

# PERFORMANCE IMPROVEMENT PROJECT (PIP) DEVELOPMENT TOOL

## CalEQRO FY21-22 Reviews



Performance Improvement Project (PIP) Documentation Tool provides a structure for development and submission of PIPs. Based on the Centers for Medicare & Medicaid Services' (CMS) [EQR Protocol 1: Validation of Performance Improvement Projects \(PIPs\)](#), the tool is designed to assist the MHP/DMC-ODS to address all required elements of a PIP.

## BACKGROUND

PIPs are designed to achieve significant improvement, sustained over time, in health outcomes and enrollee satisfaction. They should have a direct beneficiary impact and may be designed to create improvement at a member, provider, and/or MHP/DMC-ODS system level.

All MHPs/DMC-ODSs are required to have one active and ongoing clinical PIP and one active and ongoing non-clinical PIP each year as a part of the plan's quality assessment and performance improvement (QAPI) program, per 42 C.F.R. §§ 438.330 and 457.1240(b).

Each PIP will be evaluated annually by CalEQRO; every section should be reviewed and updated as needed to ensure continued relevance and to address changes to the study, including new interventions. Counties are encouraged to seek technical assistance (TA) throughout the year.

# INSTRUCTIONS

This tool contains nine steps to develop a PIP, each with a brief description and related key terms; each step has a corresponding worksheet with questions and prompts to help complete the step.

Please complete and submit Worksheets 1-9 for each PIP as part of the annual external quality review.

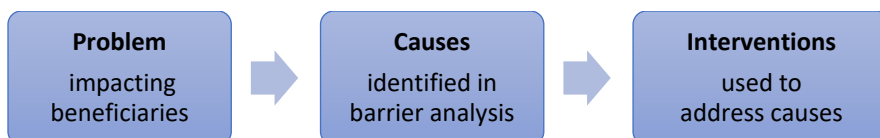
Clearly identify updates to PIP worksheets by a change in font color or the use of track changes.

STEPS 1 – 9	WORKSHEETS 1 – 9
<a href="#">Step 1</a> : Identify the PIP Topic	<a href="#">Worksheet 1</a> : PIP Topic
<a href="#">Step 2</a> : Develop the Aim Statement	<a href="#">Worksheet 2</a> : Aim Statement
<a href="#">Step 3</a> : Identify the PIP Study Population	<a href="#">Worksheet 3</a> : PIP Study Population
<a href="#">Step 4</a> : Describe the Sampling Plan	<a href="#">Worksheet 4</a> : Sampling Plan
<a href="#">Step 5</a> : Select the PIP Variables and Performance Measures	<a href="#">Worksheet 5</a> : PIP Variables and Performance Measures
<a href="#">Step 6</a> : Describe the Improvement Strategy (Intervention) and Implementation Plan	<a href="#">Worksheet 6</a> : Improvement Strategy (Intervention) and Implementation Plan
<a href="#">Step 7</a> : Describe the Data Collection Procedures	<a href="#">Worksheet 7</a> : Data Collection Procedures
<a href="#">Step 8</a> : Describe the Data Analysis and Interpretation of PIP Results	<a href="#">Worksheet 8</a> : Data Analysis and Interpretation of PIP Results
<a href="#">Step 9</a> : Address the Likelihood of Significant and Sustained Improvement Through the PIP	<a href="#">Worksheet 9</a> : Likelihood of Significant and Sustained Improvement through the PIP

# STEP 1: IDENTIFY THE PIP TOPIC

*“What is the problem?”*

A PIP is intended to target improvement in either a clinical service or non-clinical process that directly impacts beneficiary health and/or functional status.



The PIP topic ought to reflect high-volume or high-risk conditions of the population served. (Although high-risk conditions may occur infrequently, this does not diminish their significance). High-risk conditions may exist for populations with special health care needs, such as children in foster care, adults with disabilities, and people experiencing homelessness. Although these individuals may be small in number, their special health care needs place them at high risk. If the PIP addresses a high-impact or high-risk condition, please detail the rationale for addressing this type of issue.

PIP topics may be selected based on enrollee input. The topic should address a significant portion of enrollees (or a specified sub-portion of enrollees), and the intervention should have the potential to significantly impact enrollee health, functional status, or satisfaction.

The PIP topic should include an analysis of the barriers that prevent the beneficiary from receiving the desired treatment or achieving the desired goal. That is, this section should address the potential cause(s) of the problem and include the relevant MHP/DMC-ODS data. Results of that analysis should be used to inform the development of the PIP topic.

PIP strategies ought to be designed by a group of end users (including beneficiaries) and managers who are in the best position to design the new processes. A description of key stakeholder's contributions to the process should be included.

The topic should have a relevant benchmark or standard. The recommended benchmarks include those defined by:

- [CMS Priority Areas](#) CMS Quality of Care
- [Core Set of Children's Health Care Quality Measures for Medicaid and the Children's Health Insurance Program](#) (CHIP) (Child Core Set)
- [Core Set of Health Care Quality Measures for Adults Enrolled in Medicaid](#) (Adult Core Set)
- [American Society of Addiction Medicine \(ASAM\) Quality Measures](#)
- [National Quality Forum \(NQF\) Behavioral Health Measures](#)

Click here for [Worksheet 1](#)

# STEP 2: DEVELOP THE AIM STATEMENT

*“What do we want to do?”*

The PIP aim statement identifies the focus of the PIP (i.e., what the PIP is supposed to accomplish) and establishes the framework for data collection and analysis. It should provide the improvement strategy, population, and time-period of the study; be clear and concise; and include interventions with a measurable impact. The statement is measurable when it specifies variables and outcomes for a defined improvement strategy, population, and period.

Potential sources of information to help form the PIP statement include:

- State data relevant to the topic being studied
- MHP/DMC-ODS data relevant to the topic studied
- CMS Child and Adult Core Sets
- Enrollee focus groups or surveys
- Clinical literature on recommended care and benchmarks.

CMS recommends that the aim of the PIP aligns least one of the [National Quality Strategies](#), although may be considered.

## CRITIQUE of EXAMPLE PIP AIM STATEMENTS

	Example PIP Aim Statements	Critique
Poor PIP Aim Statement	Does the county adequately address depressive symptoms in clients after an inpatient hospitalization?	<ul style="list-style-type: none"> <li>• The PIP intervention is not specified</li> <li>• It is unclear how impact will be measured</li> <li>• The population and time period are not clearly defined</li> </ul>
Good PIP Aim Statement	Will the use of cognitive behavioral therapy within 30-days of discharge from an inpatient hospitalization improve depressive symptoms in adults diagnosed with depression, as evidenced by a 25% reduction in PHQ-9 scores, over a six-month period during 2017?	<ul style="list-style-type: none"> <li>• Specifies the PIP intervention (cognitive behavioral therapy)</li> <li>• Defines the population (adult clients diagnosed with depression who had an inpatient admission)</li> <li>• Defines the time period (within 30-days of discharge and for 6-months during 2017)</li> <li>• Specifies the measurable impact (improve depressive symptoms)</li> </ul>

Click here for [Worksheet 2](#)

### Examples of Aim Statements

- For (*population*), will (*intervention*) improve (*problem*) as measured by (*variable*) over (*time-period*)?
- Over the next (*time-period*), the (*population*) will receive (*intervention*) to improve (*problem*) as measured by (*variable*).

time-  
aim  
being  
external  
with at  
others

## STEP 3: IDENTIFY THE PIP STUDY POPULATION

*“Who do we intend to help?”*

In this step, the MHP/DMC-ODS provides detail on the population identified in the aim statement.

Depending on the nature of the PIP, the relevant beneficiaries may include the entire population affected by the issue/problem or a sample of that population. PIPs that rely on existing administrative data, such as claims and encounter data, registry data, or vital records, are typically based on the entire relevant population. PIPs that rely on either medical record review or the hybrid method (which uses a combination of administrative data and medical record review) typically include a representative sample based upon certain criteria of the identified population. This is also known as the sampling frame.

This step provides information on the relevant beneficiary population, such as age, length of enrollment, frequency of service use, frequency of the problem/issue, type of treatment, diagnoses, and/or other characteristics.

If a sample of the population was used for the PIP, go to Step 4.

If the entire population was studied, skip Step 4 and go to Step 5.

If [Healthcare Effectiveness Data and Information Set \(HEDIS\)](#)® measures and sampling methodology are used, go to Step 5.

Click here for [Worksheet 3](#)

## STEP 4: DESCRIBE THE SAMPLING PLAN

*“How do we select a smaller group to study?”*

If the entire population of beneficiaries is being included in the PIP, there is no need to describe the sampling method.

If a portion of the population will be receiving the intervention or benefit, a sampling approach is in order. A sampling frame is a representative subset of the population based on certain criteria. It includes the universe of members of the target population, such as individuals, caregivers, households, encounters, providers, or other population units that are eligible to be included in the PIP. For example, the sampling frame could be youth with depression or adult beneficiaries who engage in three or more services after assessment but end service before three months. The completeness, recency, and accuracy of the sampling frame are key to the representativeness of the sample.

General information about the use of sampling methods and the types of sampling methods to obtain valid and reliable information can be found in Appendix B (page 337) of the [CMS EQR Protocols](#).

If sampling methods are used, please include the:

- Appropriateness and validity of the sampling method
- Type of sampling method used and why
- Type of sampling frame used

Click here for [Worksheet 4](#)

## STEP 5: SELECT THE PIP VARIABLES AND PERFORMANCE MEASURES

*“How will we know if what we’re doing makes a difference?”*

**Variables** are measurable characteristics, qualities, traits, or behaviors of an individual or process being studied; they can take a variety of forms and will be specific to the issue(s) addressed by the PIP. When choosing variables, select ones that are best suited to the available data, resources, and intended outcomes. Clearly defined, objectively and reliably measured variables lead to higher confidence in results.

### **Variables**

quantify the intervention(s)

### **Performance Measures**

quantify the outcome(s)

**Performance measures** monitor the performance of the MHP/DMC-ODS at a point in time, track performance over time, and inform the evaluation of impact of the interventions used to quantify the outcomes. The performance measure should be consistent with the MHP/DMC-ODS’s desired goal for the PIP. When selecting performance measures, the MHP/DMC-ODS should first consider established measures. CMS encourages use of the [Behavioral Health Core Sets](#), the Certified Community Behavioral Health Clinic (CCBHC) measures, HEDIS, as well as measures developed by the Agency for Healthcare Research and Quality (AHRQ), the NQF, or the ASAM.

Data availability must also be considered when selecting variables for PIPs, as more frequent access to data, such as on a monthly or quarterly basis, supports continuous quality improvement (CQI) and Plan-Do-Study-Act efforts. Readily available data allows the MHP/DMC-ODS to correct or revise course more quickly, if needed.

**Example 1:** *A DMC-ODS’s goal is to improve and increase continuity in care from current rate of 45% by 15% with transitions between residential treatment and lower levels of care for adults by: (1) adding 2 recovery peer navigators as part of treatment and discharge planning process for all clients; (2) changing focus of program dialogue from graduation to preparation for community re-entry; and (3) identifying barriers to transitions early in the treatment process as part of treatment plan.*

**Example 2:** *An MHP’s goal is to decrease anxiety and improve daily functioning among teens diagnosed with anxiety (average GAD-7 score for beneficiary population is 13). Interventions include the use of mindfulness and other DBT coping skills. The variable used to monitor implementation of the intervention is the number of DBT group sessions attended by adolescents. The performance measure is improved daily functioning as measured by the GAD-7 and self-report. The required data are available every month through the electronic health record.*

Click here for [Worksheet 5](#)

## STEP 6: DESCRIBE THE IMPROVEMENT STRATEGY (INTERVENTION) & IMPLEMENTATION PLAN

*“What, specifically, will we do to cause the change?”*

This step describes the improvement strategy (also referred to as an intervention) and how it will be carried out. Selected PIP strategies should be evidence-based or best practices for which there is documented evidence of promise; that is, there should be existing evidence (published or unpublished) suggesting that the intervention would likely lead to the desired improvement in processes or outcomes (as measured by the variables and performance measures).

The intervention should correlate directly to the barrier(s) or cause(s) identified through a barrier analysis. It is important to select interventions that are related to the entire PIP process, from problem identification to variable selection to outcome measurement. The intervention is the thread that connects all these components.

In this step, the MHP/DMC-ODS should explain what the strategy is; how frequently the strategy is applied; who will apply the strategy; how the MHP ensures consistency in applying the strategy; and all other information that will clearly describe the strategy.

The effectiveness of the improvement strategy is determined by measuring change in performance according to the measures that were selected in Step 5.

Click here for [Worksheet 6](#)



## STEP 7: DESCRIBE THE DATA COLLECTION PROCEDURES

*“What data do we need, and how will we get it?”*

In this step, the MHP/DMC-ODS identifies the data to be collected, including data collection procedures, in order to ensure the validity and reliability of the data used for the PIP.

Validity means that the data are measuring what is intended to be measured. Reliability means that the data are producing consistent results.

To ensure validity and reliability of the data collected as part of the PIP, the data collection plan should specify:

- The data sources for the PIP (where the data are located (e.g., the EHR))
- The data to be collected
- Who will collect the data
- How and when the data are to be collected
- Frequency of data collection
- Who (which staff) will enter the data
- Instruments used to collect the data for analysis

Data sources may include:

- Encounter and claims systems
- Medical records
- Case management or electronic visit verification systems
- Tracking logs
- Surveys
- Provider and/or enrollee interviews

This step may involve two main kinds of data collection: administrative data sources and medical record review. Procedures to collect data from administrative data systems will be different from procedures for visual inspection or abstraction of medical records or other primary source documents. However, both types of data collection require assurances that data are valid and reliable. CMS encourages the plans to utilize data sources from which they can collect data on a regular basis (e.g., monthly, quarterly, and semi-annually).

Click here for [Worksheet 7](#)

## STEP 8: DESCRIBE THE DATA ANALYSIS AND INTERPRETATION OF PIP RESULTS

*“What do the data tell us, and what did we learn?”*

In this step, the MHP/DMC-ODS should describe the plan for data analysis and interpretation of PIP results. The data collection plan described in Step 7 should link to the data analysis plan.

The data analysis plan should be based on a CQI philosophy and reflect an understanding of lessons learned and opportunities for improvement. Interpretation of the PIP results should involve assessing the causes of less-than-optimal project results.

The primary source for interpretation of findings should be the results of the analysis. The MHP/DMC-ODS should include basic descriptive analysis, including both baseline and repeated measurements of PIP outcomes. In addition, reasonable benchmarks or comparable data should be included where possible, such as state-level data, data from other counties, or industry benchmarks.

The CMS protocol requires the analysis to assess the extent to which any change in performance is statistically significant; however, it does not specify the level of statistical significance that must be met. If the MHP/DMC-ODS is using a test of statistical significance, the level of significance used in the analysis and which findings were statistically significant should be provided.

If no significance testing was conducted, the MHP/DMC-ODS should indicate, at a minimum, the percent change or point change and the sample size for each performance measure.

Click here for [Worksheet 8](#)

## STEP 9: ADDRESS THE LIKELIHOOD OF SIGNIFICANT AND SUSTAINED IMPROVEMENT THROUGH THE PIP

*“Did we make a difference, and will it have an ongoing impact?”*

In this step, the MHP/DMC-ODS identifies the likelihood that significant and sustained improvement occurred as a result of the PIP. This includes an assessment of the overall validity and reliability of the PIP methods and findings to determine whether there is confidence in the results.

An important component of a PIP is to determine if the reported change is real change or the result of an environmental or unintended consequence or random chance. It is also essential to demonstrate sustained improvement. To do so requires repeated measurements to be conducted over the course of the PIP and demonstration of the degree of change in performance relative to baseline measurement. The repeated measurements should use the same methodology as the baseline measurement. If the PIP is in the early stages of implementation and repeated measurements are not yet available, the MHP/DMC-ODS should provide detail of the strategy to date (e.g., the number of study participants; consistency in implementation of the strategy; and any modifications to the study). Any deviations in methodology (such as sampling, data source, or variable definition) must be thoroughly documented.

In assessing the likelihood that PIP results are sustainable, the MHP/DMC-ODS should include the findings that were found to be significant either statistically, clinically, or programmatically.

The worksheet should include the following:

- Extent to which there was a quantitative improvement in outcomes.
- Results of statistical significance testing.
- Extent to which the improvements appear to be the result of the PIP improvement strategies.
- Extent to which statistical evidence supports that the improvement is true improvement.
- Problems or irregularities associated with data analysis.

Click here for [Worksheet 9](#)

# PIP PLANNING, SUBMISSION, AND IMPLEMENTATION WORKSHEETS

Please complete and submit Worksheets 1-9 for each PIP as part of the annual external quality review. Each worksheet is intended to be reviewed and updated as needed to ensure continued relevance and to address changes to the study, including new interventions. Counties are encouraged to seek technical assistance (TA) throughout the year.

[Worksheet 1](#): PIP Topic

[Worksheet 2](#): Aim Statement

[Worksheet 3](#): PIP Study Population

[Worksheet 4](#): Sampling Plan

[Worksheet 5](#): PIP Variables and Performance Measures

[Worksheet 6](#): Improvement Strategy (Intervention) and Implementation Plan

[Worksheet 7](#): Data Collection Procedures

[Worksheet 8](#): Data Analysis and Interpretation of PIP Results

[Worksheet 9](#): Likelihood of Significant and Sustained Improvement through the PIP

## **When completing worksheets, please:**

- Clearly identify updates using a change in font color or track changes
- Define all acronyms at the time of first use

# WORKSHEET 1: PIP TOPIC

*“What is the problem?”*

MHP/DMC-ODS Name	Los Angeles County Department of Mental Health (LACDMH)
Project Leader/Manager/Coordinator & Lead Analyst	Kalene Gilbert and Jennifer Regan
Contact Email Address	kgilbert@dmh.lacounty.gov
Performance Improvement Title	Improving the Use of Medication-Assisted Treatment (MAT) for Consumers with Co-Occurring Mental Health Disorders and Substance Use (COD)
Type of PIP	<input checked="" type="checkbox"/> Clinical <input type="checkbox"/> Non-clinical
PIP Study/Intervention Period:	Start 02/2021 to End 02/2022

**1.1** What is the problem this PIP proposes to solve? How does it affect beneficiary health, functional status, or satisfaction with care?

