



## Performance Improvement Project Implementation & Submission Tool

### PLANNING TEMPLATE

#### INTRODUCTION & INSTRUCTION

This tool provides a structure for development and submission of Performance Improvement Projects (PIPs). It is based on EQR Protocol 3: Validating Performance Improvement Projects (PIPs), as a mandatory protocol delivered by the Centers for Medicare & Medicaid Services (CMS) in September of 2012.

The use of this format for PIP submission will assure that the MHP addresses all of the required elements of a PIP. If the MHP uses another format, they must ensure that all of the required elements of the PIP are addressed and included in their submission. **PLEASE fully complete each section and answer ALL questions.**

- ❖ The PIP should target improvement in either a clinical or non-clinical service delivered by the MHP.
- ❖ The PIP process is not used to evaluate the effectiveness of a specific program operated by the MHP. If a specific program is experiencing identified problems, changes and interventions can be studied using the PIP process. This can be done to create improvements in the program and should be included in the narrative.
- ❖ The narrative should explain how addressing the study issue will also address a broad spectrum of consumer care and services over time. If the PIP addresses a high-impact or high risk condition, it may involve a smaller portion of the MHP consumer population, so the importance of addressing this type of issue must be detailed in the study narrative.
- ❖ Each year a PIP is evaluated is separate and specific. Although topic selection and explanation may cover more than one PIP year, every section should be reviewed and updated, as needed, to ensure continued relevance and to address on-going and new interventions or changes to the study.
- ❖ If sampling methods are used, the documentation presented must include the appropriateness and validity of the sampling method, the type of sampling method used and why, and what statistical subset of the consumer population was used.
- ❖ General information about the use of sampling methods and the types of sampling methods to use to obtain valid and reliable information can be found in Appendix II of the EQR Protocols.<sup>1</sup>

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<sup>1</sup> EQR Protocol: Appendix II: Sampling Approaches, Sept. 2012, DHHS, Centers for Medicare & Medicaid Services (CMS), OMB Approval No. 0938-0786

## IDENTIFICATION OF PLAN/PROJECT

MHP Name: **San Luis Obispo**

Project Title: **Integration of Mental Health and Substance Use Screening and Assessment** Check One: Clinical  Non-Clinical

Project Leader: **Greg Vickery, LMFT** Title: Division Manager Role: **QST Division Manager**

Start Date (MM/DD/YY): **10/13/2014**

Completion Date (MM/DD/YY): **12/7/2017** Projected Study Period (# of months): **NA**

Brief Description of PIP:  
*(Please include the GOAL of the PIP and what the PIP is attempting to accomplish.)*

The overall goals of the PIP evolved over time. Initially, we sought to improve accurate identification of COD and to provide “right size”/“no wrong door” services to consumers. During the last year, we implemented integrated screening to identify the most effective starting point for services. If proven successful, integrated screening will become the standard process for consumers entering services in all our adult services programs. Expected clinical outcomes included faster access to services and increased retention in services. We also hypothesized that walk in screenings would reduce wait time and fail to show rate (non-clinical).

## STEP 1: SELECT & DESCRIBE THE STUDY TOPIC

1. The PIP Study Topic selection narrative should include a description of stakeholders involved in developing and implementing the PIP. MHPs are encouraged to seek input from consumers and all stakeholders who are users of, or are concerned with specific areas of service.
- 2.

This is the final year of a multiyear clinical PIP. We focused on integrating screening and assessment for consumers with co-occurring mental health/substance use disorders. We documented the stakeholder input processes, problem definition, and early results in previous versions of the PIP Outline/Road Map, and are briefly summarizing here.

