTS implementation.

	Before ARTS April-August 2016	After ARTS April-August 2017	Percent Change
Total number of members with a substance use disorder (SUD)	**26,785**	**27,595**	**3%**
Member with SUD receiving any SUD treatment	5,815	9,460	63%
Percent receiving treatment	22%	34%	58%
Total number of members with an opioid use disorder (OUD)	**8,632**	**10,107**	**17%**
Members with OUD receiving any OUD treatment	3,439	5,207	51%
Percent receiving OUD treatment	40%	52%	29%
Total number of members with an alcohol use disorder (AUD)	**10,996**	**10,054**	**-9%**
Members with AUD receiving any AUD treatment	1,391	2,770	99%
Percent receiving AUD treatment	13%	28%	118%

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. Substance use disorder services and spending are counted using claims paid by plans to providers, (rather than the capitated rates that DMAS paid to health plans). Results are based on claims submitted between April and November, 2017 for services occurring between April 1 and August 31, 2017. As some claims may not have been submitted or paid at the time of analysis, actual utilization and spending may be higher than the estimates shown.

- Before implementation of ARTS, treatment rates for opioid use disorders tended to be higher in the Far Southwest and West Central regions, and lowest in the Southside and Hampton Roads region.

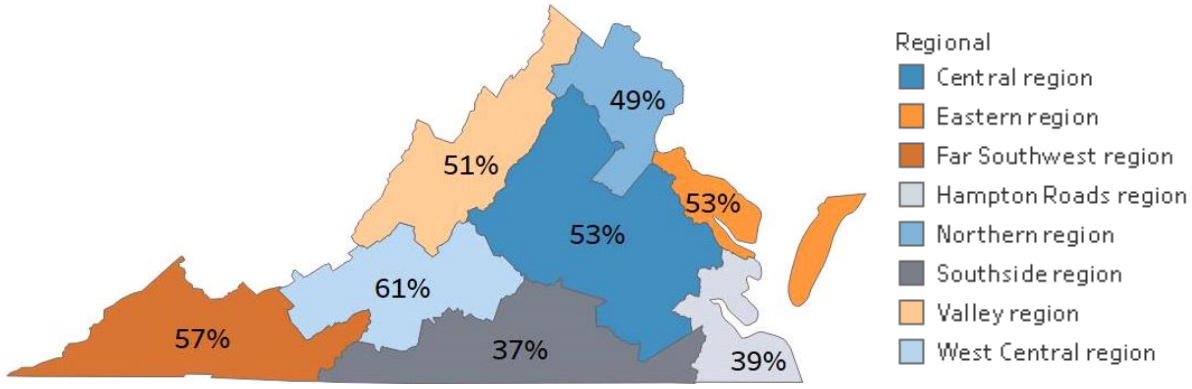
Percent of members with an OUD diagnosis who received any OUD treatment services, Apr-Aug 2016



- With the exception of the Far Southwest region, treatment rates increased across all regions during the first 5 months of ARTS. Increases in treatment rates were especially large in the Northern, Valley, and Eastern regions.

- Regional differences in treatment rates continued during the first 5 months of ARTS.

Percent of members with an OUD diagnosis who received any OUD treatment services, Apr-Aug 2017



Decreases in Emergency Department Use Related to Substance Use Disorders

It is expected that improved access to addiction treatment services will decrease emergency department (ED) utilization and spending related to substance use disorders. Although our analysis did not directly examine the causal impact of increased treatment on emergency department utilization, the trends are suggestive of such a pattern.

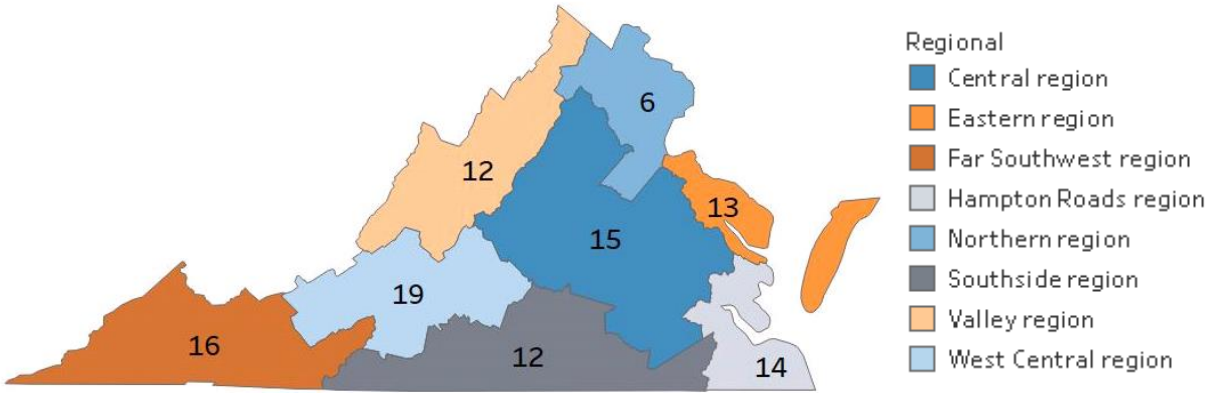
- During the first 5 months of the ARTS program, the number of ED visits that had any diagnosis for substance use disorders decreased by 31 percent, while the number of ED visits that had a diagnosis for opioid use disorders decreased by 39 percent. These decreases were larger than for all emergency department visits for Medicaid members, which decreased by 24 percent.
- The number of members with an ED visit related to substance use disorders decreased by 14 percent during the first 5 months of ARTS.
- Total spending on ED visits related to substance use disorders decreased by 14 percent, from about $19 million before ARTS to $16 million during the first 5 months of the ARTS program.

