

Washington State Medication Assisted Treatment – Prescription Drug and Opioid Addiction Project

Preliminary Outcomes through Year Two

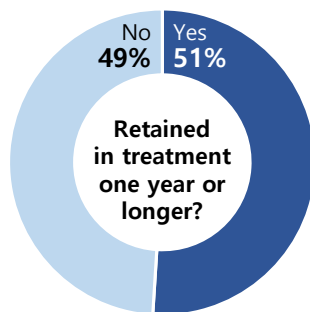
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In collaboration with Washington State's Department of Social and Health Services, Division of Behavioral Health and Recovery; Harborview Medical Center; and Evergreen Treatment Services

THE MEDICATION ASSISTED TREATMENT – PRESCRIPTION DRUG AND OPIOID ADDICTION (MAT-PDOA) PROGRAM expanded access to buprenorphine for the treatment of opioid use disorder (OUD) in Washington State. The expansion of this treatment option was to address the growing opioid epidemic. In 2015, 2.5 million Americans had an OUD.¹ Further, fatal drug overdoses have been on the rise due to an increase in opioid deaths, and now overdose is the number one cause of accidental death, outpacing car crashes and gun fatalities.² In August 2015, Washington State's Department of Social and Health Services (DSHS) received a three-year MAT-PDOA grant from the Substance Abuse and Mental Health Services Administration (SAMHSA). The Washington State MAT-PDOA project implemented an evidence-based office-based opioid treatment with buprenorphine (OBOT-B) model in three locations. One location is a large, urban hospital-based safety-net primary care clinic in Seattle. The other two are opioid treatment programs (OTP) in Olympia and Hoquiam that serve predominately rural populations via telehealth. MAT-PDOA clinics treated 532 patients in two years of operation and successfully achieved the four goals established by the project: increase MAT capacity, enhance integrated care and retention, reduce substance use, and reduce adverse outcomes of opioid abuse.

MAT-PDOA Project Goals

In the Year One report, we described the progress of MAT-PDOA during the first year of implementation.³ This report describes the continued progress through the second year of the project (ending July 31, 2017). Accomplishments through year two are:



1. MAT-PDOA clinic sites enrolled 532 patients in MAT with buprenorphine.
2. Fifty-one percent of enrolled patients were retained in treatment for a year or longer.
3. Alcohol and drug use rates decreased six months after enrollment in treatment.
4. Adverse outcomes related to opioid use disorder, such as hospitalization and unemployment, were reduced six months after enrollment in treatment.

¹ Center for Behavioral Health Statistics and Quality. Key substance use and mental health indicators in the United States: Results from the 2015 National Survey on Drug Use and Health. 2016 Contract No.: HHS Publication No. SMA 16-4984.

² American Society of Addiction Medicine. Opioid Addiction: 2016 Facts & Figures. Available from <https://www.asam.org/docs/default-source/advocacy/opioid-addiction-disease-facts-figures.pdf>.

³ Speaker, E., Mayfield, J., Yakup, S., & Felver, B. 2017. Washington State Medication Assisted Treatment – Prescription Drug and Opioid Addiction Project: Year One Performance. Department of Social and Health Services – Research and Data Analysis. Report 4.96. Available at https://www.dshs.wa.gov/sites/default/files/SESA/rda/documents/research-4-96_0.pdf.

GOAL 1

Increase MAT capacity and number of patients served

Four specific objectives were established for Goal 1:

1. Increase the number of service providers offering MAT.
2. Train staff at designated sites to use evidence-based practices to implement MAT with buprenorphine.
3. Increase the number of patients receiving MAT for opioid use disorder (OUD).
4. Develop billing protocols for MAT.

Increase the number of MAT providers. In year one, three clinic sites were selected in counties with a high need for OUD treatment services based on local opioid treatment admissions, OUD related deaths and crime lab cases related to opioids.

