



# Access to Medications for Opioid Use Disorder (MOUD) Among Residential Treatment Programs in the United States: A Pilot Secret Shopper Study

Robert S Iannaccone<sup>1</sup>; Christine U Ramdin<sup>1\*</sup>; Jeanmarie Perrone<sup>2</sup>; Lewis S Nelson<sup>1</sup>

<sup>1</sup>Rutgers New Jersey Medical School, Newark, NJ, USA.

<sup>2</sup>Center for Addiction Medicine and Policy and the Department of Emergency Medicine, University of Pennsylvania Perelman School of Medicine, Philadelphia, PA, USA.

**\*Corresponding Author(s): Christine U Ramdin**

Rutgers New Jersey Medical School, 185 South Orange Avenue, E level, Room E-610, Newark-07103, USA.

Tel: 973-972-9272;

Email: [cramdin@njms.rutgers.edu](mailto:cramdin@njms.rutgers.edu)

Received: Apr 14, 2021

Accepted: May 26, 2021

Published Online: May 28, 2021

Journal: Journal of Addiction and Recovery

Publisher: MedDocs Publishers LLC

Online edition: <http://meddocsonline.org/>

Copyright: © Ramdin CU (2021). *This Article is distributed under the terms of Creative Commons Attribution 4.0 International License*

**Keywords:** Opioid use disorder; Medication for addiction treatment; Addiction; Substance misuse; Opioids; Buprenorphine.

## Abstract

**Objective:** Addressing the opioid epidemic requires an expansion of accessible, evidence-based treatment, particularly Medications for Opioid Use Disorder (MOUD). The common practice of residential “Detoxification” using methadone or buprenorphine to manage Opioid Use Disorder (OUD) without offering sustained treatment counters the evidence basis for MOUD. We evaluated the accessibility and prevalence of MOUD among residential treatment facilities in the US.

**Methods:** This is a prospective “Secret Shopper” pilot study where facilities were contacted by telephone during business hours. We called 99 facilities randomly selected from the SAMHSA Facility Navigator website using a scripted case-based questionnaire about accessing treatment and types of treatment offered. The survey mimicked a conversation between intake personnel and a family member of a patient with OUD.

**Results:** Of 99 facilities contacted, investigators reached 66 (66.7%, 95% CI: [0.56,0.76]). MOUD was offered at 42 (63.6%, 95% CI: [0.52,0.74]) facilities for detoxification and only 5 (11.9%, 95% CI: [0.05,0.25]) for maintenance therapy. Buprenorphine was offered in 35 (53.0%, 95% CI: [0.41,0.65]). Systematic hurdles included the use of non-human automated menu by 20 facilities (30.3%, 95% CI: [0.20,0.43]), inability to address questions in 11 (16.7%, 95% CI: [0.09,0.28]), and the ability to obtain outcomes data from 13 (19.7%, 95% CI: [0.11,0.32]).

**Conclusion:** Many facilities have not adopted evidence-based treatment strategies for OUD. It is difficult to contact facilities and obtain information regarding treatment. SAMHSA should enhance its website and provide guidance regarding evidence-based treatment. This can include a preference for centers that provide sustained MOUD and

**Cite this article:** Iannaccone RS, Ramdin CU, Perrone J, Nelson LS. Access to Medications for Opioid Use Disorder (MOUD) Among Residential Treatment Programs in the United States: A Pilot Secret Shopper Study. *J Addict Recovery*. 2021; 4(1): 1029.



indicate facilities that offer only abstinence-based or detoxification therapy. Additionally, they should advocate for or create standards of competence for those handling the initial contact at the treatment centers.

## Introduction

Opioid use disorder (OUD) is a chronic, relapsing illness that results in high levels of morbidity and mortality [1-3]. The US Department of Health and Human Services reported that, in 2018, approximately 2 million people in the United States suffered from OUD [4]. Over the last two decades, the opioid epidemic has negatively impacted not only patients, but also their families, friends, and communities. Consequently, the United States has been working diligently to improve recovery by developing methods to increase access to treatment as well as expanding pharmacotherapeutic options.

