

Volume II

**Best Practices in the Justice
System for Addressing the
Opioid Epidemic**

JOURNAL

for Advancing Justice

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Best Practices in the Justice System for Addressing the Opioid Epidemic

National Association of Drug Court Professionals
Alexandria, Virginia

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for Advancing Justice

VOLUME II

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Journal for Advancing Justice

The *Journal for Advancing Justice* provides justice and public health professionals, policymakers and other thought leaders, academics, scholars, and researchers a forum to share evidence-based and promising practices at the intersection of the justice and public health systems.

The journal strives to bridge the gap between what has proven effective and what is often considered business as usual.

Although the *Journal for Advancing Justice* emphasizes scholarship and scientific research, it also provides practitioner-level solutions to many of the issues facing the justice system. To that end, the journal invites scholars and practitioners alike to submit articles on issues of interest impacting global justice systems, particularly where they collaborate with public health systems.

Advancing Justice was created by leaders of the treatment court movement at the National Association of Drug Court Professionals (NADCP). Through NADCP, Advancing Justice harnesses three decades of credibility, expertise, and leadership responsible for the creation of more than 3,000 treatment courts throughout the world. With a constituency of thousands of justice and public health professionals spanning every intercept point in the justice system, from entry to reentry, Advancing Justice is positioned to lead a new era of global reform.

National Association of Drug Court Professionals

The National Association of Drug Court Professionals (NADCP) is the premier training, membership, and advocacy organization for the treatment court model, which now includes more than 3,000 programs found in every state and four territories of the United States, and over 20 countries. Since 1994, NADCP and its divisions—the National Drug Court Institute, the National Center for DWI Courts, and Justice For Vets—have trained hundreds of thousands of professionals spanning the legal, clinical, psychosocial, and law enforcement fields.

NADCP regularly publishes cutting-edge, research-based materials—including the groundbreaking *Adult Drug Court Best Practice Standards*—and the association works tirelessly to improve the response of the American justice system to people with substance use and mental health disorders.

NADCP is a 501c3 organization.

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INTRODUCTION

For those of us working with drug courts and the larger justice system, there could hardly be a more important topic than the ongoing opioid epidemic. The death and suffering in front of us necessitate a concerted and sustained response from the first responders to the ravages of substance use disorders (SUDs): the judges, attorneys, corrections officers, and substance use treatment providers who work on the front lines of the justice system.

Opioid-related morbidity and mortality in the United States has been increasing over the last two decades: in 2017, 2.1 million Americans had an opioid use disorder (OUD) (Substance Abuse and Mental Health Services Administration [SAMHSA], 2017), and 47,600 died from opioid overdose, as compared to 8,048 deaths in 1999 (National Institute on Drug Abuse, 2019). The increase in opioid overdose deaths has occurred in three waves—the first beginning with an increased prescribing of opioids in the 1990s; a second, heroin-fueled spike that began in about 2010; and the third wave beginning in about 2013 with the increased presence of fentanyl and similar synthetic opioids in the illicit marketplace (Centers for Disease Control and Prevention, 2018).

Predictably, the damage done to individuals with OUD who are involved in the justice system has been even more striking. Drug overdose is among the leading causes of death in persons reentering society after incarceration, with most of those overdoses attributed to opioids. In one study of 229,274 former inmates released from prison, death from opioid overdose within a year of prison release was 40 times more likely than in a nonincarcerated control group (Ranapurwala et al., 2018). Even in the time period 2007–2009, 16.6% of state prisoners and 18.9% of jail inmates in a nationwide study reported that they regularly used heroin or other opiates (Bronson, Stroop, Zimmer, & Berzofsky, 2017).

Despite the overwhelming penetration of opioids into the justice-involved population, the criminal justice system has not seized this golden

opportunity to address OUD. A 2017 review of a national treatment episode data set (Krawczyk, Picher, Feder, & Saloner, 2017) showed that only 4.6% of justice-referred clients received agonist medication treatment, while 40.9% of OUD patients referred from nonjustice sources received that treatment.

The myriad reasons for the justice system's reluctance to deploy best clinical practices against OUD are easily understood, given the demands placed on the legal system. One government source (SAMHSA, 2019) listed some of these reasons: (1) misunderstanding about medication-assisted treatment (MAT) medications and their side effects, mostly the concern that the treatment is “substituting one drug for another”; (2) diversion concerns; (3) cost considerations, both before and after incarceration; (4) state regulations that prohibit the use of MAT in correctional facilities; and (5) a dearth of community-based MAT providers.

The regulatory and financial difficulties with MAT in the legal system are beyond the scope of this journal, but the profound and sometimes institutionalized lack of understanding about MAT is not. This second volume of the *Journal for Advancing Justice* is titled “Best Practices in the Justice System for Addressing the Opioid Epidemic,” and provides several reports about OUD in the justice system, from clinicians and justice professionals who are using thoughtful strategies and studying the effects of those strategies. My hope is that the clinical articles, as well as the reviews and legal observations included, will encourage you to continue the important work of addressing OUD in the justice system. For that reason, we have selected practical papers which rely on best practices in both the clinical and legal spheres.

I wrote the first article. I am an addiction psychiatrist, and the article provides a brief outline of best practices using MAT, an overview of the available data on MAT's efficacy, and some ideas for promoting the treatment's expansion within the justice system. MAT is demonstrated to be

the standard of care for the treatment of OUD both in and out of the justice system, because it significantly reduces overdose, morbidity, and justice system involvement. The guidelines that clinicians use in prescribing MAT are elucidated for the benefit of those justice professionals who work with clinicians in the justice system. These complex clinical assessments—done by a duly licensed and educated clinician—are shown to deliver good treatment even in the face of co-occurring mental illness, other SUDs, and a lack of social supports.

The second article, by former New Jersey Governor Jim McGreevey and Katie Forkey, describes promising and evidence-based programs offering MAT for incarcerated persons with OUD, focusing on robust treatment delivery services and reentry after incarceration. In their examination of responses to this problem in four states, they demonstrate that effective treatment of OUD in the incarcerated population—in addition to saving lives—can indeed result in decreased relapse rates, improved cost efficiency, and lower crime and recidivism rates.

The third article, by Dr. John Gallagher, Dr. Douglas Marlowe, and Raychel Minasian, evaluates the perceptions of drug court participants with OUD in terms of the most beneficial aspects of their drug court experience, their experience with MAT, and some potential improvements in drug court protocols. Participants held largely favorable attitudes toward MAT but cautioned about such issues as stigma emanating from family members and peers in recovery support groups, forced detoxification during jail detention, and the importance of urine drug testing to deter drug substitution.

Next, Drs. Alisha Desai, David DeMatteo, Kirk Heilbrun, and John Rotrosen explore the effect of OUD on judges' sentencing recommendations. Given the high proportion of criminal defendants who meet criteria for OUD, the paper's conclusions about alluding to an OUD diagnosis early in a defense, focusing on the benefits of rehabilitation, and forthrightly addressing the court's natural concerns about recidivism, are particularly enlightening. Judges appeared to view defendants

with OUD as less capable of logical reasoning, but more likely to reoffend. However, there were no apparent differences in sentence length, suggesting that although judicial perception of the defendant changed, the ultimate punishment decision did not.

Dr. Anees Bahji contributes a meta-analysis and review of the medical literature on the treatment of OUD-diagnosed inmates with naltrexone. The seven studies he reviewed found moderate-quality evidence for naltrexone reducing reincarceration rates, and a slight benefit for naltrexone over no-medication controls in improving abstinence from illicit opioids, both important factors for facilities that focus on naltrexone treatment for OUD. An emerging model involves some prisons and jails offering injectable naltrexone prior to release from custody; however, research on its effectiveness is newer and less developed than that on methadone and buprenorphine. The findings in this meta-analysis offer further support for this model in criminal justice populations.

In "Exploration of Knowledge, Opinions, and Stigma Regarding Medication-Assisted Treatment Among Treatment and Criminal Justice Professionals," a broad examination of opinion about all forms of MAT for OUD, Mr. Alex Dorman, Ms. Jaahnavi Badeti, and Dr. Alec Boros performed structured interviews of 234 employees in a large community-corrections nonprofit organization that specializes in the treatment of SUD. In interviewing employees from the clinical, corrections, and administrative operations of the facility, they were able to identify significant remaining stigma about MAT, as well as a lack of knowledge on the part of some participants, which allowed them to make some specific recommendations for training. These recommendations included offering training to frontline criminal justice staff to improve their knowledge, and ultimately their opinions, about MAT.

In the seventh article, Dr. Melissa Neal, Dr. Lisa Callahan, Chanson Noether, and Erika Ihara review the relevant literature about criminal justice professionals' views on discrete barriers to MAT in jails and prisons, such as perception problems, a misunderstanding of MAT by treatment courts, and a lack of funding and providers. Some examples

of these barriers were concerns about having the physical space to do the counseling connected with MAT, worries about accurate measurement of MAT's effects, and the belief that a "culture of stigma" regarding MAT is entrenched in the treatment community. Based on their review, the authors suggest some specific logistical and attitudinal changes that will be necessary in the criminal justice system. In their view, these changes should include cross-systems partnerships between criminal justice professionals and clinicians, including funding opportunities and shared staffing models, all with the goal of improving the linkage between the two disciplines.

To conclude this issue of the *Journal for Advancing Justice*, Judge William Meyer (retired) summarizes two recent appellate court cases addressing drug abstinence conditions for probationers and

availability of MAT in jail and prison settings, and Dr. Douglas Marlowe contributes an explanatory note on the cases. The cases may herald a new line of precedent requiring MAT to be available in appropriate cases, while also permitting sanctions for illicit drug use. Combining treatment with accountability is the hallmark of the drug court model and therapeutic jurisprudence, and these evidence-based principles may be influencing emerging case law precedent.

This journal is designed to help you promote both good treatment and effective justice system protocols for the benefit of persons afflicted with OUD. An overarching theme is the need for continually improving the dialogue between justice professionals and clinicians, in the service of justice-involved people with OUD.

– Laurence M. Westreich, MD

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RESEARCH COMMENTARY

Use of Medication-Assisted Treatment in the Justice System: A Medical Perspective

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INTRODUCTION

This article provides a medical perspective on the use of medication-assisted treatment (MAT) in the justice system, including drug courts, general courts, jails, prisons, and the parole and probation systems. Although some other modalities are used for the treatment of opioid use disorder (OUD) in these contexts, ongoing questions about the use of MAT—and specifically the opioid medications buprenorphine and methadone—necessitate an in-depth look at their clinical utility and the specific benefits and risks involved in their use within the justice system.

OUD is an epidemic in 2019 America: 130 Americans die every day from an opioid overdose. In 2016, the total number of opioid-related overdose deaths (including prescription opioids and heroin) was five times higher than in 1999, and more Americans now die every year from drug overdoses than from car crashes (Center for Behavioral Health Statistics, 2016). About half of state and federal prisoners meet criteria for some substance use disorder (Mumola & Karberg, 2006), and 16.6% of state prisoners and 18.9% of jail inmates acknowledge regular use of heroin or other opioids (Bronson, Stroop, Zimmer, & Berzofsky, 2017). More than that, OUD itself is strongly correlated with involvement with the criminal justice system, and the intensity of that involvement increases as the intensity of the OUD increases (Winkelman, Chang, & Binswanger, 2018).

Opioid overdose deaths have risen in three distinct waves: increased prescribing of prescription opioids (such as oxycodone) caused the 1990s outbreak; heroin fueled the second wave starting in 2010; and, since 2013, synthetic opioids such

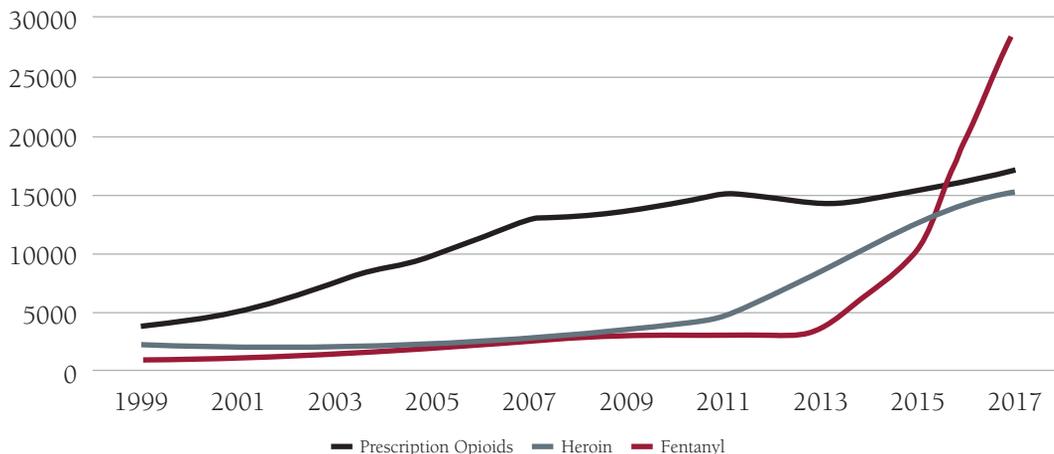
as fentanyl have provoked a third lethal wave of opioid overdoses.

In addition to the deaths and illnesses associated with OUD, shocking economic losses have resulted: according to one government estimate, the yearly economic cost of the opioid crisis is \$504 billion, or 2.8% of the U.S. Gross Domestic Product. These losses arise from healthcare spending, criminal justice costs, and lost productivity (Council of Economic Advisors, 2017).

MAT is certainly the standard-of-care treatment for OUD; multiple governmental and professional organizations have designated MAT as an essential treatment modality (Renner, Levounis, & LaRose, 2018; Substance Abuse and Mental Health Services Administration [SAMHSA], 2018; World Health Organization [WHO] 2004; American Medical Association [AMA], 2017), and patients within the justice system deserve access to it. However, MAT is no panacea for all the ills associated with OUD, and it is a potentially useful treatment modality, rather than the entire treatment package. Because justice-involved patients often suffer from other substance use disorders in addition to OUD, other co-occurring mental disorders, trauma, and unemployment, they need a comprehensive, integrated treatment plan which, when it includes MAT, should be delivered by addiction specialists well trained and experienced in the clinical use and management of MAT.

The increasing penetration of MAT into the legal system will require broad knowledge about OUD and its treatment. Legal professionals will have to assess the treatment regimens recommended to their clients and understand how to vet the

Figure 1. Three Waves of U.S. Opioid Overdose Deaths*



*Based on data contained in “Number of National Drug Overdose Deaths Involving Select Prescription and Illicit Drugs”: National Center on Health Statistics, CDC WONDER. <https://www.drugabuse.gov/related-topics/trends-statistics/overdose-death-rates> Accessed 6-23-19

credentials of those professionals who deliver the treatment. This assessment of treatment plans—and the clinicians who recommend them—requires a basic knowledge of OUD, reasonable expectations of therapies for it, and the specifics of treatment with MAT.

What is Substance Use Disorder?

The condition previously called “addiction,” “substance abuse,” or “substance dependence,” now officially called substance use disorder or SUD, is, in simplest terms, a “a problematic pattern of using alcohol or another substance that results in impairment in daily life or noticeable distress. A person with this disorder will often continue to use the substance despite consequences...” (American Psychiatric Association [APA], 2013). The Diagnostic and Statistical Manual (DSM)-5 describes substance-related disorders that can result from the use of 10 separate classes of drugs, of which opioids are one category. Each of these drugs can cause intoxication, physical dependence, and withdrawal symptoms. These drugs, when taken in excess, activate the brain reward system, the part of the brain that influences behavior and memory.

DSM-5 (APA, 2013) defines an opioid use disorder as a pattern of opioid use during a 12-month period that causes clinically significant impairment or

distress, and includes at least two of the following 11 characteristics:

- the drug is taken in larger amounts or for a longer time than intended;
- there is a persistent desire to cut down or stop the use;
- a great deal of time is spent obtaining, using, or recovering from the substance;
- cravings;
- opioid-caused failure to fulfill work, school, or home obligations;
- continued use despite recurrent or persistent problems;
- loss of important social, occupational, or recreational activities;
- recurrent, physically hazardous use;
- continued use despite knowledge of problems caused or worsened by the use;
- physiological tolerance; and
- physiological withdrawal.

It is important to note that physical tolerance and withdrawal are not necessary for the diagnosis of an SUD: in fact, many people who have serious problems with opioids are not physically dependent. And, some pain patients who are physically dependent on opioids would not be considered to have an OUD or SUD of any kind. Individuals who have two to three of these symptoms are considered to have a “mild” disorder, four to five symptoms are

a “moderate” disorder, and more than six symptoms would meet criteria for a “severe” presentation.

Three basic subgroups of opioids exist: (1) opiates—the naturally occurring substances present within raw opium, including morphine and codeine; (2) semi-synthetic opioids—which do not occur in nature but are derived by modification of a naturally occurring opiate—some examples include heroin, oxycodone, buprenorphine, and hydrocodone; and (3) the synthetic opioids—which neither occur in nature nor are derived from opiates but are fully synthetic compounds designed to act as opioid receptor agonists; they include methadone and fentanyl.

Three main factors that lead to a rapid onset of physiological opioid effects and that increase the potential for misuse and development of an SUD are: (1) drugs with faster routes of administration; (2) drugs with a shorter half-life, such as short-acting heroin versus long-acting methadone; and (3) drugs with a greater ability to dissolve in fats (lipophilic properties), which allows for more rapid transport across the blood-brain barrier—for example, heroin.

What Language Should be Used with SUD?

It is extremely important when treating a person with any sort of an SUD to use nonstigmatizing language, in order to set a respectful tone. Most people living with SUD, especially in the justice system, have experienced considerable societal animus and rejection by friends, family members, and employers, so a respectful use of language by those trying to help can be reassuring and demonstrative of the speaker’s understanding of SUD and the pain it causes.

Although many people in the field—including many of those who are getting treatment—use the word “addiction” to describe the condition, there are some uses of language which are by consensus pejorative and unhelpful. The term “addiction” itself has been switched to “substance use disorder,” in 2013’s DSM-5, with “addiction” relegated to only the most extreme cases, because the word has an “uncertain definition and ... potentially negative connotation” (APA, 2013). Offhandedly calling a positive result from a urine toxicology test “dirty” or referring to a patient as an “abuser” can have profoundly negative effects on the patient and contribute to an ineffective atmosphere for treatment. Using person-first language is important throughout healthcare—a person suffering from diabetes is best described that way, rather than a “diabetic” whose whole identity is supposedly conveyed by the disease. And being called an “addict” is much more distasteful than being addressed as a person “with addiction,” or a “person with a substance use disorder” (Botticelli & Koh, 2016). Empiric data show that the use of stigmatizing terms correlates with more negative attributions about patients and poorer perceptions of their prognoses (Ashford, Brown, & Curtis, 2018).

In clinical work, scholarship, and research about addiction, using respectful language about those suffering from addiction ideally:

- respects the worth and dignity of all persons;
- focuses on the medical nature of substance use disorders and treatment;
- promotes the recovery process; and
- avoids perpetuating negative stereotypes and biases through the use of slang and idioms (Broyles, Binswanger, & Jenkins, 2018).

Table 1. The Language of Substance Use Disorder

Stigmatizing	Nonstigmatizing
Addict, abuser	A person with a substance use disorder (SUD), a person with addiction
Dirty urine	Urine sample positive for opioids
Clean	In recovery
Substitution therapy	Medication-assisted treatment (MAT)
Noncompliant with treatment	Expressing ambivalence about change
Recidivist	Patient who relapses
Drug habit	Substance use disorder

Even the phrase “medication-assisted therapy” can rightly be questioned as misleading regarding the most efficacious treatment for OUD (Enos, 2019). Since it is increasingly clear in general medicine that the opioid medications methadone and buprenorphine (treatment medications that may themselves cause physical dependence) are for many patients effective as standalone treatment for OUD rather than adjuncts to other treatments (Weiss et al., 2019), some have advocated for avoiding the implication that agonists must or should be paired with other sorts of treatment. The benefit of medication-only treatment for OUD should be emphasized to encourage the treatment of individuals to whom adjunctive psychological care cannot or will not be delivered: those on a waiting list, or whose treatment facilities cannot afford comprehensive care. Of course, in non-criminal-justice settings, the outcome focus is treatment retention, abstinence from opioids, and improvement in psychosocial functioning.

By contrast, in criminal justice systems, additional outcome criteria include crimes by the treated individual, recidivism, and behavior while incarcerated—and several large meta-analyses have shown only modest effects of MAT alone on these criminal justice-related variables. For example, one review of 21 studies from an international database search (Hedrich et al., 2011) found six studies confirming less illicit drug use while in prison for those inmates taking MAT; four studies showed better posttreatment entry into treatment; and six studies that could document lower reincarceration rates for inmates on methadone (including two studies that found a methadone dosage of above 60 mg/day to be effective). A more recent meta-analysis of MAT in jails and prisons (Moore et al., 2019) looked at 18 studies and found that although studies confirmed a methadone effect on community engagement after release, injection drug use, and illicit opioid use, there was no discernible effect on recidivism.

As with all meta-analyses, the differences among the various study designs make it difficult to draw concrete conclusions—but it is clear that MAT itself was not overwhelmingly effective in improving criminal justice-related outcomes. As will be

discussed below, using MAT as one component of a broader OUD treatment plan for justice-involved people is the best clinical maneuver, which likely differs from treatment for the general population.

The protocol of standalone treatment with medications for the treatment of OUD is probably less useful in the justice system than in the general population. Justice-involved patients are very likely to have other SUDs, freestanding psychiatric diagnoses, and weak or absent psychosocial supports. Therefore, they are often in need of wraparound care rather than the simple prescription of a medication.

What is Medication-Assisted Treatment?

MAT is the standard-of-care treatment for OUD. The three Food and Drug Administration (FDA)-approved medications for the treatment of OUD—methadone, buprenorphine (Suboxone, Sublocade, Zubsolv, and others), and long-acting naltrexone (Vivitrol) have very different effects on the human body. In basic terms, methadone and buprenorphine activate the mu opioid receptor, and naltrexone blocks it. It is important to understand that even though methadone and buprenorphine activate the receptor, the patient appropriately prescribed either of these medications on a maintenance schedule has become physiologically tolerant and experiences neither intoxication nor sedation, nor does he or she have any withdrawal. Rather, the patient feels “normal,” if the medication is taken every day.

Methadone

Methadone, the MAT medication which has been on the market the longest, is a full agonist, which means that it *activates* the mu opioid receptor—like other opioids, it relieves pain and opioid withdrawal but, in overdose, can cause respiratory depression and death. (Those most vulnerable to overdose are children and others who are naïve to opioid use.) For treatment purposes it can be used over a few days to taper a patient off opioid drugs or as a maintenance medication for long-term treatment. The benefits of methadone over heroin or illicit prescription opioids are that methadone is legal, available orally (patients do not have to

inject or snort it), and it is very long acting. Thus, the patient prescribed methadone can have a steady-state opioid level in his or her body, and therefore not experience craving or withdrawal. Potential risks of methadone use include overdose and fatigue at the beginning of treatment, among others. Although patients and their families often question the logic of using an opioid (methadone) to treat dependence on another opioid, the benefits of a return to health, an ability to work or attend school, and engage in loving relationships usually outweigh philosophical concerns about long-term use of an opioid medication. Methadone for the treatment of an SUD can only be prescribed and dispensed in a federally licensed clinic or hospital, and it is usually administered as a liquid, but does come in pill and intramuscular injectable forms.

Buprenorphine

Buprenorphine partially activates the mu opioid receptor and, like methadone, can be used for either tapering off an opioid drug or for long-term maintenance. Buprenorphine has a greater affinity for the mu opioid receptor, meaning that it binds more strongly to the receptor and will displace a full agonist (such as heroin) or prevent it from binding to the receptor. Buprenorphine also has a “ceiling effect,” which means that at dosages above the usual therapeutic dosage the medication will stop working, thereby making overdose unlikely. Manufacturers have combined an opioid blocker (naloxone) in certain buprenorphine preparations (Suboxone and others) in order to prevent illicit injection of the medication. Buprenorphine is now available in the form of sublingual tablets, sublingual film, and under-the-skin implants (Probuphine) that last for 6 months.

The Drug Addiction Treatment Act of 2000, Title XXXV, Section 3502 of the Children’s Health (DATA 2000) Act (U.S. Department of Justice/Drug Enforcement Administration, 2019) established a method for specially licensed office-based physicians to prescribe or dispense buprenorphine, for the first time permitting use of a narcotic for addiction treatment outside of the traditional methadone clinic system, thereby allowing for more effective treatment of patients with OUD;

but also (however unintentionally) allowing for increased illicit use, diversion, and overdose with buprenorphine. Official government publications (SAMHSA, 2018) detail best practices for use of buprenorphine, and research studies explicate, among other things, buprenorphine’s efficacy in staving off relapse (Fiellin et al., 2014) and the patient characteristics associated with the best treatment outcomes (Dreifuss et al., 2013), which include the presence of a lifetime major depressive disorder, no injecting drug use, and no previous OUD treatment.

Naltrexone

Naltrexone (Vivitrol) is a pure opioid antagonist that *blocks* the mu opioid receptor for the long term. A person who takes an opioid drug after taking naltrexone will have no effect from the opioid medication, since the receptor is blocked. The benefits of naltrexone are that it decreases craving and protects the patient against any opioid use, or at least the effects of that use. However, the patient must be entirely abstinent from opioids for 7 to 10 days before the first use of naltrexone. Although it is somewhat more difficult to initiate treatment with naltrexone, as compared to methadone or buprenorphine, for those patients who succeed in starting naltrexone, outcomes are about the same as those for the opioid agonists (Lee et al., 2018). Naltrexone can be taken as a daily pill but is most useful in the treatment of SUDs as an injection that lasts for 30 days.

Naloxone

The short-acting opioid antagonist naloxone (Narcan and others) is for the acute treatment of opioid overdose, not for maintenance. Like naltrexone, it will block an agonist from binding to the receptor or, in the event an agonist is already bound (such as in an overdose), naloxone will knock the agonist off the mu receptor and bind to it, stopping the overdose effect before it becomes fatal.

What Results Has MAT Shown in the Justice System?

Therapeutic jurisprudence—the collaboration of the treatment and legal worlds for the benefit of both defendants and society at large (Wexler & Winick,

Table 2. FDA-Approved Medications for the Treatment of OUD

	Methadone (Dolophine and others)	Buprenorphine (Suboxone and others)	Injectable Naltrexone (Vivitrol)
Pharmacologic action	Agonist (activator)	Partial agonist (activator)	Antagonist (blocker)
Outpatient availability	Federally licensed clinics only	Doctor’s offices, pharmacies	Doctor’s offices, pharmacies
Potential for diversion	Moderate	Minimal	None
Potential for misuse	Moderate	Minimal	None
Necessity for opioid abstinence before induction	Depends on the patient	12-16 hours	7-10 days
Potential for overdose	Moderate	Minimal	None

1991)—is the theoretical underpinning for the drug court movement’s vast potential for delivering good care to people with SUDs including, when indicated, MAT. Defined best as “the use of social science to study the extent to which a legal rule or practice promotes the psychological and physical wellbeing of the people it affects” (Slobogin, 1995), the notion of therapeutic jurisprudence was developed in the late 1980s as a way to understand mental health law in general, but is applicable to drug courts in very obvious ways. Given that OUD is correlated with lesser likelihood of drug court success, even when compared to drugs like cocaine (Rempel et al., 2003), the most effective response to the problem is necessary. The collaboration of law enforcement professionals, the judiciary, and clinical addiction specialists delivers an effective, if imperfect, response to the epidemic of OUD in the United States. How well has this effort succeeded?

