PERFORMANCE IMPROVEMENT PROJECT (PIP) DEVELOPMENT TOOL

CalEQRO FY23-24 Reviews

The 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.

WORKSHEET 1: PIP TOPIC

"What is the problem?"

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Project Leader/Manager/Coordinator	Kara Taguchi, Psy.D.
Contact Email Address	ktaguchi@dmh.lacounty.gov
Performance Improvement Title	Improving Treatment Services for Individuals with Eating Disorders
Type of PIP	☒ Clinical ☐ Non-clinical
PIP Study/Intervention Period:	Start 06/2021 to End 06/2023

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

Eating disorders (ED), including Anorexia Nervosa (AN), Bulimia Nervosa (BN), Binge Eating Disorder (BED) among others, although less common than other mental illnesses, are lethal and costly disorders. EDs have one of the highest case fatality rates among mental illnesses and were estimated to cost healthcare systems $4.6 billion nationwide in Fiscal Year 2018-19 ($556.2 million in California, Deloitte Access Economics, 2020). The COVID-19 pandemic has exacerbated the impact of these disorders as there was a 58% increase in calls, texts, and chats from the National Eating Disorders Association (NEDA) helpline from March 2020 to October 2021 (National Eating Disorders Association, 2021) and the proportion of emergency room visits for EDs for adolescent females increased significantly during 2020, 2021, and January 2022 (Radhakrishnan, Leeb, Bitsko et al., 2022). The one-year prevalence rate for EDs in the United States is estimated at 1.7% and the lifetime rate is 8.6% (Deloitte Access Economics, 2020). However, it is likely that these numbers underestimate the true rates of EDs as research has suggested individuals with disordered eating have low rates of help-seeking (Coffino, Udo, & Grilo, 2019). These disorders also tend to be underdiagnosed in ethnic/racial minority populations (Sonneville & Lipson, 2018) and access to quality care is limited for low-income individuals (Accurso, Buckelew, & Snowden, 2021). Individuals with EDs also frequently require higher levels of care (HLOC), such as inpatient units, residential units, partial hospitalization programs, and intensive outpatient programs, within routine services and may repeatedly move through these levels of care and outpatient services (Anderson, Reilly, Berner et al., 2017). This cycling through various HLOC often has a significant impact on client and family functioning, limiting opportunities for school and work and challenging the client's sense of recovery.
In keeping with these national trends, the Los Angeles Department County of Mental

Health (LACDMH) has experienced an increase in the number of individuals diagnosed with EDs over the past five years and referrals for EDs have risen in the last year, including more severe cases that require HLOC. This PIP aims to provide quality, evidence-based care to the increasing number of individuals with EDs to reduce the need for HLOC and improve screening and assessment methods to address the discrepancy between expected ED prevalence rates and diagnostic rates.

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?

The Quality Assurance team noted an increasing number of referrals in which Medi-Cal beneficiaries requested an assessment or treatment for EDs and could not be linked to a provider due to provider concerns about lack of specialty in this area. The team that oversees relationships with managed care providers has also been involved in negotiating contracts for beneficiaries with EDs who require a HLOC that could not be provided within the Mental Health Plan (MHP). The increase in ED referrals that have not been linked to a provider has been a frequent point of discussion in Access to Care leadership meetings and administrative leadership meetings. As a result of these discussions, Debbie Innes-Gomberg initiated a systemwide workgroup (The ED Practice Network) to address the gap in quality treatment for this population. The systemwide workgroup first met in March 2022 and continues to meet bimonthly.

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

Referrals that specifically request services for EDs have generally increased over the past five years in all referral systems: the Service Request Tracking System (SRTS) and Service Request Log (SRL), SRL Contractor Web Services, and Katie A EMS (See Table 1). Total incoming referrals explicitly mentioning eating disorders increased by 117% from CY 2017 to 2021 (see Figure 1). These numbers also likely represent an undercount of the true need in the community as referrals were coded for EDs only if an ED was specifically mentioned as the reason for referral. It is possible that EDs were part of the overall presenting issues and were not indicated by the referral source or documented by the individual entering the referral data. In 2019, half of these referrals were given a timely appointment at a provider site. However, this number decreased to 32% in 2021 where the other common dispositions for these referrals were an untimely appointment at a provider site (16.9%), inability to contact the client or collateral (16.1%), and other reasons (14.5%, e.g., crisis response, Figure 2).

Referrals that reference eating concerns such as poor appetite or overeating may also indicate disordered eating that requires further assessment to determine the underlying cause. It is possible these eating concerns may be attributed to other conditions (e.g., depressive disorders, anxiety disorders) and are undetected as EDs. LACDMH practitioners have declined ED referrals citing a lack of training and discomfort in working with individuals with EDs as and it is likely that EDs are frequently missed in screening. Referrals that referenced more general eating concerns received an appointment more of the time than those that specifically

referenced EDs although this percentage also decreased over time from CY 2019 to 2021 (Figure 3). The other common dispositions followed a similar pattern as the ED-specific referrals with more instances of being unable to reach the individual or collateral (18.0%), followed by an untimely referral to the site (14.8%), and other reasons (10.8%).

Table 1. Referrals for EDs and Eating Concerns by Referral Database, 2017-2021

Calendar Year	Service Request Tracking System (SRTS)		Service Request Log (SRL)		Contractor SRL Web Services		Katie A EMS	
	ED	Eating Concerns	ED	Eating Concerns	ED	Eating Concerns	ED	Eating Concerns
2017	18	83	41	166				
2018	16	47	29	142	1			
2019	11	49	34	147	4	20	1	1
2020	15	85	33	66	22	187	2	4
2021	42	227	47	97	36	186	3	3
Total	102	491	184	618	63	393	6	8

Figure 1. Mental Health Referrals (All Databases) for Eating Disorders and Eating Concerns Over Time