	Before ARTS April-August 2016	After ARTS April-August 2017	Percent Change
Total ED visits for all Medicaid members	409,507	310,122	-24%
ED visits related to substance use disorders (SUD)			
Total number of visits	13,592	9,374	-31%
Number of members with a visit	6,824	5,862	-14%
Total spending on visits	$18,857,124	$16,260,829	-14%
ED visits related to opioid use disorders (OUD)			
Total number of visits	2,714	1,669	-39%
Number of members with a visit	1,527	1,206	-21%
Total spending on visits	$4,667,770	$3,555,774	-24%
ED visits related to alcohol use disorders (AUD)			
Total number of visits	6,654	4,288	-36%
Number of members with a visit	3,073	2,451	-20%
Total spending on visits	$9,884,337	$7,850,417	-21%

Note: ED visits with any primary or secondary diagnosis of a substance use disorder are considered to be visits related to substance use disorders. Results are based on claims submitted between April and November, 2017 for services occurring between April 1 and August 31, 2017. As some claims may not have been submitted or paid at the time of analysis, actual utilization and spending may be higher than the estimates shown.

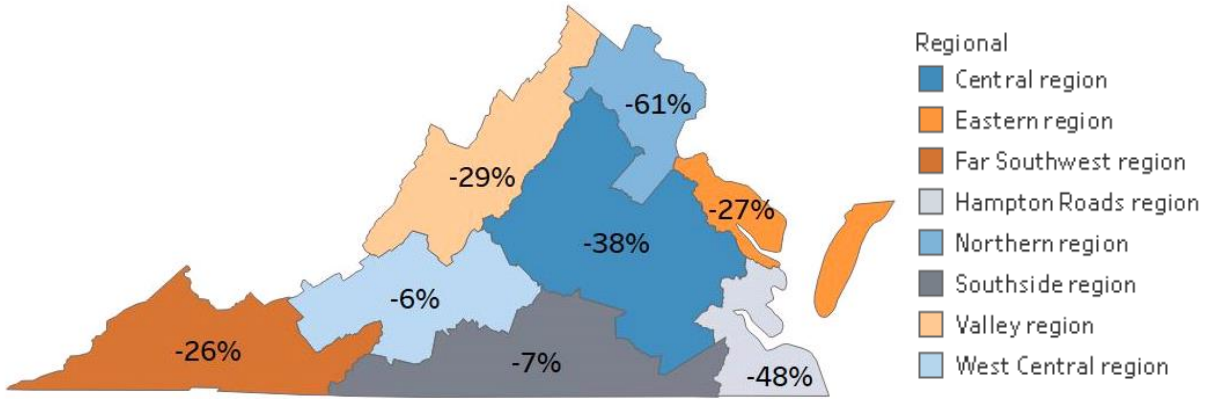
- Emergency department visits related to opioid use disorders were highest in the West Central region (19 visits per 10,000 Medicaid members) and lowest in the Northern region (6 visits per 10,000 members) (see map below).

Number of OUD-related emergency department visits per 10,000 Medicaid members, April-August, 2017



- The percent decrease in emergency department visits related to opioid use disorders during the first 5 months of ARTS was greatest in the Northern region (61 percent decrease) and lowest in the West Central region (6 percent decrease) (see map below).

Percent change in OUD-related emergency department visits between April-August, 2016 and April-August, 2017



Service Utilization by ASAM Levels of Care for Substance Use and Opioid Use Disorders

Coverage of substance use disorder services provided by ARTS are 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 (Level 0.5) to medically managed intensive inpatient services (Level 4).

- Screening, Brief Intervention, and Referral to Treatment (ASAM Level 0.5) is used to screen for substance use disorders in any healthcare setting, including primary care settings. During the first 5 months of ARTS, 221 members had screenings for substance use disorders.

- Outpatient services (ASAM Level 1), such as psychotherapy and counseling or physician evaluation, are by far the most frequently used services. During the first 5 months of ARTS, 6,861 members with a primary diagnosis of a substance use disorder had psychotherapy, counseling or a physician evaluation, including 3,492 members with an opioid use disorder.

