

# **MassHealth Medication Assisted Treatment Analysis**

## **MAT Commission Presentation**

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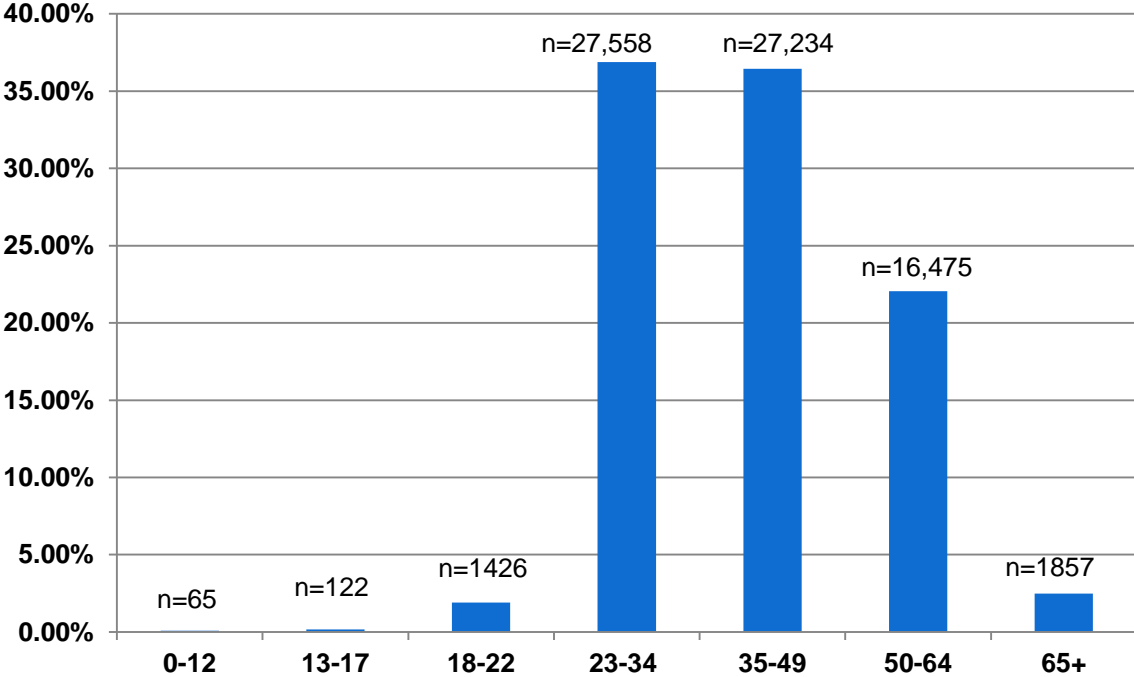
## Executive Summary

This presentation includes key findings an ongoing analysis of MassHealth administrative claims data to examine the care patterns of MassHealth members with behavioral health diagnoses. The focus of this phase of work is on impact of medication assisted treatment (MAT) for MassHealth managed care eligible members with an opioid use disorder (OUD).