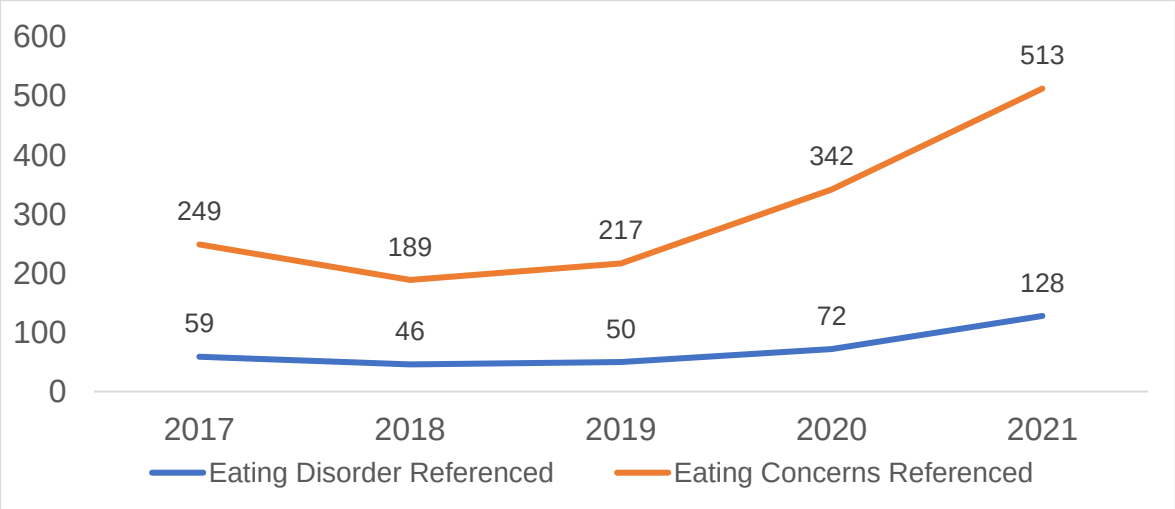


Figure 2. Dispositions for Eating Disorder Referrals, CY 2019 to 2021

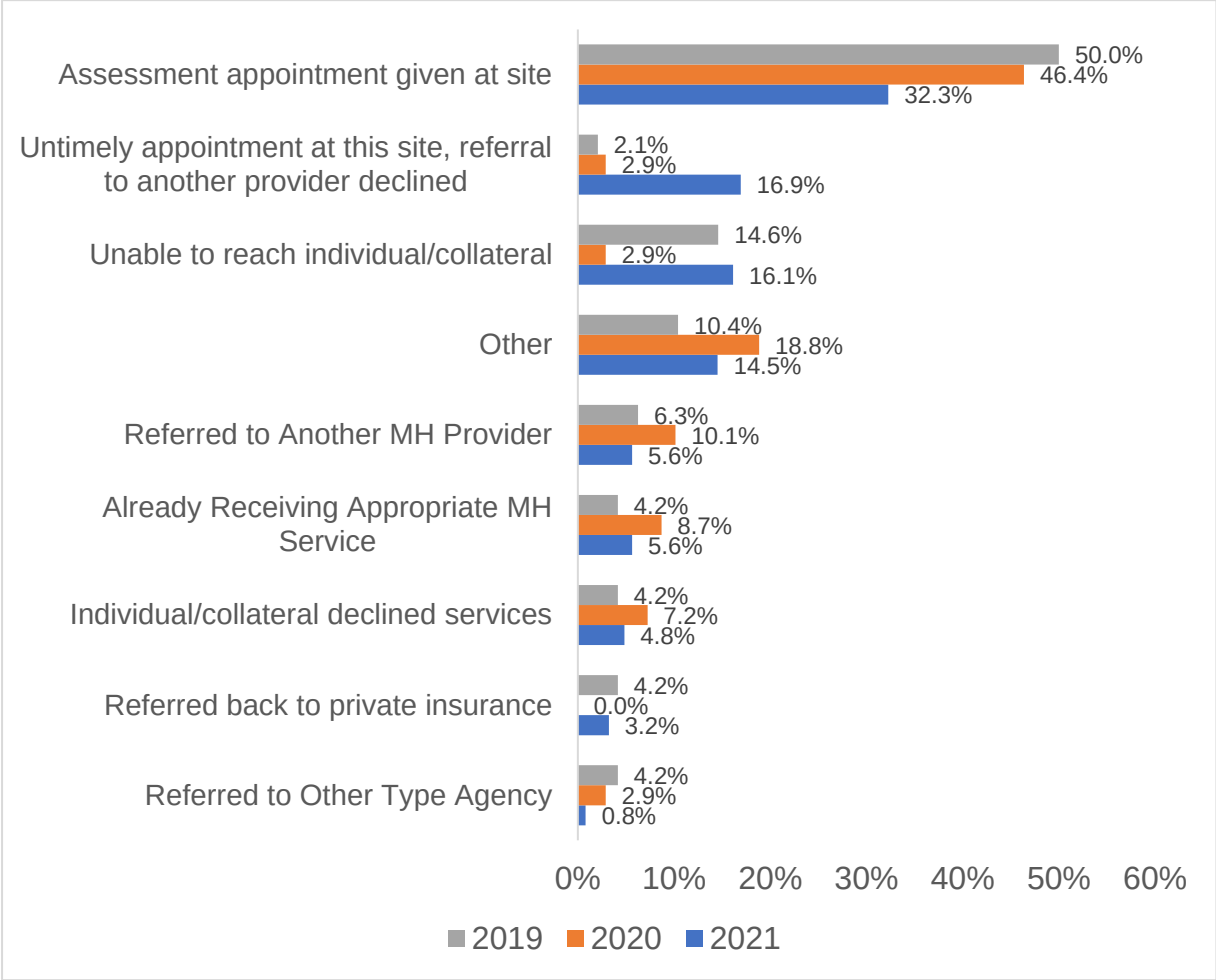
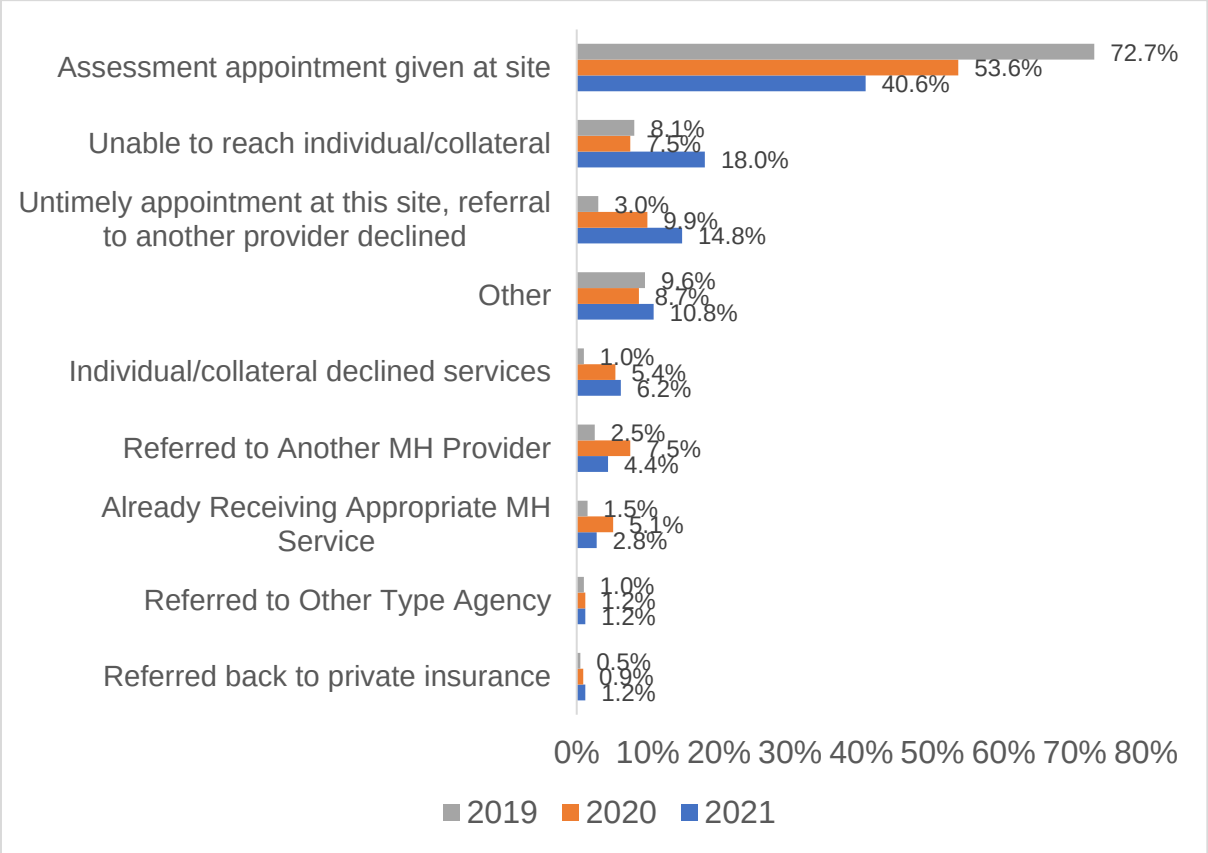
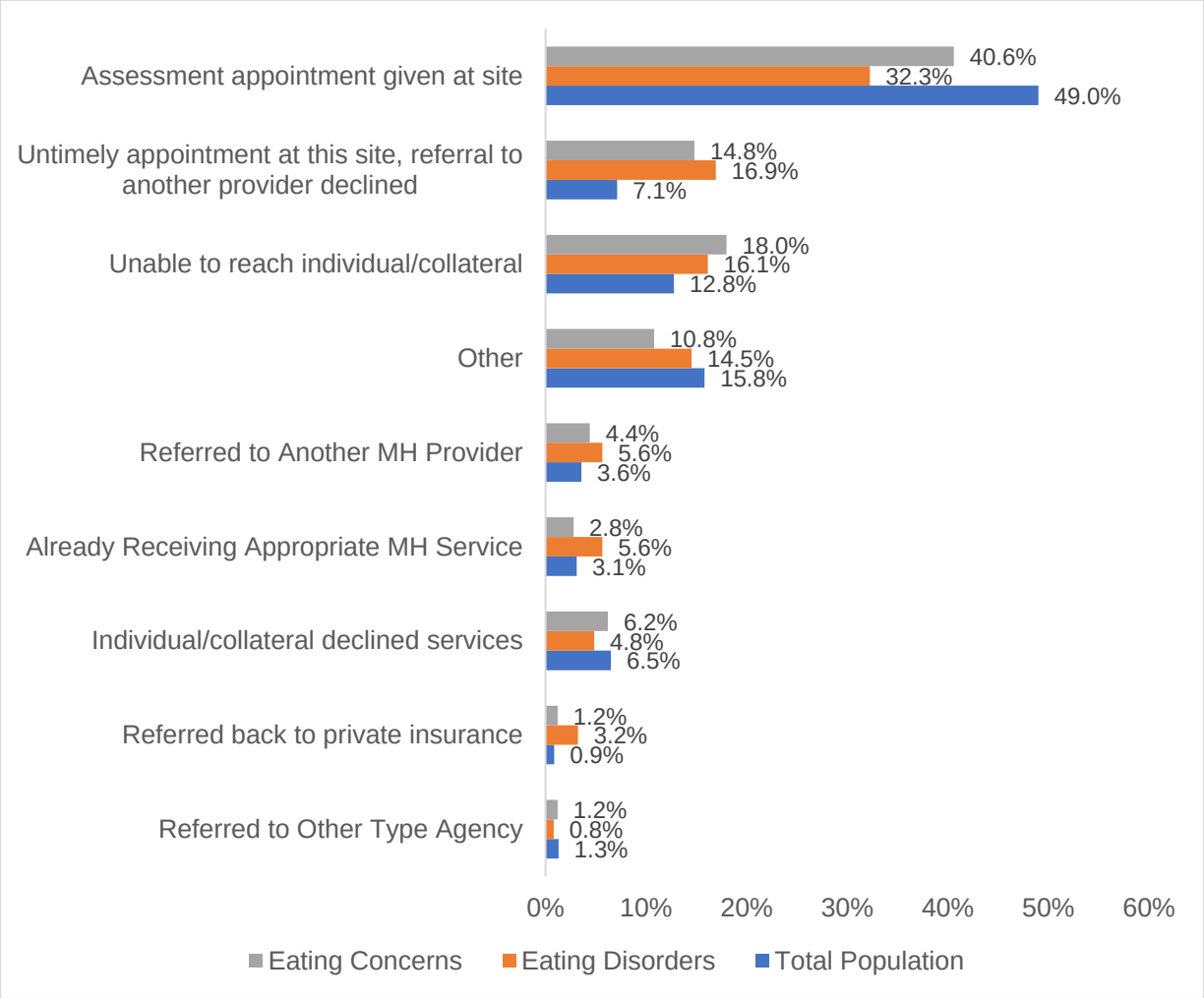


Figure 3. Dispositions for Eating Concern Referrals, CY 2019 to 2021



In comparing ED-specific referrals and eating concern (EC) referrals to the total population of referrals in CY 2021, ED and EC referrals were less likely to receive a timely appointment at the site and were more likely to receive an untimely appointment or be unable to contact (Figure 4).

Figure 4. Disposition Status for Referrals by Problem Type Compared to Total Population, CY 2021



In addition to the numbers of referrals for EDs and ECs, the number of consumers diagnosed with EDs has steadily increased over the past five years with a 53% increase from 2017 to 2021 (Figure 5). The percent of consumers diagnosed with an ED out of total consumers served remained at 0.3% from CY 2017 to CY 2020 until it rose to 0.4% in 2021. Given the one-year prevalence estimate of 1.7% nationwide, we would expect to see a larger volume of consumers with these diagnoses and it is likely this is an underrepresentation of the true number. Although the population of Los Angeles County may differ from the national population in important ways, research has indicated that EDs are likely underdiagnosed in diverse, low-income populations that have not historically been the focus in ED research trials (Accurso, Buckelew, & Snowden, 2021).

An analysis of EDs by age group (i.e., children and adults) indicates that the total number of individuals diagnosed with EDs was similar between youths and adults overall but varied based on type of diagnosis (see Table 2). Anorexia, Avoidant/Restrictive Food Intake Disorder, and Other Specified Eating Disorder are

more common for youth and Bulimia and Binge Eating Disorder are more common for adults. Of the 906 individuals diagnosed with EDs, 169 had available BMI scores and 18.6% (N=32) of the scores were in the underweight category (BMI <= 18.5) while 33.1% (N=56) were in the obese category (BMI > 30).

Figure 5. Number of Individuals Diagnosed with Eating Disorders CY 2017 to 2021

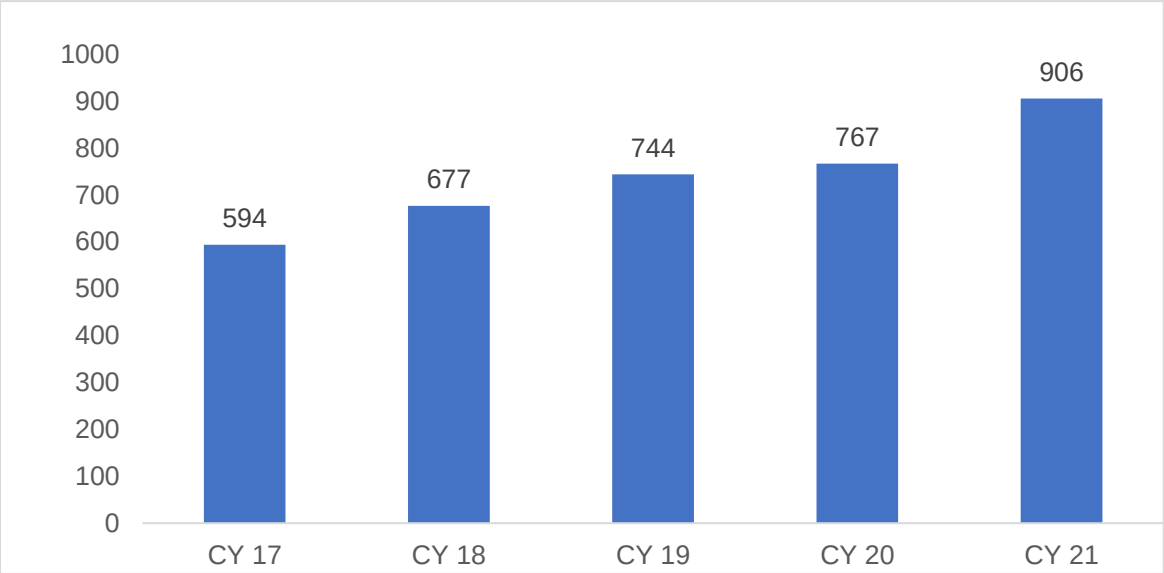


Table 2. Specific EDs by Age Group CY 2021

Eating Disorder Category	Youth (Age 18 or Under)	Adult (Age 19 and Up)	Total
Anorexia Nervosa	106	75	181
Bulimia Nervosa	49	127	176
Binge Eating Disorder	34	76	110
Avoidant/Restrictive Food Intake Disorder (ARFID)	26	12	38
Other Specified Eating Disorder	52	26	78
Unspecified Eating Disorder	165	158	323
TOTAL	432	474	906

Of the individuals entering care with EDs, there are a number that require a HLOC (i.e., residential facility, inpatient hospitalization, partial hospitalization, intensive outpatient services) based on their acuity. In these cases, LACDMH contracts with managed care facilities outside of the mental health plan and reimburses them for these services. In Fiscal Year (FY) 21-22, there were available data for 60 individuals that required a higher level of care, which represented 6.4% of clients diagnosed with EDs. The total cost for these services across clients was $4.89 million, resulting in a cost per client of $81,480. These clients were in a higher level of care an average of

76 days or roughly 2.5 months (range: 1 to 346 days). Residential and partial hospitalization programs were the most common types of programs utilized and residential programs were the costliest (Table 3). Targeting these individuals prior to or following discharge from a higher level of care is an aim of the PIP, given the significant impact of extended length of stays on client functioning and the financial impact on the system.

Table 3. LACDMH HLOC Data by Level of Care, FY 21-22

Type of Program	Total Number of Days Approved	Total Cost	Total Number of Clients
Psychiatric Inpatient	169	$253,500	5
Intensive outpatient	544	$254,584	21
Partial hospitalization	1,840	$1,625,692	40
Residential	2,015	$2,755,014	42
Total	**4,568**	**$4,888,790**	**108**

Note: Numbers based on all available data and may be missing late invoices

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?