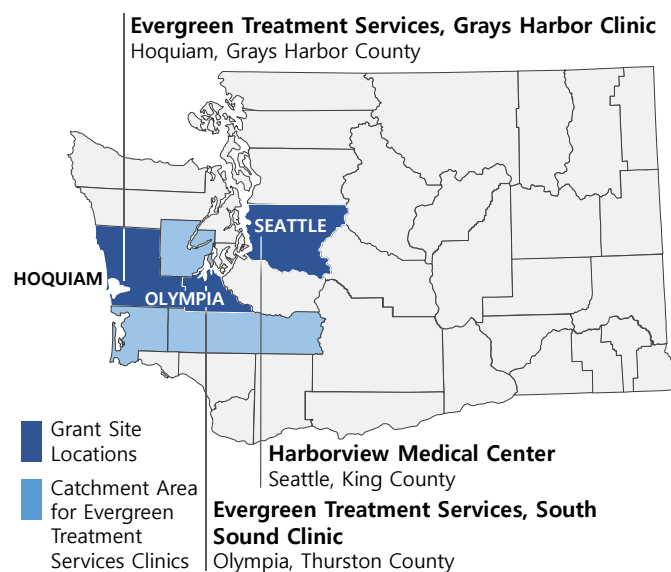
The selected sites were the Harborview Medical Center's Adult Medicine Clinic (HMC) (an urban, hospital-based, safety net primary care clinic in Seattle) and two Evergreen Treatment Services (ETS) opioid treatment programs (OTP) (South Sound Clinic (SSC) in Olympia and Grays Harbor Clinic (GHC) in Hoquiam⁴) (Figure 1). No additional clinics were added in year two.

Training Staff in Evidence-Based MAT. Project sites hired and trained staff using grant funds in year one. All hired staff were trained on the evidence-based MAT models selected in year one.⁵ Nurse care managers (NCM) and program managers were hired to assist healthcare providers with MAT service delivery. All but one project staff were retained through year two. One NCM at the GHC site resigned and was temporarily replaced by existing clinic staff due to difficulties recruiting qualified staff in that rural community. During year two, all clinics hired one to two medical assistants to assist with MAT service delivery and increase patient capacity.

The HMC Adult Medicine Clinic had seven waived⁶ physicians who could prescribe buprenorphine in year one. During year two, HMC facilitated two Drug Addiction Treatment Act (DATA) 2000 trainings which were mandated for all medical residents. In total, the HMC system has 38 waived physicians and trained 18 residents who can obtain the waiver upon medical licensure.

In year one, ETS recruited one addiction psychiatrist and one part-time physician—both with waivers—to serve patients at both ETS sites via telehealth. During year two, ETS recruited three additional waived medical providers, including a medical doctor, an advanced registered nurse practitioner, and a physician assistant.

FIGURE 1.
MAT-PDOA Grant Site Locations



⁴ To learn more about the clinical sites selected, see Speaker, E., et al. (see page 1, footnote 3).

⁵ Ibid.

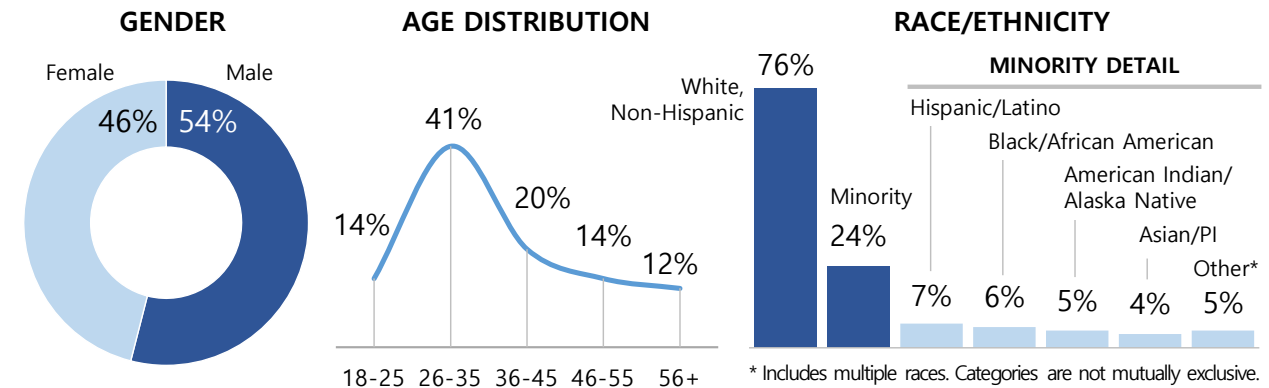
⁶ To prescribe or dispense buprenorphine, a licensed physician must apply for a Drug Addiction Treatment Act 2000 waiver with the Drug Enforcement Agency and complete eight hours of training specific to dispensing controlled substances. See https://www.deadiversion.usdoj.gov/pubs/docs/dwp_buprenorphine.htm.

