

Fall 12-12-2014

# An Evaluation of Mental Health and Methadone: Anxiety, Depression, and Drug Use

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## Recommended Citation

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Fieldwork Project Paper

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### **Executive Summary**

As a part of the Masters of Science in Behavioral Health field placement, an evaluation was conducted of the integrated treatment plan in mental health and substance abuse at Bay Area Addiction Research and Treatment (BAART) programs. The goal of the BAART programs are to provide comprehensive mental health and substance abuse outpatient recovery services, as well as on-site primary health care services for substance users, mainly opioid use. There is a link between increased substance abuse and increased rates of depression and anxiety. These disorders use the same neuro chemical pathway and are highly codependent upon one another. Because of this there is a need to treat both the mental health and substance abuse problem in parallel for best results.

The researcher examined the interaction of the substance abuse problem and mental health concerns to evaluate the effectiveness of treatment in the areas concerning anxiety, depression, and substance use. The evaluation revealed that there was not a statistically significant decrease in any of the variables. Based upon the results, recommendations were made to improve patient treatment. The recommendations consisted of using motivational interviewing to assess what part of the change process the client was in in order to provide the best recommendation for potential treatment options. This included adding medication therapy for low functioning clients with severe symptoms of anxiety or depression to improve overall outcomes. The paper also looked into more holistic treatments for clients who are more fragile with less severe psychiatric symptoms and would prefer to eliminate any risk of relapse. The goal of the evaluation is to help BAART provide

more patient centered care to each of their clients that will lead to long lasting change. The study will aid in the improvement of the overall integrated program at BAART Programs in San Francisco's Tenderloin District.

### **Agency background**

Traditionally, harm reduction has focused exclusively on the substance abuse disorders and the mental health component has been treated separately. In San Francisco's Department of Public Health, the Community Substance Abuse service provided drug treatment and the Community Mental Health Services carried out mental health treatment. Data analysis revealed that many of the same patients were utilizing both services. Consequently, San Francisco combined the services from both departments to create the Community Behavioral Health Services (CBHS). CBHS integrates care for individuals with comorbidities, dealing with substance abuse addiction and mental health concerns. Integrated treatment utilizes a harm reduction model to coordinate care so that the same team of clinicians can address mental health and substance abuse issues at the same time. Thus, treatment directly impacts the interaction of the substance abuse and mental health issues. Integrated care facilitates an understanding of the interaction between the two disorders, the treatment is more collaborative, and leads to better patient outcome.

Bay Area Addiction Research and treatment (BAART) utilizes this integrated care model in a medication assistance withdrawal program for opiate addiction in San Francisco's Tenderloin District. BAART began offering mental health services to its patients who suffer from substance abuse addiction. The company now offers psychiatric services, medication evaluation, medication management, individual and

group therapy, and crisis intervention. They are committed to providing services over a long period of time. They do not impose artificial time constraints – this is based on the knowledge that mental illnesses are long term or a lifetime. BAART measures success of the treatment based upon how long the individual stays on methadone.

Mental health services will be provided through group or individual therapy along with pharmacological therapies. These interventions are designed to provide a reduction in mental disability and improvement in function in matters of independent living and enhanced self-sufficiency. These goals will be accomplished through providing assessment that will include a clinical analysis of patient history and current mental health status. The assessment will also provide cultural implications, testing procedures and a diagnosis. BCH will also provide group and individual therapy that will mostly focus on reducing the symptoms as a means of improving functional impairments. Therapy will also incorporate any other individual that is important to the client's treatment plan such as family so they can serve as a support system for the client' long-term success.

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With prescription drug use on the rise, medication-assisted withdrawal such as methadone maintenance is a popular approach to treat opioid- addiction. However, the number of individuals in California receiving treatment in narcotics treatment programs has been declining steadily (Urada et al., 2011). In 1997, the National Consensus Development Panel of Effective Medical Treatment of Opioid Addiction stated that narcotics replacement treatment is the most effective way of treating opioid dependence (NIH, 1997). With such support methadone has become

the oldest, most widely used, and most regulated medication prescribed for opioid addiction. Through measuring self-reports, narcotics replacement therapy was concluded as being more effective than non-pharmacological approaches in retaining patients and suppressing heroin use. It has shown to have a high retention rate, and is associated with fewer relapses (Jones et al., 2012). Narcotics therapy poised with harm reduction programming is another particularly promising approach that is typically attended by high-risk underserved populations and their support networks. Key components of a harm reduction program focus on improving nutrition, decreasing smoking, decreasing alcohol and drug use, encouraging physical activity, and securing social and community support. Furthermore, it has been shown to prevent drug related disabilities (Jones et al., 2012).