Studies of MAT in the justice system (Sharma et al., 2016; Mitchell, Wilson, & McKenzie, 2007; Moore et al., 2019) have demonstrated encouraging results in the peer-reviewed literature now available, although much of that literature has focused on the opioid antagonist naltrexone and only peripherally addressed the opioid agonists methadone and buprenorphine. However, the studies cited below do show consistent, trend-level positive results within the justice system for MAT, including fewer postincarceration overdose deaths; improved return-to-court numbers; less criminal activity; fewer arrests, probation revocations, and incarcerations; as well as improved retention in treatment.

A small review of fatal overdoses after incarceration in Rhode Island (Green et al., 2018) found a large and clinically meaningful reduction in deaths after the state implemented a comprehensive MAT program in a statewide correctional facility in July of 2016. In the first 6 months of 2016, before the MAT program was introduced, 26 newly released inmates died from opioid overdoses; while after the program was introduced in 2017, only nine newly released inmates died from an opioid overdose. The authors concluded that “identification and treatment of opioid use disorder in criminal justice settings with a linkage to medication and supportive care after release from incarceration is a promising strategy to rapidly address the high rates of overdose and opioid use disorder in the community.” There is a correlation, reproduced in multiple studies (Larney et al., 2014; Marsden et al., 2017; Russolillo, Moniruzzaman, & Somers, 2018) between retention on methadone or buprenorphine and lower overdose rates in criminal justice-involved populations.

A review of drug court graduation rates in a rural Indiana jurisdiction (Gallagher et al., 2018) found that for the 248 study participants, the rate was strongly correlated with being employed or a student at the time of admission, having a nonopiate as the drug of choice, and not having a violation in the first 30 days of the program. For the participants with OUD—who were less likely to graduate—the authors hypothesized that MAT would have improved all three of the

relevant variables, and very likely improved their graduation rates: “Offering medication-assisted treatment (MAT) such as methadone, Suboxone or Vivitrol to participants who have an opiate use disorder may improve graduation rates for this population....”

A large-scale study of Ohio drug courts (Dugosh & Festinger, 2017) found a small benefit for MAT in improving drug court retention, and also revealed some fascinating trends in attitudes toward different types of MAT. In their evaluation of 25 drug courts across 13 Ohio counties, the authors found that of the 596 drug court clients they evaluated, 350 (59%) received MAT in the first 6 months of their drug court participation. Importantly, the most-used medication was naltrexone, for 89 clients, but even so, the drug court clients who received MAT were significantly more likely to be retained in drug court, and there were nonsignificant trends in the MAT recipients having urinalysis-confirmed drug abstinence, as well as less criminal recidivism. However, nearly half of the drug court employees (professionals, team members, staff) queried on their views about buprenorphine disliked it because of concerns about diversion, and worries that MAT overall only blocks opioid use, not the use of other psychoactive drugs. The employees also felt that MAT “helped reduce cravings, encouraged sobriety, reduced the incidence of relapse, and increased treatment retention.” The employees also often noted their perception that psychotherapy was necessary along with MAT and that MAT helped their clients maintain sobriety, but that the outside community had the impression that “MAT [is] a crutch [and is] replacing one drug with another....”

One positive randomized, controlled study of buprenorphine provided to inmates near their release time (Gordon et al., 2014) examined postprison outcomes of 211 participants within their final 3–9 months of incarceration. The subjects were randomized to receive either in-prison buprenorphine or counseling, and were sent to either an outpatient treatment program or a community health center. Ninety-nine percent of the inmates engaged with in-prison buprenorphine when it was offered to them, and 80.4% engaged with in-prison counseling when it was offered. The

buprenorphine patients were significantly more likely to engage with community treatment after their release from prison. Despite some expressed concerns about diversion, the authors conclude that “buprenorphine appears feasible and acceptable to prisoners who were not opioid-tolerant and can facilitate community treatment entry....”

One recent study of MAT in 10 Ohio drug courts (Baughman, Tossone, Singer, & Flannery, 2019) found no contribution of MAT to the client’s improvement in substance use, risky behaviors, and mental health symptoms; measured at intake, 6 months, and at discharge from the drug court system. Of the 263 subjects nonrandomly assigned to receive different sorts of MAT, 25 were prescribed buprenorphine, 13 were prescribed buprenorphine/naloxone, and 225 were prescribed naltrexone. Methadone was unavailable in this court system, and the authors acknowledge that there was “an insufficient number of court clients prescribed buprenorphine.” Thus, the study was essentially an assessment of naltrexone MAT alone, because of administrative barriers and other nonmedical factors.

What Are Best Practices for Using MAT in the Justice System?

Prescribers make a patient-by-patient clinical decision as to what, if any, medication is appropriate for their patient, and what the dosage of that medication should be. Justice professionals should understand there is both a science and an art to this process, and patient preference for a certain medication is one important criterion considered in making prescription and dosing decisions. The decision to use MAT *at all* is based on the standard of care: what a reasonably competent and skilled health care professional provides. In 2019, based on the now-voluminous medical literature on the subject, the use of MAT is most certainly the standard of care for OUD (SAMHSA, 2018; Renner et al., 2018). Of course, MAT is not necessarily appropriate for all cases of OUD, and the medication choice, dosage, and length of treatment are different for each patient and need to be based on patient-specific characteristics.

The clinical considerations typically include prior response, side-effect profile, the patient's occupation, pregnancy/breastfeeding, and the presence or absence of physical dependence. Administrative or financial barriers to the use of one medication might necessitate the prescription of another, more practically obtainable medication. Dosage of a medication should be decided upon using that patient's clinical profile, and therefore cannot be dictated by blanket prohibitions or policies. However, methadone dosages above 60 mg and buprenorphine dosages in the 12–16 mg range generate better results (National Academies of Sciences, Engineering, and Medicine, 2019) because those are “blocking dosages” which prevent any effect from illicit opioids.

For instance, the patient who has had a poor response to a medication should be prescribed another, in part to avoid a similar response, but also to foster the patient-doctor collaborative relationship. Some employees who hold safety-sensitive positions will be tested for opioids like buprenorphine and methadone; and to prevent complications, patients in those occupations may want to avoid anything that could result in a positive drug test. Typical occupations that test for agonist medications would include Department of Transportation-regulated jobs and those in the medical professions. For a pregnant woman being treated with an opioid agonist, continuation of that agonist—in collaboration with her obstetrician/gynecologist—is standard. However, the buprenorphine-alone formulation (rather than buprenorphine/naloxone) is preferred. For any patient not physically dependent on illicit opioids, the prescription of an opioid agonist (methadone or buprenorphine) must be carefully considered because that prescription will cause a

new opioid dependence. Although the prescription may in fact be indicated, a careful consideration of all the risks and benefits should be made by the prescriber and the patient.

These practical, patient-by-patient medical matters are important to understand in prescribing MAT. Only when nonclinicians have a basic understanding of standard-of-care treatment for OUD can they be expected to ask relevant questions about specific treatment regimens for specific patients, in order to become comfortable with the treatment.

Those characteristics include the patient's clinical presentation and clinical presentation and subjective preferences for subjective preference for one medication over another, or no medication at all. Engaging with a patient about all these clinical parameters allows the prescribing clinician to provide the treatment most likely to succeed, and the one that the patient is most likely to continue with. It should be clear from the above that the decision to prescribe or not prescribe MAT, which medication, and at what dosage, is complicated and nuanced, and the process of making these decisions should be between the patient and the clinician.

The patient's response to MAT must be continually monitored with observation and urine drug screens to test for any other drug use, and to assure that the patient is taking the prescribed medication. If a drug screen is positive for an illicit opioid (or negative for the prescribed medication), an immediate reevaluation should follow, to answer questions like: Has there been a one-time slip to

Table 3. Decision-making About the Prescription of MAT

Clinical (SAMHSA, 2018)	Administrative
Prior response	Availability within the treatment program
Side-effect profile	Availability after discharge from the treatment program
Patient's occupation/potential for drug tests	Cost to patient
Pregnancy/breastfeeding	Stigma attached to some medications
Physical dependence	
Patient preference	

the illicit drug of choice? Has there been a longer-term relapse to the illicit drug of choice? Has there been use of a nonopioid drug of abuse? Is there an intervening mental illness or set of psychiatric symptoms that interact with the apparent relapse? When these questions are answered, the treating clinician can make recommendations about treatment going forward, which may include inpatient treatment, more intensive outpatient treatment, a change in medication, or referral for a full psychiatric evaluation.

A reduction in dosage is often necessary for patients who appear sedated, while the patient experiencing craving, or using illicit opioids, often needs an increase in the dosage of a prescribed opioid medication. The legal consequences that may flow from a positive drug test, such as revocation of probation or parole, or imprisonment, should be well defined and decided upon in a joint agreement of the involved criminal justice and treatment professionals.

What Are the Challenges of Using MAT in the Justice System?

Although MAT is the standard of care for treatment of OUD and emerging data about MAT in the justice system are encouraging, MAT use in the justice system remains lower than it should be, even in dedicated drug courts. In one nationwide survey of 103 drug courts (Matusow et al., 2013), although 98% reported having OUD clients, only 47% of the courts offered agonist medication, with 56% offering MAT when naltrexone was included. Among the rationales offered for the absence of MAT in some drug courts were political, judicial, and administrative opposition to MAT itself.

The barriers to using MAT with the justice-involved client are primarily misunderstanding of the medications themselves, worries about diversion, and administrative/financial barriers. As with any education promoting systemic change, a fundamental respect for the perspectives opposing that change is very important. Educational efforts about the facts of MAT must come first and should contain evidence-based treatment protocols explained by clinicians who can accurately describe the benefits and risks of using MAT in a

drug court or jail or prison system. Those doing the education should be prepared to answer, and in fact welcome, pointed questions from their nonmedical colleagues. MAT can offer lifesaving benefits, but simply asserting that fact does not, and in fact should not, suffice in educational efforts.

Concerns about diversion of even legitimately prescribed opioid agonists must similarly be addressed with the extant data, as well as the experience and protocols of facilities that already use MAT. As with more general education about MAT, there should be frank acknowledgment of the potential for diversion, along with recommendations of strategies for avoiding that diversion—such as short-term prescriptions, regular searches of pharmacy management databases, pill counts, and urine drug screens. Candid comparison of the benefits of MAT against the (probably inevitable) small amounts of diversion, is on its face intellectually honest and therefore convincing.

Financial and administrative barriers to the use of MAT in the justice system can be harder to address for the clinician. Although the clinical benefit of having MAT at least available is inarguable, the financial cost of the medication and the treatment associated with it can be problematic. Large-scale analyses of the societal costs and benefits of MAT use in terms of improved productivity, reduced use of the courts, and lower morbidity and mortality, are to some degree irrelevant to the prison administrator who must sign off on a pharmacy budget every quarter. Similarly, the dearth of buprenorphine prescribers—and addiction-treatment professionals in general—is a serious problem in many jurisdictions.

Increasing Support for MAT in the Justice System

Despite the challenges of introducing MAT more fully into the justice system, there has been increasing support for doing exactly that. For example, drug court leaders promote the idea that MAT should be one of the modalities available to drug court participants, and that not having MAT available is a breach of best practices for drug courts. In the official publication *Adult Drug*

Court Best Practice Standards (National Association of Drug Court Professionals [NADCP], 2013, 2015), the writers note that best practices include “psychotropic or addiction medications based on medical necessity as determined by a treating physician with expertise in addiction psychiatry, addiction medicine or a closely related field” (p. 39) and later note that

“MAT can significantly improve outcomes for addicted offenders Buprenorphine or methadone *maintenance* administered prior to or immediately after release from jail or prison has been shown to significantly increase OUD-diagnosed inmate’s engagement in treatment, reduce illicit opiate use, reduce rearrests, technical parole violations, and reincarceration rates and reduce mortality and hepatitis C infections....” (p. 44, emphasis added)

Clearly, the leadership of the drug court movement has concurred with the addiction field’s assessment that MAT, including maintenance opioid treatment, can be a valuable component of some addiction treatment regimens.

In addition to their national leadership advocating for the availability of MAT in drug courts, entities outside of drug courts also promote evidence-based MAT. The authors of one study of drug court policy in New York State (Csete & Catania, 2013), which found policies requiring patients to taper off methadone after some arbitrary period of time, and profound stigma against opioid maintenance, opined that the “forced ‘tapering’ from methadone, and buprenorphine, or blanket exclusion from these treatments, show the danger of what happens when judges play doctor” (Open Society Foundations, 2014). In an open-label study (Moore et al., 2018) comparing 184 inmates continued on methadone maintenance during their incarceration to 198 forced to withdraw from methadone, the methadone-maintained patients received fewer disciplinary tickets than those forced to taper off their medication, but there was no apparent effect on community engagement after release. However, in a subset of 69 patients who continued to receive their methadone from the jail methadone prescriber postrelease, a reduced risk of arrest, new charges,

and reincarceration was noted.

Regarding funding considerations, the Office of National Drug Policy (ONDCP) required MAT as a treatment modality to ensure continued public funding of the drug court system: the ONDCP’s then-Director Michael Botticelli said, “If you are getting federal dollars ... you need to make sure that people have access to these medications and that we’re not basically making people go off these medications, particularly as participants of drug court” (Botticelli & Koh, 2015).

Despite the official and growing acceptance of MAT among drug court professionals, there is insufficient access to MAT, at least in part because there are not enough licensed practitioners who are willing and able to treat drug court participants. Judges complain that the scarcity of licensed providers limits their ability to integrate MAT into their courtrooms. This dearth of buprenorphine prescribers, especially in rural areas, is a problem nationwide, and has led to calls for lifting the requirements for training and patient caps that buprenorphine prescribers now must honor. As of this writing, prescribers with a DATA 2000 waiver to prescribe buprenorphine may do so for up to 30 patients but can apply to SAMHSA for permission to prescribe for up to 100 patients. After prescribing for 100 patients for one year, prescribers may again apply for permission to prescribe for a total of 275 patients (SAMHSA, 2017).

Advocates for lifting this cap entirely point out that, in addition to the obvious lack of effective care nationwide, patient caps have disproportionately negative effects on the poor and those who live outside of major cities, as well as potential for causing premature discontinuation of treatment, and a disincentive for physicians to devote their entire practice to treating addiction with buprenorphine. Interestingly, the resistance against prescribers making buprenorphine their main clinical focus is the exact reason given by those who oppose lifting the cap, with the rationale that physicians who only prescribe buprenorphine will be incapable of, or unwilling to, provide comprehensive care.

How to Find a Buprenorphine Prescriber

Any licensed physician or nurse practitioner may prescribe naltrexone, but in order to prescribe buprenorphine, physicians must have taken an 8-hour training course and nurse practitioners and physician assistants must have taken a 24-hour course. After taking the requisite course, potential buprenorphine prescribers must apply for and obtain a special DEA license. Methadone may only be prescribed at a hospital or a federally licensed methadone facility. Despite efforts by various agencies to expand the number of buprenorphine prescribers, some rural areas and urban centers are inadequately covered. A SAMHSA-curated website contains contact information for all U.S. buprenorphine providers who decide to make their contact information public, and can be found at www.samhsa.gov/medication-assisted-treatment/physician-program-data/treatment-physician-locator. Alkermes, the company that manufactures injectable naltrexone (Vivitrol), maintains a list of doctors who provide the medication at www.vivitrol.com/getstarted/findadoctor?s_mcid=url-vivproviders.

Professional organizations like the American Academy of Addiction Psychiatry (www.aaap.org) and the American Society of Addiction Medicine (www.asam.org) can provide leads for finding addiction clinicians and buprenorphine prescribers. Given the ongoing opioid epidemic, training and licensure restrictions are being loosened, and allied health professionals like nurse practitioners may obtain permission to prescribe buprenorphine. It appears likely that prescribing restrictions will continue to be loosened.

CONCLUSION

The use of MAT for justice-involved OUD patients is a viable, potentially lifesaving strategy that should be available to all who need it. As with all medications, the benefits for a patient should be weighed against the potential risks. Similarly, for the justice system itself, the pros and cons of using MAT must be evaluated separately by each drug court, jurisdiction, jail, and prison.

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RESEARCH COMMENTARY

The Legacy of Addiction and Incarceration on Reentry

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Abstract

In recent years, the opioid epidemic has caused the addicted population and incarcerated population to overlap increasingly. The quality and availability of addiction treatment best practices in correctional settings, however, has not risen to meet the growing need. As a result, correctional entities on the national, state, and local level must bolster addiction treatment efforts according to best practices.

This article examines the causes and consequences of the opioid epidemic's intersection with the incarcerated population. It then presents four states that serve as models of the effectiveness of implementing robust delivery systems for addiction treatment during and after incarceration; and following, draws upon the successes of these models to propose a number of best practices. The outcomes seen by the states mentioned here, as well as other jurisdictions across the country, indicate that the implementation of these best practices in addiction treatment in criminal justice settings will decrease addiction and relapse rates, improve the cost efficiency of both the treatment and criminal justice systems, lower crime and recidivism rates, and—most importantly—save lives.

STATEMENT OF THE PROBLEM

The opioid epidemic has become the defining public health crisis of our time. Declared a national public emergency in 2017, over 200,000 people have died in the last two decades from prescription opioid addiction (Seth, 2016). In 2016, total overdose deaths in the United States exceeded 64,000 (Ahmad et al., 2018); the annual death rate has now risen to over 70,000, with an opioid overdose death now occurring at least every 11 minutes, a rate that exceeds that of the HIV/AIDS epidemic at its peak (Lopez, 2017). The President's Commission on Combating Drug Addiction and the Opioid Crisis developed a detailed blueprint for a robust national response to the crisis (President's Commission, 2017). Its recommendations, however, have gone largely unimplemented.

The opioid epidemic has now spread across all demographics, with the Centers for Disease Control and Prevention reporting that heroin usage is expanding rapidly across all demographic groups, including many traditionally less affected by addiction (Centers for Disease Control and Prevention [CDC], 2016). Nevertheless, there are a number of psychosocial, medical, and personal factors that shape the profile of individuals with a substance use disorder (SUD), and that identify additional barriers to treatment and recovery. For instance, many addicted individuals suffer from co-occurring disorders of some kind. Mental health issues are particularly prevalent among the addicted population: a recent Substance Abuse and Mental Health Services Administration (SAMHSA) study reported that 40% of adults with an SUD also had a co-occurring mental illness (Hedden et al., 2015), a correlation confirmed by other studies (McGovern et al., 1996). Co-occurring physical illnesses are also found at significantly higher rates in the addicted population, as individuals with an SUD exhibit a range of illnesses (Walters & Fulman, 2016), from obesity and diabetes to hepatitis C and other infectious diseases (largely through injection transmission; National Institute on Drug Abuse [NIDA], 2016), at much higher rates than in the general population (Foundations Recovery Network, n.d.).

Drivers and Progression of the Opioid Crisis

In recent decades, there have been two clear shifts in the drivers of the opioid crisis: from prescription painkillers to heroin, and from heroin to synthetic opioids such as fentanyl. An understanding of the nature and extent of these shifts is an essential step in understanding the relationship of addiction to the challenges faced by the incarcerated and reentry population.

According to the National Governors Association, legal sales of prescription opioid painkillers nearly quadrupled from 1999 to 2014, despite the relatively unchanged amount of pain reported by Americans; and in 2012 alone, health care providers wrote enough opioid prescriptions—for drugs such as Oxycontin, Percocet, Percodan, and Vicodin—for every American adult to have a bottle of pills (National Governors Association, 2016). These drugs ultimately proved highly addictive; and their increasing prescription contributed to the ready availability of opioids on the black market (Governor's Council on Alcoholism and Drug Abuse [GCADA], 2014), providing prolonged access to individuals who become addicted while on a prescription. In 2016, the American Society of Addiction Medicine (ASAM) estimated that “four in five new heroin users started out misusing prescription painkillers” (ASAM, 2016). Similar studies have reported that three out of four people who used heroin in the past year also misused prescription opioids within the same year (Jones, 2013). As a result, in the 2010s, annual overdose deaths from prescription painkillers were supplanted by those from heroin.

In recent years, a second shift has taken place due to the introduction of synthetic opioids such as fentanyl into the heroin supply. Fentanyl is 50 times more potent than heroin (Racioppi, 2018) and is often mixed into heroin and other drugs by sellers. Accordingly, the presence of fentanyl in heroin and other drugs has increased substantially. The result is that individuals previously addicted to heroin and other nonopioid drugs become addicted to primarily fentanyl and other synthetic opioids.

Addiction and Incarceration

The burden of opioid use disorder (OUD)—in addition to its correlated comorbidities—is particularly acute among the justice-involved population. Approximately 70% of the incarcerated population is addicted (GCADA, 2014), and at least 25% is addicted to opioids (Rich & Satel, 2018). A significant percentage of those convicted of non-drug-related crimes (15% of those convicted of violent crimes and 40% of those convicted of property crimes) report committing their offense to support an addiction. Conversely, justice system involvement is particularly prevalent among those suffering from OUD, with 24% to 36% of those with a heroin use disorder passing through the criminal justice system each year (Boutwell, Nijhawan, Zaller, & Rich, 2007). Further, rates of co-occurring medical and behavioral health conditions are significantly higher among the incarcerated population, even before factoring in the added disparity of addiction (Maruschak, Berzofsky, & Unangst, 2015).

Incarceration typically compounds the dangers of OUD. As of 2017, fewer than 30 out of the 5,100 prisons and jails in the United States provided medication-assisted treatment (MAT), despite its wide recognition as the standard of care for effective opioid treatment (Williams, 2017), and those that do provide MAT often do so exclusively for pregnant women or chronic pain management rather than as the standard of care for OUD (Nunn et al., 2009). A recent study found that between 2007 and 2009, less than 1% of individuals suffering from moderate to severe SUDs in state prisons and jails received any clinical treatment during incarceration (Bronson, Stroop, Zimmer, & Berzofsky, 2017). Neither is treatment referral provided in anticipation of release, with less than half of state and federal prisons providing referrals for methadone maintenance and less than one-third providing referrals for buprenorphine (Nunn et al., 2009).

These treatment disparities are particularly concerning given the socioeconomic and demographic discrepancies already present among the incarcerated population. The national ratio of African Americans to Caucasians in state prisons is 5.1 to 1, with some states reporting a disparity

of more than 10 to 1; and the ratio of Hispanics to Caucasians is 1.4 to 1 (Nellis, 2016). Among 16- to 24-year-olds, high school dropouts are over six times more likely to be incarcerated than high school graduates, and up to 63 times more likely to be incarcerated than those who have completed a bachelor's degree. Among all dropouts, African American men are approximately three times more likely to be arrested than Caucasian, Hispanic, or Asian men (Khawiwada, McLaughlin, Palma, & Sum, 2009). These disparities are becoming further compounded as the opioid epidemic progresses. According to *The New York Times*, the heroin/fentanyl epidemic made striking inroads among African American and Hispanic populations last year, particularly in urban communities where fentanyl has become widespread (Goodnough & Katz, 2017). Although overall death tolls are higher for Caucasians, the CDC reports that the death rate is now increasing dramatically among Hispanics and African Americans: 52.5% and 83.9% respectively from 2014 to 2016 (Bebinger, 2018). The effective result is that addiction and the lack of treatment during incarceration provide further barriers to already disadvantaged populations.

Without effective treatment in criminal justice settings, tolerance wanes and cravings skyrocket during incarceration, exacerbating the risk of relapse, overdose, and death—especially given that fentanyl and other synthetic opioids have only recently been introduced into the heroin supply in many of the communities to which formerly incarcerated individuals return. The result on release is as predictable as it is devastating. Nearly 75% of those with OUD relapse within 3 months of release, and less than 10% enter treatment postrelease (Fox et al., 2015). Even more tragically, overdose death rates among the recently released population are exceptionally high: one study found that for formerly incarcerated individuals in the first 2 weeks following release, the risk of overdose death is 129 times higher than that of the general population (World Health Organization [WHO], 2014). As highly potent synthetic opioids such as fentanyl increasingly penetrate the heroin supply, these risks will likely continue to climb. Coupled with social obstacles faced by the justice-involved population such as food insecurity, housing instability, legal challenges, poverty, and

unemployment, reentering individuals with OUD represent some of the most socially and medically complex individuals in our communities.

Financial Implications of the Intersection of Addiction and Incarceration

As the opioid epidemic progresses, and as the intersection between incarceration and addiction simultaneously grows, its associated expenditures mount. In assessing the total economic impact of the crisis, it is important to note that the price tag not only includes direct treatment costs—most often borne by Medicaid—but also costs associated with related and co-occurring barriers to sobriety, such as markedly high rates of expensive inpatient and emergency department visits, medical costs associated with highly prevalent co-occurring conditions associated with OUD, addiction-driven crime, subsequent tax-funded imprisonment and recidivism, and loss of workforce participation in the age group statistically most important to labor force production.

There are a few points worth highlighting regarding the contributors of the cost of the opioid epidemic. First, the cost of addiction treatment alone is considerable, and steadily rising as the crisis continuously grows. Currently, the vast majority of treatment is done on a short-term inpatient basis, with treatment stays as short as 7 days. Though it may seem less expensive, the reality is that for addiction as severe as OUD, short-term treatment is unsuccessful the vast majority of the time. For example, in 2017 in New Jersey, of all those admitted into OUD treatment, 86% had been treated previously (New Jersey Substance Abuse Monitoring System [NJSAMS], n.d.). This means that the treatment methods currently utilized by the majority of the country result in a revolving door of expensive treatment with an end result of either incarceration or death rather than recovery.

Second, as the addicted population continues to overlap with the incarcerated population, the costs associated with addiction dramatically rise. According to the Vera Institute of Justice, in 2015 incarceration cost an average of \$33,274 per person

annually across the country (state prisons), with some states spending over \$60,000 (Vera Institute of Justice, 2019). Since the conflation of addiction and incarceration is likely to be causally linked to some degree (see above), the opioid crisis costs exponentially more when treatment is replaced by incarceration. Further, untreated addiction is highly correlated with recidivism—one study found that individuals taking their prescribed addiction treatment medications were about 44% less likely to commit a violent reoffense than those not doing so (Chang et al., 2016)—meaning that the failure to provide addiction treatment during incarceration again dramatically increases costs.

STATE MODELS AND BEST PRACTICES

In response to this national crisis, a number of states have implemented successful programs that provide models and best practices for addiction treatment in correctional settings. These programs have seen significant positive outcomes, including the reduction of relapse, overdose, and death rates on release; the lowering of recidivism rates; and improved cost-efficiency. Importantly, the models outlined below do not represent individual outliers, but present examples of a consistent trend among a larger group of state and local models that demonstrate the consistent effectiveness of the best practices they espouse.