Increase the Number of Patients receiving MAT. The goal for MAT-PDOA is to provide OBOT to 776 patients over the three-year project. In year one, 211 unique patients began treatment in MAT-PDOA. By the close of year two, the project had enrolled 532 unique patients: 198 at HMC, 169 at SSC, and 165 at GHC. Patients enrolled in the program were predominately White, non-Hispanic (76 percent), more likely to be male (54 percent) and aged 26 to 35 (41 percent) (Figure 2). Of the enrolled patients, 83 percent were receiving publicly funded healthcare (Medicaid).

FIGURE 2.

WA MAT-PDOA Demographics of Enrolled Patient

Total Participants = 532



NOTE: Gender is unreported for one patient.

The majority (70 percent) of patients enrolled in the MAT-PDOA project were beginning a new MAT episode. Other patients transferred into the program either from another MAT provider (18 percent) or after being released from a detoxification program (12 percent) (Figure 3).

FIGURE 3.

Treatment Engagement Prior to MAT-PDOA Screening

Total Participants = 532



Billing Protocols for MAT. The MAT-PDOA project collaborates with Washington State agencies—the Department of Health and The Health Care Authority (Medicaid)—to revise billing protocols for MAT to improve long-term sustainability and encourage statewide dissemination of MAT. Billing codes for MAT with buprenorphine have been available in Washington State for medical clinics but were not available for opioid treatment programs (OTPs) until January 2016. HMC has been successfully billing for MAT services and the reimbursement rate allowed them to hire an additional registered nurse and medical assistant staff for OBOT. Given ETS is an OTP, long term sustainability of MAT depends on contracting with managed care organizations (MCOs). Securing contracts with MCOs has been an ongoing challenge for ETS. After nearly two years of negotiations, ETS has draft contracts with five MCOs and hope to finalize them prior to the end of grant funding in July 2018. However, even with the contracts in place, the reimbursement rate for OTPs is much lower than the rate for medical offices. The reduced rate may present long term sustainability challenges for prescribing buprenorphine in OTPs. Additionally, in 2018 the Washington State legislature appropriated funds to increase the Medicaid MAT rate.⁷ The increased rate may encourage more providers to prescribe buprenorphine for MAT.

⁷ Washington Office of Financial Management. 2017-19 enacted budgets. Retrieved April 25, 2019: <https://ofm.wa.gov/budget/state-budgets/2017-19-enacted-budgets>.

GOAL 2

Enhance Level of Integrated Care and Improve Retention Rates

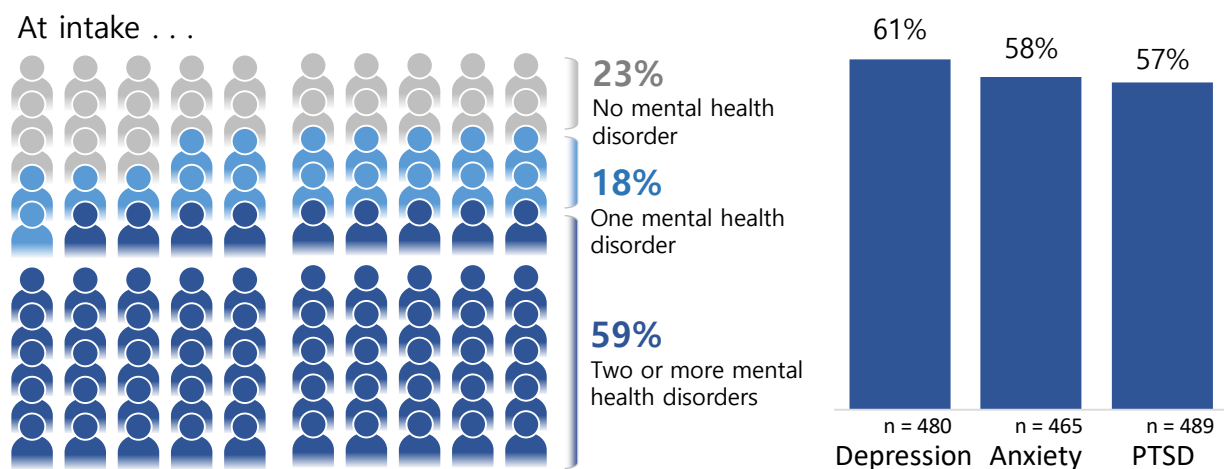
Three objectives were established for Goal 2: 1) increase access to primary care, mental health and social services, and recovery supports; 2) improve MAT retention rates for enrollees; and 3) improve electronic health record-keeping to better track treatment plans and adherence to treatment.

