

# Washington State Medication Assisted Treatment – Prescription Drug and Opioid Addiction Project: Year One Performance

AUGUST 1, 2015 – JULY 31, 2016

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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

CURRENTLY, the nation faces an opioid epidemic; in 2015, approximately 2.5 million Americans had an opioid use disorder.<sup>1</sup> Nearly 80 people die each day from an opioid-related overdose, and the treatment capacity to address this growing crisis is inadequate.<sup>2</sup> Washington State’s Department of Social and Health Services (DSHS) received a three-year federal grant to expand access to integrated medication assisted treatment with buprenorphine for opioid use disorders. The grant is funded through the Substance Abuse and Mental Health Services Administration (SAMHSA) from August 1, 2015 through July 31, 2018. The Washington State Medication Assisted Treatment – Prescription Drug and Opioid Addiction (MAT-PDOA) project implemented an evidence-based office-based opioid treatment with buprenorphine (OBOT-B) model in one large, urban safety-net primary care setting in Seattle and two opioid treatment programs (OTP) in Olympia and Hoquiam that serve predominately rural populations via telehealth.

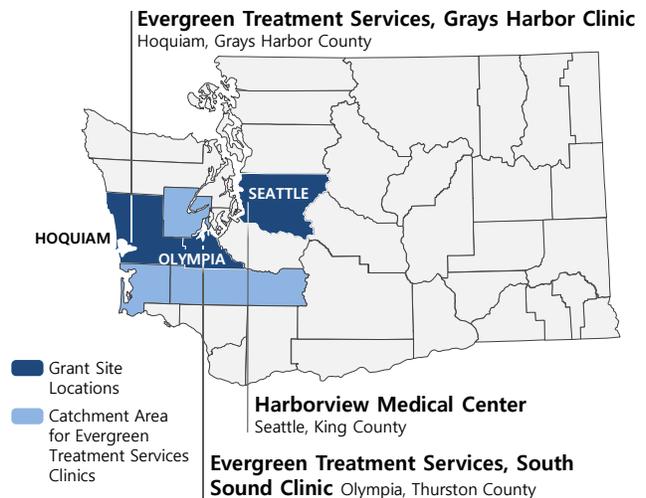
**MAT-PDOA clinics treated 211 patients in the first year of operation and successfully advanced the four main goals established by the project.**

## MAT-PDOA Project Goals

In this report, we describe in greater detail the progress towards achieving MAT-PDOA goals during the first year of implementation, August 1, 2015 – July 31, 2016. The four goals were:

1. Increase the number of patients receiving MAT with buprenorphine by increasing capacity in office-based settings.
2. Enhance the integrated care patients receive and improve treatment retention rates for enrollees.
3. Reduce 30-day alcohol and drug use rates.
4. Reduce adverse outcomes related to opioid use disorder.

FIGURE 1.  
MAT-PDOA Grant Site Locations



<sup>1</sup> 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.

<sup>2</sup> Department of Health and Human Services. 2016. The Opioid Epidemic: By the Numbers. Available at <https://www.hhs.gov/sites/default/files/Factsheet-opioids-061516.pdf>.

## GOAL 1

### Increase MAT capacity and number of patients served

To achieve Goal 1—increase MAT capacity and the number of patients receiving MAT in Washington State—MAT-PDOA project staff established four objectives: 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); and 4) develop billing protocols for MAT.

**Increase the number of MAT providers.** To expand the number of service providers offering MAT, the project identified counties with a high need for OUD treatment based on opioid treatment admissions, OUD related deaths and crime lab cases involving opioids. In the selected counties, these measures increased significantly in the past decade (Table 1). Three clinical sites were selected to serve these counties: an urban, safety net primary care clinic within Harborview Medical Center (HMC) in Seattle and two Evergreen Treatment Services opioid treatment programs (OTP): South Sound Clinic (SSC) in Olympia and Grays Harbor Clinic (GHC) in Hoquiam. HMC was selected to expand their existing capacity for OBOT-B and the ETS OTPs previously only offered methadone, and were selected to implement OTP/OBOT-B model with telehealth. The ETS clinics serve a predominantly rural five-county region in western Washington (Figure 1).

TABLE 1.