SLO community members, advocates and consumers have long held the belief that integrated co-occurring services are our optimal service delivery model. Feedback regarding the need to integrate screening, assessment and treatment has come to us from many community sources, including:

- MHSA stakeholders (especially the MHSA Advisory Committee)
- Grand Jury report (May, 2015)
- Consumer feedback from a survey completed by the MHP (November, 2014)
- Anecdotal feedback from consumers and family members, including at EQRO Focus Groups in 2015

SLOBH staff share this belief and have made the topic a priority over the years. PIP membership has evolved significantly, but has always included members of BH administration and line staff. During the past year, the PIP committee consisted of:

- Greg Vickery, LMFT; BH Quality Support Team Division Manager
- Judy Vick, LMFT; MH Adult Services Division Manager
- Star Graber, PhD, LMFT; Drug & Alcohol Services Division Manager
- Amanda Getten, LMFT; BH Managed Care Program Supervisor
- Jennifer Gustovson-Dufour, LMFT; Drug & Alcohol Services Program Supervisor
- Teresa Pemberton, LMFT; Forensics and Integrated Services Program Supervisor
- Rebecca McGarigle, LCSW; Adult Service Program Supervisor

The committee membership narrowed as we shifted from concept to cross training and developing tools for integrated screening and assessment.

### 3. Define the problem.

- The problem to be addressed should be clearly stated with narrative explanation including what brought the problem to the attention of the MHP.
  - What is the problem?
  - How did it come to your attention?
  - What data have you reviewed that suggests the issue is indeed a problem for the MHP? Describe any relevant benchmarks.
  - What literature and/or research have been reviewed that explain the issue's relevance to the MHP's consumers?

This is a multiyear PIP. We carried the Problem Definition forward from prior PIP Outlines, as the primary changes to the PIP are new interventions, data, and results.

#### **Problems:**

Co-occurring disorders (COD) are often under-identified, including at SLO Mental Health at the onset of the PIP. Contributing factors to the under identification of COD include training deficits, funding and systemic barriers. Anecdotally, at training early in the PIP, one MH staff member shared her mistaken belief that MHP staff, in order to prevent a service denial, were not to diagnose COD during intake. This and other more subtle biases likely reduce the accurate identification of COD. Effective treatment cannot occur without proper identification of presenting problems. As will be illustrated below, our baseline rate of diagnosis was lower than expected.

Even when correctly diagnosed, Mental Health and Substance Use Disorder services are provided without a high degree of integration and collaboration. The result is often difficulties with access and reduced efficacy of services. SAMHSA estimated that only 8.5% of young adults with Serious Mental Illness (SMI) and a Substance Use Disorder (SUD) received both MH and SUD services, while exhibiting significantly increased employment, residential stability and legal difficulties compared to cohorts without COD. (Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Surveys on Drug Use and Health (NSDUH), 2010 to 2011 (revised October, 2013.) Mental and physical healthcare costs are only part of the picture; costs in terms of law enforcement, jail and other indirect costs associated with less-than-optimal treatment are larger systems factors as well.

**Affected Population:**

Prevalence estimates of COD vary, depending on a number of factors, including the populations surveyed, whether ‘Any Mental Illness’ (AMI) or only ‘Serious Mental Illness’ (SMI) is used as an indicator, etc. For the purposes of our study, we will limit the study to those with SMI. Treatment literature thoroughly documents increased risk and poorer prognosis associated with COD. We detailed some of these factors in prior editions of the clinical PIP.

*The California Mental Health and Substance Use System Needs Assessment and Service Plan, Volume 2: Service Plan* (September 30, 2013) detail the efforts of work groups to identify the barriers to integrated services. Key barriers from this report that are frequently echoed in discussions in SLO include:

- Improved system performance will require systematic communication, handoffs, referral completion and cultural change
- Lack of shared awareness/understanding of Recovery, with different meanings for MH, SU
- Medical model vs. recovery model, and many other system language differences
- Fragmentation of communication in the overall health system, pervasive nature of silos
- Differences in mental health and substance use culture, leading to resistance to integration
- Differences in medical necessity criteria and documentation standards exacerbate silo effect
- Lack of shared mission/vision and lack of awareness of interdependence
- Inconsistent and conflicting mandates at national, state and local levels make integration more difficult
- Lack of clinical competence in integrated service models
- Shortage of workers, especially Psychiatrists trained in integrated services models
- Lack of specific benefits for people with co-occurring mental illness and SUD

**Data and Benchmarks:**

To establish a baseline for our study and to help us determine if a problem existed in our service delivery model, we examined the rate of COD in three main clusters of included MH diagnoses in adults at various service locations. The tables below summarize the data gleaned from the EHR for FY 2013-2014.