Traditionally, abstinence-based methods have been used to help patients recover from alcohol or stimulant use disorder [5]. Studies have shown that medication for addiction treatment (MOUD) is more effective for treating patients for opioid use disorder [6]. More recent evidence demonstrates that effective treatment for those with OUD includes a combination of access to long term care of at least 3 months, counseling services, and MOUD [7]. Medications for addiction treatment include buprenorphine, methadone, and naltrexone ER, and when utilized in conjunction with psychosocial therapy, are more effective in treatment retention for those with OUD when compared to the utilization of psychosocial or abstinence-based practices alone [8-12]. Use of MOUD decreases the all-cause mortality rate among patients with OUD by more than 50% [13]. Yet, despite the proven efficacy of MOUD, many substance use treatment programs have yet to adopt it [14].

There remains a need to further investigate the prevalence of use and attitudes towards MOUD among prescribing physicians and within substance use treatment facilities. Inpatient substance use treatment facilities can be important because such programs help patients fully recover prior to resumption of their prior life activities. Although improving access to treatment and optimizing care for these patients is a priority, treatment facilities should provide the medications and skills for a patient to sustain recovery after leaving the facility [7]. Some providers express concern with utilizing MOUD despite the strong evidence supporting its efficacy [15]. Whether this is primarily a concern due to lack of training, knowledge, or experience or bias toward patients with OUD remains unclear [16,17].

This pilot study aimed to investigate the prevalence of MOUD among inpatient treatment facilities and to identify the various concerns and limitations surrounding accessing and obtaining appropriate sustainable treatment for patients with OUD attending residential addiction treatment facilities in the United States. Per the literature, residential treatment establishes a “therapeutic community” for residents and can be viewed as a promising means of initiating long-term, effective treatment [18].

## Methods

### Model

This study was a pilot “secret shopper” survey model wherein individual treatment facilities were contacted by telephone during business hours and surreptitiously provided with a short vignette and survey. This was a descriptive study that aimed to

mimic the experience of a patient/loved one when trying to inquire about treatment information to help us further understand treatment accessibility and treatment services. The only information recorded from the calls was the information that was provided to the caller by the employees of the facilities. No direct or indirect patient interaction was included in this study. No individual patient or respondent information was collected. This pilot study employs a methodology that has been used in prior studies to understand first hand what a patient experiences while trying to access treatment [19].

This study was approved by Rutgers Health Sciences Institutional Review Board (IRB).

### Selection criteria

Substance use treatment facilities were selected for inclusion from the SAMHSA website at <https://findtreatment.samhsa.gov/locator>, which includes a locator portal with a complete listing of facilities recognized by SAMHSA. The target subject population was a cohort of institutions that provide inpatient or residential treatment services for patients with OUD. Facilities that provided only outpatient care and facilities that were “acute care hospitals” without specifically designated inpatient care areas for addiction treatment were excluded. Acute care hospitals manage immediate health conditions and not convalescent or rehabilitative care. Those with designated inpatient care units for addiction treatment were included. After strictly acute care hospitals were excluded, there were a total of 897 remaining facilities that met the inclusion criteria.

### Outcomes

Our primary outcome was the prevalence of MOUD as maintenance therapy at these facilities. We used a random number generator to select 99 facilities from the list of the 897 facilities.

In addition to MOUD services, we also questioned treatment facilities about counseling and alternative services offered to their residents.

### Researcher training and protocol

Research representatives were trained in May of 2019 *via* a pilot study with 9 randomly selected treatment facilities. Research representatives were given the call script prior to the start of the pilot study and, once prepared, practiced using the script until comfortable. This pilot study also helped to determine the ideal times to call the treatment facilities, which was determined to be between the hours of 0900 and 1500, since this frame generally encompassed the working hours for most of the facilities.

