Jail-to-Community Medication-Assisted Treatment: Perceptions of clients and staff

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Abstract

This article presents the perceptions of clients and staff involved in a jail-to-community medication-assisted treatment (JTCMAT) program involving the administration of the extended-release injectable naltrexone drug, Vivitrol. The program was delivered in one rural county jail in the northeastern region of the United States. Through semi-structured interviews with inmates and key program staff, we gathered data regarding the criminal history, history of victimization, and mental health status of inmates enrolled in the JTCMAT program. We also investigated inmates' and service providers' perceptions of the strengths and weaknesses of the JTCMAT program itself. Findings suggest a general level of satisfaction among program clients and service providers, although some challenges following reentry were identified.

Keywords: addiction, correctional treatment, MAT, re-entry, naltrexone, Vivitrol

INTRODUCTION

Each year from 2000 through 2017, there has been a significant increase in the number of overdose deaths, with opioids and particularly synthetic opioids being overwhelmingly responsible (National Institute on Drug Abuse, 2019; see also Rudd et al., 2016). The Centres for Disease Control and Prevention (2019) reported that there were over 70,000 overdose deaths in 2017, with 68% of those being opioid-related. Research indicates that the number of individuals in need of drug and alcohol treatment and rehabilitative programming is significant and increasing, particularly among those under correctional supervision.

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The Prison Policy Initiative reported that the most recent national data about substance use in prison is from 2009 (Troilo, 2018). The 10-year-old data revealed that 58% of inmates in prison and 63% of inmates in jail are dependent on substances and, since being admitted to a facility, only 28% of those in prison and 22% of those in jail had received substance abuse treatment (Bronson et al., 2017). Upon release from prison, those with a history of drug use are at a higher risk for relapse and overdose, if they have not received any treatment to help address their addiction while incarcerated (National Institute on Drug Abuse, 2019).

People released from jail or prison (PRJP) have been found to be particularly vulnerable to opioid-related overdose due to a number of factors (Binswanger et al., 2013). For example, those who suffered from chronic pain, HIV, or some form of trauma are at an increased risk of overdose upon reentry (Joudrey et al., 2019). Among incarcerated individuals with severe chronic pain, 70% were given access to prescription opioids (Williams et al., 2014). Among PRJP, victims of physical trauma were 36 times more likely than others to suffer a non-fatal overdose, and 48% of victims of sexual violence were likely to suffer a non-fatal overdose (Lake et al., 2015).

Those who have been recently released from prison may also overdose on opioids due to the challenges of reintegrating into society (Joudrey et al., 2019). Factors such as stigma, restricted housing, and social supports can lead PRJP to turn to opioids as a coping mechanism. One study found that 18% of PRJP resumed using drugs and 23% continued abusing alcohol (Chamberlain et al., 2019). Mental health disorders can also exacerbate the stress of reintegration. Individuals suffering from mental health disorders, including some resulting from sustained solitary confinement, often used drugs and/or alcohol to cope (Binswanger et al., 2012; Hagan et al., 2018). The risk of overdose among PRJP reveals the necessity for treatment programs for incarcerated individuals with substance abuse problems

Medication-Assisted Therapy (MAT) programs involve therapy and medication (SAMHSA, 2019a). Essentially, treatment providers supplement therapy with drug treatments that assist individuals by weaning themselves off the substance(s) that they have been abusing (SAMHSA,

2019a). For those addicted to opioids, there are three types of medications administered in MAT programs to prevent substance abuse: methadone, buprenorphine, and naltrexone (SAMHSA, 2019b). Both methadone and buprenorphine are opioid agonists, reducing withdrawal symptoms and craving for the previously-abused opioids. Methadone treatment, a full opioid agonist, involves the daily administration of the medication within a treatment clinic to avoid misuse. While much research has found methadone to be effective in treating addictions (Green et al., 2018; Lincoln et al., 2018; Russolillo et al., 2018), unfortunately methadone overdoses have increased as have prescriptions for this synthetic opioid (Kuehn, 2012; Whelan & Remski, 2012).

Buprenorphine, on the other hand, can be prescribed and dispensed by physicians because it is a partial opioid agonist, with a lesser euphoria from the drug and so a reduced likelihood of misuse (SAMHSA, 2019a; Whelan & Remski, 2012). Naltrexone is an opioid antagonist that, rather than suppressing cravings for an opioid like buprenorphine and methadone, will prevent the euphoria the opioid normally provides if someone should relapse (SAMHSA, 2019b). Naltrexone comes in pill form that requires daily administration as well as extended-release injectable form (i.e., Vivitrol) that requires monthly injections (SAMHSA, 2019a).