- ARTS established a new integrated care delivery model – Office-Based Opioid Treatment. During the first 5 months of ARTS, 369 members obtained care through either this new model or an Opioid Treatment Program.

- ASAM Level 2 includes partial hospitalization and intensive outpatient services. During the first 5 months of ARTS, 386 members used these services, including 150 members with an opioid use disorder.

- ARTS added coverage of short-term residential treatment services (ASAM Level 3) and medically managed inpatient services (ASAM Level 4). During the first 5 months of ARTS, more than 1,200 members used medically managed inpatient services for substance use disorders, while 83 members used short-term residential treatment services.

Members who used treatment services for substance use disorders, April – August, 2017

	All substance use disorders	Opioid use disorders	Alcohol use disorders
Members who had any ASAM level of service	9,683	4,981	2,511
ASAM Level 0.5, Early Intervention	221	99	38
Office-Based Opioid Treatment/ Outpatient Treatment Providers	369	183	107
ASAM Level 1, Outpatient Services	6,861	3,492	1,805
ASAM Level 2, Intensive Outpatient/Partial Hospitalization	386	150	123
ASAM Level 3, Residential/Inpatient Services	83	41	26
ASAM Level 4, Medically Managed Intensive Inpatient Services	1,228	257	679

Note: Results are based on claims submitted between April and November, 2017 for services occurring between April 1 and August 31, 2017. As some claims may not have been submitted or paid at the time of analysis, actual utilization and spending may be higher than the estimates shown.

Pharmacotherapy for Treatment of Opioid Use Disorders

Treatment of opioid use disorders often involves pharmacotherapy, including buprenorphine, methadone, and naltrexone as part of evidence-based care.

- During the first 5 months of ARTS, the number of members receiving pharmacotherapy for an opioid use disorder increased by 26 percent.
- Members receiving buprenorphine pharmacotherapy – the most widely prescribed medication for opioid use disorders – increased by 25 percent.
- Methadone treatment increased by 19 percent, while naltrexone and other medications treatment increased by 45 percent, although remaining a small portion of overall pharmacotherapy.

Members who received pharmacotherapy for opioid use disorders

	Before ARTS April-August 2016	After ARTS April-August 2017	Percent Change
Members who received any pharmacotherapy for opioid use disorder	4,259	5,380	26%
Members who received buprenorphine*	3,540	4,432	25%
Members who received methadone treatment*	347	413	19%
Members who received naltrexone or other medication treatment	385	558	45%

Note: Results are based on claims submitted between April and November, 2017 for services occurring between April 1 and August 31, 2017. As some claims may not have been submitted or paid at the time of analysis, actual utilization and spending may be higher than the estimates shown.
*Excludes buprenorphine and methadone prescriptions used primarily to treat chronic pain.

Many Receiving Buprenorphine Pharmacotherapy Not Receiving Other Recommended Opioid Use Disorder Treatment Services

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.

- Less than half (48 percent) of Medicaid members who received buprenorphine pharmacotherapy during the first 5 months of ARTS received other treatment services, such as outpatient counseling or psychotherapy, physician evaluation and management, intensive outpatient, partial hospitalization, residential treatment, or medically managed intensive inpatient services.

- However, this is still a substantial increase compared to the year before, when only 30 percent of buprenorphine users received other services.

Members who received buprenorphine and other services for opioid use disorders

	Before ARTS April-August, 2016	After ARTS April-August, 2017	Percent Change
Number of members who received buprenorphine pharmacotherapy	3,540	4,432	25%
Percent of members who also received other treatment*	30%	48%	58%
Percent of members who received counseling or psychotherapy	29%	45%	57%
Percent of members who received a urine drug screen	32%	37%	14%
Percent of members who received case management services	3%	6%	124%

Note: Substance use disorder services and spending are counted using claims paid by plans to providers, (rather than the capitated rates that DMAS paid to health plans). Results are based on claims submitted between April and November, 2017 for services occurring between April 1 and August 31, 2017. As some claims may not have been submitted or paid at the time of analysis, actual utilization and spending may be higher than the estimates shown. *Treatment 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, and medically managed intensive inpatient services.

- While the Far Southwest region includes 8 percent of all Medicaid members, 45 percent of members receiving buprenorphine and over half of all buprenorphine prescriptions filled were in the Far Southwest (findings not shown).

- Buprenorphine users in the Far Southwest are only about half as likely (32 percent) to be receiving other opioid-related treatment services compared to other regions (60 percent). They are also much less likely to be receiving urine drug screens.