Increase access to services. Patients continued to receive health and social services referrals by clinical staff through year two.⁸ However, during year two, HMC added peer recovery supports by implementing the Medication Assisted Recovery Services (MARS) program and hiring a peer support navigator. The MARS program is a peer-initiated and peer-based supportive community within HMC's OBOT program that provides education and other recovery supports to participants. The peer support navigator can provide one-on-one support to individuals with a range of services from education on MAT to housing and employment support.

MAT-PDOA patients are systematically screened for depression, anxiety and post-traumatic stress disorder (PTSD), using the Patient Health Questionnaire 9 (PHQ-9), the Generalized Anxiety Disorder 7 (GAD-7), and the PTSD Checklist-Civilian (PCL-Civilian), respectively. Three in four (77 percent) of enrolled patients had at least one mental health disorder and three in five (59 percent) had more than one mental health disorder (Figure 4).^{9, 10} Of those with mental health disorders, depression was slightly more prevalent (61 percent) than anxiety and PTSD (58 percent and 57 percent, respectively).

FIGURE 4.

Prevalence of Mental Health Disorders at Intake



Improve Retention Rates. A total of 532 unique patients were enrolled by MAT-PDOA; 36 of these patients returned for second or third treatment episodes. In total the clinics completed 572 enrollments and 268 discharges. Over 50 percent of MAT-PDOA patients were retained in treatment for at least one year, which is typical for MAT patients receiving buprenorphine (Figure 5).¹¹ Retention

⁸ Speaker, et al. 2017 (see page 1 footnote 3).

⁹ A PHQ-9 or GAD-7 score of 10 or higher indicates moderate to severe depression and anxiety. A PCL-Civilian score of 30 or higher indicates moderate to severe PTSD. Patients scoring in the moderate to severe ranges were considered to have screened positive. To be considered to have at least one mental condition, at least one of these screens had to be positive (total = 462).

¹⁰ Patients with only two mental health screens completed were included in the denominator for two or more mental health conditions if the outcome of the two completed screens were both negative or if they scored positive on both completed screens (total = 481).

¹¹ Alford, D.P., LaBelle, C.T., Kretsch, N., Bergeron, A., Winter, M., Botticelli, M., Samet, J.H. 2011. Five Year Experience with Collaborative Care of Opioid Addicted Patients using Buprenorphine in Primary Care. Archives of Internal Medicine; 171(5): 425-431. DOI: 10.1001/archinternmed.2010.541.

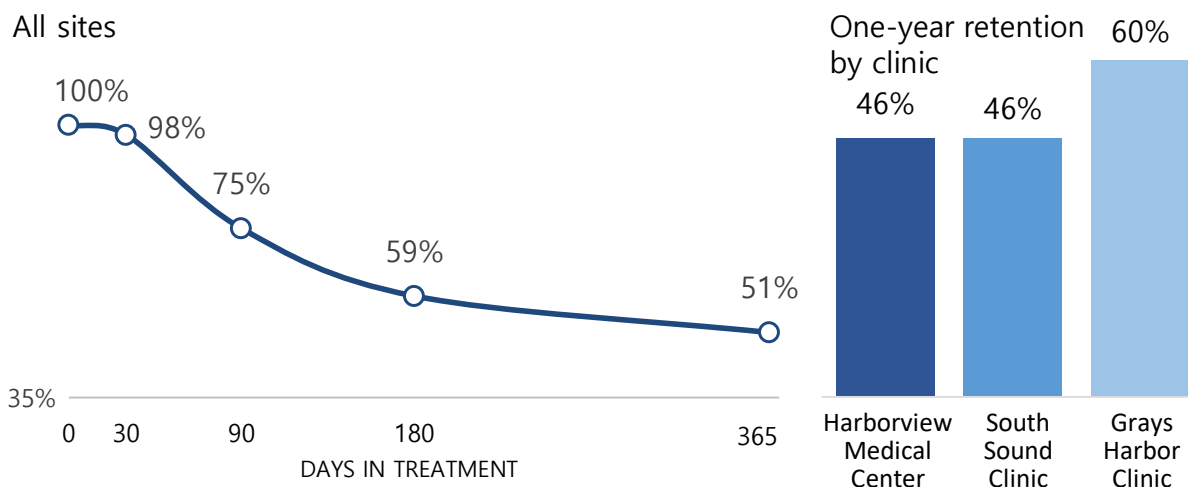
rates were calculated at 30-, 90-, 180 days and one year.¹² Across the three clinics, GHC retained the most patients at one year (60 percent) (Figure 5).