For substance-abusing individuals revolving through institutional corrections, an overdose is most likely to occur within two weeks post-incarceration at a rate that is 42 times higher than that of the general population (Troilo, 2018). Despite an increasing number of justice-involved opioid users, many facilities have not allowed individuals to start or continue using MAT programs (Green et al., 2018). Some of the primary reasons for this resistance include costs; potential for illegal distribution of the drugs among inmates; lack of resources; the stigmatisation of inmates, drug use, and drug offending; and opposition to the drugs utilised in MAT programs (Kulaga, 2019). Some of these challenges, however, are beginning to dissipate.

MAT programs using methadone and buprenorphine have been most commonly implemented, with much research supporting their effectiveness, while naltrexone has only more recently been FDA

approved (Gordon et al., 2015). The extended-release injectable Vivitrol received FDA approval for the treatment of opioid-dependent patients in 2010. Naltrexone, including Vivitrol, is beneficial "to patients and providers who are unlikely to access opioid-agonist maintenance treatment or who prefer a relapse-prevention medication" (Lee et al., 2016, p. 2). The use of naltrexone is beneficial in the criminal justice system because drug diversion is not possible, overdose is highly unlikely, and the extended-release injectable drug does not require daily administration as with the use of methadone and buprenorphine (Gordon et al., 2015).

Medication-Assisted Treatment (MAT) Evaluations

There have been generally positive results in evaluations of MAT programs involving the administration of methadone, buprenorphine, and naltrexone in conjunction with other traditional treatment/counseling programs (Lee et al., 2016, 2018; Lincoln et al., 2018; McDonald et al., 2016). Much previous research has indicated that adherence to MAT programs has reduced the risk of death during custody and immediately following release (e.g., Lee et al., 2018; Lincoln et al., 2018; Velasquez et al., 2019), while others have warned that additional research is warranted to examine some serious side effects and an unsettling number of fatal overdoses (Wolfe et al., 2011). In a study of a jail-to-community MAT program (using methadone, buprenorphine, or naltrexone) in the Rhode Island Department of Corrections, Green et al. (2018) examined overdose fatalities in the same six-month period in 2016 (before the implementation of the program) and in 2017 (following the implementation of the MAT program). There was a 12.3% decrease in overdose related deaths from 2016 to 2017, presumably due in large part to the MAT program (Green et al., 2018). Another study showed that all three MAT programs (naltrexone, buprenorphine, and methadone) available to inmates starting while they were incarcerated and continuing post-release, resulted in more individuals continuing with treatment and fewer individuals relapsing (Lincoln et al., 2018). Lincoln et al. (2018) concluded that it is beneficial for these types of programs to begin in jail or prison and continue post-incarceration rather than starting them once the inmate is released.

In another study, Velasquez et al. (2019) compared four (non-randomised) treatments of individuals being released from jail and entering

the community. Interviews were conducted with 33 adults who were opioid dependent and being treated using methadone (9/33), buprenorphine (4/33), naltrexone (11/33), or receiving no MAT (9/33) (Velasquez et al., 2019). Those receiving naltrexone who relapsed briefly during the study did so either because they forgot they received the injection, or because they wanted to test whether the medication was working (Velasquez et al., 2019). With naltrexone, there were no reported overdoses on any opioids and some participants said they lost their cravings altogether, while others received a few injections before stopping treatment altogether (Velasquez et al., 2019). Those who used buprenorphine and methadone reported that the effects of the medication were helpful, but most were unhappy with the fact that treatment was required daily and because they were misinformed about some of the undesirable side effects of the treatments (Velasquez et al., 2019).

To be eligible to use naltrexone, a person must first be detoxified. According to the pharmaceutical manufacturer, those who have not detoxed are at risk of overdosing after a relapse (Alkermes, Inc., 2019). In a study comparing the naltrexone extended-release injectable, Vivitrol, and buprenorphine (Suboxone), more individuals using Vivitrol dropped out of the study before treatment began (79/283) than did those using Suboxone (17/287); these individuals who dropped out of the study relapsed (Lee et al., 2018). However, of the individuals who remained in the study (204/283 using Vivitrol and 270/287 using Suboxone), both medications had similar results in terms of negative effects, such as overdosing, and in effectiveness once treatment began (Lee et al., 2018).

In another study, Lee et al. (2016) compared naltrexone (Vivitrol) with an alternative treatment that involved counseling and referrals to treatment programs (i.e., the usual treatment). This study found that individuals who used Vivitrol had zero instances of overdose, both fatal and non-fatal, during the 78 weeks that treatment was administered; whereas those who received the usual treatment resulted in five overdoses during the first 24 weeks (0-25), and a total of seven overdoses by the end of the 78 weeks (Lee et al., 2018). During the first 24 weeks, 43% (153/308) of the individuals who received Vivitrol relapsed compared to 64% (155/308) of the individuals who received usual treatment (Lee et al.,

2018). Additional long-term studies are required to determine whether naltrexone treatment benefits are consistent and to see whether any additional improvements might be needed.