#### Opioid Risk Profiles for Counties Served by MAT-PDOA Clinics

County	Publicly Funded Opioid Treatment Admissions Annual Rate per 100,000			Deaths Attributed to Any Opiate Annual Rate per 100,000			Crime Lab Cases Involving Any Opiate Annual Rate per 100,000		
	2002-04	2011-13	% Change	2002-04	2011-13	% Change	2002-04	2011-13	% Change
Grays Harbor	88.6	260.7	194.1%	9.4	8.6	-8.2%	52.2	166.0	217.9%
King	72.5	130.9	80.7%	6.2	7.5	21.1%	11.9	17.6	48.2%
Lewis	60.5	118.7	96.2%	3.5	10.1	186.8%	27.9	118.6	325.3%
Mason	86.4	201.3	132.9%	5.7	14.0	145.3%	26.9	106.3	295.3%
Pacific	62.7	289.8	362.1%				51.5	114.5	122.6%
Thurston	59.2	138.9	134.7%	5.7	7.4	30.2%	17.4	11.5	-33.6%
State Average	59.4	176.3	196.5%	6.6	8.6	30.9%	19.8	36.7	85.6%

SOURCE: University of Washington: Alcohol and Drug Abuse Institute. 2015. Opioid trends across Washington State. ADAI-IB 2015-01. See: <http://adai.uw.edu/pubs/infobriefs/ADAI-IB-2015-01.pdf>. NOTE: Pacific County data not available for deaths attributed to any opiate.

**Training Staff in Evidence Based MAT.** All project sites hired and trained staff using grant funds. Each clinic hired a nurse care manager (NCM) and program manager to assist with grant implementation. At the end of year one, all nurse care managers were hired and ETS was still recruiting a second program manager. HMC already had physicians waived<sup>3</sup> to provide MAT; ETS recruited one addiction psychiatrist to serve patients at both ETS sites via telehealth. The clinics implemented: 1) evidence-based MAT with buprenorphine/naloxone; 2) Massachusetts Office-Based Opioid Treatment with Buprenorphine (OBOT-B) model; and 3) a promising practice, The Johns Hopkins School of Medicine Collaborative Opioid Prescribing (CoOP) model of OTP/OBOT coordinated care. Ten staff between the three clinics was trained on the three models. ETS staff, who serve rural communities, were also trained on telehealth to deliver MAT.

HMC increased the number of MAT waived physicians to 21 in year one, up from seven in the Adult Medicine clinic prior to MAT-PDOA implementation. At the close of year one, HMC had trained 31 medical staff on the model, including residents, NCMs, and waived physicians. HMC plans to

<sup>3</sup> To prescribe or dispense buprenorphine, a licensed physician must apply for a waiver with the Drug Enforcement Agency and complete eight hours of training specific to dispensing controlled substances.

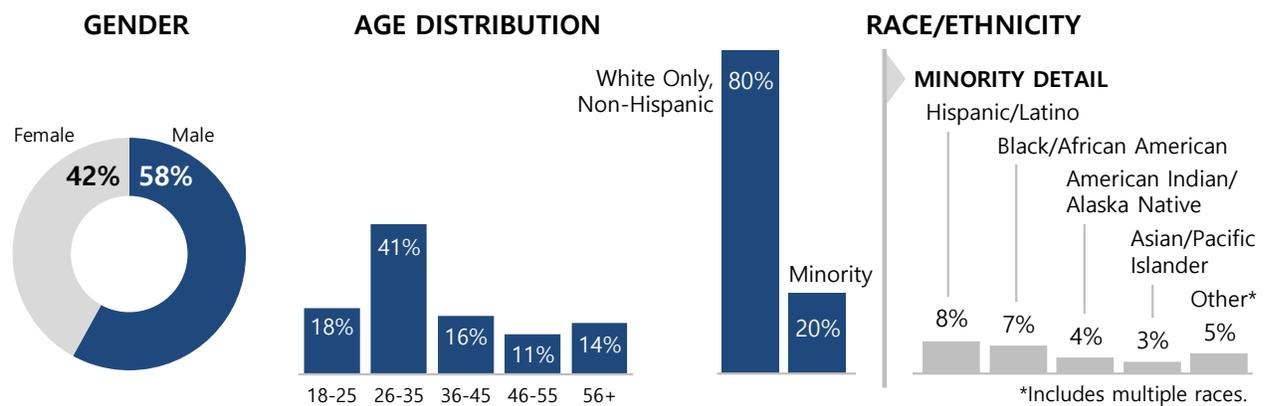
conduct more training in year two. During year one ETS clinics shared one physician via telehealth. Due to patient capacity issues inherent in sharing one physician between two sites, ETS continued to build partnerships with other physicians and healthcare agencies to expand MAT at those clinics. At the end of year one, ETS recruited a second, part time MAT-waivered physician and trained two NCMs.