Members who received buprenorphine and other services for opioid use disorders

	Far Southwest	All Other Regions
Number of members who received buprenorphine pharmacotherapy	1,978	2,454
Percent of members who also received other treatment*	32%	60%
Percent of members who received counseling or psychotherapy	31%	57%
Percent of members who received a urine drug screen	27%	45%
Percent of members who received case management services	4%	8%

Note: Substance use disorder services and spending are counted using claims paid by plans to providers, (rather than the capitated rates that DMAS paid to health plans). Results are based on claims submitted between April and November, 2017 for services occurring between April 1 and August 31, 2017. As some claims may not have been submitted or paid at the time of analysis, actual utilization and spending may be higher than the estimates shown. *Treatment 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, and medically managed intensive inpatient services.

Co-prescribing with Buprenorphine

Several medications that are often co-prescribed with buprenorphine are known to have the potential for abuse among persons with opioid use disorders, including benzodiazepines (anti-anxiety medications), gabapentin (used to treat nerve pain and withdrawal symptoms), and some stimulants.

- Co-prescribing of benzodiazepines among buprenorphine users decreased by 27 percent during the first 5 months of ARTS, while co-prescribing of gabapentin increased by 22 percent.

Co-prescriptions with buprenorphine

	Before ARTS April-August, 2016	After ARTS April-August, 2017	Percent Change
Percent also prescribed benzodiazepines	32%	23%	-27%
Percent also prescribed gabapentin	28%	34%	22%
Percent also prescribed other stimulants	6%	5%	-17%
Percent also prescribed opioid analgesics	6%	4%	-32%

Note: Results are based on claims submitted between April and November, 2017 for services occurring between April 1 and August 31, 2017. As some claims may not have been submitted or paid at the time of analysis, actual utilization may be higher than the estimates shown.

- Co-prescribing of benzodiazepines and gabapentin is much higher in the Far Southwest region compared to other regions in Virginia. Co-prescribing of other stimulants and opioid pain medications is relatively rare across all regions, but lower in the Far Southwest.

Regional variation in co-prescribing with buprenorphine

	Far Southwest	All Other Regions
Percent also prescribed benzodiazepines	33%	15%
Percent also prescribed gabapentin	47%	25%
Percent also prescribed other stimulants	1%	9%
Percent also prescribed opioid pain medications	2%	6%

Note: Results are based on claims submitted between April and November, 2017 for services occurring between April 1 and August 31, 2017. As some claims may not have been submitted or paid at the time of analysis, actual utilization may be higher than the estimates shown.

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.[4,5] These include prior authorization requirements and quantity limits for new opioid prescriptions beginning in December, 2016, which was expanded to all members in health plans beginning in July 1, 2017. To encourage more substitution of non-opioid pain medications for opioids, non-opioid pain medications that do not require prior authorization have been added to Medicaid formularies.

- During the first 5 months of ARTS, the total number of prescriptions for opioid pain medications decreased by 28 percent compared to a similar time period in 2016.
- Total spending on opioid prescriptions and days supplied decreased by 34 percent during the first 5 months of ARTS.
- The number of non-opioid pain medications increased slightly (2 percent).

Prescriptions for opioid and non-opioid pain medications

	Before ARTS April-August 2016	After ARTS April-August 2017	Percent Change
Opioid pain medications			
Total number of prescriptions	231,449	166,471	-28%
Total days supplied	3,533,147	2,348,834	-34%
Total spending on paid claims for prescriptions	$7,564,271	$4,957,460	-34%
Number of prescriptions per 10,000 members	1,786	1,273	-29%
Non-opioid pain medications			
Total number of prescriptions	950,034	972,623	2%
Total days supplied	23,190,737	23,851,310	3%
Total spending on paid claims for prescriptions	$25,846,113	$27,285,973	6%
Number of prescriptions per 10,000 members	7,333	7,436	1%

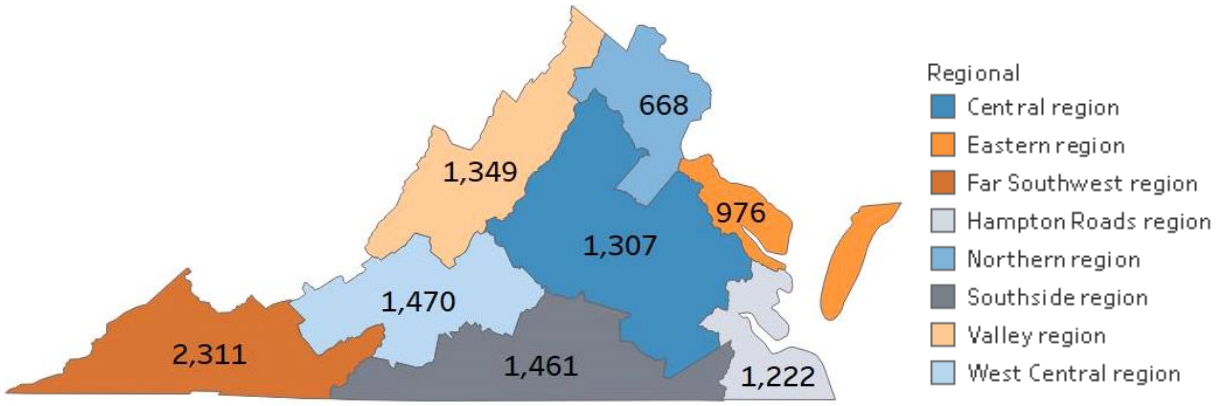
Note: These results are based on claims submitted between April and November, 2017 for services occurring between April and August, 2017. As some claims may not have been submitted or paid for at the time of analysis, actual utilization and spending may be higher than the estimates shown.