State Models Rhode Island

As part of a statewide initiative to address the opioid epidemic, the Rhode Island Department of Corrections (RIDOC) implemented a new model for treatment within the correctional setting in January 2017. RIDOC works through a partnership with CODAC Behavioral Health, a community vendor with statewide capacity, to ensure access to MAT for individuals with OUD while in custody (Green et al., 2018). All three medications approved to treat OUD by the Food and Drug Administration (FDA) (buprenorphine, methadone, and naltrexone) are offered. As a result, Rhode Island is now the only state in the country to offer all forms of MAT across their entire incarcerated population (Vestal, 2018).

Upon entrance into RIDOC, all individuals are screened for SUDs and other treatment needs. Individuals who screen positive for an OUD and are in need of treatment are immediately enrolled in the program. Those awaiting trial are not withdrawn from MAT, and those already receiving medications are maintained on their current regimens. During incarceration, individuals have access to all medications to treat OUD, as well as behavioral interventions and wraparound services such as individual and group counseling (Beckman, Bliska, & Schaeffer, 2018).

At the inception of the program, group counseling was emphasized similarly to an “outpatient format” within the correctional setting. RIDOC developed a residential treatment model in 1992, in which inmates were housed in separate units staffed by treatment professionals and peers in sustained recovery. Treatment is now based on a four-tier model of care (listed from highest to lowest level of care):

1. Modified residential therapeutic community
 2. Day treatment
 3. Counseling groups
 4. Recovery services/peer support
- (State of Rhode Island Department of Corrections, n.d.)

To maintain treatment postrelease, 12 MAT Centers of Excellence were established across the state. They repurposed an existing network of CODAC outpatient facilities to continue care for reentering individuals in the community. These facilities are scattered throughout the state to enable formerly incarcerated individuals to continue treatment regardless of their location postrelease. To facilitate an easy transition, incarcerated individuals are coached on how to apply for Medicaid prior to release and are then referred directly to a Center of Excellence that continues treatment in the community (Green et al., 2018). These community-based services aim to ensure both successful reintegration and long-term sobriety and stability. They include continued MAT, psychiatric care for co-occurring mental health disorders, counseling and education for patients and their families, peer recovery support, hepatitis C testing and on-site treatment, and reentry services.

The relationship between RIDOC and CODAC staff is critical to the success of the program. CODAC provides medical directors, a project coordinator, a program director, three masters/licensed assessment clinicians, two MAT clinicians, a discharge planner, and peer support specialists to aid in reentry. Although clinical staff are primarily responsible for prescribing and dispensing MAT, RIDOC medical and nursing staff are also educated on MAT to enable coordination of care.

Two million dollars per year is dedicated to the program (Beckman et al., 2018). After the successful implementation of the RIDOC MAT program, as well as numerous other statewide initiatives addressing the opioid epidemic, Rhode Island has seen significant reductions in overdose rates. Between January 1, 2017, and June 1, 2017, Rhode Island’s overall overdose death rate decreased by 12.3% compared to the same timeframe the previous year. During the same time, the overdose death rate among those recently incarcerated saw a 60.5% reduction. Similarly, the overall number of deaths attributed to fentanyl was cut in half. The number of naloxone kits—medication used to reverse the effects of an overdose—dispensed at release from incarceration decreased from 75 in the 2016 cohort to 32 in the 2017 cohort; while the receipt of MAT (buprenorphine, methadone, and naltrexone) after release increased (Green et al., 2018).

New Jersey

New Jersey has recently implemented a number of initiatives to increase and improve access to SUD treatment in its jails and prisons. Most notably, the Mid-State Correctional Facility, a prison closed in 2014 for renovation, was reopened in 2017 as an addiction treatment center for individuals in prison (State of New Jersey Department of Corrections [NJDOC], 2017). Although the program serves individuals with any alcohol or substance use disorder, a primary focus is to address the opioid crisis and its criminogenic effects.

Through a partnership between the NJDOC and the New Jersey Department of Human Services (NJHHS), the facility is now operational as a residential correctional treatment center, housing

nearly 700 incarcerated men. Through the same program, the Edna Mahan Correctional Facility for women repurposed a wing of the prison to house 65 beds for incarcerated women with SUD (Gray, 2018).

On entrance into NJDOC custody, individuals are screened for health and substance problems as part of the intake process. Those who are classified as medium-risk and present with an SUD are eligible for the Mid-State or Edna Mahan program. Once enrolled, individuals are provided with MAT as needed, as well as wraparound services. SUD treatment is provided by the Gateway Foundation, a national substance use treatment provider, and all three forms of MAT are offered—buprenorphine, naltrexone, and methadone (Gateway Foundation, 2018). Adjunctive services include counseling, group therapy, and healthcare provided by Rutgers University Correctional Health Care, primarily to address the high prevalence of comorbidity. Treatment is individualized based on each participant's needs, with intensity of treatment provided varying from 7 to 28 hours per week and lasting as long as necessary for recovery.

The program has demonstrated considerable success since its inception in 2017. According to the acting NJDOC Commissioner, approximately 100 individuals across NJDOC custody have received MAT each month since November 2017 (Elnahal, 2018). In addition, according to the New Jersey Department of Health Commissioner, among all incarcerated individuals receiving addiction treatment, 91% of those receiving MAT completed treatment successfully, compared to 50% of those receiving other treatment. The renovation of Mid-State Correctional Facility cost the state \$28 million, and the state's partnership with the Gateway Foundation includes a provision to cover treatment services for 5 years at a cost of \$29.2 million (Gray, 2018).

Additional steps have been taken by New Jersey to improve the landscape of SUD treatment in correctional settings. A number of county jails have begun offering MAT. In 2018, a partnership between NJDOC and the New Jersey Department of Health (NJDOH) was created to facilitate ongoing follow-

up services upon release from state prison and to improve access to treatment in the long term. The program connects navigators to participants prior to release to develop an individualized treatment plan. Navigators then monitor participants for 1 year postrelease, during which time they remain in regular contact with participants, meet one-on-one, follow up on appointments, and track progress. Though no data are yet available on the outcomes of this program, it has exhibited initial indicators of success in connecting participants to reentry and substance use treatment providers to minimize relapse and recidivism.

Kentucky

In 2015, the Kentucky Department of Corrections (KYDOC) began offering extended-release naltrexone (Vivitrol) in its facilities. Programming is now operational in 8 out of 12 prisons and 24 out of 76 jails. The program focuses on successful reentry, offering Vivitrol in anticipation of release and for a minimum of 6 months postrelease, in order to lower the risk of relapse and overdose during reintegration. In addition to Vivitrol, whole person care is offered for the duration of treatment, including cognitive behavioral therapy, general aftercare, and relapse prevention support groups (Staton, Dickson, & Winston, 2018).

KYDOC's prisons and jails begin identifying individuals with SUDs 6 months prior to release. Though participation is voluntary, KYDOC offers a 90-day reduction in sentence length for cooperation. Once enrolled, and while still incarcerated, participants are assigned a caseworker and go through a 12-step therapy program, attend classes about chemical dependency, and receive cognitive behavioral therapy. Additional behavioral interventions are determined by the patient's social service clinician; KYDOC offers day programs, intensive outpatient programs, general aftercare, and relapse prevention support groups. A first injection of naltrexone is offered 5 weeks prior to release, and a second is delivered 1 week prior to release, with regular treatment continuing for at least 6 months postrelease (Beckman et al., 2018).

The average cost of addiction treatment programs is \$9.00 per day in all KYDOC jails and \$6.67 per

day in prisons (Staton et al., 2018). Although the only medication offered is naltrexone, Kentucky has seen considerable improvements in healthcare costs, relapse rates, overdoses, and recidivism rates since the program was initiated.

Furthermore, KYDOC partners with a number of reentry service providers to ease the transition into the community, especially for individuals with SUDs. One of the largest and most innovative of these programs is Recovery Kentucky, a housing program for individuals impacted by addiction. Recovery Kentucky began in 2004 as a partnership among KYDOC, the Department for Local Government, and the Kentucky Housing Corporation. Recovery Kentucky now operates 14 addiction treatment housing sites across the state, with a particular focus on the reentry population (Kentucky Housing Corporation, 2019).

On release, individuals are referred directly from KYDOC to Recovery Kentucky, where 70% of all beds available are funded by KYDOC on a per diem basis. Participants in Recovery Kentucky remain in KYDOC-funded housing, treatment, and support systems for up to 180 days, in accordance with best practices (NIDA, 2018) that indicate the importance of long-term treatment for success.

Recovery Kentucky is based on a therapeutic community model that emphasizes the development of coping skills, including job skills necessary for active participation in the community. Currently, they maintain patients who enter the program on Vivitrol, and some sites partner with Federally Qualified Health Centers to provide Vivitrol to those not receiving it on entry. Recovery Kentucky is now working to expand further access to more MAT. The average cost of Recovery Kentucky is \$35.89 per day (Logan, Miller, Cole, & Scrivner, 2018).

On intake to all KYDOC treatment programs, data are collected on behaviors prior to incarceration, and follow-up data are collected 12 months after completion of the program. A recent study of KYDOC's treatment programs, including the MAT program, found that for every \$1 invested in corrections-based addiction treatment in

Kentucky, there was a \$4.52 return on investment, using data collected from July 1, 2016, to June 30, 2017. Further, 70% of those who completed addiction treatment programming were employed 12 months following release, 57.2% had not been reincarcerated, and 61% had no evidence of illegal drug use (Staton et al., 2018).

Recovery Kentucky alone has likewise seen significant positive outcomes. According to a 6-month follow-up study, 76% of those completing the program were employed, compared to 46% at intake; 5% reported illegal drug use, compared to 83% at intake; and there was a \$2.60 return in avoided costs for every \$1 invested (Logan et al., 2018).

Massachusetts

Implemented in 2014, the Medication-Assisted Treatment Reentry Initiative (MATRI) is a collaboration between the Massachusetts Department of Corrections (MADOC) and the Massachusetts Department of Public Health's Bureau of Substance Abuse Services. MATRI offers prerelease treatment as well as postrelease follow-up and linkage to treatment for individuals identified as having alcohol or other SUDs (Beckman et al., 2018).

MATRI programming is available at 14 of the 16 Massachusetts state prisons (Beckman et al., 2018). Nine months before release, individuals are screened for eligibility, and any qualifying individuals who are at a facility that does not provide programming are transferred to a participating facility. After screening, eligible inmates attend programming that includes MAT education, one-on-one appointments with substance use counselors and therapy groups for at least 6 months (Bureau of Justice Assistance [BJA], 2016).

At 6 months prerelease, participants are paired with recovery support navigators (RSNs). The purposes of an RSN are to facilitate a warm hand-off to the community, ensure continuity of care, and monitor progress throughout treatment. Through a partnership with Spectrum Health Services, a medical service provider for incarcerated individuals, MAT is provided beginning 10 days

prerelease. To evaluate for possible negative side effects, low doses of oral naltrexone are provided daily for the first few days. Assuming positive outcomes, Vivitrol is administered 7 days prior to release.

Following release, individuals are directly referred to clinics in the community to continue Vivitrol monthly and facilitate continued behavioral interventions. Partnering clinics include 13 intake centers and other sites maintained by Spectrum, as well as at least a dozen other community treatment providers that have partnered with MADOC. Throughout the transition into the community and through the duration of treatment, RSNs work directly with participants to coordinate and manage treatment for up to 1 year postrelease (BJA, 2016). Currently, the only medication provided is Vivitrol (naltrexone), but Massachusetts is now expanding to provide access to all FDA-approved medications.

MATRI is funded through a combination of Medicaid and partnerships. RSNs and aftercare treatment are provided by Spectrum. Alkermes, a pharmaceutical company, provides Vivitrol to MADOC for prerelease treatment. Through Medicaid expansion adopted by Massachusetts, postrelease Vivitrol is covered, and the vast majority of incarcerated and previously incarcerated individuals are Medicaid eligible (BJA, 2016). In addition, MADOC received a \$1 million allocation in 2014 to initiate the program, and it has received an additional \$250,000 each year since to maintain it (National Governors Association, n.d.).

MATRI has seen considerable successful outcomes since its implementation in 2014. As of October 2016, 78% of those provided Vivitrol prior to release through the program received some form of treatment postrelease; and 62% of those provided Vivitrol prior to release received MAT postrelease. (Massachusetts Department of Public Health, 2017). Similarly, between the program's inception and 2016, the state saw a 9.7% reduction in crime as a result of the program (Pelletier, n.d.).

In addition, MATRI has significantly improved the cost-effectiveness of the Massachusetts criminal

justice system. According to the Massachusetts Results First Initiative, the net benefit of treatment after the implementation of MATRI and other MAT programs in MADOC was \$8,986 per inmate. There was a \$6.27 reported return on every dollar invested in MAT addiction treatment (Pelletier, n.d.).

Best Practices

The above programs indicate and exemplify the success of a set of best practices in addiction treatment in criminal justice settings. Although the following are not meant to constitute an exhaustive list of best practices in this area, they provide an outline of practices highly correlated to successful programming. The implementation of such practices in correctional settings across the board is likely to result in successful outcomes in each case, similar to those witnessed by the above programs.

MAT

MAT has become the national standard of care for opioid addiction treatment in recent years, regardless of setting. MAT is defined by the U.S. Department of Health and Human Services' Center for Substance Abuse Treatment as "the use of medications, in combination with counseling and behavioral therapies to provide a whole patient approach to the treatment of substance abuse disorders." MAT programs provide a "whole patient" approach through the combination of medication and behavioral care for comprehensive integrated treatment (NIDA, 2018).

The reasons for the use of medication in addiction treatment have been well established and need not be recapitulated here (Sordo, 2017). It is important to note, however, that the effective use of MAT is particularly critical for the recovery of incarcerated and formerly incarcerated individuals. There have been numerous studies reporting positive effects of MAT in probation, parole, jail, and prison settings (de Andrade, Richtie, Rowlands, & Hides, 2018; Egli et al., 2009; Holloway, Bennett, & Farrington, 2006; Lee et al., 2016; Mitchell, Wilson, & MacKenzie, 2007, 2012; Moore et al., 2019). Furthermore, the use of MAT has been shown not only to lower rates of OUD, SUD, drug use, relapse, overdose, and death; it has also been linked to positive criminogenic outcomes such as reduced

crime and recidivism rates. One recent study found that among the addicted reentry population, MAT maintenance reduces the risk of reoffense by 36.4% (Chang et al., 2016).

It also must be highlighted that although medication alone has been proven to improve outcomes significantly compared to no intervention (Martin, Chiodo, Bosse, & Wilson, 2018), behavioral care such as therapy, group counseling, and addiction counseling, as well as concurrent care for comorbid mental and physical illness should be provided when possible in conjunction with medication for treatment to be effective, especially for the incarcerated and reentry populations. Because the justice-involved population is disproportionately affected by co-occurring disorders and illnesses (Foundations Recovery Network, n.d.; Hedden et al., 2015; Kessler et al., 1996; McGovern et al., 2006; NIDA, 2016; Walters & Fulman, 2016), medication, when feasible, should be used while addressing the underlying causes of addiction as well as concurrent issues (NIDA, 2016; Shatterproof, 2018).

Personalized Treatment and Continuity of Care

Best practices indicate that treatment be both personalized and consistent. As reported by the Surgeon General, ASAM, and SAMHSA, individual screening and assessment must be the first step in treatment; and following, patients must be provided with a personalized treatment plan that meets their individual needs (Comer et al., 2015; Shatterproof, 2018; U.S. Department of Health and Human Services [HHS], 2016, 2018). Largely because individuals with OUD are some of the most complex patients, both their medical needs and their social barriers make the individualization of treatment procedures essential to successful recovery and long-term stability. This is particularly true among the incarcerated population, because the barriers to reentry make long-term employment, stable housing, physical and behavioral healthcare, and other social supports both most critical and most difficult to maintain.

Similarly, care must be seamlessly maintained throughout the duration of treatment. This

includes a step-down treatment model and the effective navigation of patients through their individualized plan (Comer et al., 2015). Again, these measures are particularly relevant to the justice-involved population. Given the already highly destabilizing transition from incarceration back to the community, the risk of treatment failure is particularly high among this population. To mitigate this risk, most successful state models have made provisions to ease the treatment transition through such measures as navigators, case managers, direct referral, and partnership with outside treatment providers (including those models outlined herein). Furthermore, best practices indicate that effective continuity of care postrelease demands the initiation of OUD with individuals during incarceration, at least 30 days prior to release (Comer et al., 2015).

Length of Treatment

In order for MAT in any context to be effective in achieving and maintaining sobriety, research indicates that treatment should be provided on a long-term basis, and that participation in treatment for less than 90 days significantly limits its efficacy (NIDA, 2018). The standard is no different for the incarcerated and reentering population. Indeed, all the programs highlighted in this report, as well as many other successful models, place emphasis on the continuum of care lasting a significant period of time after release. Given the extreme nature of opioid addiction, patients have a very high risk of relapse if they are not given long-term maintenance therapy; this is especially true of those with particularly severe OUD who require longer treatment and more comprehensive wraparound services (NIDA, 2014). For example, a recent report released by the Surgeon General says:

“patients with serious substance use disorder are recommended to stay engaged for at least 1 year in the treatment process, which may involve participation in three to four different programs or services at reduced levels of intensity, all of which are ideally designed to help the patient prepare for continued self-management after treatment ends” (HHS, 2018).

The efficacy of long-term treatment is supported by

the success of other models. American Addiction Centers enrolled more than 4,000 patients as part of a study conducting 12-month SUD treatment. By the end of the year, 63% of patients were abstinent from all substances, frequency of heroin use decreased by 88% overall, frequency of other opiate use decreased by 95%, frequency of significant family conflict decreased by 87%, frequency of physical health problems decreased by 44%, and frequency of mental health problems decreased by 56% (Centerstone Research Institute, 2018).

Furthermore, longer treatment based on best practices, although higher in cost than traditional detoxification methods in the short term, is far more cost-effective than traditional detoxification methods in the long term. A number of studies (Baser, Chalk, Fielin, & Gastfriend, 2011; McCarty et al., 2010; Mohlmann et al., 2016) have confirmed this assertion, including a 2010 study which found that over a 5-year period, those who received MAT had 50% lower total annual health plan costs than those who had two or more visits to an addiction treatment department but no MAT, and 62% lower than those with zero to one visit and no MAT (McCarty et al., 2010).

Peer Support/Recovery Coaching

As the needs for continuity of care and length of treatment imply, integral to the success of MAT is successful navigation throughout the course of treatment. This can be accomplished in a variety of ways, but one of the most common and effective methods utilizes peer support and recovery coaches: for example, the Massachusetts model outlined above. Individualized case managers are necessary to maintain personalization of care and continuity on release.

In particular, the engagement of peer coaches who have themselves experienced OUD and recovery processes is a vital practice in a number of successful models. Peer support and recovery coaching extends beyond the clinical environment and offers advocacy, sharing of resources, development of health community and relationships, participation in Narcotics Anonymous, Alcoholics Anonymous, and other recovery groups, goal setting, and mentoring services.

Peer support requires the development of core competencies to provide critically needed services to individuals in recovery and their families. SAMHSA has recognized peer support in the role of recovery support services in recovery-oriented systems of care. Peer support provides stability, especially for those with mental health comorbidities, and also assistance in addressing health disparities of those in the recovery process who face additional medical, psychosocial, or socioeconomic barriers to recovery.

Wraparound Services

In order to effectively recover and maintain long-term sobriety, best practices indicate that addicted individuals need a robust support structure and comprehensive wrap-around services (Boyle, Ragusa-Salerno, Lanterman, & Marcus, 2013; Braga, Piehl, & Hureau, 2009; Davis et al., 2013; Mallik-Kane & Visher, 2008; Roman & Travis, 2004; Uggen, 2000). This is particularly true for the justice-involved population, who face numerous barriers to stability that often have a negative impact on recovery. These barriers often include, but are not limited to, ineligibility for education, training, and employment; lack of access to mental and physical healthcare coupled with high rates of mental and physical health issues; housing instability; and legal barriers such as lack of proof of identification and a morass of fines and fees. In addition to increasing the risk of treatment failure, all of these barriers have been proven to be linked to high recidivism rates (Forkey, 2016).

As a result, all of the highlighted programs, and the majority of programs that have been successful in lowering relapse and recidivism rates on release, have provided linkage to effective wraparound reentry services, including:

1. Sober transitional housing
2. Training and employment
3. Medicaid registration
4. Linkage to medical and behavioral healthcare services
5. Legal services
6. Faith-based services

Information Exchange

In recent years, the use of an effective information-sharing system has become a best practice in the creation and maintenance of a successful infrastructure of addiction treatment (Addiction Policy Forum, 2017; Walters & Fulman, 2016). This ensures that a consistent standard of care is maintained across treatment providers for the duration of treatment. Often, when information exchange is not present, patients receive treatment from a number of different providers, none of whom are aware of the longitudinal history—the results can be ineffective at best and detrimental at worst.

This is necessarily true for addiction treatment among the justice involved-population. To bridge the gap between incarceration and reintegration, direct and efficient referral must be a priority in order to maintain consistent and effective care.

CONCLUSION

The conflation of the addicted population and the incarcerated population in recent years has only led to the further destruction of already disadvantaged communities. The burden to rebuild now lies with the correctional system. The state models outlined in this report demonstrate that the effective use of best practices yields positive outcomes nearly across the board. Thus, the implementation of best practices in addiction treatment in criminal justice settings across the country will decrease addiction and relapse rates, improve the cost efficiency of both the treatment and criminal justice systems, lower crime and recidivism rates, and save lives.

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Conflict of Interest Attestation

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

RESEARCH REPORT

Participant Perspectives on Medication-Assisted Treatment for Opioid Use Disorders in Drug Court

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Abstract

Drug court participants with moderate to severe opioid use disorders (N=38) were interviewed in focus groups concerning their views on the most helpful aspects of drug court for treating opioid use disorders, how drug courts might better serve persons suffering from opioid use disorders, and their experiences relating to the use of medication-assisted treatment (MAT) in the drug court environment. Dominant themes emerging from the focus groups centered on the importance of destigmatizing MAT among family members and peers in the self-help recovery community, and ensuring that participants are held accountable for their actions through frequent, random, and continuous drug testing. Other perceived benefits of MAT included reduced cravings for opioids and withdrawal symptoms and receiving encouragement and support from drug court team members and fellow participants holding favorable attitudes toward MAT. Concerns focused on forced withdrawal from agonist and partial-agonist medications during jail detention, physiological dependence on agonists and partial-agonists, and drug substitution. Implications for drug court practices and criminal justice policy reforms are discussed.

INTRODUCTION

Opioid Use Disorders in Drug Court

Approximately 15% to 30% of adult drug court participants in the United States have a moderate to severe opioid use disorder or report primarily having problems with opioid use (Marlowe, Hardin, & Fox, 2016; Matusow et al., 2013). Evidence is mixed as to whether persons suffering from opioid use disorders have worse outcomes in drug court compared to other participants. Studies have reported poorer outcomes compared to participants with other substance use disorders (Gallagher et al., 2018; Rempel et al., 2003), no differences in outcomes (Cissner et al., 2013; Rossman et al., 2011), and better outcomes compared to those with cocaine use disorders (Dannerbeck et al., 2006; Guerrero et al., 2013; Hartley & Phillips, 2001; Miller & Shutt, 2001). No information is available to explain these discrepancies or to identify best practices in drug courts that can enhance outcomes for persons with opioid use disorders.

Medication-Assisted Treatment

Medication-assisted treatment (MAT) using three Food and Drug Administration-approved addiction medications—methadone, buprenorphine, and naltrexone—has been demonstrated to improve outcomes for persons with opioid use disorders on probation or parole and in traditional substance use treatment programs. Methadone is a full agonist medication that binds preferentially to opioid receptors in the brain, thus blocking the effects of illicit opiates like heroin (Kreek, 2008). It reduces withdrawal symptoms and cravings by stimulating the opioid receptors, but the effects are gradual, slow acting, and elicit rapid tolerance to intoxication. Because methadone is an opioid, it is addictive, can be intoxicating in nontolerant individuals, and can cause serious side effects, including respiratory suppression. Naltrexone, in contrast, is a full antagonist medication that binds preferentially with opioid receptors in the brain but does not stimulate those receptors (O'Brien & Kampman, 2008). It blocks the intoxicating effects of opiates but has no effect on withdrawal symptoms. Naltrexone is not an opioid and is neither intoxicating nor addictive. An extended-

release form of naltrexone, Vivitrol, produces blockade effects for approximately 30 days with a single injection. Although oral naltrexone has no demonstrable effects on cravings for opioids, evidence suggests Vivitrol can reduce cravings significantly (Langleben et al., 2012). Finally, buprenorphine is a partial-agonist medication that is slower acting and less stimulating than methadone, thus posing a lower risk of intoxication, sedation, and dangerous side effects such as respiratory suppression (Strain & Lofwall, 2008). Buprenorphine is an opioid that is addictive and can be intoxicating in nontolerant individuals.

Randomized controlled studies in probation and parole have found that combining psychosocial counseling with methadone, buprenorphine, or naltrexone (including Vivitrol) reduced unauthorized opioid use significantly better than counseling alone (Cornish et al., 1997; Gordon et al., 2008; Kinlock et al., 2009; Lee et al., 2016). Methadone and buprenorphine have also been shown to increase treatment entry and retention among probationers and parolees (Gordon et al., 2008; Gordon et al., 2014; Kinlock et al., 2009; Magura et al., 2009). Although some studies have reported reduced rearrest rates, reincarceration rates, or self-reported criminal activity for probationers or parolees receiving methadone or buprenorphine (Dolan et al., 2005; Gordon et al., 2008; Havnes et al., 2012), effects on crime outcomes have not been consistent (Egli et al., 2011; Magura et al., 2009; Miller, Griffin, & Gardner, 2016; Perry et al., 2015). Naltrexone, in contrast, has been consistently found to reduce rearrest and reincarceration rates (Cornish et al., 1997; Egli et al., 2011; Perry et al., 2015) and Vivitrol has been found to increase treatment retention in criminal justice populations (Crits-Christoph et al., 2015).

MAT in Drug Court

Given the promising findings in other criminal justice contexts, it is reasonable to hypothesize that MAT should improve outcomes in drug courts as well; however, efforts thus far have fallen short of expectations. In 2014, the Ohio General Assembly appropriated \$5 million to establish pilot MAT programs in drug courts in seven counties, and an additional \$11 million was appropriated in 2016

to extend the program to 21 counties. A study of 25 drug courts participating in the pilot program compared outcomes for participants with opioid or alcohol use disorders receiving MAT ($n = 543$) to those declining MAT ($n = 247$). Results revealed a small effect on 6-month retention rates (75% vs. 73%, $p < .01$) and no effect on rearrest rates, urine drug test results, employment, mental health symptoms, or other indicia of adaptive functioning (Dugosh & Festinger, 2017). A subsequent study of nine adult drug courts and one family drug court in Ohio similarly found no effects of MAT on graduation rates, mental health symptoms, or health-risk behaviors during enrollment (Baughman, Tossone, Singer, & Flannery, 2019).