This performance improvement project aims to improve the health and functioning of consumers with co-occurring mental health and substance use disorders (CODs) by increasing their access to and receipt of medication-assisted treatment (MAT) to supplement their mental health services. As consumers with CODs are hospitalized and re-admitted within 30 days at higher rates than the consumers without CODs served (see Figure 1 below for more information), this project will measure improvement in functioning as a reduction in consumers' 30-day re-hospitalization rates. Symptom improvement will also be measured as a decrease in the mood, anxiety, and impact of substance use ratings on a weekly clinical outcome measure used in one of the PIP interventions, the Integr8Recovery groups. This project will focus on consumers with co-occurring alcohol use disorders (AUD) and opioid use disorders (OUD). These are the substances that currently have approved and research-supported MAT medications available.

There is a significant amount of research that supports the use of MAT in reducing substance use and relapse rates as well as overdose and mortality rates, particularly for AUD and OUD (Donoghue, Elzerbi, Saunders, Whittington, Pilling, & Drummond, 2015; Ma, Bao, Wang et al, 2019; Thomas, Fullerton, Kim et al., 2014). The use of MAT in populations with serious mental illness (SMI) has also been associated with reductions in psychiatric hospitalizations and improvements in psychotropic medication adherence (Robertson, Easter, Lin et al., 2018). However, internal LACDMH data and data collected in partnership with the RAND Corporation indicate that MAT is being underutilized for consumers with CODs.

In Fiscal Year (FY) 19-20, 24.9% (N = 26,211) of all Transition Age Youth (TAY), adult, and older adult consumers served in directly-operated (DO) clinics (Total N = 105,205) had a documented secondary substance use disorder (SUD). Of those with SUDs, 31.2% (N = 8,180) had a documented AUD and only 8.0% (N = 658) of these consumers were prescribed MAT for AUD (i.e., naltrexone, acamprosate, disulfiram). OUD diagnosis rates were lower at 5.2% (N = 1,370) of consumers with documented SUDs and 10.0% of these consumers (N = 136) received MAT for OUD (i.e., naltrexone, buprenorphine). Please see Figure 2 below for more information. Additional RAND data suggest that OUD rates may be much higher in LACDMH but are not detected and documented. A survey administered in the waiting rooms of eight LACDMH clinics indicated that 10% of consumers met criteria for a probable OUD to either prescription drugs or heroin. One barrier to consumers receiving MAT is there are additional training requirements for one of the available medications. Buprenorphine, a MAT for OUD, is subject to additional Drug Enforcement Agency (DEA) requirements. Prescribers using buprenorphine must apply for a special waiver known as an X-waiver after receiving eight hours of training. A significant portion of eligible prescribers in LACDMH do not have an X-waiver required to prescribe buprenorphine and have expressed a need for more training in MAT and treatment for COD overall.

It is important for LACDMH to be able to provide MAT services to consumers that meet medical necessity as opposed to referring out to the Department of Public Health Substance Abuse Prevention and Control (SAPC) as a significant percentage of consumers have true co-occurring mental health and substance use problems. By including MAT as a treatment service in addition to mental health treatment and other supportive services, LACDMH is in a better position to serve the whole person and avoid gaps in coordinated care. The medication that is most commonly used as MAT for AUDs in LACDMH is naltrexone (also referred to as brand name Vivitrol), which is an opioid antagonist and can be administered orally or as a long-acting intramuscular injection. Other medications for AUD that are less commonly used are acamprosate, which is intended to decrease alcohol intake and is administered in tablet form and disulfiram, which produces an unpleasant reaction to alcohol and is administered in tablet form. The medications most commonly used as MAT for OUDs are naltrexone and buprenorphine (also known as brand name Butrans), an opioid partial agonist and can be administered in multiple forms, including tablets, films, and extended-release injections.

**1.2** Who was involved in identifying the problem? (Roles, such as providers or enrollees are sufficient; proper names are not needed). How were beneficiaries or the stakeholders who are affected by/concerned with the issue included?

Dr. Jeremy Martinez, in his role as Associate Medical Director of COD, is spearheading various efforts to increase the use of MAT. He developed the November 2020 LACDMH prescriber survey to assess current use and familiarity with MAT among prescribers. He is also the developer of the Integr8Recovery group model, which is an interdisciplinary group for COD consumers that focuses on using cognitive-behavioral strategies and staff with lived experience to manage the impact of substance use on mental health and provides education on MAT as a supplement to mental health services. Dr. Martinez is the primary author of the Integr8Recovery group manual and is continually revising the manual based on stakeholder and consumer feedback. He is also leading the effort to create a MAT Mentorship Network both within DO clinics and for contracted providers.

John Sheehe, Program Manager I, was highly involved in the collaboration with the RAND Corporation to study the need for and barriers to use of MAT and is now involved in the rollout of MAT and related COD services to LACDMH staff. He is assisting with the implementation of the Integr8Recovery groups and the staff trainings to ensure that new services and tools are efficiently incorporated into current staff workflows and have the necessary supports. In addition, the Outpatient Services Division and Clinical Operations leadership helped to facilitate access to the clinics for the RAND collaboration, were integral to the data review and planning stages of the study, and are currently overseeing the efforts to educate staff and consumers about MAT in DO clinics.

In Calendar Years 2018 and 2019, the RAND Corporation partnered with program leadership in several DO clinics on two large projects to interview and survey LACDMH staff and consumers with CODs regarding MAT and develop toolkits to guide MAT implementation. The first project was focused on AUDs and the second project was focused on OUDs. The participating DO clinics were selected to represent each service area (SA), a variation on size and setting (i.e., urban, semi-rural), and reflect Los Angeles County's diversity. For the project focused on AUDs, the eight included clinics were Antelope Valley Mental Health Center (SA 1), Santa Clarita Mental Health Center (SA 2), Arcadia Mental Health Center (SA 3), Northeast Mental Health Center (SA 4), Edelman Mental Health Center (SA 5), West Central Mental Health Center (SA 6), Rio Hondo Mental Health Center (SA 7), and South Bay Mental Health Center (SA 8). For the OUD project, the clinics were largely the same except that East San Gabriel Valley Mental Health Center represented SA 3, Downtown Mental Health Center represented SA 4, and Compton Mental Health Center represented SA 6. Integr8Recovery groups have started at Edelman Mental Health Center as well as the Men's and Women's Re-Integration programs and the plan will be to expand to other DO clinics. Integr8Recovery groups are co-facilitated by a prescribing staff member, a clinician, and a Substance Abuse Counselor with lived experience. There are weekly meetings with both teams to discuss consumer responses to the groups and to revise the materials based on consumer feedback.

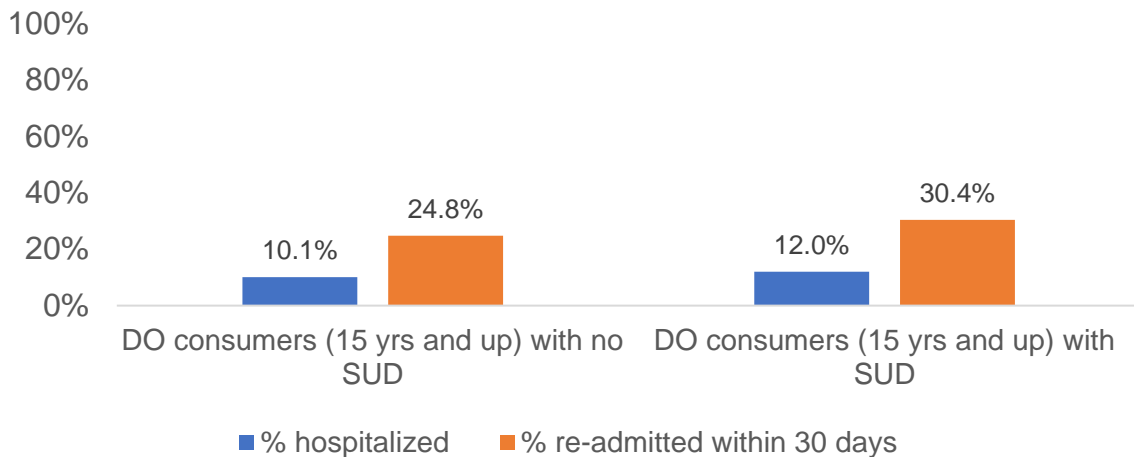
**1.3** What MHP/DMC-ODS data have been reviewed that suggest the issue is a problem? Provide the data.

### **Hospitalization and Re-Hospitalization Rates for Consumers with CODs**

LACDMH consumers with CODs have higher rates of hospitalization and re-hospitalization within 30 days of discharge as compared to consumers without CODs. Of the 26,211 consumers in DOs ages 15 and up with a secondary SUD, 12.0% (N=3,141) were hospitalized at least once and 30.4% (N=955) of these consumers were re-hospitalized within 30 days of discharge from a previous admission. In comparison, of the 90,245 TAY, adult, and older adult consumers in DOs with no secondary SUD, 10.1% (N=9,141) were hospitalized at least once and 24.8% (N=2,264) were re-admitted within 30 days. These data suggest that consumers with CODs experience greater challenges to their functioning than consumers without CODs and that additional intervention to address these rates would be beneficial.



Figure 1. Hospitalization and Re-admission within 30 Days Rates by COD Status FY 19-20



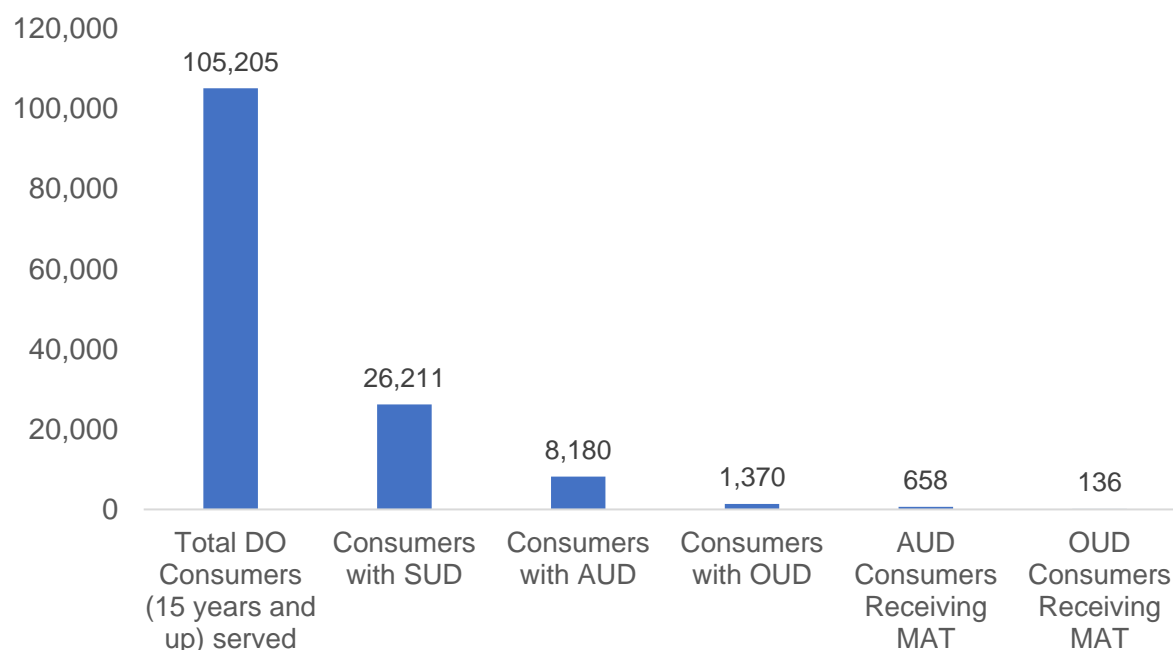
### Prevalence of SUDs and Use of MAT

In partnership with the RAND Corporation, in CYs 2018 and 2019, LACDMH administrators, staff, and consumers from the eight aforementioned DO clinics participated in surveys and focus groups related to the treatment of co-occurring AUDs. Data from these eight clinics show high rates of AUD screening (95% across all clinics, range: 89% - 99%) and much lower rates of brief intervention for consumers with hazardous alcohol use (47% across all clinics, range: 35% - 60%). The average percent of consumers diagnosed with AUDs out of the total consumer population was 7% across clinics with a wide range from 3% to 15%. Of the consumers diagnosed with AUDs, an average of 5% across clinics received MAT, again with a wide range from 1% to 16%, suggesting that some clinics were more likely to use MAT as a treatment option than others.

More recent IBHIS data from FY 19-20 indicate a similar pattern in that 24.9% (N = 26,211) of all TAY, adult, and older adult consumers served in DO clinics (Total N = 105,205) had a documented secondary SUD. Of those with SUDs, 31.2% (N = 8,180) had a documented AUD and only 8.0% (N = 658) of these consumers were prescribed MAT for AUD (i.e., naltrexone, acamprosate, disulfiram). OUD diagnosis rates were 5.2% (N = 1,370) of consumers with documented SUDs and 10.0% of these consumers (N = 136) received MAT for OUD (i.e., naltrexone, buprenorphine). Please see Figure 2 below for more information.



Figure 2. MAT Treatment Cascade FY 19-20



Regarding OUD prevalence, in CYs 2019 and 2020, RAND administered a survey in the waiting room of the eight aforementioned clinics to determine the prevalence of OUD and willingness for treatment among LACDMH consumers (Ober, Hunter, McCullough et al., in press). Out of 3,090 consumers who were screened, 340 completed the full survey and 8% met criteria for a probable prescription misuse OUD and 2% met criteria for a probably heroin OUD, suggesting the rate of probable OUDs is 10%. This number is double LACDMH's rate of documented OUDs in FY 19-20 and indicates that OUDs may be underdiagnosed in particular.

### Staff Ability to Prescribe Specific MATs

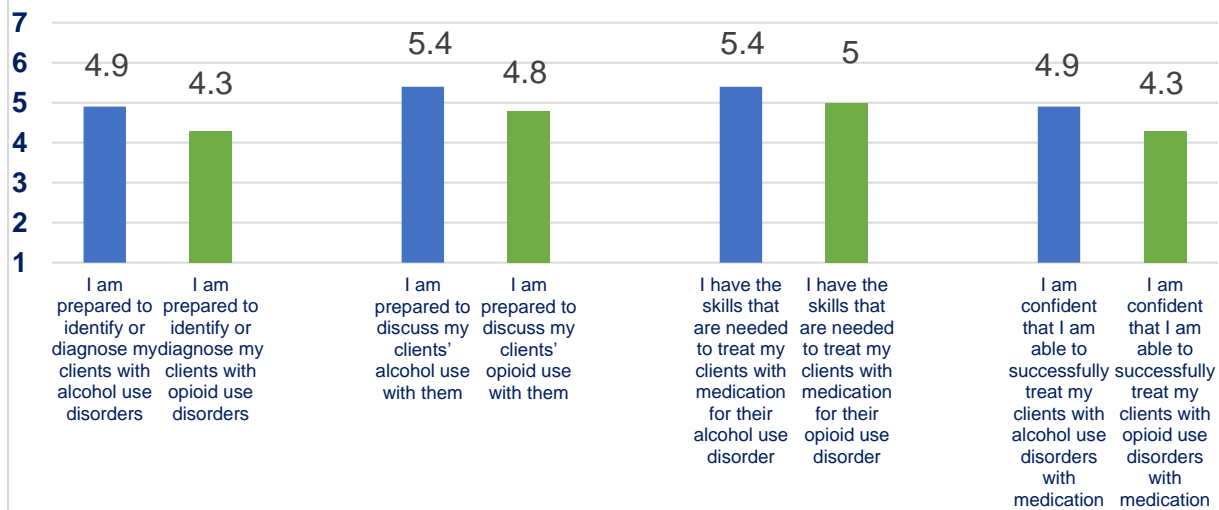
There are approximately 274 prescribers that serve DOs in the Los Angeles County Department of Mental Health (209 Psychiatrists, 27 Supervising Psychiatrists, 18 Post Graduate Physicians, 11 Nurse Practitioners or Registered Nurses, and 8 Clinical Pharmacists). In FY 2019-2020, these staff members prescribed medications to 51,078 consumers. In that same time frame, 201 LACDMH staff prescribed naltrexone whereas only six prescribed buprenorphine. Buprenorphine requires an X-waiver from the Drug Enforcement Agency (DEA) to prescribe and, as of January 2021, only 16.7% (N = 46) of the prescribing staff had an X-waiver.

### Staff Survey and Focus Group Data regarding COD Treatment

RAND data from staff focus groups and surveys showed that staff members perceive few LACDMH consumers meet the criteria for an OUD and that they feel more prepared to address treatment for AUDs than OUDs (see Figure 3 below for more information). Prescribers also agreed more strongly with items related to providing medications for AUD as opposed to OUD (see Figure 4 below for more information). In terms of supports, medical doctors (MDs) were more neutral in regard to feeling like they had an expert to consult for questions regarding MAT for consumers with COD as

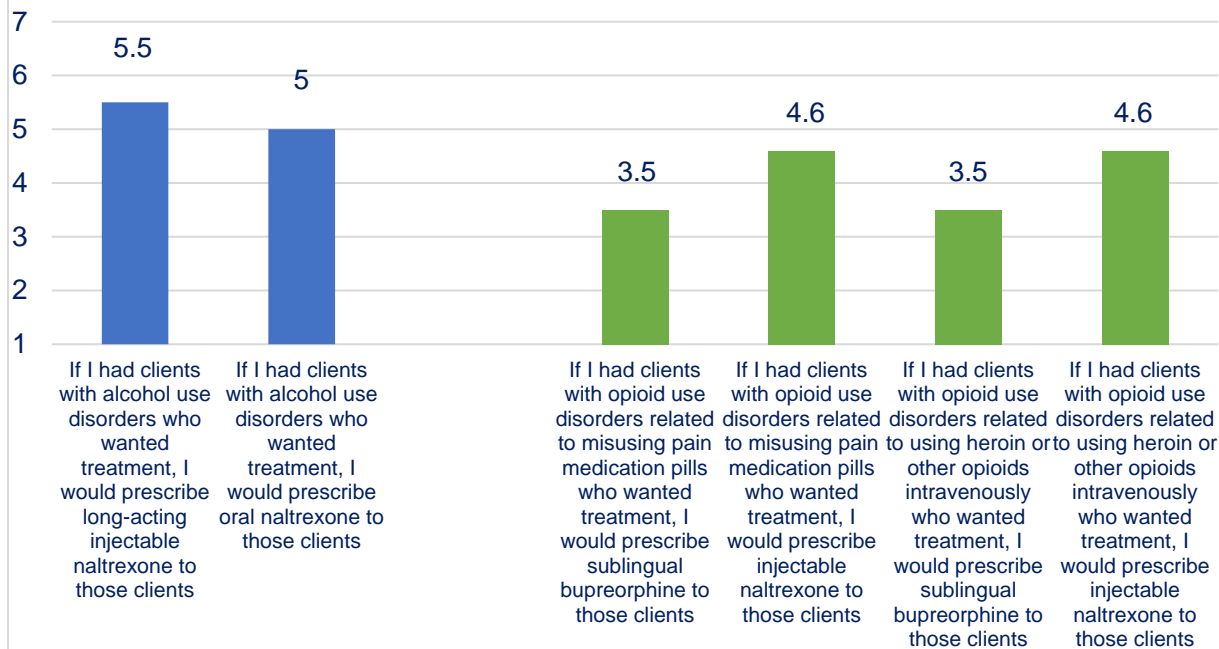
compared to Nurse Practitioners (NPs; MDs, M = 3.6/7, SD = 2.03; NPs, M = 4.7/7, SD = 1.49). All surveyed staff disciplines were highly interested in receiving more training for AUDs (MDs, M = 0.9/1, SD = 0.23, Licensed Therapists, M = 0.9/1, SD = 0.27, Case Managers, M = 0.9/1, SD = 0.32, NPs, M = 1.0/1, SD = 0.00) and OUDs (MDs, M = 0.9/1, SD = 0.35, Licensed Therapists, M = 0.9/1, SD = 0.25, Case Managers, M = 0.9/1, SD = 0.34, NPs, M = 1.0/1, SD = 0.00).