[4] Dowell D, Haegerich TM, Chou R. CDC Guideline for Prescribing Opioids for Chronic Pain — United States, 2016. *MMWR Recomm Reports*. 2016;65(1):1-49. doi:10.15585/mmwr.rr6501e1.

[5] Medical Society of Virginia. Opioid and Buprenorphine Prescriber Regulations Guide.

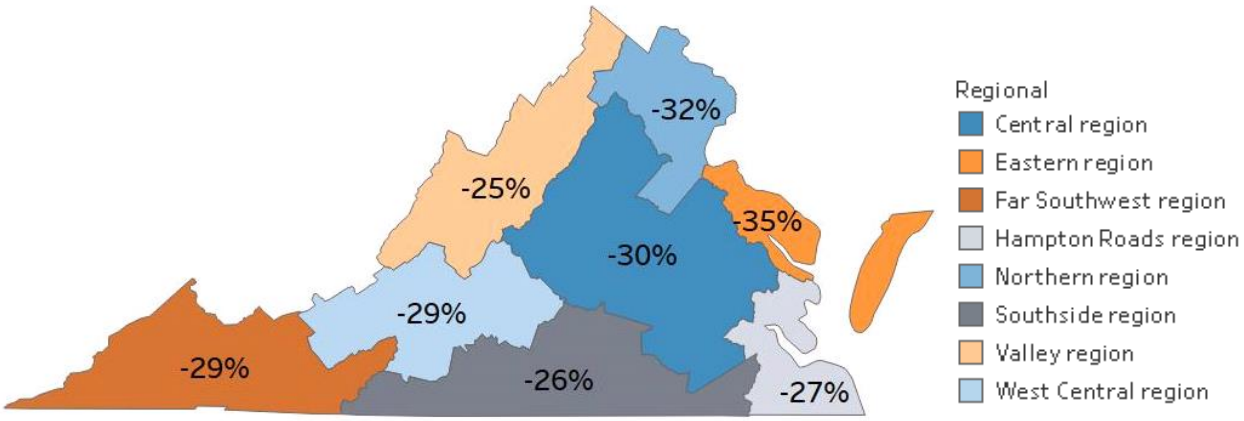
- The rate of opioid prescribing is highest in the Far Southwest region (2,311 prescriptions per 10,000 Medicaid members) and lowest in the Northern region (668 prescriptions per 10,000 Medicaid members).

Number of prescriptions for opioid pain medications per 10,000 Medicaid members, April-August 2017



- Opioid prescribing decreased the most in the Eastern region (35 percent) and decreased the least in the Valley region (25 percent).

Percent change in the number of prescriptions for opioid pain medications between April-August, 2016 and April-August, 2017



Workforce Development for Treatment of Addiction Disorders

Multiple efforts have been undertaken to increase the addiction disease management workforce in the Commonwealth of Virginia. Between January and March, 2017, the Virginia Department of Health (VDH) sponsored 27 day-long training sessions on addiction disease management (ADM) that were attended by 264 prescribers (physicians, nurse practitioners and physician assistants) and 544 behavioral health professionals.