These disappointing findings require explanation. Either MAT is less effective or functions differently in drug courts than in other criminal justice settings, or it has been implemented poorly in the drug courts studied thus far. The negative results could, for example, have stemmed from preferential use of antagonist medications, which are less effective than agonists for relieving cravings and withdrawal symptoms. In the first study, 84% of participants received antagonist medications and only 12% received agonists or partial agonists (Dugosh & Festinger, 2017). In the second study, 62% of participants received antagonists and 11% received agonists (17% received both) (Baughman et al., 2019). If attitudinal preferences on the part of program staff or policy makers led to an undue predilection for antagonists—as opposed to basing prescription decisions on sound medical judgment—this might explain the lackluster results. The null findings may also be explained by self-selection of participants into the MAT condition. Participants with more severe opioid use disorders or associated impairments may simply have been more likely to request or accept referrals for MAT. Conversely, those who were more motivated to succeed in treatment may have been more willing to receive MAT.

An alternative possibility that must also be considered is that MAT may be less critical for treating opioid use disorders in drug courts as compared to other criminal justice or treatment programs. Drug courts include numerous program

elements not ordinarily available in probation, parole, and traditional community treatment settings—such as frequent court hearings, weekly drug testing, incentives and sanctions contingent on program performance, and supervision by a multidisciplinary team of professionals including a judge, prosecutor, defense lawyer, supervision officer, and treatment professionals (National Association of Drug Court Professionals [NADCP], 1997). MAT may not elicit incremental benefits beyond this intensive backdrop of services or may require substantial modifications to work effectively in the drug court environment.

Current Study

The current study sought to shed light on this issue by interviewing drug court participants with opioid use disorders about their experiences with MAT and other services in the program, and their impressions as to why MAT might not be achieving its potential in drug courts. To our knowledge, this is the first qualitative study to explore the lived experiences of drug court participants who have an opioid use disorder concerning their thoughts, opinions, and experiences related to opioid treatment. Using a focus group methodology and qualitative research design, we investigated the following questions: (1) what are drug court participants' perceptions concerning the most helpful aspects of drug court for treating opioid use disorders?; (2) how can drug courts be more helpful in treating opioid use disorders?; (3) what are their thoughts, opinions, and experiences relating to the use of MAT to support recovery from opioid use disorders?; and (4) what barriers have they encountered or observed related to MAT in drug court?

METHODS

Recruitment

The study was approved and monitored by the Institutional Review Board at the first author's university. Research participants were recruited between May 2018 and July 2018 from one drug court located in a midwestern state in the United States. Inclusion criteria were as follows: (1) 18 years of age or older; (2) currently enrolled in the drug court; (3) capable of comprehending,

speaking, and reading English at the 6th grade level or higher; and (4) assessed by treatment staff as having a moderate to severe opioid use disorder.

A researcher unaffiliated with the drug court approached eligible participants outside of the courtroom after their status hearings to describe the study and offer an opportunity to participate. Recruitment took place after six weekly status hearings to ensure that every eligible participant with an opioid use disorder in the drug court had a chance to be in the study. During the recruitment, researchers introduced themselves to participants, described the research questions and format of the focus groups, explained the study inclusion criteria, and emphasized that participation in the study was voluntary and confidential. Individuals providing voluntary informed consent were scheduled for a focus group on the same day.

Focus Groups

Focus groups were held in a private, secure conference room in the same building as the drug court but on a different floor. The groups were audio-recorded and co-facilitated by two researchers who are co-authors on this article, Gallagher and Minasian. Gallagher has a PhD in social work and is a clinician who has practiced addiction and mental health counseling for nearly 20 years. Additionally, he has training and expertise in qualitative research, and has published multiple qualitative studies related to participants' lived experiences in treatment courts. Minasian has

a Master of Social Work (MSW) and is a clinician who has practiced addiction counseling for nearly a year. While she was a graduate student, she served as a research assistant where she was trained in qualitative methodologies and analysis.

Interview prompts were open-ended and semistructured; specifically, participants were asked the five open-ended questions listed in Table 1. The open-ended questions were developed by Gallagher and Minasian, in collaboration with key stakeholders of the St. Joseph County (Indiana) drug court, including the judge, chief of probation, and drug court coordinator. Follow-up probes were used to develop an in-depth understanding of participants' lived experiences in the drug court. For example, the researchers used validating statements and probing questions such as: "You mentioned the judge is supportive of you using Suboxone [buprenorphine combined with naloxone] to treat your opioid use disorder. Could you please describe how this has impacted your participation in drug court?"

We elected to conduct focus groups rather than administer structured surveys or interviews because little is known about effective MAT practices in drug courts or potential barriers to those practices. Not knowing the potential range of participants' views and experiences, it is premature to develop the content domain for a structured assessment tool. Focus groups are indicated when researchers are engaged in early exploration of a

Table 1. Focus Group Questions

1. Could you please describe what aspects of drug court are most helpful to you in treating your opioid use disorder?
2. Could you please describe how drug court could be more helpful to you in treating your opioid use disorder?
3. Could you please describe your thoughts and/or experiences on the benefits of using medication-assisted treatments to treat your opioid use disorder?
4. Could you please describe your thoughts and/or experiences on the challenges of using medication-assisted treatments to treat your opioid use disorder?
5. Could you please describe your thoughts and/or experiences on whether or not the drug court effectively utilizes medication-assisted treatments to treat participants who have opioid use disorders?

new area of study, and consensus or debate among group members is useful for evoking new material and exploring divergent views and experiences (Padgett, 2016; Rubin & Babbie, 2008).

Qualitative Data Analysis

Audio recordings of the focus groups were transcribed verbatim and uploaded to NVivo, a qualitative analytic software program. Responses were examined through a phenomenological lens (Miles, Huberman, & Saldana, 2014). Phenomenological analyses explore the lived experiences of participants from their own subjective viewpoints rather than imposing researchers' preconceived theories or perspectives on their responses (Padgett, 2016).

Data analyses followed a four-step process, and several strategies were employed to increase the rigor and reliability of the findings, including negative case analysis (identifying infrequent dissenting opinions in the groups). First, to promote immersion in the data, researchers read the transcriptions on four occasions over a two-week period. Second, responses were coded to reflect logical or semantic categories. For example, words or phrases such as *nausea* or *injection site pain* were coded as relating to medication side effects. Third, concept mapping was used to group the coded responses into conceptual themes, and the number and percentage of participants contributing to or endorsing each theme was calculated. For example, medication side effects and stigmatizing reactions from other people were grouped into a theme concerning hindrances to MAT adherence, and the percentage of participants reporting such hindrances was calculated. Fourth, statements endorsed by a small percentage of participants that were inconsistent with other group members' responses were coded as outliers and used for negative or contrary case analyses.

Several strategies were employed to enhance the rigor of the data analyses and validity of the findings (Padgett, 2016). First, response coding and concept mapping were performed by researchers from different professional disciplines (criminal justice, psychology, and social work), offering

interdisciplinary triangulation and agreement on the codes and themes. Second, peer debriefing allowed the researchers to receive in-depth feedback on their preliminary codes and themes from senior colleagues who were unaffiliated with the research study and had substantial expertise in qualitative research methods. The peer reviewers had access to the focus group transcripts (purged of subject-identifying information) and the peer-debriefing process was completed via email and phone calls. Finally, negative case analyses and audit trails were used to establish the confirmability of the coded themes. Broadly speaking, confirmability involves reestablishing that the conclusions drawn from the analyses are based on participants' own responses rather than the researcher's preconceptions or biases. Audit trails are one approach to establishing confirmability. They involve having the research team retrace the coding and concept-mapping procedures to ensure that the conclusions follow a logical path emanating directly and accurately from participants' narratives. Finally, negative cases (infrequent contradictory responses) are described in the results to promote a balanced interpretation of the findings.

RESULTS

Thirty-nine drug court participants met inclusion criteria for the study and 38 agreed to participate, providing a consent rate of 97%. The average age of study participants was 34 years ($SD = 6.39$) and the majority were male (63%) and Caucasian (71%). Over half (58%) had been on MAT at some point in their lifetime, and roughly a third (37%) were receiving MAT at the time of the focus groups. Among those currently on MAT, 50% ($n = 7$) were receiving Suboxone (buprenorphine combined with naloxone), 29% ($n = 4$) were receiving Vivitrol, and 21% ($n = 3$) were receiving methadone. Participants not currently receiving MAT were either not referred for it, refused it, were unable or unwilling to pay for the medications, or had been tapered off the medication in the late stages of treatment. There were no apparent differences in focus group themes generated by participants receiving MAT compared to those not receiving MAT.

By far the most prevalent themes expressed in the focus groups related to the importance of

conducting frequent and random drug testing (reported or endorsed by 66% of respondents) and reducing stigmatization of MAT by persons outside of the drug court, such as family members and peers in self-help recovery groups (58% of respondents). These two themes were reported and emphasized by the majority of participants in all six focus groups. Nine additional themes were reported or endorsed by at least 25% ($n \geq 10$) of participants. The themes and examples of participant statements are summarized in Tables 2 and 3.

Importance of Drug Testing

Twenty-five participants (66%) emphasized the importance of frequent and random drug testing, as it minimized the likelihood of relapse and increased the chances of completing the program successfully. Participants noted that, in the past, the drug court had conducted random drug testing two to three times per week in the beginning of the program but reduced the frequency of testing to twice weekly and then once weekly as

Table 2. Perceived Benefits of MAT

Prevalent Themes (reported by > 50% of respondents)	
Importance of Drug Testing: Two-thirds of participants (66%) emphasized the benefits of frequent and random drug testing in combination with MAT to minimize relapse and increase completion of treatment.	"All the drug testing is stressful, but it helps deter me from using drugs and the more I am clean, the easier it becomes."
Other Common Themes (reported by 25% to 50% of respondents)	
Reduced Cravings: Several participants reported that MAT helped reduce cravings for opioids. Methadone, buprenorphine, and Vivitrol (extended-release naltrexone) were all reported to reduce cravings.	"Vivitrol curbs your cravings and your urges. You know you can't get high on it, so your thoughts make you not crave it. I guess you could say you retrain yourself."
Engagement and Attendance in Treatment: Some participants felt MAT improved their engagement and attendance in treatment, as well as other aspects of their life, such as employment.	"I get there [methadone clinic], take my medication, and I'm good for the day. I go to work every day; I don't miss a day of work. I actually got a certificate for work for being non-tardy. It's an attendance thing. I attend treatment more, especially more than when I wasn't on the medicated assistance [methadone], and I actually participate in the groups."
Psychosocial Treatment in Conjunction with MAT: Participants emphasized the importance of psychosocial counseling in conjunction with MAT, as counseling helped promote behavioral changes that supported recovery.	"I don't think medication-assisted treatment alone helps. The [drug] court makes us go to classes to learn about addiction and relapse prevention, and that helps. Medications help with the withdrawal and cravings, but we also need to learn what we need to change to stay sober."
Support from the Judge and Team: Some participants viewed the drug court team, particularly the judge, as supportive of MAT and having insight into how MAT assists recovery from opioid use disorders. Compliance with MAT demonstrated to staff that the participant was committed to sobriety and elicited positive feedback and support.	"They [drug court team] don't judge you at all for that [being on MAT]. They actually, they appreciate you going to treatment and taking your medicine because you're trying to stay on the right track. And if that's what it takes for people, that's what it takes, and they are totally open for ideas."
Peer Support for MAT: Some participants, including those not on MAT, were supportive of those who were and offered encouragement and camaraderie.	"Abstinence is what I need, but if someone needs methadone or another opiate, a prescribed one, to do better, I feel like it's better than sticking a needle in your arm, you know. I know it's hard to get off heroin, and you do whatever you need to do, so the drugs [MAT] should be available to people who need it."

Table 3. Challenges Associated with MAT

Prevalent Themes (reported by > 50% of respondents)	
Stigmatization: Over half (58%) of participants experienced or witnessed stigmatizing comments from family members or members of the self-help recovery community.	“Methadone is part of my recovery; it helps me stay clean and sober and do the right thing. I wish my family saw it that way, too. I have spent many nights crying and just wishing my parents would stop making it so difficult for me.”
Other Common Themes (reported by 25% to 50% of respondents)	
Side Effects: Several participants reported side effects related to their medication, particularly Vivitrol (extended-release naltrexone).	“The Vivitrol injection thing seemed to have side effects for me. It was like affecting my sleeping, making me depressed, and some other things, private, sexual things. It just wasn’t for me. It hurt for like the first two weeks. They shoot you right in the back on the ass, like right above your butt cheek ... it was a big knot for the first couple weeks and it gradually goes down.”
Use of Other Substances: Several participants shared their own experiences or observation of others who were abstinent from opioids as a result of MAT but still used nonopioid drugs, such as alcohol, marijuana, and cocaine.	“I’ve seen it with my friends and me, we stop shooting dope [heroin] but aren’t completely clean like the court wants us to be. I still drink [alcohol] sometimes, but overall feel I am doing much better than when I got arrested.”
Discontinuation of MAT in Jail: Some participants expressed serious reservations about agonists and partial agonists because they feared that if they were incarcerated, even for a few days, there would not be a continuation of care during custody.	“I tell people, don’t get on the methadone or Suboxone, none of these medications, because if you get locked up, you aren’t getting it in jail, and the withdrawal is really bad. Once you’re locked up, they don’t care about you staying on your meds, so you get out and relapse.”
Risk of Abuse with Buprenorphine or Methadone: Some participants reported they did not want to take buprenorphine or methadone because they abused it in the past or feared they might abuse it in the future. However, most of these individuals were open to naltrexone or Vivitrol.	“For me, being a heroin addict, give me any kind of addictive substance like methadone, and I’m going to get addicted to it. It’s not going to work out for me. It’s always going to lead me back to heroin, but I can see how it works for some people, not me, though. Vivitrol because it’s not an opiate is probably the best option for me.”

participants made progress in treatment. However, in response to the opioid epidemic, the drug court began conducting testing three times per week for the duration of treatment for participants with opioid use disorders. This is referred to as the blue schedule, because participants must submit a urine sample whenever the color blue is randomly called on a testing day. A female participant, for example, shared her experiences with thrice-weekly testing:

“I would say that they [drug court] work with you. If you’re honest about, you know, slipping or relapsing, they are willing to give you another chance and not just throw you in jail and keep you locked up. I relapsed myself a few times and they worked with me. The drug testing keeps you on your toes because,

being on blue in the beginning, you got to be clean for three days. But, some people, you know, they try to beat the system. I tried to beat the system and it ended up biting me, but, you know, I learned my lesson. Being on the color blue, it keeps you on your toes and helps me make better decisions.”

A male participant discussed how the beginning of drug court was a difficult time for him, but drug testing three times per week helped to promote self-accountability and internal motivation for recovery:

“At the beginning, I was on the color blue, and just knowing that you’re going to be tested

three times a week, and it's random, it's like the hardest time. It holds you accountable by knowing that you are going to have to pass these drug tests. You have to come in every day you get selected, and it's not set by you, it's random and three times a week. So, it helps knowing you're going to have to do that or go back to jail. There are consequences for not doing the drug tests. I think that helps a lot. I didn't enjoy being on blue, but it definitely helped me at the beginning."

Another male participant highlighted the importance of conducting drug testing on Saturdays, not just weekdays. He noted that drug testing three times a week can be stressful, but at the same time, it promotes recovery by deterring drug use:

"Drug court keeps close tabs on you with the drug tests. You got to test quite often, like three times a week, and even on Saturdays. I don't like coming in on my weekends to drug test, but if they didn't do that, a bunch of us would be getting high. When our minds see an opportunity to get high, like if they didn't drug test on the weekend, we would get high. It just keeps you on your toes, and I'm totally thankful for it because now I realize that, once you're off the dope, it's a totally different thought process, you know, it's completely different. When you're on that stuff [opioids], believe me, it's just terrible. All the drug testing is stressful, but it helps deter me from using drugs, and the more I am clean, the easier it becomes."

Negative case analysis revealed that four participants (11%) shared thoughts, opinions, and lived experiences that conflicted with this theme. It is important to note, however, that all four of these participants raised objections concerning the cost of frequent drug testing rather than taking issue with its effectiveness. Because many drug courts do not require participants to pay for drug testing (unless they challenge a test result that is subsequently confirmed on retesting), these objections may not apply to all drug courts. One participant stated: "I am on blue and also get drug tested twice a week

in treatment, which I think is a little much because it's expensive and more money out of my pocket." Another participant offered suggestions on how to minimize the financial impact of frequent drug testing on participants:

"Fifteen dollars every drop [drug test], and we are doing three a week. I have been on blue the whole time and racked up hundreds of dollars in fees in drug tests. So, I think that is one way drug court can improve. If you're doing everything, like they draw a name once a week for a free drop [drug test], but if you're doing everything you're supposed to do, especially if you're on blue, I think you should probably get a free one [drug test] like every week, like, everyone should if you're doing what you're supposed to be doing."

Stigmatization of MAT

Twenty-two participants (58%) shared thoughts, opinions, and lived experiences relating to stigmatization of MAT. Several shared their own experiences relating to stigmatization and others commented on negative interactions they witnessed by others. Stigma reportedly emanated primarily from peers in recovery groups (e.g., Alcoholics Anonymous [AA], Narcotics Anonymous [NA]) and family members. Negative judgments came in a variety of forms, such as minimizing an individual's recovery because he or she was receiving MAT, or predicting that the use of MAT will eventually lead the person back to illicit opioid use. These comments were exclusively associated with buprenorphine and methadone.

In virtually all instances, stigmatization of MAT was attributed to persons not involved in the drug court. The drug court team and specific members of the team, such as the judge, case managers, and treatment providers, were viewed as being generally supportive and nonjudgmental of MAT. Whether this supportive stance is representative of the views of many drug court teams is unknown.

One participant shared her experience with Suboxone and how she felt offended when others judged her recovery. She hoped more people would adopt the same accepting attitude evinced

by the drug court team:

“You get people saying comments all the time about it, like when I was on Suboxone, they would say, ‘Oh it’s just switching one opiate for another opiate, you’re still using.’ That is offensive. The people who were supposed to be supporting me were judging me. They don’t understand my recovery, like, I wasn’t shooting up [opioids] anymore, and I was keeping a job and functioning well. So, they just don’t understand it, so people who don’t understand things like this like to make comments. The drug court does a good job, though. The judge allows people to take medications, and she praises them for doing well; she doesn’t judge them. Using medications in this program is a good thing.”

Another participant shared a similar experience in which he witnessed stigmatization at recovery support groups. He also discussed the benefits he has received by taking Suboxone to support his recovery, but noted he is cautious about disclosing his use of Suboxone at recovery support groups because of the fear of being judged:

“Treatment requires that we go to NA meetings, but sometimes I leave the meetings frustrated. The people there, not all, but many look down upon others who are on medications like methadone and Suboxone. They don’t see it as real recovery and make comments like, ‘These people are just substituting one addiction for another, and it’s only a matter of time before they start using heroin again.’ I have stopped using heroin without medications and with, and I do much better on Suboxone. The cravings are less, I do good in drug court, my family is happy that I’m not getting high, and I have more energy and feel better, better self-esteem. These NA meetings, you know, are not always good for people on medications. I am selective in what I share at these meetings, and I rarely mention medications anymore. We need support and encouragement, not to be told we aren’t in recovery.”

Some participants shared that stigmatization came from family members, and this was particularly

challenging because they wanted their family to support their recovery and praise the progress they had made. One participant, for instance, discussed her sadness related to her family not supporting her while she was on methadone:

“When I’m doing good, my family is okay for the most part, and they don’t give me that much of a hard time. But, the moment I make some mistake, they blame it on the methadone. They say I’m still getting high on the methadone, and I’ll never change. They don’t see that the methadone is helping. This is the best I’ve felt ever, and I still have a long way to go, but the methadone takes away the cravings and obsession to use heroin. Methadone is part of my recovery; it helps me stay clean and sober and do the right thing. I wish my family saw it that way, too. I have spent many nights crying and just wishing my parents would stop making it so difficult for me.”

Negative case analysis revealed that two participants (5%) shared thoughts, opinions, and lived experiences conflicting with this theme. Both participants stated they found their recovery support groups to be open and supportive of MAT. One participant stated:

“The meetings [recovery support groups] I go to are open to recovery. They don’t judge you at all for using medications. They appreciate you going because you’re trying to stay on the right track. And, if that’s what it takes for people, that’s what it takes, and they are totally open to it.”

The negative cases reveal a noteworthy observation. In no way do the findings from this study suggest that all recovery groups and families misjudge and stigmatize MAT. The prevalence and tenacity of stigma is likely to vary from one support group to another and could perhaps be reduced by delivering effective educational and preparatory interventions for family members, significant others, and other community groups.

Additional Benefits of MAT

Additional benefits from MAT were reported or

endorsed by at least 25% ($n \geq 10$) of participants (Table 2). These benefits included the intended pharmacological effects of MAT, such as reducing cravings for opioids and withdrawal symptoms, thus enabling participants to concentrate comfortably on other counseling services and treatment components. The importance of psychosocial counseling was stressed repeatedly by several participants who noted that MAT may reduce withdrawal and craving but does nothing to teach prosocial skills to help them adapt to life's challenges without resorting to illicit drugs.

Several participants also reported that adhering to their MAT regimen communicated to others in the drug court that they were serious about and committed to their sobriety. Taking their medication reliably provided early evidence to drug court team members and fellow participants that they were complying with their treatment plan and meeting their obligations in the program. This, in turn, elicited greater support and encouragement from others in the program, thus furthering their commitment to sobriety and alliance with program staff and peers.

Additional Challenges of MAT

Several additional challenges relating to MAT were also reported by at least 25% of participants (Table 3). These included known pharmacological side effects of the medications, such as injection site discomfort from Vivitrol and physiological dependence on buprenorphine and methadone. Participants also noted that although MAT may reduce the use of illicit opioids, it has little or no effect on other substances, such as alcohol, marijuana, and cocaine. Participants warned staff not to be naïve about or misled by drug substitution and diversion of prescription medications, again emphasizing the importance of frequent drug testing and suggesting other strategies to minimize diversion, such as observed administration of the medications, especially in the early phases of treatment.

Finally, several participants raised serious concerns about discontinuation of MAT in the event they are sanctioned or sentenced to jail. Because many jails may not maintain inmates on agonist or partial-

agonist regimens, participants may suffer serious withdrawal symptoms at the same time they are confronting other stressors of incarceration and possible termination from treatment. Several focus group members felt that the risk of suffering acute withdrawal in custody outweighed any potential benefits that might accrue from methadone or buprenorphine.

DISCUSSION

Drug court participants with moderate to severe opioid use disorders were interviewed in focus groups concerning their views on the most helpful aspects of drug court for treating opioid use disorders, how drug courts might better serve persons suffering from opioid use disorders, and their experiences relating to the use of MAT in the drug court environment. By far the most dominant themes emerging from the focus groups centered on the importance of destigmatizing MAT and ensuring that participants are held accountable for their actions through frequent, random, and continuous drug testing.

Focus group members reported experiencing supportive reactions concerning MAT from drug court staff members and fellow drug court participants; however, they experienced or witnessed negative and judgmental reactions from some members of the self-help recovery community and family members. These reactions were not merely hurtful but interfered with participants' self-efficacy and confidence in their ability to meet treatment goals. Because not all drug courts may be as supportive of MAT as the program in this study, participants in other drug courts may face even more severe and pervasive stigma, undermining their self-confidence, interfering with treatment goals, and hindering healthful recovery. A recent report from NA World Services acknowledged that some NA meetings limit or restrict participation of individuals receiving MAT or may be less welcoming of such individuals (NA World Services, 2016).

In light of these unfortunate findings, drug courts must be selective in deciding to which recovery support groups they refer their participants (Gordon, 2017). If groups that are welcoming of MAT are not available in the local community, which

may be the case particularly in sparsely populated rural areas, then drug courts should collaborate with community partners to develop their own recovery support groups, such as developing and cultivating a drug court alumni association (Burek, 2011; McLean, 2012). Additionally, treatment providers and other members of the drug court team should educate participants about what to expect at self-help meetings and recovery support groups, and prepare them for potential stigma they may face in disclosing their use of MAT. A longstanding norm in the substance use treatment profession is to encourage participants to explore multiple recovery support groups before selecting the one that is the best fit for them, and this practice should be accepted and encouraged in drug courts (Bassuk et al., 2016; Laudet & Humphreys, 2013).

Participants also reported negative attributions about MAT from family members. Given the powerful impact of family interactions on the recovery process (Berg & Huebner, 2011; Datchi & Sexton, 2013), drug courts should explore multiple avenues to educate family members about MAT and encourage its acceptance in the broader community. Psychoeducation concerning MAT should, for example, be delivered during family counseling sessions and reiterated by the judge during status hearings. Community forums, local news stories, and presentations at local colleges and universities are other promising avenues for reducing stigma in the broader community and increasing acceptance of MAT.

Focus group participants were equally vocal about the importance of frequent and sustained drug testing. This is consistent with numerous studies finding better outcomes for drug courts that engaged in frequent urine drug testing (Carey, Mackin, & Finigan, 2012; Gottfredson et al., 2007; Kinlock et al., 2013) and participant surveys indicating that drug testing is perceived as being among the most influential factors for success in drug courts (Gallagher & Nordberg, 2018; Gallagher, Nordberg, & Kennard, 2015; Gallagher, Nordberg, & Lefebvre, 2017; Goldkamp, White, & Robinson, 2002). Best practice standards promulgated by NADCP (2013) require drug courts to perform urine drug testing at least twice per week on a

truly random basis, including on weekends and holidays; otherwise, they should test three times per week. The standards further discourage drug courts from reducing the frequency of testing as participants move through the various phases of treatment. Participants in the current study wholly endorsed these sustained surveillance practices, asserting that without continuous monitoring and accountability even the best treatment, including MAT, is unlikely to counteract the powerful influence of opioid addiction.

Drug courts must, however, take into consideration the financial impact of frequent drug testing on participants. Paying for three tests per week could be an insurmountable barrier for some individuals, potentially disqualifying members of certain racial and ethnic groups, women, and indigent persons from drug courts. Drug courts must consider alternative methods to defray some of the costs, such as offering sliding fee scales or, as suggested by one participant in this study, incentivizing negative test results with fee offsets.

Participants reported several other benefits and burdens of MAT in drug court. Some themes related to the expected therapeutic benefits of the medications, such as reduced cravings and withdrawal symptoms, as well as known side effects, such as injection site pain from Vivitrol and physiological dependence on buprenorphine and methadone. Apart from these anticipated effects, participants raised additional concerns relating to drug substitution and discontinuation of agonist and partial-agonist regimens by jail staff. Currently, there are no addiction medications available to treat other commonly used drugs in drug courts, such as cannabis, cocaine, methamphetamine, and benzodiazepines. Naivety is the enemy of effective substance use treatment, and participants warned staff to be ever-vigilant to the emergence of other substances when participants reach blockade levels of opioid agonists or antagonists. From a policy perspective, these admonitions raise questions about criminal justice reform initiatives that seek to deflect persons arrested for drug-related crimes into treatment without the benefit of ongoing criminal justice leverage or oversight. If the participants in this study are correct, treatment alone, without

accountability, whether it includes evidence-based MAT or not, is unlikely to remedy the scourge of opioid addiction for many individuals.