While several research studies have evaluated MAT programs that use one or more of the three pharmaceutical treatments in terms of relapse and overdose, few research studies have been conducted to gather and examine qualitative data regarding the actual experiences of participants and providers in these programs (e.g., Velasquez et al., 2019). Given the exploratory nature of research designed to examine the structure and function of newly emergent correctional-based drug treatment programs, qualitative approaches can provide valuable perspectives related to substance use and motivation for change and program design and content. The current research study provides some preliminary qualitative data related to one county's MAT program.

County Jail-to-Community Medication-Assisted Therapy (Vivitrol) Program

In January 2017, an evidence-based MAT program was implemented in a rural county in the northeastern United States. The primary aim of the program was to address substance abuse disorders among individuals incarcerated in the county jail who were soon to be released into the community. This jail-to-community medication-assisted therapy (JTCMAT) program relied heavily on key jail and community-based personnel who would monitor the treatment of eligible individuals within the county jail and within the community, post-release. The program was supported by access to jail and community-based treatment opportunities designed to address the individual needs of inmates with both alcohol and opiate use disorders. The aim of the JTCMAT program was to minimise obstacles for individuals who were incarcerated and transitioning to the community, and to maximise the positive development of an inmate's cognitive, behavioural, social, vocational, and other skills to address the underlying causes of substance use and related problems. The program was comprised of traditional treatment (e.g., group and individual counseling) and the administration of extended-release naloxone (i.e., Vivitrol) injections, with the initial injection given prior to reentry into the

community. The county provided the transportation of incarcerated program participants to the various community treatment centres.

The purpose of our research was to explore the backgrounds and needs of the inmates enrolled in the JTCMAT program, to gather information regarding their experiences in the JTCMAT program, and to examine the perspectives of both program participants and program staff regarding the general strengths and weaknesses of the program. Utilising data obtained through one-on-one semi-structured interviews with inmates and key program personnel, this study sought to answer three main research questions:

Research Question #1: What are the individual life experiences of inmates who are enrolled in the county JTCMAT program related to prior criminal behavior, substance use or abuse, history of victimisation, and experiences with emotional and mental illness?

Research Question #2: What are JTCMAT program participants' beliefs about the strengths and weaknesses of the program?

Research Question #3: What do community treatment providers believe are the strengths and weaknesses of the county JTCMAT program?

METHOD

Participants

All inmates targeted for one-on-one interviews in this study were 18 years of age or older, enrolled in the JTCMAT program, and at varied stages of the correctional process (incarcerated, re-incarcerated, or under community supervision). Inclusion in the program was determined by the county jail exclusively and, although convenience sampling was utilised, it was based, in part, upon the inmate's individual need and willingness to participate in substance abuse treatment, substance abuse history, receptivity to treatment, and anticipated date of release from jail. Key program staff targeted for interviews included the county jail health service administrator—who referred patients meeting inclusion criteria to the JTCMAT —and other service providers. For the purposes of this study, key provider staff included program directors, case managers, psychiatrists, counsellors, and nurses based at two community-based

agencies—one, a drug and alcohol rehabilitation centre, and the other, a federally qualified health centre (FQHC).

Participants were informed that the researchers would be available on certain days/times to discuss their experiences in the program. There was no compensation to research subjects for participating in the study, nor any impact on inmates' access to jail or community services or their correctional supervision. The employment status of staff who chose not to participate was not impacted either. All participants were instructed that they could withdraw from the interview at any time.

Data Collection/Interviews

In the context of health promotion and disease (e.g., substance abuse) prevention, it is essential to identify core determinants that may influence effective health practices, which may include one's knowledge of health risk/benefit, perceptions of ability to control health risk, outcome expectations/goals, and perceived social facilitators and impediments to positive change (Bandura, 2004). Based upon these considerations, we included questions designed to assess participant socio-demographic information, family history, social and personal risk history, history of substance use/abuse, medical, mental health status, prior victimisation/traumatisation, prior hospitalisations, medications, housing status, and community needs.

The interview tool for use with program staff included questions designed to elicit staff/county provider perceptions about client needs and risks (individual and social), efficacy or clients' ability to successfully participate/complete the program, and perceived usefulness or effectiveness of the program in its current form—including benefits and impediments to MAT and community-based treatment/supports. Staff were also asked to make any recommendations for change or improvement based upon their assessments of program effectiveness.