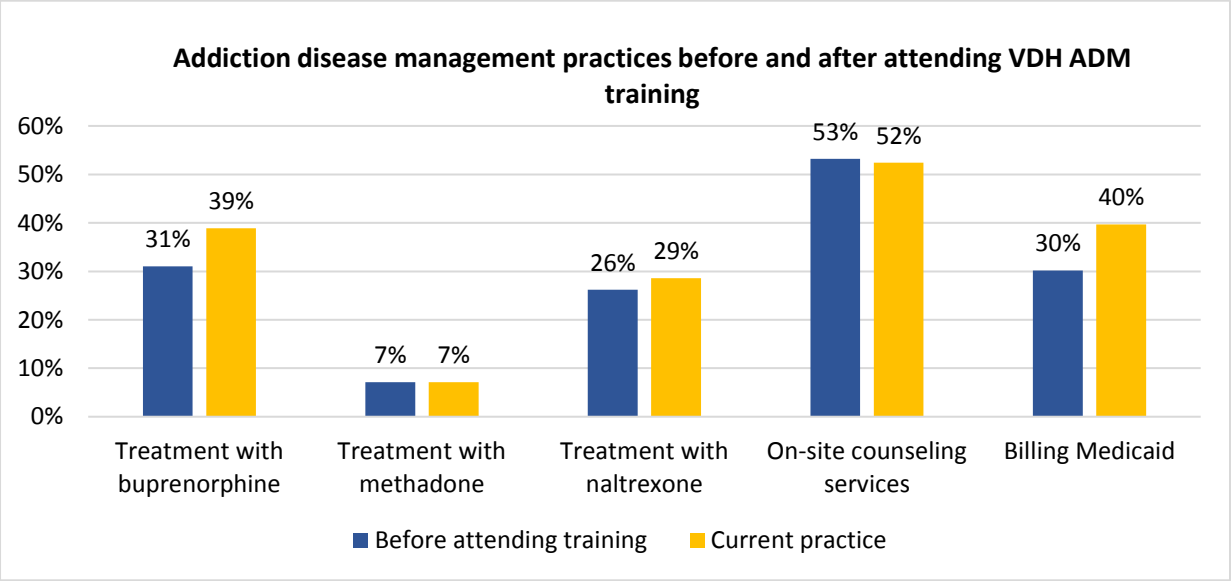
To understand the impact of these training sessions on the provision of addiction treatment services, surveys were administered to attendees both at the time of the training and 6 months after the training. At the time of the training, 419 attendees completed surveys on current and intended addiction management practices. Among those who completed the initial survey, 126 (30 percent) completed follow-up surveys. The results of the survey are summarized below:

Drug Enforcement Agency (DEA) waiver to prescribe buprenorphine

- Prior to attending the VDH ADM training, 10 percent of potential prescribers had a waiver to prescribe buprenorphine from the DEA.
- Six months after attending the training, 41 percent of those who did not have a waiver had obtained a buprenorphine prescribing waiver
- Among those who had obtained a wavier since attending the training, 77 are currently prescribing buprenorphine to patients.

Changes in treatment practices

- The percent of attendees who provided buprenorphine treatment increased from 31 percent before attending the training to 39 percent after attending the training.
- The percent of attendees billing Medicaid for services increased from 30 percent to 40 percent after attending the training.



Other practice changes following the training

- Practitioners reported improved awareness of substance use disorders.
- Practitioners reported improved controlled substance prescribing patterns including co-prescription of naloxone (a rescue medication) when prescribing buprenorphine or other opioid use disorder medications.
- After attending trainings, practitioners were more likely to use motivational interviewing skills and other counseling skills taught during the addiction disease management training.
- More clinic staff were trained on addiction disease management.

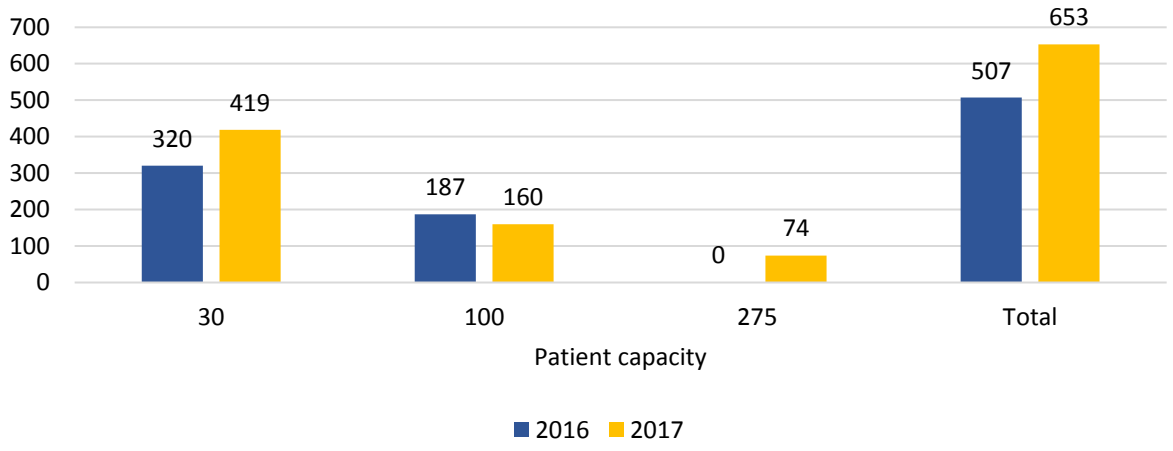
Barriers identified to starting or increasing buprenorphine treatment

- Although the number of waivered practioners increased, practioners reported reluctance to initiate buprenorphine treatment due to insufficient numbers of licensed providers at their clinic.
- The cost to the practice of providing addiction treatment services remains a barrier to providing care.
- Practitioners need further educational activities and/or support in naloxone training, Medicaid billing details, ongoing mentoring support, and development of regional networks of established practitioners who provide Medication-Assisted Treatment.

Increase in number of buprenorphine waivered providers

- From 2016 to 2017, there was a 29% increase (507 providers in 2016 to 653 providers in 2017) in the total number of buprenorphine waivered providers in Virginia.