**Increase the Number of Patients receiving MAT.** The MAT-PDOA project plans to serve 776 patients over three years, 204 patients in the first year. By the end of year one, the project clinics screened 239 patients for enrollment in MAT. Of those 239 patients, 211 enrolled in treatment and received their first dose of buprenorphine: HMC enrolled 76, ETS SSC enrolled 74, and ETS GHC enrolled 61. The patients enrolled in MAT were predominately white (80 percent), more likely to be male (58 percent) and aged 26 to 35 (41 percent) (Figure 2).

FIGURE 2.

### WA MAT-PDOA Enrolled Patient Demographics

TOTAL PARTICIPANTS = 211



NOTE: Gender is unreported for one patient. Race is unreported for two patients.

The majority (65 percent) of patients enrolled in MAT-PDOA were not in any other substance use disorder treatment prior to enrollment. Seventeen percent of patients were already receiving MAT with buprenorphine or methadone. ETS partnered with local detoxification agencies for patients who are placed on a waiting list for treatment. Eighteen percent of patients received detoxification services prior to enrollment in MAT-PDOA (Figure 3) and were inducted on buprenorphine prior to their treatment start date.

FIGURE 3.

### Treatment Engagement Prior to MAT-PDOA Induction

TOTAL PARTICIPANTS = 211



**Billing Protocols for MAT.** The MAT-PDOA project is collaborating with Washington State agencies—the Department of Health and Health Care Authority (Medicaid)—to develop billing protocols for MAT to improve long-term sustainability and encourage statewide dissemination of MAT. When the MAT-PDOA project began, billing codes were available for medical clinics but not OTPs. Through the efforts of this project and others, billing rules were amended in January 2016 so OTPs could receive reimbursement for MAT services. HMC has successfully billed and the reimbursement rate allowed HMC to hire an additional registered nurse and medical assistant to help coordinate MAT OBOT care. Given ETS is an OTP, long term sustainability will depend on contracting

with managed care organizations (MCOs) that handle Medicaid and third party insurance claims. Securing these contracts has presented some challenges, but ETS has draft contracts with five of the MCOs and hopes to finalize them prior to the end of grant funding. However, even with the contracts in place, the reimbursement rate for OTPs is much lower than what medical clinics can receive. The reduced rate will present long term sustainability challenges for OBOT in OTPs.

## GOAL 2

### Enhance Level of Integrated Care and Improve Retention Rates

To meet this goal, three objectives were developed: 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.

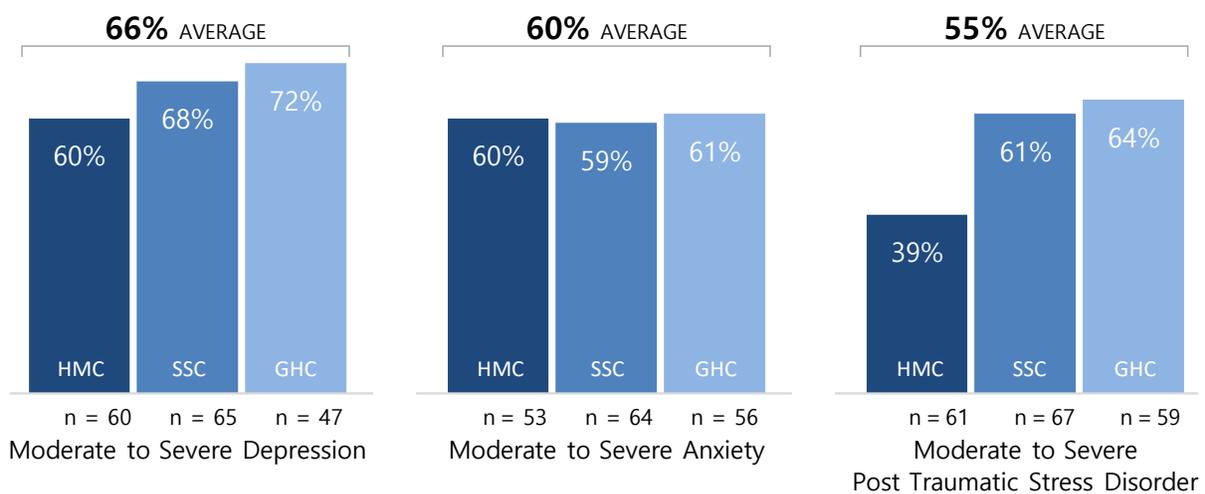
**Increase access to services.** All three MAT-PDOA clinics routinely provide or refer patients to medical, mental health, social and recovery services as needed. Primary medical care is provided to all HMC patients and ETS sites refer patients to primary care as needed. All sites routinely screen for HIV, viral hepatitis, and sexually transmitted infections, and if positive, HMC creates care plans with patients and ETS refers patients for further assessment and care. Project clinics also routinely refer patients to dental services, wound clinics, transportation services, detoxification, mental health services, employment and housing assistance programs, shelters, and intensive outpatient or inpatient treatment for substance use disorders.