Treatment facilities were called between the hours of 0900 and 1500 in their respective time zones. Calls were made Monday through Friday from May to August of 2019. Trained research representatives called each facility and acted as a concerned family member seeking help for their loved one who had developed an opioid use disorder. A script/ survey, designed to represent a conversation between intake personnel and the concerned family member was used to provide the receptionist or clinical intake specialist with a collateral history about the loved one and to speak with someone who could answer questions about the facility. The call script/survey utilized branching logic where the path of questioning deployed by the research representatives varied predictably based on respondent answers. The data collected by the research representatives were documented in real-time. Specific survey questions

can be viewed in Table 1.

**Analysis**

After all calls were completed, the data were categorized and descriptive statistics such as proportions and 95% confidence intervals were computed. In order to compare the data that we received over the phone to the data that was originally reported on SAMHSA’s facility resources data, we used the using the chi-squared difference of proportions test or Fischer’s exact test as appropriate to determine significant differences. P-values were reported to be significant at the 0.05 level.

**Results**

Attempts were made to contact a total of 99 treatment facilities. Of these treatment facilities, 66 (67%, CI [56,76]) were reached. Of the other 33, 3 (3%, CI [1,9]) were not accepting private calls, 3 (3%, CI [1,9]) had phone numbers no longer in service, and 27 (27%, CI [19,37]) were unavailable, prompting researchers to leave a message. Of the 66 treatment facilities, the call script was completed with 53. The remaining 13 facilities did not provide complete information.

Of the 99 facilities contacted, researchers were sent to an automated menu 20 (30%, CI [20,43]) times, encountered treatment facilities that were unwilling to answer questions 4 (6%, CI: [2,16]) times, and found treatment facilities that were unable to answer questions 11 (17%, CI: [9,28]) times. Researchers were transferred during the conversation with treatment facilities 11 (17%, [9,28]) times.

Of the 66 facilities that we reached, the data we obtained are described below.

Detoxification but not maintenance treatment for OUD was reported by 28 (42%, CI: [31,54]) treatment facilities. Maintenance treatment was reported by 18 (27%, CI: [18,39]) treatment facilities. Other forms of treatment were reported by 5 (8%, CI: [3,11]) treatment facilities.

Utilization of MOUD was reported by 42 (64%, CI: [52,74]) treatment facilities. Of these facilities, 12 (29%, CI: [17,44]) reported use of MOUD for detoxification alone while 5 (12%, [5,25]) facilities reported use of MOUD only for maintenance and following discharge. Of the 42 facilities utilizing MOUD, 5 (12%, [5,25]) reported the use of MOUD for both detoxification or maintenance. The breakdown of the type of MOUD offered at these facilities can be viewed in Table 2. The expected duration of MOUD was variable depending on the case or by personal choice of the patient in 18 (43%, [29,58]) of the facilities offering MOUD therapy. In 16 (24%, [16,36]) facilities MOUD was reportedly used frequently while 16 (24%, [16,36]) reported that MOUD is not a preferred option of treatment and 8 (12%, [6,22]) reported that the use of MOUD varied by case. Ordering and prescribing of MOUD at facilities was found to occur either at the facility itself or *via* an outside contracted vendor with prescribing privileges. Of the facilities who were able to answer questions related to prescribing privileges, 21 (32%, [21,45]) facilities reported that their providers had MOUD prescribing privileges while 15 (23%, [14,35]) reported that they did not.

When questioned about counseling (individual, group, or family), most facilities (48/66) offered counseling services (73%, 95% CI: [61,82]). Other common alternative services offered included psychiatry (for treatment of mental illness), yoga, physical recreation, 12-step programs, and behavioral therapy. After counseling, behavioral therapy was the next most common ser-

vice offered, and it was offered by 17 facilities (26%, 95% CI: [17,37]). In this context, behavioral therapy refers to therapies targeted towards addressing behavioral health issues, such as depression and self-injury behaviors. Examples of behavioral therapies could include, but are not limited to stress and relaxation techniques, counseling, and cognitive behavioral therapy. A more specific breakdown of these results regarding counseling and alternative services can be viewed in Table 3.

