Title Page

**Including Individuals in Medication Assisted Recovery into Recovery Residences**

by

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Submitted to the Graduate Faculty of the

Department of Behavioral and Community Health Sciences

Graduate School of Public Health in partial fulfillment

of the requirements for the degree of

Master of Public Health

University of Pittsburgh

2019

Committee Page

UNIVERSITY OF PITTSBURGH

Graduate School of Public Health

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**Abstract**

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**Including Individuals in Medication Assisted Recovery into Recovery Residences**

Julie Ann Brewer, MPH

University of Pittsburgh, 2019

**Abstract**

**Background:** Those whose primary drug of choice is opioids have the poorest treatment outcomes of all individuals with substance use disorders (SUD). Medication assisted treatment, generally consisting of some type of drug replacement medication combined with behavioral therapy, is currently considered to be best practice for those with long-term Opioid Use Disorder (OUD). While this is widely recognized in the medical community, recovery residences (RRs), which are largely organic and unregulated, cling to abstinence-only models. This has created a gap in housing services that has exacerbated an already serious public health issue both by limiting the capacity of available housing and by limiting the number of individuals willing to be treated by drug replacement medications because of housing concerns.

**Methods:** In order to understand attitudes toward medication-assisted recovery (MAR), the logistics of including individuals in MAR into RRs, and regulations governing RRs, the professional experience, perceptions, and understanding of 7 key informants was obtained through semi-structured interviews. The qualitative data gained through this process was analyzed for themes that were compared and contrasted.

**Results:** The results of this study have important public health significance as they can be used to develop both standards for and studies of RRs. The results make clear that there is definite bias against individuals who participate in MAR by both providers of SUD services and peers in RRs. MAR is not viewed as a viable recovery pathway and is often seen merely as a steppingstone to abstinence. Participants reported that it is widely believed that individuals in MAR impact their peers negatively, although no evidence has been found to support this. This study also makes clear that there is serious concern about diversion of medications used to treat SUD, but there are a number of ways this concern can be mitigated. Lack of regulation of RRs has led to an environment that varies widely. It is feared that recently proposed guidelines in Pennsylvania may have a number of unintended consequences and do little to help those in MAR to secure safe, stable housing.

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Preface

*Acknowledgements*

There is no way to effectively express my gratitude for all those who have helped me on this journey. I do want to attempt to convey my sincere appreciation to all those who made themselves available so that this work might be accomplished. First and foremost, my family, who tolerated endless readings, conversations about the topic, requests for support, and dinners without me throughout the completion of this endeavor.

Drs. Mary Hawk and Catherine Greeno, I couldn’t have asked for better partners in this work. You are both amazing educators and human beings. Your generosity of time, resources, and expertise was invaluable to me.

Dr. Charlotte Brown, thank you for believing in me long before I thought any of this possible. It is because of that belief that this work had any chance of being accomplished. Your spirit of acceptance and compassion were gifts to me, and I’ll do my best to pass them on to others I meet along the path.

I also want to express my heartfelt appreciation to all those that have inspired and encouraged me throughout my journey: Gina Brown, Jean Byrnes, Maria Corrado, Jordan Coughlan, Steve Devlin, Maizee Devlin, Deborah Duch, Karen Garland, Richard Garland, Lisa George, Patty Grattan, George Jones, Jasmin Jones, Shawna Kline, Melissa Knorr, Terri Pacella, Dr. Helen Petracchi, Mark Pfenninger, Tim Phillips, Patricia Schake, Adrienne Smith, Clear Day Treatment Center Staff, Makenzie White, Misha Zorich, and countless fellow students who have restored my faith in humanity by showing me that the next generation has infinite potential.

# Introduction

According to experts, as of 2017 over 9% of the United States population self-reported as “in recovery” from some sort of substance use disorder (SUD) [[1](#_ENREF_1)]. This translates to over 29 million individuals, many of whom struggle daily not to return to self-destructive lifestyles [[2](#_ENREF_2)]. The concern this raises impacts society on multiple levels. First, the economic consequences of addiction including healthcare expenditures, lost earnings, and costs associated with crime and accidents is estimated to be over $700 billion dollars yearly. Even more worrisome are the statistics on drug-induced mortality. In 2017, death rates from drug overdoses were nearly 380% higher than they were in 2000. This is a public health burden that affects all of society, including those without SUD.

Unfortunately, the stigma surrounding this disease and the continued prejudice toward persons who suffer from SUDs and their families act as barriers to successfully connecting them with the ongoing care they need to live full, productive lives [[3](#_ENREF_3)]. This is particularly damaging when it comes to the need for safe, stable housing [[4](#_ENREF_4)]. Safe and stable housing is repeatedly identified in the literature as a critical contributor to successful recovery from SUD; without it, individuals may never move from “survival mode” and be able to envision a positive future for themselves [[5](#_ENREF_5)].

 Many individuals in early recovery do not meet the criteria for the range of supportive housing options that are currently available, and even when they do, long wait lists often make the transition from treatment directly into these programs impossible [[6](#_ENREF_6)]. Halfway houses and long-term treatment programs are short term, have specific criteria for admission, and are often oversubscribed [[7](#_ENREF_7)]. Independent housing is difficult for many of these individuals to secure due to criminal records and lack of sufficient credit [[6](#_ENREF_6)]. This is the gap currently being filled by recovery residences (RRs) [[8](#_ENREF_8)].

 RRs are privately owned houses set up by operators as communal living for those in recovery from SUD [[9](#_ENREF_9)]. In this unique approach, residents are functionally program participants rather than renters, which allows operators to prescribe a set of rules that residents must abide by in order to be compliant with the “program” [[9](#_ENREF_9)]. Residents can be asked to leave immediately if they fail to meet these standards. Typically, these standards include assigned house chores, 12- step meeting attendance, and participation in formal SUD treatment [[9](#_ENREF_9)]. Specific conditions may be tailored to an individual’s need. For example, an individual may be required to follow physical or mental health provider recommendations as they are presented. Often, individuals are required to sign releases so that operators can communicate with these providers.

 There are no federal or state laws that permit the operation of RRs, but there are also no regulations against them. Efforts are underway in Pennsylvania to certify some RRs. This certification is only valid for those who receive payments or referrals from governmental sources. Uncertified houses will still be permitted to operate; they will just be prohibited from receiving referrals or funds.