Figure 3. LACDMH Staff Survey Responses to AUD vs. OUD Items



Note: Graphic provided by the RAND Corporation, presented by Dr. Sarah Hunter during Co-Occurring Disorders Mini Conference on 5/26/21

Figure 4. LACDMH Prescribing Staff Survey Responses to AUD vs. OUD Items



Note: Graphic provided by the RAND Corporation, presented by Dr. Sarah Hunter during Co-Occurring Disorders Mini Conference on 5/26/21

Focus groups with staff also highlighted the need for more training and clear policies on working with consumers with CODs. Some non-prescriber roles were not familiar with MAT. In administrator focus groups, leaders also indicated that there is a lack of awareness of treatment availability and resources for consumers with CODs, difficulty tracking and communicating about consumers with COD, confusion about role and scope in addressing co-occurring substance use, and lack of consumer motivation to work on substance use.

A provider survey administered internally to LACDMH psychiatrists (completed by 29 prescribers) in November 2020 similarly indicated the need for more staff training and mentorship. Sixteen of the respondents (55%) indicated that they had an X-waiver to prescribe buprenorphine. Ten of those who do not have a waiver (77%) expressed an interest in receiving training to obtain the waiver. Half of the respondents (50%; N = 14) indicated that they felt they had a low or moderate level of knowledge ( $\leq 5$  on a scale of 1-10) about treatment and medications for co-occurring mental health and substance use disorders. In terms of medications for specific disorders, respondents felt most knowledgeable about medications for AUDs with 57% (N = 16) indicating a higher level of knowledge ( $\geq 6$  on a scale of 1-10) for these medications, followed by those for OUDs (50% with a higher level of knowledge) and stimulant use disorders (39% with a higher level of knowledge). The majority had prescribed oral naltrexone (64%, N = 18) to at least one consumer (range: 1-40 consumers) in the past three months, whereas only 32% (N = 9) had prescribed intramuscular naltrexone (range: 1-25 consumers) and 25% (N = 7) of respondents had prescribed buprenorphine to at least one consumer

(range: 1-10 consumers) in that time frame. In addition, currently, only 16.7% (N = 46) of the prescribing staff have an X-waiver to prescribe buprenorphine.

### **Consumer Data Regarding COD Treatment**

The RAND study on AUDs also included consumer-focused groups with 87 individuals with past or current AUD diagnosis or drinking problems across the eight selected clinics. The OUD focus groups were delayed due to COVID-19. Results from the AUD focus groups indicated that 75% of the consumers had never heard of naltrexone and would benefit from more information on available medications (Bromley, Tarn, McCreary, Hurley, Ober & Watkins, 2020). The authors also found that consumer views about an internal locus of control were the most important driver of demand for MAT. Accordingly, if consumers viewed MAT as supporting their internal locus of control, their interest in MAT increased, whereas if consumers viewed MAT as undermining their internal locus of control, their interest in MAT declined. As such, the study facilitators recommended that programs focus on demonstrating how MAT can facilitate locus of control and be a tool that works as part of a larger treatment package.

In this study, contextual factors and cues to action such as seeing others succeed with MAT and reducing provider stigma were also related to the demand for MAT. Consumers also expressed several misconceptions about MAT (e.g., developing dependency on the medication, causing discomfort when drinking). The authors suggest these views may also be held by providers with limited knowledge about MAT. It will be important to dispel these myths with consumer education and provider training. Consumers who had tried MAT displayed the most optimism about their effectiveness in decreasing substance use, suggesting that these individuals might play a role as champions or models for others.

In the OUD waiting room survey, findings related to willingness to take MAT showed that the strongest predictor was the belief that the medication would effectively reduce opioid use. The research team also found that those with a probable heroin OUD compared with a prescription drug OUD were more willing to receive any OUD treatment in a mental health setting, suggesting that openness to treatment may differ by the substance used.

**1.4** Are there state or national standards or benchmarks related to the problem? If so, what are they? How does the MHP/DMC-ODS's data/performance compare?

There is a HEDIS measure regarding the identification of alcohol and other drug services, including Outpatient or ambulatory medication-assisted treatment (MAT) dispensing events. However, data are not currently available for this measure to compare as a benchmark.

SAMHSA data from the 2020 National Survey of Substance Abuse Treatment Services (N-SSATS) indicate that, out of all OUD clients receiving MAT in Non-Opioid Treatment Programs in the United States, 2.2% received Medication-Assisted Opioid Therapy from Local, county, or community governments (1.9% buprenorphine, 4.3% naltrexone), suggesting that OUD clients largely receive MAT from other kinds of facilities and programs. Across California, 34.2% of OUD clients in substance use treatment received methadone/buprenorphine maintenance or naltrexone treatment. These percentages

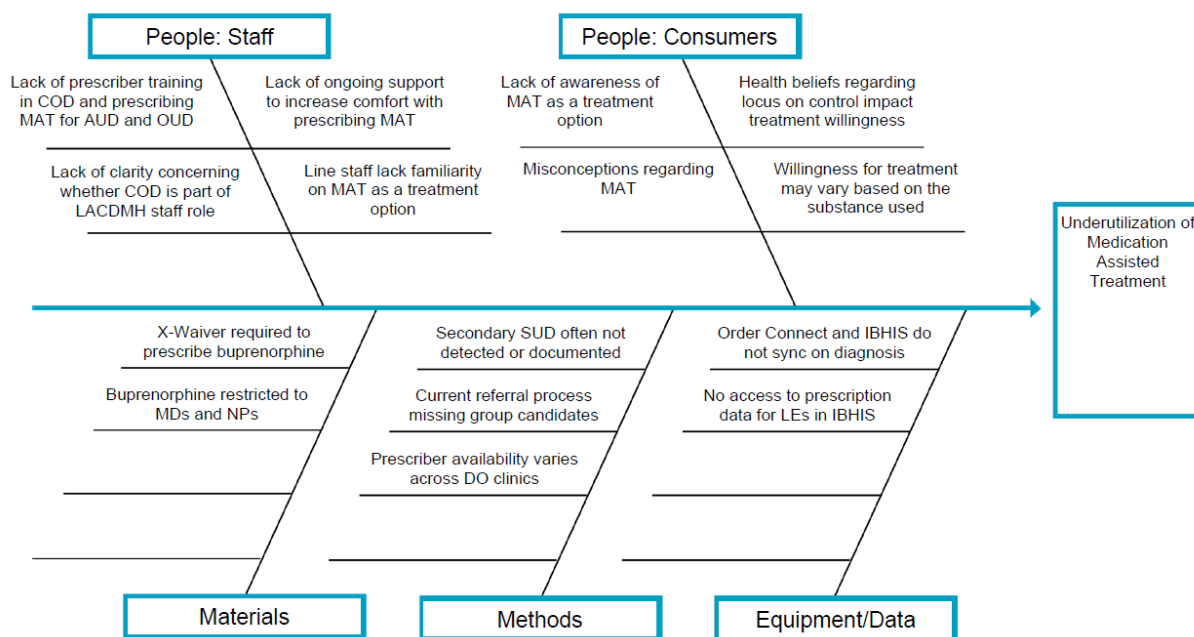
include individuals in SUD treatment programs rather than individuals receiving MAT as part of a mental health treatment program for CODs so they are significantly higher than what would be expected in the LACDMH system.

The San Francisco Department of Public Health Behavioral Health Services, which represents a similarly large and diverse metropolitan area, reported the rate of MAT administered for all clients diagnosed with an AUD in their Quality Improvement Work Plan Evaluation Report FY 19-20 (San Francisco Mental Health Plan, 2020). Starting from FY 18-19 Quarter 1 to FY 19-20 Quarter 4, the rate ranged from 15.1% to 17.4%, which is higher than the current rates for LACDMH.

**1.5** What are the provisional or potential root causes of the problem as suggested by quantitative information that the MHP/DMC-ODS chose to address and why?

Root causes of the underutilization of MAT suggested by the data are shown in the fishbone diagram below followed by a description of each category.

Figure 5. Fishbone Diagram of Root Causes for the Underutilization of MAT



## People: Staff

Potential causes of the root problem that are related to LACDMH staff members cluster around lack of training, ongoing support, and familiarity with MAT as well as lack of role clarity. RAND and internal survey data suggest that prescribing staff do not feel adequately prepared to work with the COD population based on their previous experience and education and would benefit from more specialized knowledge of COD treatment options, particularly for OUD, in the form of training and ongoing consultation. For LACDMH direct service staff more generally, the RAND survey data indicate that staff are more neutral regarding whether leadership has sent a clear signal regarding MAT implementation and focus groups also indicated a lack of familiarity with MAT and

confusion regarding whether providing education about MAT is part of their role at the clinic.

### **People: Consumers**

Potential causes of the root problem that are related to LACDMH consumers cluster around a lack of familiarity with MAT, misinformation regarding MAT, and willingness for treatment. RAND focus group data suggest that consumers also lack familiarity with MAT as a treatment option or may have misconceptions related to the use of MAT (e.g., believing all MAT drugs make you sick, assuming MAT is replacing one addiction with another) that could be addressed by receiving psychoeducation regarding MAT from a provider. The AUD focus groups also indicated that health beliefs were a strong indicator of willingness for treatment. Focusing on MAT as supporting an internal locus of control may increase the likelihood of MAT use. RAND OUD waiting room survey data that showed those with a probable heroin OUD might be more open to any treatment also suggest that providers may want to tailor messaging and outreach based on the consumers' particular substances of use.

### **Materials**

Potential causes of the root problem that are related to materials involve the DEA requirement for providers to have an X-waiver to prescribe buprenorphine for OUD, as internal survey data show that a limited number of LACDMH prescribers have one and that these waivers are restricted to certain disciplines. Clinical pharmacists have taken on more of a role in prescribing within LACDMH but are not eligible to prescribe this medication in particular.

### **Methods**

Potential causes of the root problem that are related to methods cluster around challenges detecting and documenting SUDs, lack of a clear group referral process across clinics, and lack of prescriber availability. Documented rates of secondary SUDs within LACDMH are lower than expected rates, as shown by the RAND OUD waiting room study that suggests probable OUDs are double the current rates. If consumers are not identified as having a secondary SUD, there is a lower likelihood that they would be offered MAT or referred to a prescriber. This also impacts the COD group referral process. Consumers with secondary SUDs may not be referred to Seeking Safety or Integr8Recovery groups that specifically target their co-occurring mental health and substance use problems using evidence-based practices. The goal is to have the Seeking Safety groups act as the first step in recovery by focusing on increasing safety and reducing risky behaviors. Consumers with CODs who express an interest in reducing their substance use can then be referred on to Integr8Recovery groups. Finally, lower staffing capacity due to the COVID-19 pandemic has reduced prescriber availability, which impacts the number of consumers that can receive MAT each month.

### **Equipment/Data**

Potential causes of the root problem that are related to equipment focus on the electronic health record and limitations of available data. One issue that has impacted detection and identification of secondary SUD prevalence and MAT use is that the diagnoses entered into the prescription database (Order Connect) do not sync with the



diagnosis entered into the electronic health record (IBHIS). Prescribers must go into IBHIS to update the secondary SUD diagnosis if they are prescribing MAT to an eligible consumer, which increases documentation time and reduces available clinical time. In addition, the prescription database does not include prescriptions from the contracted sites, which makes it difficult to track and measure the use of MAT across the system. The intervention required to address this problem is largely clerical/administrative. Currently, DO clinics are receiving administrative guidance and support to improve the availability of updated diagnosis information in IBHIS. Screening has improved, but identification is an ongoing effort.

**1.6 Briefly state the intervention(s) selected to address the root causes.**

The two main clinical interventions of the PIP are MAT and the Integr8Recovery groups. These are described in more detail below.

1) Medication-Assisted Treatment (MAT) - medications used to manage cravings for AUDs and OUDs. LACDMH uses buprenorphine for OUDs, naltrexone for both AUDs and OUDs, and, to a lesser extent, acamprosate and disulfiram for AUDs. Providing MAT to appropriate LACDMH consumers addresses the overall problem of underutilization of MAT for COD consumers.

2) Integr8Recovery groups - treatment groups offered in several DO clinics to provide education on and direct referral to MAT for consumers with CODs. LACDMH prescribers (nurse practitioners, psychiatrists, clinical pharmacists) present on MAT in the group and provide individual services to consumers interested in MAT. Integr8Recovery groups are currently ongoing in three DO clinics (i.e., Edelman Mental Health Center, Men's Re-Integration Program, Women's Re-Integration Program). There are plans to expand to other DO clinics in the next calendar year. Plans to expand this year were delayed due to the COVID-19 pandemic and related staffing capacity. The model will also be shared with LEs in the future if the pilot outcomes support expansion and scaling up. The Integr8Recovery groups address a number of the root causes in the People (Staff and Consumers) and Methods categories. For the Staff category, the groups involve training in a treatment manual and ongoing technical assistance calls to support new group facilitators. For the Consumers category, the groups offer psychoeducation regarding MAT, facilitate discussions about medication myths, and target health beliefs regarding locus of control in these discussions. For the Methods category, the groups aim to provide a more clear referral process. The goal is to start by encouraging consumers with CODs to join a Seeking Safety group first, which focuses on the concept of safety and reducing risky behaviors. They can then be referred to the Integr8Recovery groups once it is established that they are interested in reducing their substance use.

Additional supportive interventions are described below:

1) Buprenorphine X-Waiver Training – an 8-hour course required before prescribers can receive a waiver from the United States DEA to prescribe buprenorphine for OUD. This was first offered to Directly-Operated sites in February 2021, and 41 staff attended the training. A training for Legal Entities (LEs) was planned for later in Spring 2021 and was delayed due to the COVID-19 pandemic and staffing capacity. This supportive intervention address the Materials category root cause of getting prescribers the X-waiver.

- 2) MAT Mentorship Network – a peer network pairing experienced MAT prescribers with those interested in prescribing MAT to facilitate the process and offer ongoing support. This intervention consists of monthly meetings where paired mentors and mentees discuss consumers receiving or are eligible to receive MAT. Pilot mentorship groups started at Edelman Mental Health Center and the Women’s Re-Integration groups in February 2021. The plan was to expand to other DO clinics and have a parallel-group occurring in the contracted sites. This plan was delayed due to the COVID-19 pandemic and lack of provider availability and interest in the contracted sites. In DO clinics, 23 prescribing staff expressed interest in becoming mentees, and six board-certified prescribers expressed interest in becoming mentors. This supportive intervention addresses the People: Staff category of root causes in that it provides training and ongoing support for prescribers who are just starting to administer MAT. It also addresses the People: Consumers category of root causes. The greater the number of available prescribing staff to educate consumers about MAT, the greater opportunities to increase awareness of MAT as a treatment option for consumers with CODs.
- 3) Co-Occurring Disorders Mini-Conference – half-day training open to all direct service providers in DMH to inform them of MAT as an option for consumers with CODs and provide more education on this treatment. This training was held in May 2021. This conference addressed several root causes in the People: Staff and Materials categories. As this was a conference open to all LACDMH staff, more line staff attended and were able to learn about the impact and evidence behind MAT as well as potential myths about the medications as the RAND AUD study suggested this may also contribute to lower MAT usage in the LACDMH system. The conference also outlined the assessment of secondary SUDs to improve the early detection of CODs and generate referrals for the COD groups.

Click here for [Step 1](#)



## WORKSHEET 2: AIM STATEMENT

*“What do we want to do?”*

**2.1** What is the aim of this PIP? The statement should define succinctly: the improvement strategy, population, and time-period of the study. (The statement should be clear and concise; the impact of interventions should be measurable.)

The provision of medication-assisted treatment (MAT) and interdisciplinary treatment groups, as well as staff training and a peer mentoring network, will result in a five percent increase in the percent of consumers with AUDs receiving MAT (from 7% to 12%) out of those consumers diagnosed with an AUD and a five percent increase in the percent of consumers with OUDs receiving MAT (from 5% to 10%) out of those consumers diagnosed with an OUD from Calendar Year 2020 to Calendar Year 2021. The use of MAT will also result in a five percent decrease in the 30-day re-hospitalization rates for consumers that receive any MAT medication (from 16.7% to 11.7%) from Fiscal Year 20-21 Quarter 2 to Quarter 4. In addition, the interdisciplinary treatment groups and MAT will result in a thirty percent reduction in mood (from 4.3/10 to 3/10), anxiety (from 6.6/10 to 4.6/10), and substance use impact (from 3.3/10 to 0/10) ratings from the first weekly measurement to the most recent weekly measurement for those consumers receiving both interventions.