Depression, anxiety and post-traumatic stress disorder (PTSD) screening is routine upon enrollment in MAT-PDOA using the Patient Health Questionnaire 9 (PHQ-9), the Generalized Anxiety Disorder 7 (GAD-7), and the PTSD Checklist-Civilian (PCL-Civilian), respectively. Screening for the presence of mental health disorders is particularly critical given that co-morbidity for substance use and mental health disorders is common<sup>4</sup>. Among enrolled patients screened, 79 percent (Figure 4) had at least one mental health disorder and 59 percent had more than one mental health disorder.<sup>5,6</sup>

FIGURE 4.

#### Mental Health Screen Results at Intake

TOTAL PARTICIPANTS = 211



<sup>4</sup> Lucenko, B.A., Mancuso, D., Felver, B.E.M., Yakup, S. 2010. Co-occurring mental illness among clients in chemical dependency treatment. Washington State Department of Social and Health Services: Research and Data Analysis. Report 4.82.

<sup>5</sup> A PHQ9 or GAD7 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.

<sup>6</sup> Patients with only two mental health screens completed were included in the denominator if the outcome of the two completed screens were both negative or if they scored positive on both completed screens.

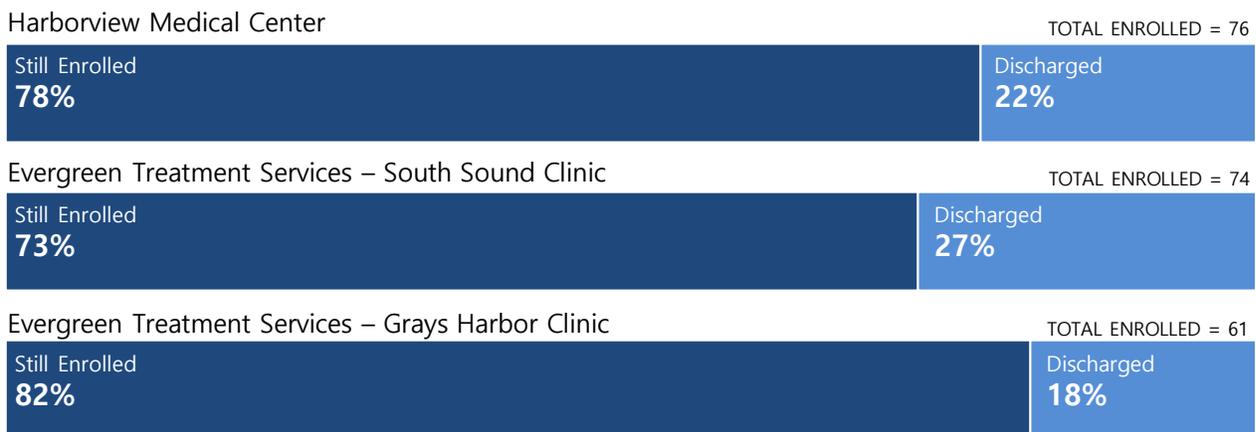
**Improve Retention Rates.** The research literature on OUD treatment programs cites a 50 percent retention rate for persons who begin opioid treatment.<sup>7</sup> In year one, MAT-PDOA clinic retention rates were 77 percent (Figure 5).<sup>8</sup> For patients still enrolled in MAT-PDOA at the close of year one, the average number of days in treatment was 112 days. Patients that left the program averaged 76 days in treatment. The top three reasons for leaving treatment was inability for the clinic to locate patients that miss appointments, patient deciding to end treatment, or being referred to another program. Three patients returned to treatment after having left.