Number of buprenrophine waivered providers in Virginia by waivered patient limits, 2016 to 2017

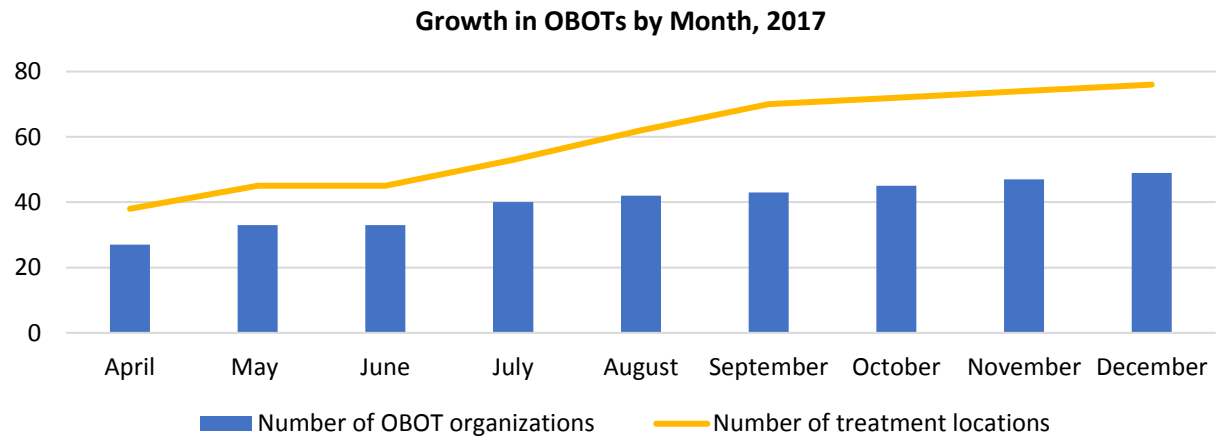


Office-Based Opioid Treatment Models

Effectively combating the opioid addiction epidemic requires expanding access to medication-assisted treatment (MAT) in community settings and coordinating with other medical and behavioral health providers. To incentivize this expansion of services and treatment capacity, ARTS provides higher reimbursement rates and a $243 per-member per-month payment to "gold card" Office-Based Opioid Treatment (OBOT) clinics that combine MAT, behavioral health therapy, and coordination with other medical and social needs. Based on an analysis of 43 applications representing 70 new OBOTs as of October, 2017, we examined the growth and geographic distribution of clinic sites, clinic settings and care models, roles and responsibilities of clinical team members, and care coordination activities.

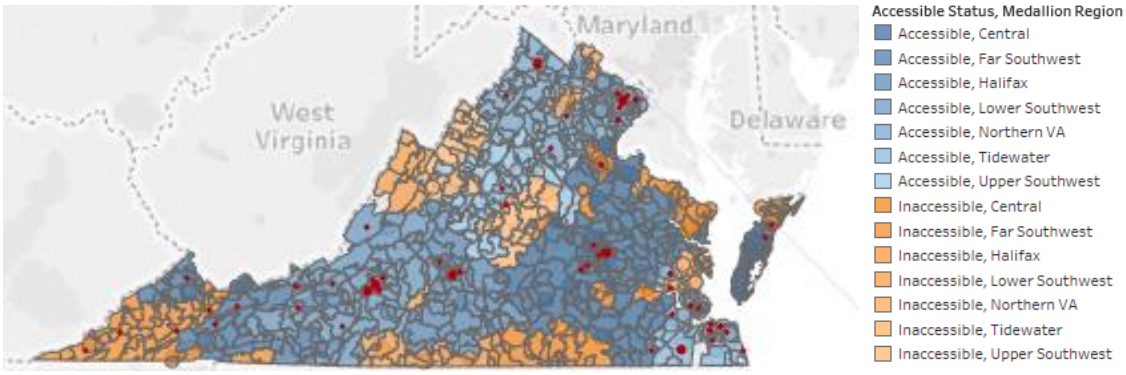
Growth and geographic distribution of OBOTs

- Statewide access to integrated MAT treatment at OBOTs has greatly expanded, from 38 treatment locations on April 1, to 76 treatment locations nine months later.



- However, most OBOTs are clustered around urban centers, leaving many rural areas without access to integrated MAT options.

Network adequacy of OBOT providers



Note: Map provided by the Department of Medical Assistance Services and reflect providers as of November 2017. The map is based on zip codes that have at least two providers within 30 miles driving of an urban area or 60 miles driving of a rural area.

Characteristics of OBOT settings and clinic care models

- OBOT settings vary, with Community Service Boards comprising almost half of all applications. OBOTs also include addiction treatment centers, health system outpatient clinics, primary care clinics, and psychiatric clinics.

Type of OBOT setting

	Count
Community service board	19
Addiction treatment center	7
Outpatient health system clinic	6
Primary care clinic	2
Psychiatry clinic	2
Federally qualified Health Clinic	1
Other (unspecified)	6

Note: Based on 43 applications submitted to DMAS as of October 2017 representing more than 70 locations.