Discharge planning was provided by 48 (73%, [60,83]) of the facilities, often beginning upon admission. Discharge planning involved discharge with prescriptions for medications or to outpatient care at 15 (23%, [14,34]) facilities. Whether a patient was discharged with medication or to outpatient care varied by case at 9 facilities (14%, [7,24]) while 15 facilities ( 23%, [14,34]) reported that prescriptions for medications and or outpatient care were not part of discharge planning.

The success rates of the treatment facilities contacted were often unobtainable. Thirty-three (50%, [38,62]) facilities did not have information on the success rate of their programs while 13 (20%, [11,32]) were able to provide information.

Following analysis of collected data, the results were compared to the reported services offered on the SAMHSA website. This comparison can be viewed in Table 2.

As shown by Table 2, there was a significantly smaller proportion of facilities (24.5%) that actually offered naltrexone compared to what SAMHSA reported (62%) (p<0.0001). Additionally, only 21% of facilities actually offered 12-step programs compared to what SAMHSA reported (91%, p<0.00001). There were no statistically significant differences between what was reported by SAMHSA and what we found in terms of availability of methadone, buprenorphine, and discharge planning.

**Table 1:** Caller Script Survey Questions.

What type of operational agency manages the facility (For-profit, non-profit, government)?
How many patients are there on average in the facility?
Is residential/ Inpatient treatment offered in a stand-alone setting (non-hospital)?
→ If yes, is it offered for detoxification or longer treatment? (Detoxification, Substance Abuse Maintenance Treatment, Other).
What opioid abuse services are offered?
→ Does this facility use medication-assisted treatment?
→ For detoxification, as maintenance treatment, or for both?
→ Are counseling services provided?
→ OR 12 Step, Abstinence-based, i.e. Non-MAT
What type of medications for opioid use disorder treatment are available?
→ Methadone, Buprenorphine, Extended-Release Naltrexone, other?
→ Are only medications used to manage the symptoms of opioid withdrawal available?
→ How long are patients typically on MAT in the facility?
→ Are MAT therapies used frequently?
→ Are there currently patients enrolled in MAT?
→ Are there currently providers who have active MAT prescription privileges?
Are patients provided with discharge planning?
→ Does discharge planning involve discharge with medications?
→ Does discharge planning involve discharge with outpatient care?
Is there any information on the success of the program?

**Table 2:** Comparison of reported treatment services offered as reported by SAMHSA and the 53 treatment facilities with which call script was completed. (n=53).

Service Offered	SAMHSA Data			Collected Data			P-value
	As reported by SAMHSA	Proportion (%)	95% CI	As reported by the facility	Proportion (%)	95% CI	
Methadone	9	17	[9,29]	16	30	[20,44]	p=0.1691
Buprenorphine	30	57	[43,69]	35	66	[53,77]	p=0.1594
Naltrexone	33	62	[49,74]	13	25	[15,38]	p<0.0001
Discharge Planning	49	92	[82,97]	48	91	[80,96]	p=1.00
12 Step Program	48	91	[80,96]	11	21	[12, 33]	p< 0.00001

**Table 3:** Treatment facility counseling/alternative services offered as reported by treatment facilities (n=66).

Services offered	As reported by the facility	Proportion <sup>a</sup> (%)	95% CI
Counseling Services (individual, group, family)	48	73	[61,82]
Psychiatry	11	17	[10,27]
Yoga	2	3	[1,10]
Physical Recreation (such as sports, gym, yoga)	8	12	[6,22]
12 Step Program	11	17	[10,27]
Behavioral Therapy	17	26	[17,37]

<sup>a</sup>A facility may be represented multiple times in this table if they offer more than 1 type of counseling/alternative service.