<b>Mental Health Outpatient</b>	<b>Mood and Anxiety Disorders</b>	<b>Psychotic Disorders</b>	<b>Personality Disorders</b>	<b>Total</b>
# clients with MH dx:	764	150	38	952
# clients with MH + SUD	134	27	13	174
Percentage with COD	17.54%	18.00%	34.21%	18.27%

While estimates of COD among clients with Severe Mental Illness (SMI) vary widely, the 2010 National Survey of Drug Use and Health (NSDUH) estimate that approximately 20 percent of adults with SMI have a COD. While that data is outdated, at the time we started the PIP it was relevant. At 18.27% for the key diagnostic categories selected, our MHP outpatient baseline was below the national average.

➤ The study topic narrative will address:

- What is the overarching goal of the PIP?
- How will the PIP be used to improve processes and outcomes of care provided by the MHP?
- How any proposed interventions are grounded in proven methods and critical to the study topic.

The goals of the PIP evolved over time. Initially, we sought to improve accurate identification of COD and to provide “right size”/“no wrong door” services to consumers from the start. During the last year, we implemented integrated screening to identify the most effective starting point for services. If proven successful, integrated walk in screening will become the standard process for consumers entering services in all our adult services programs. Expected clinical outcomes included faster access to services and increased retention in services. We also hypothesized that walk in screenings would reduce wait time and fail to show rate (nonclinical).

- The study topic narrative will clearly demonstrate:
  - How the identified study topic is relevant to the consumer population
  - How addressing the problem will impact a significant portion of MHP consumer population
  - How the interventions have the potential to impact the mental health, functional status, or satisfaction of consumers served.

We believe that improved screening and assessment will increase the chances of treatment success by allowing quicker identification of needs and access to appropriate types and levels of care. We cited literature that describes the potential of poorer outcomes for consumers and the scope of the problem. We believe that adult clients will receive improved care and remain engaged in treatment when we address all of their behavioral health needs from the onset of treatment.

**IMPORTANT NOTE:**

During the final year of the PIP, we shifted focus from clients with COD toward aligning our siloed systems of care. We brought Mental Health and Substance Use Disorder treatment staff and supervisors together to develop a common walk in screening tool. We cross-trained staff to use the other program’s outcome measure/level of care tools. We had SUD staff, who traditionally conducted walk-in services, train MH staff to do a similar process.

**STEP 2: DEFINE & INCLUDE THE STUDY QUESTION**

The study question must be stated in a clear, concise and answerable format. It should identify the focus of the PIP. The study question establishes a framework for the goals, measurement, and evaluation of the study.

As the PIP evolved over time, the study question changed. We asked the following questions:

**Study Question 1 (2015 and 2016):**

Will staff training increase accurate diagnosis and effective treatment for clients with co-occurring disorders?

**Study Question 2 (2017):**

Will integrated walk in screening improve access and retention for clients?

### STEP 3: IDENTIFY STUDY POPULATION

Clearly identify the consumer population included in the study. Include an explanation of how the study will address the entire consumer population, or a specific sample of that population. If the study pertains to an identified sector of the MHP consumer population, how inclusion of all members will occur is required. The documentation must include data on the MHP's enrolled consumers, as well as the number of consumers relevant to the study topic.

**Study Question 1:**

We collected baseline diagnosis data using a report from the MHP's electronic health record for all adult clients served in outpatient mental health clinic settings. We retested using the same population.