- Most OBOTs (85%) appear to have been providing behavioral health and substance use disorder treatment services prior to ARTS.
- OBOT clinical team members include a total of 117 buprenorphine prescribers, 123 licensed behavioral health treatment providers, and 40 specialized substance abuse counselors.
- Waivered buprenorphine prescribers are primarily physicians, with significantly fewer nurse practitioners and physician assistants.
- The majority of OBOTs plan to use waivered buprenorphine prescribers to manage patients' pharmacotherapy (90%) and conduct medical intake assessments (73%).
- The majority of OBOTs directly employee prescribers, with fewer using negotiated service contracts and space rental agreements.
- Behavioral health providers include a wide array of clinical psychologists, licensed clinical social workers, licensed marriage and family therapists, licensed professional counselors, certified substance abuse counselors, and residents in counseling.
- Behavioral health providers are primarily tasked with providing individual (76%) and group counselling (78%) services.

- Less than half of OBOTs plan to use certified substance abuse counselors (CSAC) or other substance abuse counselors in their clinical teams.

- Only 3 OBOTs plan to use peer recovery specialists.

Care coordination roles and responsibilities

- Care coordination plans were underdeveloped in the majority of OBOT applications. Most did not designate a specific care coordinator or define care coordination activities.[6]

- Over half of OBOTs (56%) plan to use team meetings to coordinate patient care. About half of those using team meetings plan to meet weekly.

- Most OBOTs did not plan to use prescribers in care coordination activities.

[6] DMAS provided additional guidance on care coordination responsibilities and requirements in an update to the ARTS manual on Oct 31, 2017. In the updated manual care coordination is defined as "connecting members with community resources to facilitate referrals and respond to social service needs, as well as linking members with peer supports and tracking and supporting members when they obtain medical, behavioral health, or social services outside the practice."

Conclusion

The first 5 months of ARTS have seen substantial gains in access to and use of substance disorder services among Medicaid members. While the impact of new programs is often not observed until months or even years after they are implemented, the substantial increase in access and utilization during the first 5 months of ARTS is likely due in part to extensive preparations and outreach by the Department of Medical Assistance Services (DMAS) and the Virginia Department of Health (VDH) prior to the April 1, 2017 implementation. These include provider trainings, presentations and briefings to stakeholders by DMAS and VDH staff across the state, and efforts by health plans to recruit providers of substance use disorder services into their networks. High "pent-up demand" for services due to low access prior to ARTS may have also contributed to the surge in service utilization for substance use disorders during the first 5 months of the program.

Most notably, the supply of providers for addiction-related services increased significantly. This increase is especially apparent for residential treatment centers, which increased from 4 to 78 programs state-wide. While nearly all members now have geographic access to a buprenorphine-waivered practitioner for medication treatment of opioid use disorder, many areas of the state still lack full opioid treatment programs.

Indeed, the use of pharmacotherapy to treat opioid use disorders has dramatically increased, however, only about half of all members receiving pharmacotherapy also receive other services. Furthermore, members in some regions of the state – especially the Far Southwest – have very high rates of prescribing for buprenorphine, but much less use of other treatment services. Since outcomes tend to be better when pharmacotherapy is combined with psychotherapy and counseling, this raises concerns about the quality and effectiveness of care being received in these regions.

Higher rates of treatment for substance use disorders combined with less opioid prescribing may be related to fewer emergency department visits for substance use disorders during the first 5 months of ARTS. This decrease was larger than the decrease observed for all emergency department visits, although the report did not specifically test the impact of ARTS or other policy actions on emergency department utilization. Nevertheless, the trends are consistent with the expectation that increased access to treatment should result in fewer overdoses and other addiction-related health emergencies.

Despite gains in overall access to treatment services during the first 5 months of ARTS, some important challenges remain. Most notably, two-thirds of members with substance use disorders – and about half of members with opioid use disorders – did not receive any treatment services paid for by Medicaid. Treatment rates are considerably lower in the Southside and Hampton Roads regions compared to other areas of the state. While it is possible that some members are receiving services not paid for by Medicaid (for example, as uncompensated care or paid out-of-pocket), such care is likely to be more fragmented and ad-hoc than when received through a more organized system of treatment paid for by Medicaid.

Also, utilization of some services is still quite low, such as SBIRT (Screening, Brief Intervention, and Referral to Treatment), care coordination, intensive outpatient, partial hospitalization, and residential services. Finally, some areas of the state still lack access to some services, such as residential treatment, opioid treatment, and OBOT programs.

The ARTS evaluation team will continue to monitor trends in access, service utilization, and outcomes related to substance use disorders among Medicaid members. Future reports will examine whether the gains in access to treatment continue, and will identify new or ongoing challenges in member access and treatment.