Several participants expressed anticipatory dread about being withdrawn precipitously from methadone or buprenorphine if they are sanctioned or sentenced to jail. Such practices, although widespread, are not merely medically uninformed and harmful, but may also be unconstitutional or violate statutes such as the Americans with Disabilities Act (Legal Action Center, 2009). Recent appellate cases have held that jail and prison officials are prohibited from denying medically necessary treatments for opioid use disorders to inmates without having a compelling, or at least rational, basis for doing so (*Pesce v. Coppinger*, 2018; *Smith v. Aroostook County*, 2019). Unfortunately, participants and advocacy groups may need to bring costly and time-consuming test cases to encourage correctional institutions to meet their obligations and offer medically indicated and appropriate health services to persons under their charge.

Limitations and Future Research

Several limitations must be borne in mind when interpreting the results of this study. First, participants were recruited from only one drug court that was supportive of MAT, including agonists and partial agonists. The results may not generalize to other drug courts having less experience with or acceptance of MAT. Drug courts are encouraged to enlist independent researchers to study their own programs and discern the views of their participants. The current study suggests that qualitative research methods can be employed effectively to develop an in-depth understanding of how drug courts are serving (or failing to serve) their participants, and how their services are viewed by individuals who are unlikely to voice

their true beliefs publicly for fear of retribution. NADCP's best practice standards require drug courts to examine the quality and impact of their services on an ongoing basis (NADCP, 2015), and it is recommended that qualitative research methods be incorporated into program evaluations to give participants a voice in the services they receive.

Focus group members may also have been impacted by social desirability bias. That is, they may not have been honest or forthcoming with research staff for fear of retribution and may simply have told the researchers what they wanted them to hear. If the drug court takes participants' concerns to heart and implements recommended changes without retaliation or resentment, participants will be more likely to trust assurances of confidentiality in the future and may be more honest or forthcoming in subsequent studies. Each time a study is conducted for the benefit of participants and staff, the odds are likely to increase that future studies will gather more accurate data and avoid intentional or unconscious distortions in participant reports.

Another important limitation is that other drug court stakeholders were not included in the study—such as drug court team members, local policy-makers, representatives of the self-help recovery community, and members of the public at-large. Future studies should facilitate interviews or focus groups with various stakeholder groups to gauge their perspectives on treating opioid use disorders in drug court. Examining different ways of addressing the opioid epidemic from multiple informed viewpoints would provide unique and comprehensive insights into this dire public health crisis and yield important information for designing effective and cost-effective intervention strategies.

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RESEARCH REPORT

The Impact of Criminal Defendants' Opioid Use Disorder on Judges' Sentencing Recommendations

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Abstract

Individuals with substance use disorder continue to be disproportionately represented in the criminal justice system. This trend is particularly pronounced among those with opioid use disorder (OUD). Given the rising rates of opioid use among arrestees specifically, this study examined the impact of a defendant's reported OUD on sentencing outcomes following a robbery conviction. United States federal and state criminal court judges (N = 67) provided sentencing recommendations and generated perceptions of a hypothetical defendant with (1) reported heroin use, (2) reported prescription pain reliever use, or (3) no reported OUD. Analysis of variance (ANOVA) revealed that a criminal defendant with either of the OUD diagnoses was viewed as more likely to reoffend and less capable of logical reasoning than a defendant with no reported history of OUD. These findings suggest that defense attorneys may more effectively support clients with OUD by introducing the defendant's diagnosis during sentencing, with a focus on the benefits of rehabilitation and on addressing judges' concerns regarding recidivism. Additionally, ongoing research efforts to identify empirically supported treatment that targets criminogenic risk and relapse may offer further support.

INTRODUCTION

Substance use disorder (SUD), marked by significant clinical and functional impairment stemming from the repeated use of drugs or alcohol, has become increasingly pervasive in the United States. Prevalence estimates have risen steadily since 2002. As of 2017, approximately 19.7 million Americans aged 12 and older met criteria for an SUD (Substance Abuse and Mental Health Services Administration [SAMHSA], 2018). Within the scope of this trend, rates of opioid use disorder (OUD) in the United States have risen to particularly alarming levels.

The overprescribing and misuse of prescription opioid pain relievers (e.g., OxyContin) largely is responsible for the initiation of the opioid epidemic (Van Zee, 2009); however, despite reductions in prescribing over the past decade, the epidemic and overdose fatalities are currently maintained by the increased availability of more potent and relatively inexpensive alternatives (e.g., heroin, fentanyl). Furthermore, rates of opioid initiation continue to increase. The statistics offer a stark snapshot of the extent of recent opioid use. In 2016, 2 million Americans reported initiating pain reliever use, representing the second highest rate of drug onset after marijuana, and 81,000 initiated heroin use (SAMHSA, 2018). As of 2017, 11.4 million people reported misusing opioids, of which 11.1 million endorsed prescription opioid use and 886,000 endorsed heroin use (SAMHSA, 2018). Finally, approximately 2.1 million Americans formally met criteria for OUD in 2017, with prevalence rates of 1.7 million for prescription opioids and 652,000 for heroin (SAMHSA, 2018). The continued rapid growth of OUD holds wide-ranging social, clinical, and legal implications, and it highlights the importance of bolstering efforts to intervene effectively, educate the general public and relevant stakeholders (e.g., treatment providers, law enforcement), and rehabilitate users.

Although the expansion and wide reach of the opioid epidemic has garnered notable attention from the media, treatment providers, and policy-makers, ongoing barriers to effective intervention remain. One such barrier is the historical stigma

surrounding SUDs, as evidenced by the public's willingness to accept discriminatory practices toward substance users (e.g., denying housing for those with an SUD), opposition to public policies aimed at promoting recovery, and perceptions of individuals with SUDs as less competent and more dangerous than their nondependent counterparts (Barry, McGinty, Pescosolido, & Goldman, 2014; Pescosolido et al., 1999). Although the direct impact of the opioid epidemic on a variety of communities might suggest a reduction in stigma, recent surveys of public perception regarding prescription opioid misuse found that these patterns persist for OUD. Specifically, 44% of respondents in a recent survey indicated that presence of an OUD reflects a lack of willpower and discipline, and 32% view illicit opioid use as a character defect or a reflection of poor parenting; furthermore, fewer than 20% are willing to associate with individuals with OUD as a friend, colleague, or neighbor (Associated Press-NORC, 2018).

OUD and the Criminal Justice System

The stigma surrounding illicit drug use extends to the criminal justice system, which has been greatly affected by the opioid epidemic. The tendency to incarcerate drug users has deep roots in United States policy and law, dating back to the early 1900s and later reinforced by the Reagan administration's War on Drugs (Marlowe, 2002, 2009; Sharp, 1994). SUDs continue to be disproportionately represented within the United States criminal justice system. A 2014 survey of five major cities across the nation revealed that between 63% and 83% of arrestees tested positive for drugs at the time of arrest; it is particularly noteworthy that opioids demonstrated the greatest increase in prevalence across substances among drug-tested arrestees between 2000 and 2013 (Hunt et al., 2014). An examination of the National Survey on Drug Use and Health found that any type of opioid use—including use of pain relievers as prescribed—was associated with an increased likelihood of criminal justice involvement (Winkelman, Chang, & Binswanger, 2018). Furthermore, a positive relationship was observed between severity of opioid use and reported involvement with the criminal justice system (i.e., arrest, probation,

or parole) in the past year, with rates of justice involvement ranging from 4.4% to 19.5% among those reporting varying levels of prescription (mis) use and 42.5% among those reporting heroin use, as compared to 2.9% among those with no reported use (Winkelman et al., 2018).

Although many individuals with OUD face criminal charges, the specific impact of their opioid use on the outcomes of these charges remains unclear. Many individuals with SUDs are ultimately convicted, with an estimated 64.5% of inmates meeting criteria for an SUD (CASA Columbia, 2010). Among a random sample of 160 male inmates in one study, 73% with an SUD met criteria for OUD (Raggio, Kopak, & Hoffman, 2017). Surveys of inmates have revealed that drug users largely commit property-related crimes to support their habit (Mumola & Karberg, 2006), and the highest rates of SUDs among jail inmates were observed in cases of burglary (74%), drug possession (71%), and robbery (64%) (Karberg & James, 2005).

Rehabilitation and the Criminal Justice System

Given the overrepresentation of OUD in United States jails and prisons, the criminal justice system serves as a salient point of intervention. Although the United States has historically assumed a punitive approach to curbing and treating SUDs, recent years have seen a shift in drug policy alongside the advent of drug courts and diversion programs (see Marlowe, 2002). Consistent with these efforts, Farole (2009) found that 59% of the nation's judges believe that the goal of the criminal justice system is to treat and rehabilitate, rather than to punish, offenders. However, the limited research to date suggests a more complex reality.

With the passage of the Anti-Drug Abuse Act of 1986, minimum sentencing guidelines were established for different illicit substances in federal cases involving drug offenses, and these guidelines were adopted by numerous states in subsequent years (La Vigne & Samuels, 2012). In cases in which an individual commits a non-drug-related crime, the defendant's SUD can be presented as

a mitigating or aggravating factor, but there are limits in terms of how SUD evidence can be used in the guilt-innocence phase of a trial. In *Montana v. Egelhoff* (1996), the Supreme Court of the United States upheld a Montana statute that prohibited the defense from entering into evidence information regarding a defendant's voluntary intoxication at the time of the alleged offense. This ruling prevented the defense from arguing that active alcohol intoxication impacted the defendant's ability to form the requisite *mens rea* (i.e., criminal intent). Although the ability to introduce voluntary intoxication as evidence of mental state at the time of the offense is limited, judges can exercise more discretion in considering a history of SUD when making a sentencing recommendation. This flexibility introduces the opportunity for rehabilitative intervention.

Substance Use Disorder as a Mitigating Factor

The judge (or the jury in capital trials) considers a variety of defendant characteristics to inform sentencing. Aggravating factors, which function to bolster the severity of a criminal act and justify a harsher sentence, typically include lack of remorse, history of recidivism, and harm to the victim. The introduction of mitigating factors serves to promote rehabilitation and encourage leniency in sentencing. Mitigating evidence, presented to the court by the defense, may include factors related to diminished capacity (e.g., intoxication, diagnosis of mental illness) or psychosocial considerations (e.g., childhood abuse; McPherson, 1995). Thus, mitigation serves as a salient opportunity to address mental health needs in the criminal justice system. Although no studies to date have examined OUD as a mitigating or aggravating factor, an examination of SUDs overall can illuminate more general trends.

Mitigation in Capital Sentencing

The vast majority of research examining the impact of defendant SUDs on sentencing outcome has centered on capital cases. Studies of mock jurors' verdicts in capital trials found that defendants with a reported history of SUD were more likely to receive a life sentence than those without a

diagnosis (Barnett, Brodsky, & Davis, 2004). However, when compared to individuals with severe mental illness or intellectual disability, defendants with SUDs were more likely to be perceived as capable of logical reasoning and of engaging in rational behavior; defendants with SUDs were also perceived as more responsible for their crime, blameworthy, dangerous, and likely to reoffend (Barnett, Brodsky, & Price, 2008; Mossiere & Maeder, 2016). Furthermore, mock jurors viewed defendants' SUD as an aggravating factor, and these perceptions were associated with deleterious outcomes, including increased likelihood of receiving a guilty verdict and of being sentenced to death (Barnett et al., 2008).

A review of case law reveals that, in practice, defendants' SUD diagnoses have received mixed reception when introduced by the defense as a mitigating factor. Some defendants receive more lenient sentences (Kirchmeier, 2004) while others are more likely to receive a death sentence regardless of whether the diagnosis was accepted by the court as a mitigating factor (Bjerregaard, Smith, Fogel, & Palacios, 2010). Thus, in certain circumstances, the introduction of SUDs during sentencing not only may fail to mitigate sentencing but actually aggravate it, unintentionally harming the defendant's legal interests. Given the potential associated risk of disclosing a defendant's SUD, a greater awareness of the potential impact of an OUD diagnosis on sentencing seems particularly indicated.

Mitigation in Noncapital Sentencing

Whereas the Supreme Court of the United States in *Lockett v. Ohio* (1978) held that mitigating factors must be considered before rendering a decision regarding the death penalty, the consideration of mitigating evidence in noncapital cases is not mandated. Nonetheless, in *Pepper v. United States* (2011), the Supreme Court emphasized the importance of an individualized approach to sentencing in all criminal cases, ruling in favor of a defendant with methamphetamine use disorder who received a reduced sentence due to demonstrated rehabilitative efforts (e.g., addiction treatment). Although the vast majority of offenders with SUD do not commit capital crimes (Karberg & James, 2005), there is a dearth of research

examining an SUD diagnosis as a mitigating factor in noncapital sentencing contexts.

The presentation of mitigating factors during sentencing introduces the opportunity to address treatment needs, thus interrupting the problematic cycle of recidivism and symptom exacerbation among justice-involved individuals with OUD. A review of the literature suggests that individuals with SUDs face greater stigma and consequently receive harsher punishment in the criminal justice system, but no studies have examined the distinct influence of OUD. Studying the impact of an OUD diagnosis on factors related to sentencing has implications for how attorneys elect to use this information during trial to best serve clients with OUD. Furthermore, doing so improves our understanding of how judges perceive opioid misuse within the larger frameworks of public stigma and traditional nationwide approaches to public policy and legislation.

To address these gaps in the literature, the present study examined the impact of a defendant's reported OUD on judges' sentencing recommendations following a robbery conviction. Specifically, the study investigated whether differences in recommended sentence length and criminogenic risk-related perceptions of the hypothetical defendant emerged as a function of the type of OUD reported: heroin, prescription pain relievers, and none. We hypothesized that defendants with an OUD would receive a lengthier sentence and that judges would be more likely to view these defendants as culpable, dangerous, and likely to reoffend as compared to their counterparts without an OUD diagnosis.

METHOD

Participants

Participants were sampled from a larger study examining the impact of various SUD diagnoses (alcohol, marijuana, prescription pain relievers, and heroin) on sentencing outcomes. A total of 3,547 criminal court judges were contacted to participate in an SUD study via email from a listserv obtained through *The American Bench*, an online database of 20,000 United States judges. To

participate, candidates must have been English-speaking and a currently practicing United States judge presiding over federal or state criminal court. No exclusion criteria were applied for the original study. Participants were excluded from the present study if they failed to correctly answer the manipulation check questions or were randomized to a nonopioid SUD condition (alcohol use disorder or cannabis use disorder). A power analysis, which was conducted for the present study using a medium effect size (0.25) and an alpha level of 0.05, revealed that 159 participants (53 per condition) were needed to obtain adequate statistical power (0.80).

Of those who provided consent for the SUD study ($N = 216$), 92 respondents were removed due to incomplete participation and an additional 13 were removed due to inability to identify the type of SUD reported when completing the manipulation check. Of the remaining 111 respondents, 44 were removed because they were not randomized to the control (i.e., no reported SUD), heroin, or prescription pain reliever conditions.

The final sample consisted of 67 state and federal criminal court judges, with an average age of 59.45 years ($SD = 7.55$, range = 38.00-74.00) and an average of 15.11 years of service as a criminal court judge ($SD = 7.26$, range = 3.00-35.50). Participants primarily identified as male (85.1%), White (95.5%), non-Hispanic/Latino (97.0%), and Republican (53.7%). Further details of relevant demographic characteristics, including the setting in which participants preside, are presented in Table 1.

Table 1. Participant (U.S. Criminal Court Judge) Demographics

	n	%
Race		
Caucasian	64	95.5
Black/African American	2	3.0
American Indian/Alaskan Native	1	1.5
Total	67	100.0
Ethnicity		
Non-Hispanic/Latino	65	97.0
Not reported	2	3.0
Total	67	100.0
Sex		
Male	57	85.1
Female	10	14.9
Total	67	100.0
Political Affiliation		
Republican	36	53.7
Democrat	15	22.4
American Independent	5	7.5
Libertarian	1	1.5
Other	8	11.9
Not Reported	2	3.0
Total	67	100.0
Setting Over Which Judge Presides		
Rural	26	38.8
Urban	22	32.8
Suburban	19	28.4
Total	67	100.0

MEASURES

Presentence Investigation Report (PSIR)

An abbreviated PSIR was created to mirror the format of reports provided to judges prior to sentencing a criminal defendant. The PSIR included information regarding the defendant's basic demographic characteristics, charges, index offense, criminal history, and background information (e.g., education, mental health history). The defendant was a 24-year-old Caucasian male who pled guilty to one charge of robbery in the second degree. The defendant's criminal history included one prior juvenile adjudication, which resulted in probation, and no adult convictions. The three PSIR versions were identical except for manipulation of the OUD diagnosis. The PSIR is available from the first author upon request.

Sentencing Survey

This survey assessed judges' sentencing recommendation in length of years, with sentencing parameters of a minimum of 1 year and a maximum of 15 years. Sentencing parameters were established based on robbery sentencing guidelines across a range of states. Participants assigned to one of the two OUD conditions also received additional questions regarding the impact of the defendant's diagnosis on sentencing recommendations, measured on a Likert scale ranging from "Not at all" (1) to "Very Much" (5).

Perceptions of Defendant Questionnaire

This questionnaire assessed judges' beliefs regarding the defendant's culpability (i.e., logical reasoning at the time of the offense), dangerousness, and likelihood of reoffending. Responses were scored on a Likert scale ranging from "Not at all" (1) to "Very much" (5).

Manipulation Check

A brief set of multiple-choice questions was presented to ensure comprehension of the case, including accurate identification of the crime (i.e., robbery), whether the defendant was diagnosed with an SUD, and the specific type of drug use reported (i.e., heroin, prescription painkillers, or none).

Demographic Questionnaire

The demographic questionnaire captured individual participant characteristics, including

age, sex, race, ethnicity, and political affiliation. The questionnaire also assessed judicial career experience, including the state and setting in which judges preside and the number of years they have presided as a criminal court judge.

Procedures

Institutional Review Board approval to conduct this research was obtained from Drexel University. This study was conducted electronically using Qualtrics, a survey-hosting website. Candidates first completed a brief measure to confirm eligibility; only currently practicing criminal court judges were directed to continue.

Participants were then randomized to one of three OUD conditions: 1) no reported OUD (i.e., control); 2) OUD with reported heroin use; or 3) OUD with reported prescription pain reliever use. Participants within each condition were asked to read the respective version of the PSIR and complete a series of questionnaires, including questions related to sentencing recommendations and perceptions of the defendant. Lastly, participants completed a manipulation check, followed by a brief demographic questionnaire. Participants did not receive compensation for completion of the survey.

STATISTICAL ANALYSES

Demographic information, sentencing recommendations, and perceptions of the defendant were analyzed using descriptive statistics to obtain measures of frequency, central tendency, and variability across conditions. Data screening was conducted to test assumptions and to identify the presence of outliers and missing data. A series of between-subjects one-way analyses of variance (ANOVAs) was conducted to examine differences across OUD conditions in sentencing recommendations (i.e., number of years) and perceptions of the defendant as capable of logical reasoning, dangerous, and likely to reoffend. Post-hoc tests were conducted using the Scheffé test to account for unequal sample sizes across groups, and measures of effect size were obtained using partial eta-squared (η^2).

RESULTS

The final sample consisted of 67 participants who were randomized to one of three OUD conditions: no OUD ($n = 21$, or 31.3%), OUD-heroin ($n = 27$, or 40.3%), and OUD-prescription pain relievers ($n = 19$, or 28.4%). Preliminary analyses, conducted using one-way ANOVAs, confirmed that the three groups did not differ significantly on any demographic characteristic, $p > 0.05$; thus, participant demographics and judicial experience were considered equivalent across conditions.

Data screening revealed three cases of extreme outliers (i.e., greater than three SDs from the mean) for the variable of sentence length. A closer examination revealed that these scores did not reflect erroneous or impossible values; therefore, they were retained for analysis to obtain a more well-rounded view of the sample given the exploratory nature of the study. Levene’s test for homogeneity of variance revealed no violations across all sentence length and perception of defendant comparisons, $p > 0.05$. An examination of distributions using the Shapiro-Wilk test revealed non-normal distributions across all categorical outcome variables, $p < 0.001$; however, ANOVA was deemed appropriate as it is robust to violations of normality.

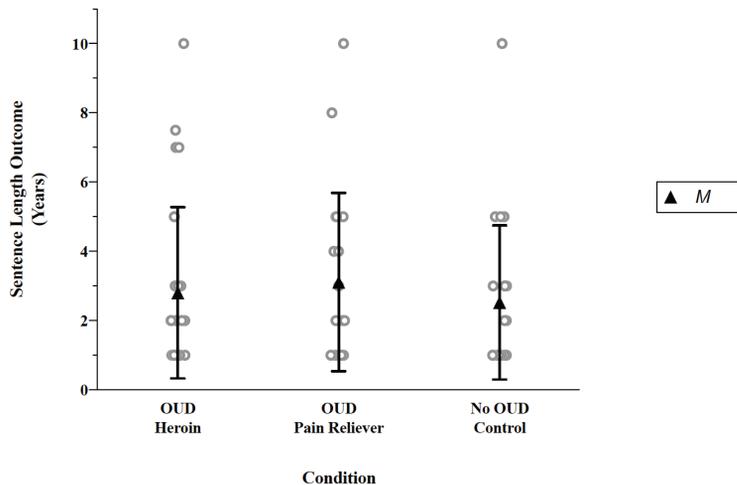
Descriptive Data

Descriptive data were obtained for 67 criminal court judges. Measures of central tendency and variability for all continuous variables (i.e., sentence length, logical reasoning capability, dangerousness, and likelihood of reoffending) are shown in Figures 1–4. Notable variability was observed in the overall distribution of recommended sentence length, such that responses were positively skewed (i.e., clustered around 1–2 years with a few responses around 8–10 years).

Sentence Length

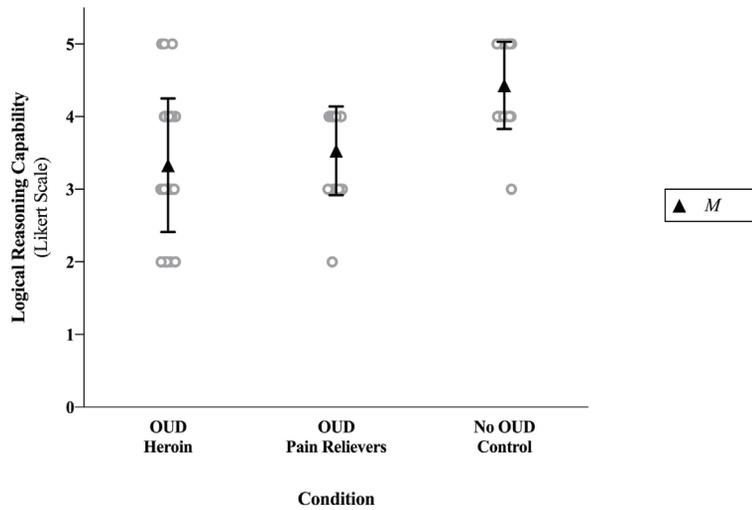
An examination of differences in recommended sentence length in years as a function of OUD condition revealed nonsignificant findings across all three groups, $F(2, 64) = 0.29$, $p = 0.75$, $\eta^2 < 0.01$ (small), 95% CI [0.00, 0.07]. Of note, judges in the two experimental conditions reported that their decision-making regarding sentencing was moderately impacted by the defendant’s reported heroin use ($M = 3.59$, $SD = 0.70$, range: 3.00–5.00) and prescription pain reliever misuse ($M = 3.32$, $SD = 0.89$, range: 2.00–5.00), but this reported impact did not differ significantly as a function of the type of opioid, $t(44) = 1.19$, $p = 0.24$, $d = 0.34$, 95% CI [-0.24, 0.93].

Figure 1. Sentence Length Outcome (Years)



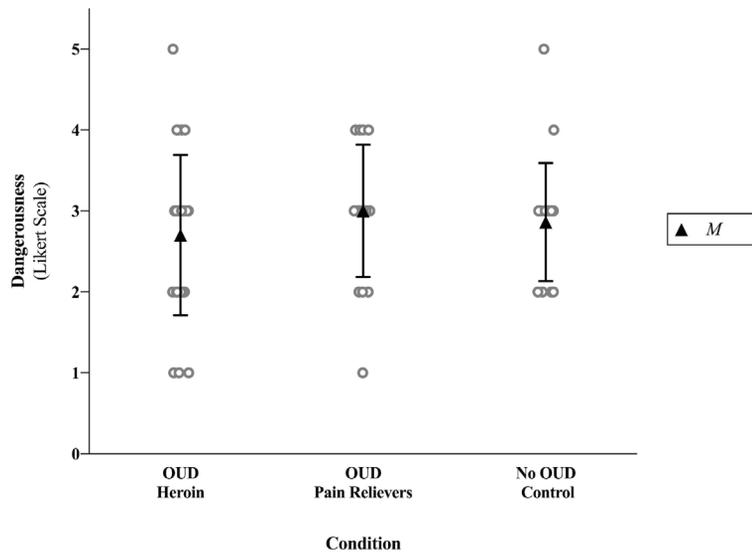
Note: Participants were informed that sentencing parameters permitted a minimum sentence of 1 year and a maximum sentence of 15 years.

Figure 2. Logical Reasoning Capability



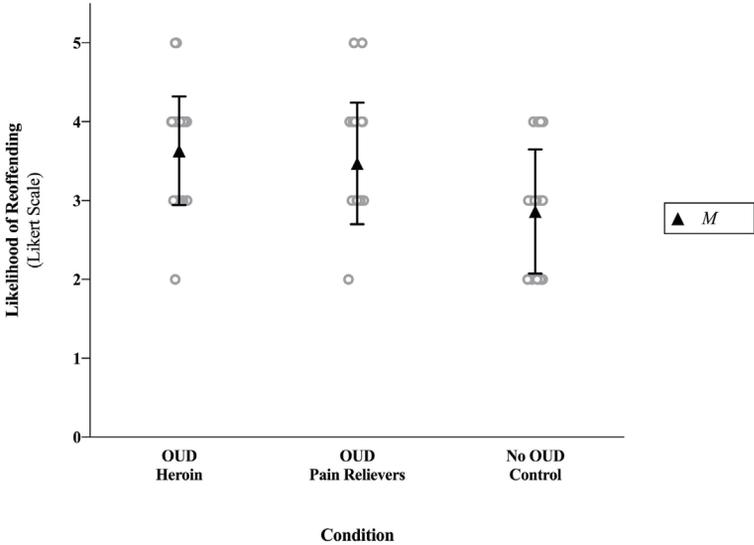
Note: Responses consisted of a rating on a Likert scale:
Not at all (1), A little bit (2), Somewhat (3), Quite a bit (4), and Very much (5)

Figure 3. Dangerousness



Note: Responses consisted of a rating on a Likert scale:
Not at all (1), A little bit (2), Somewhat (3), Quite a bit (4), and Very much (5)

Figure 4. Likelihood of Reoffending



Note: Responses consisted of a rating on a Likert scale:
Not at all (1), A little bit (2), Somewhat (3), Quite a bit (4), and Very much (5)

Perceptions of the Defendant

Logical Reasoning Capability

There were significant differences across groups in the reported belief that the defendant was capable of logical reasoning at the time of the offense, $F(2, 64) = 13.63, p < 0.001, \eta^2 = 0.30$ (large), 95% CI [0.11, 0.44]. Post-hoc analysis using the Scheffé test revealed that the no OUD group ($M = 4.43, SD = 0.60$, range: 3.00–5.00) significantly differed from both OUD-heroin ($M = 3.33, SD = 0.92$, range: 2.00–5.00), $p < 0.001$, and OUD-prescription opioid ($M = 3.53, SD = 0.61$, range: 2.00–4.00), $p = 0.001$, such that defendants with an OUD diagnosis, regardless of the type of opioid, were viewed as less capable of logical reasoning.