**Study Question 2:**

As stated above, we changed strategies in the final year of the PIP from a focus on clients with COD to aligning systems to study the resulting effect on client outcome (retention). Clients who participated in walk in appointments at SLO Adult Outpatient clinic from 5/26/17 through 9/30/17 were the study group (N = 102), without regard to diagnosis. Clients we scheduled at North County Adult outpatient clinic for assessment (business as usual) during the same period were the control group (N = 49). We wanted to control for attendance issues related to the season of the year, so we selected North County Adult clinic because it provides services for a similar sized population. Another option was to use a different period for SLO Adult clinic, but we felt that would introduce a variable that we could not control.

### STEP 4: SELECT & EXPLAIN THE STUDY INDICATORS

**Clinical Study Indicators:**

1. Rate of COD diagnosis (FY 2015-2016, repeated for open clients on 10/23/2017)
  - This indicator was selected to measure the effect of training on the diagnostic practices of MH staff
  - Data was collected using a report from the MHP's EHR
  - The numerator is the number of clients with a COD during the study period.
  - The denominator is the total number of clients assessed during the same period.
  - The baseline is the data previously reported from FY 2012-2013.

2. Adult Needs and Strengths Assessment (ANSA) and SUD diagnosis rate concordance **(Discontinued in 2017)**
  - The ANSA was selected for use by the MHP because the structure of the ANSA increases the likelihood of interrater reliability and because we were able to embed it into our assessments as an outcome measure. We believe that using the rating responses on this question will allow us to measure consistency between assessment data and diagnosis.
  - Data was collected using a report from the MHP's EHR
  - For the PIP, we evaluated the rate of concordance between clients rated as "moderate" or "severe" on the Substance Use scale and an SUD diagnosis.
  - The numerator is the number of clients with a ANSA SU rating of "moderate" or "severe" and a SUD diagnosis
  - The denominator is the number of clients with a ANSA SU rating of "moderate" or "severe"
  - The baseline is data from our FY 2012-2013 report
3. Retention rate (at 30 and 60 days post assessment) **(New measure 2017)**
  - We looked at client records in the EHR to determine the number and percentage of clients in the study and control groups who received outpatient services within 30 and 60 days of the assessment.
  - We hypothesize that retention is a reflection of engagement in treatment and predicts better outcome
4. Kept Assessment with therapist followed by assessment/medication support service with MD **(New measure 2017)**
  - We calculated the number and percentage of clients who kept an assessment service and then had an appointment with an MD
  - We wanted to determine if our study group followed up with other services more readily
  - We hypothesized that engagement in other services such as medication support predicts better outcome
5. We compared the number of days from the request for services to the date of service by MD **(New measure 2017)**
  - We tracked the number of days from request for service to first MD service
  - While not strictly a clinical measure, we wanted to test our theory that more rapid engagement was associated with retention, which in turn would predict improved outcome

#### **Nonclinical Study Indicators**

6. Wait for first contact **(New measure 2017)**
  - While not a clinical outcome, we wanted to study the effect that walk ins have on wait time
7. FTS **(New measure 2017)**
  - Again, while not a clinical measure, we added this indicator because we wanted to test whether walk in appointments reduced FTS rate. Clearly, services are only effective if a client attends!

#	Describe Performance Indicator	Numerator	Denominator	Baseline for Performance Indicator (number)	Goal (number)
1	COD diagnosis rate	# adult clients with MI and SUD dx	# adult clients with MI dx	18.27%	25%
2	ANSA/diagnosis concordance rate (Discontinued in 2017)	# adult clients with ANSA SU = 3, 4 and SUD dx	# adult clients with ANSA SU = 3, 4	92.68%	100%
3	Retention rates in service after 30 and 60 days (New measure 2017)	# adult clients with ongoing services recorded within 30 and 60 days (assessed in North County clinic, June to Sept. 2017)	# adult clients assessed in North County clinic, June to Sept. 2017	30 Days: 20/49 = 40.81%%  60 Days: 4/49 = 8.16%	30 Days: 60%  60 Days: 30%
4	Assessment + MD service (New measure 2017)	# clients who had an MD service	# clients who kept an assessment	Control Group: 17/49 = 53.13%	65%
5	Wait from request for services to MD assessment (New measure 2017)	# days from call in to MD service for clients who saw an MD (study group)	# days from call in to MD service for clients who saw an MD (control group)	Control Group: 62.26 days	28 days
6	Wait time for services (New measure 2017)	Wait time for adult clients served via walk in at SLO Adult clinic, June to Sept. 2017	Wait time for adult clients served at North County clinic, June to Sept. 2017	Control Group: 18.83 days	8 days
7	Kept assessment rate (New measure 2017)	# adult clients with a kept assessment service	# adults scheduled for an assessment	Control Group: 32/49 = 65.31%	75%