# Demographic Data

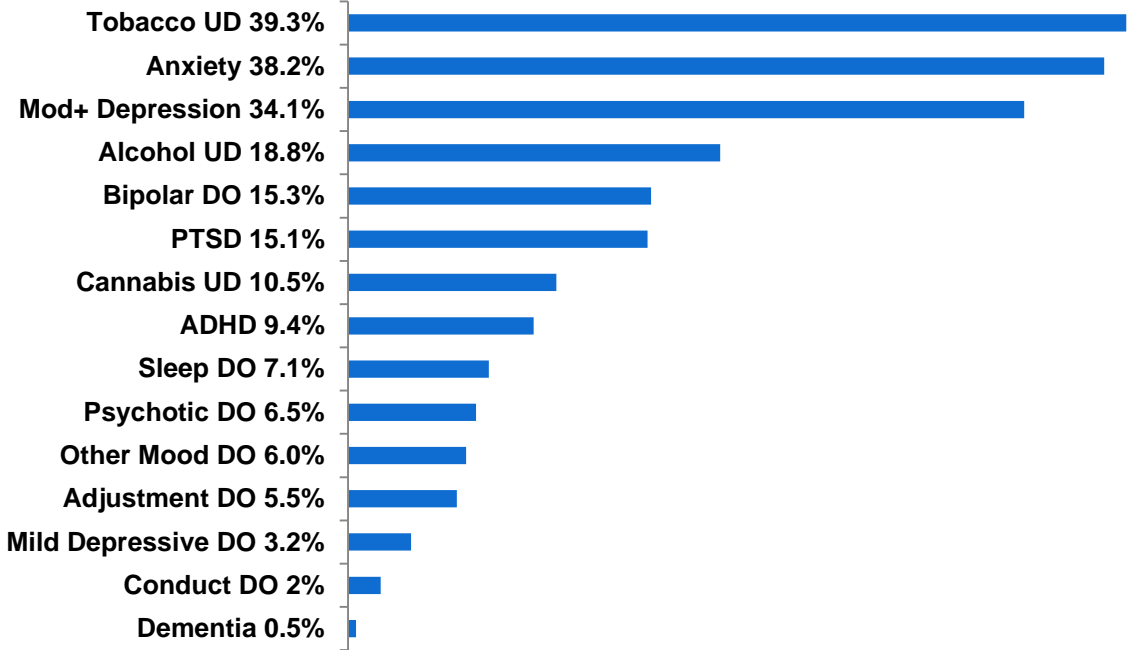
- Claims in FY17; Co-Occurring Diagnosis Data Set
  - **74,737 (4% of 1.8M) MassHealth Members had a diagnosis of OUD**
    - 42% Female
    - 58% Male

Age Ranges of Members w OUD Dx

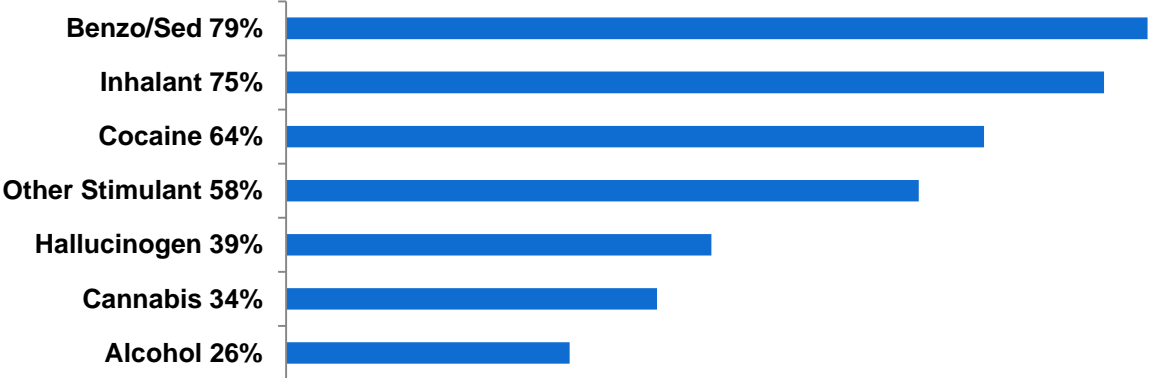


# Co-Occurring BH Diagnoses

## Most Common Co-Occurring Diagnoses w OUD



## Members w a SUD Dx often have a co-occurring OUD Dx



# MAT Analytics: Findings

- Out of 1.8M MassHealth Members:
  - 5% (90k) had a diagnosis of OUD in FY17 and
  - 75% (68k of 90k) of those had MassHealth as their primary payer
  - 67% (46k of 68k) received MAT at some point during the year

**Total MassHealth Expenditures for Managed Care Eligible Members with OUD were ~\$1.5B in FY17, greater than the total expenditure for specialty BH services for ALL beneficiaries**

<b>FY17 - Members w/ OUD</b>	<b>PMPY</b>	<b>Annual Spend</b>
Inpatient PH	\$4,170	\$285,051,304
Inpatient Behavioral Health	\$1,495	\$102,178,499
24 HR Diversionary	\$1,386	\$94,737,079
Outpatient Behavioral Health	\$1,545	\$105,601,103
Professional and Other Outpatient Hospital	\$2,722	\$186,063,856
Emergency Room and Transportation	\$1,489	\$101,783,872
Lab and Radiology - Facility	\$442	\$30,228,511
Lab, Radiology & Diagnostic - Professional	\$416	\$28,415,724
MAT	\$2,500	\$170,895,892
Pharmacy	\$4,454	\$304,444,005
Other	\$1,936	\$132,310,040
<b>Total/Overall</b>	<b>\$22,555</b>	<b>\$1,541,709,884</b>
Members	68,354	