Dangerousness

There were no significant differences across the three OUD conditions in the perceived dangerousness of the defendant, $F(2, 64) = 0.66, p = 0.52, \eta^2 = 0.02$ (small), 95% CI [0.00, 0.11].

Likelihood of Reoffending

An examination of judges' perceptions that the defendant is likely to commit another crime in the future revealed significant differences across groups, $F(2, 64) = 6.75, p = 0.002, \eta^2 = 0.17$ (large), 95% CI [0.03, 0.32]. Post-hoc analysis using the Scheffé test revealed that the control group ($M = 2.86, SD = 0.79$, range: 2.00–4.00) significantly differed from both the heroin group ($M = 3.63, SD = 0.69$, range: 2.00–5.00), $p = 0.003$, and prescription pain reliever group ($M = 3.47, SD = 0.77$, range: 2.00–5.00), $p = 0.04$, such that defendants with an OUD diagnosis, regardless of the type of opioid used, were viewed as more likely to reoffend.

DISCUSSION

Recent years have been marked by the emergence and growth of the opioid epidemic in the United States. The criminal justice system has been particularly affected by this crisis, with increasing rates of arrestees with OUD (Hunt et al., 2014). Although prior studies suggest that the justice system employs a punitive approach to defendants with SUDs (e.g., Mossiere & Maeder, 2016), no research has examined whether and how a defendant's OUD is factored into sentencing. The

present study aimed to investigate the direct (i.e., sentence length) and indirect (i.e., perceptions of defendant) impact of a reported OUD diagnosis on sentencing outcomes among criminal defendants. Findings revealed that judges viewed defendants with either heroin or prescription opioid misuse differently than they viewed those without reported OUD in terms of responsibility for and risk of future criminal behavior, despite imposing equivalent sentences.

Prior research has demonstrated differential sentencing outcomes between defendants with an SUD diagnosis and both those without a diagnosis (Barnett, et al., 2004) and those with other forms of mental illness (Mossiere & Maeder, 2016). However, no significant differences in the recommended sentence length as a function of the defendant's reported OUD emerged in the present study.

Despite the lack of distinction in sentence outcome, significant findings were obtained for some related domains. Specifically, criminal court judges viewed defendants with an OUD diagnosis as less capable of logical reasoning at the time of the offense and more likely to reoffend as compared to defendants without an OUD; these findings were supported by large effect sizes. Notably, there were no significant differences regarding perceived dangerousness of the defendant, and on average, judges across all conditions viewed these defendants as "somewhat" dangerous. The findings regarding perceptions of the defendant suggest increased leniency toward defendants with OUD, particularly within the scope of prior research that has demonstrated a tendency for offenders with SUD diagnoses to be viewed as dangerous, likely to reoffend, and responsible for their crime (Mossiere & Maeder, 2016). However, although nonsignificant, sentence length outcomes reveal that those without an OUD received shorter sentences, on average, than those with reported heroin use or prescription pain reliever misuse.

The view of defendants with an OUD as less capable of logical reasoning than those without an OUD may promote leniency in sentencing and reflect a belief among judges that these individuals are less culpable due to impaired cognition. In contrast,

a view of the defendant as likely to reoffend is typically considered aggravating. Several factors may account for this perceived criminogenic risk. Judges may be influenced by the “revolving door” phenomenon, which posits that upon release, offenders with SUDs often relapse, commit another crime, and return to prison (DeMatteo, Filone, & Davis, 2015). Within the scope of this trend, their perception may reflect beliefs that offenders are more likely to commit future crimes due to a moral shortcoming that underlies both drug use and criminality; this view is consistent with surveys demonstrating that between 32% and 44% of individuals believe OUD is indicative of a character defect and reflects poor willpower and discipline (Associated Press-NORC, 2018). Alternatively, judges may believe that defendants with OUD are more likely to recidivate due to a view of crime as “necessary” to support drug use habits. The latter interpretation is more consistent with the finding that judges did not differentiate among groups with regard to perceived dangerousness of the defendant.

Anticipated likelihood of recidivism is a critical risk factor to consider when sentencing a defendant. However, despite the view of defendants with OUD as more likely to reoffend than their counterparts without OUD, an associated significant difference in sentence length was not observed in this study. One potential explanation for this apparent discrepancy is that these perceptions of the defendant cancel one another out, resulting in no overall impact on sentence length. Per this approach, any punitive consequence associated with an increased risk of reoffending is tempered by the view that individuals with OUD are less culpable for their crimes. Importantly, equivalent sentencing was demonstrated despite the judges’ report that the OUD diagnosis had a “moderate” impact on their sentencing decisions.

Of note, judges did not appear to differentiate between prescription pain relievers and heroin when making sentencing decisions or generating perceptions of the defendant. This finding is particularly interesting given the historical stigma surrounding heroin use, which predates the current opioid epidemic. Additionally, misuse of

prescription pain relievers is more common and can more readily be attributed to external causes (e.g., receiving a prescription following surgery); therefore, it might be expected that misuse of pain relievers, rather than a purely illicit drug such as heroin, is treated more leniently.

Taken together, the results reveal that judges perceive defendants who have been convicted of a robbery and have a reported OUD diagnosis as less able to logically reason at the time of the offense and as more likely to reoffend (but not as more dangerous) than defendants with no reported OUD. Although related factors were impacted by an OUD diagnosis, judges recommended similar—and low (mean of 2.8 years)—sentence lengths across all three conditions.

Implications

Recent years have seen a growing awareness of the disproportionate rates of SUDs among incarcerated individuals and of the opioid epidemic in particular. The present study provides evidence regarding how OUD is addressed within the criminal justice system during sentencing, which has implications for the successful defense of defendants with OUD and efforts to promote rehabilitation.

Despite the stigma surrounding SUDs and prior research demonstrating deleterious criminal justice outcomes among defendants with SUDs, judges recommended similar sentence lengths across those with and without OUD. Heroin use, as compared to prescription pain reliever misuse, may reflect a certain level of OUD severity as users develop a tolerance to opioids and become increasingly unable to readily access illicit prescription opioids (Carlson, Nahhas, Martins, & Daniulaityte, 2016). However, judges in this study did not differentiate between heroin and prescription pain relievers when sentencing a defendant convicted of a non-drug-related crime. Taken together, these findings suggest that there may be less stigma, as perceived by judges, surrounding either type of OUD.

Importantly, the findings suggest that the introduction of a defendant’s OUD diagnosis during presentencing is unlikely to negatively impact the defendant. As such, lawyers may benefit from

presenting this diagnosis in an effort to assuage judges' concerns regarding criminogenic risk and to advocate for rehabilitation of their client. For example, a defense attorney or defense-retained expert witness may introduce literature supporting the inverse relationship between addiction treatment and recidivism to address the importance of securing treatment services for the client and his or her potential for reduced criminogenic risk. Furthermore, the perceived elevated risk may be offset by the introduction of existing protective factors that support and maintain recovery from OUD (e.g., current participation in a treatment program, social support).

Treatment providers and researchers can continue to bridge the gap between the clinical and legal realms in support of defendants with OUD. Continued efforts to identify novel, empirically supported treatment that reduces criminogenic risk among offenders with OUD (e.g., medication-assisted treatment; behavioral interventions) would meaningfully contribute to effectively intervening in the cycle of relapse and recidivism. Additionally, those retained to conduct forensic mental health evaluations should thoroughly assess for OUD, introduce related protective and risk factors, and provide treatment recommendations that address criminogenic risk and relapse.

Overall, judges recommended similar sentence lengths for convicted defendants with and without reported OUD, despite factoring in the OUD diagnosis. This trend suggests that lawyers may benefit from introducing a defendant's OUD diagnosis with an emphasis on its link to criminogenic risk and reoffending and on the promising impact of tailored intervention. This level of transparency would enable the courts and clinicians to work together to effectively address the defendant's OUD and to identify these critical needs earlier in the criminal justice process.

Limitations

A primary limitation of the study was the lack of alternative sentencing options. All participants were asked to provide a sentencing recommendation in the form of an executed sentence, without an

option to mandate treatment, provide suspended or probationary sentences, or generate a combination of options. This exploratory study sought evidence regarding judges' sentencing practices given the high rate of inmates with OUD who have received an executed sentence (i.e., incarceration upon conviction). However, with the rise of rehabilitation-focused courts (e.g., drug court), this may have limited the extent to which the study reflected current judicial practices.

The study presented a case in which the defendant was convicted of a robbery and had a limited arrest history. The judges' responses suggested that most would recommend a relatively lenient sentence (mean of 2.8 years) across all conditions for the defendant. Different results may have been obtained if the crime was more severe (e.g., resulting in actual rather than threatened bodily harm to the victim) or if the defendant had a demonstrated history of reoffending and repeated treatment attempts, as is the case for many offenders stuck in the "revolving door." These factors may also shed light on the lack of concordance with prior research demonstrating harsher sentences for offenders with SUDs convicted of capital crimes.

The defendant's demographic characteristics may have impacted sentencing outcome as well. In the present study, the defendant was a young adult, Caucasian male. Findings may have differed for a defendant with a different presentation based on gender, race, or age. Furthermore, the defendant presented with solely an OUD diagnosis; however, 74% of prison inmates have co-occurring disorders (CODs; i.e., meet criteria for both an OUD and an additional mental health diagnosis or polysubstance abuse) (Mumola & Karberg, 2006). Given the high rates of CODs among inmate populations, the generalizability of the current findings may be limited. However, given the exploratory nature of this study, we opted to isolate the effects of one OUD diagnosis.

Another limitation of the present study was the relatively limited sample size. Although a small sample size is associated with increased likelihood of a Type II error, significant differences emerged within this study, which suggests adequate statistical

power. Furthermore, given the documented low response rates among judges (Arnold, 2017) and the exploratory nature of the study, the small sample size may be less problematic.

Lastly, despite efforts to recruit from the population of United States criminal court judges, response bias may be present; for example, the study's participants may reflect judges who have an interest in contributing to behavioral health. Additionally, the present study did not differentiate between whether respondents presided over drug courts or another form of criminal court.

Future Directions

The present study was exploratory in nature and aimed to provide empirical evidence regarding the impact of an OUD diagnosis on sentencing in the criminal justice system. Subsequent research might investigate the apparent discrepancy between perceptions and sentencing, including an examination of potential moderators (e.g., presiding over states most impacted by the opioid epidemic) and a qualitative analysis of judges' beliefs underlying reported perceptions (e.g., risk of reoffending due to a need to support drug use versus a moral shortcoming). Future studies might also introduce alternative sentencing options (e.g., suspended sentences), manipulate potential moderators (e.g., breadth of arrest history), recruit specific subsamples of criminal court judges (e.g., those presiding over drug court), and examine defendants with co-occurring mental illness or polysubstance abuse.

CONCLUSION

The present study investigated whether an OUD diagnosis impacted judges' sentencing recommendations for and perceptions of a defendant convicted of a robbery. Findings demonstrated a tendency for judges to view defendants with OUD as less capable of logical reasoning at the time of the offense and more likely to reoffend than their counterparts without OUD. Despite the impact of OUD on these indirect sentencing outcomes (i.e., perceptions of the defendant), there were no significant differences in sentence length. Additionally, judges did not distinguish between type of OUD reported (i.e., heroin or prescription pain relievers). These patterns have implications for whether and how a defendant's OUD is addressed during trial or at sentencing to most effectively provide this information to the legal decision-maker.

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Conflict of Interest Attestation

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Author Attestations

- This submission reflects the authors' original work.
- Institutional Review Board approval to conduct this research was obtained from Drexel University.

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RESEARCH REPORT

The Effectiveness of Naltrexone for Opioid Use Disorder among Inmates: A Systematic Review and Meta-Analysis

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Abstract

Although opioid use disorder (OUD) is an important issue universally, it is a severe problem among jail and prison inmates, who have disproportionately higher rates (12%–15%) than the general population (2.1%). The overall aim of this review was to analyze the available studies of oral or injectable naltrexone versus control using a meta-analytic technique, comparing retention rates in the experimental group with those in the control group, as well as other relevant outcome measures. The PRISMA guidelines were followed in searching six electronic databases for relevant articles and the reference lists from these articles, as well as electronic sources of ongoing trials. Randomized, quasi-randomized, and nonrandomized intervention trials involving the use of naltrexone to improve retention in treatment, to promote cessation or reduction of illicit opioid use, or both, in comparison with other medications, placebo or no medication (supportive care) in participants diagnosed as opioid dependent or who were likely to be opioid dependent (on the basis of criteria established by the authors of the reviewed papers—often from heavy and sustained use of illicit or prescription opioids) were eligible. Relevant data were analyzed by random-effects meta-analysis for treatment effect with regard to a range of outcome criteria. The degree of heterogeneity was also determined. Seven studies involving 613 inmates were found. Significant heterogeneity was found in the effectiveness of naltrexone at improving treatment retention; however, there was moderate quality evidence for reducing rates of reincarceration. Overall, naltrexone was significantly better than control conditions in improving abstinence from illicit opioids. There is preliminary evidence for the effectiveness of naltrexone based on the findings of this review. Although quantitative analysis was not possible for several outcomes, and the quality of the available evidence was limited due to small sample sizes, inconsistency, and risk of attrition bias, the analyses that were possible suggest that naltrexone—either oral or through long-acting injectable forms—is of some value in treating inmates with OUD.

BACKGROUND

Opioids include substances such as heroin, morphine, fentanyl, codeine, oxycodone, and hydrocodone (American Psychiatric Association [APA], 2013). While originally used in the treatment of pain, opioids have gained increasing notoriety for their misuse and addictive potential. The last two decades have seen a dramatic increase in the number of opioid overdose deaths, and opioids were responsible for 49,000 of the 72,000 drug overdose deaths overall in the United States in 2017 (deShazo, Johnson, Eriator, & Rodenmeyer, 2018). The opioid crisis is also growing in Canada and is driven by both illegal and prescription opioid use (Lisa & Jessica, 2018). In 2017, Canada's national report stated that there were 3,987 opioid-related deaths, with 92% of these deaths being unintentional (Canada & Canada, 2018). Fentanyl and analogues appear to be fueling the rise in opioid-related deaths (Dyer, 2015), with the number of deaths in Canada involving fentanyl increasing by 17% compared to 2016 (Canada & Canada, 2018). As a majority of illicit opioid use (including heroin) begins with use of prescription opioids (Tetrault & Butner, 2015), there has been a widespread emphasis on reductions in inappropriate opioid prescribing.

Description of the Condition

Opioid use disorder (OUD) is a problematic pattern of opioid use that causes significant impairment or distress. Symptoms of the disorder include a strong desire to use opioids, increased tolerance to opioids, failure to fulfill major role obligations, trouble reducing use, and a withdrawal syndrome with discontinuation or reduction in opioid consumption. In 2013, OUD affected about 0.4% of people (APA, 2013). As of 2015, it was estimated that about 16 million people worldwide have been affected at one point in their lives (Schuckit, 2016). Long-term opioid use occurs in about 4% of people following opioid use for trauma or surgery-related pain (Mohamadi et al., 2018). Onset is often in young adulthood, and males are affected more often than females (APA, 2013). OUD resulted in 122,000 deaths worldwide in 2015 (Reddy, 2016), up from 18,000 deaths in 1990 (Degenhardt et al., 2013). In the United States during 2016, there were

more than 42,000 deaths due to opioid overdose, of which more than 15,000 were the result of heroin use (deShazo et al., 2018). Individuals with OUD are often treated with opioid agonist therapy (OAT) using methadone or buprenorphine, and such treatment has been shown to reduce mortality (Sordo et al., 2017). Additionally, individuals may benefit from psychosocial interventions, such as cognitive behavioral therapy, individual or group psychotherapy, 12-step programs, and other peer support programs (McHugh, Hearon, & Otto, 2010). The rapid-acting opioid receptor antagonist naloxone is useful for treating an opioid overdose, and those who are at risk can be given take-home naloxone as an effective means of harm reduction (Kumar & Rosenberg, 2017).

Although OUD is an important issue universally, it is a severe problem among jail and prison inmates, who have disproportionately higher rates than the general population (12%–15%). In the United States alone, there are more than 1.5 million state and federal prisoners (Jarvis et al., 2018). Many of these prisoners lose their tolerance to the respiratory-depressant effects of opioids during incarceration (Hutchinson et al., 2011); this is important because if untreated, such individuals have increased susceptibility to opioid overdose upon release from prison. To compound this challenge, substance use disorder resources are scarce in correctional settings, and many individuals are left untreated; consequently, opioid use either continues or resumes rapidly after release from prison (Gordon et al., 2017), placing newly released inmates at extremely high risk for death from drug overdose (Binswanger et al., 2007; Merrill et al., 2010).

Description of the Intervention

There is a growing body of evidence supporting the effectiveness of opioid agonist pharmacotherapy in jail and prison settings (Dolan et al., 2003). In addition, there is increasing evidence that the use of naltrexone (an opioid antagonist) may be a feasible and effective intervention for individuals with OUD who are under criminal justice supervision, and warrants further investigation with criminal justice populations (Johansson, Berglund, & Lindgren,

2006). Naltrexone was first made in 1965 and approved by the United States Food and Drug Administration (FDA) in 1984 for the treatment of addiction to drugs such as heroin, morphine, and oxycodone (Sadock, Sadock, & Sussman, 2012; Center for Substance Abuse Treatment, 2009, p. 4). Naltrexone and its active metabolites are competitive antagonists at the μ -opioid receptor, κ -opioid receptor, and δ -opioid receptors (Sadock et al., 2012). Naltrexone reversibly blocks the intoxicating and reinforcing effects of opioids but has no opioid-like effects: when taken regularly, it reduces opiate-taking behavior (Bisaga et al., 2018). Naltrexone's modulation of the dopaminergic mesolimbic pathway (one of the primary centers for risk-reward analysis in the brain, and a tertiary "pleasure center") is hypothesized to be a major center of the reward associated with addiction that all major drugs involved in substance use disorder are believed to activate (Sadock et al., 2012).

The use of long-acting, extended-release injectable naltrexone (XR-NTX) may be a promising form of treatment for prerelease prisoners (Gordon et al., 2017). XR-NTX is supplied as a microsphere formulation of naltrexone for suspension and is administered via intramuscular gluteal injection every 4 weeks, eliminating the need for adherence to daily oral therapy (Saxon et al., 2018). Moreover, monthly administration avoids the daily plasma concentration fluctuations associated with daily oral administration of naltrexone. Its lower frequency of administration, the fact it has no opioid-like effects, and that it cannot be diverted by patients may make XR-NTX more acceptable to corrections officials than methadone or buprenorphine (Kunøe et al., 2016). Results from Russia are especially noteworthy, given that in a nation with one of the highest rates of heroin use in the world, methadone and buprenorphine are not available (Krupitskiĭ et al., 2012, 2010, 2013, 2015). Nonetheless, many American prison and jail administrators remain reluctant to offer this opioid agonist pharmacotherapy in their facilities, largely due to preference for drug-free interventions (Rich et al., 2015; Zaller et al., 2013). However, XR-NTX may be eschewed not only due to a preference of drug-free interventions, but also

because of its cost—about \$1,500 per month—and has had limited penetration into both prisons and jails (Lopez, 2017, 2018).

How the Intervention Might Work

There is substantial evidence that naltrexone is an effective treatment for OUD, particularly in ameliorating signs and symptoms, including cravings, following induction (Jarvis et al., 2018; Sadock et al., 2012). Naltrexone may also encourage people to enter psychotherapeutic treatment (Aboujaoude & Salame, 2016; Ahmed et al., 2018). In turn, effective pharmacotherapy for opioid cravings and withdrawal may in turn encourage people who are opioid dependent to subsequently enter psychotherapy, and may increase the rates of retention in treatment, reduction or cessation of illicit opioid use, entry into relapse prevention treatment, improved quality of life, and decreased mortality from opioid overdose (Jarvis et al., 2018).

Why It Is Important to Do This Review

While there is increasing recognition that opioid use and OUD are important public health issues, naltrexone remains a controversial treatment. There is inconsistent evidence that naltrexone lessens the risk of overdose from opioids (Sharma, Bruner, Barnett, & Fishman, 2016). As well, several authors have highlighted how the challenges with initiation and subsequent adherence have limited the overall potential of naltrexone in the treatment of OUD (Chang et al., 2018). While not all opioid users will need pharmacotherapies to manage opioid withdrawal or support cessation of their use, it is important that effective pharmacotherapies are identified for the treatment of OUD, especially for subpopulations that are not ideal candidates for traditional opioid agonist treatments—such as inmates.

As such, this review seeks to establish current knowledge on the effectiveness of medications in the treatment of OUD in an inmate population. To date, no reviews have directly handled or meta-analyzed the results of intervention studies where the aim was to improve retention in naltrexone-treated opioid-dependent individuals who are either currently prison inmates or involved in other correctional facilities. This population is

an important one, particularly when considering that opioid tolerance can be lost rapidly during institutionalization; as such, release from correctional facilities and prisons is an extremely high-risk period for opioid overdose. Given naltrexone's pharmacologic properties, it may be an effective means of preventing death following release from prison.

OBJECTIVES

As most individuals who are incarcerated do not have access to any pharmacotherapy for OUD, demonstrating the effectiveness of naltrexone in a prison setting may serve to make it more available to those who wish to take it, and may also encourage attitudinal changes on the part of correctional staff for the treatment of OUD. The overall aim of this review was to analyze the available studies of naltrexone versus control using a meta-analytic technique, comparing retention rates in the experimental group with those in the control group as well as other relevant outcome measures.

METHODS

Criteria for Considering Studies for This Review

Types of Studies

Randomized controlled trials that provided detailed information on the type and dose of naltrexone used and the characteristics of participants treated were considered eligible.

Types of Participants

Studies that involved participants diagnosed as opioid dependent (or who were likely to be dependent, at the discretion of the authors of the reviewed papers, based on reported dose and duration, and frequency of use) who were either imprisoned or recently released from prison or correctional facilities were considered eligible.

Studies involving participants dependent on, and withdrawing from, both opioid and other substances were included, but studies involving participants dependent on and withdrawing only from substances other than opioids (e.g., alcohol,

stimulants) were excluded. It was intended to use subgroup analyses to assess the impact of concurrent substance use disorders or comorbid diagnoses on the effectiveness of naltrexone for OUD, but there were insufficient data for such analyses to be undertaken.

Studies undertaken in either inpatient or outpatient settings were included. Studies undertaken in purely research settings, such as residential research laboratory settings, were excluded.

Types of Interventions

Experimental interventions involved the administration of naltrexone formulations (either oral or parenteral) with the aim of reducing the symptoms and signs of OUD. Comparison interventions involved the use of different pharmacotherapies, placebo, or no pharmacotherapy (supportive care) with or without psychosocial interventions.

Types of Outcome Measures

Primary Outcomes

1. Number of participants abstinent from illicit opioids at the end of treatment as determined by self-report, urine drug screens, or both
2. Number of participants who completed scheduled treatment
3. Number of participants who were reincarcerated
4. Intensity of opioid withdrawal as determined by scores on withdrawal scales, the need for symptomatic medications in addition to the experimental intervention, or overall assessments by clinicians and participants
5. Nature, incidence, and frequency of adverse effects and whether the planned medication regime was modified in response to adverse effects

Secondary Outcomes

1. Level of opioid use at the end of treatment as measured via participant-reported level of use, urine drug screens, or both
2. Number of participants engaged in further treatment following completion of the intervention

Search Methods for Identification of Studies

All searches included non-English language literature. No studies were found in languages other than English.

Electronic Searches

The following databases were searched:

1. PubMed (inception to 3 January 2019)
2. MEDLINE (1946 to 3 January 2019) via Ovid Online
3. EMBASE (1980 to 3 January 2019) via Ovid Online
4. PsycINFO (1806 to week 3 January 2019) via Ovid Online
5. Cochrane Central Register of Controlled Trials (inception to 3 January 2019)
6. The Cochrane Library (inception to 3 January 2019)

A search strategy to retrieve references was developed relating to the treatment of OUD using naltrexone in inmates. This strategy was adapted to each of the databases listed above. For details, see Appendix 1, available online at <https://www.nadcp.org/advancingjustice/journal-for-advancing-justice/volume-ii/>.

Searching Other Resources

The reference lists of relevant review articles and retrieved studies were hand-searched to identify any further studies of interest that were not retrieved by the electronic search. In addition, some of the main electronic sources of ongoing trials were examined for relevant articles:

1. ClinicalTrials.gov
2. Current Controlled Trials (www.controlled-trials.com/)

Data Collection and Analysis

Selection of Studies

Initially, the titles and abstracts of records retrieved from the systematic search were screened according to the identified inclusion and exclusion criteria. Details of the study selection are outlined in Figure 1.

Data Extraction and Management

Following study selection, key information from the included studies was extracted using a data-

collection form to record information against the outcome measures (abstinence, intensity of withdrawal, adverse effects, completion of treatment, change in opioid use, and engagement in follow-up treatment). Key findings of studies were summarized descriptively in the first instance, and the capacity for quantitative meta-analysis was considered. Sufficient information was extracted from reports of included studies to enable assessment of the risk of bias.

Assessment of Risk of Bias in Included Studies

The Cochrane Risk of Bias Tool for intervention studies was used to assess the quality of six specific domains: random sequence generation, allocation concealment, blinding, incomplete outcome data, selective outcome reporting and “other issues” (Higgins et al., 2011). Each included study was analyzed and described according to these domains and “graded” in accordance with the handbook guidelines. Details of the assessments of risk of bias are included in Figures 2 and 3.

Measures of Treatment Effect

For dichotomous outcomes, risk ratios (RR) with 95% confidence intervals (CI) were calculated. For continuous outcomes, standardized mean differences (SMD) with 95% CI were calculated.

Unit of Analysis Issues

In studies with more than two treatment arms (two different doses of naltrexone and placebo), the active medications, compared to placebo, were included in separate subgroups, and the calculation of overall totals was suppressed, thereby avoiding the unit of analysis error of double-counting participants. Where urine drug screens were reported in studies, the unit of analysis was the number of study participants and not the number of tests performed.

Dealing With Missing Data

Original investigators were contacted if missing data were requested. However, this was not undertaken given the limited extent of missing data and the reduced capacity for meta-analysis.

Assessment of Heterogeneity

Clinical and methodological heterogeneity were assessed by reviewing the variations between studies in terms of the characteristics of participants included, the interventions, and the reported outcomes. Statistical heterogeneity was assessed using the Chi^2 test and its p value, by visual inspection of the forest plots, and by the I^2 statistic (Higgins & Thompson, 2002). A p value of the Chi^2 test lower than 0.10 or an I^2 statistic of at least 50% indicated a significant statistical heterogeneity.

Data Synthesis

Review Manager 5.3 was used for statistical analyses (The Cochrane Collaboration, 2014). In all analyses, random-effects modeling was employed.