### **Needs Assessment/Problem Statement**

A large part of BAART clients are prescription drug users, whose numbers have been on the rise. There is a tremendous rise in legal prescription drug use, which has also brought about illegal prescription drug use especially opioid drug use. In 2010, 2 million people used prescription painkillers for non-medical reasons for the first time within the last year (SAMHSA, 2010). Prescription painkillers bind to the pain receptors in the brain and provide a euphoric effect that can also cause a decrease in breathing rates with continuous use; ever-increasing amounts of the drug are needed to achieve the same euphoric feelings. Three out of four prescription drug overdoses are due to opioid prescription. In 2008, there were 14,800 cases of prescription opioids overdoses, more than cocaine and heroin

combined (CDC, 2008). Misuse of these prescription painkillers was the cause of 475,000 ER cases in 2009, which has doubled in about five years (SAMHSA, 2010). Over the last decade sales of prescription opioids in the US have tripled (Guglema, H. & Nelson, L., 2012). In 2010, 33 million people reported using prescription opioids like hydrocodone, the most commonly prescribed form of prescription opioid for non-medical use. For example, hydrocodone/acetaminophen is prescribed 100 million times more than any other medications (Back, Payne, Simpson, Brady, 2010).

It was also discovered by Goldner E.M., Lusted A., Roerecke M., Rehm J., Fischer B. (2013) that individuals who are non-medical prescription opioid users and those with mental health problems share the presence of chronic pain. Pain control is one of the primary reasons individuals begin to have problems with excessive and misuse of opioids. Along with that persistent pain is also a key factor in the development of depressive symptoms and other mental health problems (Goldner et al., 2013). This can lead to more intense pain symptoms through neuromechanical factors that then create a positive feedback loop, which leads down the road of addiction.

One of the reasons for the drastic rise in prescription drug use is the ease of access in obtaining the drug. In her study, Hamilton (2012) points out that the majority of individuals who reported using drugs for non-medical purposes (55.3%) reported they acquired the drug at no cost from a friend or relative who had obtained the drug from a doctor. A smaller percentage (17.6%) reported they had obtained the opioid from a doctor's prescription. A relatively small percentage



(4.8%) reported purchasing their prescription opioids from a dealer, and a relatively small number of people (0.4%) reported purchasing opioids online (Hamilton, 2012). Prescription drugs are easily accessible and have fewer stigmas associated with them because a medical professional often prescribes them.

Psychological disorders such as anxiety and depression are very common for those with pain and addiction both have implications in opiate abuse (Manchikanti, Giordano, Boswell, Fellows, Manchukonda, and Pampati, 2007). Studies examining the link between non-medical prescription opioid use and mental health comorbidities found a high association between the two phenomena (Amari, Rehm, Goldner & Fisher, 2011). A systematic review found that there is a 43% prevalence of individuals with co-occurring mental health disorders in the substance abuse population. This rate is three to four times higher than the rate of psychiatric disorders among the normal population, which ranges from 10-17%. The rate of depression among substance abuse users is approximately 27%, while the rate of depression among the normal population ranges from 2-5% (Manchikanti et al., 2007). Depression among substance users has been associated with poorer treatment outcomes, increased risk of suicide, and a worse prognosis. Along with that the rate of anxiety among drug users is 29% while among the normal population it averages about 6-10% (Manchikanti et al., 2007). Not only are rates for psychiatric illness higher in the substance abuse population when compared to the normal population; these rates are even higher for substance users in drug treatment programs, by a third or more, compared to substance users not in treatment. Higher levels of comorbidities among the treatment population could be

linked to more severe disease symptoms and/or problems, thus they are more likely to end up in treatment. While the rate of psychiatric disorders varies among different studies depending on the study design and it tends to be more prevalent in the substance use populations.

Psychological distress can lead someone to abuse prescription drugs and often result in someone using multiple agents to escape their distress (Matteliano, 2014). There are three explanatory models, which discuss the link between non-medical prescription opioid use and psychiatric disorders. The first of these is the self-medication model which states that individuals self-medicate to relieve psychiatric symptoms or control distressing emotions through drug use. Next, the prescription model theorizes that substance abuse may induce psychiatric symptoms as they interact with similar parts of brain functioning and may modify neurotransmitter functioning. This could also be induced through neural plasticity, activation of dormant genes, or through psychosocial factors. Lastly the shared liability model proposes that psychiatric disorders and substance abuse operate through similar mechanism including genetics, neurobiological, and psychosocial pathways. None of these models are considered to be mutually exclusive and may operate synergistically. For example, someone who is self- medicating may be more vulnerable to addiction due to genetics and thus both can lead to the individual developing an issue with substance abuse and a psychiatric disorder (Goldner et al., 2013).