Over a two-month period in the spring of 2018, the researchers collected data through interviews with a convenience sample of 10 inmate participants and nine provider staff. After obtaining informed consent, face-to-face individual interviews lasting approximately one hour were conducted in a private room at the jail, FQHC, or substance abuse

treatment program. All interviews were audio-recorded and later transcribed by the researchers.

Data Analysis

Both quantitative and qualitative interview data were analysed. Descriptive analyses of the quantitative data documented program participants' self-reported demographic and other personal characteristics, financial and family support, motivation for change, history of violent and property crimes, involvement with substance abuse, incidents of victimisation, and mental and emotional health problems.

Extensive qualitative data were obtained through program participants' and program staff members' narrative responses to several open-ended questions asked during their individual, one-on-one interviews. All interview responses were digitally recorded and then transcribed verbatim into a relational database. Content analysis techniques were used when reviewing these narratives (Holsti, 1969). Narrative responses were reviewed, and conceptual categories or themes were identified by the research team. Next, coding rules were established for each category or theme. Each member of the research team then reviewed the interview transcripts again and coded the narrative responses using the objective criteria established. For the present analysis, themes and categories related to the perceived strengths and weaknesses of the program design, Vivitrol injections, other drug options, clients' insurance, and motivation to change behavior were examined.

RESULTS

Program Participants

Table 1 reports findings (n=10) about program participants' demographic characteristics and reported history of victimisation. The interview respondents were predominantly non-Hispanic white (90%), female (80%), single (60%) or divorced (30%), and had earned at least a high school diploma or GED (60%). Program participants ranged in age from 22 through 50, with a median age of 31.5 (mean=34.67; SD=12.74). Seventy percent of the participants were responsible for dependent children (median=1.5; range=0 through 5).

Table 1 also highlights information about the financial status and family support of program participants. As shown, the majority had worked as unskilled laborers (70%), with 40% of respondents reporting that their financial stability was supported predominately from their own employment or disability benefits, while others reported that they were supported mainly by their family (30%) or through a combination of employment and family financial support (30%). Many (80%) of the participants reported strong family support systems, even if this support was not financial. Finally, the table reveals what participants reported as motivating factors to be successful in their recovery. These factors included having contact with their children (40%), attaining a healthy lifestyle both in body and mind (30%), and maintaining stable employment (20%).

Table 1 *Participant characteristics, financial and family support, and motivation for change*

(n=10)	%
Respondent Characteristics	
Race/Ethnicity	
non-Hispanic white	90
non-Hispanic, non-white	10
Gender	
female	80
male	20
Marital Status	
never married	60
divorced	30
married	10
Education	
no high school diploma/GED	40
completed high school/GED	30
some college	10
graduate degree	20
Age	Median=31.5; range=22-50 $\bar{x}$=34.67; s=12.74

Number of dependents	Median = 1.5; range = 0-5	
0 children		30
1+ children		70
Employment		
formerly/currently unskilled laborer		70
formerly/currently skilled laborer		30
Financial Dependence/Independence		
main income source was/is employment/disability benefits		40
main income source was/is family members		30
combined sources of self-support/family support		30
Social Support		
strong family support		80
social non-familial support		10
no social support		10
Motivation for Change		
children		40
employment		20
healthy body/mind		30
other motivators		10

Table 2 reveals findings (n=10) about participants' self-reported involvement in criminal behaviour that led to prior incarceration, as well as use/abuse of alcohol and other drugs. Only 30 percent of participants reported no prior incarceration, while the remainder reported prior incarceration for violent crimes, including simple assault (30%), domestic violence (20%), and robbery (10%); property crime, including burglary (40%) and theft (20%); and/or DUIs (30%). Participants reported a variety of involvement with substance use/abuse including most commonly reported heroin (80%), other opiates/opioids (50%), alcohol (50%), cocaine (50%), crack (50%), and/or marijuana (30%).

Table 2
Participants' self-reported history of violent and property crimes and drug use

(n=10)	%
History of Prior Incarceration	
No prior incarceration	30
Prior incarceration for violent crime	
Simple assault	30
Domestic violence	20
Robbery	10
Prior incarceration for property crime	
Burglary	40
Theft (felony and retail)	20
DUIs	30
History of Substance Use/Abuse	
Alcohol	50
Amphetamines	10
Bath salts	10
Cocaine	50
Crack	50
Crystal methamphetamine	10
Heroin	80
Marijuana	30
Other opiates/opioids (other than heroin)	50

Table 3 reveals findings (n=10) about participants' self-reported experiences of victimisation and mental and emotion health problems. As shown, participants described a history of victimisation, including emotional abuse (40%), physical abuse (50%), and sexual abuse (60%). Also, 50 percent of the participants reported victimisation through one or more forms of abuse, and 20 percent reported abuse that had occurred during childhood. The respondents who reported histories of childhood trauma were reluctant to elaborate about this form of victimisation during the interview.