**Electronic Health Records.** HMC uses their electronic health record system, Epic, to document patient outcomes and create customized reports for monitoring treatment plans and adherence to MAT. The ETS clinics’ electronic health record has not been adapted to track MAT; therefore an additional patient log is used to manually track treatment adherence at those clinics. Additionally, all three sites use the Washington State Prescription Monitoring Program (PMP) to look up incoming patient prescription drug histories. Clinics, however, report the PMP to be cumbersome and the lag in reporting to be restrictive.

FIGURE 5.

### MAT-PDOA Year One Retention by Clinic

TOTAL PARTICIPANTS = 211



## GOAL 3

### Reduce 30 Day Alcohol and Drug Use Rates

SAMHSA requires the MAT-PDOA project to conduct the Government Performance and Results Act (GPRA) survey with all participants.<sup>9</sup> The survey is a self-report tool that asks participants about past 30 day alcohol and drug use; housing and employment; criminal justice involvement; physical, social and mental health. The survey is conducted for each patient 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, marijuana, prescription opioids, heroin, methamphetamine, downers/sedatives, hallucinogens and inhalants.<sup>10</sup>

<sup>7</sup> 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.

<sup>8</sup> Patients were considered retained in treatment if they were still enrolled in the program on July 31, 2016.

<sup>9</sup> The GPRA survey instrument is at [https://www.samhsa.gov/sites/default/files/GPRA/sais\\_gpra\\_client\\_outcome\\_instrument\\_final.pdf](https://www.samhsa.gov/sites/default/files/GPRA/sais_gpra_client_outcome_instrument_final.pdf).

<sup>10</sup> 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.

With respect to opioids, significantly fewer patients reported any use at follow-up.<sup>11</sup> Prior to treatment engagement, 65 percent of all patients reported using opioids in the past month; at follow-up only 16 percent reported opioid use. As noted in Figure 3, 35 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 35 percent reported using prescription opioids illicitly. By the six-month follow-up, heroin use declined to 13 percent and illicit prescription opioid use dropped to six percent, according to self-reports (Figure 6).

While the focus of MAT-PDOA is to reduce illicit opioid use, it is useful to report other substance use patterns associated with treatment. Reported alcohol use rates declined (22 percent to 20 percent), but the change was not statistically significant. Similarly, most other reported drug use declined slightly from intake to follow-up, but the declines were not statistically significant. Methamphetamine use, however, had significant declines in reported use at intake and follow-up (19 percent to 9 percent, respectively).

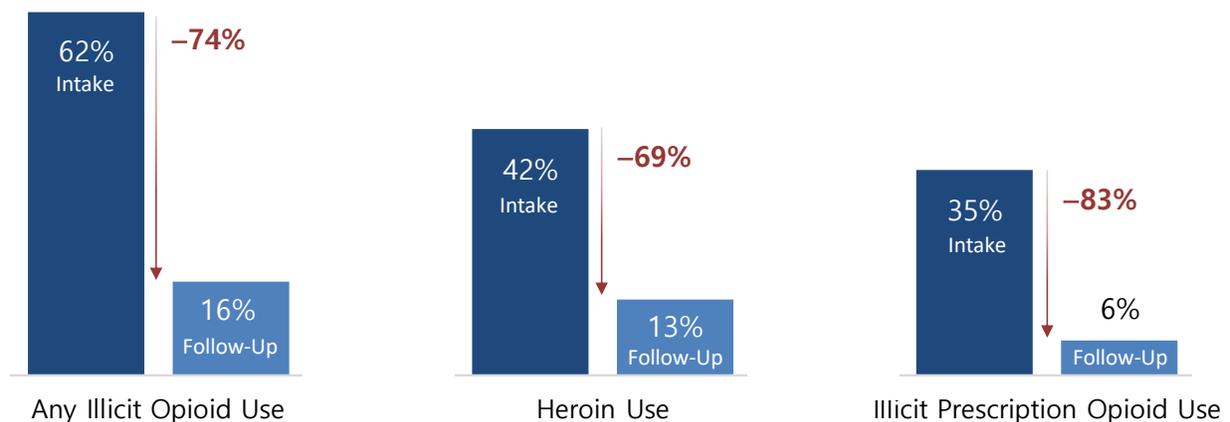
Compared to intake, patients reporting any alcohol or illicit drug use reported fewer days of substance use in the month prior to follow-up. Self-reported illicit drug use significantly declined from 25.5 days to 15.5 days in the past month. Similar trends were found across all opioid categories and all were statistically significant: any opioid use declined by 14.2 days, heroin use declined by 11.9 days, and illicit prescription opioid use declined by 10.6 days (Figure 7). Alcohol use days were relatively unchanged (5.7 to 5.3 days). All other drug categories reported either had small, insignificant declines in days used or remained constant from intake to follow-up.