Subgroup Analysis and Investigation of Heterogeneity

This review aimed to consider the following potential sources of heterogeneity through subgroup analyses:

1. Concurrent substance use disorders (e.g., stimulants, alcohol);
2. Concurrent psychiatric illness and current treatment for a psychiatric illness;
3. The nature of the treatment setting;
4. Demographics (e.g., gender, age); and
5. The nature of adjunct treatment if provided (e.g., psychosocial treatments).

However, none of these analyses were possible due to limitations of the studies that met the inclusion criteria.

Sensitivity Analysis

Methodological quality was not used as a criterion for inclusion in this review. Limitations in the data reported by the studies that met the inclusion criteria meant that sensitivity analysis was not possible. However, the risk of bias was discussed in presenting the results.

Appendices for this article include details concerning the search strategy, study characteristics, and risk of bias. They are available online at nadcp.org/advancingjustice/journal-for-advancing-justice/volume-ii/.

RESULTS

Description of Studies

Table 1 outlines the key characteristics of the included studies and the study participants.

Results of the Search

The search strategy identified 165 unique citations from which 13 full-text studies were identified as potentially relevant to this review (see Figure 1).

Included Studies

A total of 7 studies met final inclusion criteria for this meta-analysis (Cornish et al., 1997; Coviello et al., 2010; Friedmann et al., 2018; Gordon et al., 2015; Lee et al., 2015; Lee et al., 2016; Lincoln, Johnson, McCarthy, & Alexander, 2017). Of these, six were randomized controlled trials, and one was a prospective cohort study. In total, 613 participants were represented across studies. Of these, 369 of the participants received naltrexone while 244 received the control intervention. In all studies, participants were offered some form of psychological therapy in addition to medication (or placebo). Two studies (Cornish et al., 1997; Coviello et al., 2010) used oral naltrexone (250–300 mg per week) inducted in the community under probation officer supervision, while the remaining five studies used monthly, long-acting naltrexone injections that were inducted either prerelease or postrelease.

All studies excluded participants with severe and unstable concurrent medical or psychiatric illnesses, including other substance use disorders; however, comorbid depression or anxiety disorders were permitted so long as the patient was not deemed to be imminently suicidal, homicidal, or psychotic. Across studies, the target population was adults with a current diagnosis of OUD (or opioid dependence) who were either inmates, parolees, or had a recent history of incarceration and were on probation. In all studies, these diagnoses were confirmed using the Diagnostic and Statistical Manual (DSM)-IV or DSM-5 criteria (American Psychiatric Association, 2013). The average age of participants varied from 34 to 44 years of age. Participants were primarily male, but there was diversity in the representative races and ethnicities of participants, with roughly similar

numbers of Caucasian, African American, and Hispanic participants in total.

In all studies, participants were required to be abstinent from opioids at the outset of the study (which was confirmed by self-report, a negative urine drug screen for all opioids, and a negative naloxone challenge).

Excluded Studies

Six studies that were considered potentially relevant to the review and assessed in detail were excluded from the review (see Figure 1 and Characteristics of Excluded Studies). The reasons for exclusion were: systematic review and/or meta-analysis [three studies] (Jarvis et al., 2018; Johansson et al., 2006; Sharma et al., 2016); no study data [two studies] (Gordon et al., 2017; McDonald et al., 2016); no relevant outcomes [one study] (Soares et al., 2019).

Risk of Bias in Included Studies

For summary results of the judged risk of bias across the included studies for each domain, see Figure 2 and Figure 3. The overall quality of included studies was low due to the fact that there were inconsistencies in the use of controls, a lack of blinding, and mostly small sample sizes.

Allocation (Selection Bias)

Five studies were randomized, controlled trials, and were rated as having low risk of selection bias due to allocation or randomization. The remaining two studies (Gordon et al., 2015; Lincoln et al., 2017) were rated as having a high risk of selection bias due to their absence of controls (for the former), and the absence of an adequate description of the methods of randomization and allocation (in the latter).

Blinding (Performance Bias and Detection Bias)

As all seven included studies were open label; all were at high risk of performance and detection bias.

Incomplete Outcome Data (Attrition Bias)

With the exception of two studies (Friedmann et al., 2018; Lee et al., 2015) that had low rates of overall attrition, the remaining five studies had high rates of patient drop-out and were rated as having a high risk of attrition bias.

Selective Reporting (Reporting Bias)

The studies were consistent in their method of reporting their stated objectives and outcomes and were rated as having a low risk of reporting bias.

Other Potential Sources of Bias

In all seven studies, the risk of other potential sources of bias was rated as unclear. In the five studies using XR-NTX, the studies were funded by Alkermes, Inc., and there was a potential risk of bias from the funding source, as Alkermes produces and markets injectable naltrexone in the United States. In the two remaining studies (Cornish et al., 1997; Coviello et al., 2010), there was potential for selection bias due to the fact that the study participants were willing to participate. Across studies, constraints on external validity are particularly relevant because those who participated in the study had greater access to treatment and potentially more motivation than the general OUD population—particularly those who chose not to participate.

Effects of Interventions

Retention

Naltrexone—either by oral or extended-release routes (XR-NTX)—did not significantly improve retention in treatment (RR: 1.29; 95% CI: 0.92 to 1.81; 4 studies; $I^2 = 35\%$). There was also no significant improvement in rates of community engagement at the completion of treatment (RR: 0.96; 95% CI: 0.81 to 1.13; 2 studies; $I^2 = 0$). In the two studies comparing pre- and postrelease induction of XR-NTX, there was no significant improvement in retention (RR: 1.62; 95% CI: 0.54 to 4.81; 2 studies; $I^2 = 0$).

Reincarceration

Naltrexone—either by oral or extended-release routes—was associated with a significant reduction in rate of posttreatment reincarceration (RR: 0.52; 95% CI: 0.31, 0.89; 4 studies; $I^2 = 62\%$).

Opioid and Other Drug Use

Naltrexone—either by oral or extended-release routes—significantly reduced illicit opioid use, as confirmed by urine drug screening (RR: 0.60, 95% CI: 0.49 to 0.74; 4 studies; $I^2 = 0$). However, there was no significant reduction in cocaine or alcohol

use or in the rates of intravenous drug use (IVDU). Meta-analysis was not possible due to insufficient outcome reporting by candidate studies for other substance use-related outcomes (benzodiazepines, amphetamines, or marijuana).

Adverse Events and Overdoses

There was inconsistent evidence that naltrexone—either by oral or extended-release routes—reduced the number of fatal or nonfatal opioid-related overdoses. However, the relevant adverse events reported by eligible studies is reported in Table 2. Across studies, naltrexone was largely well tolerated by most participants.

DISCUSSION

Summary of Main Results

On the basis of this review, naltrexone—either oral or via extended-release injections—has preliminary evidence for improving a variety of prognostic outcomes in inmates with OUD, including reducing rates of reincarceration and improving rates of abstinence from illicit opioid use. Most of the studies were 6 months in length, and the effectiveness of naltrexone should be kept in perspective for that reason. Although this meta-analysis did not find statistically significant improvements in other outcomes (such as the rates of IVDU, reductions in other classes of substance use, retention in treatment, or engagement in community follow-up), naltrexone shows promise in supporting the needs of the some of the most vulnerable individuals who struggle with OUD.

Overall Completeness and Applicability of Evidence

Overall, these results are limited by the few studies that have been conducted on inmates and recently incarcerated individuals with a history of OUD. There were only two studies that suggested oral naltrexone was useful, while the remaining five involved XR-NTX and showed variable efficacy. Several relevant studies excluded by this review are notable for their contributions to the field. For example, Soares and colleagues' recent publication (Soares et al., 2019)—which explicitly looked at arrests associated with the Lee 2016 study included in this review—found no difference between

naltrexone and treatment as usual. Although this reflects the current state of knowledge on the use of naltrexone in this population, there is a need for larger studies that can more definitively measure relevant opioid outcomes over a longer duration of follow-up. Although the included studies primarily focused on naltrexone therapy, previous studies have looked at the efficacy of adjunctive psychosocial interventions, such as motivational interviewing and contingency management (Aboujaoude & Salame, 2016). However, the usefulness of adjunctive psychosocial treatment for OUD has received robust criticism more recently, suggesting the efficacy may be more limited than originally thought (Schwartz, 2016).

Quality of the Evidence

The studies included in this review were small in size, and the quality of the evidence was assessed as being generally low. None of the studies were blinded, and there was significant heterogeneity in the use of controls, randomization, interventions, and outcomes. These factors limited the extent to which meta-analysis and meta-regression were possible.

Potential Biases in the Review Process

Pharmacological approaches to the management of OUD using naltrexone are still in an experimental phase, but there is preliminary evidence of effectiveness. Although the use of naltrexone for OUD is more well established in the noninmate population, larger studies are still needed to generate the evidence base for the more widespread use of naltrexone for other populations with OUD. As studies with negative or neutral findings are less likely to be published, it is also possible that there are further such studies that were not located in this review (although using clinical trial registries, no active or ongoing trials were identified).

Agreements and Disagreements With Other Studies or Reviews

Five recently published reviews of the use of naltrexone in individuals with OUD (Bahji & Bajaj, 2018; Crowley & Van Hout, 2017; Jarvis et al., 2018; Johansson et al., 2006; Sharma et al., 2016) were identified; however, this review is the first to meta-analyze inmate-specific outcomes. All are in agreement that naltrexone shows promise for the

treatment of OUD; but there is currently insufficient evidence to support its broad therapeutic use in inmate populations. These reviews also identify the advantages of adjunctive psychotherapies, such as motivational enhancement therapy, drug counseling, and cognitive behavioral therapy, as having demonstrated efficacy in decreasing illicit opioid use and improving overall functioning. Hence, these reviews support the conclusion that psychological approaches should continue to be offered in conjunction with pharmacotherapies for inmates with OUD. Controlled environments offer an excellent opportunity to initiate XR-NTX because individuals who were opioid dependent prior to imprisonment have a high likelihood of remaining abstinent in the controlled correctional environment for the required length of time prior to initiating XR-NTX treatment. Thus, increased access to effective treatment interventions that begin during incarceration and continue in the community is needed for inmates with OUD (Chandler et al., 2016; Dolan et al., 2003; Murphy et al., 2017).

CONCLUSIONS

Implications for Practice

There is preliminary evidence for the effectiveness of naltrexone based on the findings of this review. Although quantitative analysis was not possible for several outcomes, and the quality of the available evidence was limited due to small sample sizes, inconsistency, and risk of attrition bias, the analyses that were possible suggest that naltrexone—either oral or through long-acting injectable forms—is of some value in treating inmates with OUD. In general, oral naltrexone is not a first-line recommendation for individuals with OUD—except in a controlled environment—because it is too easily discontinued

(Chang et al., 2018; DeFulio et al., 2012; Dunn et al., 2015; Dunn et al., 2013). With this in mind, some facilities—for various reasons—may only be able to use the antagonist naltrexone and may not have access to buprenorphine and methadone, and that for those facilities, this meta-analysis supports the use of naltrexone. However, there remains insufficient evidence that completion of treatment is more likely with naltrexone, although there is moderate quality evidence that naltrexone improved abstinence from illicit opioid use and reduced reincarceration. Hence, it is concluded that preparations containing naltrexone are of potential value, but the limitations of the evidence are such that this application of naltrexone should be considered to still be experimental when compared to the more substantiated evidence base for the use of opioid agonist therapies, like methadone and buprenorphine.

Implications for Research

Naltrexone warrants further investigation for the treatment of OUD among inmates. The use of naltrexone to promote cessation of illicit opioid use is a worthwhile topic for future research, given the potential to save countless lives from unintentional fatal opioid overdose. Further studies should compare the effectiveness of different preparations (for example, oral versus long-acting injectable naltrexone, different doses, longer durations of treatment), and could explore the use of adjunctive medications and therapies. Additionally, more head-to-head studies comparing naltrexone to opioid agonists (such as buprenorphine or methadone) would be useful, building on early noninferiority trials (Tanum et al., 2017); and more consistent reporting of outcomes will enable a more comprehensive meta-analysis in the future.

Table 1. Sample Characteristics

Study	Duration	Design	Participants	Intervention	Comparator	Outcome Measures	Findings
Cornish 1997 USA	6 months	Randomized, open-label, controlled, parallel group trial	Opioid-dependent federal probationers (N = 51) Demographics: average age 39 years; 90% male; 24% White, 62% Black, 14% Latino. Inclusion: abstinent from opioids at outset (UDS-confirmed), minimum of 2 years federal probation or parole, history of heroin dependence, willingness to participate. Exclusion: not described.	300 mg oral naltrexone weekly inducted in the community (N = 34)	Drug counseling (N = 17)	Retention/adherence Reincarceration Opioid use/abstinence Mean % opioid-positive urine tests	52% in the naltrexone group continued for 6 months and 33% remained in the control group. Opioid use was significantly lower in the naltrexone group. 46% of the controls and 26% of the naltrexone group (p < .05) had their probation status revoked within the 6-month study period and returned to prison.
Coviello 2010 USA	6 months	Randomized, open-label, controlled, parallel group trial	Opioid-dependent offenders under legal supervision in the community (N = 111) Demographics: average age 34 years; 82% male; 47% Caucasian, 26% Black, 27% Hispanic Inclusion: 18–55; DSM-IV diagnosis; good general health; 6+ months' probation/parole; abstinent from opioids at outset (UDS-confirmed). Exclusion: severe concurrent psychiatric/medical illness; chronic pain disorder; prior use of opioid antagonist in last 6 months; pregnant or breastfeeding	300 mg per week of oral naltrexone inducted in the community plus standard psychosocial treatment as usual (N = 56)	Standard psychosocial treatment as usual (N = 55)	Retention/adherence Reincarceration Employment HIV risk behaviors Abstinence/opioid use Time to relapse UDS	The TAU participants who remained in treatment used more opioids than those who remained in the naltrexone group.
Friedmann 2017 USA	6 months	Randomized, open-label, controlled, parallel group trial	Opioid-dependent adult inmates (N = 15) Demographics: average age of 35 years; 93% male; 83% Caucasian. Inclusion: currently incarcerated, not interested in opioid agonists, abstinent at outset (UDS-confirmed), good health, informed consent, 18+, DSM-IV diagnosis. Exclusion: pregnant, breastfeeding, severe concurrent medical/psychiatric illness, chronic pain.	Monthly XR-NTX injections inducted prerelease (N = 9) Max: 6 Mean: 2.8 (1.9)	Monthly XR-NTX injections inducted postrelease (N = 6) Max: 6 Mean: 1.3 (1.9)	Induction Retention/adherence Overdose Opioid use/abstinence % of days confirmed opioid abstinence to week 4 days confirmed abstinent to week 4 % urine samples positive for opioids through 6 months time to opioid relapse % of participants who relapsed to opioids	Prerelease group had greater abstinence than postrelease group. Time to relapse was longer in the prerelease group compared to postrelease.

Study	Duration	Design	Participants	Intervention	Comparator	Outcome Measures	Findings
Gordon 2015 USA	7 months	Uncontrolled, open-label pilot trial	Prerelease adult inmates with opioid dependence (N = 27) Demographics: average age 39.9 (SD = 8.3) years; 59.3% male; 85% Black. Inclusion: 18 years or older, DSM-IV diagnosis, treatment-seeking, eligible for release within 30 days of screening, abstinent from opioids at outset (UDS-confirmed). Exclusion: pregnant, breastfeeding, severe concurrent medical/psychiatric illness, unstable renal/hepatic function, HIV/AIDS, obesity, recent opioid overdose, known drug allergy.	Monthly XR-NTX injections inducted prerelease (N = 27) Max: 7 Mean: 4.1 (2.5)	No controls	Retention/adherence Reincarceration Overdose Opioid use/abstinence % of participants who used opioids to follow-up	Fewer completers (20.0%) used opioids than noncompleters (68.8%).
Lee 2016 USA	6 months	Randomized, open-label, controlled, parallel group trial	Adult criminal justice offenders with histories of opioid dependence (N = 308) Demographics: average age 44 years; 85% male; 77% Black or Hispanic. Inclusion: 18–60 years old, DSM-IV diagnosis, treatment seeking, community dwelling who were recently incarcerated on probation/parole, abstinent from opioids at outset (UDS-confirmed). Exclusion: pregnant, breastfeeding, severe concurrent medical/psychiatric illness, unstable renal/hepatic function, HIV/AIDS, obesity, recent opioid overdose, known drug allergy.	Monthly XR-NTX inducted in the community plus standard psychosocial treatment as usual (N = 153) Max: 6 Mean: 4.6 (2.0)	Standard psychosocial treatment as usual (N = 155)	Induction, Adherence/retention Unsafe sex Reincarceration Abstinence/opioid use Time to opioid relapse % who relapsed to opioids % of opioid-negative UDS % of 2-week intervals with confirmed opioid abstinence % days opioid use cocaine alcohol IVDU	In this trial involving criminal justice offenders, XR-NTX was associated with a rate of opioid relapse that was lower than that with usual treatment. Opioid-use prevention effects waned after treatment discontinuation.

The Effectiveness of Naltrexone for Opioid Use Disorder among Inmates

Study	Duration	Design	Participants	Intervention	Comparator	Outcome Measures	Findings
Lee 2015 USA	2 months	Randomized, open-label, controlled, parallel-group, pilot	Prerelease adult inmates (N = 34) Demographics: average age 44 years; 100% male. Inclusion: 18+, DSM-IV diagnosis, currently incarcerated with known release date, not interested in agonist treatment, abstinent from opioids at outset (UDS-confirmed) Exclusion: severe concurrent medical/psychiatric illness, pregnancy, unstable renal/hepatic function, chronic pain.	Monthly XR-NTX injections inducted prerelease plus standard psychosocial treatment as usual (N = 17) Max: 2 Mean: 1.6 (0.7)	Standard psychosocial treatment as usual (N = 1)	Induction Adherence/retention Overdose Abstinence/opioid use Opioid relapse by weeks 4 and 8 Confirmed opioid abstinence to weeks 4 and 8 % of urine samples negative for opioids to weeks 4 and 8	Compared to treatment referral, the XR-NTX group had lower rates of opioid relapse at weeks 4 (37.5 versus 88.2%) and 8 (50.0 versus 94.1%), higher confirmed abstinence through weeks 4 (50.0 versus 11.8%) and 8 (50.0 versus 5.9%) and higher rates of opioid-negative urine samples through weeks 4 (58.5 versus 28.9%) and 8 (59.6 versus 24.2%)
Lincoln 2017 USA	6 months	Prospective cohort study	Adult inmates with OUD (N = 67) Demographics: average age 33 years; 65% Caucasian, 30% Hispanic, 5% Black Inclusion: abstinent from opioids at outset (UDS-confirmed), patient request, registered in probation/parole program, Exclusion: severe concurrent medical/psychiatric illness, pregnancy, unstable renal/hepatic function, chronic pain.	Monthly XR-NTX injections inducted prerelease (N = 47) Max: 6 Mean: 3.6 (1.8)	Monthly XR-NTX injections inducted postrelease (N = 20) Max: 6 Mean: 1.8 (1.1)	Induction Adherence/retention Overdose	Rate of retention was higher in group with treatment initiation prior to release as compared to those started in community.

Footnotes: UDS = urine drug screen; TAU = treatment as usual; DSM = Diagnostic and Statistical Manual of Mental Disorders; XR-NTX = extended-release naltrexone.

Table 2. Side Effects Reported

Study	Adverse Effects Reported
Cornish 1997	Overall, there were few side effects reported and there were actually higher levels of distress reported by the control group than among naltrexone subjects.
Coviello 2010	Overall, there were few side effects reported and there were actually higher levels of distress reported by the control group than among naltrexone subjects.
Friedmann 2017	Adverse event data were collected for 12 of 15 participants. During the active treatment phase, 6 participants reported a total of 16 adverse events, including dry mouth, kidney stone pain, fatigue, lump at injection site, anxiety, blurred vision, jitters, abdominal pain, vomiting, nausea (2), insomnia (2), edema/gout, damaged eye socket, and broken/ dislocated jaw. Of the 6 participants, 2 reported 1 event, 2 reported 2 events, 1 reported 3 events and 1 reported 7 events. Only 8 events among 3 participants were classified as drug related or possibly drug-related (all not serious): dry mouth, fatigue, lump at injection site, nausea (2), insomnia (2) and edema/gout. Only one participant reported serious adverse events (not study-related): damaged eye socket and broken/dislocated jaw. The prerelease group reported a higher number of events during the study.
Gordon 2015	There were no overdoses or deaths reported during the study in the completers or noncompleters. There was a total of 7 SAEs with 1 person accounting for 2 of those serious adverse events. Three of the 7 SAEs were for psychiatric disorders with 1 reporting suicidal ideations (1 participant accounted for 2 of the psychiatric SAEs). Two SAEs were for allergic reactions; 1 was food poisoning; and the second was a possible reaction to XR-NTX that was received in prison. The remaining 2 SAEs were for cellulitis and an abscess on the hand. Two of the 7 participants were discontinued from receiving study drug because the study physician decided that it was possibly related to study drug (suicidal ideation and the possible allergic reaction to XR-NTX). Twenty-six of 27 participants (96.3%) experienced 1 or more AEs during study participation. Consistent with information on the product label, the most common AEs were nasopharyngitis, hypertension, nausea, and headache, and were observed in 12 (44%), 11 (41%), 9 (33%) and 7 (26%) participants, respectively.
Lee 2016	Adverse events, including medication-related adverse events, were more common among participants assigned to extended-release naltrexone than among those assigned to usual treatment; however, significantly more serious adverse events occurred in the usual-treatment group than in the extended-release naltrexone group. All recorded overdose events, fatal or nonfatal, occurred among participants assigned to usual treatment (0 events in the extended-release naltrexone group versus 5 in the usual-treatment group from week 0 to 25, $p = 0.10$; 0 versus 7 events from week 0 to 78, $p = 0.02$); no overdoses occurred in the extended-release naltrexone group after discontinuation of the agent.
Lee 2015	There were no study-related serious adverse events, including no observed or self-reported accidental opioid overdoses or deaths.
Lincoln 2017	Not reported.

Table 3. Summary of Meta-Analyses

Outcome	Studies	Participants	Statistical Method	Effect Estimate
Retention	4	504	Risk Ratio (M-H, Random, 95% CI)	1.29 [0.92, 1.81]
Retention (weeks)	2	66	Std. Mean Difference (IV, Random, 95% CI)	0.64 [-0.55, 1.83]
Community Engagement	2	342	Risk Ratio (M-H, Random, 95% CI)	0.96 [0.81, 1.13]
Retention (pre- vs. postrelease)	2	82	Risk Ratio (M-H, Random, 95% CI)	1.62 [0.54, 4.81]
Reincarceration	4	504	Risk Ratio (M-H, Random, 95% CI)	0.52 [0.31, 0.89]
Opioid	4	455	Risk Ratio (M-H, Random, 95% CI)	0.60 [0.49, 0.74]
Cocaine	4	163	Odds Ratio (M-H, Random, 95% CI)	1.19 [0.38, 3.78]
Amphetamine	1	51	Odds Ratio (M-H, Random, 95% CI)	0.16 [0.01, 4.13]
Benzodiazepine	1	51	Odds Ratio (M-H, Random, 95% CI)	0.48 [0.03, 8.26]
Marijuana	1	51	Odds Ratio (M-H, Random, 95% CI)	0.62 [0.12, 3.16]
Alcohol	2	359	Odds Ratio (M-H, Random, 95% CI)	0.91 [0.45, 1.83]
Self-Reported Abstinence	2	340	Odds Ratio (M-H, Random, 95% CI)	4.22 [0.77, 23.29]
Time to Relapse (weeks)	1	308	Std. Mean Difference (IV, Random, 95% CI)	Not estimable
Intravenous Drug Use	2	342	Odds Ratio (M-H, Random, 95% CI)	1.39 [0.22, 8.77]
Any Overdose	1	308	Odds Ratio (M-H, Random, 95% CI)	0.06 [0.00, 1.14]
Fatal Overdose	1	308	Odds Ratio (M-H, Random, 95% CI)	0.14 [0.01, 2.77]
Deaths	1	308	Odds Ratio (M-H, Random, 95% CI)	0.40 [0.08, 2.08]
1 + Adverse Event	1	308	Odds Ratio (M-H, Random, 95% CI)	2.53 [1.54, 4.16]
Serious Adverse Events	1	308	Odds Ratio (M-H, Random, 95% CI)	0.29 [0.15, 0.53]

Figure 1. PRISMA Study flow diagram.

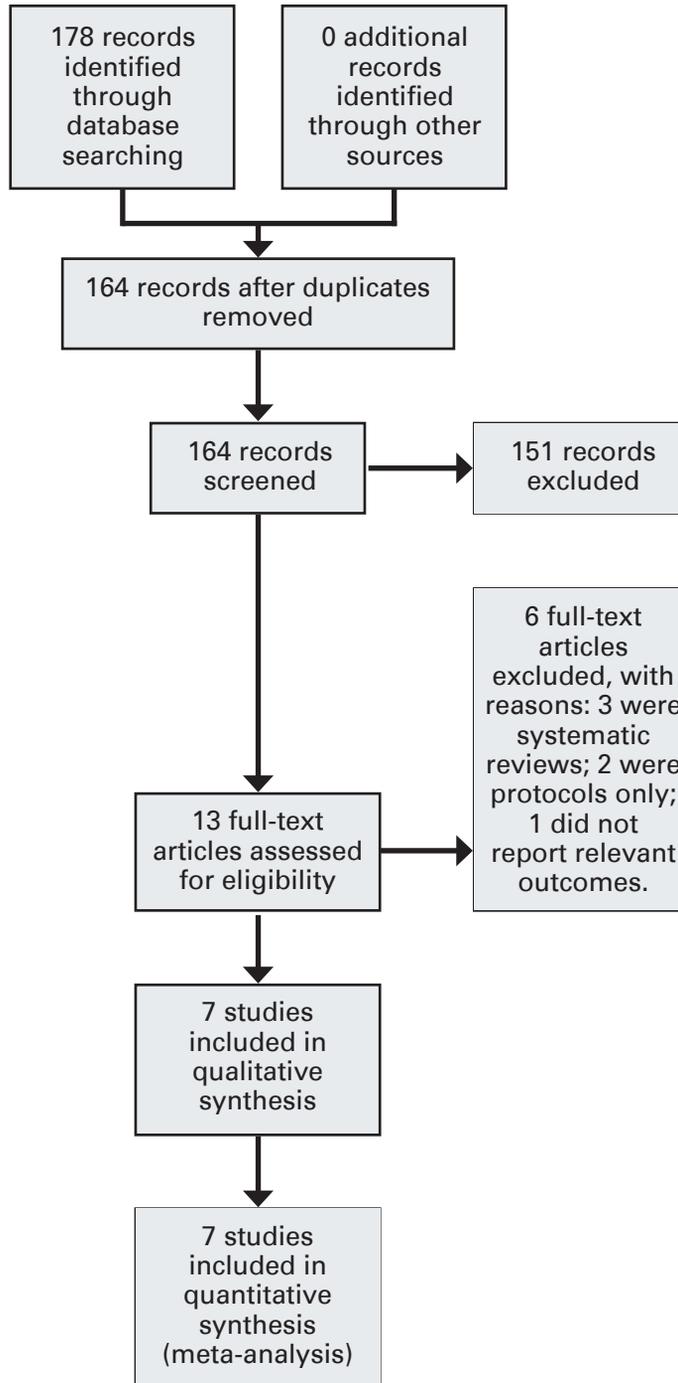


Figure 2. Risk of bias graph: consensus judgments about each risk of bias item presented as percentages across all included studies.