## Discussion

Research has convincingly demonstrated that MOUD is more effective in treating patients with OUD than traditional abstinence-based approaches [7-12]. Our pilot study sought to assess the simulated experience of a community member attempting to seek and obtain information from facilities regarding their treatment options for potential patients with OUD. A number of media reports have detailed the failures of the opioid treatment system, revealing the struggles and tragedies of patients and their families searching for proper OUD treatment [19,20]. Prior studies have discussed the gap that exists between the increasing OUD treatment demand and the supply of physicians waived to prescribe buprenorphine and treatment facilities [21]. Our study highlighted the challenges and barriers in navigating the intake system of these treatment facilities, supporting prior studies with different methodologies that have had similar findings [22]. However, unlike previously conducted studies, our study uses the lens of a patient/patient's loved one to describe barriers to navigating and obtaining treatment in realtime. Our study revealed this experience to be difficult and frustrating, analogous to the many anecdotes found in the press. We acknowledge that when prompted to leave a voicemail or provide a callback number, we elected to forgo doing these to protect the identities of research representatives. Additionally, navigating these calls and connecting with treatment facility personnel was hampered by their use of an automated call menu or call transfers, which can be an inconvenience or a barrier for patients who may not be as literate or are already frustrated. Furthermore, a large, national database of treatment centers like that offered by SAMHSA is an important resource in identifying resources to combat OUD, but the complexity of navigating through this system, that results

from inaccuracies in the database, as demonstrated, presents an opportunity to address some of these issues. Conflicting information from multiple sources can increase challenges and be discouraging for patients and their family members while they are looking for treatment options, thus decreasing likelihood for them to pursue recovery.

In January 2018, it was reported that out of 12,029 treatment facilities nationally, only 4,950 (41%) reported offering at least one form of MOUD [23]. Unlike our study, the January 2018 report did not focus on residential facilities but rather facilities that offered any form of substance use treatment. Data in this pilot study was obtained from The National Survey of Substance Abuse Treatment Facilities (N-SSATS), an annual survey of U.S. facilities offering treatment services for alcohol and drug misuse. A recent study published in 2020, that also analyzed N-SSATS data, found that only 40% of residential treatment facilities in the United States offered at least one form of MOUD in 2017 [24]. Our study also looked at the prevalence of MOUD use among residential treatment facilities in the United States. These findings may reflect reporting bias by treatment centers or may be related to differences that exist between the patient population treated in residential facilities versus any facility offering some form of substance misuse treatment or an increase in use of MOUD in other types of treatment facilities. These differences could include variables such as severity of illness or insurance status. More research in this area is needed.

Facilities that did not offer MOUD relied on abstinence-based strategies, counseling, 12-step programs, physical recreation, and yoga, which have not been proven to significantly benefit those with OUD [25-27]. When questioned about MOUD, these

treatment facilities reported that they did not believe in the therapy with several even stating that “replacing one drug with another drug” was not the solution, a well-documented trope used against MOUD [21,28,29].

Our pilot study has demonstrated the challenges and misinformation that may arise when seeking treatment for OUD. A potential means to address these problems and improve the treatment seeking process includes providing patients and families with the most up to date and accurate information related to the treatment facilities they may consider. When investigating discrepancies that may have existed between treatment facility services as reported by SAMHSA and our collected data, we found statistically significant discrepancies in the number of facilities that offered naltrexone and 12 step programs. While the results were not significant, we found minor discrepancies in each treatment category including methadone, buprenorphine, and discharge planning (Table 2). The discrepancies revealed by our data could be partly attributed to a knowledge gap by treatment center personnel. Research representatives were rarely able to speak with physicians at these facilities. It was far more common that representatives spoke with intake personnel who may have lacked specific knowledge related to the medical treatment offered at the facility. The questions asked of the selected treatment facilities by research representatives are questions that those with OUD and families are likely to ask when seeking treatment [30].