Table 3 also shows participants' self-reported history of mental and emotional health problems. Most respondents (70%) reported having one or more types of mental and emotional health problems (MEHP). Specifically, participants reported experiencing anxiety (40%), depression (30%), post-traumatic stress disorder (30%), mood disorders (20%), panic disorders (10%), and/or obsessive-compulsive disorder (10%). Additionally, though not reported in the table, 60 percent of the respondents reported one or more prior inpatient hospitalisations for mental health, substance abuse, or co-occurring substance abuse and mental health problems.

Table 3
Percentage of participants reporting history of victimization and mental and emotional health problems

(n=10)	%
History of Victimization	
emotional abuse	40
physical abuse	50
sexual abuse	60
one or more types of abuse	50
abuse during childhood	20
Mental & Emotional Health Problems (MEHP)	
anxiety	40
depression	30
mood disorder	20
panic disorder	10
post-traumatic stress disorder	30
obsessive compulsive disorder	10
one or more types of MEHP	70

Offender and Treatment Providers' Perspectives Regarding the JTCMAT Program

Program participants and staff shared their perceptions of the JTCMAT program during semi-structured one-on-one interviews. Several themes emerged from these narrative accounts and are summarised in Table 4.

Program Design. Aspects of out-patient treatment therapy, including group sessions facilitated by community providers, were well received by program participants. Program participants reported feeling comfortable and supported during group therapy sessions with others who were struggling with issues of addiction. One participant mentioned how connected she was to the group, "…anybody I could relate to almost, everybody has a story there, I could relate to anyone I could talk to".

Responses provided by program staff also were favourable. Staff, however, discussed in greater detail specific aspects of the program design that were conducive to learning and fighting addiction. One staff member liked that the county jail "let [the offenders] come out of the jail to be able to participate in this treatment…. they really understand why they are here, they are supportive of one another. I feel that gives them more support because in jail they are alone a lot or they are with negative people". Another staff member liked that the program linked group treatment and individual counselling to receiving the Vivitrol injections, "a lot of our clients, they will tell you that getting the Vivitrol is a big motivator to stay in treatment…they will tell you that is why they like to stay engaged with counselling, it is beneficial, but they really enjoy the fact that they can get the MAT part of it, the medication".

Staff from the community treatment providers generally reported a good working relationship with the county jail. A staff member commented, "Once someone is in and we need to schedule individual sessions, something outside the normal group, I think that goes really well. We never had a problem with availability for scheduling, never had a problem with transportation for individuals, so once we schedule with the jail, our clients are here and everything is going well". Another staff member praised the program for allowing the clients to start the Vivitrol injections while inside the jail:

> I think what that allows the patient to do is to get the experience for the first time of this is what sobriety feels like. They can both have a visceral/physical experience, but also the psychological experience of 'I am thinking clearer, other people are noticing that about me'. That's huge because that they hit the community with

> that already in place, so they don't immediately go back to the one coping skill they know, which is the addictive behaviour.

There were some criticisms of the program design however. For example, some program staff were concerned with the continuity of care, citing a lack of access to Vivitrol as a common obstacle. One staff member commented,

> I feel that the grant coverage for the jail program seems disconnected. The jail has tons of Vivitrol, but the community/provider does not. We've had to call over to the jail to request a supply of Vivitrol. [The jail administrator] will tell me he has plenty of supply, but then only sends enough for one month. I am often wondering why he just does not send us several months' worth of injections at a time, since he seems to have a huge supply there.

Although improvements could be made, participants and staff overwhelmingly agreed the program was designed in a manner that worked for everyone. Modeling the JTCMAT program after other successful MAT programs that used group counselling sessions and referrals may have facilitated such positive outcomes here.

Vivitrol Injections. Another theme that emerged from the interviews related to the Vivitrol drug itself. Program staff reported Vivitrol was the most appropriate medication to use with inmates suffering from substance abuse issues. Many staff spoke favourably about the monthly injection versus taking other kinds of medication every day. Clients made similar comments. For example, one stated, "for me, I was always chasing the high. So, it wasn't for me. I wasn't …I couldn't medicate myself properly. So, Vivitrol is one time, done, that's it". Some service providers believed the monthly injections reduced the likelihood of "forgetting" to take the medication, especially because community centre staff were responsible for administering the doses, but other advantages included reducing the likelihood that the participant's own family members or friends would steal and/or coerce them into sharing the medication. Staff also reported taking medication every day is symbolic of taking illicit drugs, which is an association they wanted to break.

