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Medication assisted therapy and recovery homes

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Abstract

There is a need to better understand improved recovery supportive services for those on Medication Assisted Treatment (MAT) for opioid use disorder (OUD) and, at the same time, enhance the available treatment interventions and positive long-term outcomes for this vulnerable population. A growing empirical literature supports the assertion that improved access to housing and recovery support is a low-cost, high-potential opportunity that could help former substance users who are utilizing MAT to sustain their recovery. Recovery home support could serve the populations that need them most, namely servicing a significant number of the enrolled in MAT programs. The two largest networks of recovery homes are staff run Traditional Recovery Homes (TRH) and self-run Oxford House Recovery Homes (OH). There is a need to better understand how substance users on MAT respond to recovery homes, as well as how those in recovery homes feel toward those on MAT and how any barriers to those utilizing MAT may be reduced. Recovery may be an outcome of the transactional process between the recovering individual and his/her social environment. In particular, how recovery houses can help people on MAT attain long-term recovery.

Keywords

Medication assisted therapy; Oxford houses; recovery homes

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The Department of Health & Human Services has identified Opioid Use Disorder (OUD) as an epidemic (U.S. Department of Health & Human Services, 2017). Approximately 2.6 million U.S. citizens are classified as having an OUD, with 591,000 of those individuals being addicted to heroin alone. Furthermore, OUD has been linked to the increased spread of human immunodeficiency virus and hepatitis C virus in many rural and suburban communities in the U.S. (Zibbell et al., 2015). OUD is also associated with decreased quality of life and increased morbidity and mortality. The rate of drug-related death continues to rise alarmingly. In the state of Illinois, for example, the number of deaths

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by opioid overdose has increased by more than 50%; it rose from 1,382 in 2015 to 2,199 in 2017 (Illinois Department of Public Health, 2017). In 2017, over 80% of drug overdose-induced deaths were due to opioids. This is evident when looking at Illinois's opioid-induced overdose data, with an estimated 7,802 opioid-related deaths between 2013 and 2017. Between the years 2013 and 2017, African Americans comprised 1,688 of the opioid overdoses resulting in death in the state of Illinois. The number of fatalities nearly tripled from 198 in 2013 to 559 in 2017 (Illinois Department of Public Health, 2017). Challenges in the treatment of OUD include the relapsing nature of the condition, the frequent presence of psychiatric and medical comorbidities, and the disproportionate impact on those in socioeconomically disadvantaged settings with limited access to care (Boscarino, Hoffman, & Han, 2015).

Medication Assisted Treatment (MAT), involving medications such as methadone, buprenorphine, or naltrexone, has been shown to increase rates of recovery from OUD (Center for Substance Abuse Treatment, 2005). The increased retention with MAT reduces mortality, improves social function, and is associated with decreased drug use and improved quality of life. However, we need to know more about how the MAT population interacts with recovery resources, particularly as those on MAT have higher unemployment rates, fewer job skills, and there is an overrepresentation of those who are young and environmental factors (Monk & Heim, 2014). Environmental factors, including housing, employment, and reliable sober-living settings can affect the degree and types of support a patient receives (Jason, Olson, & Harvey, 2015; Vaillant, 1983). MAT providers can offer some psychosocial interventions, such as referrals to self-help groups like Alcoholics Anonymous (AA)/Narcotics Anonymous (NA) and recovery community centers (Kelly et al., 2019). Community-based support groups such as NA and AA do offer immediate support, but they do not provide needed housing and employment for those most-at-risk of relapse. Without holistically addressing the other environmental factors involved with OUD recovery, the progress that patients on MAT make in treatment programs can be jeopardized by the lack of appropriate housing options (Braucht et al., 1996; Majer et al., 2020). Follow-up stays in supportive, cohesive, settings encourage personal transformation, and have been shown to substantially reduce relapse rates (Schaefer, Cronkite, & Hu, 2011). One way to reduce relapse may be to provide MAT while additionally supporting changes in social context.