Click here for [Step 2](#)

## WORKSHEET 3: PIP STUDY POPULATION

*“Who do we intend to help?”*

**3.1** Describe the beneficiary or enrollee population affected by the problem. Provide information such as age, length of enrollment, diagnosis, and other relevant characteristics.

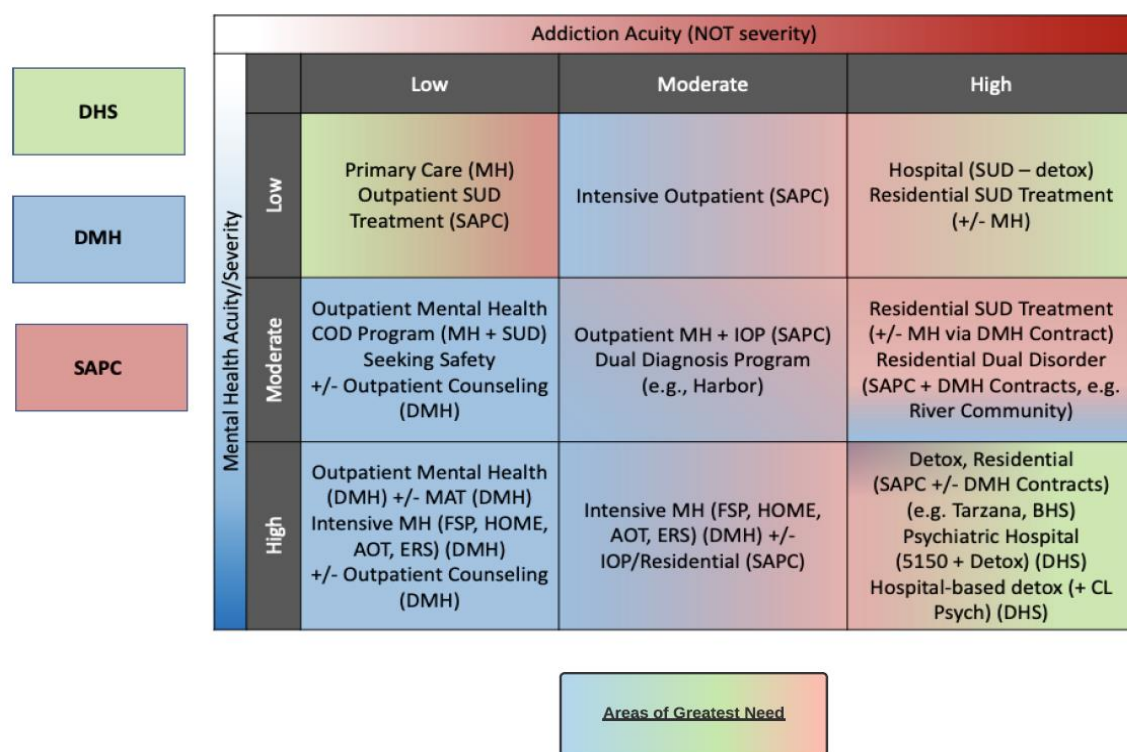
The PIP focuses on LACDMH consumers (most of whom are Medi-Cal beneficiaries) who are experiencing co-occurring mental health and substance use problems, particularly with alcohol and opioids, as these are the areas for which MAT is approved. Consumers must meet medical necessity within the LACDMH system in order to receive services and participate in the PIP. To be eligible, consumers can have any mental health diagnosis as well as problematic substance use, whether or not it is documented as a secondary substance use diagnosis, can be any age for which MAT would be indicated (typically transition age youth and up), and be at any stage of enrollment in services.

Several clinical tools were developed to help determine which consumers with CODs are best served by LACDMH as opposed to other healthcare systems. The 9-quadrant model (Figure 6) outlines the systems of care to best meet the need based on mental health and addiction acuity.

DMH has had discussions with SAPC regarding using the American Society of Addiction Medicine (ASAM) criteria to expedite the referral process of DMH clients to SAPC programs. SAPC mandates that the ASAM assessment be initiated/administered only by the SAPC contracted program assessing the client and will not allow DMH providers access to the SAPC ASAM interface to expedite referral/placement.

DMH providers would need to be part of the SAPC contracted system of care to facilitate/expedite ASAM placement. When the expanded Drug Medical benefit came into being, DMH decided not to become providers under this benefit. Given the number of programmatic, administrative, and fiscal constraints Drug Medi-Cal would impose, it was determined that incorporating care under Drug Medi-Cal would compromise LACDMH's mission.

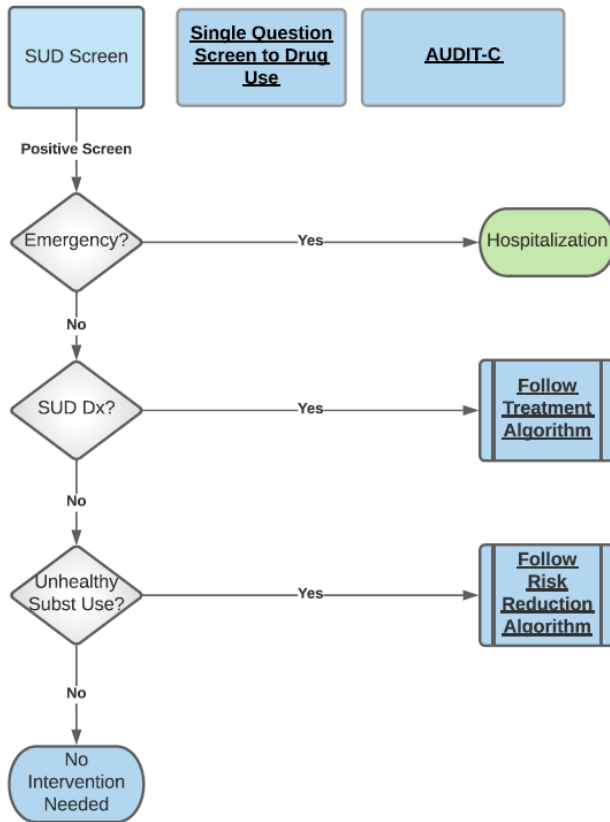
Figure 6. Nine-Quadrant Model of Systems of Care based on Mental Health and Addiction Acuity for Consumers with CODs



In making specific triage and treatment decisions, providers start by using the Co-Occurring Disorders Algorithm (Figure 7, pictured below), which uses a combination of the Single Question Drug Screener (i.e., “How many times in the past year have you used an illegal drug or used a prescription medication for non-medical reasons?”) and the Alcohol Use Disorders Identification Test-Concise (AUDIT-C) to consider whether consumers are in an active emergency, meet criteria for a SUD, or are engaging in unhealthy substance use. If consumers are in an active emergency, they will be referred for hospitalization through the Department of Healthcare Services (DHS). If consumers meet the criteria for a SUD, providers should follow the Co-Occurring Disorders Treatment Algorithm (Figure 8), which provides guidance based on consumers’ willingness, current substance use status, current mental health acuity, and capacity to engage in treatment for COD. If consumers engage in unhealthy substance use, providers should follow the Risk Reduction Algorithm (Figure 9), which provides guidance based on consumers’ use of specific substances. The complete tool is included in the Supplemental Materials for the PIP.

Figure 7. Co-Occurring Disorders Algorithm

Co-Occurring Disorders  
Screening, Assessment, and Referral to Treatment



Key

DMH	Department of Mental Health
SAPC	Substance Abuse Prevention and Control
DHS	Department of Health Services
9-Quadrant Model	System of Care for COD (click)

SUD = Substance Use Disorder

Figure 8. Co-Occurring Disorders Treatment Algorithm

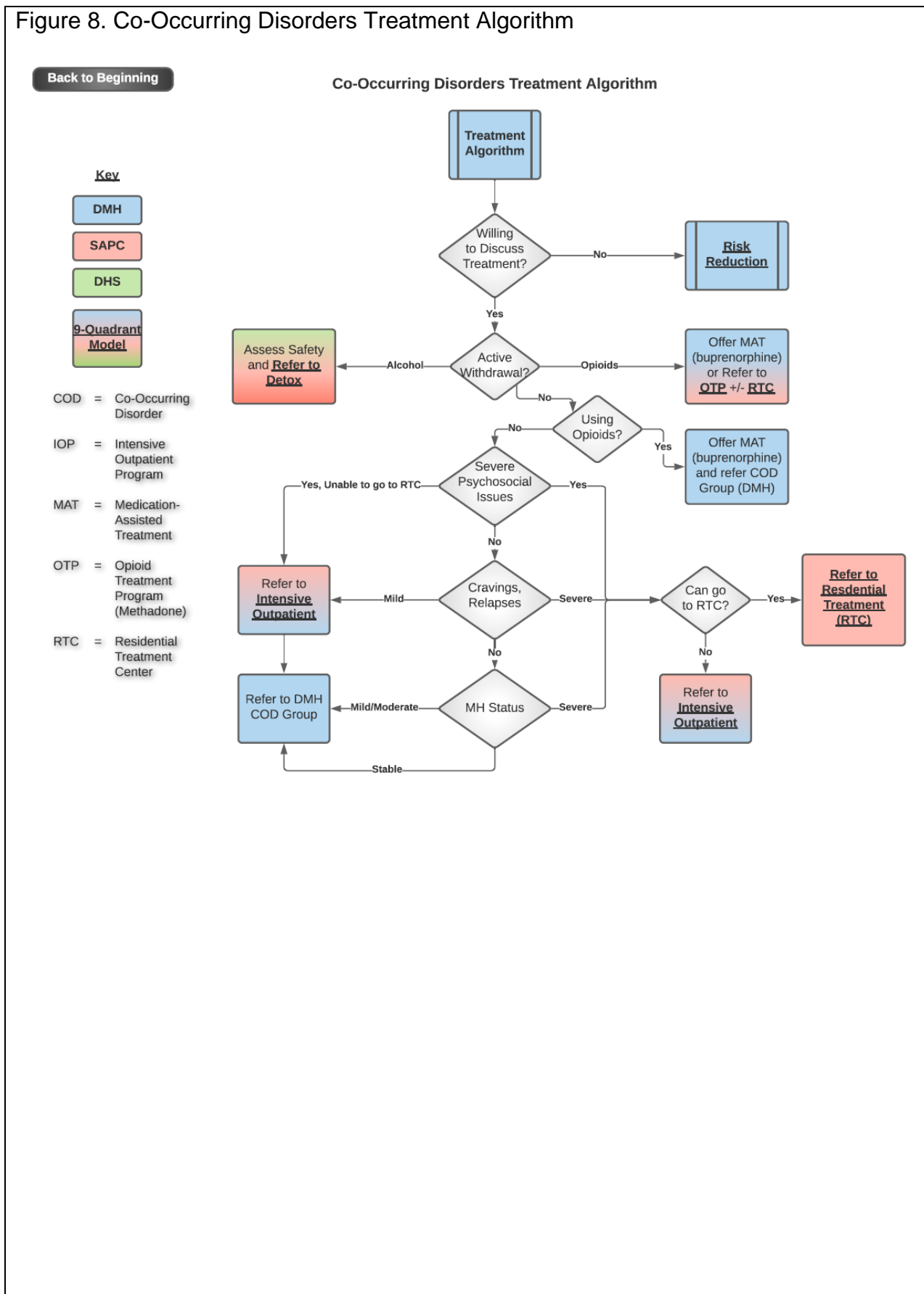
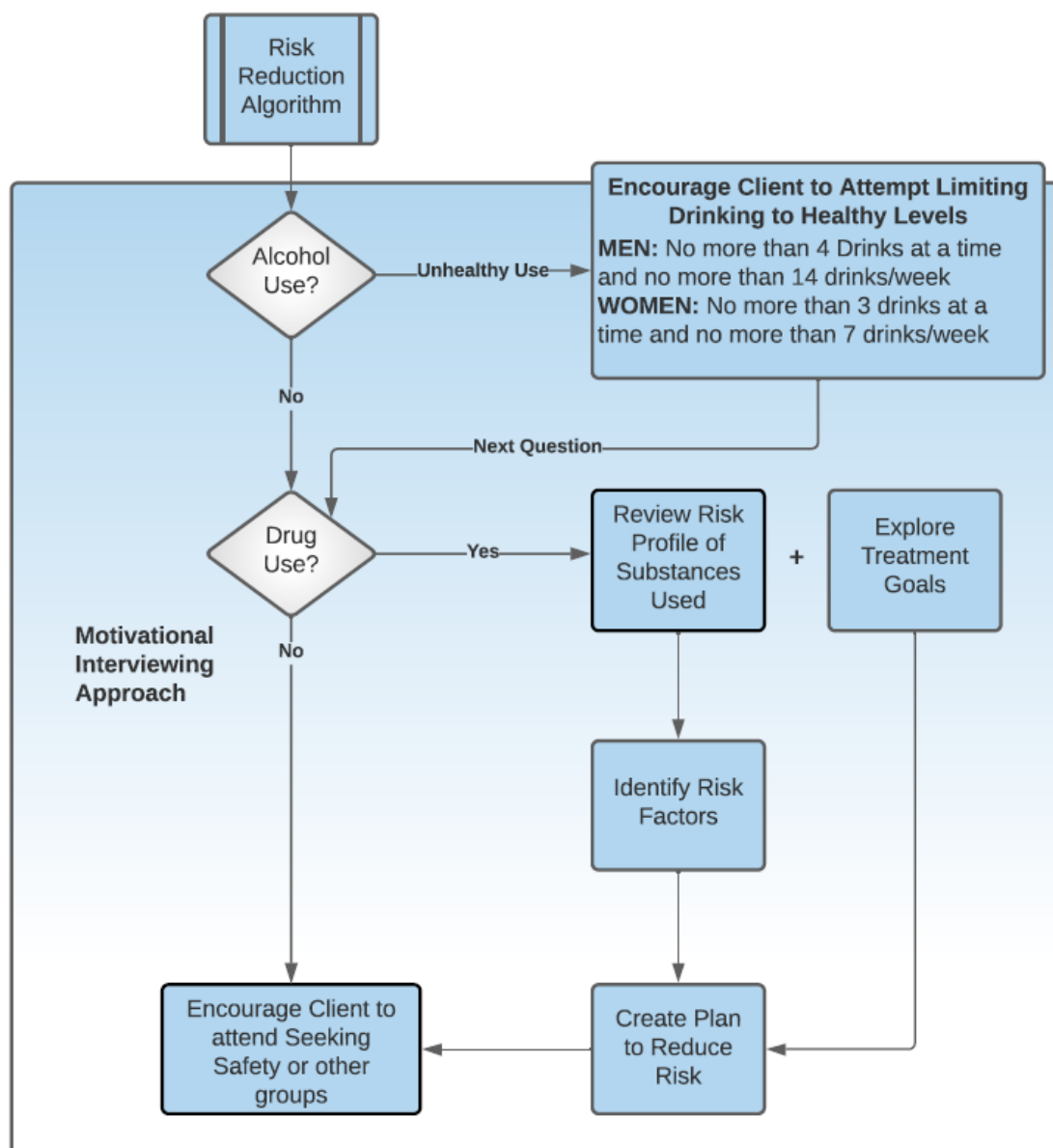


Figure 9. Risk Reduction Algorithm



### PIP Population Demographics

The PIP is targeting the expansion of MAT, including its initial use. Ongoing administration and acceptance are aspects of retention and will be examined as a separate effort.

808 consumers received at least one administration of any of the MAT medications between January and June 2021. Demographics are presented in figures 10 to 13 below. The majority of the consumers were Latino (37.4%, N = 302), followed by White (27.2%, N = 220), Black/African-American (15.8%, N = 128), Two or more races (3.3%, N = 27), Asian/Pacific Islander (API; 1.6%, N = 13), and American Indian/Alaska Native (AI/AN; 0.7%, N = 6). The remaining were unknown (13.9%, N = 112). Fifty-three percent (N = 431) self-identified as Male, 46.4% (N = 375) self-identified as Female,

0.1% (N = 1) self-identified as Transgender Female to Male, and 0.1% (N = 1) self-identified as Transgender Male to Female. Most consumers were in the age range of 26 to 59 years (84.8%, N = 685) followed by 60 and up (8.5%, N = 69), and ages 16 to 25 (6.6%, N = 53). One consumer is age 15 (0.1%, N = 1). The primary languages spoken were English (85.6%, N = 692) and Spanish (10.0%, N = 8) followed by Other (i.e., Armenian, Farsi, Russian, Vietnamese; 1.0%, N = 8) and Unknown (3.3, N = 27).