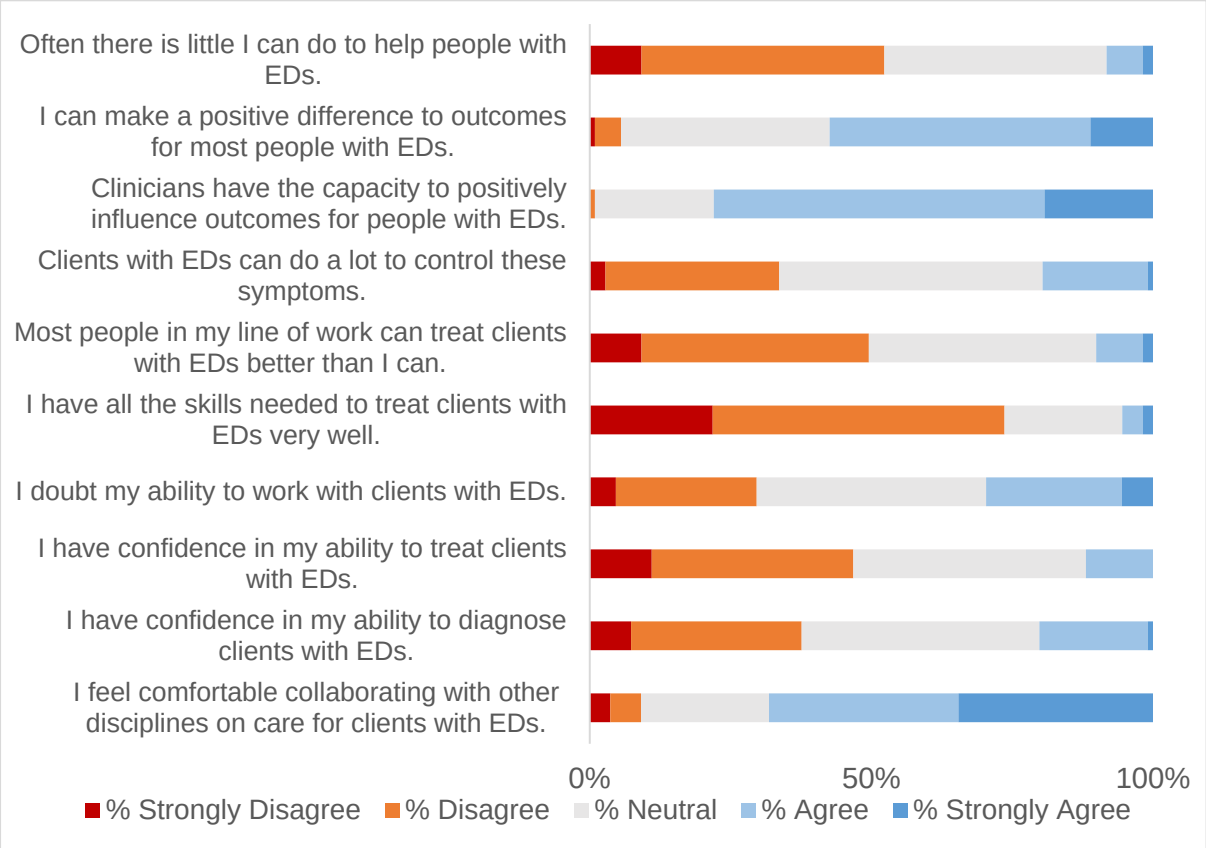
The one-time prevalence rate for EDs is estimated to be 1.7% nationwide (Deloitte Access Economics, 2020). LACDMH's ED prevalence rate for CY 2021 is 0.4%, suggesting there may be a significant number of individuals who experience disordered eating that are not formally diagnosed with EDs. There were no identifiable benchmarks related to individuals with EDs that require HLOC and that transition to outpatient services following HLOC.

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 cause analysis demonstrated that the limited use of transdisciplinary evidence-based quality care for EDs in LACDMH is due to a lack of practitioner training and experience in working with individuals with EDs. A workgroup including expert ED practitioners identified in early 2022 that practitioners often view EDs as a specialty treatment practice and do not feel comfortable treating individuals with EDs without appropriate training and experience. Practitioners also cite a lack of familiarity with accessing HLOC and helping individuals with EDs transition appropriately through these different levels of care. It is hypothesized that practitioners that express discomfort working with EDs in the outpatient specialty mental health service setting may be more reliant upon HLOC to provide services for clients with EDs rather than collaborating with an interdisciplinary team to determine the appropriate level of service first. In these cases, it may be that clients with EDs can be served in the outpatient setting with enhanced teaming and monitoring and practitioners are referring out before this work can be established. The lack of practitioner comfort and knowledge regarding assessment for EDs also contributes to the discrepancy between the expected and observed number of individuals with EDs at LACDMH as practitioners need to carefully screen for EDs and assess with enough depth to support differential diagnosis.

In June 2022, a survey administered to 110 LACDMH mental health practitioners across both Directly-Operated (DO) and Legal Entity (LE) sites demonstrated most practitioners reported low confidence in their abilities to both diagnose and treat EDs as well as a lack of the skills needed to treat clients with EDs well (Figure 6). However, practitioners reported a higher level of comfort collaborating with other disciplines on care for clients with EDs and optimism that it is possible to make a positive difference to outcomes for most clients with EDs.

Figure 6. Practitioner Attitudes toward EDs by Response Choice



1.6 Briefly state the intervention(s) selected to address the root causes.
To address the limited practitioner training and familiarity with EDs and lack of clear guidelines regarding quality treatment for EDs, the interventions will include:
1) Training and application of best practices for EDs, including evidence-based interventions for EDs such as Cognitive-Behavioral Therapy and a focus on factors to consider to determine the appropriate level of care
2) Monthly case consultation series with an ED expert
3) ED Practice Network – a team of ED treatment clinical champions across the county who receive training, technical assistance and support from each other and a DMH administrative team.
4) ED Best Practice toolkit – a countywide resource that maps out the best practices for EDs including guidelines for level of care based on severity.

5) ED Clinical Practice Consultation TEAMS group – a countywide Microsoft TEAMS group to support peer consultation and sharing of resources.

Click here for Step 1

WORKSHEET 2: AIM STATEMENT

"What do we want to do?"

2.1 What is the aim/goal 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.)

Will implementing training, consultation, a best practice toolkit, and an integrated practice network decrease the percent of Medi-Cal beneficiaries with EDs requiring a higher level of care (HLOC) from 4% to 2% per quarter and increase the number of individuals transitioning from HLOC to outpatient services from 14.8% to 19.8% as well as those screened and assessed for EDs from 0.4% to 1.0% to approach the nationwide one-year prevalence rates within 18 months?

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.

There were two populations affected by the problem: the total population of consumers served that may meet criteria for an eating disorder with enhanced screening and assessment and the population of clients with diagnosed eating disorders that would receive the treatment interventions.

For the total population of clients served in FY 21-22, most clients were Hispanic/Latino (N=82,183), followed by unreported race/ethnicity (N=55,127), Black/African American (N=39,760), White (N=33,654), Asian (N=6,476), Two or More Races (N=6,448), Native Hawaiian/Pacific Islander (N=2,229), and Native Americans (N=1,142, Figure 8). Clients served in FY 21-22 were also predominately female (N=120,621) followed by male (N=105,641), transgender (M to F, N=257; F to M, N = 245), and unknown (N=74, Figure 9). Most clients were in the adult group (N=100,651) with children as the next largest group (N=56,599) and then transition-age youth (N=42,545) and older adults (27,023, Figure 10).