Social Capital Theory (SCT) may account for the benefits provided by relationships within community-based assets called recovery homes. Social capital is defined as "... the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition" (Bourdieu, 1985, p. 248). Applications of SCT to the recovery process (e.g., Best & Laudet, 2010) highlight access specifically to recovery-supportive resources provided by social relationships. These immersive sober living environments are specifically intended to augment nonmember friend and family relationships by providing possibly hard-to-find companionship for those attempting the transition from new sobriety to self-sustaining recovery. Since individuals in recovery homes are all, to one degree or another, goal-driven to stay clean and abstinent, these goal-focused networks may be particularly suitable for these individuals because homogenous and insular networks of individuals can

help to conserve existing resources while providing social support. Recovery homes may be effective in reducing the chance of relapse and improving outcomes for the MAT at-risk population (Majer et al., 2020a).

Recovery homes are currently the largest residential recovery-specific, community-based support option (Polcin, Korcha, Bond, Galloway, & Lapp, 2010). It is estimated that there are over 17,000 recovery homes in the U.S. that serve about 250,000 people over the course of a year (Jason et al., 2020). These settings have been especially important in providing support for high-risk, low-resource individuals who frequently cycle through substance use treatment programs, often failing to maintain abstinence because of their tenuous financial and social linkages to the mainstream community. To support these initiatives, Substance Abuse Prevention and Treatment block grants make at least \$100,000 available annually to each state to provide loans for recovery housing, and states may provide up to \$4,000 in loans to each group that requests to establish drug-free housing for individuals recovering from SUDs (Substance Use Disorder, 2018). As further evidence of the federal government's interest in this area, The Substance Abuse and Mental Health Services Administration (SAMHSA) held two recovery housing meetings in 2017 that covered topics including research on emerging best practices in recovery housing and state recovery housing programs. In March of 2018, the United States Government Accountability Office released a report on recovery housing (Substance Use Disorder, 2018) and indicated that, "Recovery housing—peer-run or peer-managed supportive residences—can offer safe, supportive, stable living environments to help individuals recovering from SUD maintain an alcohol- and drug-free lifestyle" (p. 1). The National Drug Control Strategy (2013) has prioritized the further development of recovery support services and recovery-oriented service systems. Studies such as those conducted by Jason, Davis, Ferrari, and Anderson (2007) were cited as evidencing the effectiveness for this approach.

According to the National Alliance for Recovery Residences (NARR), recovery home residences span from low- to high-service intensity, with levels of support ranging from peer-operated residences (called level 1) to those with more professional support that offer a wide variety of treatment and recovery support services (called levels 2–4; Jason, Mericle, Polcin, & White, 2013). An example of level 1 or peer-operated residences are Oxford Houses (OHs), which are democratically-run, sober living houses with no limit on length of stay (Jason, Ferrari, Davis, & Olson, 2006). Members are expected to remain abstinent from drugs and alcohol, pay their portion of the rent and utilities, and attend weekly house meetings (Oxford House Inc., 2019). Other recovery home residences with more professional support we will refer to as traditional recovery homes (TRH). These are also low cost, community-based residential programs for people with substance use disorders (Borkman, Kaskutas, Room, Bryan, & Barrows, 1998; National Alliance for Recovery Residences, 2018). Typically, similar to OHs, residents of TRHs can stay for as long as they want but are required to abstain from substance use and pay rent. In these settings, the staff and/or owner determine who can enter the recovery homes and whether residents need to leave if they relapse or violate house rules. The central difference between the two approaches is that TRHs employ house managers (paid staff) who run house meetings, enforce rules, make decisions regarding eviction due to rule violations, collect weekly rent, and oversee the overall operation of the houses. In OHs, these functions are performed

by the residents themselves in a standardized, self-governing administrative structure. OHs and TRHs comprise the two largest networks that provide relatively inexpensive housing and support for abstinence. Recovery homes may have considerable potential for improving MAT treatment outcomes and relieving the economic burden associated with this population. Despite the strong literature that demonstrates positive outcomes for substance abusers having access to recovery housing, its availability remains limited for the MAT population.