Finally, patients were also asked about injection drug use (IDU) during the past 30 days. IDU was reported by nearly a third (31 percent) of all enrolled patients at intake. At follow-up, the self-reported rate of IDU was nine percent.

FIGURE 6.

### Self-Reported Opioid Use, Past 30 Days

TOTAL PARTICIPANTS = 152

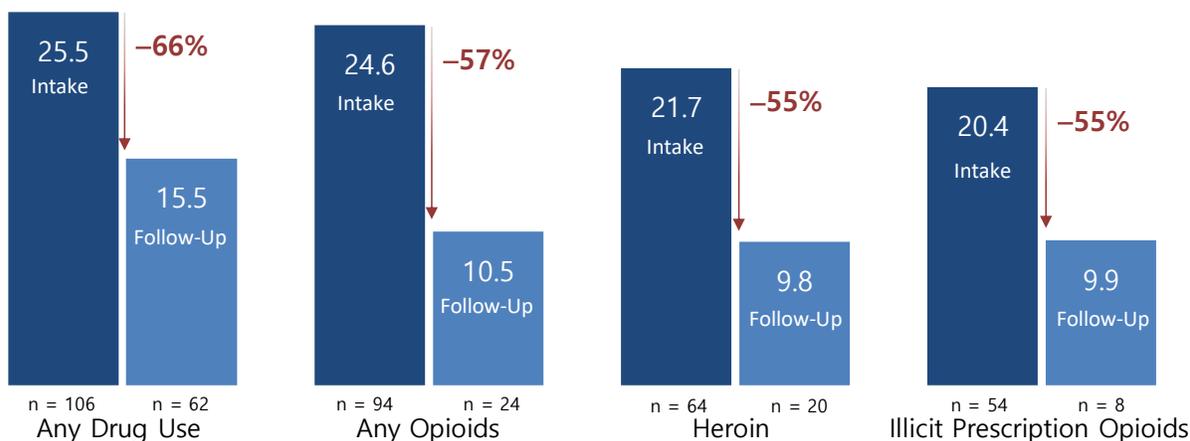


NOTE: Heroin and Illicit Opioid Use are not mutually exclusive. Statistically significant at  $p < .0001$ .

<sup>11</sup>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 Drug Use, Past 30 Days



NOTE: Statistically significant at  $p < .0001$ . Averages are based only on patients using drugs.

## GOAL 4

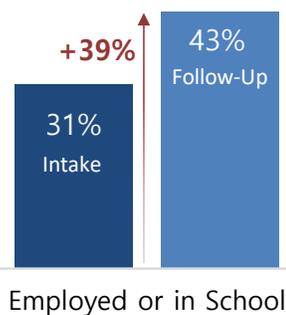
### Reduce Adverse Outcomes Related to Opioid Use Disorder

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 GPRA intake and follow-up data were used to examine housing and employment status, criminal justice involvement, death, and healthcare utilization.

FIGURE 8.

### Self-Reported Employment and School Enrollment, Past 30 Days

TOTAL PARTICIPANTS = 152



NOTE: Statistically significant at  $p = .01$ .

The experiences of individuals who completed both intake and follow-up surveys ( $n=152$ ) are summarized here.

**Housing and Employment.** The majority of patients were housed at intake (93 percent) and follow-up (94 percent). At intake, 31 percent of enrolled patients reported employment, school enrollment or both. Significantly more patients (43 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 increased slightly over time (12 percent to 14 percent); however the change was not statistically significant.