Figure 8. Clients Served by Race/Ethnicity, FY 21-22

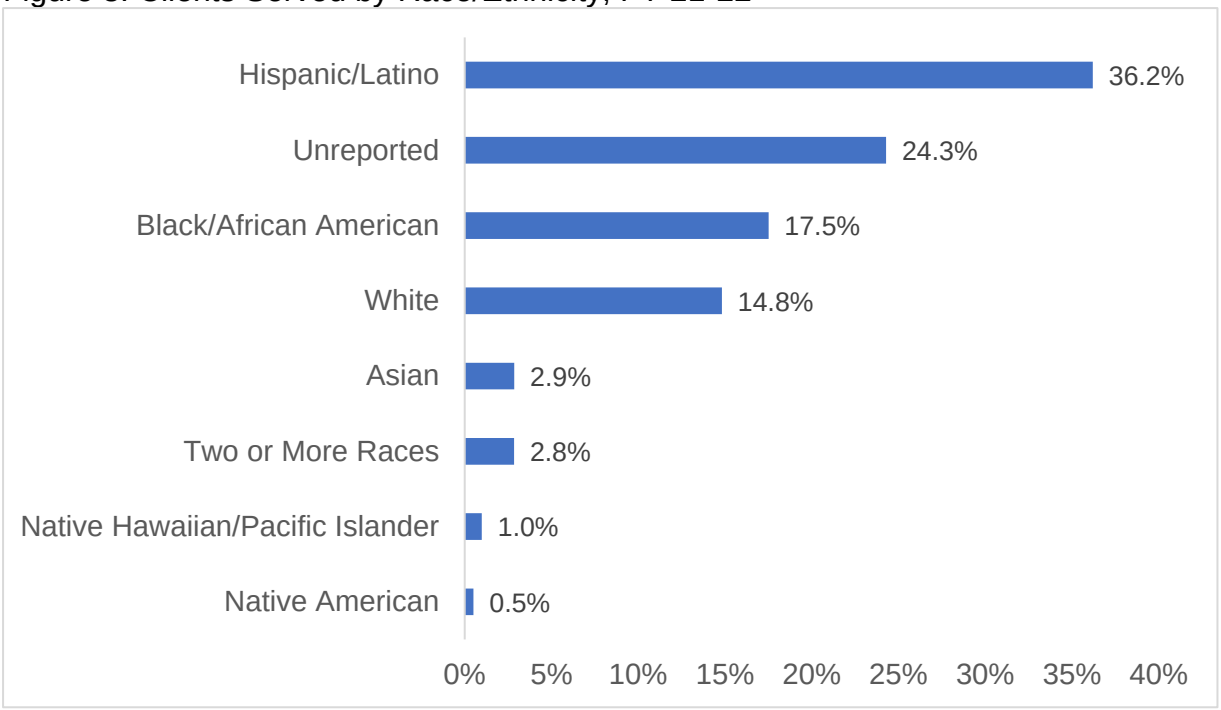


Figure 9. Clients Served by Gender, FY 21-22

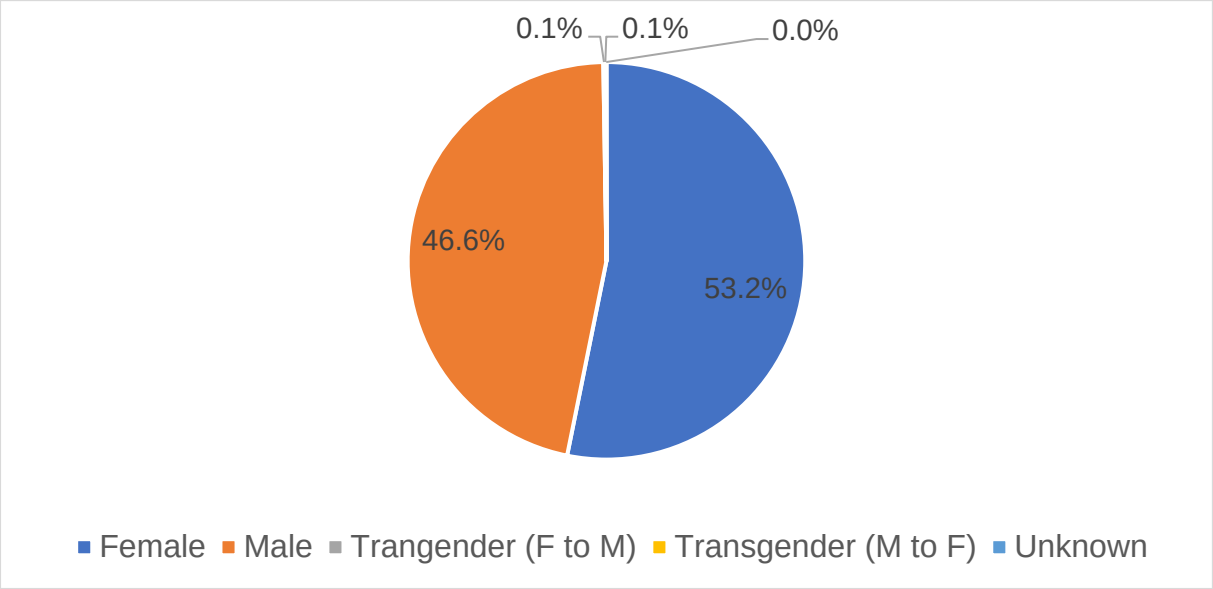
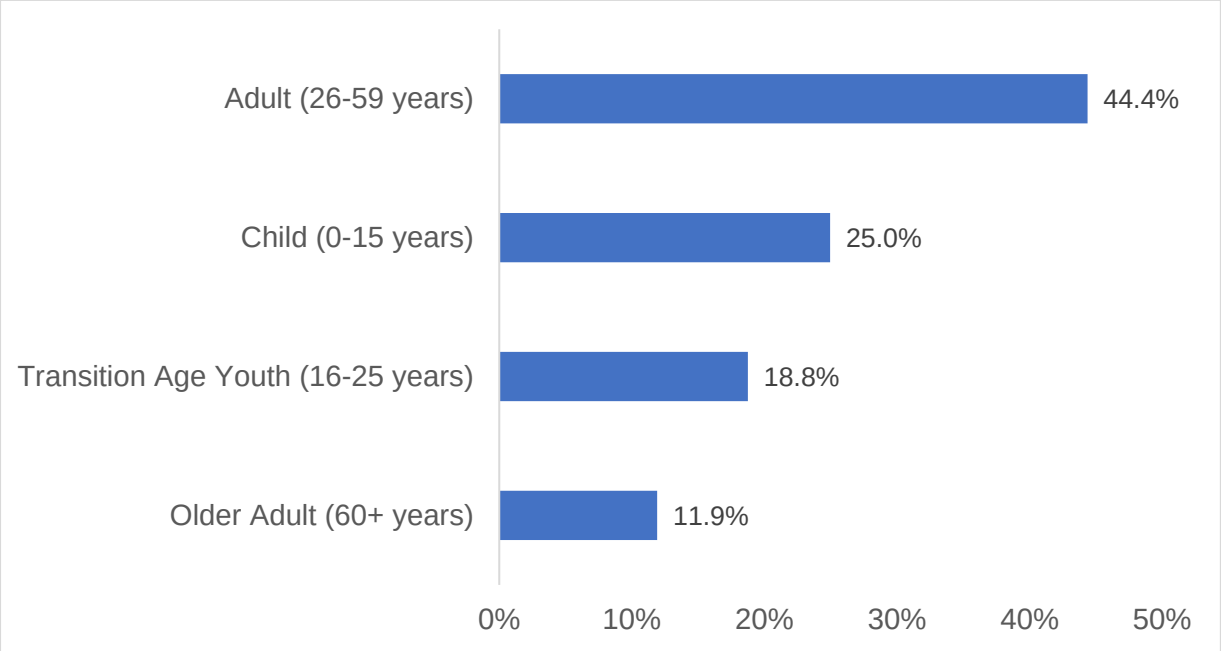


Figure 10. Clients Served by Age Group, FY 21-22



The population of youth and adults diagnosed with an ED (i.e., Anorexia Nervosa, Bulimia Nervosa, Binge Eating Disorder, Avoidant/Restrictive Food Intake Disorder (ARFID), Other Specified Eating Disorder, Unspecified Eating Disorder) requesting specialty mental health services, in FY 21-22, were predominately Hispanic/Latino (N=372) followed by unreported race/ethnicity (N=290), White (N=154), Black/African American (N=44), Two or More Races (N=42), Asian (N=28), and Native Hawaiian/Pacific Islander (N=10, Figure 11). Most clients with EDs in FY 21-22 were Female (N=801) followed by Male (N=137), Transgender (F to M, N=1) and Unknown (N=1, Figure 12). Most clients were Transition-Age Youth (N=421), followed by Adults (N=265), Children (N=224), and a smaller group of Older Adults (N=30, Figure 13).

The most common diagnosis in FY 21-22 was Unspecified Eating Disorder (N=353) followed by Anorexia Nervosa (N=180), Bulimia Nervosa (N=170), Other Specified Eating Disorder (N=112), Binge Eating Disorder (N=104), and Avoidant Restrictive Food Intake Disorder (ARFID, N=43, Figure 14). For clients with EDs, the most common comorbid diagnoses were mood disorders (N=724), followed by anxiety disorders (N=595), substance use disorders (N=133), child/adolescent disorders (N=101), psychosis/thought disorders (N=94), personality disorders (N=52), developmental disorders (N=29), and intellectual disorders (N=4, Figure 15).