As an example, a 4-bedroom, 2-bath house in McKeesport that normally rents for $1,000 monthly could house 7 individuals in early recovery. A house manager would typically receive his or her own room and reduced or free rent in exchange for managing day-to-day operations of the house. The 6 other residents pay typically between $450 and $500 a month and reside there until they are evicted due to program noncompliance or transition to independent living (often between 9 months and 2 years). The profit from this operation funds house expenses, and the remaining is pocketed by the house owner. With a single owner operating several houses, this can be a lucrative business. Operators who choose to remain unregulated in the current proposed system can continue to operate in this fashion indefinitely.

Twelve-step fellowships are grassroots, peer-led programs that evolved when there were few treatment options for those with SUD [[4](#_ENREF_4)]. These programs nearly all espouse an abstinence-only approach [[10](#_ENREF_10)]. Abstinence-only models maintain that use of any psychoactive substances is unacceptable to success [[10](#_ENREF_10)]. Those committed to this concept regularly put forth the claim that once drug use becomes problematic, changes occur in the brain that make controlled use of substances impossible.This model conveys that individuals who are addicted cannot partake in any mind- or mood-altering substances whatsoever without risking complete catastrophic return to total dependence [[10](#_ENREF_10)]. From this structure, RRs were born [[9](#_ENREF_9)].

 Recent decades have seen the advances in the treatment of SUD, particularly in regard to those who are identified as having an opioid use disorder (OUD). Medications have been developed that have proved to be effective tools to combat OUD [[2](#_ENREF_2), [11-14](#_ENREF_11)]. Two of these that show great efficacy are kgreeno@pitt.edu and methadone [[15](#_ENREF_15), [16](#_ENREF_16)]. For the reasons described above, individuals residing in RRs are often barred from participating in this type of treatment, often referred to as medication assisted treatment (MAT) [[17](#_ENREF_17)].

OUD is a significant public health issue, the importance of which is exacerbated by the fact that treatment professionals and other providers sometimes will not recommend MAT, even when it is clinically indicated [[18](#_ENREF_18)]. Those without safe, stable housing who might benefit from MAT are precluded from this type of treatment because of the limited availability of supportive housing for this population. The aim of this paper is to build understanding of how to integrate medication assisted recovery (MAR) into RR, which is critical to the success of those impacted by OUD.

# Background

Individuals with Opioid Use Disorder (OUD) often leave treatment facilities and return to the same living environments that propagated their substance use in the first place, putting them at increased risk of relapse [[13](#_ENREF_13)]. For those seeking a supportive housing arrangement, recovery residences (RRs) have filled a much-needed role for additional support while transitioning to a healthier lifestyle [[8](#_ENREF_8), [13](#_ENREF_13)]. Medication assisted recovery (MAR) has proved to be another resource that can support individuals on their recovery journey [[19](#_ENREF_19)]. However, these two supports have evolved out of very different communities with divergent philosophical beliefs given that RRs utilize abstinence-only approaches. In Allegheny County, this divergence has resulted in a seriously limited number of RRs that will accept individuals who have chosen to augment their OUD treatment with medication [[18](#_ENREF_18)].

MAR is firmly grounded in principles of harm reduction [[19](#_ENREF_19)]. Harm reduction principles are the basis of many alternate pathways to recovery [[11](#_ENREF_11)]. Harm reduction is a set of practices that seeks to alter the conditions and consequences of an individual’s drug use. Its focus is the quality of life as opposed to cessation of substance use [[19](#_ENREF_19)]. Treatment goals are set by the individual and are supported by a therapeutic process. The incremental and non-judgmental approach this method employs has shown to be a more effective tool than abstinence-only approaches for those with OUD [[13](#_ENREF_13)].

While the literature is limited, it is clear that no comprehensive assessment has been done of either the capacity or need for RRs that support those in MAR. The anecdotal evidence that does exist suggests strongly that the vast majority of RRs do not support any form of MAR and exclude individuals prescribed methadone and buprenorphine based on no other criteria. This hampers self-direction and limits individuals’ ability to recover in the way they choose. RRs are central to housing strategies for people in early recovery [[6](#_ENREF_6)]. MAR is now a critical support for many, if not most, people attempting recovery [[13](#_ENREF_13)].

## Recovery Residences

Stable supportive housing is widely recognized by experts as a critical component of maintaining recovery from SUD. Individuals who are not in stable housing situations are at greater risk of returning to destructive behavior patterns [[4](#_ENREF_4), [6-8](#_ENREF_6), [20](#_ENREF_20)]. RRs are identified as one type of housing that can provide supportive housing services to those in need.

The number of RRs in the United States has grown dramatically in the past 25 years and has helped fill the void of community support between professionally directed addiction treatment and peer-led recovery mutual aid societies [[6](#_ENREF_6)]. The purpose of a RR is to provide a safe and healthy living environment to initiate and sustain recovery, meaning abstinence from alcohol and other nonprescribed drug use, and to support improvement in one’s physical, mental, spiritual, and social wellbeing [[9](#_ENREF_9)]. The goal is for individuals is to build resources while living in an RR, which will continue to support their recovery as they transition to living independently and productively in the community [[21](#_ENREF_21)].

RRs have historically been generally unregulated [[22](#_ENREF_22)]. In response to reports of unethical operation of these residences, some states have undertaken legislative efforts toward their management [[22](#_ENREF_22)]. These efforts are often tied to some financial compensation that can support the RR, which generally comes in the form of some governmental entity paying a particular resident’s rent for a period of time. [[22](#_ENREF_22)]. In Pennsylvania, a volunteer task force made up of representatives from law enforcement, treatment providers, recovery houses, county and state drug and alcohol agencies, and advocacy and recovery-support groups released recommendations for a voluntary certification process for RRs in July 2016. These recommendations led to legislation proposed by Senator Tom McGarrigle.

In December of 2017, SB 466 was signed into law by Governor Tom Wolf. This law provides for the regulation of RRs. If the legislation is implemented, in order to receive referrals or assistance from any governmentally funded sources, RRs will have to comply with a set of standards that were outlined and left to the Department of Drug and Alcohol Programs of the Commonwealth (DDAP) to regulate. The public comment period for this policy ended on June 13th of this year, and final rules have yet to be released at the time of this writing. The proposed regulations are required by the legislation to be implemented before June 17, 2020.