**OUD patients account for ~5.5% of all MassHealth managed care eligible members**

**Spending on patients with OUD represents \$1.5B (9%) of the \$17.2B overall MassHealth spend in 2017**

## MAT Analytics: Findings

**OID patients on MAT have lower costs than those not on MAT, driven by a reduction in acute services utilization**

FY17 - Members w/ OUD	PMPY			Difference
	Total	w/ MAT	w/o MAT	
Inpatient PH	\$4,170	\$2,940	\$6,822	\$3,883
Inpatient Behavioral Health	\$1,495	\$1,140	\$2,260	\$1,121
24 HR Diversionary	\$1,386	\$1,347	\$1,470	\$123
Outpatient Behavioral Health	\$1,545	\$1,620	\$1,383	(\$237)
Professional and Other Outpatient Hospital	\$2,722	\$2,409	\$3,397	\$988
Emergency Room and Transportation	\$1,489	\$1,191	\$2,132	\$941
Lab and Radiology - Facility	\$442	\$394	\$547	\$153
Lab, Radiology & Diagnostic - Professional	\$416	\$430	\$385	(\$45)
MAT	\$2,500	\$3,660	\$0	(\$3,660)
Pharmacy	\$4,454	\$4,449	\$4,466	\$17
Other	\$1,936	\$1,750	\$2,336	\$586
<b>Total/Overall</b>	<b>\$22,555</b>	<b>\$21,329</b>	<b>\$25,197</b>	<b>\$3,868</b>
Members	68,354	46,131	22,223	

- 67% of members with OUD received MAT
- Members on MAT have higher costs for MAT but significantly lower costs for acute care including inpatient hospitalizations and emergency rooms contributing to a \$3,900 lower PMPY cost in 2017

## MAT Analytics: Findings

**All three medications are associated with reduced patient costs compared to patients with no MAT**

<b>FY17 - PMPY Spend</b>	<b>Total</b>	<b>w/o MAT</b>	<b>w/ MAT</b>	<b>Methadone Only</b>	<b>Buprenorphine Only</b>	<b>Naltrexone Only</b>
Inpatient PH	\$4,170	\$6,822	\$2,940	\$3,019	\$2,719	\$2,421
Inpatient Behavioral Health	\$1,495	\$2,260	\$1,140	\$665	\$1,207	\$1,632
24 HR Diversionary	\$1,386	\$1,470	\$1,347	\$733	\$1,031	\$3,113
Outpatient Behavioral Health	\$1,545	\$1,383	\$1,620	\$738	\$2,143	\$1,995
Professional and Other Outpatient Hospital	\$2,722	\$3,397	\$2,409	\$1,688	\$2,951	\$2,263
Emergency Room and Transportation	\$1,489	\$2,132	\$1,191	\$925	\$1,169	\$1,622
Lab and Radiology - Facility	\$442	\$547	\$394	\$297	\$479	\$354
Lab, Radiology & Diagnostic - Professional	\$416	\$385	\$430	\$203	\$600	\$392
MAT	\$2,500	\$0	\$3,660	\$4,047	\$3,110	\$5,732
Pharmacy	\$4,454	\$4,466	\$4,449	\$4,619	\$4,584	\$4,074
Other	\$1,936	\$2,336	\$1,750	\$3,233	\$889	\$628
<b>Total/Overall</b>	<b>\$22,555</b>	<b>\$25,197</b>	<b>\$21,329</b>	<b>\$20,168</b>	<b>\$20,881</b>	<b>\$24,224</b>
Members	68,354	22,223	46,131	16,628	21,448	3,456

- Savings are not as substantial for patients on naltrexone, compared to buprenorphine and methadone

Note: Methadone Only, Buprenorphine Only, and Naltrexone Only are defined by MAT drug usage during the 12 month MPR period.