Figure 11. Clients with Eating Disorder Diagnoses by Race/Ethnicity, FY 21-22

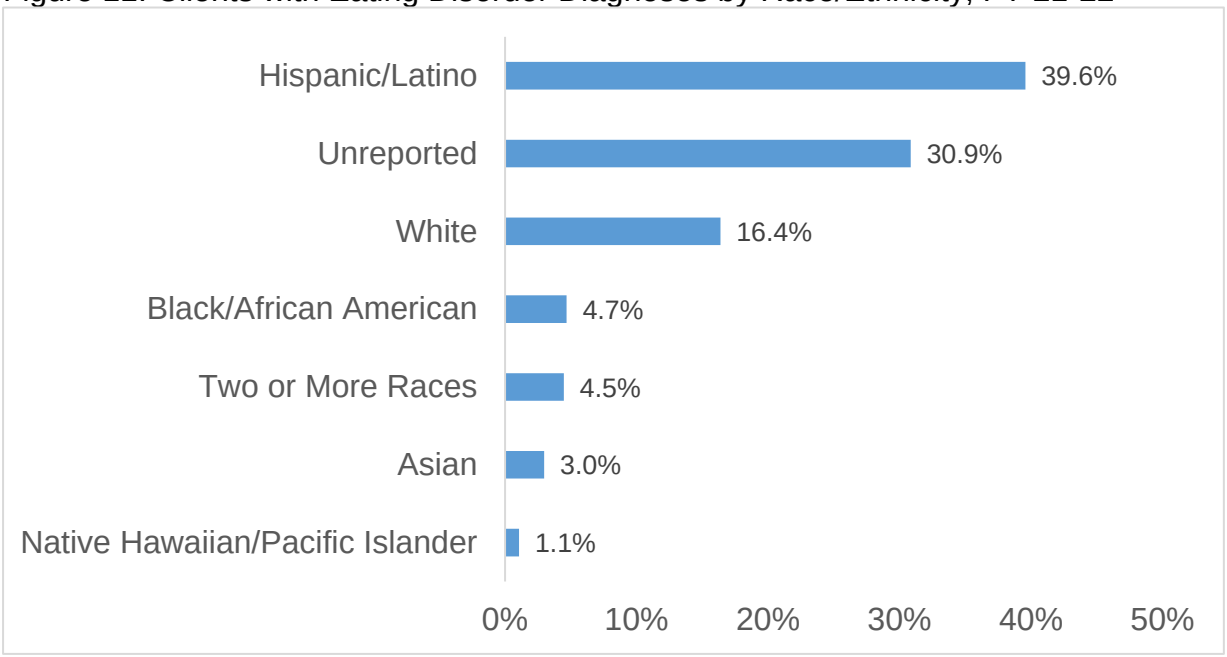


Figure 12. Clients with Eating Disorder Diagnoses by Gender, FY 21-22

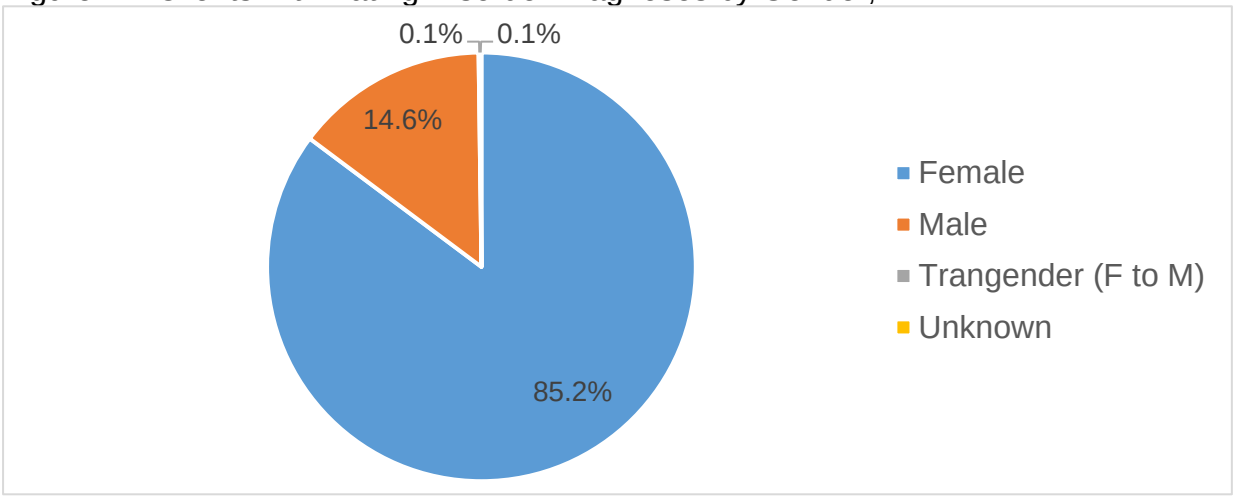


Figure 13. Clients with Eating Disorder Diagnoses by Age Group, FY 21-22

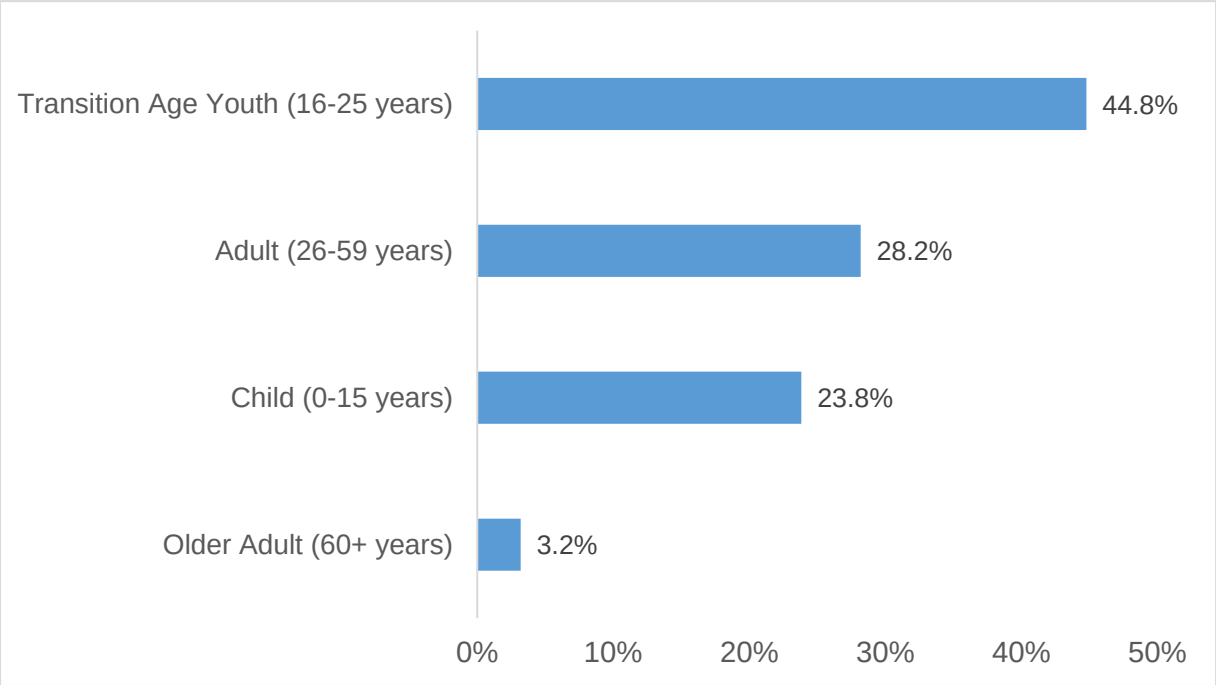


Figure 14. Clients by Specific Eating Disorder Diagnosis, FY 21-22

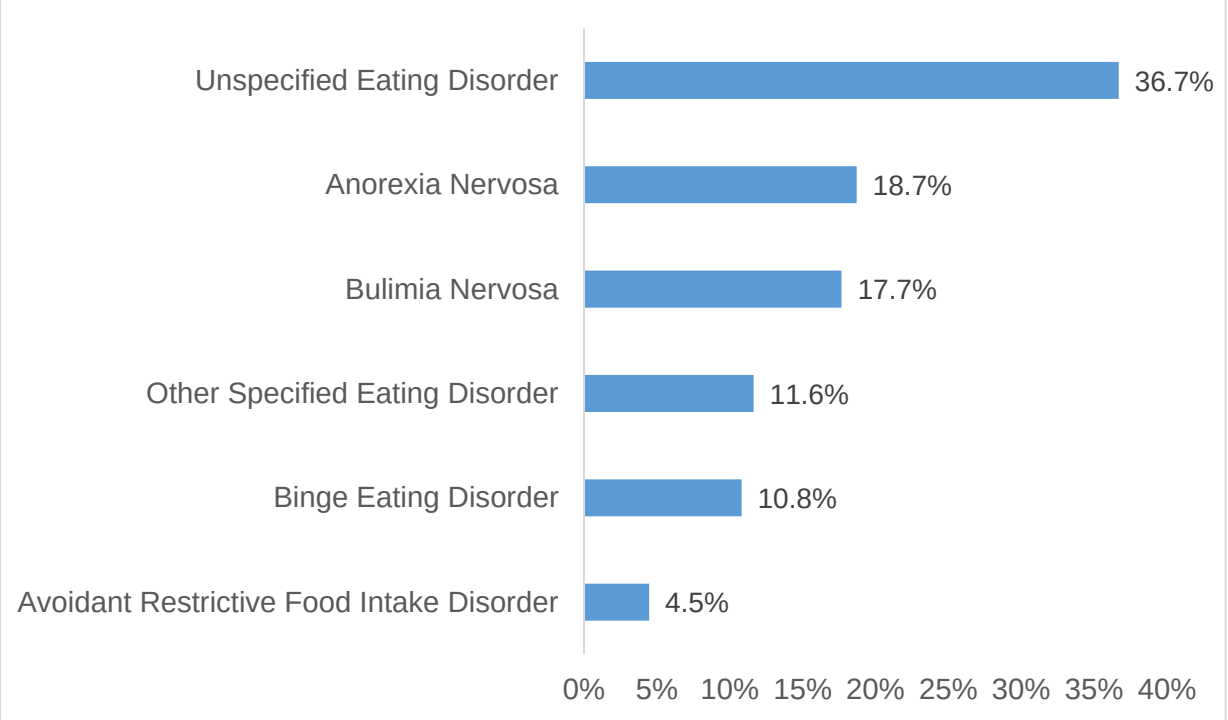
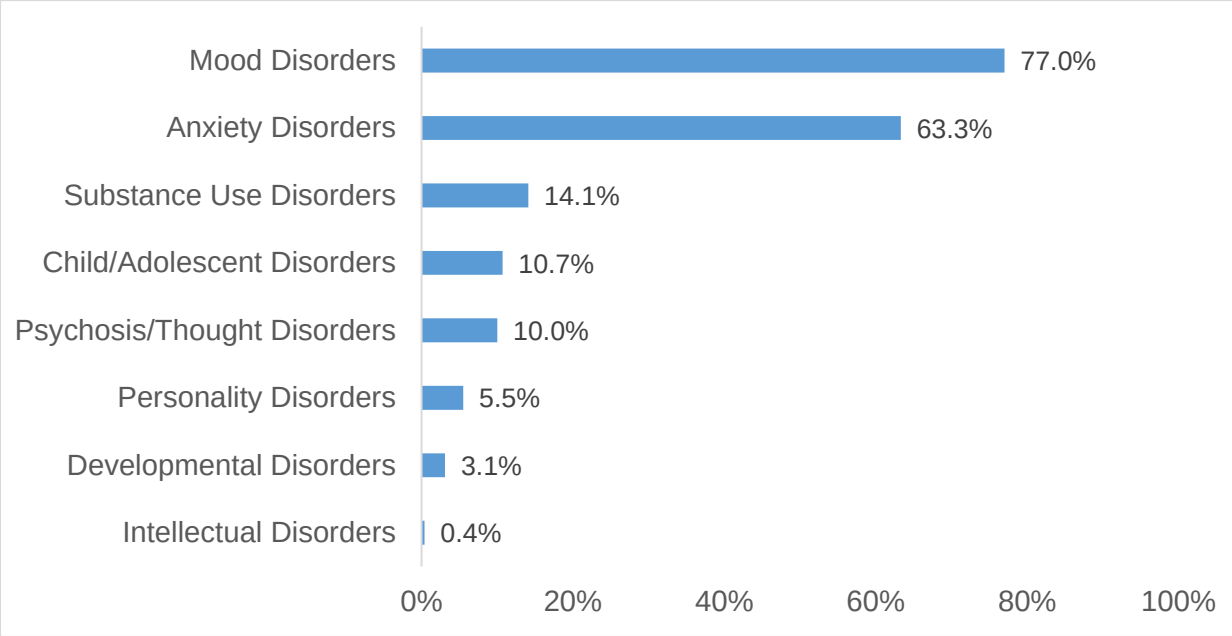


Figure 15. Comorbid Diagnoses for Clients with Eating Disorders, FY 21-22



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

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.
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)?

Clients that have an ED diagnosis and receive services from practitioners who attend the trainings and case consultation series will be tracked in IBHIS by pulling claims associated with those practitioner and client unique IDs. ED-specific interventions will be noted in progress notes or by group name. Interventions used with specific clients as reported on the case consultation calls will also be recorded and tracked through unique client and practitioner ID. Practitioners can also indicate a need for case consultation through the practice network or TEAMS group and these requests will be tracked separately by the project lead.

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 that will be used to track outcomes are the percent of clients with EDs that require HLOC and the percent of clients that are able to transition from a higher level of care for EDs to outpatient services. Higher levels of care for EDs such as residential facilities, inpatient units, partial hospitalization programs, and intensive outpatient services have a significant impact on client functioning and are also a large cost for the system. Being able to effectively treat clients with EDs in an outpatient setting would be beneficial for clients in that they could maintain greater stability and independence in their lives. Process measures will also measure improvements in practitioner screening and detection of EDs as evidenced by diagnosis rates as well as practitioner confidence in treating EDs and knowledge of EDs as evidence by attitude measures and knowledge tests.

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
Clinical Measures				
Decrease the number of ED clients that require higher levels of care (HLOC)	Application of best practices for EDs (e.g., CBT, interdisciplinary team, warm hand off)	# of clients diagnosed with ED	# of clients diagnosed with EDs that require HLOC	Decrease by two percentage points
Increase the number of ED clients that step down from higher levels of care (HLOC)	Application of best practices for EDs (e.g., CBT, interdisciplinary team, warm hand off)	# of clients receiving interventions	# of clients receiving HLOC that step down to a lower level of care out of those in HLOC	Increase by five percentage points
Process Measures				
Increase screening and diagnosis of eating disorders at intake	Training, case consultation, toolkit	# of practitioners diagnosing clients with EDs	# of individuals diagnosed with EDs or eating concerns indicated on problem list	Increase percent of individuals receiving services diagnosed with EDs from 0.4% to 1.0%
Increase practitioner confidence in working effectively with clients with EDs	Training, case consultation, toolkit, practice network	# of practitioners that participate in interventions	Eating Disorders Attitude measure	Increase practitioner confidence by 25%
Increase practitioner knowledge in working effectively with clients with EDs	Training, case consultation, toolkit, practice network	# of practitioners that participate in interventions	Eating Disorders 101 Knowledge Test	Increase practitioner knowledge by 25%

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.

The improvement strategy will consist of the application of best practices for working with clients with EDs. This will be supported by expanded training, a case consultation series, an expert practice network, a TEAMS resource group, and a toolkit for providers. Much of the training and consultation interventions will focus on factors to consider when determining an appropriate level of care for clients with EDs. As practitioners have reported discomfort with working with this population on an outpatient level, it is important to reinforce that many clients with EDs can be treated on an outpatient basis, particularly with good interdisciplinary teaming, and to train practitioners to recognize signs that a client may need to be transitioned to a HLOC. Interventions will also focus on how to provide continuity of care when a client is in a HLOC and how to transition back to outpatient services when appropriate.

Describe when and how often the intervention will be applied.

The first training in the intervention process was Cognitive-Behavioral Therapy (CBT) for Eating Disorders, which was attended by 151 practitioners in July 2021. The ED practice network first began in March 2022 and consists of 20 experts in EDs across the LACDMH system. A monthly one-hour consultation series for the CBT training for EDs began in June 2022. In these sessions, participants are given the opportunity to present a clinical case or discuss questions or challenges they face with implementing the techniques and approaches they learned in the initial CBT skill-based training. The facilitator also presents a brief content refresher featuring a key learning point or specific micro-skill taught in the initial training. Examples of these topics include: Assessment of Eating Disorders, Assessment of Eating Disorders in Context of Other Problems, Deciding Level of Care, Case Conceptualization Review, Addressing Dietary Restraint, Addressing Shape/Weight Checking, Addressing Shape/Weight Avoidance, Deep-Dive into the Rationale for In-Session Weighing (with role-plays), Cognitive Interventions for Body Image, Treating Eating Disorders in the Latinx population, Behavioral Experiments (planning, implementation, building client engagement), and Working with Parents of Teens/Young Adults with Eating Disorders. Table 4 displays monthly call information in detail. An additional CBT for Eating Disorders cohort started in October 2022 and 36 practitioners attended that training.

Table 4. ED Conference Call Attendance

Month	Number of Attendees	Number of Cases
June 2022	6	2
July 2022 (cancelled by presenter)	N/A	N/A
August 2022	8	1
September 2022	16	3
October 2022	15	2
November 2022	10	1
December 2022	13	1
January 2023	18	1
February 2023	13	1
March 2023	2	2
April 2023	9	2
May 2023	8	1
June 2023	5	2

The Eating Disorders 101 training was developed to provide a more basic overview of EDs and best practice strategies to engage and treat individuals with EDs. The first two Eating Disorders 101 trainings occurred in June 2022 and were attended by 86 and 117 practitioners, respectively (203 total). Additional Eating Disorders 101 trainings occurred in December 2022 and January 2023 and were attended by 115 and 112 practitioners, respectively (227 total). Due to the popularity of the ED101 trainings, the most recent one was recorded and is available to all LACDMH clinicians and contracted providers for one year. In addition, the Academy of CBT developed an Eating Disorders 102 training for us, which was attended by 75 practitioners in March 2023. As a deeper dive, Eating Disorders: Working with Children and their Families (which focused on Family-Based Treatment) was offered in April 2023, when it was attended by 75 practitioners. These latter two trainings were offered again in June 2023, with approximately 30 practitioners and 69 practitioners in attendance, respectively. The QA Bulletin outlining the procedures for treating clients with EDs was distributed countywide on July 29, 2022 (see attached) and subsequent QI/QA meetings reviewed the bulletin and guidelines with providers. The TEAMS group supporting practitioners working with clients with EDs was created in August 2022 and was open to provider enrollment on September 12, 2022. The materials for the Best Practice toolkit have been posted in the TEAMS group and there are currently 57 members with posts approximately once per week. The toolkit has been transitioned to a webpage hosted by LACDMH so that it can be accessed by external providers without requiring a direct link to the TEAMS page. It will be maintained by staff in the Quality, Outcomes, and Training Division.

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?