This proposed legislation is broken down into 5 parts: A definition of “recovery houses,” an ethics code, policies and procedures, physical standards, and a final report. Included in the licensing program are policies addressing:

* Informing residents about recovery house rules and requirements
* Managing resident funds
* Conducting employee criminal background checks
* Accepting no commissions or items of value in exchange for services
* Addressing the safety of residents
* Requiring resident participation in treatment and recovery support
* Requiring abstinence from alcohol and illicit drugs
* Maintaining the property
* Managing complaints
* Notifying emergency contacts of emergency situations

While these regulations will have to be followed for RRs to receive referrals or assistance from any governmentally funded sources, they are not a prerequisite for operation. This is because the Fair Housing Act (FHA) and the Americans with Disabilities Act (ADA) protect individuals with disabilities from discrimination in all areas, including housing [[23](#_ENREF_23)]. Under these acts, SUD is considered to be a disability, and individuals with SUD are considered to be a “protected class” [[22](#_ENREF_22)]. The FHA mandates that state and local governments provide “reasonable accommodations” for those with SUD that seek to live together in an environment that fosters their recovery. Therefore, RRs are subject only to the same zoning regulations that families in the locality need to follow [[22](#_ENREF_22)].

 According to the Substance Abuse and Mental Health Services Administration (SAMHSA), it is illegal for RRs to discriminate against individuals solely for participating in MAR [[23](#_ENREF_23)]. This is covered under the same provision of the FHA protecting those with disabilities from housing discrimination [[23](#_ENREF_23)]. The FHA’s definition of “dwelling” would include RRs [[23](#_ENREF_23)]. However, this discrimination is widely practiced, and the Western Pennsylvania Alliance of Recovery Residences (West PAAR) openly acknowledges that the vast majority of those they represent “do not take people on Suboxone or Methadone” [[18](#_ENREF_18)]. As will be discussed in the results section, not a single person interviewed for this project mentioned the violation of this protection among the regulations that needed to be followed by RRs.

 In the limited available literature, RRs have been associated with improvements in quality of life and health outcomes in a number of areas including decreased substance use, decreased criminal justice involvement, perceived increase in quality of social relationships, and increased employment [[24](#_ENREF_24)]. The level of evidence for these results is hampered, however, because of the lack of consistency among RRs in terms of evaluation measures and program design.

There are a variety of models for RRs. These differ widely in terms of offered services, models of administration, and use of staff. The National Association of Recovery Residences (NARR) has defined four levels of RRs based on these factors [[25](#_ENREF_25)]. At all levels RR provide an abstinence-based living environment with some social support provided by peers.

Level I residences are self-governing and operate democratically. Current residents vote to admit new residents or expel those who may be problematic. They also offer no structured services and do not employ staff. The financial needs of the house are covered by rent paid by residents [[25](#_ENREF_25)]. Level II residences operate similarly, but a house manager, who is generally a peer that has lived in the residence for a set period of time, directs the operation of the house. The manager is paid a stipend or receives reduced rent in exchange for service and handles issues such as curfew violations and other minor rule infractions [[25](#_ENREF_25)]. Level III houses are different in that they typically offer formal recovery services and employ a professional staff that generally includes a certified peer support specialist [[25](#_ENREF_25)]. Level IV houses are often connected with residential treatment providers and offer a variety of professional services. Their structure tends to be hierarchical, and a paid staff is responsible for house operations. Insurance typically pays only for Levels III and IV, which offer structured services [[25](#_ENREF_25)].

In addition to providing a framework for understanding RRs, NARR provides support to statewide and regional affiliate organizations in their efforts to certify that residences operating within their geographic purview do so in accordance with best practice standards. The local chapter, West PARR, maintains a listing of certified residences that are not licensed treatment programs and, therefore, ineligible for insurance payments [[26](#_ENREF_26)]. However, this list is far from exhaustive, and many RRs locally operate entirely self-managed without any oversight whatsoever.

## Medication Assisted Treatment

 Medication Assisted Treatment (MAT) uses both several medications and behavioral therapy to combat OUD. It is widely considered the best evidence-based treatment available for OUD and uses several medications to both reduce cravings for illicit opiates and block their effects [[11](#_ENREF_11)]. Three primary medications that are identified in the literature are methadone, buprenorphine, and naltrexone. Each of these medications differs in the way it works to relieve symptoms of opiate withdrawal or block the euphoric effects of illicit opiates [[2](#_ENREF_2), [11](#_ENREF_11), [16](#_ENREF_16)]. All of these have been shown to be more successful than behavioral therapies alone [[11](#_ENREF_11), [14-16](#_ENREF_14), [27](#_ENREF_27)].

 Methadone was the first drug of this type to be used for OUD by order of the Narcotic Addict Treatment Act of 1974. This Act approved the use of methadone at treatment centers set up solely for the distribution and management of methadone [[11](#_ENREF_11)]. Acknowledging that substance dependence had not been mitigated but that the negative consequences associated with injection drug use had been decreased, the developers used medication as a form of harm reduction for the first time with those suffering from SUD [[14](#_ENREF_14)]. Methadone is used to mitigate the symptoms associated with withdrawal and reduce cravings for opiates [[14](#_ENREF_14)].

 Methadone, a synthetic opiate and full opioid agonist, remains the most well-researched MAT with positive long-term results [[28](#_ENREF_28)]. Methadone treatment programs have been repeatedly shown to reduce transmission of infectious diseases, including hepatitis C by as much as 22.6% and HIV by nearly 18.5% [[27](#_ENREF_27)]. It has also been reported to be a factor in treatment retention, which is cited as indicative of success [[28](#_ENREF_28)]. Additionally, decreases in criminal activity rates and overdose death rates, and an increase in health indicators and social productivity have been observed [[27](#_ENREF_27)].

Buprenorphine, generally combined with naloxone, is considered a partial agonist, which means that it partially stimulates the receptors associated with the euphoric effects of illicit opioids [[16](#_ENREF_16)]. Its combination with naloxone causes a partial blockage of these receptors as well. Individuals must be in active withdrawal from opiates before beginning treatment with buprenorphine or precipitated withdrawal results [[15](#_ENREF_15)]. It has been available in the United States since the passage of the Drug Addiction Treatment Act of 2000 but has experienced a glacial uptake due in part to legal restrictions on prescribers and in part due to fears about diversion [[16](#_ENREF_16)].

Rates of reduction of transmission of infectious diseases, criminal behavior, and overdose death for buprenorphine are similar to those of methadone [[14](#_ENREF_14)]. Because there is a level at which no further opiate administration produces any effect at all, it has been shown that drug misuse is less problematic than with methadone. Both methadone and buprenorphine are considered to be drug replacement therapies (DRTs) and are regularly barred from use in many RRs [[29](#_ENREF_29)].

Naltrexone, an opioid antagonist, blocks the effects of opiates. It has been available for the treatment of OUD since 1984 [[11](#_ENREF_11)]. Long-term use does not produce chemical dependence, and the medication can be stopped without individuals experiencing withdrawal [[16](#_ENREF_16)]. Because naltrexone blocks the effects of opiates entirely, individuals must be entirely detoxified from other opiates before the initiation of treatment [[16](#_ENREF_16)].