Figure 10. Race/Ethnicity of Consumers Receiving MAT January to June 2021

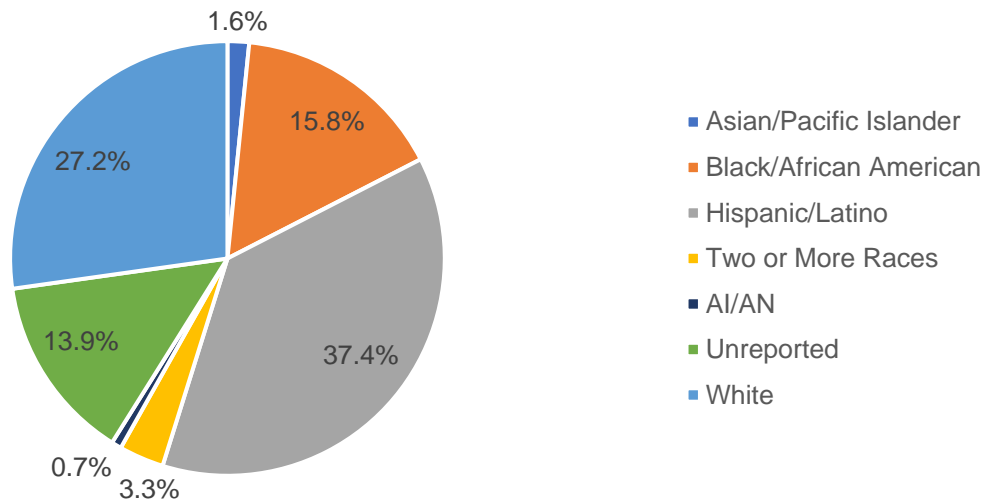


Figure 11. Gender of Consumers Receiving MAT January to June 2021

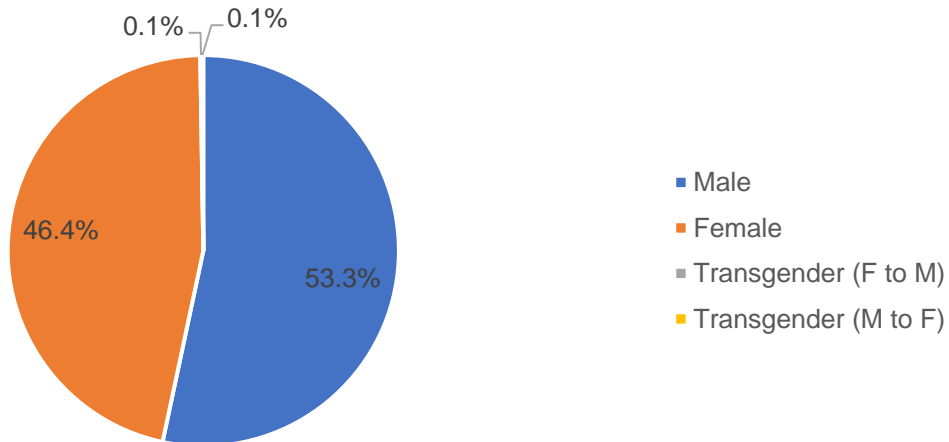


Figure 12. Age Groups of Consumers Receiving MAT  
January to June 2021

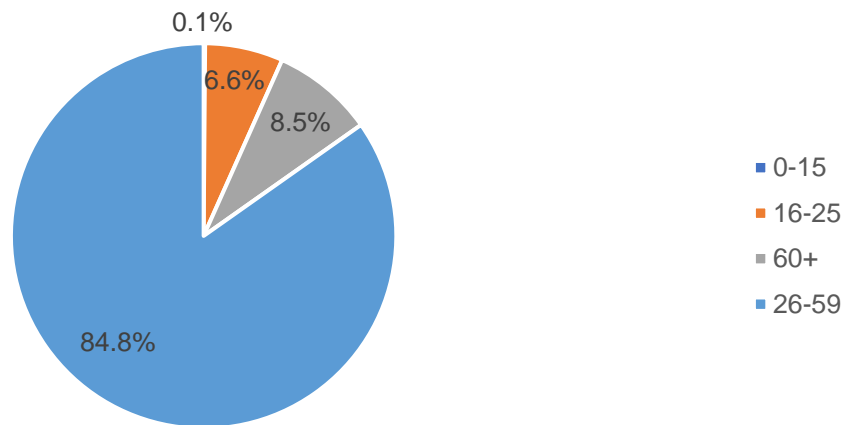
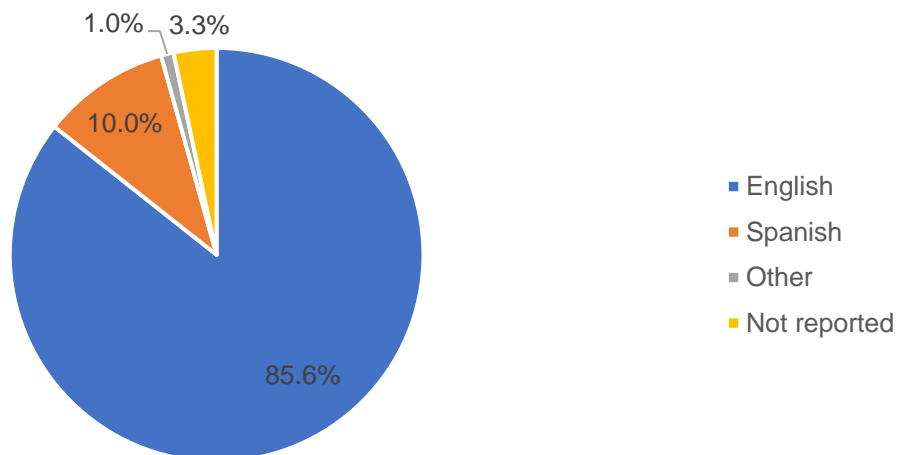


Figure 13. Language of Consumers Receiving MAT  
January to June 2021



**3.2** Will all affected beneficiaries/enrollees receive the intervention(s) and be included in the PIP study population?

☒ Yes

☐ No

**3.3** If no, who would be included? (May be a representative sample, a pilot location, or some other subset of the affected population that will serve as an initial pilot). [Click or tap here to enter text.](#)

[Click here for Step 3](#)

[FINAL - Post EQR\\_PIP Development Tool FY21-22 v1.1 MAT project](#) [PIP Development Tool FY21-22 v1.1](#)

Last Revised 9/30/21 LS



## WORKSHEET 4: SAMPLING PLAN

*“How do we select a smaller group to study?”*

A representative sample of the population are included in the PIP. Such a sample may include some subset of the affected population, a pilot location, a particular caseload, or other feature.

- If the entire relevant population is included in the PIP, skip Worksheet 4.
- If the entire population is **not** included in the PIP, complete Worksheet 4.

**4.1** Please describe the sampling frame for the PIP; include the criteria for selection of the sample population. Click or tap here to enter text.

MAT services were open to all qualifying clients – no sampling occurred. The Integr8Recovery groups were piloted in three DO clinics: Edelman Mental Health Center, Men’s Re-Integration Program, and Women’s Re-Integration Program. By way of pilot implementation, the Integr8Recovery groups’ curriculum and materials could be tested on a smaller scale before departmental-wide implementation. The Integr8Recovery groups will expand to additional DO clinics this year and to Legal Entities in the future.

**4.2** Specify the criteria for selection of the sample population. (The sample should be representative of the sampling frame to ensure that the findings from the sample can be generalized to the population as a whole). Ensure that there are a sufficient number of enrollees to take into account non-response, dropout, etc.

Click or tap here to enter text.

**4.3** State the confidence level and margin of error to be used.

Click or tap here to enter text.

Click here for [Step 4](#)

# WORKSHEET 5: PIP VARIABLES AND PERFORMANCE MEASURES

*“How will we know if what we’re doing makes a difference?”*

## 5.1 What are the variables used to track the intervention(s)?

The PIP variables that will be used to track the interventions are the percent of consumers receiving MAT(in general and for the specific diagnoses of AUD and OUD), the number of consumers that attend Integr8Recovery groups and the number of groups attended, the percent of prescribers eligible to administer MAT, and the percent of prescribers that administer MAT (particularly for those that participated in the Buprenorphine X-waiver training, MAT Mentorship pilots, and Co-Occurring Disorders Mini-Conference). Please see Table 5.1 for more details.

## 5.2 What are the performance measures used to track the outcomes? Please describe how the performance measures assess an important aspect of care that will make a difference to beneficiary health or functional status.

The performance measures will be the rate of re-hospitalization within 30 days for the full sample and, for those that participate in the Integr8Recovery groups and receive MAT, clinical progress measures over time. As including MAT as part of a larger treatment package has been associated with fewer hospitalizations and emergency room visits, re-hospitalization rates are an important metric for assessing beneficiary functioning. The outcomes assessed on the Weekly Check-In measure (i.e., mood rating, anxiety rating, substance interference rating, and weekly substance use) provide important insights into consumer perceptions of their mental health and substance use improvements as treatment progresses.

*Please complete the table below with specific details.*

**TABLE 5.1 VARIABLES AND PERFORMANCE MEASURES**

Goal	Interventions	Variables (Indicators)	Performance Measures (Outcomes)	Target Improvement Rate
<b>Example 1:</b>	<i>Addition of recovery navigators; change in program focus to community re-entry; identification of barriers</i>	<i>1.# of clients with navigators assisting with discharge and 2. # and types of navigator contacts. 3.# of treatment plans with identification of barriers</i>	<i># of admissions to lower levels of care within 30 days of discharge from residential treatment for adults</i>	<i>Increased discharges linked to outpatient or recovery support or MAT by 15 percentage points over next 12 months from 45% to 60%</i>
<b>Example 2:</b> <i>Decrease anxiety and improve daily functioning among teens diagnosed with anxiety</i>	<i>Mindfulness and other DBT coping skills</i>	<i># of DBT group sessions attended by adolescents</i>	<i>GAD-7 and self-report</i>	<i>Reduce average score by 25% (from 13 to below 10)</i>

Process Measures				
Increase use of MAT	1) MAT 2) Integr8Recovery groups 3) X-Waiver training 4) MAT Mentorship Network 5) Co-Occurring Disorders Mini-Conference	1) Percent of prescribers eligible to administer MATs 2) Percent of prescribers administering MAT to at least one consumer 3) Percent of total consumers prescribed MAT	1) Number of consumers with AUDs prescribed MAT 2) Number of consumers with OUDs prescribed MAT	Increase percent of consumers receiving MAT for AUD and OUD out of those with the respective diagnosis served by 5% (from 7% to 12% for AUD and from 5% to 10% for OUD)
Clinical Measures				
Improve functioning for consumers receiving MAT	1) MAT 2) Integr8Recovery groups	Number of consumers receiving MAT	30-day re-hospitalization rates	Reduce 30-day re-hospitalization rates for those receiving MAT by 5% (from 16.7% to 11.7%)
Decrease depressed mood, anxiety, and impact of substance use ratings for consumers participating in Integr8Recovery groups	1) MAT 2) Integr8Recovery groups	Number of consumers attending Integr8Recovery groups and number of sessions attended	1) Depressed mood rating 2) Anxiety rating 3) Impact of substance use rating (all scales 0-10 self-report where 10 is worst)	Reduce depressed mood, anxiety, and substance use impact ratings by 30% from first to the last measure

Click here for [Step 5](#)

# WORKSHEET 6: IMPROVEMENT STRATEGY (INTERVENTION) AND IMPLEMENTATION PLAN

*“What, specifically, will we do to cause the change?”*

**6.1** Describe the improvement strategy/intervention. (Distinguish between the intervention(s) and the training and administrative supports required prior to implementation). Include pre-intervention process description, if relevant.

## **Clinical Interventions:**

1) Medication-Assisted Treatment (MAT) Delivery – medications used to manage cravings for AUDs and OUDs. LACDMH uses buprenorphine for OUDs, naltrexone for both AUDs and OUDs, and, to a lesser extent, acamprosate and disulfiram for AUDs.

2) Integr8Recovery Groups – treatment group offered in several DO clinics (i.e., Edelman Mental Health Center, Men’s and Women’s Re-Integration Programs) to provide education on and greater access to MAT. LACDMH prescribers (i.e., nurse practitioners, psychiatrists, clinical pharmacists) present on MAT in the group focusing on psychoeducation, dispelling myths, reducing stigma, and providing individual services to those interested in receiving MAT.

The Integr8Recovery model seeks to fully integrate the various facets of co-occurring disorder treatment, from medication-assisted treatment to cognitive behavioral therapy and mutual self-help groups using lived experience. This model is designed to maximize available staff time and provide flexibility for therapists specializing in specific treatment modalities. The goal is to incorporate effective and evidence-based treatments in a single group that naturally provides interdisciplinary treatment and planning. This model is intended to be 48 weekly sessions in a group format. Participants are those with a primary mental health disorder who have at least some interest in reducing or stopping substance use. The model includes evidence-based practices such as contingency management, cognitive behavioral therapy, 12-step facilitation, and medication for co-occurring disorders.

The Integr8Recovery groups also include an outcomes component through the Weekly Check-In measure. This brief measure assesses for anxiety, depressed mood, and substance use impact ratings (0-10 with 10 being highest), questions regarding medication side effects and need for an individual medication appointment, suicidality, and use of non-prescribed substances over the past week. The use over the past week includes the number of drinks for alcohol (with a visual of a standard drink for various alcoholic beverages) and indication of use or no use for cannabinoids, cocaine/crack, amphetamine/methamphetamine, opioids/heroin, benzodiazepines (e.g., Xanax, Klonopin, Valium, Ativan, etc.) and other drugs.

## **Supportive Process Interventions**

1) Buprenorphine X-Waiver Training (February 2021) – an 8-hour course required before prescribers can receive a waiver from the DEA to prescribe buprenorphine for OUD. This was first offered to directly operated sites in February 2021, and 44

staff attended. A training for contracted sites was planned for Spring 2021 and was delayed due to the COVID-19 pandemic and staffing issues.

- 2) MAT Mentorship Network – (starting in February 2021) peer network pairing experienced MAT prescribers with those interested in prescribing MAT to facilitate the process and offer ongoing support. This intervention consists of monthly meetings where paired mentors and mentees discuss consumers that are receiving or are eligible to receive MAT. The training for the DO network was scheduled for mid to late February and was delayed due to the COVID-19 pandemic and staffing capacity. Currently, 23 prescribing staff in DO clinics have expressed interest in being mentees, and six board-certified prescribers have expressed interest in being mentors. Small pilot groups started in February 2021 at Edelman Mental Health Center and the Women's Re-Integration Program.
- 3) Co-Occurring Disorders Mini-Conference - half-day training open to all direct service providers in LACDMH to inform them of MAT as an option for consumers with CODs and provide more education on this treatment. This training was held in May 2021.

Describe when and how often the intervention will be applied.

MAT medications vary in their dosing frequency. Oral naltrexone is frequently prescribed once a day in 30- or 90-day installments, as is disulfiram. Vivitrol, the injectable of naltrexone, is typically injected subcutaneously once a month. Buprenorphine sublingual tablets, Suboxone, a sublingual film, and acamprosate are often prescribed to be taken several times a day.

Integr8Recovery groups are weekly treatment groups that encourage consumers to participate through a contingency management system. Participants are entered into a gift card raffle when they complete the Weekly Check-In measure before each session.

For the supportive process interventions, the MAT mentorship network pilot meetings occur monthly, and the staff trainings were one-time events.

**6.2** What was the quantitative or qualitative evidence (published or unpublished) suggesting that the intervention(s) would address the identified causes/barriers and thereby lead to improvements in processes or outcomes?

Research indicates that MAT can successfully reduce substance use and relapse rates as well as overdose and mortality rates, particularly for AUD and OUD (Donoghue, Elzerbi, Saunders, Whittington, Pilling, & Drummond, 2015; Ma, Bao, Wang et al, 2019; Thomas, Fullerton, Kim et al., 2014). The use of MAT in populations with serious mental illness (SMI) has also been associated with reductions in psychiatric hospitalizations and improvements in psychotropic medication adherence (Robertson, Easter, Lin et al., 2018). As the Associate Director of Co-Occurring Disorders developed the Integr8Recovery groups for internal use, they have not yet been tested. However, the material used in the groups has been sourced from various evidence-based models, including cognitive-behavioral therapy and motivational interviewing.

**6.3 Does the improvement strategy specifically address cultural and linguistic needs for the population/beneficiaries? If so, in what way?**

The improvement strategy addresses cultural and linguistic needs primarily through adapting consumer materials for various audiences. The Integr8Recovery developer's goal in creating a treatment manual and handouts is to make the information as generalizable as possible to consumers from different backgrounds. To that end, the content covers cognitive-behavioral skills that can be useful across different diagnostic categories, including depression, anxiety, thought disorders, and personality features, uses visuals and limited text to be more inviting to consumers with limited literacy, and will be available in other threshold languages with a current focus on translation in Spanish.

**6.4 Who is involved in applying the intervention? What are their qualifications?**

MAT can be prescribed by psychiatrists, clinical pharmacists, or nurse practitioners, with the majority prescribed by psychiatrists. The Integr8Recovery group leaders vary by clinic. The full implementation of the group involves facilitation by a prescribing staff (psychiatrist or clinical pharmacist), a clinician, and a substance use counselor.

The staff trainings were delivered by experts in the subject area. Brian Hurley, M.D, led the buprenorphine X-waiver training. He has worked with RAND to develop an e-book on using MAT in mental health settings and has significant experience mentoring others to use MAT. The MAT Mentorship Network is overseen by Jeremy Martinez, M.D., who is currently the Associate Director of Co-Occurring Disorders, and the mentors are psychiatrists in LACDMH who have multiple years of experience administering MAT.

**6.5 How is the MHP/DMC-ODS ensuring consistency and/or fidelity during implementation of the intervention?**

Each intervention will have a component of ensuring consistency. For the buprenorphine X-waiver training, there was a pre-post knowledge test that assessed the level of comfort with and intention to administer MAT as well as an inventory of prescribers who have obtained the X-waiver. For the MAT mentorship network, there will be logs of participants in each meeting and a review of the consumers to whom mentees administer MAT. Dr. Martinez will also have quarterly meetings with the MAT mentors to assess mentee progress and address barriers. For the Integr8Recovery groups, when the groups can scale up to other clinics, Dr. Martinez plans to hold technical assistance meetings to ensure consistency and fidelity across different groups. For the Co-Occurring Disorders Mini-Conference, there was a pre-post attitude measure to ensure increased openness to MAT due to the training. It will also be possible to track the number of new MAT enrollees in each participating clinic after the training.



Complete this table and add (or attach) other tables/figures/charts as appropriate.

**TABLE 6.1 IMPROVEMENT STRATEGY SUMMARY**

#	Intervention	Date Intervention Began	Frequency of Intervention	Corresponding Variable (Indicator)
	<b>Example 1:</b> <b>1a:</b> Addition of two navigators to engage with all admitted clients to adult residential treatment <b>1b:</b> Addition of barriers on treatment plan and types of barriers	<b>1a:</b> 4/1/2021 <b>1b:</b> 4/1/2021	<b>1a:</b> Minimum weekly individual contact and optimal three times per week before discharge and week after discharge until two face to face appointments in lower level of care <b>1b:</b> Documented in medical record and summarized by supervisor for QI review. # and type	<b>1a:</b> Navigator visits and type of visits <b>1b:</b> # of treatment plans with barriers and report with types of barriers weekly and quarterly
	<b>Example 2:</b> Mindfulness and other DBT coping skills	4/1/2021	Weekly groups	# of DBT group sessions attended by adolescents
<b>Clinical Interventions</b>				
1	<b>Medication-Assisted Treatment (MAT)</b>	01/2021	Dosage varies	1) Number of consumers prescribed MAT 2) Number of consumers with AUDs prescribed MAT 3) Number of consumers with OUDs prescribed MAT
2	<b>Integr8Recovery groups</b>	01/2020 (Edelman); 3/9/20 (Men's Re-Integration); 2/1/21 (Women's Re-Integration)	Weekly groups	1) Number of consumers participating in Integr8Recovery groups 2) Number of consumers participating in Integr8Recovery groups that begin receiving MAT
<b>Supportive Process Interventions</b>				
3	<b>Buprenorphine X-Waiver Training</b>	2/10/2021	One-time event	1) Number of psychiatrists attending training 2) Number of psychiatrists with X-waiver 3) Pre/post knowledge test scores
4	<b>MAT Mentorship Network</b>	2/2021 (Pilot at Edelman MHC and Women's Re-Integration)	Monthly meetings	1) Number of psychiatrists attending meetings 2) Number of consumers referred to MAT
5	<b>Co-Occurring Disorders Mini-Conference</b>	5/26/2021	One-time event	1) Number of staff members attending training 2) Pre/post attitude scores

Click here for [Step 6](#)

# WORKSHEET 7: DATA COLLECTION PROCEDURES

*“What data do we need, and how will we get it?”*

**7.1** Describe the (planned) methods for ensuring the collection of valid and reliable data. Include MHP/DMC-ODS data entry and collection processes.