#### STEP 5: SAMPLING METHODS (IF APPLICABLE)

Not applicable. We did not use sampling. Control and study populations were all callers to Central Access Line scheduled at our two largest adult clinic between 5/26/17 and 9/30/17.

#### STEP 6: DEVELOP STUDY DESIGN & DATA COLLECTION PROCEDURES

A study design must be developed that will show the impact of all planned interventions. Include the information describing the following:

- Describe the data to be collected.
- Describe the methods of data collection and sources of the data. How do these factors produce valid and reliable data representing the entire consumer population to which the study indicators apply?
- Describe the instruments for data collection, and how they provided for consistent and accurate data collection over time.

- Describe the prospective data analysis plan. Include contingencies for untoward results.
  - Identify the staff that will be collecting data, and their qualifications. Include contractual, temporary, or consultative personnel.
1. Rate of COD diagnosis (FY 2015-2016, repeated for open clients on 10/23/2017)
    - Data was collected using a report from the MHP's EHR based on diagnostic information entered into the Diagnostic Review  
Data is based on application of DSM criteria and is considered valid
    - Baseline data was similarly collected based on the same report from the EHR
  2. Adult Needs and Strengths Assessment (ANSA) and SUD diagnosis rate concordance
    - The ANSA was selected for use by the MHP because it increases the likelihood of interrater reliability and because we were able to embed it into our assessments as an outcome measure.
    - Data was collected using a report from the MHP's EHR
    - For the PIP, we evaluated the rate of concordance between clients rated as "moderate" or "severe" on the Substance Use scale and an SUD diagnosis.
    - The baseline is data from our 2012-2013 report
    - We did not repeat this measure in successive years
  3. Integrated screening
    - We developed a BH Integrated Screening tool (BHIS) that incorporates ANSA rating scales, questions from the Addiction Severity Index (ASI) and the level of care criteria from the American Society of Addiction Medicine (ASAM)
    - We cross-trained staff in ASAM and ANSA
    - We selected SLO Adult Outpatient Clinic as the study site. Clients who participated in walk in appointments at SLO Adult Outpatient clinic from 5/26/17 through 9/30/17 were the study group (N = 102), without regard to diagnosis.
    - Clients we scheduled at North County Adult outpatient clinic for assessment (business as usual) during the same period were the control group (N = 49). We wanted to control for attendance issues related to the season of the year, so we selected North County Adult clinic because it provides services for a similar sized population. Another option was to use a different period for SLO Adult clinic, but we felt that would introduce a seasonal attendance variable to our study.
  4. Retention rate at 30 and 60 days from walk in versus scheduled assessment
    - We compared retention rates in service for an identical period at two of our clinics. North County clinic utilizes scheduled assessments and SLO Adult clinic was our walk in pilot site. We collected service data from the EHR by report and evaluated it manually.
  5. Kept Assessment with therapist followed by assessment/medication support service with MD
    - We calculated the number and percentage of clients based on clinical record review
  6. We compared the number of days from the request for services to the date of service by MD
    - Collected from the EHR and calculated in Excel

7. Wait for first contact

- Collected from EHR report and calculated in Excel

8. FTS

- Collected from EHR

Data analysis:

Reports were completed to collect data and results were analyzed by Greg Vickery, LMFT, QST Division Manager. We previously reported significance data for Indicators 1 and 2, so these measures were not repeated in 2017. Key issues included differences in size between the control and study groups in Indicators 3-7. We discontinued Indicator 2 because the initial results were positive enough that we did not think ongoing training would have a significant effect.