Recent meta-analyses support the efficacy of cognitive-behavioral therapy in improving the symptoms of EDs, particularly in the case of bulimia nervosa and binge eating disorder (Linardon, Wade, De la Piedad Garcia, & Brennan, 2017; Agras & Bohon, 2021). For anorexia nervosa, particularly in adolescents and young adults, family-based treatment also has some support (Lock, Le Grange, Agras et al., 2010; Couturier, Kimber, & Szatmari, 2013). LACDMH partnered with experts from the Academy of Cognitive Therapy to create and present the CBT and ED 101-102 trainings as well as the case consultation series to ensure that practitioners are taught evidence-based strategies for working with clients with EDs. The practice network is made up of experts across the system who have a wide range of experience treating clients with EDs. This group advises on the best practices toolkit as well as the QA bulletin and TEAMS group content.

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

The CBT for EDs and ED 101-102 trainings specifically incorporated cultural models for treatment and adaptations to consider when working with clients from various backgrounds. For the training on June 23, 2022, 85% of participants felt that the curriculum strongly addressed cultural competency and diversity, for the June 30, 2022 training, it was 73% of participants. 85% of the participants in December and January 2023 ED 101 training felt the curriculum strongly addressed cultural competency and diversity. The case consultation series also invites practitioners to discuss cultural elements of their cases and includes topics such as working with the Latinx population specifically.

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

The CBT for Eating Disorders and ED 101-102 trainings were presented by experts from the Academy of Cognitive Therapy. The case consultation series was overseen by one of these experts, Dr. Andie Murray, who has over ten years of experience treating clients with EDs. The practitioners applying these interventions to their clients represent a range of disciplines across the LACDMH system. They are predominately masters- and doctoral-level clinicians with a smaller percentage of bachelor-level or peer counselors. Many of the practitioners report having limited experience with EDs and a major goal of the PIP is to increase their comfort in working with this population in order to expand treatment availability for clients.

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

The case consultation series, practice network, and TEAMS group all reflect venues for practitioners to pose questions related to their implementation of the intervention and receive feedback to improve upon their skills.

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)
1	Application of Cognitive Behavior Therapy (CBT) for Eating Disorders Training	6/7/2021, 10/3/22-10/4/22	As needed	# of clients with EDs receiving CBT for EDs
2	Eating Disorders Practice Network	3/23/2022	Bimonthly	# of members that attend practice network
3	Case Consultation Series for EDs	6/15/2022	Monthly	# of clients presented for consultation; # of practitioners that attend call and seek consultation
4	Application of Eating Disorders 101 Training	6/23/22, 6/30/22, 12/2/22, 1/13/23, pre-recorded webinar thereafter	As needed	# of clients with EDs received care from practitioners that attended training
5	Application of Eating Disorders 102 Training	3/30/23-3/31/23, 6/8/23-6/9/23	As needed	Reported Practitioner Knowledge & Confidence
6	Application of Eating Disorders: Working with Children & Families	4/25/23-4/26/23, 6/13/23-6/14/23	As needed	Reported Practitioner Knowledge & Confidence
7	QA Bulletin	7/29/22	One time	# of practitioners that access bulletin
8	Eating Disorders Clinical Practice Consultation TEAMS group	9/14/22	As needed	# of clients presented for consultation; # of practitioners that seek consultation
9	Eating Disorders Best Practice Toolkit	9/14/22	As needed	# of practitioners that access toolkit

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.

Diagnosis and services received data are available through IBHIS, the electronic health record for LACDMH. These data are entered by practitioners following a service or as needed to update a diagnostic record and are available once the form is submitted. These data were used to calculate diagnostic rates as well as transition from HLOC to outpatient services. Higher level of care data are available through authorization letters and service invoices for each individual client that requires these services. These data were compiled across clients according to FY. Attitude and knowledge test data were collected pre and post the second ED 101 training through Microsoft Forms.

7.2 What data elements are being collected?

Data elements being collected include clients with an active diagnosis in the Eating Disorders category (codes starting F50) of the ICD-10, clients with an ED that require a HLOC (i.e., residential, inpatient, partial hospitalization program, intensive outpatient program) and the level of service received over time. Additional process measure data elements collected are the number of practitioners that attended the CBT for ED and ED 101-102 trainings and consultation calls as well as activity on the ED Clinical Practice Consultation group.

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?

Data collected through IBHIS are entered by the practitioners who are directly working with the consumers with EDs and represent billable services or pertinent updates to consumer charts. These data are stored in the data warehouse and were extracted by the project lead in collaboration with the Clinical Informatics team. HLOC data are collected by the Managed Care plan team that assists with coordinating contracts with HLOC providers. These staff are trained to manage authorization letters and invoices and track these items for individual clients. HLOC data were shared with the project lead in an encrypted folder.

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.

Data elements were available in IBHIS or were constructed from authorization letters and invoices for HLOC. For the process measures, LACDMH created an adapted ED attitude measure from existing validated measures including the Personal Efficacy Beliefs Eating Disorder Scale (Riggs, Warka, Babasa et al, 1994; Brown & Perry,

2018) and the Therapeutic Optimism Eating Disorder Scale (Byrne, Sullivan, & Elsom, 2006; Brown & Perry, 2018) The ED knowledge test was created to reflect the content of the ED 101/102 training slides.

TABLE 7.1 SOURCES OF DATA

#	Variable or PM	Data Source	Frequency of Collection
1	# of clients diagnosed with EDs engaged in HLOC	Treatment Invoices, IBHIS diagnosis tables	Monthly
2	# of clients receiving HLOC that step down to outpatient services	Treatment Invoices, IBHIS claiming	Monthly
3	# of practitioners diagnosing clients with EDs # of individuals diagnosed with EDs	IBHIS	Monthly
4	Attitude change score	Eating Disorders Attitude measure	With each applicable training
5	Knowledge test change score	Eating Disorders CBT/101/102/FBT Knowledge Test	With each applicable training

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: Data are to be presented to the PIP committee for a monthly review. The monthly review allowed for the committee to make decisions on a finer grain analysis than the quarterly metrics included in the final analyses.

Actual: Data were analyzed according to the plan with exception of a few months when the project was lacking staff.

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 original PIP lead analyst was a clinical psychologist (PhD) with a background in quantitative and qualitative research methods and statistical analysis.

Actual: The original PIP lead analyst conducted the first 18 months of data analysis as planned. The second PIP lead analyst, who holds a Master of Health Science and Master of Social Work conducted analysis in the last 6 months of the PIP. In addition, the unit's new research analyst, who holds an MS and PhD in Health Behavior, conducted the end-of-term statistical analysis. Both have backgrounds in quantitative and qualitative research methods.

8.3 How was change/improvement assessed?

Plan: The plan for assessing change was to monitor the performance and process metrics in the PIP committee meeting using both monthly and quarterly data. Gains in the expected direction indicated that improvements had been made in that area. For the two clinical outcome measures, this was a decrease in the number of individuals with EDs requiring HLOC and an increase in the number of individuals in HLOC transitioning to outpatient care. For the process measures, this was an increase in the number of clients diagnosed with EDs and an increase in practitioner confidence and knowledge in assessing and treating EDs.

Actual: Improvement was analyzed according to the plan. To evaluate statistically significant change across all quarters for unique ED clients, a McNemar's-test was conducted. Procedurally, this was done by generating a unique comprehensive set of ED clients from FY1 21-22 Q1(first quarter with complete data) and FY 22-23 Q3 (quarter with highest number of ED clients). Transition to outpatient was operationally defined as clients with HLOC at baseline who received outpatient services 30 days post baseline and who did not re-enroll in a higher level of care for 60 days.

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

Data from IBHIS were largely complete and sufficient. HLOC data are contingent

upon receipt of letters of authorization and invoices. Efforts were made to update any changes to invoices over time to ensure the most accurate data possible.

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

Statistical analyses were conducted for the main clinical performance outcome measures and the process measure pertaining to ED diagnoses mid-way through the PIP and at the end of the PIP period. For the clients with EDs that are engaged in HLOC, HLOC clients stepped down to outpatient care analyses, and individuals diagnosed with EDs, the McNemar chi-square test was used to determine if there were significant differences in the frequencies of consumers in each category at different time points. The McNemar test allows for paired data as many of the same clients are included at baseline and remeasurement. For the number of clients with EDs that are engaged in HLOC, the categories were those that did or did not get authorized to participate in HLOC at baseline and at the remeasurement period. For the number of clients in HLOC that stepped down to outpatient, the categories were those that stepped down or did not step down from baseline to final remeasurement. For the number of individuals diagnosed with EDs, the categories were those that had and did not have an ED diagnosis from baseline to remeasurement. The target level of significance used for all analyses was 5% or a p-value under or equal to 0.05.

The McNemar's test with a Yate's correction was conducted at the end of the PIP measurement period. This was completed by looking at all unique ED clients from FY 21-22 Q1 and FY 22-23 Q3. There was an 18.75% decrease in HLOC among clients (n=32), with a total of 6 clients transitioning to a lower level of care. This was a statistically significant transition of clients from HLOC to a lower level of care (=5.04, p-value= .02).

For process measure 1 (prevalence of ED among client receiving services), a two-sample proportion test was conducted to assess if the change in prevalence was statistically significant. The prevalence rate of FY 20-21 Q3 was compared to FY 22-23 Q4. There was a .07% increase in ED diagnosis, which is a small albeit statistically significant difference (t-score= 39.50, p-value <.001). An assumption of this test is that populations at baseline and post-baseline does not include duplicated clients.

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. As EDs tend to have lower prevalence rates than other mental illnesses, the sample sizes for consumers that received HLOC and that meet criteria for an ED are small. It is also possible that the HLOC data do not represent all facilities and higher levels of care that clients may have accessed. LACDMH contracted with two sites in the first 18 months of the PIP (Reasons/BHC Alhambra Hospital and Discovery Practice Management), and only one site during the last six months (Reasons/BHC Alhambra Hospital).

TABLE 8.1 PIP RESULTS SUMMARY

Performance Measure Description	Target Performance Rate	Baseline (N, %, Date)	Largest Cohort Remeasure (N, %, Date)	Demonstrated performance improvement (Yes/No)	Statistically significant change in performance (Yes/No) Specify P-value
Clinical PM 1. # of clients with EDs that engaged in HLOC	Decrease by 2%	N = 28 28/632 = 4.4% FY2021-22 Q1	N = 25 25/697= 3.6% FY2022-23 Q3	☒ Yes ☐ No	☒ Yes ☐ No P-value: ☐ <.01 ☒ <.05 P-value = 0.02
Clinical PM 2. # of clients receiving HLOC that step down to a lower level of care	Increase of 5 percentage points from baseline	N = 4 4/28 = 14.3% FY2021-22 Q1	N = 25 7/25 = 28% FY2022-23 Q3	☒ Yes ☐ No	☒ Yes ☐ No P-value: ☐ <.01 ☒ <.05 P-value = 0.02
Process Measure 1. # of clients served diagnosed with EDs	Increase of 0.6% from 0.4% to 1.0% to be closer to national prevalence	N = 592 592/160,721 = 0.37% FY2020-21 Q3	N=697 697/151,706 = 0.46% FY2022-23 Q3	☒ Yes ☐ No	☒ Yes ☐ No P-value: ☒ <.01 ☐ <.05 P-value = <0.01

Figure 16. Percent of Clients with EDs that Engaged in Higher Levels of Care by Quarter