Because the euphoric effects of opiates are mitigated by naltrexone, it has been theorized that naltrexone works as a deterrent to opiate use as opposed to reducing cravings [[30](#_ENREF_30)]. It also has no real potential for abuse or diversion [[16](#_ENREF_16)]. Naltrexone requires that individuals receive monthly injections, and treatment retention has proved to be the greatest challenge faced by this medication [[30](#_ENREF_30)]. Many RRs see this as the only acceptable form of MAT [[29](#_ENREF_29)].

#  Literature Review

Evidence from research evidence has established MAT as an evidence-based approach to treating OUD [3, 5-7]. While the research field acknowledges the growing evidence base for recovery residences, more research is needed to establish how and for whom recovery residences are helpful. An exhaustive search produced only two journal articles that deal with the intersection of MAT and RRs. Emerging research suggests that individuals on MAT often voluntarily discontinue their medication upon moving into recovery homes, though the rationale for this discontinuation has not been explored [8]. Moreover, no known studies have evaluated the effect of a new resident being in MAR on roommates or housemates

## Majer et al.

This study used questionnaires to examine the attitudes of residents of Oxford houses in the state of Maryland regarding MAT. For the purposes of this study, naltrexone was not considered because it does not produce psychoactive properties and is thus unlikely to be considered a drug of abuse. Oxford Houses are democratically run RRs that offer no professional services and have no limit on the amount of time residents can stay. They have been designated by SAMHSA as an evidence-based program.

The participants of this study included 87 residents at Oxford Houses. They were mostly male, (75%) white, (52%) and single (58%). A majority were employed full time (65%). A vast majority reported having graduated from high school or receiving their GED (90%). The analysis was broken down by both substances used and current use of naloxone/buprenorphine or methadone. Three groups were represented in the analysis. Those whose primary drug of choice were not opioids were the largest group (n=56). The second group consisted of those currently receiving naloxone/buprenorphine or methadone (n=10). The final group was made up of those whose primary drug of choice was opioids but were not receiving naloxone/ buprenorphine or methadone (n=21).

Attitudes regarding MAT were examined by use of a questionnaire designed to determine whether use of naloxone/buprenorphine or methadone was the deciding factor when voting whether to accept a prospective resident and whether use of naloxone/buprenorphine or methadone made someone a “using addict.” While none of the group receiving MAT reported that they believed that use of buprenorphine made someone a “still using addict," 22% of that group saw those receiving methadone as such. Of the group not prescribed MAT, 49% saw use of buprenorphine as “still using” and 68% reported that use of methadone was “still using.” A similar trend was noticed for whether use of these substances would be the deciding factor for disallowing someone to move in.

The conclusions of this study suggested that that abstinence-based recovery homes may not be the optimal resource for those using buprenorphine or methadone due to the negative perception by peers. The authors also suggested that clinicians should attempt to refer patients receiving these medications to recovery homes designed for persons receiving MATs.

## Kepple et al.

This study examined acceptance of MAT among 360 facilities that provide recovery support services for those with OUD. The rationale for acceptance or lack of acceptance was gathered from 89 facilities, and the results were analyzed to identify facility-level factors that may influence acceptance level.

 A comprehensive list of facilities was compiled by contacting SUD service providers from a variety of sectors, as well as performing 30 key informant interviews and gathering resource lists from all services identified. After removing duplicate providers and verifying that services were still being provided by each, a survey was sent to each provider.

Of the providers identified, 126 were categorized as “Recovery Housing.” This number made up 35% of the group classified as “Recovery Support Services.” It was found that a quarter of these were unwilling to serve those receiving MAT, and among those that did provide services for these individuals, 16% were classified as having low acceptance of any form of medication for OUD.

Acceptance level among this group was correlated with whether or not the facility identified itself as an “alcohol and drug free facility.” Providers at these facilities were unaccepting of MAT and fell into 1 of 2 subgroupings. Either they saw MAT as being narcotic and, therefore, unacceptable, or they had concerns about a “potential negative impact on the therapeutic community.” Due to the low acceptance level, it was theorized that there was a less hospitable atmosphere for those receiving MAT in alcohol and drug free facilities. Some facilities also had medication-specific preferences for acceptable forms of MAT. Chief among these was naltrexone, followed by methadone.

The final factor discussed was that facilities felt as though they could not offer appropriate support or screening for individuals on MAT. Facilities that provided medication-specific services had higher overall acceptance levels for MAT. Some support services were classified as being moderately supportive of individuals on MAT because they did not assess medication usage at all. These facilities were primary classified as spiritual services who did not offer specifically targeted OUD services.

# Methods

## Participants

For the current study, semi-structured qualitative interviews were conducted with representatives from different disciplines in Pittsburgh in order to understand three critical aspects of MAR in RRs: 1) attitudes toward MAR, 2) logistics of including individuals in MAR into RRs, and 3) the regulations governing RRs and how these affect RRs’ abilities to accept individuals in MAR.

 Recruitment of respondents was accomplished by purposive sampling, initially drawing on professional contacts of the investigator. These contacts were formed over 10 years of the investigator working in direct social services provision to those with SUD locally.

Interviews, requiring approximately a half hour each, were conducted in person in the participants’ offices. The Institutional Review Board of the University of Pittsburgh determined this study to be exempt from review.

## Semi-Structured Interviews

 A semi-structured interview guide was developed by building on the literature and in partnership with stakeholders including representatives from The Open Door, a housing-first provider; Alpha House, a long-term treatment provider; and the investigator’s research mentor. This interview guide sought to examine attitudes, knowledge of regulatory requirements, as well as logistical issues faced by providers when integrating MAT into residential treatment. Topics included reasons persons on MAT were or were not included in the program, medication storage, medication administration, knowledge of funding sources for RRs, and knowledge of RR regulations/oversight. The interview guide can be found in Appendix A.

## Data Analysis

Interviews were transcribed verbatim, and these data were then used to develop themes for analysis. The systematic process followed generally accepted standards for thematic analysis and was undertaken to identify both implicit and explicit concepts. This analysis was accomplished manually by only one coder. Thematic analysis, a form of qualitative analysis, was chosen as it is considered the most useful for systematically interpreting responses [[31](#_ENREF_31)]. It allows for comparing and contrasting data as well as calculating frequency of specific responses [[32](#_ENREF_32)].

 The process for evaluation began with the investigator becoming familiar with the data by reading each transcript multiple times. During this operation the context of the data was of paramount importance. Some common themes among the transcripts became obvious during these readings, and differences began to emerge as well.