# MAT Analytics: Findings

## Members who are adherent to a MAT regime generally cost less than those without MAT or those who are non-adherent

12 Month Adherence FY17 - PMPY Spend	No MAT	Methadone Only			Buprenorphine Only			Naltrexone Only		
		Adherent	Non-Adherent	Difference	Adherent	Non-Adherent	Difference	Adherent	Non-Adherent	Difference
Inpatient PH	\$6,822	\$2,116	\$4,806	\$2,690	\$1,769	\$4,218	\$2,449	\$1,387	\$2,600	\$1,212
Inpatient Behavioral Health	\$2,260	\$309	\$1,370	\$1,061	\$602	\$2,161	\$1,559	\$945	\$1,751	\$806
24 HR Diversionary	\$1,470	\$337	\$1,516	\$1,179	\$426	\$1,983	\$1,557	\$1,642	\$3,367	\$1,725
Outpatient Behavioral Health	\$1,383	\$702	\$809	\$107	\$2,254	\$1,967	(\$287)	\$2,363	\$1,931	(\$433)
Professional and Other Outpatient Hospital	\$3,397	\$1,620	\$1,824	\$204	\$3,057	\$2,782	(\$275)	\$2,384	\$2,242	(\$142)
Emergency Room and Transportation	\$2,132	\$692	\$1,388	\$697	\$761	\$1,808	\$1,047	\$1,023	\$1,725	\$702
Lab and Radiology - Facility	\$547	\$321	\$250	(\$72)	\$499	\$448	(\$51)	\$438	\$339	(\$99)
Lab, Radiology & Diagnostic - Professional	\$385	\$199	\$209	\$10	\$654	\$516	(\$138)	\$436	\$385	(\$51)
MAT	\$0	\$4,775	\$2,608	(\$2,167)	\$4,192	\$1,402	(\$2,790)	\$12,008	\$4,646	(\$7,362)
Pharmacy	\$4,466	\$5,250	\$3,372	(\$1,877)	\$5,504	\$3,121	(\$2,383)	\$6,117	\$3,720	(\$2,398)
Other	\$2,336	\$3,827	\$2,059	(\$1,768)	\$915	\$849	(\$66)	\$955	\$571	(\$384)
<b>Total/Overall</b>	<b>\$25,197</b>	<b>\$20,147</b>	<b>\$20,210</b>	<b>\$63</b>	<b>\$20,632</b>	<b>\$21,255</b>	<b>\$623</b>	<b>\$29,699</b>	<b>\$23,276</b>	<b>(\$6,423)</b>
Members	22,223	10,824	5,804		12,885	8,556		531	2,925	
Percent Adherent	-	65%	-		60%	-		15%	-	