These findings reflect the importance for SAMHSA to provide regularly updated information and terminology to accurately allow attendees an understanding of the treatment options offered and the success and evidence for each at treatment facilities across the nation. A recent study found that the similar SAMHSA buprenorphine practitioner locator also lacked up to date treatment and contact information [31]. SAMHSA released an updated treatment locator tool at [findtreatment.gov](http://findtreatment.gov) in October 2019. When compared to the information provided prior to the update, SAMHSA had resolved two out of the three telephone numbers found to no longer be in service during data collection. Of the 53 treatment centers with which the call script was completed, 6 treatment centers had updated treatment information, 3 treatment centers had updated contact information, and 1 treatment center had been removed. The new treatment locator is objectively more user friendly and, together with these findings, reflect an effort by SAMHSA to provide up to date information and highlight the importance of a regularly updated resource for those seeking treatment.

### Implications

Given the increases in the prevalence of OUD and opioid-related overdoses, access to effective treatment and accurate information regarding treatment must be improved. This pilot study revealed existing limitations in access to treatment facilities and MOUD. The difficulties experienced during this study when attempting to access treatment facilities is a barrier to those seeking help for themselves or a family member. Treatment facilities must improve and provide personnel who are more accessible and capable to answer questions regarding treatment methods. At the same time, we must destigmatize and educate the public about the effective treatment for OUD so that they are equipped to ask the proper questions when inquiring about treatment. A recent study found that the majority of patients with OUD do not believe that MOUD would be an effective means of primary treatment indicating a need for

improved access to education about the substantial efficacy of treatment [32]. Studies have shown that most physicians have minimal requirements for training in addiction and medical schools devote little time to educating students about opioid use and treatment although that may be changing [33,34]. This could be related to the lack of availability of MOUD as seen in this study and represents an area of medical training and education that must be improved.

### Limitations

These findings should be interpreted with key limitations in mind. Our pilot study was unique in that it simulated the experience of a family member seeking treatment for a loved one, an experience that, while documented *via* anecdotes in news articles, had not yet been replicated in a research study. Our study was not limited to a particular region of the county as treatment facilities were selected at random from all 50 states. We had planned to obtain data from 99 selected treatment facilities. Using an intention to treat analysis, we were able to reach our target sample size of 99, reflecting the reality of the real-life experience. We were only able to obtain information from 66, which may limit the interpretation of the actual prevalence of MOUD in the study population. However, we reported any information that we were able to obtain from difficult to reach facilities and provided a detailed account of the problems we encountered in contacting them. An additional limitation to our study was the varying degrees of knowledge among treatment facility personnel previously discussed. Because of this, there may be discrepancies between what research representatives were told and what pharmacotherapy may be provided. However, similar information would likely be provided to a family member searching for this information. Also, our study focused specifically on trying to estimate the prevalence of availability of MOUD versus the availability of other addiction treatment services. Lastly, another limitation of our pilot study was that we did not permit call-backs from facilities had they tried to reach us post our initial call. Consequently, we may have not received all the information we could possibly have had from the 33 facilities that we did not initially reach. However, not answering a patient at their first call can be a concern as patients may not have a reliable call back number or may call from a private line.

### Conclusions

There are struggles in seeking information about treatment availability and options, highlighted by the unavailability of treatment facility intake personnel one-third of the time. Further study should be done to understand and correct specific issues relating to facility intake personnel as well as the creation of guidelines to ensure that an expected standard of competence for those handling the initial contact. Additionally, discrepancies exist between the treatment options reported by SAMHSA and the treatments that facilities report to callers. In the future, SAMSHA should consider making information about addiction treatment facilities and specific services offered more accessible to patients and their families. Finally, although the evidence supports the use of maintenance MOUD, the majority of sites provided primarily opioid detoxification regimens. Future studies should specifically look at the prevalence of other specific treatment services, such as motivational interviewing, cognitive behavioral therapy, and treatment for chronic pain. If we are to most effectively combat this continuing crisis the ease of navigating the treatment system and implementation of evidence-based treatment approaches must be enhanced.