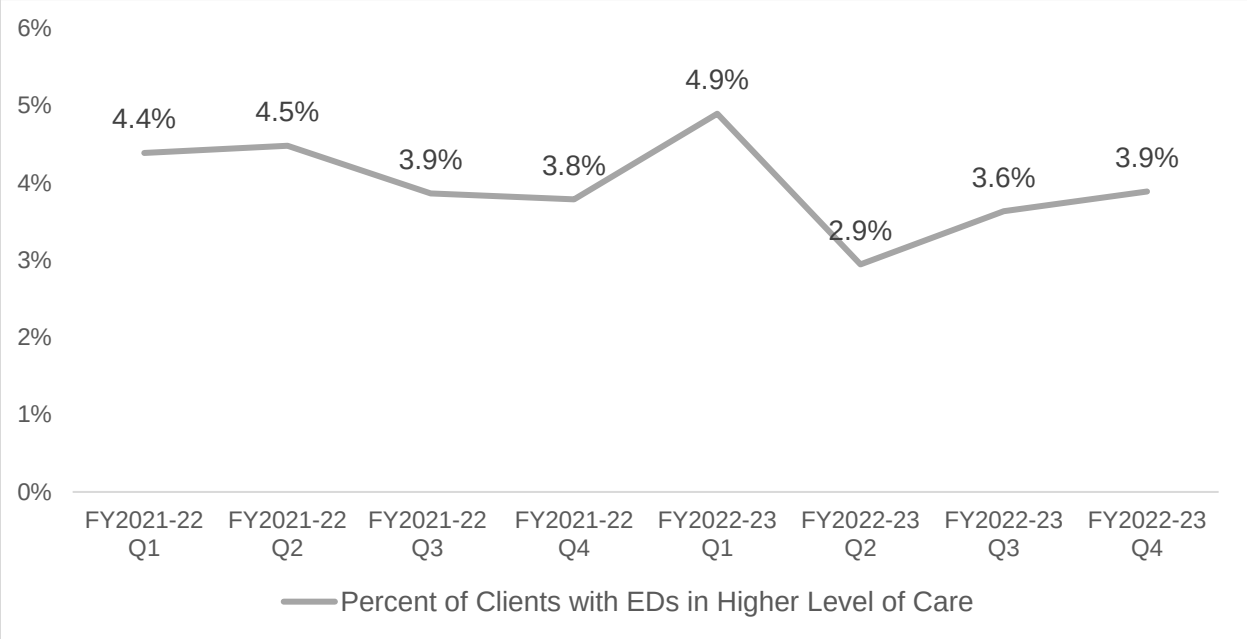


Figure 17. Percent of Clients in Higher Level of Care Transitioning to Outpatient Care by Quarter

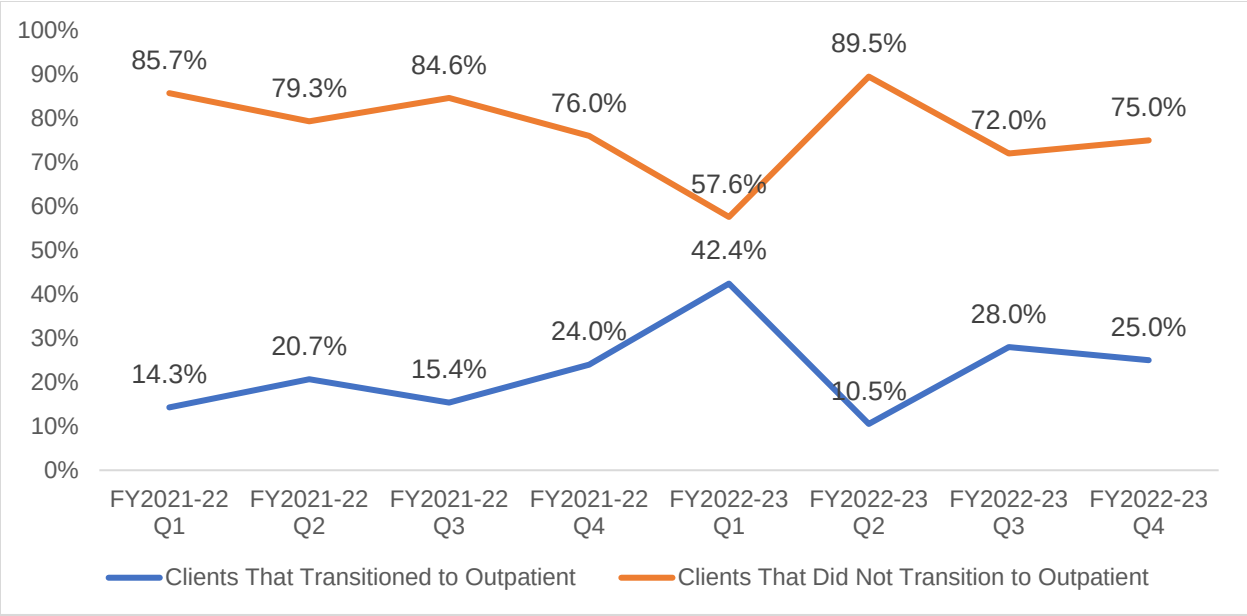


Figure 18. Percent of Clients Served that are Diagnosed with EDs by ED training status

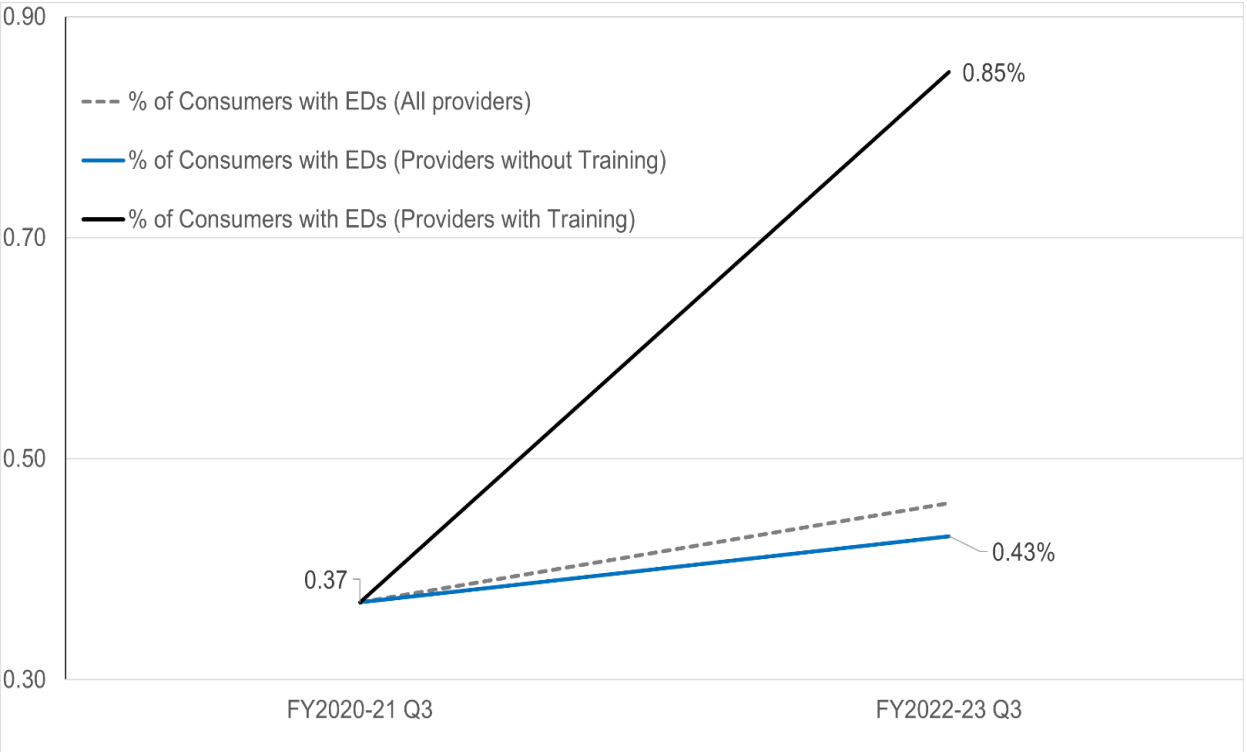


Figure 19. Attitude Change Scores Pre and Post: Average Aggregate of Four different (CBT-e, ED 101, ED 102, FBT) Trainings between June 2022 and June 2023

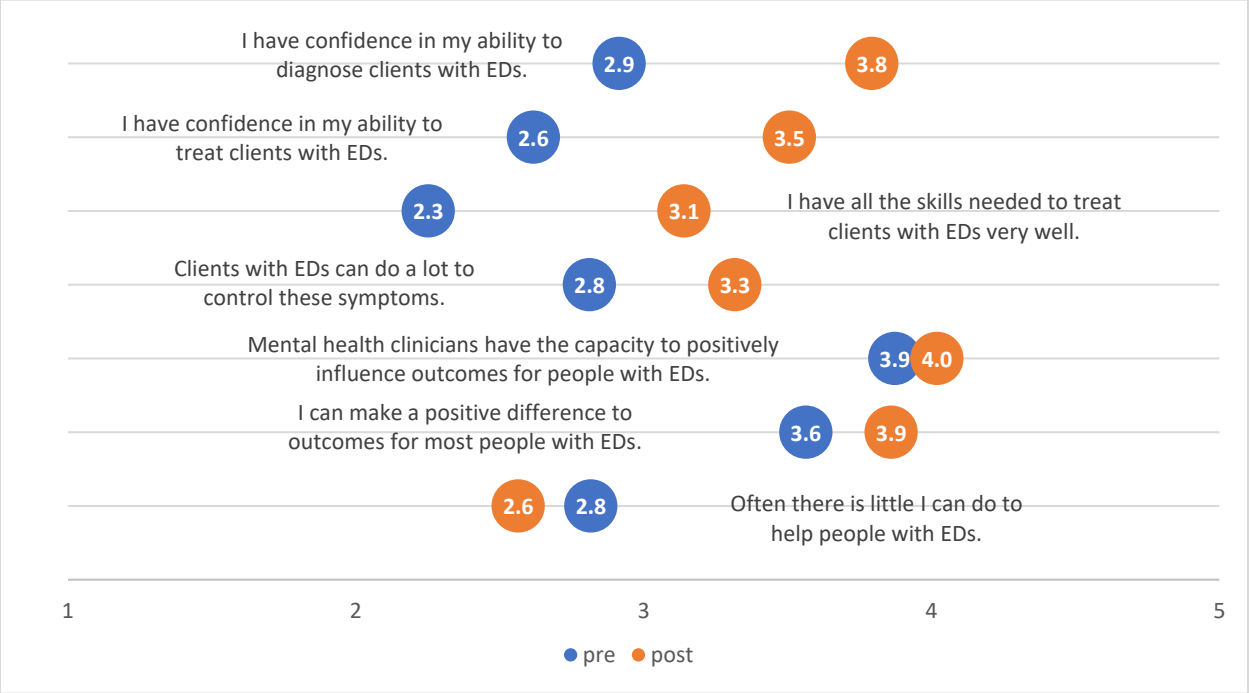
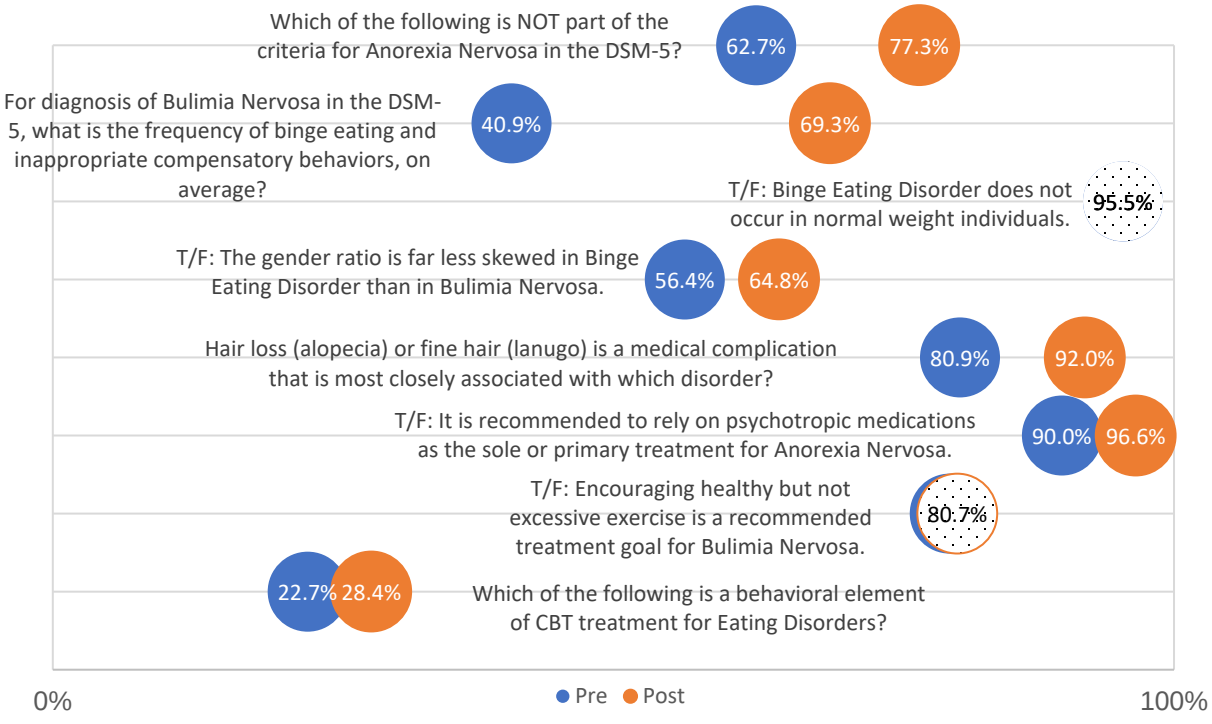


Figure 20. Percentage correct on knowledge tests Pre and Post ED 101 Training



Note: The two questions "T/F: Binge Eating Disorder does not occur in normal weight individuals." And "T/F: Encouraging healthy but not excessive exercise is a recommended treatment goal for Bulimia Nervosa." Did not show any measurable change pre- and post- ED 101 training.