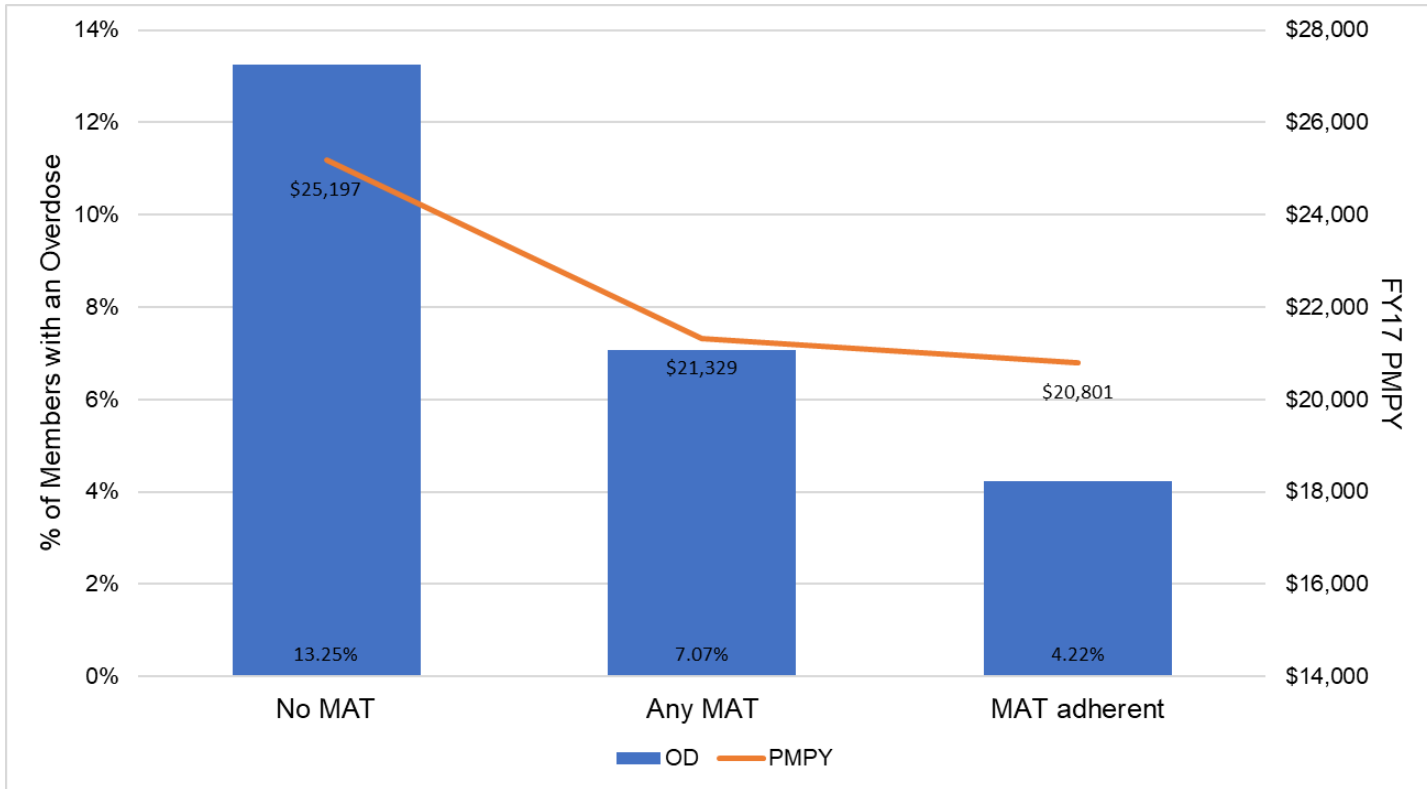
- Achieving a maintenance regime of MAT reduces reliance on intensive, 24 hour levels of care
- Increased Rx costs for methadone and buprenorphine (but not naltrexone) are offset by reductions in 24 hour LOC

Note: Compares members who were on only methadone, only buprenorphine, or only naltrexone during their 12 month MPR period. Adherence is defined as MPR >= 0.8.



# MAT Analytics: Findings

## Members on MAT cost less and have lower rates of overdose



- Members who are on MAT have fewer overdoses and cost less
- Adherence to MAT shows a further decrease in overdoses and cost

Note: Overdoses in the “Any MAT” and “MAT adherent” categories were after starting MAT treatment. Adherence is defined as MPR  $\geq$  0.8

## MAT Analytics: Key Points

- Out of 1.8M MassHealth Members:
  - **5%** (90k) had a diagnosis of OUD in FY17 and
  - **75%** (68k of 90k) of those had MassHealth as their primary payer
- Of these 68k MassHealth Members:
  - **67%** (46k of 68k) received MAT at some point during the year
  - **37%** (25k of 68k) were adherent to MAT (MPR  $\geq$  80% for 12 months)
- Individuals on MAT cost \$4,000 (15%) less
  - Increased MAT spending of ~ \$3,600 is offset by decreased spending of ~ \$7,500, driven by declines in 24-hr level of care
  - Members who are adherent to MAT experience the greatest reductions in 24 hour levels of care
- MAT works
  - Members who are on MAT have fewer overdoses (7% v. 13%)
- While naltrexone reduces reliance on 24 hour levels of care, it is less cost effective as a maintenance drug than methadone or buprenorphine

## MAT Analytics: Methods

- Find all members with an opioid dependence diagnosis during FY17 using MH internal claims and encounter data
- Flag MAT users who had a buprenorphine, buprenorphine/naloxone, or naltrexone NDC or J code, or had a methadone procedure code.  
NOTE: Only outpatient methadone treatment is flagged as MAT. Prescriptions of methadone are not included.
- Use standard Categories of Service code with BH specific groupings
- Members with TPL or Medicare A/B coverage at any point during the period were excluded from all analyses
- Medication Possession Ratio (MPR) was calculated as total days supply during the period divided by total days during the period
- MPR periods begin with first instance of MAT during FY17
- An MPR of 80% or greater is considered adherent to treatment