There is a clear need to better understand how TRH and OH approaches work for those on MAT. In other words, in spite of these two large networks of recovery homes serving a large number of people with substance use disorders, there is limited knowledge on their differential outcomes or how accepted they are; this is particularly true for those using MAT. In the era of the Affordable Care Act (ACA), there has been an effort to integrate primary and behavioral healthcare. This includes providing better screening, treatment, and services to support relapse prevention as well as utilizing referral practices to enhance behavioral health outcomes (Tai & Volkow, 2013). It is estimated that 3–5 million people dealing with addiction may become newly eligible for health insurance; although the ACA does not include funding specifically for recovery residences, demand for recovery housing is likely to increase as more people seek treatment. Recovery residences could play a major role in this federal initiative to provide community support targeted at improved long-term recovery. An important need is to better understand the barriers to and possible benefits of MAT within these housing environments.

Barriers to incorporating MAT in recovery homes

It is important to better understand why those on MAT have often not been residents of recovery homes. This might partially be due to the tendency for house operators to implement abstinence-based approaches that prohibit the use of psychoactive substances by residents. However, recently, the concept of “medication-assisted recovery” (MAR; the use of medications in combination with abstinence-based recovery) has emerged that blends progressive recovery goals and services and potentially offers a bridge between the distinct philosophies of abstinence-based and medication-assisted approaches. Many individuals that are associated with mutual aid programs, including many recovery residences, have begun to transition toward MAR. This transition represents a significant shift in philosophy for those that espoused approaches based on traditional abstinence definitions.

Clearly, more acceptance of MAT is being influenced by the evolution of what it means to be “abstinent.” In many cases, nicotine products and caffeine are deemed acceptable despite having psychoactive properties. Additionally, as more effective and safe medications have become available to treat psychiatric disorders, the list of acceptable medications has grown. However, medications that could be habit-forming or that have been used in active addiction largely remain prohibited or frowned upon by many members of mutual aid groups and recovery residences.

What it means to be in “recovery” has also evolved. Historically, abstinence was the primary measure of whether an individual was in recovery. In 2007, the Betty Ford Center introduced a new definition of recovery: “A voluntarily maintained lifestyle characterized

by sobriety, personal health, and citizenship” (Betty Ford Institute Consensus Panel, 2007). This definition explicitly identifies sobriety, defined as “abstinence from alcohol and all other non-prescribed drugs,” as essential to, but not the sole component of, recovery (Betty Ford Institute Consensus Panel, 2007). Furthermore, the “multiple pathways” concept promotes the idea that recovery can be achieved in many different ways, whether that be through an abstinence-based approach as described above, a moderation approach wherein individuals reduce but do not discontinue use, a harm-reduction approach wherein measures are taken to reduce the harmful effects of substance use without requiring that one moderate or discontinue use, or the use of medications that block or minimize the psychoactive effects of opiates or alcohol on the brain.

There have been a number of potential recovery home barriers for those on MAT, including the need for employment. Recovery residences are largely self-pay with typical fees, depending on the setting, ranging from \$100–\$200 per week; however, it is unclear if those on MAT are able to secure and maintain work. About half of MAT clients are unemployed at the time of application. Thus, the ability and motivation of the resident to work and pay for rent are important considerations. It is important to learn how many recovery homes provide a grace period for those just entering and obtaining gainful employment. It is also important to learn whether accommodation for individuals on disability are made if the resident is willing to engage in the functioning of the house, participate in some form of volunteer/service work, and has an income source (e.g., from social security).

We also need to better understand whether and how house residents receive employment placement and soft-skill counseling. Residents might need counseling on punctuality, dress, communication, and resume development by the in-residence peer support specialist to eliminate possible barriers to employment. Do recovery homes maintain contracts with local businesses who employ residents for jobs in food service, house construction/remodeling, landscaping, manufacturing, and the service sector? Do recovery houses provide transportation to local worksites to mitigate another employment barrier? Are peer-support specialists available to address the social and financial stability of housing? We need to know whether adding the roles of an onsite peer-support specialist and an at-large community coordinator are successful in providing financial stability to residents within this housing model.

Additionally, the issue of participation in external recovery resources such as mutual aid programs, outpatient programs, and substance abuse counseling exists. Most MAT programs that are office-based only require the patient to be compliant with their medication and see a health care professional monthly. A few provide additional counseling or have accredited intensive outpatient programs as part of their regimen. There is a need to better understand the connection of recovery homes to the wide availability of mutual aid meetings, with more than 100,000 groups in the U.S.