Nicolson et. al., (2009) stated that patients with depression are more likely to report pain than those without depression. They are also more likely to report more

intense pain for a physical problem, to have unexplained pain, and worse outcomes despite treatment. For patients with comorbid pain and depression, worsening pain tends to increase depressive symptoms and vice versa (Nicolson et al., 2009). This may result because depression and pain are neutrally linked through brain structures that are involved with emotions such as the amygdala and the hypothalamus. Pain and depression also share neurological pathways that use serotonin and norepinephrine in depression and modulating pain signals. Much like depression anxiety is closely linked to pain Nicolson et al., (2009) also reported that patients experiencing anxiety and pain such as headaches, and have headaches that are tougher to treat. They address that anxiety and pain are interlinked and both much be treated in parallel to obtain optimal results.

By June 1<sup>st</sup> recommendations based on the results from an evaluation followed by a literature review of best practices will be made for BAART programs in the Tenderloin District of San Francisco to improve services. Some of the potential obstacles include not having enough funding to hire a new psychiatrist on staff. Another barrier is offering patients anxiety medication. This is because when anxiety medication is given with methadone it tends to produce a euphoric effect similar to that of opioid use. As of right now, the patients with anxiety are given Selective Serotonin Reuptake Inhibitors (SSRI's) because they are a safer option and there is little risk for overdose. While medication maintenance is one of the most reliable forms of therapy, since many of the patients are homeless or transient they may be less medication compliant, which could affect treatment goals and outcomes. However because the services the patients are utilizing daily are in house they are

able to take their psych meds at the same time as their methadone thereby reducing the chances of patients not being medication compliant. While it is fairly easy to determine whether medication is distributed to the patients it is tougher to know if counselors and therapists will follow the recommendations as each has a different style of therapy. Many of the clients are assigned student interns who rotate yearly making it difficult to provide continuous quality care to clients. All of these factors could possibly hinder quality care to clients if they are not addressed in a timely and appropriate manner.

### **Target Population**

BAART has 22 clinics throughout the state, however, this paper's target population is homeless or marginally housed residents in the San Francisco's Tenderloin, Market Street, and neighboring downtown areas. These residents are culturally and ethnically diverse and include approximately 50% Caucasian, 25% African American, 9% Latino, 2% Southeast Asian and others minority populations (BAART Community Healthcare, 2011). Behavioral Community Health Services aims to provide culturally competent and linguistically appropriate services to their clients. Approximately 58% of the population is male and 42% is female. Of the target population about 15% of them identify as Lesbian, Gay, Bi Sexual, Transgender, Queer, and Questioning (LGBTQQ). The majority of the population is between the aged of 25-60 with approximately 10% of the target population is 18-25 and another 10% is 61 and over (BAART Community Healthcare, 2011). BCH operates a program where recently released inmates are referred directly to

BCH/BAART. BCH will also reach out to incarcerated individuals being released from the San Francisco County Jails to provide jail based aftercare services.

### **Goals and Objectives**

Goal: To reduce the number of individuals reporting symptoms of depression and Anxiety

Objectives:

- Increase the number of patients who are compliant with their psychiatric medication from 20% to 50% through follow-up phone calls and reminders by June, 2015.
- Increase staff training from once a month to twice a month to identify individuals who are good candidates for psychiatric medication by September 2014.
- Establish a follow up protocol for patients who are coming out of the hospital and identify the reason for their visit and future precautions to avoid re-admittance by September 2014 to decrease hospital visits from 2% to .05%.

Goal: Reduce the number of positive urinary drug screens for all drugs

Objectives

- Train counselors to practice motivational interviewing skills in order to provide more client centered treatment to decrease drug use from 3.2 positive urinary drug screens to 2.8 by June 2015.
- Train counselors to have a harm reduction viewpoint vs. an abstinence viewpoint towards drug use in order to increase retention and decrease drug use from 3.2 to 2.8 by June 2015.