Data are primarily collected from the prescription and claiming records submitted through Order Connect and IBHIS and are housed in the data warehouse. Multiple departments and staff members, including supervisors, program managers, CIOB, and Quality Assurance (QA) regularly review this data to ensure it is valid and reliable. The Weekly Check-in form is administered to consumers immediately prior to Integr8Recovery sessions each week, and they participate in a raffle to improve the likelihood that consumers will complete it.

The primary data sources for the performance indicators are the prescription, billing, hospitalization, and group appointment tables in IBHIS. Additional data sources include survey data from the MAT Mentorship network, pre/post-tests for the X-waiver training and pre/post attitude measure for the Co-Occurring Disorders Mini-Conference, and the Weekly Check-In consumer outcomes measure, all of which are collected through Microsoft Forms.

**7.2** What data elements are being collected?

The data elements being collected are the use of MAT, including the prescriber, the type of medication, and the consumer ID as indicated by the Order Connect tables in the data warehouse. Data elements related to performance measures include the number of consumers receiving MAT (also separated by those with specific AUD and OUD diagnoses), the number of consumers with improved mood or anxiety ratings on Weekly Check-in, the number of consumers with decreased substance use and interference ratings on the Weekly Check-in, and the percent of consumers receiving either MAT or Integr8Recovery groups that are re-hospitalized within 30 days. Other data elements are the prescriber's level of comfort with and knowledge of MAT.

**7.3** Who is collecting the data? How are they qualified for this task? How will you ensure that all staff collecting data do so in accordance with the plan?

Prescription data are entered by the prescribing staff directly into Order Connect. These data are up-to-date and accurate because the staff member administering the prescription enters the data, and it needs to be communicated correctly to the pharmacy. The Weekly Check-in form is completed by consumers participating in the Integr8Recovery group. Participation in Integr8Recovery groups and 30-day re-hospitalization rates is indicated by progress notes and hospitalization records entered by staff into IBHIS. Hospitalization records may not be complete due to the data coming from a third-party entity. The pre-post knowledge tests are completed by the training participants in Microsoft Forms. Surveys regarding participation in the MAT mentorship network are also be completed by mentors and mentees in the program through Microsoft Forms.



**7.4** What data collection instruments and electronic data collection/analytic systems are being used (i.e., tools with which raw, original data are collected and/or downloaded for analysis)? Please note if the MHP/DMC-ODS has created any instruments for this PIP.

The Weekly Check-in form was developed by Dr. Martinez and inquires about the following areas: side effects or other issues with current medications, life goals and progress toward life goals, anxiety level (0-10 rating), mood level (0-10 rating), suicidal ideation, substance use (including the quantity of various kinds of alcohol and use of various substances not prescribed by a doctor), and impact of substance use (0-10 rating). The X-waiver training pre-post knowledge test was developed by Dr. Brian Hurley and Dr. Martinez and covers questions related to the training as well as the level of comfort and intention to administer MAT. The MAT Mentorship network survey was created by Dr. Martinez and will be modified to track progress for mentors and mentees over time. A pre-post survey was created for the Co-Occurring Disorders Mini-Conference based on the questions in the original RAND AUD study surveys.

**TABLE 7.1 SOURCES OF DATA**

#	Variable or PM	Data Source	Frequency of Collection
	<b>Example 1:</b> <b>1a:</b> Navigator contacts <b>1b:</b> Treatment Plan Barriers	<b>1a:</b> EHR & Billing logs <b>1b:</b> EHR	<b>1a:</b> Monthly <b>1b:</b> Weekly
	<b>Example 2:</b> # of DBT group sessions attended by adolescents	EHR	Monthly
Process Measures			
1	Number of prescribers eligible to administer MATs	Inventory of prescribers with X-Waiver	Quarterly
2	Number of prescribers administering MAT to at least one consumer	Order Connect data	Monthly
3	Average number of consumers to which each prescriber administers MAT	Order Connect data	Monthly
4	Number of consumers prescribed MAT (any diagnosis)	Order Connect, Diagnosis tables	Monthly
5	Number of consumers with AUDs prescribed MAT	Order Connect data, Diagnosis tables	Monthly
6	Number of consumers with OUDs prescribed MAT	Order Connect data, Diagnosis tables	Monthly
7	Number of consumers receiving MAT through the Integr8Recovery group	IBHIS data	Monthly
Clinical Measures			
8	30-day Re-hospitalization rates	IBHIS data	Quarterly
9	Average mood, anxiety, or substance use impact rating on Weekly Check-in (0-10 scale with 10 worst)	Weekly Check-in data (Microsoft Forms)	Monthly
10	Average quantity of alcohol and other substance use	Weekly Check-in data (Microsoft Forms)	Monthly

Click here for [Step 7](#)

# WORKSHEET 8: DATA ANALYSIS AND INTERPRETATION OF PIP RESULTS

*“What do the data tell us, and what did we learn?”*

## 8.1 How often were the data analyzed?

Plan: The ongoing process and clinical measure data were analyzed and presented monthly to the clinical PIP committee. Data from one-time events (e.g., Buprenorphine X-waiver training, COD Mini-Conference) were evaluated soon after the event.

Actual: The implementation of data analysis occurred according to plan. For the purposes of the PIP results, to minimize time points, data were aggregated at the fiscal quarter level.

## 8.2 Who conducted the data analysis, and how are they qualified to do so?

Plan: The PIP lead analyst conducted the data analysis. The PIP lead analyst is a clinical psychologist Ph.D. with a strong research background in dissemination and implementation science as well as quantitative and qualitative research methods and statistical analysis. She is an author on 21 peer-reviewed original research publications and has participated in over 30 original research presentations at state and national conferences on psychology and mental health care.

Actual: The PIP lead analyst conducted the data analysis as planned.

## 8.3 How was change/improvement assessed?

Plan: Improvement was determined according to the measures used. For process measures involving the utilization and receipt of MAT, improvement was assessed according to percent increases in prescribers administering and consumers receiving MAT. For clinical measures, improvement in functioning was assessed by a reduction in 30-day re-hospitalization rates for the intervention group, and symptom improvement was assessed by a reduction in depressed mood, anxiety, and the impact of substance use ratings on the Weekly Check-In measure.

Actual: Improvement was assessed according to plan

## 8.4 To what extent was the data collection plan followed—were complete and sufficient data available for analysis?

The data were complete in that the relevant information was entered into IBHIS or Microsoft Forms. However, the amount of data that was able to be collected was lower than what was expected for this point of the PIP due to delays from the COVID-19 pandemic. The Integr8Recovery groups were meant to expand to 10 other DO clinics within Calendar Year 2021, which would have likely increased the number of consumers receiving MAT. However, key leaders on the project were re-assigned to Disaster Service Worker projects to manage the COVID-19 pandemic, which limited the time that could be devoted to finalizing the Integr8Recovery manual and ensuring the other clinics had implementation support in rolling out new groups. Similarly, the MAT mentorship network plans were delayed given staffing issues related to COVID-19. Only small pilots at two clinics could take place (i.e., the pilot group at Edelman Mental Health Clinic consisted of Dr. Martinez and three prescribing staff mentees

and the pilot group at the Women's Re-Integration program consisted of Dr. Scott Hunter and three psychiatrist mentees). The plan to replicate the MAT Mentorship Network in contracted agencies was similarly put on hold, which limited our ability to include more data from contracted agencies. Data from one program, Behavioral Health Services, Inc., was available as a similar mentoring program had been in place there from April 2018 to August 2020.

**8.5** Were any statistical analyses conducted? If so, which ones? Provide target level of significance for each measure.

Yes, multiple statistical analyses were conducted on the process and clinical measures. For the prescription rates for AUD and OUD as well as the 30-day re-hospitalization rate analyses, the McNemar chi-square test was used to determine if there were significant differences in the frequencies of consumers on each dichotomous variable from quarter to quarter. For the prescription rate analyses, the two binary variables were MAT status (i.e., yes for consumers that had both an AUD/ODD diagnosis and were receiving a MAT for AUD/ODD, no for consumers that did not have both a diagnosis and a matching MAT prescription) and time (i.e., baseline, 1<sup>st</sup> remeasure, 2<sup>nd</sup> remeasure, each tested separately). For re-admission within 30 days analyses, the two binary variables were re-hospitalization within 30 days status (i.e., yes for consumers receiving MAT who were re-hospitalized within 30 days of discharge, no for consumers receiving MAT who were not re-hospitalized within 30 days of discharge), and time (i.e., baseline, 1<sup>st</sup> remeasure, 2<sup>nd</sup> remeasure, each tested separately). A comparison between those consumers receiving MAT and those with a SUD not receiving MAT was also performed using the McNemar test. For the Weekly Check-in ratings, a repeated-measures ANOVA was used with time as the within-subjects factor and MAT status (i.e., consumers receiving Integr8Recovery and MAT vs. consumers receiving only Integr8Recovery groups) as the between-subjects factor. The included time points were the depressed mood, anxiety, and substance use impact ratings at weeks 1, 4, and 8, as the majority of consumers participating in Integr8Recovery had completed at least eight measures (range 1 to 17). The target level of significance used for all analyses was 5% or a p-value under or equal to 0.05.

**8.6** Were factors considered that could threaten the internal or external validity of the findings examined?

Yes, there were multiple factors that could threaten the internal or external validity of the findings. Due to the limitations of the COVID-19 pandemic and the more limited initial rollout of the interventions, the sample sizes for consumers that received both MAT and Integr8Recovery groups and for prescribers participating in the MAT mentorship network pilot groups were very small. The number of consumers receiving MAT that were re-hospitalized within 30 days was also lower than expected. However, this may have also been impacted by the COVID-19 pandemic due to limited bed availability and concern about presenting to the hospital. The depressed mood, anxiety, and substance use impact scores may also have been affected by the COVID-19 pandemic. Data from the Gallup wellbeing survey and Kaiser Permanente indicated higher rates of depression, anxiety, and substance use overall during the pandemic, which may have inflated scores for some participants.

Please complete the following table and add other tables/figures/charts as appropriate.

**TABLE 8.1 PIP RESULTS SUMMARY**

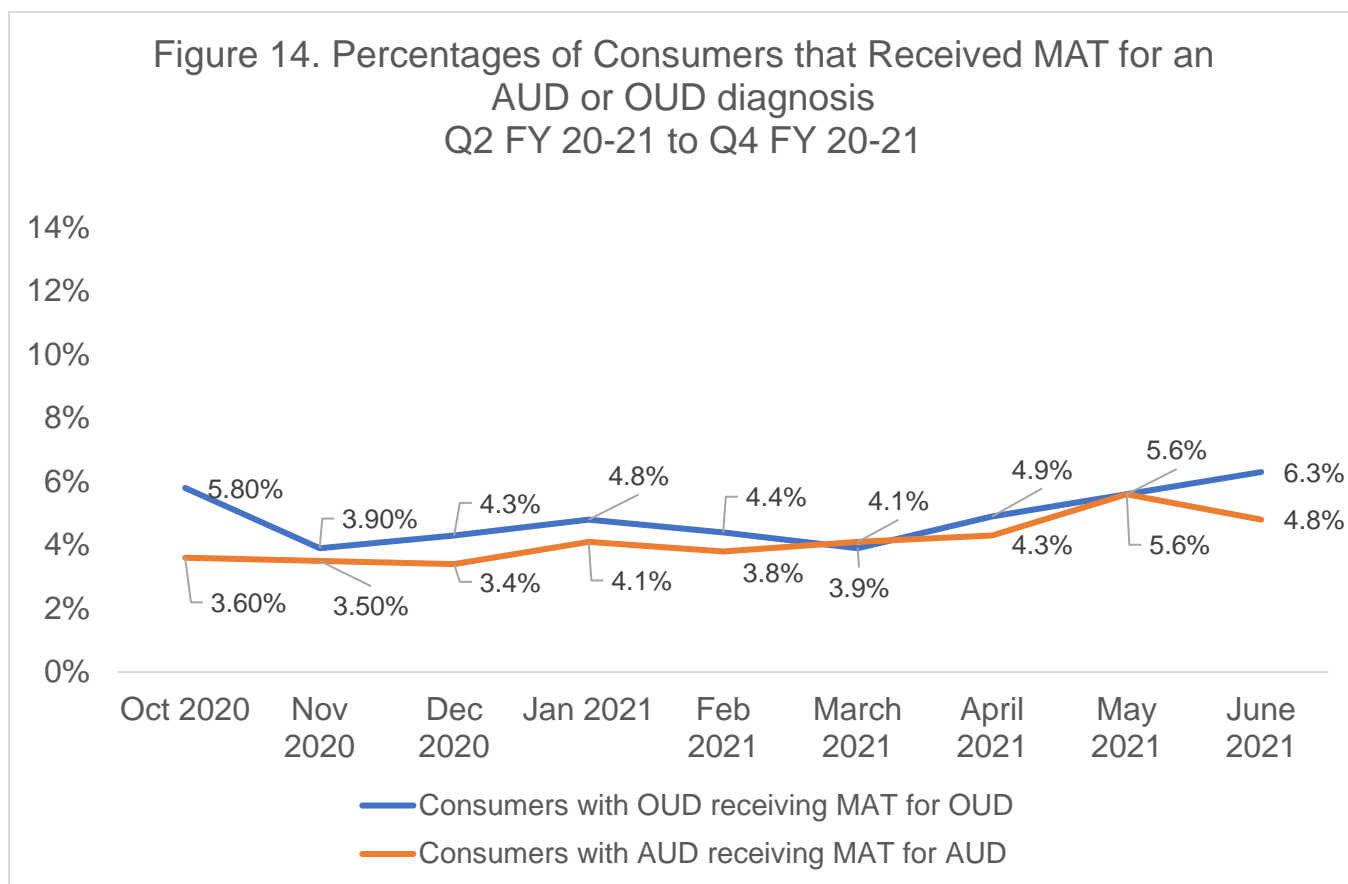
	Variable (Indicator)	Variable (Indicator)	PM 1 (Outcome)	PM 2 (Outcome)	<u>PM pending PIP committee follow-up</u>
<b>Description</b>	Consumers with AUDs receiving MAT for AUD	Consumers with OUDs receiving MAT for OUD	30-day re-hospitalization rates	Depressed mood, anxiety and substance use impact ratings (Weekly Check-In)	<u>Hospitalization rates among clients receiving MAT</u>
<b>Target Performance</b>	Increase by 5%	Increase by 5%	Reduce by 5%	Reduce by 30%	<u>TBD</u>
<b>Numerator</b>	The number of consumers with AUD diagnosis receiving MAT for AUD	The number of consumers with OUD diagnosis receiving MAT for OUD	The number of consumers receiving MAT re-hospitalized within 30 days of a discharge	Sum of individual ratings for consumers receiving MAT and Integr8Recovery on depressed mood, anxiety, and substance use impact	<u>The number of consumers receiving MAT hospitalized</u>
<b>Denominator</b>	The number of consumers diagnosed with AUD	The number of consumers diagnosed with OUD	The number of consumers receiving MAT hospitalized	Number of consumers receiving MAT and Integr8Recovery with ratings on depressed mood, anxiety, and substance use impact	<u>The number of consumers diagnosed with AUD or OUD</u>
<b>Baseline Rate</b>	221/3,669 = 6.0% (Q2 FY 20-21)	36/551 = 6.5% (Q2 FY 20-21)	5/30 = 16.7% (Q2 FY 20-21)	Week 1 (for all scales, 10 is worst) Depressed mood: 4.3/10 Anxiety: 6.6/10 Substance Use Impact: 3.3/10	<u>30/4220 = 0.71% (Q2 FY 20-21)</u>
<b>1st Remeasure</b>	275/3,750 = 7.3% (Q3 FY 20-21)	36/586 = 6.1% (Q3 FY 20-21)	4/20 = 20.0% (Q3 FY 20-21)	Week 4: Depressed mood: 3/10 Anxiety: 5.3/10 Substance Use Impact: 2/10	<u>20/4336 = 0.46% (Q3 FY 20-21)</u>
<b>2nd Remeasure</b>	289/3,939 = 7.3% (Q4 FY 20-21)	40/606 = 6.6% (Q4 FY 20-21)	2/28 = 10.7% (Q4 FY 20-21)	Week 8: Depressed mood: 3/10 Anxiety: 7/10 Substance Use Impact: 0/10	<u>28/4545 = 0.62% (Q4 FY 20-21)</u>
<b>3rd Remeasure</b>	Will be measured after Q1 FY 21-22)	Will be measured after Q1 FY 21-22)	Will be measured after Q1 FY 21-22)	Will be measured after Q1 FY 21-22)	<u>Will be measured after Q1 FY 21-22)</u>
<b>Final</b>	Will be measured after Q2 FY 21-22)	Will be measured after Q2 FY 21-22)	Will be measured after Q2 FY 21-22)	Will be measured after Q2 FY 21-22)	<u>Will be measured after Q2 FY 21-22)</u>

Note: Results were summarized for the intended study population. A review of hospitalization rates for clients receiving MAT among the AUD and OUD populations is pending PIP committee discussion. This analysis was not initially considered given the denominator includes a large percentage of clients who were not hospitalized, and a reduction in 30-day hospitalization rates is the aim. Pending committee decisions, targets and remeasurements will be evaluated and presented at the project's close.