Other staff mentioned how Vivitrol negates any effects of drug use. Essentially, Vivitrol impedes "getting high". One staff member described that "…if they have Vivitrol in their system and they drink or they would use an opiate, they are not going to feel it…they are spending the money and they use the substance, but they are not getting the payoff. And that is a common thing that they say, that `it would be a waste if I did it'". Individual program staff perceived this effect as a great deterrent to future drug use. The comments provided by program staff in this study echoed findings from previous research about the benefits of Vivitrol to reduce cravings and to minimise urges to start reusing in the future.

Vivitrol Compared to other Drugs. During the one-on-one interviews, program participants and staff compared the Vivitrol drug to other medications designed to combat addiction. Program participants reported a preference for the Vivitrol injections compared to other treatment options including Suboxone. For example, participants described that Vivitrol reduced the cravings for additional drugs/narcotics, while Suboxone caused a "high" among users. One respondent commented, "…if you're an addict, you're going to chase that high" if on Suboxone. Another described Vivitrol:

> There's no high, there's nothing like it. All it is a shot, done, there's nothing to it. The Vivitrol eliminates all cravings and anything like it. For me, personally speaking, I can say …Suboxone, Subutex…I got high off it when I first started it. And like I said, you're gonna crave that high. That's how I was, I was an addict.

Several staff concurred that Vivitrol was a better option than other drugs currently available. Program staff described Vivitrol as a relapse prevention medication, while other drugs, like Suboxone, are harm reduction medications that are initially used regularly, then tapered off gradually. One staff member mentioned that Vivitrol offers a better path for recovery, as the program participants are not taking something every day. She noted,

> With Suboxone you are still taking something every day, so when our clients get down to none, they still have that desire to take something. People will commonly go back to either buying

> Suboxone off the street or they will start taking something else. With Vivitrol, they are not doing that. They have the medication, the anti-craving medication, and they also are not on an opiate anymore.

However, some staff warned that Vivitrol may not be the drug of choice for all inmates who were suffering from drug addiction and encouraged examining other drug therapies, depending upon the needs of the target population. According to one treatment provider, the effectiveness of MAT may depend on the stage of addiction. For example, one staff member commented, “there are different types of MAT and some work better than others, depending on the client’s status…In particular, Vivitrol works well earlier in a client’s addiction, as it blocks the craving and the injections must be administered under the care of a physician and only once a month”. This staff member continued by explaining that Vivitrol would not work on individuals who had an active addiction,

> You also have to look at frequency. When you take someone who is incarcerated who may be in active addiction, you can't give them once a month injection, and once a month individual therapy and expect to impact change. So, I think we've handed some folks back depending on their severity of when they walked in the door.

Other staff indicated Vivitrol was not appropriate for use with pregnant clients.

Staff also mentioned that other types of MAT are preferable for a number of reasons, including their risk of relapse and an ability to access the drug. One staff member mentioned, “…using Suboxone (buprenorphine), which has been found to be an effective alternative approach to addiction and is less costly. It is also available in injectable form, which would prevent abuse”.

Some staff mentioned the importance of waiting until after detox is completed before administering Vivitrol to clients. Other staff warned of the drug backfiring when clients try to achieve the previous effects of drugs while Vivitrol is preventing these desired effects. For example, one service provider stated,

> …generally, if you use heroin or drink alcohol, you won't feel a high or anything and you won't get sick. People think, maybe if a use a little more I can overpower it. They will either continue to drink or they will use more and they will start getting physically sick because they are putting a poison in their body but they are not feeling a high from it…One of [the county's] first clients with Vivitrol was on it for alcohol and he started drinking and he thought he could override it and he ended up in the hospital.

Similarly, another service provider warned against using Vivitrol for people who have overdosed previously, as they are more likely to repeat that behavior while they are attempting to overcome the impact of the Vivitrol. Despite these setbacks for some people, Vivitrol injections, as previous research has shown, have been utilized quite successfully in other MAT programs. The majority of participants and staff associated with the JTCMAT program spoke favourably about using Vivitrol compared to other drug substitutes.

Insurance. Another theme that emerged from the interviews related to financial expenses. Specifically, staff discussed concerns about who would be responsible for the financial costs associated with the Vivitrol injections. Some staff discussed how the cost of the Vivitrol medication and injections were covered by the county jail through grant monies. The cost would continue to be paid by the county as long as the participant was incarcerated and actively enrolled in the program. Upon discharge from the county jail, the client's own health insurance would be billed for expenses. Staff indicated that many insurance companies would not cover the Vivitrol injections which they estimated to cost between $1,200 - $1,500 per injection. Staff reported they were instructed by the insurance companies to find less expensive alternative medications. One staff member described, "Vivitrol is not a preferred medication by medical assistance and few commercial insurances. They would argue the patient could take one of the other alternative choices…or try taking the Vivitrol tablet".