 The transcripts were then printed, and the investigator highlighted sentences that related to the objectives of the study. These highlights were in 3 colors each relating to one of the following areas of interest: attitudes regarding MAT, regulatory requirements of including persons on MAT, and significant logistical barriers or facilitators. This data was then transferred to an Excel document and themes broken down and classified by subthemes order to present an accurate evaluation.

To ensure that the themes identified were applicable, that they were representative of the entire text, and that no meaningful concepts were missed, the full transcripts were compared several times to the identified themes and subthemes. Two research mentors of the investigator also reviewed the transcripts and themes to ensure validity.

# Results

## Description of Participants

Seven key informants were interviewed. They had worked in the Pittsburgh community with individuals with SUD for an average of 16 years. Key informants represented 3 separate roles within the provision of residential treatment shown in Table 1. Two representatives were chosen for each of the following categories: executives, front-line clinical staff, and operators/managers. One of each of these was from a facility that accepted clients who were in MAR, and the other was a provider that does not. The 7th interview was an RR owner who also serves as an officer in a regional advocacy organization that represents RR operators.

Key informants included representatives of licensed providers, RR operators, and an organization that represents and advocates for RRs. Providers of licensed services were interviewed because their responsibilities include finding housing for people in recovery; as such, they are very aware of the issues of MAR and RRs. Other key informants were directly involved in running RRs. Both organizations that support and those that reject MAR were included (Table 1).

Table 1 Interview Participants

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **MAR** | **Non-MAR** | **Licensed Inpatient Treatment Provider** | **Recovery Residence** | **Regional Advocacy Organization** |
| Participant 1:Executive | X |  | Organization A |  |  |
| Participant 2: Clinical Staff | X |  | Organization A |  |  |
| Participant 3:House Operator | X |  |  | Organization B |  |
| Participant 4:Executive |  | X | Organization C |  |  |
| Participant 5:Clinical Staff |  | X | Organization C |  |  |
| Participant 6:House Manager |  | X |  | Organization D |  |
| Participant 7:House Owner/ Representative |  | X |  | Organization D | Organization E |

## Attitudes

### MAR Is Not Recovery

Even among providers that accept those in MAR, it appeared that there was a sense that MAR is a stopgap measure that has a goal of complete abstinence at some point. Responder 1, an administrator at a residential facility that provides MAT, said:

“I do agree with MAT. I think it is another step to complete abstinence now instead of just coming to treatment and then doing your 28 days and never using again, that is not reality for a lot of addicts and alcoholics. So, MAT is very beneficial in people staying alive long enough until they maybe come to that conclusion that they want to come completely off of all substances.”

This suggests that MAR is a step toward recovery instead of an alternate pathway and perpetuates the stigma that pathways other than total abstinence are somehow a lesser form of recovery. Another respondent asserted:

“If a person is not quite ready to quit indulging in substance use, MAT is a very safe method for the addict or alcoholic to continue receiving some type of medication until they are completely sure that they want to be completely absent from drugs.”

The goal of complete abstinence is often assumed, and MAT is sometimes seen as something that can be done to mitigate the risk of death associated with OUD as opposed to be a pathway to recovery in its own right. One providers of MAT stated,

“So, MAT is very beneficial in people staying alive long enough until they maybe come to that conclusion that they want to come completely off of all substances.”

It is apparent that the assumed goal for all individuals seeking treatment is to pursue traditional abstinence-based recovery.

 There seems to be an attitude that being prescribed medications is somehow negatively associated with retention in other clinical activities This perception is contrary to the literature that shows that treatment engagement is, in fact, positively associated with MAT. A front-line clinical staff person at a residential provider of MAT said:

“Many of them…. don’t follow protocol for the MAT, they don’t go to their counseling, they just keep their medication appointment, they just take their medications, and they don’t keep their appointments for their counseling, it doesn’t do any good”

Even in cases where staff members have been required to attend trainings specifically about MAT there seems to be very little understanding of MAR as a recovery pathway. While there are champions for MAT in many organizations, these individuals cannot change perceptions of methadone and buprenorphine as only drugs of abuse on their own. One respondent said:

“.... certain staff members will talk about, ‘what happens when suboxone is not strong enough and they go back to heroin?’ Or, ‘what are you going to do, give it to people the second they walk in here?’ ‘What if they’ve already been detoxed off of it? Are you still going to give it to them?’ So, there are a lot of misconceptions about what medication assisted recovery is.”

Three respondents made it clear that they saw any individual taking opiate-based medications as still in their active addiction. Their responses are indicative of a serious trend in the treatment community at large toward marginalizing MAR as a lesser form of recovery than abstinence. One responder went as far as to indicate that traditional therapies were not at all effective with this population. He said:

“…if you have somebody who is on suboxone or methadone, they numb their feelings. So, you don't do really work in depth with that. They have managed to numb the feelings, they are just there to say, “I’m fine.” It does very much conflict and contradict what we are trying to do here.”

This inability to engage in cognitive treatment approaches was cited as a reason to not include those on opiate-based medications. When asked why a treatment center might choose to not accept residents on MAT, one provider responded:

“we realized that it is not going to be productive. It would not give us the way in to deal with the emotions and the abuse and all those other issues and the feelings around them. So, we are getting to see that we won’t be doing counseling. We will be doing maintenance just coming here. We can talk to you and lecture you and nothing else gets done.”

There is also a perception that individuals in MAR are still “high” and are incapable of functioning in the traditional recovery community. This is particularly damaging in environments whose purpose is to create a supportive community. One responder made clear that she believes MAT is not a viable recovery pathway by saying:

“A lot of people nod on the suboxone because it’s overprescribed.”

This attitude was echoed by another respondent who said:

“Simply because they cannot tell the difference on the suboxone. But they are showing the same symptoms of someone on heroin”.

There is also the perception that those on MAT are not only incapable of functioning in a traditional recovery community but in society as a whole. When this is the prevailing attitude it is easy to see why individuals in MAR often choose to discontinue use of medications upon entry into recovery-based housing. One respondent went further to insinuate that those on MAT could be a safety concern because,

“If you’re not in your right mind (on MAT), you could fall and get hurt.”

### MAR Effects Other Residents

Perception of this pathway by other residents/consumers of services was identified as an attitude that prohibits the inclusion of individuals in MAR into a facility. Because of the communal structure of RRs, peer perception of this recovery pathway can be a significant barrier to having multiple recovery pathways in the same facility. The director of a facility that does not accept those receiving MAT said:

“Because even if all of the clinical staff were fully supportive, I know that residents would talk shit behind each other’s back, and they might be ostracized within the care that they’re receiving...... I can’t in good conscience, welcome someone into care knowing they might be ostracized.”