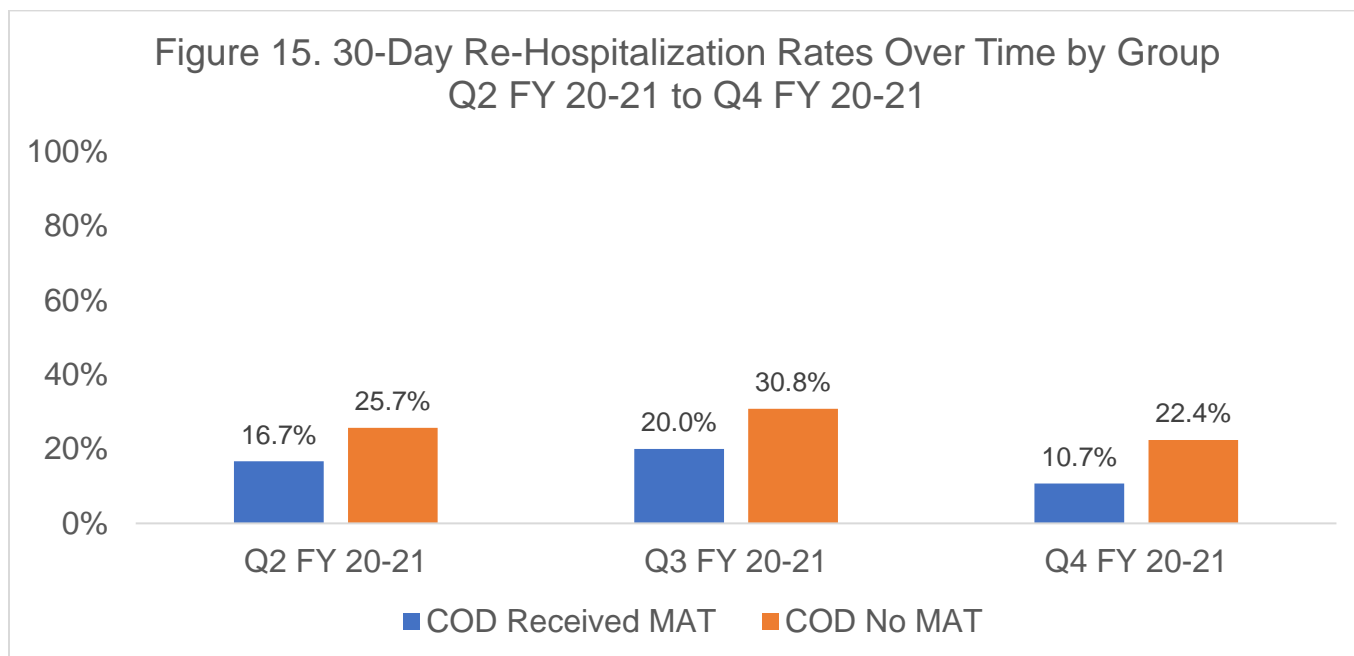
**TABLE 8.2 PERCENT IMPROVEMENT AND STATISTICAL ANALYSES SUMMARY**

Baseline to 1 <sup>st</sup> Remeasure			1 <sup>st</sup> Remeasure to 2 <sup>nd</sup> Remeasure		Baseline to 2 <sup>nd</sup> Remeasure	
	% improvement	Test Value	% improvement	Test Value	% improvement	Test Value
<b>Consumers with AUDs receiving MAT for AUD</b>	19.7% Target met: No	$X^2 = 183.13$ $p = .00^*$ (McNemar Test)	0% Target met: No	$X^2 = 164.69$ $p = .00^*$ (McNemar Test)	19.7% Target met: No	$X^2 = 409.28$ $p = .00^*$ (McNemar Test)
<b>Consumers with OUDs receiving MAT for OUD</b>	6.2% Target met: No	$X^2 = \text{Not calculable}$ $p = .10$ (McNemar Test)	8.2% Target met: No	$X^2 = 16.68$ $p = .00^*$ (McNemar Test)	1.5% Target met: No	$X^2 = 15.19$ $p = .00^*$ (McNemar Test)
<b>30 day re-hospitalization rates</b>	19.8% Target met: No	$p = .22$ McNemar Test	46.5% Target met: Yes	$p = .69$ McNemar Test	35.9% Target met: Yes	$p = .62$ McNemar Test
<b>Weekly Check-in depressed mood ratings</b>	30.2% Target met: Yes	N/A	0% Target met: No	N/A	30.2% Target met: Yes	Time by MAT Status interaction: $F = 0.02$ , $p = 0.88$
<b>Weekly Check-in anxiety ratings</b>	19.7% Target met: No	N/A	-24.2% Target met: No	N/A	-62.8% Target met: No	Time by MAT Status interaction: $F = 0.07$ , $p = 0.81$
<b>Weekly Check in substance use impact ratings</b>	39.4% Target met: Yes	N/A	100% Target met: Yes	N/A	100% Target met: Yes	Time by MAT Status interaction: $F = 4.5$ , $p = 0.08$

## Prescription Rate Data:



## Re-hospitalization Data:



Note: The difference between groups was not significant ( $p > 0.05$ ).

## Weekly Check-In Data:

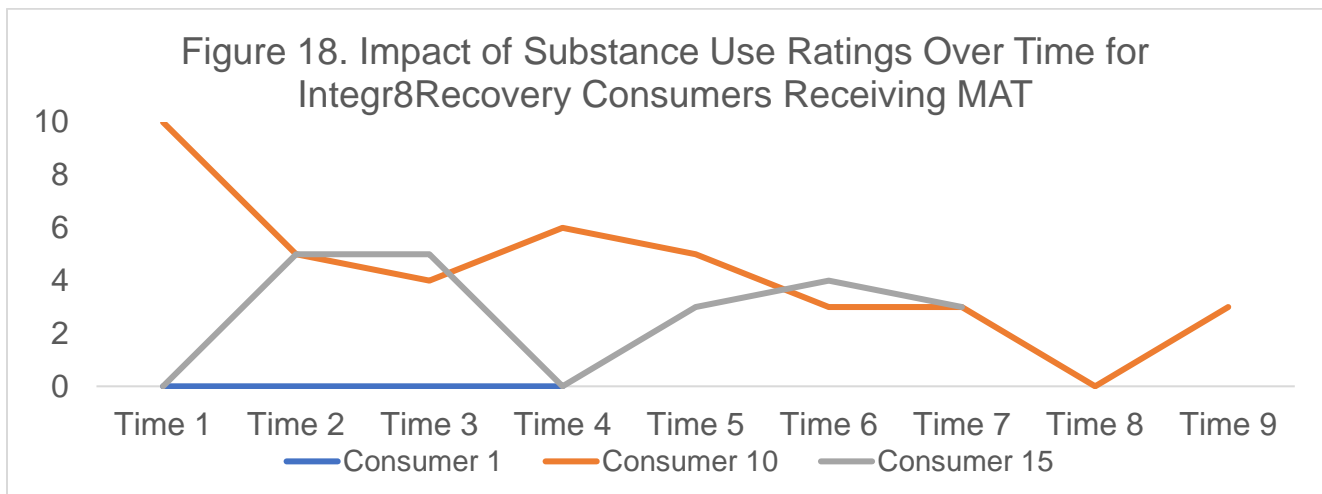
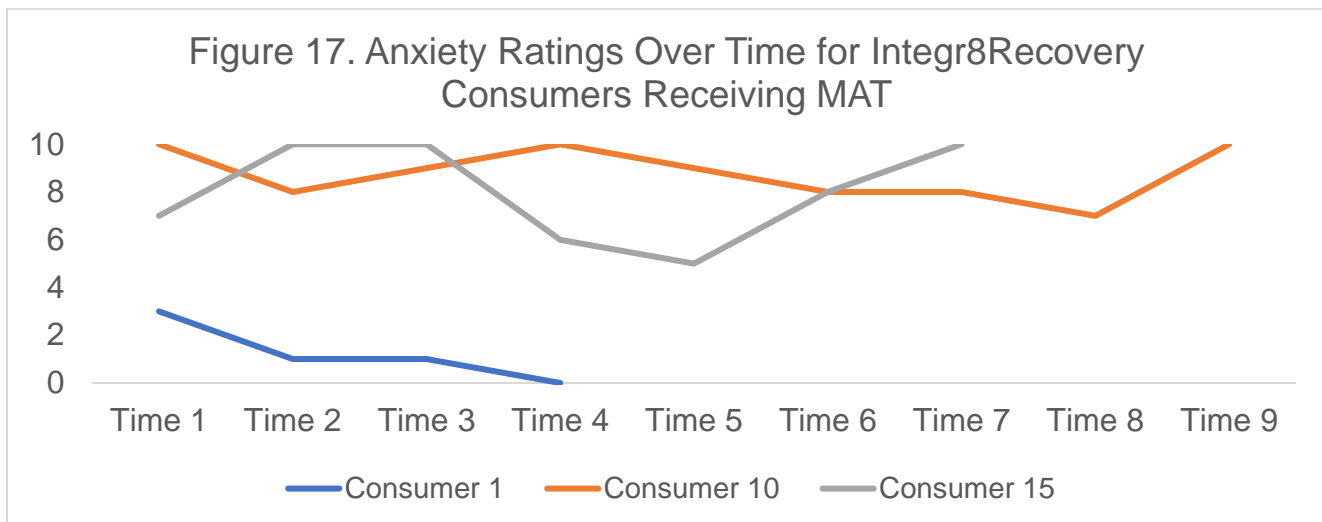
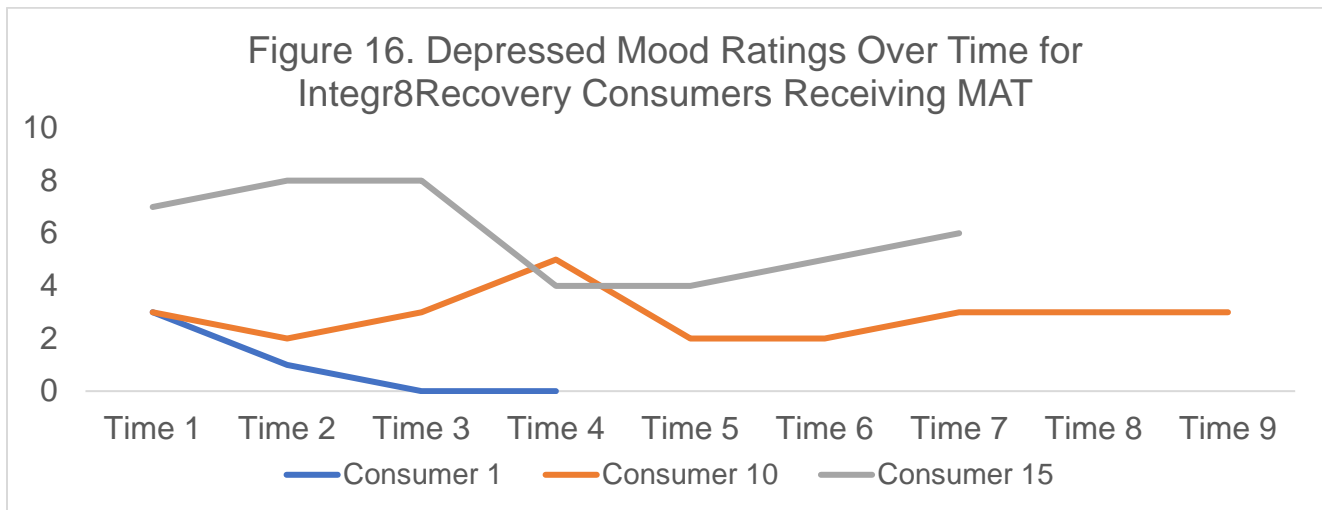
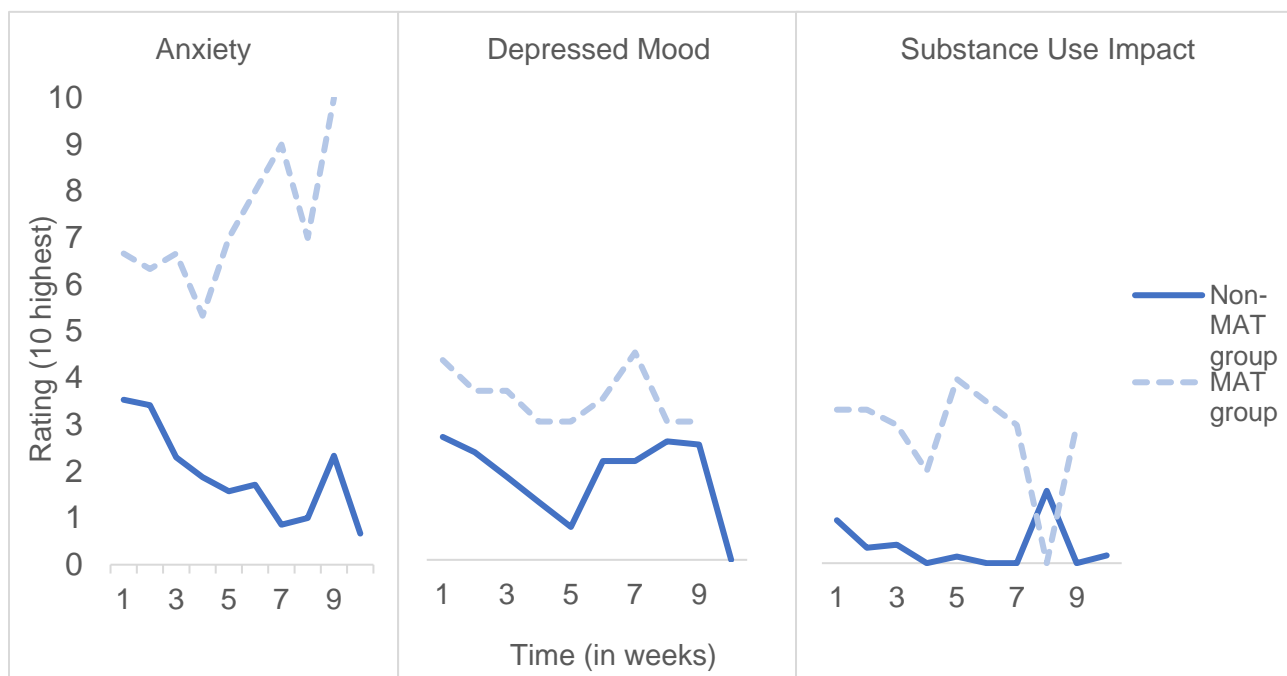




Figure 19. Average Ratings Over Time for Integr8Recovery Consumers Receiving MAT vs. Not Receiving MAT



Note: Difference between groups was not significant ( $p > 0.05$ )

**TABLE 8.3 PIP RESULTS SUMMARY – ADDITIONAL INDICATORS**

	Variable (Indicator)	Variable (Indicator)	Variable (Indicator)	Variable (Indicator)	Variable (Indicator)
Description	Percent of prescribers eligible to administer MAT for OUDs	Percent of prescribers administering MAT to at least one consumer	Number of consumers receiving MAT	Number of consumers receiving MAT from Integr8Recovery groups	Average number of sessions attended by consumers in Integr8Recovery groups
Target Performance	Increase by 5%	Increase by 5%	Increase by 2%	Increase by 5%	Increase by 10%
Numerator	The number of prescribers with an X-waiver to prescribe buprenorphine	The number of prescribers who prescribed MAT to at least one consumer	The number of consumers receiving MAT	The number of consumers receiving MAT and Integr8Recovery	The number of sessions attended by group participants
Denominator	The number of prescribers within LACDMH	The number of prescribers within LACDMH	The total number of consumers served	The number of consumers in Integr8Recovery groups	Total number of group participants
Baseline Rate	47/275 = 17.1% (Q2 FY 20-21)	136/275 = 49.5% (Q2 FY 20-21)	503/70,590 = 0.7% (Q2 FY 20-21)	4/13 = 30.8% (Q2 FY 20-21)	146/13 = 11.2 (Q2 FY 20-21)
1st Remeasure	72/272 = 26.5% (Q3 FY 20-21)	139/272 = 51.1% (Q3 FY 20-21)	532/72,221 = 0.7% (Q3 FY 20-21)	7/26 = 26.9% (Q3 FY 20-21)	179/26 = 6.9 (Q3 FY 20-21)

<b>2nd Remeasure</b>	72/262 = 27.5% (Q4 FY 20-21)	157/262 = 59.9% (Q4 FY 20-21)	599/74,066 = 0.8% (Q4 FY 20-21)	10/33 = 30.3% (Q4 FY 20-21)	382/33 = 11.6 (Q4 FY 20-21)
<b>3rd Remeasure</b>	Will be measured after Q1 FY 21-22	Will be measured after Q1 FY 21-22	Will be measured after Q1 FY 21-22	Will be measured after Q1 FY 21-22	Will be measured after Q1 FY 21-22
<b>Final</b>	Will be measured after Q2 FY 21-22	Will be measured after Q2 FY 21-22	Will be measured after Q2 FY 21-22	Will be measured after Q2 FY 21-22	Will be measured after Q2 FY 21-22