**STEP 7: DEVELOP & DESCRIBE STUDY INTERVENTIONS**

The MHP must develop reasonable interventions that address causes/barriers identified through data analysis and QI processes. Summarize interventions in a table that:

- Describes each intervention;
- Identifies the specific barriers/causes each intervention is designed to address;
- Identifies the corresponding indicator that measures the performance of the intervention; and
- Maintains the integrity/measurability of each intervention.
- Describe how the interventions will impact the indicators and help to answer the study question.

Number of Intervention	List each Specific Intervention	Barriers/Causes Intervention Designed to Target	Corresponding Indicator	Date Applied
1	Train staff in the proper coding of DSM 5 ICD 10 diagnosis codes	Will ensure consistent application of criteria	1,2	7/23/2015 and 7/24/2015
2	Train staff regarding medical necessity and co-occurring disorders	Will increase likelihood that COD are coded	1,2	January & February, 2015 April & May, 2016
3	Provide ANSA training for Drug & Alcohol Assessment Coordinators	Will ensure accurate ANSA rating in screening tool	1,2	11/20/15 through 6/23/17 (repeated as needed when new staff were hired)
4	Provide ASAM training for Managed Care Assessors	Will ensure accurate ASAM rating in screening tool	1,2	June 12, 2015 (David Mee-Lee, MD) June, 2016 and ongoing
5	Create and implement an Integrated Screening Tool	Siloed screening/assessment that reduces likelihood of integration	3-7	Completed and piloted 10/24/2016; revised and implemented
6	Implement Integrated Walk In Screening at SLO Adult MH clinic	Siloed screening/assessment that reduces likelihood of integration	3-7	Revised and implemented on 5/26/2017

## STEP 8: DATA ANALYSIS & INTERPRETATION OF STUDY RESULTS

Data analysis begins with examining the performance of each intervention, based on the defined indicators. (For detailed guidance, follow the criteria outlined in Protocol 3, Activity 1, Step 8.)

- Describe the data analysis process. Did it occur as planned?
- Did results trigger modifications to the project or its interventions?
- Did analysis trigger any follow-up activities?
- Review results in adherence to the statistical analysis techniques defined in the data analysis plan.
- Does the analysis identify factors that influence the comparability of initial and repeat measurements?

Performance Indicator	Date of Baseline Measure	Baseline Measurement	Goal for % Improvement	Intervention Applied & Date	Date of Re-measurement	Results (numerator/denominator)	% Improvement Achieved
1 COD diagnosis rate	10/2013	174/952 = 18.27%	33.3%	1/2015 and following	10/20/2016 10/23/17 (open clients only)	640/2338 = 27.37% 413/1255 = 32.9%	49.8% F = significant @ .05
2 ANSA/diagnosis concordance rate (Discontinued)	10/2013	38/41 = 92.68%	7%	1/2015 and following	10/20/2016	266/307 = 86.64%	- 6.97%
3 Retention rates in service after 30 days (New measure 2017)	10/27/17	20/49 = 40.81%	25%	5/26/17 to 9/30/17	10/27/17	51/102 = 50%	18.38% T = significant @ .05
3 Retention rates in service after 60 days (New measure 2017)	10/27/17	4/49 = 8.16%	25%	5/26/17 to 9/30/17	10/27/17	39/102 = 38.23%	78.65% T = significant @ .05
4 Assessment + MD service (New measure 2017)	10/27/17	17/32 = 53.13%	25%	5/26/17 to 9/30/17	10/27/17	43/73= 58.90%	10.86%
5 Wait from request for services to MD assessment (New measure 2017)	10/27/17	62.26 days (mean)	50%	5/26/17 to 9/30/17	10/27/17	29 days (mean)	114.69% T = NOT significant @ .05, but is at .09
6 Wait time for services (New measure 2017)	10/27/17	18.83 days (mean)	25%	5/26/17 to 9/30/17	10/27/17	4.87 days (mean)	286.65% T = significant @ .05
7 Kept assessment rate (New measure 2017)	10/27/17	32/49 = 65.31%	50%	5/26/17 to 9/30/17	10/27/17	73/102 = 71.57%	8.74% T = NOT significant