The attitude that abstinence-based recovery does not blend well with approaches that include medication was pervasive among responders. There was a fear among several respondents that exposure to individuals receiving MAT could somehow provoke the thought process that abstinent clients would also want to be on medication in some form. One respondent said:

“...they (residents) are seeing other people in treatment that are on maintenance medications, and it is bringing the thought process up.”

Two respondents made note that there are other psychoactive substances that seem to be viewed differently than methadone and buprenorphine. The damage this leads to was noted by one respondent when he said:

“So, when you have somebody who is on any number of psychiatric medications, possibly smoking, and drinking energy drinks, telling someone else who is on suboxone that they’re not in recovery, we create division within an already divided recovery environment.”

## Logistics of Including Individuals in MAR into RRs

### Concern About Diversion

 All 7 respondents indicated that diversion was a serious concern for them. Diversion, meaning that prescription substances meant for one individual are ingested by others, is also reported as a barrier in the literature, particularly for buprenorphine, as methadone is generally administered at a clinic daily. One respondent (respondent 1) said that his greatest concern about including those receiving MAT was,

“A patient possibly sneaking in medications that are not prescribed to them, over-taking meds, getting meds from other patients.”

While all respondents acknowledged that there was institutional protocol in place to guard against the possibility of diversion. Four respondents recognized that this possibility was nearly impossible to eliminate. Respondent 5 went as far as to say:

*“The truth is, our clientele is very creative. I mean very, very creative…. They find a way to get high.”*

 Interestingly, the recovery house operator who accepted individuals on MAT was the only responder that mentioned that medications other than methadone and buprenorphine were subject to be misused. When asked about her concerns regarding liability while including clients on MAT she responded:

*“…the same concerns I would have as far as people on psych meds or people on seizure medication, It’s the same kind of concern I would have for anybody.* *That someone else could get their medication.”*

Two respondents mentioned injectable Subclade, which is a recently U.S. Food and Drug Administration approved long-acting form of buprenorphine, given by monthly injection. This form of MAT appears to be preferred due to the small likelihood that it will be diverted. It appears that this may carry less stigma. Respondent 5 said of Sublocade,

*“The staff seem more apt to accept that because medication (Sublocade) wouldn’t be kept on site.”*

The diversion risk appeared to have been managed as all 3 representatives of licensed treatment facilities mentioned that medications are kept locked and that staff manage access to them. RR operators/managers said that residents were required to keep their own medications locked and submit to occasional random counts to verify that residents are not diverting medication or taking more than prescribed. One provider seemed to see the fact that his facility does not administer medication as an additional risk. He stated:

“So, because we do not administer, that is a further hindrance for us because an individual could potentially take more than they’re allowed or cheek it, so to say. We do our best to keep medicine secure, but that (diversion) is a concern.”

### Funding

With SB 466’s and DDAP’s proposed regulations only valid for those receiving funding or referrals, it was interesting that 3 respondents noted that there was no funding for individuals residing in RRs. Three other respondents mentioned private funding that they said had to be requested through West PARR. Only 2 respondents mentioned any governmental sources, and both noted that that funding came through the legal system. Responder 7, the regional advocacy organization representative, went on to name some of the private sources by saying,

*“There is funding through JRS (Justice Related Services), through Ryan’s Wings, through different organizations. Catholic Charities. Yeah, there are different organizations that will help them if they are reaching out. West PARR, but they only give a week.”*

Lack of funding was a barrier that all respondents noted in some form. A front-line clinical provider summed up many of these thoughts when he eloquently said:

“You cannot bring someone into residential treatment and after five or six months and say to them, “You completed treatment. You did a good job. Here’s your certificate.” Then I walk out of here with a certificate and I don’t have a place to live... a safe place to live, an environment conducive to my recovery…. And that is another relapse right there. I am going to go back to my neighborhood where I know there are some abandoned houses or link with somebody who is using and say, “Well you know, I’m just going to put my head down and go out in the morning.” Eventually I’m going to crack… Look at how people keep going back to treatment. A big part of it is housing.”

## Regulations

### Current Regulations

All respondents acknowledged that there was little or no direct oversight of RRs. Only 1 respondent thought this should be permitted to continue. She said,

*“I think right now it’s working well, as far as us being self-regulated and we understand our role in the whole process.”*

 All other respondents seemed to echo respondent 5 who said,

*“There is no oversight. There is no structure. There are no rules or regulations to govern these three-quarter houses. People just find a house, fix it up...three quarter house.”*

Respondent 7 went further to suggest,

*“There needs to be oversight because of the stigmatization of people not following through with the right proper care of recovery houses.”*

### Proposed Regulations

 Two respondents were not aware that a law requiring regulation of RRs had passed in Pennsylvania and that regulations were being promulgated by DDAP, and both of these were front-line clinical staff at a treatment agency. Only respondent 7 thought that this proposal was wholly positive. He noted,

*“I think it is a good idea. It will probably eliminate a lot of overdoses that occur in those types of settings.”*

 Two of those responding expressed fear that an unintended consequence of these regulations may be that the limited available housing could be further reduced. Respondent 3 said,

*“I feel like they are overstepping their bounds. I think a lot of people will be put out of business and a lot of people coming out of rehab will end up being homeless.”*

Another respondent who wasn’t aware of the specifics of the proposed legislation expressed his fear about the unintended consequences that regulation may be responsible for. He said:

“I think that’s a weird gray area that it’s on the one hand drug and alcohol is so highly regulated I am concerned that if they come out with regulations what that might do to the recovery housing environment, but also due to the lack of regulations, it can cause issues where anyone and everyone will open up a home exactly how they want. There is no consistency. It’s like a double-edged sword.”

 Respondent 7 expounded on why she felt these regulations may be perceived as far too strict. Her belief was that instead of certifying the RRs they were making them follow a much more rigorous licensing process. She explained,

*“The first draft of DDAP regulations was taken straight from the regulations for detox centers, halfway houses, and rehabs.”*

One respondent connected the lack of funding to the problems Pennsylvania seems to be experiencing with oversight. The overall feeling one is left with is expressed beautifully by respondent 4 when he said,

*“My fear is until there are some baseline policies set in place to operate a recovery home, as well as the funding to support it, that we won’t see people truly welcomed into an inclusive environment, that while there may be treatment centers that are inclusive of MAT because they follow rules and regulations that allow them to do so, they then send people out into a community that is not willing to meet them in the same way, and so we’re essentially setting people up for failure.”*

# Discussion

This study found that there are definite biases against those who choose to use methadone and buprenorphine to augment their recovery. MAR does not appear to be recognized as a recovery pathway by participants interviewed, but rather is seen either as a stopgap measure to eventual abstinence or simply as a continuation of active addiction. This perception appears to be pervasive among both peers and providers. This is unsurprising given the findings of Majer et al. and suggests that addressing stigma surrounding MAT would be critical before making a decision to include those receiving MAT into an abstinence- only RR [[17](#_ENREF_17)].