### Mentorship Pilot Data:

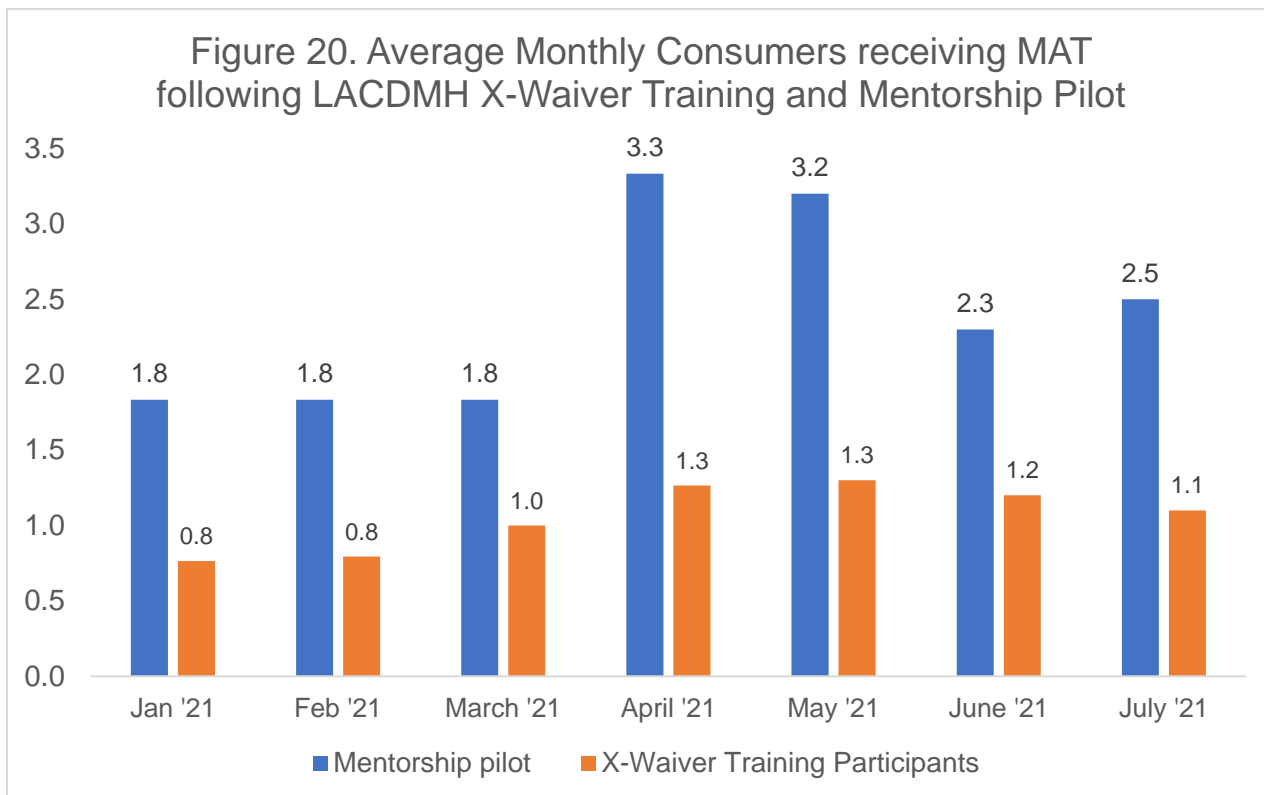


Figure 21. Behavioral Health Services, Inc. Buprenorphine Prescriptions Over Time

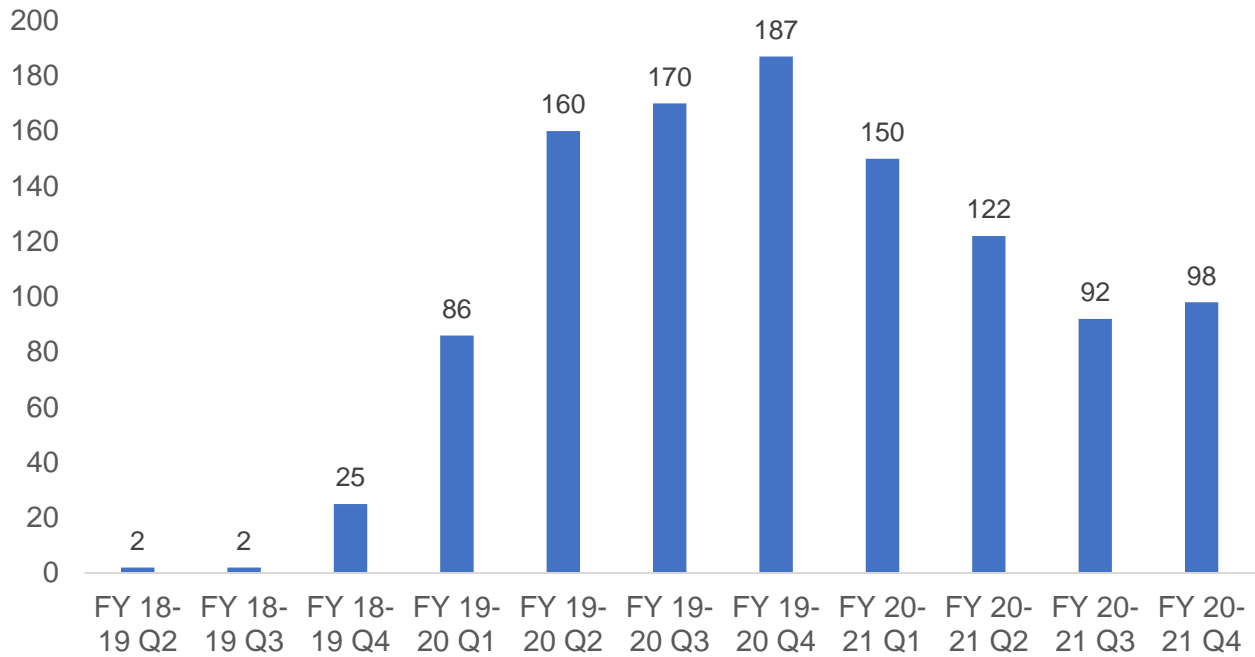


Figure 22. Percent Correct for Knowledge Test Questions Pre and Post Buprenorphine X-Waiver Training

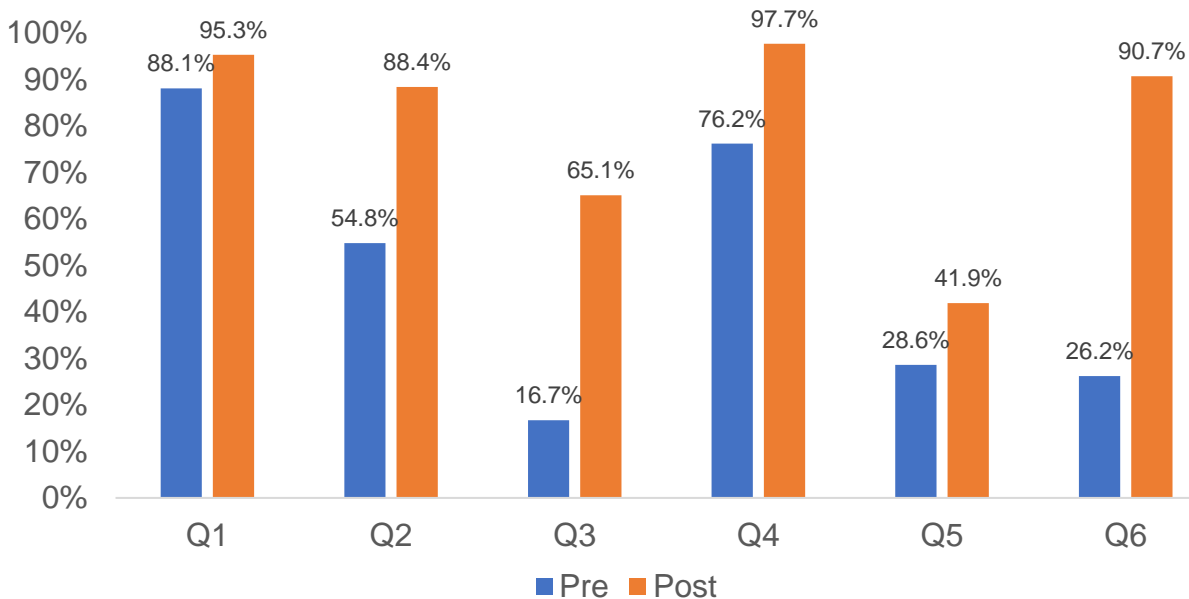
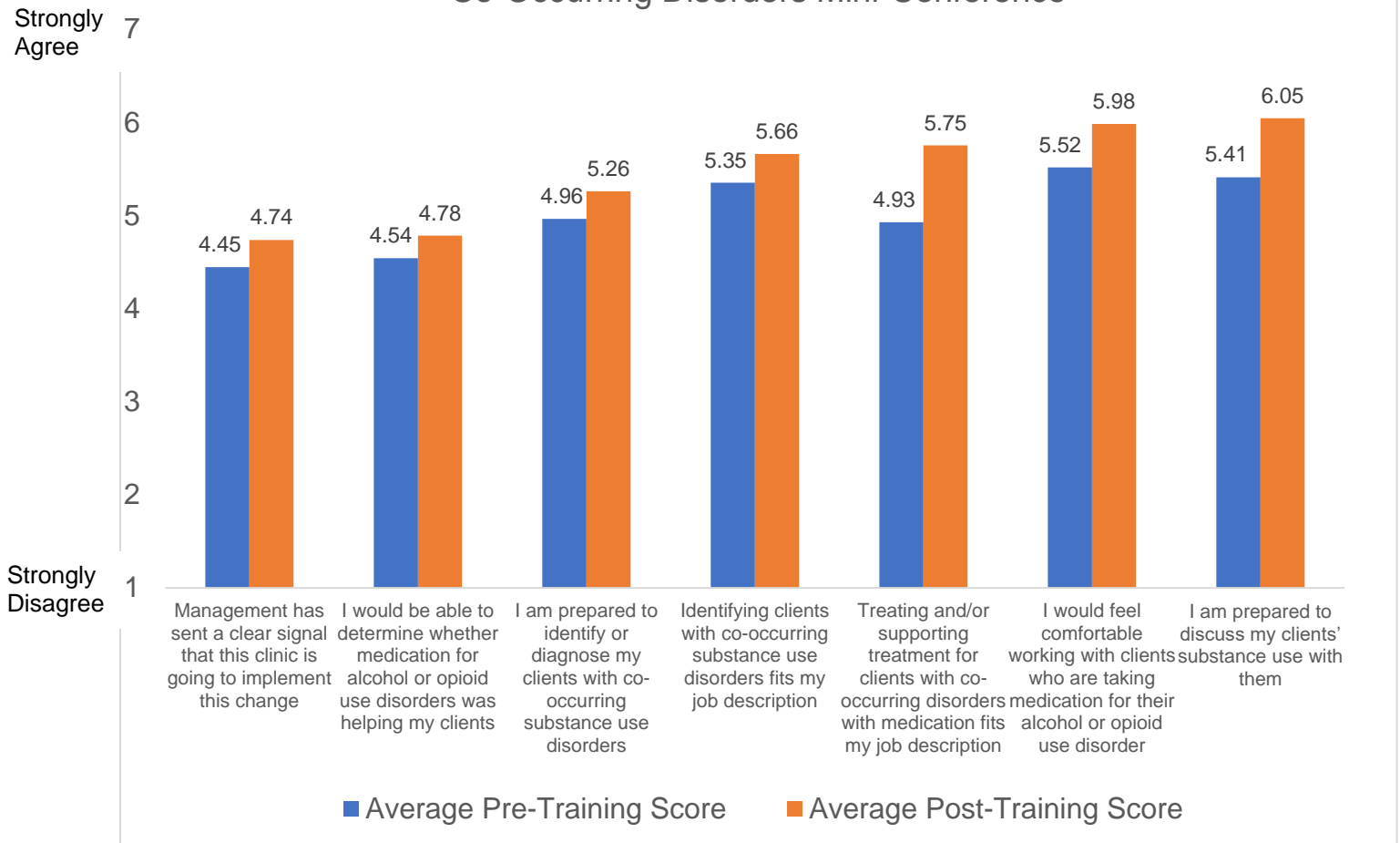


Figure 23. Average Attitude Pre and Post Training Scores for the Co-Occurring Disorders Mini-Conference



Click here for [Step 8](#)

# WORKSHEET 9: LIKELIHOOD OF SIGNIFICANT AND SUSTAINED IMPROVEMENT THROUGH THE PIP

*“Did we make a difference, and will it have an ongoing impact?”*

**Provisional Findings, if applicable:** *(For PIPs that are in process at the time of submission, or that do not yet have any remeasurement data, please briefly provide preliminary results or impressions to date)* [Click or tap here to enter text.](#)

## 9.1 What is the conclusion of the PIP?

There is preliminary evidence to support that the initial pilot versions of the interventions have resulted in **mixed** outcomes. However, these results are limited by the small sample sizes and delayed implementation due to the COVID-19 pandemic. The percentage of consumers with AUDs receiving MAT increased significantly from quarter to quarter although the percent increase did not hit the target of five percent. The percentage of consumers with OUDs receiving MAT also increased significantly from the first remeasure to the second remeasure and from baseline to the second remeasure. These percentages varied more over time than did the percentages for consumers with AUDs and, again, did not meet the target increase of five percent. For re-hospitalization rates, the percent decrease of consumers receiving MAT that were re-hospitalized within 30 days met the target decrease of five percent from the first remeasure to the second remeasure and from baseline to the second remeasure. However, the sample sizes were so small that these findings were not statistically significant. Weekly check in outcomes ratings varied depending on the target. For depression, scores were reduced by the target 30% from baseline to the first remeasurement and from first remeasurement to second remeasurement. However, these changes were not significant likely due to the small sample size. Anxiety scores increased over time and did not significantly differ by time or group (i.e., receiving MAT vs. not receiving MAT). Substance use impact significantly decreased over time and the target reduction of 30% was met at each timepoint. However, this item was rated so low at baseline that it is difficult to ascertain whether this is a true change. These ratings were only available for three participants. The Weekly Check-in measure was only administered in the Men's and Women's Re-Integration Programs and three of the consumers receiving MAT were at those two sites.

Early pilot data from the mentorship pilot groups at Edelman Mental Health Center and the Women's Re-Integration Program and data from the contracted site BHS, Inc, which had its own mentorship program from April 2018 to August 2020, show promising results about these programs generally increasing the number of consumers receiving MAT prescriptions from baseline. The percent of prescribers administering MAT to at least one consumer increased over time and met the target percent increase of five percent from first remeasurement to second remeasurement and from baseline to second remeasurement. At this point of the project, over half of the prescribing staff in LACDMH have prescribed MAT to at least one consumer with

COD and we anticipate that number will increase with greater mentorship. The percent of prescribers with an X-waiver to administer buprenorphine increased over time. The pre/post knowledge test from the X-waiver training showed improvement for all questions.

The percentage of consumers receiving MAT from the Integr8Recovery groups out of the total consumers in the groups fluctuated with a slight decrease from baseline. The number of consumers receiving MAT and the number of participants in the Integr8Recovery groups both increased over time but not at a rate at which the percent increase improved. The number of Integr8Recovery sessions attended on average similarly fluctuated over time with a slight increase from baseline to second remeasurement. Again, a higher number of consumers attended sessions from quarter to quarter but there is wide variation in how many sessions are attended by each participant.

The clinical PIP started in February 2021, during the middle of the COVID-19 pandemic. As a result of virus surges in late 2020, there were continued dramatic shifts to service delivery and staffing at LACDMH. These shifts created significant barriers to implementing the interventions. Treatment groups have been slower to return due to complications with using the virtual telehealth platform specifically for groups and consumer access to technology. Key project staff were also assigned to COVID-19-related projects that limited the resources devoted to increasing MAT administration. The mentorship groups were delayed as strains on prescribing staff time have been particularly challenging. Due to these challenges, it is difficult to make conclusions regarding the PIP at this time.

**9.2 Do changes appear to be the results of the PIP interventions? Please explain.**

As mentioned above, it is difficult to assess the impact of the PIP interventions on the clinical and process measures at this point of the project. Due to the COVID-19 pandemic, there was a slower-than-expected and limited rollout of the interventions. It is premature to conclude that changes resulted from the PIP interventions and LACDMH will continue to monitor outcomes for FY 21-22 Q1 and Q2 to determine if the interventions result in true change with a somewhat larger rollout.

**9.3 Does statistical evidence support that the change represents a real improvement or difference?**

There are some statistically significant findings related to the change in the percentage of consumers with AUDs and OUDs receiving MAT over time and the decrease in substance use impact scores on the Weekly Check-In measure. For the substance use impact scores, the baseline scores were so low that it is difficult to interpret this as true change. The percentages of consumers with AUDs and OUDs receiving MAT significantly increasing over time is promising and it is hypothesized that with a greater focus on mentorship, teaming, and improving the group referral process, these percentages would continue to increase.

**9.4 Did any factors affect the methodology of the study or the validity of the results? If so, what were they?**

Yes, there were a number of factors that impacted the methodology of the study. As mentioned above, due to the limitations of the COVID-19 pandemic and the more limited initial rollout of the interventions, the sample sizes for consumers that received both MAT and Integr8Recovery groups and for prescribers participating in the MAT mentorship network pilot groups were very small. The COVID-19 pandemic may have also played a role in the smaller number of consumers receiving MAT that were re-hospitalized within 30 days due to limited bed availability and concern about presenting to the hospital. It is also difficult to disentangle changes in the depressed mood, anxiety, and substance use impact scores on the Weekly Check-in from the pandemic as higher rates of depression, anxiety, and substance use were reported overall in LA county. In addition, Weekly Check-in measures were only available for participants in the Integr8Recovery groups in the Men's and Women's Re-Integration groups, which may have impacted the outcomes. The participants in these groups may be more motivated to reduce their substance use or not report their substance use on the Weekly Check-in due to the terms of their release.

**9.5** Was the improvement sustained through repeated measurements over comparable time periods? (If this is a new PIP, what is the plan for monitoring and sustaining improvement?)

Many of the indicators fluctuated over time. As the interventions could only be rolled out in smaller pilots due to the COVID-19 pandemic, it is challenging to assess whether the improvements would be more consistent over time with the implementation of the full interventions.

**9.6** How were untoward results addressed?

It is too early in the project to determine if results that were below target will continue over time. For example, it is not clear if the anxiety ratings on the Weekly Check-In will continue to increase over time as these changes were based on ratings from three consumers. Consumers completed measures at different time points and with varying frequencies. Weekly ratings tend to fluctuate much more than data collected on a quarterly or pre/post time frame.

**9.7** What is the MHP/DMC-ODS's plan for continuation or follow-up?

Given that barriers put in place by the COVID-19 pandemic will likely continue to impact clinical intervention delivery, LACDMH will continue this project as a quality improvement project (QIP) and will select a new clinical PIP topic at the close of the project in February 2022. The original plan to implement Integr8Recovery groups in ten other DO clinics within the calendar year and rollout the MAT mentorship network both in DOs and contracted sites will continue into the following 2022 calendar year and outcomes will be tracked as a QIP. Additional evaluations to be considered for the QIP:

- Examine differences in clinical outcomes for the MAT group related to the type of prescription (i.e., Naltrexone versus Butrans )
- Apply a repeated measures approach to evaluate individual change and level of significance – personal goals are individualized and should be observed according to what the client self-reports (school enrollment, employment)



- Aggregate data by the number of MAT administrations and evaluate retention rates for trends

Once final remeasures are complete, LACDMH will seek technical assistance from EQRO.

Click here for [Step 9](#)

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