## **Program Evaluation**

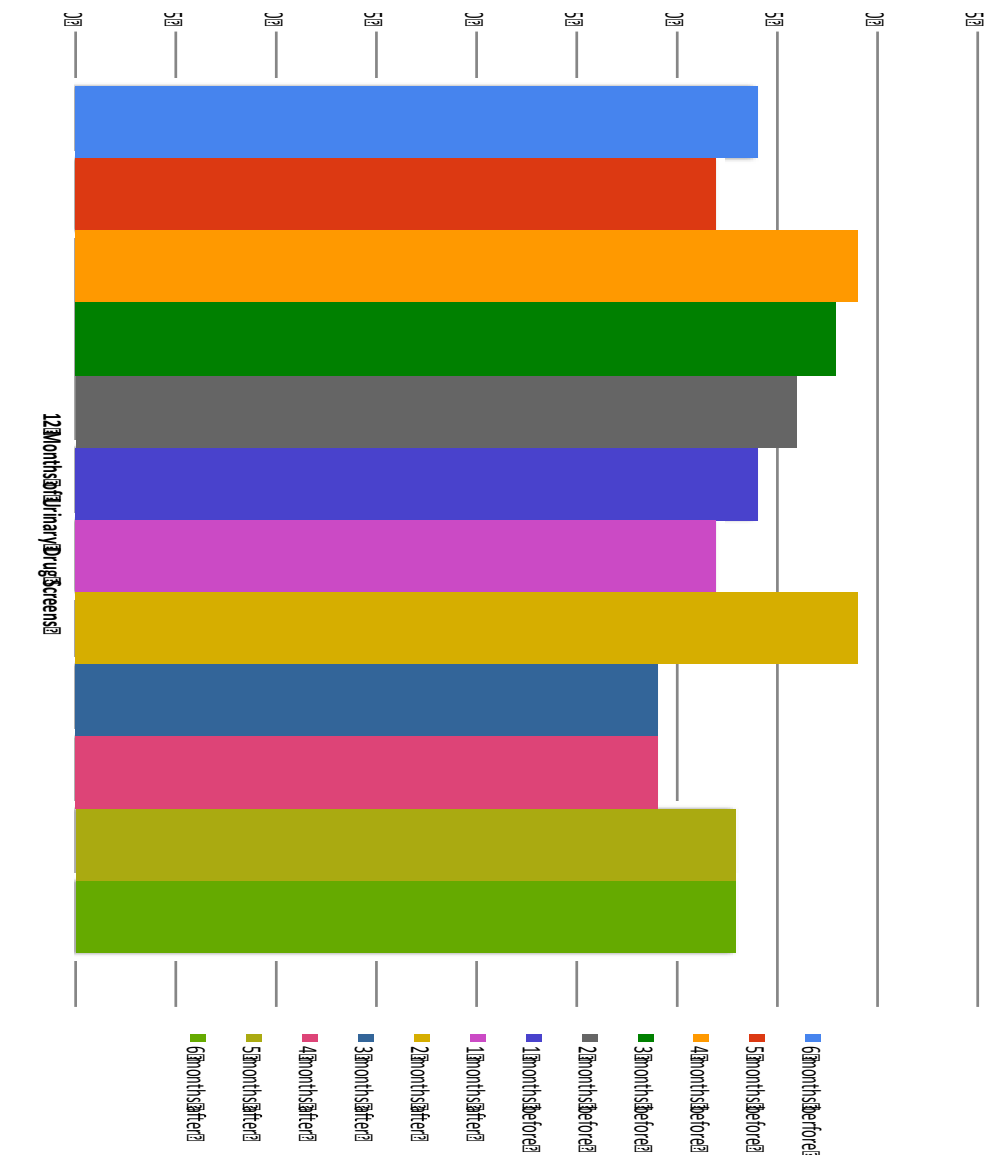
The program was established in 2010 and the author is conducting an evaluation of the integrated mental health program to see how successful the program has been in meeting its goals and objectives. The study will aid in the improvement of the overall integrated program at BAART Programs in San Francisco. For this study/evaluation the participants included 61 Methadone Maintenance Treatment (MMT) patients enrolled in the integrated mental health and MMT program at BAART Programs at the Turk and Market Street Clinics. The current analysis includes patients who have been enrolled in MMT for at least one year and who had been in the mental health program for at least six months. The evaluation will be done through a retrospective chart review to collect information on four clinical outcomes including Urinary Drug Screens (UDS), feelings of depression and anxiety.

Urine drug screen data was extracted from the patient's electronic medical records for a period of six months before and six months after their admittance into the mental health program. Patients give a random drug sample each month and positive UDS are recorded into the database, this includes various opioids and non-opioids on a 9-line item scale. These measures already existed in BAART's database and is a critical part of their treatment and assessment process. To measure the rates of depression and anxiety among the BAART population, the Addiction Severity Index (ASI) was used. The ASI is a self reported assessment that is conducted annually with the client and their counselor. The following two questions were used in the analysis ('Experiences serious depression- sadness hopelessness,

loss of interest, difficulty with daily function? 'and 'Experienced serious anxiety/tension, uptight, unreasonably worried, inability to feel relaxed?'). Items are rated on a four-point scale (0 - Not at all; 1 - Slightly; 2 - Moderately; 3 - Considerably; 4 - Extremely). Client's answers to these questions pre and post entrance into the mental health program were averaged and used in analysis of the effectiveness of the integrated treatment services.