The results of this analysis also make clear that some providers of SUD services believe that MAT effects individuals’ ability to engage in treatment by affecting cognition. MAT, however, generally employs a cognitive behavioral approach [[13](#_ENREF_13)]. It is well established that MAT combined with some form of behavioral therapy produces the best outcomes for those with OUD [[11](#_ENREF_11), [14-16](#_ENREF_14)]. Unless this false narrative among providers is addressed it will be difficult, if not impossible, to change how the abstinence- only recovery community views MAT.

There are a significant number of providers of SUD service who are themselves in abstinence-based recovery from their own SUD. This may have an impact on the way they view other recovery pathways. Previous individual experience with MAT is one of the significant factors found to correlate with perception of MAT as “still using” [[17](#_ENREF_17)]. It is possible that providers with their own history of SUD have personal experience with MAT that may alter their perception of MAT as a viable approach to recovery.

It appears that naltrexone because of how it blocks the effect of opiates, is not generally seen as MAT in the recovery community. This is unsurprising as the chemical action of Vivitrol nearly amounts to enforced abstinence because if an individual who has received a Vivitrol shot uses opiates, the psychoactive effects of the drug are mitigated [[11](#_ENREF_11)]. For this reason, Vivitrol is often excluded from being considered as MAT [[17](#_ENREF_17), [27](#_ENREF_27), [30](#_ENREF_30), [33](#_ENREF_33)].

The qualitative evidence this study provides is that very few RRs in Allegheny County are willing to accept residents on methadone and buprenorphine. This is a far higher percentage than the 33% found in the literature [[33](#_ENREF_33)]. With the RR community having evolved organically from abstinence-only roots, it is easy to see why so many providers of RR services bar use of MAT. Other communities, including Philadelphia and Ohio, have mitigated the bias toward individuals on MAT by providing funding geared specifically toward creating RR capacity for those receiving MAT [[34](#_ENREF_34)].

One extremely concerning finding of this study that has not been reported in the literature is that some inpatient providers of MAT will not start individuals on methadone or buprenorphine unless they are already stably housed, even if it is clinically indicated. The lack of appropriate housing may be a driver in individuals receiving less than optimal care for OUD.

The current lack of oversight of RRs as an industry is a concern for both licensed treatment providers and some RR operators themselves. There are concerns about safe and ethical operation of these facilities. The research about RR is so lacking that making best practice policy decisions appears difficult. While there is evidence that RR have value for those with SUD, there is little evidence about why [[6](#_ENREF_6), [9](#_ENREF_9), [20](#_ENREF_20)]. Therefore, policy may either overreach and include unnecessary requirements or not include components that are critical for success.

DDAP’s proposed regulations will only be valid for those receiving funding or referrals from a governmental source, so the current lack of governmental funding is a serious barrier to implementation to the proposed oversight. Also, these regulations include nothing about RR operators continuing to exclude those in MAR. The regulations, as they have been proposed, will do little to alleviate the problems outlined here.

## Implications for Practice

 Prior to including individuals in MAR, it is critical that house operators address the stigma attached to this recovery pathway. The main stated purpose of RR is to provide peer support to those in early recovery, and the literature is clear that there are definite biases against those who take certain medications. This would need to be addressed on an ongoing basis for it to be effective. Monthly educational groups for house residents that make clear the distinction between MAR and MAT and dispel the myths surrounding OUD medications could help to lay the groundwork for a culture of inclusion.

 Consistently screening prospective residents to be sure that the RR is the appropriate setting is also absolutely necessary for success. Making clear that all applicants are expected to follow house rules, including participation in house activities and outside treatment, before an applicant is admitted eliminates confusion about expectations.

One of the major logistical concerns about including those on MAT into RRs is diversion of medications. Preventing the diversion of medications could begin with coordinating with prescribers so that all medications and amounts are disclosed. In order to accomplish this, it would be necessary to obtain releases of information so that information may be shared. Other tactics for the prevention of diversion arising from this study include:

* Securely storing medication in a locked container
* Drug testing
* Random medication inventory by staff
* Keeping medication logs

 Developing person-centered recovery plans for each resident would help identify areas of need for both the individual and the services offered by RR. By looking at areas of overlap in these plans, house meetings, which are relatively standard across RRs, could be tailored to the population’s needs. By setting their own goals individuals, would be invested in and responsible for their own recovery path. These plans should be continuously adapted and include a plan for transition to appropriate permanent housing.

# Conclusion

This study has a number of limitations, so results should be interpreted with caution. Key informants were all recruited from the same general geographic location; therefore, results may not be applicable to other regions. Also, although every effort was made to gather divergent perspectives, all key informants came from a single investigator’s professional contacts. This limitation may be mitigated by the fact that the investigator has a large professional network. In addition, it appears that participants shared views that may be different from that of the investigator, suggesting that social desirability bias may be limited despite the convenience sampling used here.

Despite these limitations, this paper is one of the first to explore barriers to MAR in RR and presents several important findings. This study highlights the need for further evaluation of the RR system as a whole. The lack of data about this service, provided at a critical point in an individual’s recovery process, is disconcerting. Rates of relapse for those with OUD and the financial impact of multiple inpatient treatment stays are often mitigated by safe, stable housing upon discharge. RRs are a critical service used by many to transition to healthier living. Not even the number of RRs in operation are known, to say nothing of the quality of care that residents receive.

RR owners and operators need to be educated about the benefits of MAT and the stigma associated with this recovery pathway addressed. They need to be supported by education and resources to make inclusion of those in MAR feasible. Under the current system, individuals are being forced to choose between housing and effective treatment for OUD. This is a choice no individual should face.

Appendix Interview Guide

* Why you choose not to accept or not accept people on MAT into your program?
* What, if any, concerns do you have about liability when including clients on MAT?
* What barriers do you think exist to including individuals on MAT into recovery residences?
* Do you have written policies and procedures that guide your operation?
* Is medication administration managed or supervised?
* How is storage of medications handled?
* Is there funding available to support individuals?
* Do you also have clients who are on/ not on MAT? If yes, are they managed any differently?
* What do you think of the current oversight system for recovery residences?
* Are you aware of any laws/ regulations that govern the operation of recovery residences?
* What are your thoughts on the proposed regulations?