Of the patients leaving the MAT-PDOA program, one in four (24 percent) decided to end their treatment. Additionally, 40 percent left treatment without notifying the clinic, so the reason for treatment termination was unknown.

FIGURE 5.

One Year Retention in MAT-PDOA Program

Total Participant Enrollments = 572



Electronic Health Records (EHR). During year one, HMC adapted their EHR to track outcomes for MAT patients. In year two, HMC modified their EHR to improve charting and case management for MAT patients. They created reporting templates specific to staff roles and developed a template that drafts a patient letter reminding them to contact the clinic when they have missed appointments and are at risk for being discharged from the program. By the end of year two, the ETS clinics also modified their EHR to more efficiently chart MAT outcomes. All MAT-PDOA sites continue to use the Washington State Prescription Monitoring Program (PMP) to review prescription drug histories for patients.

GOAL 3

Reduce Alcohol and Drug Use

All patients enrolled in MAT-PDOA are asked to self-report their past 30 day alcohol and drug use; housing and employment; criminal justice involvement; physical, social and mental health.¹³ The survey conducted with each patient is administered at enrollment (intake) and six months after the enrollment date (follow-up).

To understand changes in patients' alcohol and drug use over time, patients were asked how many days in the past 30 days they used the following substances: alcohol, cocaine, cannabis, prescription opioids, heroin, methamphetamine, downers/sedatives, hallucinogens and inhalants.¹⁴ A total of 422 intake surveys were matched to their respective follow-up survey.

¹² To calculate retention rates, we examined total days in treatment for all enrolled and discharged patients through year two (N=565). Patients that were referred to another MAT program, tapered off treatment, had medical or mental health transfers, died, or were incarcerated were censored as the duration of their ongoing treatment could not be established.

¹³ The GPRA survey instrument is at https://www.samhsa.gov/sites/default/files/GPRA/sais_gpri_client_outcome_instrument_final.pdf.

¹⁴ The GPRA survey is descriptive only and our analyses do not include a comparison group; therefore, these results should not be used to describe the net impact of MAT.

Patients' self-reported drug use declined significantly over time.¹⁵ At intake, 78 percent of patients reported drug use in the past 30 days which dropped to 45 percent at follow-up. Opioid use also declined significantly at follow-up. Prior to treatment engagement, 66 percent of all patients reported using opioids in the past month; at follow-up only 18 percent reported opioid use.