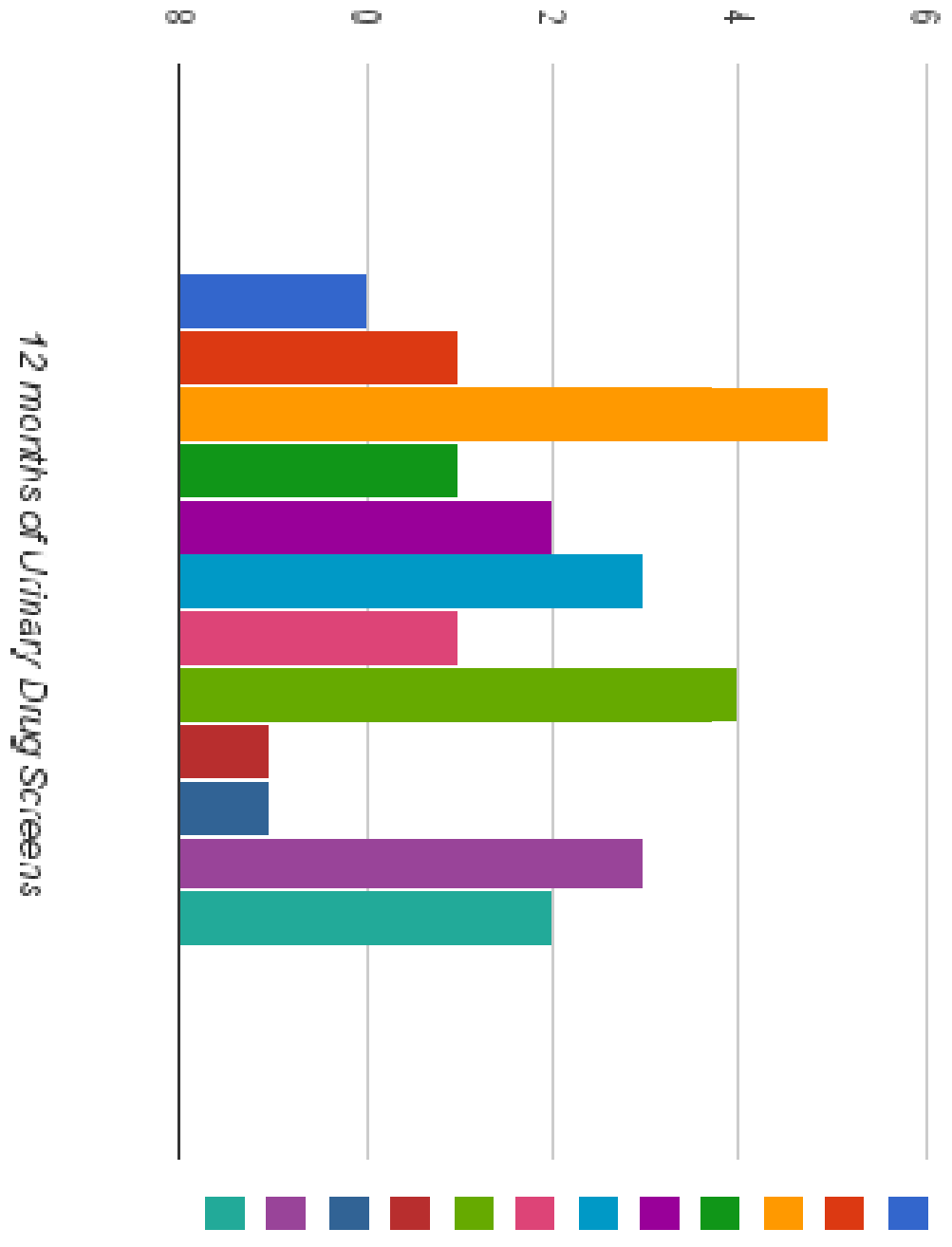
UDS data is extracted from the patient's electronic medical record; the average positive number of urinary drug screens before starting the mental health program is 3.49 and six months after the individual has been enrolled the number has gone down to 3.2. While the graph represents a longitude and a cross sectional review one can clearly see that there is no noticeable pattern of decreased drug use among the clients. This graph showed that there was not a significant change in the decrease of urinary drug screens before and after entrance into the mental health program at BAART. The second graph attempts to analyze just the use of opioids six months pre and most entrance into the mental health program. Going into the evaluation it was believed that this graph would show a more significant decline since methadone is primarily used to treat opioid addiction. However, as one can tell from the second graph no significant patter can be seen to conclude that the treatment had any effect on the use of opioids throughout the twelve- month observation period.