There are many other issues to consider and investigate. One example of such issues is the availability of naloxone in these housing units. Naloxone is a medication that takes a minimum amount of training to administer and is available for under \$100 per dose. Additionally, it is not prohibitive to operators. In addition, some persons who desire recovery

housing support will test positive for illicit drugs, most commonly benzodiazepines, marijuana, alcohol, or other substances. In order to maintain an abstinence-based culture and provide a safe setting for all residents, potential residents need to refrain from alcohol and/or illicit drug use with the exception of their MAT medication. The pursuit to find optimal ways to better ensure compliance with this requirement is still underway.

DePaul university research studies

Those living in recovery homes are very similar to those in other recovery settings. For example, Jason, Ferrari, Dvorchak, Groessler, and Molloy (1997) examined whether OH residents differed from people in other drug recovery programs in a national sample: 53% were never married, 58% were White, 70% were male, 71% had at least completed high school, 69% were employed with an adequate income to live independently, and 64% had experienced homelessness.

In addition, Harvey and Jason (2011) compared the social climate of peer-run OHs to staffed TRH. Findings indicated high levels of Involvement, Support, Practical Orientation, Spontaneity, Autonomy, Order and Organization, and Program Clarity scores. Demographic variables were comparable in the two types of settings.

In a national sample of OH residents, only 18.5% of the participants reported any substance use over 1 year (Jason, Davis, et al., 2007). Additionally, over the course of the study, the proportion of abstainers in individuals' personal social networks increased. An NIAAA-supported study recruited 150 individuals who completed treatment at drug abuse facilities in the Chicago metropolitan area. Half of the participants were randomly assigned to live in an OH, while the other half received community-based aftercare services (Usual Care). Results from this randomized study indicated at a 2-year follow-up that there was significantly lower substance use for OH participants (31.6%) than Usual Care participants (64.8%) (Jason, Ferrari, et al., 2006). Further, OH residents were more likely to be employed (76.1% vs. 48.6%) and less likely to report illegal activities. This study also found that individuals who stayed in the OH for at least 6 months had lower relapse rates and significantly better indicators of personal change such as employment, abstinence self-efficacy, and proportion of abstinent others in the personal "significant persons" network (Jason, Olson, et al., 2007).

In a study of recovery home social dynamics and personal (ego-based) social support networks, baseline and 3-month follow-up data were collected from 31 participants residing in five OH recovery houses (Jason, Light, Stevens, & Beers, 2014). We successfully recruited nearly all house members (2 opted out of participation). Trust within groups tended to develop over time, in part as a function of inter-individual exposure, especially when the individuals in the group were dependent on each other for desired outcomes (Schachter, 1951). OH recovery homes with a self-governance structure might promote such interdependence, which could be important for the wider inclusion of MAT residents within these settings.

There appears to be a large transition in economic viability during the 1–6 months residency period in these recovery homes. Average employment income increased from \$55 during the first month to \$1,500 at the 6-month time point. In addition, the Addiction Severity Light Employment Index improved from .6 to .4, where 1 indicates higher addiction severity and 0 indicates low/no addiction severity. Additionally, a measure of Social Embeddedness showed that the number of friends that residents in the OH possessed increased from zero one in the period of 1 month to 6 months. Proxies for learned recovery skills increased from month 1 to month 6. At the house level, OH locations ranged from below the 10th percentile to the 80th percentile on measures of neighborhood SES.

Majer et al. (2018) found one-third of a sample of OH residents living in Maryland (USA) reported a history of MAT utilization, possibly explaining their negative attitudes toward residents utilizing MAT. However, attitudes toward MAT utilization among recovery home residents seem to be improving in recent times. We predict that this may be related to environmental and personal factors. For example, an investigation of OH residents living in 23 U.S. states (Majer et al., 2020) found house (i.e., living with other MAT residents) and individual (i.e., heroin/opioids as former drug of choice) characteristics of OH residents were related to more favorable attitudes toward MAT. Examining such characteristics can provide insights into how to integrate MAT and non-MAT treatment elements to maximize outcomes for persons with opioid use disorders (Galanter, 2018). For instance, social support in this sample was found to mediate the relationships between stress on important recovery outcomes (quality of life, abstinence self-efficacy), and that the indirect effects were comparable regardless of MAT status (Majer et al., 2020a). However, homophily effects (i.e., living with another resident utilizing MAT) were observed to moderate the mediating effects of these relationships (Majer et al., 2020b). Social support mediated the relationships between stress and outcomes among residents utilizing MAT living with at least one fellow MAT resident, but not those who did not have a fellow MAT resident living in their recovery home.