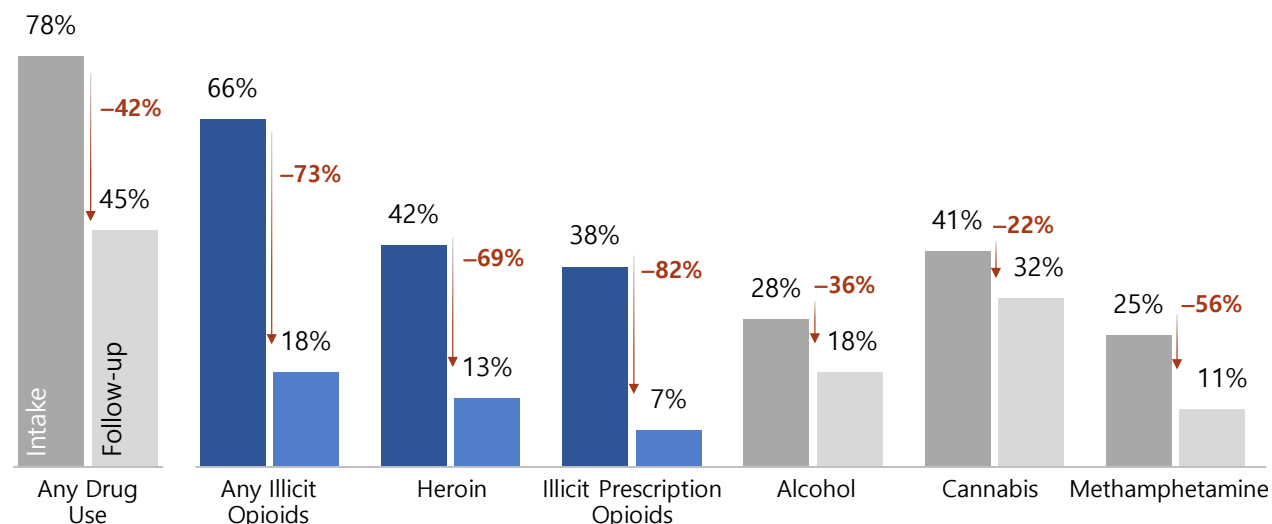
As noted in Figure 3, 30 percent of all patients enrolling in treatment were coming from another treatment program or from detoxification with a buprenorphine prescription. At intake, 42 percent of patients reported using heroin and 38 percent reported using prescription opioids illicitly. By the six-month follow-up, self-reported heroin and illicit prescription opioid use declined significantly to 13 percent and seven percent, respectively (Figure 6).

While the primary focus of MAT-PDOA is to reduce illicit opioid use, patients are also asked about their use of other substances. Alcohol, cannabis and methamphetamine were the most frequently reported non-opioids patients used at intake (28 percent, 41 percent, and 25 percent, respectively). At follow-up, significantly fewer patients reported past month use of all these substances (Figure 6).

FIGURE 6.

Self-Reported Substance Use, Past 30 Days

Total Participants = 422



NOTE: All changes were statistically significant at $p < .05$. Heroin and illicit prescription opioid use are not mutually exclusive.

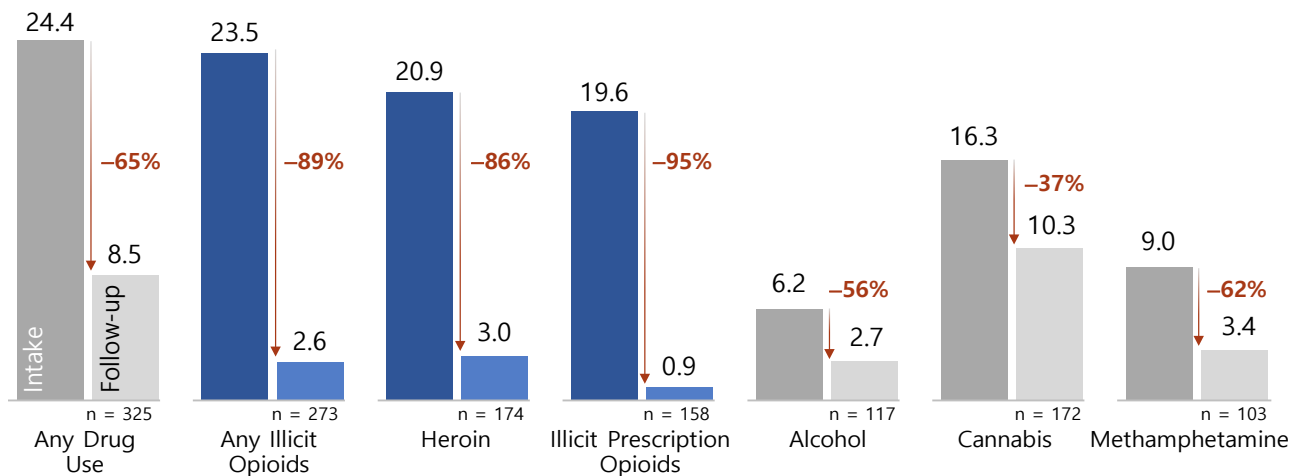
Frequency of substance use also declined. Patients reporting any alcohol or drug use at intake reported fewer days of substance use at their follow-up. Prior-month drug use declined significantly from 24.4 days to 8.5 days. Similar trends were found across all opioid categories: any opioid use declined by 20.9 days, heroin use declined by 17.9 days, and illicit prescription opioid use declined by 18.7 days (Figure 7). The frequency of alcohol, cannabis and methamphetamine use also decreased significantly at follow-up (Figure 7). Further, there was a decline in the average number of days of substance use across all categories.