### Urinary Tract Infections and their Effect on Mental Health Program





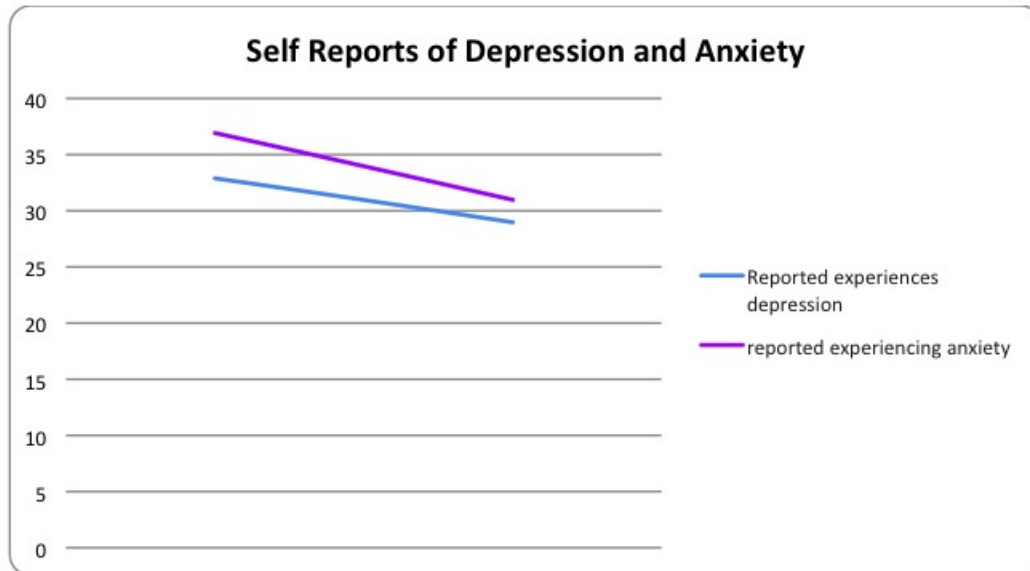
# Opioid Drug Screens Before and After Entrance Into the Mental Health Program



To measure the rates of depression and anxiety among the BAART population, the Addiction Severity Index (ASI) was used. The ASI is a self-reported assessment that is conducted annually with the client and their counselor. There are 14 items in this scale and the following 2 items in the analysis (Experienced serious

depression-sadness, hopelessness, loss of interest, difficulty with daily functions?) to which 33 (54%) patients responded “yes” and 22 (36%) of the patients responded “no” before entrance into the integrated mental health program. After being in the mental health program for a period of six months “29” (47.5%) participants reported “yes” to experiencing depression while 23 (37.7%) said “no” they did not experience symptoms of depression. To summarize the percentage of client who reported experiencing symptoms of depression went from 54% to 47.5%. A Chi Square analysis revealed that there was not a significant decrease in the pre and post assessment responses.

In the same survey patients were asked if they experienced symptoms of anxiety (Experienced serious anxiety/tension, uptight, unreasonably worried?). Out of 37 participants reported “yes” too experiencing symptoms of anxiety while 18 program participants said “no” to having symptoms of anxiety. Six months after their entrance into the integrated mental health program at BAART 31 clients said “yes” to having anxiety concerns while 21 reported “no” to experiencing any problems with anxiety. Another Chi Square analysis revealed that these results were not statically significant in reduction of symptoms of anxiety six months pre and post entrance into the mental health program.



### Recommendations for Practice

All Patients come with different strengths and weaknesses, which play a large role in the treatment and recovery process. Along with that, patients are at different levels of the treatment and recovery process when they come in, which can make it challenging for counselors and practitioners. There is no one answer or solution to patient's problems. A good way for counselors to assess what stage of change a patient is in is to use motivational interviewing upon first meeting a patient.

While the sample size for my evaluation was fairly small and may have contributed to the lack of data when assessing the significance of the results, Ling W., Hillhouse M., Ang A., Jenkins J. & Fahey J. (2013), reported that it is very difficult

to show any added benefits of behavioral treatment with maintenance treatment. This lack of change may have been attributed to the fact that, the clients in BAART's Tenderloin clinics are significantly low functioning in that they are unable to hold down a regular job, pay monthly rent and have overall low levels of social productivity. In their article Wusthoff and her colleagues (2014) suggest that cognitive-behavioral therapy treatments are effective for higher functioning individuals and not as effective for lower functioning adults with psychiatric and substance abuse problems. These findings coupled with the results of the evaluation, which indicate that there was not a statistically significant decrease in the rate of anxiety and depression among BAART's population, call for a more reliable form of treatment.