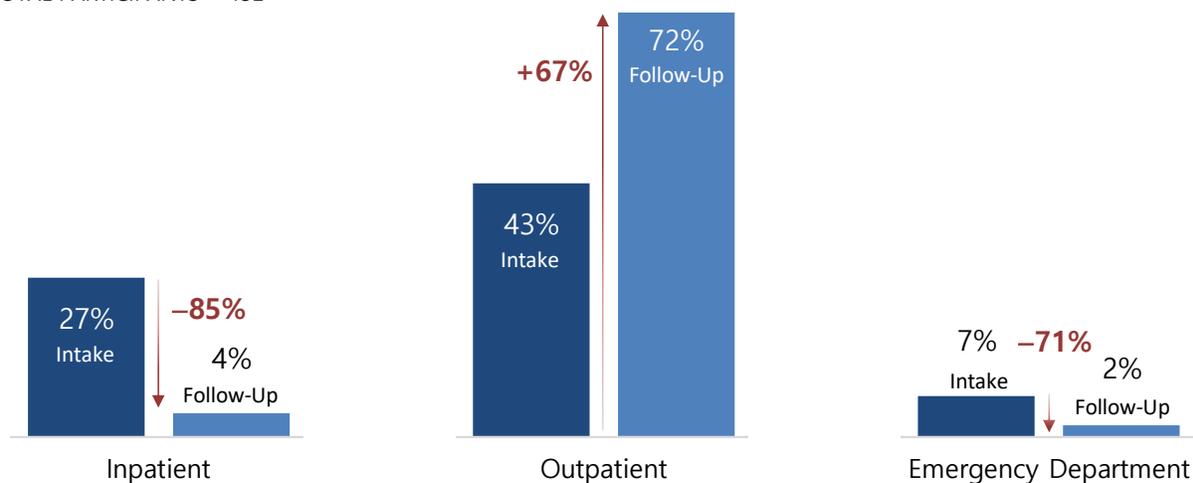
**Opioid Related Overdose and Death.** One death was reported in the follow-up period. The cause of death is unknown and the individual had discharged from treatment prior to the time of death. Future analyses of MAT-PDOA outcomes will examine overdoses or deaths related to opioid use among grant participants using Washington State Department of Health and Medicaid records.

**Emergency Department Utilization.** Patients were asked about their past 30-day utilization of inpatient, outpatient or emergency department services for physical complaint, mental or emotional difficulties, or substance misuse. Significant reductions in inpatient (27 percent to 4 percent) and emergency department utilization (7 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 (43 percent to 72 percent).

FIGURE 9.

## Self-Reported Healthcare Utilization, Past 30 Days

TOTAL PARTICIPANTS = 152



Note: Statistical significance at  $p < .001$  for Inpatient and Outpatient utilization; and Emergency Department utilization ( $p = .0348$ ).

## Summary

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

- Increasing the number of patients receiving MAT by increasing capacity in office-based settings.
- Enhancing the integrated care MAT-PDOA patients receive and improving treatment retention rates for MAT-PDOA enrollees.
- Reducing 30-day alcohol and drug use rates of MAT-PDOA patients.
- Reducing adverse outcomes related to opioid use disorder.

Three clinics expanded services for MAT with buprenorphine; providers not previously waived received training to provide MAT; 211 patients were enrolled into treatment; and billing procedures were amended to better facilitate MAT sustainability. Participating clinics provided or referred patients to medical services, behavioral health services, and social and recovery supports; and 77 percent of patients were retained in treatment for an average of 112 days, a retention rate higher than the 50 percent originally targeted.

Among 152 patients completing six-month follow-up surveys, illicit prescription opioid use, heroin use, methamphetamine use, and injection drug use rates declined significantly. Alcohol and other drug use rates declined, but not significantly. One death was reported in year one, which occurred after the patient had left treatment. More patients reported employment or school enrollment at follow-up; patients also reported increases in outpatient services. Inpatient treatment and emergency department utilization decreased from intake to follow-up. The majority of patients were housed (93 percent) at intake and housing remained high at follow-up (94 percent). Criminal justice involvement did not change significantly in the follow-up period.

Findings in this report are preliminary. Further study is needed to understand the degree to which the OBOT-B model as implemented here improves short- and long-term outcomes. Future analyses using administrative data and statistically matched comparison groups will provide more definitive evidence with respect to the impact of MAT-PDOA.

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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.