Nearly a third (30 percent) of all enrolled patients reported injection drug use (IDU) at intake, compared to 10 percent at follow-up. Among patients reporting IDU, 12 percent reported sharing needles or other injection equipment at intake, 10 percent at follow-up.

¹⁵ P-values less than .05 are considered statically significant. Patients not reporting illicit opioid use were either already in treatment, given a buprenorphine prescription upon completion of detoxification, or using another prescription opioid as prescribed.

FIGURE 7.

Self-Reported Average Days of Substance Use, Past 30 Days



NOTE: All changes were statistically significant at $p < .05$. Averages are based only on patients using a specific substance at intake.

GOAL 4

Reduce Adverse Outcomes Related to Opioid Use Disorder

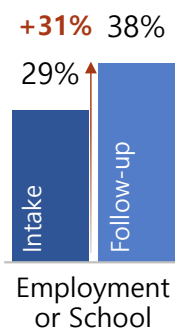
Opioid use disorder is associated with several adverse outcomes including job loss, homelessness, deterioration of interpersonal relationships, criminal justice involvement, poor health, and death. The intake and follow-up survey data were used to examine changes to housing and employment status, criminal justice involvement, and healthcare utilization. The experiences of individuals who completed both intake and follow-up surveys (n=422) are summarized here.

Additionally, Washington State administrative data was used to examine overdose rates and deaths among MAT-PDOA Medicaid patients.

FIGURE 8.

Self-Reported Employment or School Enrollment, Past 30 Days

Total Participants = 415



NOTE: Change statistically significant at $p < .05$.

Housing and Employment. Patients were asked where they were living for the majority of the past 30 days. At intake, 52 percent of patients were stably housed, reporting they rent or own their own apartment, room or house; at follow-up this increased, but not significantly, to 55 percent. Employment was defined as any part- or full-time work. School enrollment means current enrollment in school or job training.

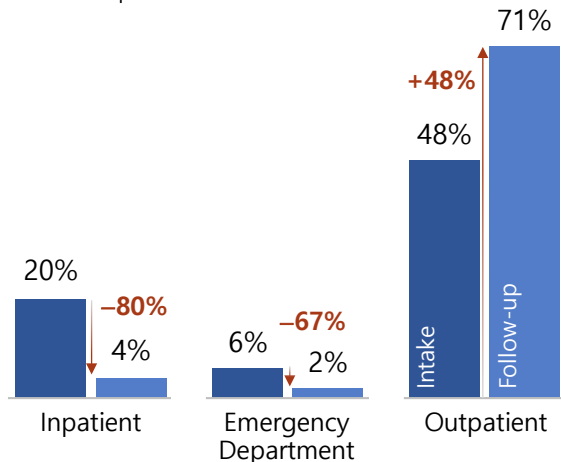
At intake, 29 percent of enrolled patients reported employment, school enrollment or both. Significantly more patients (38 percent) reported being employed or enrolled in school at follow-up (Figure 8).

Criminal Justice Involvement. Criminal justice involvement was defined as self-reported arrests, probation or parole, or awaiting charges, sentencing or trial. Criminal justice involvement declined slightly from intake to follow-up (13 percent to 12 percent), but the change was not statistically significant.

FIGURE 9.

Self-Reported Healthcare Utilization, Past 30 Days

Total Participants = 415



Note: All changes were statistically significant at $p < .05$.

Healthcare Utilization. Patients were asked about their past 30-day utilization of inpatient, emergency department or outpatient services for a physical complaint, mental or emotional difficulties, or substance misuse. Significant reductions in inpatient (20 percent to 4 percent) and emergency department utilization (6 percent to 2 percent) were reported (Figure 9).

Given patients are enrolling in outpatient treatment services, outpatient utilization significantly increased from intake to the six-month follow-up (48 percent to 71 percent).