Ling et al., (2013) also cited that patient's beliefs about what is most important for their recovery was a critical part of success in client's treatment. While substance users are often marginalized in society and not trusted to make appropriate decisions. In her study 63% of patients reported more faith in pharmacological therapy to increase treatment satisfaction and positive outcomes (Ling et al., 2013). Client's beliefs coincide with the research from Harts I., Bramness J. G., Skurtveit S., (2011) article which reported that pharmacotherapy with buprenorphine is effective in reducing drug use and increasing retention. They also concluded that drug therapy for methadone maintenance patients with depression and anxiety is in line with recommendations for use. SSRI's are the drug of choice as they have fewer side effects when compared to older antidepressants (Harts I., Bramness J. G., Skurtveit S., 2011). Adding pharmacological therapy with

methadone maintenance for some client's treatment modalities is a viable option available within the context of BAART's services as BAART has begun to offer primary health care services for their clients. Many of these patients come to BAART on a daily basis to receive their daily dose of methadone and adding one additional treatment that can be taken on the spot should be fairly easy for staff and clients.

However there are barriers when using medication to treat psychiatric symptoms in substance abusers. For example, Goldner E.M., Lusted A., Roerecke M., Rehm J., Fischer B. (2013), state that patients receiving concurrent psychiatric drugs such as antidepressants require monitoring for potential drug interactions. This is especially true for anti-anxiety drugs. This leads to a greater need for a psychiatrist and nurse practitioner who can closely monitor for such harmful events. An additional concern is that individuals who make up a significant part of BAART's Tenderloin clientele are homeless and/or transient and this population has also been shown to be less medication compliant. However since most of the services are in house, this is a one-stop shop for clients, minimizing these risks.

While some clients might not show up to take their medication, others might opt out of taking medication completely. Some clients who are in a very fragile state with their substance abuse may choose to forgo medication treatment for their psychiatric symptoms. Some anxiety medications have been known to cause a euphoric effect, the same as opioid abuse, when used in conjunction with methadone. As such not every patient with anxiety or depressive symptoms is a good candidate for pharmacological therapy. It is necessary for counselors,

therapists, psychiatrists, and nurse practitioners to have the proper training in order to accurately identify patients who would be good candidates. Along with training for identifying proper candidates for psychopharmacological therapy counselors should also receive training on various treatment modalities.

In addition to having a harm reduction program BAART counselors can show clients alternative models when dealing with pain management depending on the best fit for the client. One of the techniques involves biofeedback has helped patients manage their anxiety and may also be helpful in pain management. Biofeedback involves tracking ones hart rate, blood pressure and other measurements for continuous feedback regarding ones psychological state. Through this gained knowledge the hope is that the patient will learn to modify that state to some degree (Nicolson S.E., Caplan J.P., Williams D.E., Stern T.A., 2009). In higher functioning clients Nicolson and his colleagues suggest using relaxation therapy that involves muscle relaxation and deep breathing too offset physiological markers of pain. While biofeedback might be a viable option for some patients Matteliano D., Marie B., Oliver J., and Coggins C. (2014) think others may be better suited using a biopsychosocial- spiritual (BPSS) model which uses a more holistic approach to mitigate drug addiction. Another BPSS technique includes guided therapy where the patient is told to imagine a pleasant setting in great detail to help distract them from pain symptoms (Matteliano D et. al., 2014).

Patients may also choose to seek alternative treatments that are not was widely recommended but may still help provide relief. Physical therapy such as exercise and strength building may improve functions of chronic pain and mood

levels of anxiety (Nicolson S.E., Caplan J.P., Williams D.E., Stern T.A., 2009).

According to Cochrane Database review aerobic exercise had a positive effect on pain and a small to moderate effect on depression. Another form of therapy that has been used to treat pain for more than 3,000 years is Acupuncture. Acupuncture is used to treat pain; it utilizes that endogenous opioid system and stimulates the descending serotonin and norepinephrine inhibition in peripheral pathways (Nicolson et. al., 2009). These alternative treatments have not been researched as widely as pharmacological therapy, however they do serve to provide some relief for patients suffering from pain, depression, or anxiety. These treatments are also a great option for clients who are seeking to avoid any form of pharmacological treatment in an effort to prevent the possibility of relapse during and after the treatment process.

When it comes to drug use, increased retention and a relaxed drug use policy has shown to be the most significant factor in reducing drug use among substance users. Substance Abuse and Mental Health Services Administration (2005) concluded that subjects assigned to a strongly abstinence-oriented program were more likely to leave treatment than those subjects assigned to more laissez-faire programs such as BAART's. Patients attending harm-reduction types of clinics had significantly better in-treatment and post-treatment outcomes in decreased use of illicit opiates. BAART is doing everything in line with the most current research to maintain a high retention rate in all their clinics. Retention has also shown to increase when patient's psychiatric symptoms are managed. This leads to the

conclusion that while drug use is effectively controlled through integrated care in a maintenance setting more effective control over psychiatric disorders is necessary.