Motivator to Work on the Underlying Causes of Substance Abuse. Some staff and clients pointed out that Vivitrol can be a motivator for working on underlying issues. One staff mentioned,

> A lot of our clients they will tell you that getting the Viv is a big motivator to stay in treatment because the way our program is set is they have to be engaged in counselling to get the Vivitrol. And so they will tell you that is why they like to stay engaged with counselling, it is beneficial but they really enjoy the fact that they can get the MAT part of it, the medication.

Also, some staff and clients recognised that Vivitrol was not a panacea that would cure addiction without working on the underlying issues. One service provider stated,

> It does reduce the craving, but it's a behaviour. Like, the medication helps with the craving and the physical aspect, but the behaviour of addiction…until they address the behaviour of addiction, a lot of times, somebody's always gonna want that feeling…to be high. It doesn't take care of the psychological aspect of why we need to be in treatment…

In previous addiction and MAT research (e.g., Najavits et al., 2017), several clients pointed to histories of trauma and mental health problems during their interviews, and some were motivated to work on rekindling positive relationships with children and other family members through sobriety and therapy. Given the frequency with which mental health disorders and substance use co-exist, especially among adults with opioid use disorder (Jones & McCance-Katz, 2019), the urgency for the inclusion of therapy and counselling while in the correctional and community settings cannot be overstated; this is particularly important at the point of reentry. As one client lamented, "when something goes wrong in my life, I just wanted to use to deal with my problems". Consistent with previous studies on addiction, the present analysis illustrates that one issue which often leads people to abuse substances involves the motivation to alleviate underlying psychological needs.

Table 4: *Most common themes identified in interviews with JTCMAT participants and service providers*

Strengths
Program design
Transportation from jail to community-based treatment providers
Group counselling relatable for clients
Vivitrol convenience (monthly injection)
Vivitrol effectiveness in eliminating cravings
Vivitrol advantages over opioid agonists (methadone and buprenorphine)
Timing of the first Vivitrol injection (pre-release)
Access to Vivitrol as a motivator to work on underlying issues
Challenges
Continuation of treatment after reentry – less of a controlled environment
Vivitrol's cost relative to other medication options
Access to Vivitrol – cost and insurance denials
Can increase likelihood of overdose due to efforts to overcome the effects of Vivitrol
Detox before Vivitrol administration
Vivitrol is not suitable for everyone (e.g., pregnant women; those with overdose histories)
Vivitrol is not a panacea

DISCUSSION

The purpose of this study was to better understand the JTCMAT program participants and the strengths and weaknesses of the program identified by participants and providers. Findings gathered through this project can: 1) add to the current body of research about effective correctional intervention techniques, 2) have practical implications for county officials to develop more effective inmate programs, policies, and strategies to reduce habitual substance abuse and recidivism, and 3) be used as a model to replicate the research on larger samples in other jurisdictions.

Findings showed that the county JTCMAT program participants were diverse in terms of their life experiences, including their history of

prior incarceration for various violent and property crimes, self-reported use or abuse of illicit substances, history of victimisation, and mental health diagnoses. Staff or counselors of Vivitrol programs held in small communities or with county jail populations may find it more challenging to facilitate group discussions with a diverse population as compared to larger state or federal prison systems where participants can be better grouped and enrolled in programming based on participants' background and life experiences.

Responses provided by subjects in this study revealed that the diversity of individual participants in group counselling did not detract from the discussion; rather, it was used to encourage discussion and to identify commonalities. Indeed, findings uncovered from one-on-one interviews with staff and program participants revealed a general satisfaction with group sessions. Participants reported feeling supported during groups and comfortable interacting with others who struggled with issues of addiction. Overall, the groups appeared to be facilitated in a manner where everyone could find something to relate to.

Other findings uncovered here included themes that emerged from one-on-one interviews with program participants and staff. With respect to program participants, we observed life trajectories that paralleled those found in previous research. In particular, there is a substantial body of evidence that links abuse and traumatisation to the use of substances as a negative coping mechanism; this is especially exacerbated in cases where mental illness is present (Najavits et al., 2017). Consistent with these outcomes, participants revealed complex histories of exposure to multiple forms of trauma (abuse, neglect, polyvictimisation) and mental health conditions that, for many, led to early experimentation with drugs/alcohol. Over time, their substance use has transformed into dependence and addiction. While not explored in our analysis, it is possible that underlying mental health conditions that have been left unaddressed and untreated may lead to complications that prevent optimal success in an MAT program—a finding supported by prior studies (Hien & Levin, 2012; Zeledon et al., 2020).