## References

1. Gomes T, Tadrous M, Mamdani MM, Paterson JM, Juurlink DN. The Burden of Opioid-Related Mortality in the United States. *JAMA network open*. 2018; 1: e180217.
2. Hedegaard H, Warner M, Minino AM. Drug Overdose Deaths in the United States, 1999-2016. *NCHS data brief*. 2017; 294: 1-8.
3. Rudd RA, Seth P, David F, Scholl L. Increases in Drug and Opioid-Involved Overdose Deaths - United States, 2010-2015. *MMWR Morbidity and mortality weekly report*. 2016; 65:1445-1452.
4. HHS.gov/Opioids: The Prescription Drug & Heroin Overdose Epidemic. Public Affairs - <https://www.hhs.gov/opioids/>.
5. NICE. Alcohol-use disorders: diagnosis, assessment and management of harmful drinking (high-risk drinking) and alcohol dependence. National Institute for Health and Care Excellence. 2011.
6. SAMHSA. Medication for the Treatment of Alcohol Use Disorder: A Brief Guide. US Department of Health and Human Services: Substance Abuse and Mental Health Services Administration (SAMHSA), Center for Substance Abuse Treatment, Division of Pharmacologic Therapies. 2015: 39.
7. NIDA. Principles of Drug Addiction Treatment: A Research-Based Guide (Third Edition). National Institute on Drug Abuse website. 2018.
8. Krupitskii EM. [Injectable extended-release naltrexone for the prevention of relapse to opioid dependence following opioid detoxification]. *Zhurnal nevrologii i psikiatrii imeni SS Korsakova*. 2014; 114: 64-72.
9. Fudala PJ, Bridge TP, Herbert S, et al. Office-based treatment of opiate addiction with a sublingual-tablet formulation of buprenorphine and naloxone. *The New England journal of medicine*. 2003; 349: 949-958.
10. Weiss RD, Potter JS, Fiellin DA, et al. Adjunctive counseling during brief and extended buprenorphine-naloxone treatment for prescription opioid dependence: A 2-phase randomized controlled trial. *Archives of general psychiatry*. 2011; 68: 1238-1246.
11. Woody GE, Poole SA, Subramaniam G, et al. Extended vs short-term buprenorphine-naloxone for treatment of opioid-addicted youth: a randomized trial. *Jama*. 2008; 300: 2003-2011.
12. Mattick RP, Kimber J, Breen C, Davoli M. Buprenorphine maintenance versus placebo or methadone maintenance for opioid dependence. *The Cochrane database of systematic reviews*. 2004; 3: Cd002207.
13. Sordo L, Barrio G, Bravo MJ, et al. Mortality risk during and after opioid substitution treatment: Systematic review and meta-analysis of cohort studies. *BMJ (Clinical research ed)*. 2017; 357: 1550.
14. SAMHSA-HRSA. Expanding the Use of Medications to Treat Individuals with Substance Use Disorders in Safety-Net Settings-Creating Change on the Ground: Opportunities and Lessons Learned from the Field SAMHSA-HRSA Center for Integrated Health Solutions. 2014: 12.
15. Knudsen HK, Abraham AJ, Oser CB. Barriers to the implementation of medication-assisted treatment for substance use disorders: the importance of funding policies and medical infrastructure. *Evaluation and program planning*. 2011; 34: 375-381.
16. Livingston JD, Adams E, Jordan M, MacMillan Z, Hering R. Primary Care Physicians' Views about Prescribing Methadone to Treat Opioid Use Disorder. *Substance use & misuse*. 2018; 53: 344-353.
17. Forman RF, Bovasso G, Woody G. Staff beliefs about addiction treatment. *Journal of substance abuse treatment*. 2001; 21: 1-9.