### **Conclusion**

While BAART has a well-rounded approach to treating mental illness and substance abuse there is still room for improvement. Their techniques of integrating care are innovating the way treatment for substance abuse and mental health is administered. An analysis of the program is likely to help see where changes are necessary to help patients in the program receive even better therapeutic treatment. This evaluation will help the company be more client-centered and provide treatment that is better suited to each individual's needs. More effective strategies of treatment can hopefully lead to long-term success. Future research can look at psychiatric hospitalization to assess the type and number of psychotic episodes these individuals are having in an effort to decrease visits to the emergency room for psychiatric episodes.



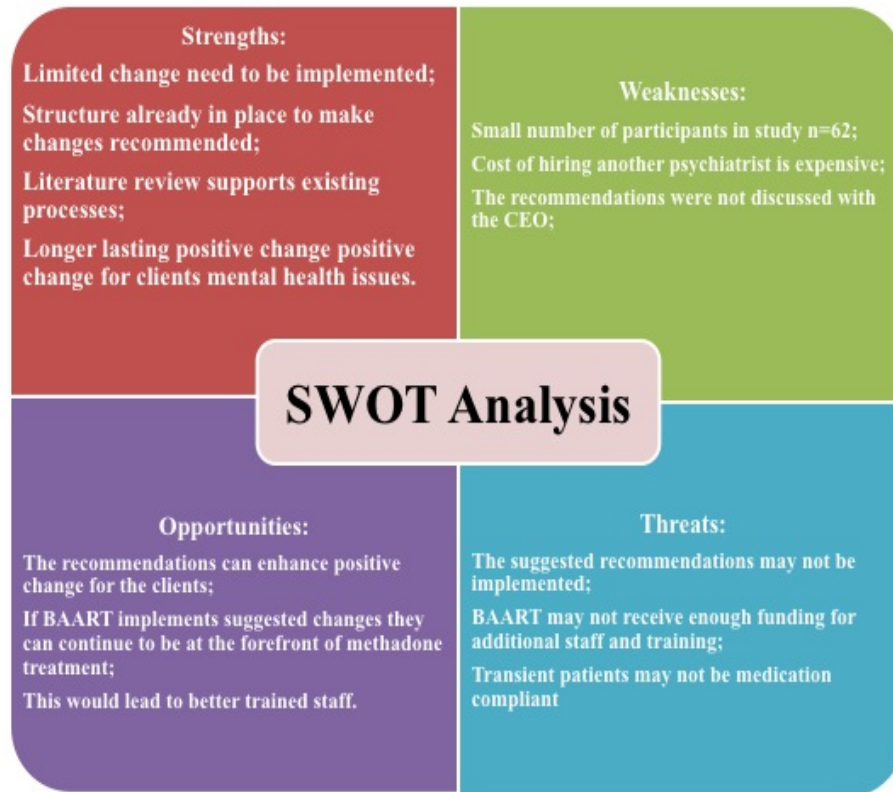
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## Appendices



### ASI - Psychiatric Status

#### Psychiatric Status

How many times have you been treated for any psychological or emotional problems:

- P1. In a hospital or inpatient setting?
- P2. Outpatient/Private Patient
- P3. Do you receive a pension for a psychiatric disability?
- Have you had a significant period of time (that was not a direct result of alcohol/drug use) in which you have:
- P4. Experienced serious depression - sadness, hopelessness, loss of interest, difficulty with daily function?
- P5. Experienced serious anxiety/tension, uptight, unreasonably worried, inability to feel relaxed?

### Patient Drug Screen Results

BAART Turk Sr  
433 Turk St.  
San Francisco, CA 94102 (415) 928-7800

Name: Frazier, Terry

CID: 999019612

Date:	Test Type	MDA	MDL	BAM	MA	TH	MI	MM	Q	R	U	Other
10/11/2013	Urine/analysis	X	X									Random CREATININE:61.2
11-10-23	Urine/analysis	X	X									Random CREATININE:49.1
98204	Urine/analysis	X	X									Random CREATININE:47.9
	Urine/analysis	X	X									Random CREATININE:174.0
	Urine/analysis	X	X									Random CREATININE:214.7
	Urine/analysis	X	X									Random CREATININE:116.1
	Urine/analysis	X	X									Random CREATININE:82.2
	Urine/analysis	X	X									Random CREATININE:72.6
	Urine/analysis	X	X									Random CREATININE:57.2
	Urine/analysis	X	X									Random CREATININE:107.6
	Urine/analysis	X	X									Random CREATININE:12.5
	Urine/analysis	X	X									Random CREATININE:183.6

Total Drug Screens: 12