Performance Indicator 1:

Data demonstrates a 49.8% increase in co-occurring diagnoses in Mental Health clients in FY 15-16 compared to the FY 12-13 baseline at the SLO Adult clinic. The improvement surpassed our goal and was statistically significant at  $\alpha$  0.05. We recalculated the data for open clients at all sites on 10/23/2017 to get a sense about stability of the behavior change. Of the 1255 clients open to adult mental health programs, 32.9% carried a COD diagnosis. We did not calculate significance because we measured a different group than the control, but the percentage is an increase over a previously significant change. We believe the results represent a real change in diagnostic practices by our clinical staff in response to training interventions.

Performance Indicator 2:

Data showed a slight decrease in concordance between ANSA rating and diagnosis at re-measurement from baseline. This difference is not significant at  $\alpha$  0.05. We looked closer at the specific coding issues and identified themes. We updated our ANSA training to clarify the use of the rating scale. We did not repeat this measure, but did increase staff training and published an Assessment Practice Guideline to reinforce correct use of the ANSA scale.

Performance Indicator 3:

Retention rates at 30 and 60 days demonstrated significant improvement at  $\alpha$  0.05 in the study group. As could be expected, the differences were more dramatic at 60 days. One possible issue with the calculation of significance could be that we used binary values for yes and no. However, the T test normally accounts for this, so the overestimation of significance is not likely to be large. It is also theoretically possible that there are other differences between the two clinics, but each operate using the same practice models other than our study intervention.

Performance Indicator 4:

A modest percentage increase in clients with an MD service occurred in the study group. We did not analyze variance for significance because we believe that over time the difference would be so strongly affected by attrition in the control group that a valid comparison could not be made.

Performance Indicator 5:

Wait time from request for service to MD appointment was reduced in the study group by 114.69%, but the difference was not significant at the  $\alpha$  0.05 we established (it was significant at  $\alpha$  .09, however).

Performance Indicator 6:

The walk in intervention reduced wait times significantly at  $\alpha$  0.05.

Performance Indicator 7:

Each time we study first visit attendance we assume that shorter waits would reduce FTS, but the data hasn't supported that common sense notion to date. These findings show that attendance at the first session was no more likely in the study group than the control group.

## STEP 9: ASSESS WHETHER IMPROVEMENT IS “REAL” IMPROVEMENT

We are very pleased with the way the study went and the results it produced. We consider it a success. After feedback from our EQRO review team, we will retire it. However, if we were to repeat this study we would make several changes. First, we would use the same site as the control and study site. Second, while we collected data about the types of services clients in both groups received after assessment, we only evaluated differences between the two groups in regards to one type of service – med support by an MD. We did not evaluate whether other services, i.e., therapy or rehab, were associated with better retention, because we assumed that they would be equivalent between the two groups. Finally, we did not match the two groups for presenting problems or diagnosis, which might reveal other differences between the two groups.

The results discussed above for Performance Indicators 1 appears to have a high degree of face validity. The change in staff behavior in Performance Indicator 1 is highly likely to be “real” improvement given the size of the sample and that the results are consistent with data reported by such big studies as the NSDUH study cited in the introduction. Subsequent re-test of all open clients on 10/23/2017 showed an even greater improvement and further support our assertion that training improved diagnosis accuracy; further, the change was sustained over time.

Similarly, results for Performance Indicators 3-6 appear to be robust, “real” changes that have ample face validity – it makes good sense that walk in would result in better retention. The measures showed solid statistical significance, too. Better retention and improved access to services are highly likely to be associated with improved client outcomes. The intervention was successful and the clinical PIP will be retired.

Based on our results we will roll out integrated walk in assessments at all our adult MH clinics over the next year. This will better align our processes with our SUD programs and will position us for a successful launch of our DMC-ODS waiver services.