18. Keen J, Oliver P, Rowse G, Mathers N. Residential rehabilitation for drug users: A review of 13 months' intake to a therapeutic community. *Family practice*. 2001; 18: 545-548.
19. Rhodes KV, Kenney GM, Friedman AB, et al. Primary care access for new patients on the eve of health care reform. *JAMA Intern Med*. 2014; 174: 861-869.
20. She spent more than \$110,000 on drug rehab. Her son still died. Lopez - <https://www.vox.com/policy-and-politics/2009/9/3/20750587/rehab-drug-addiction-treatment-sean-blake-opioid-epidemic>  
<https://www.vox.com/policy-and-politics/2009/9/3/20750587/rehab-drug-addiction-treatment-sean-blake-opioid-epidemic>.
21. Lopez G. A lost decade and \$200,000: one dad's crusade to save his daughters from addiction. *Vox*. 2019. <https://www.vox.com/policy-and-politics/2019/10/9/20870308/rehab-drug-addiction-treatment-cost-michel-cote-opioid-epidemic>
22. Stover H. Barriers to opioid substitution treatment access, entry and retention: a survey of opioid users, patients in treatment, and treating and non-treating physicians. *European addiction research*. 2011; 17: 44-54.
23. Kepple NJ, Parker A, Whitmore S, Comtois M. Nowhere to go? Examining facility acceptance levels for serving individuals using medications for opioid use disorder. *Journal of substance abuse treatment*. 2019; 104: 42-50.
24. Where Multiple Modes Of Medication-Assisted Treatment Are Available, "Health Affairs Blog. 2018.
25. Huhn AS, Hobelmann JG, Strickland JC, et al. Differences in Availability and Use of Medications for Opioid Use Disorder in Residential Treatment Settings in the United States. *JAMA network open*. 2020; 3: e1920843.
26. Ferri M, Amato L, Davoli M. Alcoholics Anonymous and other 12-step programmes for alcohol dependence. *Cochrane Database of Systematic Reviews*. 2006.
27. Bøg, Martin, Trine Filges, Lars Brännström, Anne-Marie Klint Jørgensen, and Maja Kärrman Fredriksson. 12-Step Programs for Reducing Illicit Drug Use. *Campbell Systematic Reviews*. 2017.
28. Kuppili PP, Parmar A, Gupta A, Balhara YPS. Role of Yoga in Management of Substance-use Disorders: A Narrative Review. *Journal of neurosciences in rural practice*. 2018; 9: 117-122.
29. The single biggest reason America is failing in its response to the opioid epidemic. Lopez - <https://www.vox.com/science-and-health/2017/12/18/16635910/opioid-epidemic-lessons>.
30. Olsen Y, Sharfstein JM. Confronting the stigma of opioid use disorder--and its treatment. *Jama*. 2014; 311: 1393-1394.
31. Lopez G. Looking for Drug Rehab? Ask Facilities These 11 Questions First." *Vox*. 2019. <https://www.vox.com/science-and-health/2019/10/9/20887787/drug-rehab-addiction-treatment-facilities-inpatient-outpatient>.
32. Flavin L, Malowney M, Patel NA, et al. Availability of Buprenorphine Treatment in the 10 States With the Highest Drug. 2021.
33. Huhn AS, Tompkins DA, Dunn KE. The relationship between treatment accessibility and preference amongst out-of-treatment individuals who engage in non-medical prescription opioid use. *Drug and alcohol dependence*. 2017; 180: 279-285.
34. Atterman J, Dormond M, Schreiber J, Haffajee R, Andraka-Christou B, Singer M, Haworth S. Behavioral Health Workforce Implementation Challenges Related to Medication Assisted Treatment. Behavioral Health Workforce Research Center: University of Michigan. 2018: 28.