Opioid Related Overdose and Death. Opioid overdoses result in costly hospitalizations, acute and chronic health conditions, and potentially death. Persons with Medicaid coverage are disproportionately affected by the opioid epidemic.^{16 17}

According to Medicaid claims and encounter data, at least eight percent of MAT-PDOA Medicaid patients (N=439) had an opioid overdose-related hospitalization or emergency-room encounter in the two years prior to engagement in treatment. Using administrative data, ten MAT-PDOA patients died as of January 31, 2018 (the end of the follow-up period). Five of the deaths were confirmed opioid overdoses according to death certificates. Three of the individuals were enrolled in treatment at the time of death, four deaths occurred within two month of discharge, and the remaining deaths were six to eleven months after discharge.

Summary

The Washington State MAT-PDOA project is meeting the goals established in the grant:

- The three MAT-PDOA clinic sites enrolled 532 unique individuals into their office-based opioid treatment programs.
- Patients were provided integrated care for their opioid use disorder and 51 percent of all enrolled patients were retained in treatment for one year or longer.
- Alcohol and drug use rates decreased from intake to follow up.
- Adverse outcomes related to OUD were mitigated. Employment/school enrollment rates and outpatient treatment participation increased. Inpatient hospitalizations or treatment and emergency department utilization decreased.

Additionally, MAT-PDOA clinics trained and hired additional medical providers to prescribe buprenorphine; improved their ability to document and track OUD patients; and made buprenorphine prescribing in OTPs more sustainable. Patients continue to be offered or referred to medical services, behavioral health services, and social and recovery supports.

¹⁶ Centers for Disease Control and Prevention. 2011. Policy Impact: Prescription Painkiller Overdoses. Atlanta, GA: National Center for Injury Prevention and Control, Division of Unintentional Injury Prevention. <https://www.cdc.gov/drugoverdose/pdf/policyimpact-prescriptionpainkillerod-a.pdf>.

¹⁷ Centers for Medicare & Medicaid Services. 2016. Best Practices for Addressing Prescription Opioid Overdoses, Misuse, and Addiction. CMA Information Bulletin. Baltimore, MD: Centers for Medicare & Medicaid Services. Available from <https://www.medicare.gov/federal-policy-guidance/downloads/cib-02-02-16.pdf>.

Among this population rates of co-occurring mental health disorders are high, with over three-quarters of the populations having at least one mental health condition. Drug and alcohol use rates declined among the population of patients that completed the six month follow up survey. Future analyses will evaluate how methamphetamine, cannabis, and alcohol use at intake impact treatment retention for those seeking OBOT with buprenorphine.

Patient outcomes generally improved over time, with significant increases in employment and mental health outpatient treatment utilization and significant decreases in ED visits and inpatient hospitalizations. There were no significant changes in housing stability or criminal justice involvement.

Finally, ten MAT-PDOA patients enrolled in the first two years of the program died. Half of the deaths were confirmed overdoses. Three of the patients were enrolled in treatment at the time of death, while the remaining deaths occurred within two weeks to 11 months of discharge.

These findings are descriptive and outcomes cannot be attributed to OBOT. Further study with a comparison group is needed to establish the degree to which the OBOT-B model as implemented in MAT-PDOA improves short- and long-term outcomes.

ADDITIONAL MEDICATION ASSISTED TREATMENT FINDINGS FROM WASHINGTON STATE

<https://www.dshs.wa.gov/sesa/research-and-data-analysis>

Geographic Distribution of Patients in Washington State's Medication Assisted Treatment – Prescription Drug and Opioid Addiction Project

Speaker, Mayfield, Sharkova, Yakup, Felver

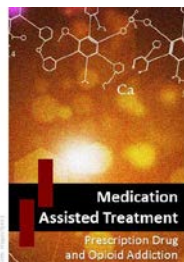
MAY 2018



Washington State Medication Assisted Treatment – Prescription Drug and Opioid Addiction Project: Year One Performance: AUGUST 1, 2015 – JULY 31, 2016

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VISIT US AT: <https://www.dshs.wa.gov/SESA/research-and-data-analysis>

We want to acknowledge the work of our colleagues throughout the research and data analysis division and our partner programs for all the work they do in serving Washington's vulnerable populations.