Despite some anticipated challenges, there was a general consensus among community treatment providers and clients that the JTCMAT

program was conducive to learning and fighting addiction. Staff liked how the program was designed to allow inmates a temporary release from the jail setting to take programming in the community. Staff also praised the program for linking the Vivitrol injections to the program itself, and for administering the first injection prior to reentry into the community. They perceived this as a motivating factor for participant attendance. Findings here also suggested that hybrid, jail-community based programs like this require a strong working relationship and coordinated efforts between the correctional setting and the community treatment provider.

Much insight was provided during interviews about the Vivitrol drug itself and comparisons were made to other medications designed to alter an addict's behaviour. First, staff and clients extolled Vivitrol because of the need for monthly, not daily, injections and how the drug would negate any effects of other drug use. Both staff and clients described Vivitrol as a relapse prevention medication, while drugs like Suboxone, are harm reduction medications. These other drugs often leave participants with a lingering desire to continue taking medication of some kind, while with Vivitrol the cravings are eliminated. Some staff viewed this outcome as having a great deterrent effect, including curbing other drug use while on the Vivitrol injections, while others warned that some might try to overcome the effects of Vivitrol with a higher quantity of drugs that might lead to overdose. Other staff pointed out that Vivitrol cannot safely be administered to pregnant women. Methadone is the only medication of the three that pregnant and breastfeeding women can use safely (SAMHSA, 2019b).

Another common drawback identified by community treatment providers and clients involved the financial cost of injections. During the evaluation period, the cost of the Vivitrol medication for incarcerated participants was paid for by the county jail. Once released from prison, community providers reported the participant's own insurance (either private insurance or medical assistance) would be billed for expenses. Oftentimes insurance companies were unwilling to incur the expense and encouraged other less expensive treatment options including Suboxone. Recent research findings, however, suggest that a cost savings may be

realised by significantly reducing the dosage of naltrexone without negatively impacting the drug's effectiveness (Sidana, Das, Bansal, 2019).

CONCLUSION

From 1999 through 2017, rates of fatal drug overdoses in the US increased more than 250% (Centres for Disease Control, 2020). Given their vulnerability to substance abuse, persons in prisons and jails have been the focus of many researchers and policy makers. The importance of substance abuse treatment programs that straddle incarceration and the community following reentry has been highlighted repeatedly by several researchers (e.g., Binswanger et al., 2007; National Institute on Drug Abuse, 2019; Ranapurwala et al., 2018). While previous research has shown that relapse occurs at rates similar to those for other chronic illnesses such as diabetes, hypertension, and asthma (National Institute on Drug Abuse, 2018), MAT programs are likely the best available options for substance-abusing offenders both during incarceration and following release to the community. These programs allow clients and treatment providers to work on the underlying causes of clients' substance abuse while maintaining sobriety. The focus of our study was one that included group and individual therapy and the administration of (naltrexone) Vivitrol injections.

In general, clients revealed various life experiences (e.g., prior physical and sexual abuse) and mental health issues that lessened the odds for successful recovery from addiction. However, responses gathered during interviews with the JTCMAT program participants and staff were overwhelmingly positive, corroborating the earlier research by Velasquez et al. (2019). The logistics of the program (e.g., eligibility screening, treatment, transportation to the community treatment facilities, Vivitrol injections, etc.) provided a relatively seamless treatment protocol during the incarceration period. Upon reentry, transportation issues and insurance denial of coverage for Vivitrol sometimes become critical issues. Supplemental interviews should be administered with program participants, including inmates currently enrolled in the program, inmates who have completed the program and have successfully transitioned back into society, and inmates who were reincarcerated after completing the program. These interviews would help us to gain a deeper understanding

of the strengths and weaknesses of the program, as well as risk and protective factors that might impact treatment results.

Although the presence of co-occurring substance use and mental health disorders among survivors of trauma and abuse is a well-established research finding, there is a need for improved understanding of their prevalence and related mental health treatment requirements among justice-involved individuals. Our study design did not lend itself to more fully examine these relationships; however, we encourage further exploration in future research endeavours with offenders engaged in similar jail to community programming.

In addition, further research is needed to examine the potential for "fatal overdose at the end of a dosing interval, after missing a dose . . . after discontinuing Vivitrol treatment [or during] attempts to overcome blockade" (USFDA, 2019). Additionally, research that can more carefully establish which pharmaceutical treatment is most effective with clients with different patterns of abuse will help to establish a protocol that will result in more personalised and effective MATs.

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