Figure 21. Percentage correct on knowledge tests Pre and Post ED 102 (March and June 2023) Trainings

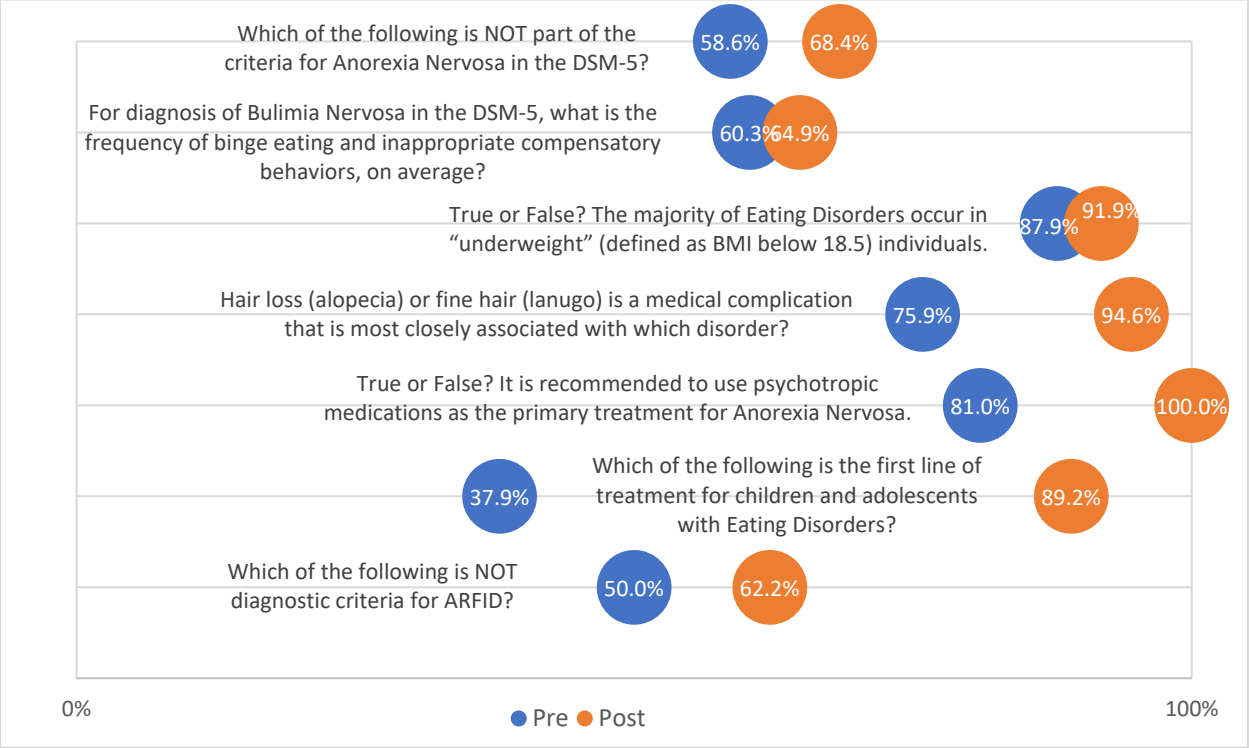
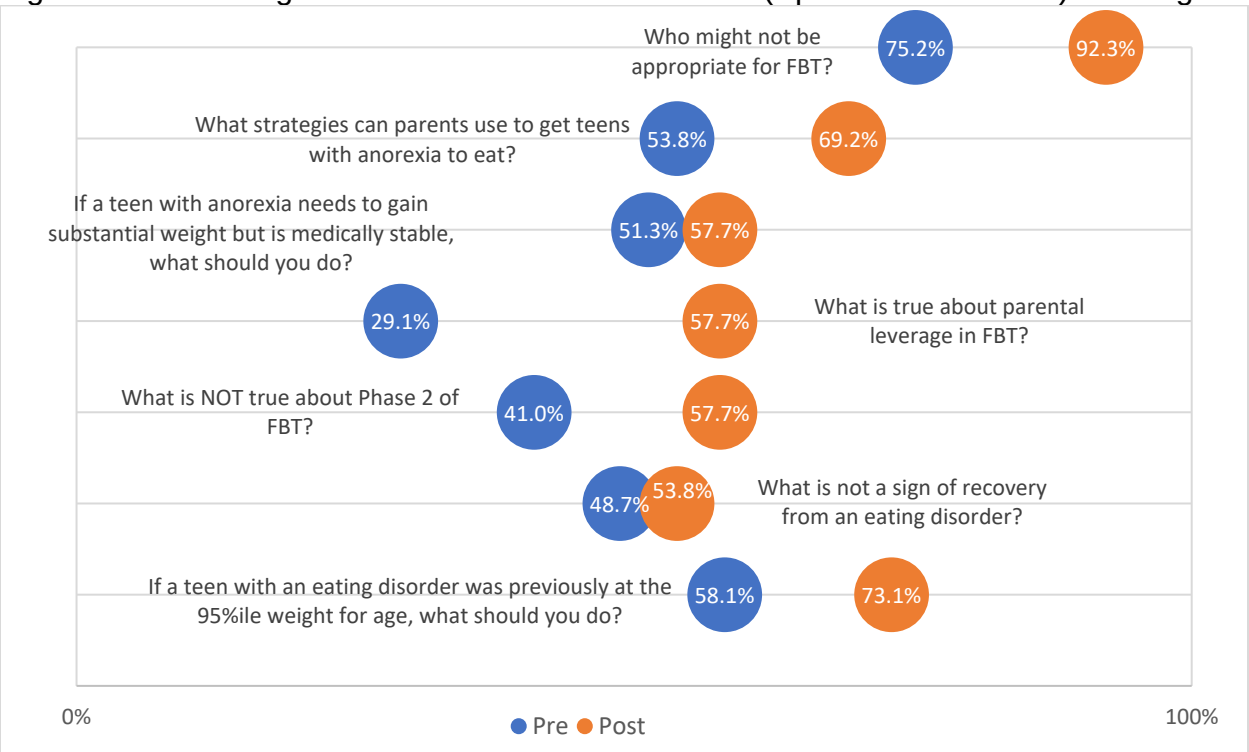


Figure 22. Knowledge Test Scores Pre and Post FBT (April and June 2023) Trainings



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?

The clinical PIP continued through Fiscal Year 2022-23 (June 30, 2023), with mostly positive results. There have been improvements in both the process measures and clinical performance measures but not to the degree we had hoped. Practitioner attitude and knowledge regarding EDs improved directly following training (see Figures 19-22). Diagnostic rates for EDs increased over time albeit slightly, with significance at $p<.01$ (see Table 8.1). However, the diagnostic rates of those providers who had been trained in CBT-e, ED101, and/or ED102 and FBT since the start of the PIP was nearly twice that of those who had not taken advantage of these trainings (see Figure 18). The percentage of clients in HLOC that transitioned to outpatient services more than doubled over time from baseline, with significance at $p=0.02$ (see Figure 17 and Table 8.1). As we'd hoped, the percentage of clients with EDs that were engaged in HLOC decreased over time from 4.4% in Q1 of FY 2020-21 to 3.6% in Q3 of FY2022-23 (see Figure 16). While this change was statistically significant ($p=0.02$), it may be that variations in demand for HLOC have more to do with extraneous factors such as availability of beds, holidays, summer vacation from school, etc. than it has to do with availability of outpatient services or confidence and comfort of outpatient providers.

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

Practitioner confidence and comfort with treating EDs and knowledge regarding EDs appeared to change because of the ED 101 and ED 102 trainings. Overall diagnostic rates also appeared to increase immediately following the ED 101 training with a leveling off over time, however diagnostic rates of those providers who took advantage of the PIP's ED-specific trainings continued to climb through the course of the PIP. There were improvements in the number of clients with EDs requiring HLOC and transitioning from HLOC to outpatient care, which could be partially due to procedural, contractual, or even seasonal changes unrelated to the PIP.

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

The clinical performance and process metrics did not demonstrate statistically significant positive change midway through the PIP but did demonstrate statistically significant change in the final quarters of the PIP.

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

Yes, it has been challenging to link the use of the intervention with intervention participants if not documented through case consultation discussion or an identified support group. This has made it difficult to determine whether the interventions contributed to differences in outcomes. Some clients may also receive HLOC through sites other than the LACDMH contracted site(s) and therefore may represent an undercount of those in HLOC.

A common limitation of data collection efforts is to accurately identify the number of participants. At the data collection/entry point, this can be mitigated by ensuring that only one unique participant Identifier (ID) is generated and that any re-enrolled participants are capture using their original ID. From a data analysis process, data are clean to de-duplicate IDs and to generate a list of only unique participants.

There are also limitations to an on-rolling basis cohort design when analyzing pre and post matched pairs. As clients can be added to cohorts, measuring baseline against another time point may not yield an accurate estimate. To mitigate this, specific quarters can be selected to create a comprehensive sample of participants, and then pre and post analysis can be operationalized at specified recurring timepoints across the cohorts. In the calculations ran for HLOC status in ED clients, the Baseline was considered the first assessment (e.g., first billing of mental health services) and their post measure was considered their level of care 30 days post that initial assessment. This allowed for an aggregate comparison across quarters that standardized the measurement periods across clients from different cohorts.

Lastly, another limitation is the source of the data itself and how frequently and accurately it is updated. The analysis for this report utilized billing data, which can sometimes be delayed. This means there is a lag between services rendered and diagnosis entered the system which can create an underestimation in our analysis and counts.

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?)

Improvement differed by performance and process metrics. In the case of clients engaged in HLOC, there was an initial increase in the summer and fall of 2021, followed by decreases in the winter and spring, another increase in summer of 2022, followed by a decrease in the fall, and increase in the winter and spring of 2023 (see Figure 16). For HLOC clients transitioning to outpatient services, there was overall

improvement from a low of 14% to a high of 42% in summer of 2022. The number fell in the Fall and leveled off at about 25% at the end of the PIP (see Figure 17). For the diagnostic rates, these tended to increase very slightly over time but levelled off in the last three quarters of the PIP. Providers who attended the trainings (which addressed screening tools and recognizing factors associated with EDs that may indicate an eating concern not expressed by the client during the assessment or ongoing services) demonstrated a substantial increase in the number of ED diagnoses made. Our hope is that as more providers are trained, the diagnostic rates will continue to grow.
9.6 How were untoward results addressed? There were no untoward results during the PIP.
9.7 What is the MHP/DMC-ODS's plan for continuation or follow-up? The PIP continued through the end of Q4 FY 22-23. The very popular ED 101 training continues to be available on-demand. Additional trainings such as ED 102 and FBT continue to be offered to reach a wider number of practitioners systemwide to increase availability of quality care for individuals with ED. In addition, we have developed a Best Practice Toolkit which is available to the public on the LACDMH website. Furthermore, we plan to continue offering the ED Practice Network and the ED Consultation Group into the next fiscal year so that we can continue to be responsive to practitioners' and clients' needs.

Click here for Step 9

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