Bibliography

1. NIDA (National Institute on Druge Abuse). *Trends and Statistics*. 2019 [cited 2019 August 24].

2. NIDA (National Institute on Drug Abuse). *Medications to Treat Opioid Use Disorder*. 2018; Available from: <https://www.drugabuse.gov/publications/research-reports/medications-to-treat-opioid-use-disorder>

3. Woods, J.S. and H. Joseph, *Reducing stigma through education to enhance Medication-Assisted Recovery.* J Addict Dis, 2012. **31**(3): p. 226-35.

4. Pannella Winn, L. and K. Paquette, *Bringing Recovery Housing to Scale in Ohio: Lessons Learned.* J Dual Diagn, 2016. **12**(2): p. 163-74.

5. Polvere, L., E. Macnaughton, and M. Piat, *Participant perspectives on housing first and recovery: Early findings from the At Home/Chez Soi project.* Psychiatric Rehabilitation Journal, 2013. **36**(2): p. 110.

6. Mericle, A.A., et al., *Recovery Housing: Evolving Models to Address Resident Needs.* J Psychoactive Drugs, 2017. **49**(4): p. 352-361.

7. Paquette, K. and L.A. Pannella Winn, *The Role of Recovery Housing: Prioritizing Choice in Homeless Services.* J Dual Diagn, 2016. **12**(2): p. 153-62.

8. May, E.M., B.A. Hunter, and L.A. Jason, *Methodological Pluralism And Mixed Methodology To Strengthen Community Psychology Research: An Example From Oxford House.* J Community Psychol, 2017. **45**(1): p. 100-116.

9. Jason, L.A. and J.R. Ferrari, *Oxford House Recovery Homes: Characteristics and Effectiveness.* Psychol Serv, 2010. **7**(2): p. 92-102.

10. Chappel, J.N. and R.L. DuPont, *Twelve-step and mutual-help programs for addictive disorders.* Psychiatric Clinics of North America, 1999. **22**(2): p. 425-446.

11. Bart, G., *Maintenance medication for opiate addiction: the foundation of recovery.* J Addict Dis, 2012. **31**(3): p. 207-25.

12. Chang, D.C., et al., *Medication-assisted treatment for youth with opioid use disorder: Current dilemmas and remaining questions.* Am J Drug Alcohol Abuse, 2018. **44**(2): p. 143-146.

13. Lagisetty, P., et al., *Primary care models for treating opioid use disorders: What actually works? A systematic review.* PLoS One, 2017. **12**(10): p. e0186315.

14. McElrath, K. and H. Joseph, *Medication-Assisted Treatment (MAT) for Opioid Addiction: Introduction to the Special Issue.* Subst Use Misuse, 2018. **53**(2): p. 177-180.

15. Kampman, K. and M. Jarvis, *American Society of Addiction Medicine (ASAM) national practice guideline for the use of medications in the treatment of addiction involving opioid use. .* Journal of addiction medicine, 2015. **9**(5): p. 358.

16. Connery, H.S., *Medication-assisted treatment of opioid use disorder: review of the evidence and future directions.* Harv Rev Psychiatry, 2015. **23**(2): p. 63-75.

17. Majer, J.M., et al., *Oxford House Residents' Attitudes Toward Medication Assisted Treatment Use in Fellow Residents.* Community Ment Health J, 2018. **54**(5): p. 571-577.

18. Jones, G., *Including those on medication assisted treatment into Recovery Residences*, J. Brewer, Editor. 2019.

19. White, W.L., *Medication-assisted recovery from opioid addiction: historical and contemporary perspectives.* J Addict Dis, 2012. **31**(3): p. 199-206.

20. Tuten, M., et al., *A Comparison of Reinforcement Based Treatment (RBT) versus RBT plus Recovery Housing (RBT(RH)).* J Subst Abuse Treat, 2017. **72**: p. 48-55.

21. Harvey, R., L.A. Jason, and J.R. Ferrari, *Substance abuse relapse in Oxford House recovery homes: A survival analysis evaluation.* Subst Abus, 2016. **37**(2): p. 281-5.

22. Werner- Singh, L. *Federal law and state sober living regulations intersect*. 2018 September 12, 2019]; Available from: <https://www.psychcongress.com/article/policy/federal-law-and-state-sober-living-regulations-intersect>.

23. Center, A.a.t.L.A., *Know Your Rights: Rights for Individuals on Medication- Assisted Treatment*, S.A.a.M.H.S. Administration, Editor. 2009, HHS Publication: Rockville, MD.

24. *The role of recovery residences in promoting long-term addiction recovery.* Am J Community Psychol, 2013. **52**(3-4): p. 406-11.

25. NARR, *An Introduction and Membership Invitation from the National Association of Recovery Residences*. 2011, National Association of Recovery Residences: Atlanta, GA.

26. Western Pennsylvania Alliance of Recovery Residences. *Western Pennsylvania Alliance of Recovery ResidencesWeb Site*. 2019 [cited 2019 September 19]; Available from: <http://www.westparr.org>.

27. McElrath, K., *Medication-Assisted Treatment for Opioid Addiction in the United States: Critique and Commentary.* Subst Use Misuse, 2018. **53**(2): p. 334-343.

28. Ball, J.C. and R. A., *The Effectiveness of Methadone Maintenance Treatment: Patients, Programs, Services, and Outcome*. 2012, Berlin/Heidelberg, Germany The Effectiveness of Methadone Maintenance Treatment: Patients, Programs, Services, and Outcome.

29. Knopf, A., *For methadone, buprenorphine patients, sober housing may be hard to find.* Alcohol and Drug Abuse Weekly, 2016. **29**(9): p. 1-3.

30. Uebelacker, L.A., et al., *Patients' Beliefs About Medications are Associated with Stated Preference for Methadone, Buprenorphine, Naltrexone, or no Medication-Assisted Therapy Following Inpatient Opioid Detoxification.* J Subst Abuse Treat, 2016. **66**: p. 48-53.

31. Alhojailan, M.I., *Thematic analysis: A critical review of its process and evaluation.* West East Journal of Social Sciences 2012. **1**(1): p. 39-47.

32. Thomas, J.A.H., *Methods for the thematic synthesis of qualitative research in systematic reviews.* BMC medical research methodology, 2008. **8**(1): p. 45.

33. Kepple, N.J., et al., *Nowhere to go? Examining facility acceptance levels for serving individuals using medications for opioid used disorder.* Journal of Substance Abuse Treatment, 2019.

34. Residences, N.A.f.R., *Helping Recovery Residences Adapt to Support People with Medication-Assisted Recovery*. 2019 St. Paul, MN.