In another recent study, participants were recruited from treatment providers that included office-based MAT, methadone clinics, and inpatient treatment. All providers have working relationships with Stepping Stones (a recovery residence network in Huntsville, Alabama). Inclusion criteria included a primary diagnosis of OUD and having entered a MAT program within the past 30 days. A total of 34 subjects, including both men and women, were recruited and assigned to a control or housing condition. The average length of stay within recovery housing was 104 days for outpatient clients, and data were collected at a 3-month follow-up. MAT residents were found to have improved indicators of recovery between baseline and Wave 2. The largest effect changes measured between the MAT recovery housing and usual care MAT groups were in employment and recovery meeting participation. This echoes the findings of past research that indicates that MAT recovery housing participants have much more exposure to 12-Step recovery meetings, the attendance of which is strongly encouraged and reinforced daily in the houses. Previous studies with Stepping Stones individuals show employment rates of about 90%, while MAT usual care participants as a population are known to have unemployment rates in excess of 50%. The study confirms that there do not appear to be any substantial differences between the MAT population and standard abstinence-based population within our recovery housing—

both are equally likely to participate in recovery mutual aid groups and employment with commensurate benefit to recovery outcomes. In the final part of this investigation, a survey instrument was constructed and administered to recruited participants at methadone and buprenorphine outpatient clinics. Between 34% and 53% of current MAT patients were found to be eligible for and may benefit from recovery housing.

Discussion

There are many components of MAT for recovery residences to consider when contemplating the admission of MAT patients. These components could be addressed by a closely-networked MAT research community. It is important to understand how potential MAT residents can be assisted, potentially through a combination of appropriate staffing, training, resident screening, and proper support. Potential residents could be screened based on their willingness to refrain from illicit drug use, ability to work, and willingness to participate in a form of recovery program (e.g., mutual aid program). Factors that would facilitate better MAT patient-centered planning, decision-making, and utilization of residential aftercare may include a focus on overall healthcare outcomes as well as a focus on systemic indicators of problematic outcomes such as noncompliance and retreatment.

Future research should attempt to guide better development of recovery networks, specifically networks that accommodate individuals who utilize MAT. This can be accomplished through the exploration of the barriers faced by recovery housing organizations that often involve a lack of awareness of issues surrounding MAT. These issues include the lack of available aftercare resources or and other, important services necessary for MAT-using individuals, the lack of resources to help finance these aftercare settings, and psychosocial impediments experienced by those utilizing MAT such as identifying with peers. In addition, there is the need for the use of novel techniques that leverage software and online tools. In addition, the development of a screening tool for prospective applicants that determines whether they are an appropriate fit for recovery housing could be of substantial help to these recovery homes. This tool could be made available to referral agencies, treatment centers, MAT clinics, and the public. This type of screening tool could provide an essential step that comes just prior to interviews with staff and house residents.

In summary, recovery homes could serve the populations that need them most, namely a significant number of the estimated 278,000 persons enrolled in MAT programs (SAMHSA, 2016). There is a clear obligation of researchers and recovery housing programs alike to answer questions that might lead to improvement in MAT recovery outcomes for those participating in residential aftercare. These answers would increase appropriate patient-centered education and planning. This planning must be connected to accessibility, availability, and affordability of aftercare residential resources. Overall, this rationale argues for a system of SUD recovery services that implement a strongly-networked continuum of care. This system should uphold MAT usage as something that patients can choose after evaluating it as a potentially critical and evidence-based option that could influence their likelihood of recovery.

Lastly, there is a need to develop the infrastructure support to facilitate multi-stakeholder research networks through meetings, conferences, small-scale pilots, data development work, theory development, and dissemination to encourage growth and development of resources for advancing recovery support services research for recovery residences.

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