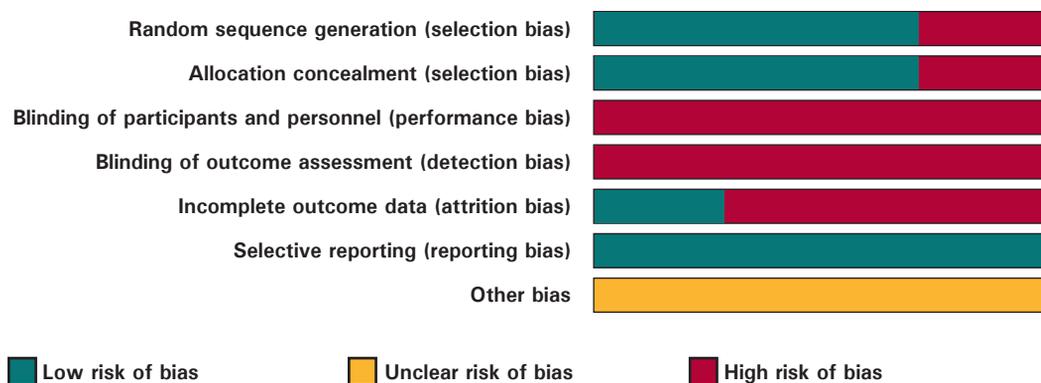


Figure 3. Risk of bias summary: consensus judgments about each risk of bias item for each included study (green = low risk; red = high risk; yellow = unclear risk).

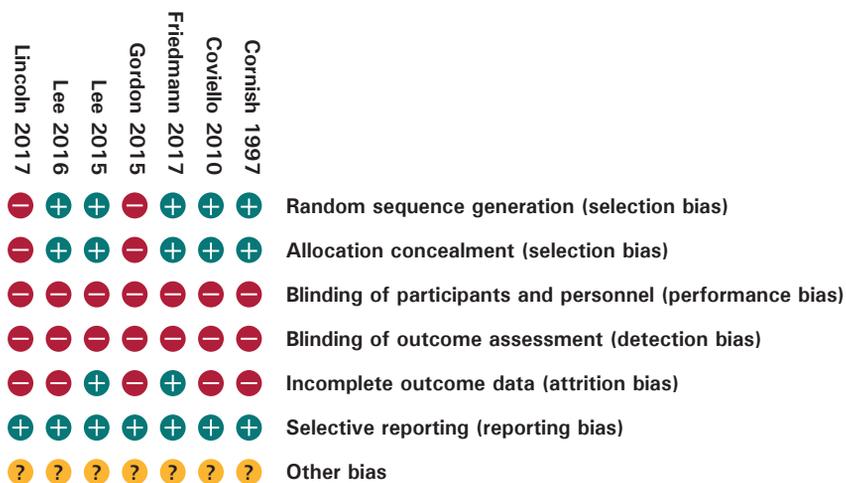


Figure 4. Forest plot of comparison: overall retention in treatment.

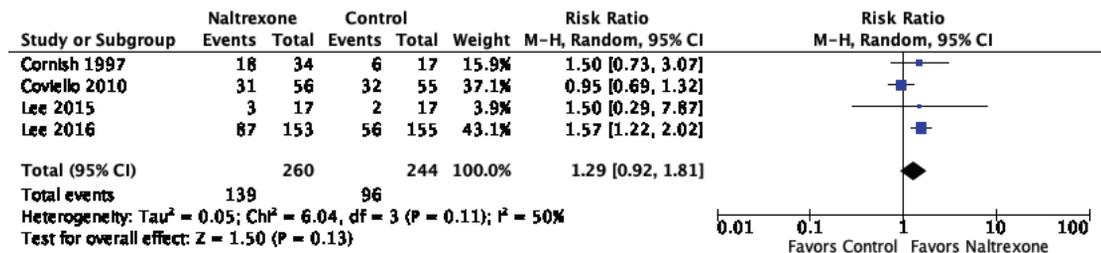


Figure 5. Forest plot of comparison: community engagement.

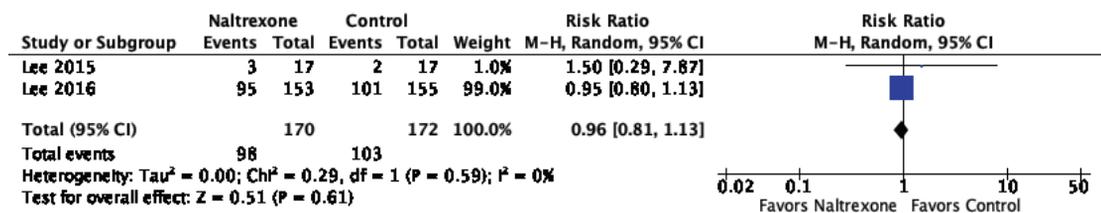


Figure 6. Forest plot of comparison: retention in treatment prerelease versus postrelease.

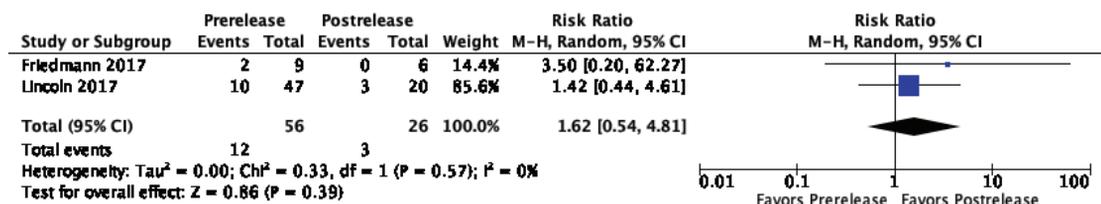


Figure 7. Forest plot of comparison: reincarceration.

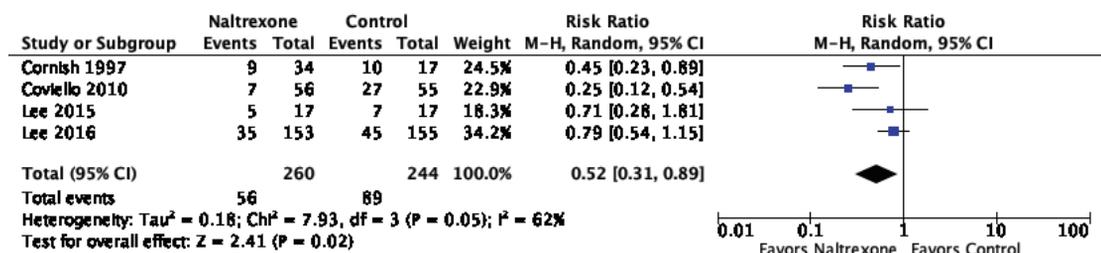
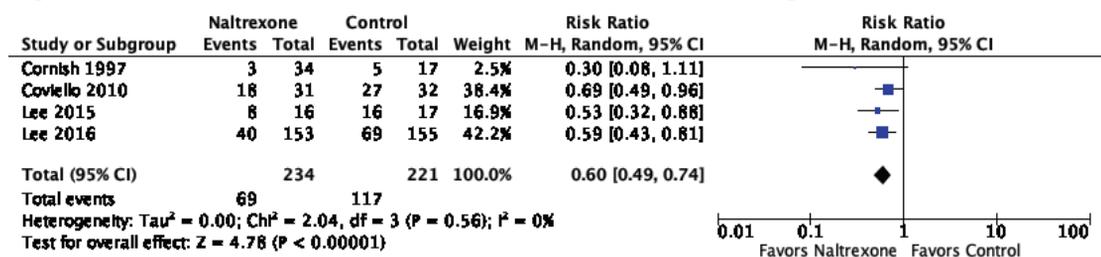


Figure 8. Forest plot of comparison: mean positive urine drug screens for opioids.



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Author Attestation

The primary author contributed to all aspects of review conceptualization, design, literature searches, data extraction, analysis, and manuscript writing.

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RESEARCH REPORT

An Exploration of Knowledge, Opinions, and Stigma Regarding Medication-Assisted Treatment among Treatment and Criminal Justice Professionals

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Abstract

Medication-assisted treatment (MAT) combined with behavior therapy continues to be one of the most effective and well-documented treatment options for individuals with an opioid use disorder. Research also suggests that MAT can be particularly effective when used in conjunction with the criminal justice system, especially in specialty courts. However, despite the promising research surrounding MAT, there continues to be a lack of knowledge and stigmatizing beliefs surrounding MAT. This can have profoundly negative impacts on the individuals who stand to benefit from this treatment option. The current research explores the knowledge and beliefs of MAT among (n = 234) treatment and criminal justice professionals, within a large community corrections nonprofit in the Midwest that specializes in substance use disorder treatment. The research draws on five different perspectives: resident supervisors (frontline staff), caseworkers, treatment staff, ancillary staff, and management staff. Logistic regressions were used to compare the knowledge and opinions of MAT by perspective, and significant differences in knowledge and opinions are discussed. This research lays the foundation for the need to explore knowledge and opinions of MAT by employee position within an agency, and provides evidence for the importance of identifying stigmatizing beliefs among treatment and criminal justice professionals.

INTRODUCTION

Medication-assisted treatment (MAT) is a term used to describe a form of substance use disorder (SUD) treatment that combines the use of behavior therapy and medications to treat an individual's SUD. MAT for opioid addiction comes in three common forms: methadone, naltrexone, and buprenorphine. In brief: methadone acts as an opioid agonist, easing the symptoms of withdrawal from opioids; naltrexone is an opioid antagonist that blocks the effects of opioids, so it poses no risk for physical dependence or misuse; and buprenorphine is an opioid agonist/antagonist that blocks the effects of opioids while simultaneously reducing cravings. Different MATs are better suited for different individuals and situations (for further reading on the types of MAT, see Bart, 2012; SAMHSA, 2018).

The Importance of MAT

The evidence supporting the use of MAT for opioid use disorder (OUD) is comprehensive and well documented. In regard to methadone, a meta-analysis of research to date found that methadone maintenance treatment increased treatment retention and had positive impacts on secondary outcomes such as mortality, drug-related HIV risk behaviors, and criminal activity (Fullerton et al., 2014). In a recent review of the literature regarding OUD treatment with buprenorphine, Soyka (2017) writes that buprenorphine is both safe and effective for treating OUD, further detailing the documented advantages and disadvantages of buprenorphine compared to methadone. Naltrexone, especially in its injectable extended-release form (XR-NTX), has been garnering much excitement recently. For instance, in the largest North American randomized control study of XR-NTX effectiveness, XR-NTX was shown to be more effective than SUD treatment without MAT in reducing opioid relapse, across a wide array of social and health-related demographics (Friedmann et al., 2018). This mirrors findings from international, randomized control trials that found XR-NTX to be significantly more effective in reducing opioid relapse when compared to a placebo medication (Nunes et al., 2015).

More specifically, there is evidence supporting the

use of MAT in individuals involved in the criminal justice system as well. In a recent meta-analysis of the use of MAT in prisons and jails (Moore et al., 2019), evidence shows that methadone provided during incarceration increased community treatment engagement, reduced illicit opioid use, and reduced injection drug use. However, the evidence did not necessarily support a reduction in recidivism. There was an insufficient number of studies to properly meta-analyze buprenorphine ($n = 3$) and naltrexone ($n = 3$). Information from the available studies indicates that both buprenorphine and naltrexone were as effective as (and in some cases superior to) methadone in reducing opioid use postrelease (Moore et al., 2019). Recently, the case has been made that the drug court model may be particularly well suited for MAT, specifically XR-NTX: "The drug court setting includes a criminal justice-treatment infrastructure that could support active implementation of XR-NTX given its well-defined collaboration with the treatment system and that it is connecting many clients to treatment for the first time" (Robertson & Swartz, 2017, p. 3). The National Association of Drug Court Professionals (NADCP) and the Substance Abuse and Mental Health Services Administration (SAMHSA) have made clear their opinions on the use of MAT in drug courts. The NADCP *Adult Drug Court Best Practice Standards* emphatically state that even though MAT may be resisted by some criminal justice professionals, it is imperative for drug courts to learn about offering MAT to their participants in conjunction with expert consultation from trained addiction psychiatrists or addiction physicians (NADCP, 2013, p. 44). Furthermore, SAMHSA will not award grant monies to drug court programs hoping to start or expand their services if these courts have policies that prohibit individuals from using MAT while in the program.

The Barriers to Implementing MAT

Despite the promising and overwhelming evidence for MAT, there can be significant barriers to implementing MAT (Hutchinson et al., 2014; Knudsen, Abraham, & Oser, 2011; Olsen & Sharfstein, 2014; Robertson & Swartz, 2018; Sperber & Manzo, 2016). In a survey of 250 publicly funded SUD treatment programs,

Knudsen, Abraham, & Oser (2011) found that 63% of programs did not offer MAT. These providers were then asked to rank their top barriers to being able to do so. The most salient barriers included lack of access to medically trained staff (physicians and nurses), funding constraints, and patients' inability to pay for the medications. Conversely, the authors concluded that MAT barriers related to organization culture and staff opinions were the least important factors in preventing agencies from adopting MAT. This nascent research is one of the first of its kind to explore negative opinions within treatment facilities as a barrier to MAT implementation. However, the study's focus on all barriers to MAT from the opinion of program administrators potentially misses the harm that negative MAT opinions can still cause within an organization. For instance, if a program administrator is unable to find funding for or qualified medical staff to prescribe MAT, it makes sense that concerns about organizational cultural barriers would be deprioritized. So while perhaps not as salient a potential barrier as funding and adequate staffing, it is still necessary to explore opinions about MAT held by treatment and criminal justice professionals, especially considering the harmful role that stigma can play in an individual's recovery.

The stigma that individuals in recovery may face is well documented. A recent national survey of Americans found that nearly 60% of respondents were likely to view treatment options for SUD as ineffective, and 28% felt that individuals with an SUD could never get well and return to productive lives with treatment (Barry, McGinty, Perscolido, & Goldman, 2014). Indeed, this stigma can have detrimental impacts on individuals in need of treatment; according to the most recent National Survey on Drug Use and Health (SAMHSA, 2017), 17.2% of respondents who needed but did not receive SUD treatment did not seek treatment because it might cause neighbors or community members to have negative opinions of them. Similarly, there is evidence to indicate that individuals who experienced more potential stigma (SUD, mental illness, poverty, etc.), were more likely to report stigma as a barrier to seeking SUD treatment (Conner & Rosen, 2008). At the root of this stigma is the perpetual misconception that SUD/OD is not a chronic illness, but a moral

failing and ultimately a choice; therefore, the use of MAT indicates a lack of willpower to stop using opioids (Olsen & Sharfstein, 2014). This misconception permeates opinions of MAT for OUD, and stigmatizes individuals seeking help and in recovery (Conner & Rosen, 2008; Earnshaw, Smith, & Copenhagen, 2013; Olsen & Sharfstein, 2014; White, 2009). Aside from being less likely to seek treatment, the stigma surrounding MAT can have very tangible detrimental effects on the lives of the people it was designed to help. As several authors have found (Olsen & Sharfstein, 2017; Robertson & Swartz, 2018; White, 2011; Woods & Joseph, 2015) there have been cases of:

- Judges forbidding the use of MAT for individuals on probation or in problem-solving courts
- Child welfare agencies removing children from the homes of individuals on MAT
- Housing and employment practices discriminating against individuals on MAT
- Nursing homes refusing to accept elderly individuals using MAT because they are unable or unwilling to comply with Drug Enforcement Administration storage requirements for MAT
- Alcoholics Anonymous and Narcotics Anonymous groups treating individuals on MAT as not in recovery and therefore discouraging participation
- Communities opposing MAT services being offered in their neighborhoods

Much of the published literature exploring stigma related to MAT is specific to medications that operate as an opioid agonist (methadone, buprenorphine). An opioid agonist may be more easily misperceived as a "substitute" for illicit opioids, and therefore it may be difficult to know if the same level of stigma is attached to antagonist MATs (naltrexone). It is also difficult when reviewing topics like cultural opinions about MAT, how quickly opinions may change as the United States continues to struggle through the opioid epidemic. Regardless, with an understanding of the negative impact stigma can play on individuals in recovery from SUD/OD, exploring opinions about MAT from the perspective of treatment and criminal justice professionals remains important for another reason.

The relationship these professionals maintain with the individuals in recovery can have a direct effect on outcomes. A meta-analysis exploring client-provider relationships for SUD treatment ($n = 25$ studies) found that the quality of the client-provider relationship was associated with better treatment retention, engagement, and posttreatment substance use (Marsh, Angell, Andrews, & Curry, 2012). It is worth noting that this meta-analysis found client-provider relationships to have a weaker association with treatment outcomes for MAT programs when compared to non-MAT SUD treatment programs; however, the association was still present. Similarly, there is evidence to suggest that the relationship with individuals from the criminal justice system can have a strong effect on criminal justice outcomes; from the judge in a drug court (see NADCP 2013, p. 21, subsection G), to an individual's parole/probation officer (Manchak, Kennealy, & Skeem, 2014; Skeem, Eno Louden, Polaschek, & Camp, 2007; Walters, 2016). In a recently published article, leading criminologists have pushed to redefine the role and professional identity of the probation officer as a "coach"—one who is an authority figure, but uses tough love and a healthy combination of restriction and support to help their teams succeed (Lovins, Cullen, Latessa, & Jonson, 2018). Any feelings of stigmatization from either treatment or criminal justice professionals would damage the relationship between the provider and the client and, according to previous research, hinder program outcomes.

The current paper seeks to add to the literature on both treatment and criminal justice professionals' opinions of MAT, and the implications of those opinions for implementing MAT. To the authors' knowledge, this is the first study to explore MAT opinions among professionals with different roles within a large community corrections nonprofit organization. The culture of large organizations can be complex and difficult to define; therefore, it is important when assessing something like opinions of MAT to collect data from various positions within the organization. This study surveyed five different categories of job position within the community corrections nonprofit, representing professionals with a treatment background, a corrections background, and a management background.

METHODS

Sample

The participants in this study were drawn from a sample of employees at a large community corrections nonprofit that specializes in treating SUD. The nonprofit is located in the Midwest, serving primarily two large urban centers, as well as surrounding rural communities. In 2017, the organization served close to 13,000 individuals in its community corrections programs, and provided SUD treatment to over 15,500 individuals. These individuals (internally referred to as "clients") would have received treatment in one of the many agency-operated community-based corrections facilities, halfway houses, day reporting programs, problem-solving courts, and/or driver intervention programs. A client's American Society of Addiction Medicine (ASAM) level of care determines that client's SUD treatment needs, and an Ohio Risk Assessment System score identifies a client's criminogenic risk and needs, which determines additional programming needs. The agency offers comprehensive services including intensive outpatient programming, case management, crisis counseling (such as Seeking Safety or prolonged exposure therapy), MAT, cognitive skills classes, education and employment classes/services, and parenting classes.

In addition to the diversity of clientele at the study site, the types of employees also vary greatly. The current sample consisted of 234 employee participants. The participants were primarily female (67.5%), under the age of 35 (51.7%), and had been working for the agency for five or more years (39.7%). The participants were categorized by job position as follows: resident supervisor ($n = 53$, 22.6%); caseworker ($n = 54$, 23.1%); SUD treatment staff ($n = 37$, 15.8%); ancillary staff including cognitive skills specialists, employment specialists, education specialists, intake specialists, continuous quality improvement specialists, support staff, and nurses ($n = 47$, 20.1%); and management staff, including program coordinators, administrators, and managers ($n = 43$, 18.1%). Resident supervisors are frontline staff who work primarily in the residential facilities, working with clients and implementing the day-to-day operations of the facilities. Caseworkers are responsible for monitoring clients' progression through their treatment and programming needs. Treatment staff conduct all screening and assessments and deliver evidence-

based treatment curricula in accordance with a client's individualized treatment plan. Management staff are responsible for operating programs and facilities, as well as providing supervision and direction for the staff in those programs and facilities. Ancillary staff have multiple roles within the organization. All positions, with the exception of the resident supervisor position, require a bachelor's degree in social work, counseling, corrections, or a related field; for treatment staff, a minimum of a chemical dependency counselor certification is required. Management staff are preferred to have graduate-level degrees in relevant fields. It is reasonable to assume any community corrections agency will have similar position equivalents. All staff are required to complete at least 40 hours of training per fiscal year with a minimum of 24 of those hours specific to changing criminogenic behavior. Therefore, staff members continuously attend a variety of courses offered by

the agency, as well as through additional outside training opportunities. See Table 1 for a breakdown of participant information.

Measures, Procedures, and Analysis

Data were collected through Survey Monkey and sent to all staff members via internal email. Employees were informed that participation was voluntary and anonymous. If individuals were accidentally identified, there would be no impact whatsoever on their employment at the agency. The survey was sent on July 7, 2016, and closed on August 25, 2016. The survey questions were developed in part by the internal research department at the nonprofit where the data were collected. A similar recent research project from the Center for Health and Human Services Research (CHHSR) at Talbert House in Cincinnati also proved to be instructive in the current project. The CHHSR study, initiated

Table 1. Participant Sample Demographics

	n	%
Gender		
Male	76	32.5
Female	158	67.5
Total	234	100
Age		
18–25	31	13.2
26–35	90	38.5
36–45	45	19.2
46–55	40	17.1
Over 55	28	12.0
Total	234	100
Time at the Agency		
0–6 months	35	15.0
7–12 months	20	8.5
1–2 years	53	22.6
3–4 years	33	14.1
5+ years	93	39.7
Total	234	100
Position in the Agency		
Resident Supervisors	53	22.6
Caseworkers	54	23.1
Treatment Staff	37	15.8
Ancillary Staff	47	20.1
Management Staff	43	18.1

by Sperber and Manzo (2016), explored the factors influencing MAT in Ohio halfway houses and community-based corrections facilities by interviewing representatives from each facility. The current study intends to build on the CHHSR study by conducting a deeper analysis of MAT opinions within one agency, across all types of staff that have direct contact with clients.

Questions were split into three categories: sources participants used to learn about MAT; knowledge about MAT; and opinions about MAT. In the first section, participants were free to endorse as many sources of information as they used. The latter two sections were scored on a 4-point Likert scale of “Agree,” “Somewhat Agree,” “Somewhat Disagree,” and “Disagree,” and collapsed to binary measures of “Agree” and “Disagree” for analysis. Measures of frequency were initially used to show the general distribution of responses to the statements, and using logistic regression analysis, the response of “agree” for each individual statement was modeled with the participant’s position of employment within the agency. Participants were also asked to report the duration of time spent working at the agency, coded as 0–6 months, 7–12 months, 1–2 years, 3–4 years, and 5+ years. To rule out any confounding effect of the time spent working at the agency on the association between the participant’s position and their perceptions toward MAT, adjusted logistic regression analysis was performed, adjusting for the duration of time spent working at the agency. The adjusted odds ratios with 95% confidence intervals were predicted from this analysis. All tests used a p value of .05 or less to determine significance. All analysis was completed

in Statistical Analysis Software (SAS 9.4).

Appendices for this article include odds ratios adjusting the responses based on participants’ time served in their current position. Appendices are available online at <https://www.nadcp.org/advancingjustice/journal-for-advancing-justice/volume-ii/>.

RESULTS

Sources of Information About MAT

Participants were asked to endorse all the sources of information they used to form their opinions of MAT. The results indicated that in-service trainings are the primary source of information about MAT for the majority of staff positions, including resident supervisors, ancillary staff, and management staff. Caseworkers indicated that they primarily base their opinions about MAT on conversations with coworkers, and treatment staff indicated that personal experience (working with clients, client testimonies, and the recovery community) was the primary basis for their MAT opinions. Of note, a greater variety of information sources about MAT were endorsed by treatment and management staff, whereas the majority of resident supervisor staff based what they know about MAT primarily on in-service training. See Table 2 for full results.

Table 2. Sources of Information Used to Form Opinions of MAT; Percentage in Agreement

	Position of the Staff, n (%)				
	Resident Supervisors 53 (22.6)	Caseworkers 54 (23.1)	Treatment Staff 37 (15.8)	Ancillary Staff 47 (20.1)	Management Staff 43 (18.4)
Personal experience	13 (24.5)	36 (66.7)	22 (59.5)	21 (44.7)	20 (46.5)
Professional articles	9 (17.0)	17 (31.5)	21 (56.8)	15 (31.9)	20 (46.5)
Outside training	6 (11.3)	8 (14.8)	17 (45.9)	7 (14.9)	23 (53.5)
In-service training	31 (58.5)	28 (51.9)	21 (56.8)	30 (63.8)	25 (58.1)
Conversations with coworkers	12 (22.6)	37 (68.5)	21 (56.8)	21 (44.7)	24 (55.8)

Knowledge About MAT

Participants were questioned about their knowledge regarding MAT. See Table 3 for the full results of the participants' knowledge of MAT.

Table 3. Knowledge About MAT, N = 234; Percentage in Agreement

Questions	Position of the Staff, n (%)					
	Total	Resident Supervisor 53 (22.6)	Caseworkers 54 (23.1)	Treatment Staff 37 (15.8)	Ancillary Staff 47 (20.1)	Management Staff 43 (18.4)
Q1. MAT helps people who are diagnosed with substance use disorder control their drinking.						
Agree, n (%)	142 (61.1)	36 (73.5)	29 (59.2)	23 (65.7)	27 (64.3)	27 (67.5)
Missing, n	17					
Q2. MAT helps people who are diagnosed with substance use disorder control their drug use.						
Agree, n (%)	200 (92.6)	44 (89.8)	48 (98)	32 (88.9)	37 (88.1)	39 (97.5)
Missing, n	18					
Q3. If a client is on MAT, they still need to do counseling and/or group therapy.						
Agree, n (%)	214 (99)	48 (98)	49 (100)	36 (100)	41 (97.6)	40 (100)
Missing, n	18					
Q4. I know what buprenorphine (Suboxone) is and how it is used in MAT.						
Agree, n (%)	175 (81)	26 (54.2)	41 (83.7)	35 (97.2)	36 (83.7)	37 (92.5)
Missing, n	18					
Q5. I know the difference between oral naltrexone and injectable naltrexone and how it is used in MAT.						
Agree, n (%)	159 (73.6)	32 (65.3)	33 (68.7)	28 (77.8)	29 (67.4)	37 (92.5)
Missing, n	18					
Q6. I know what methadone is and how it is used in MAT.						
Agree, n (%)	159 (73.3)	29 (59.2)	35 (71.4)	32 (88.9)	30 (69.8)	33 (82.5)
Missing, n	17					
Q7. MAT reduces relapse.						
Agree, n (%)	175 (84.1)	32 (68.1)	43 (89.6)	32 (91.4)	30 (78.9)	38 (95)
Missing, n	26					
Q8. MAT reduces crime.						
Agree, n (%)	154 (74.4)	22 (46.8)	34 (70.8)	31 (91.2)	29 (76.3)	38 (95)
Missing, n	21					
Q9. MAT increases employment.						
Agree, n (%)	158 (76)	28 (59.6)	38 (79.2)	33 (94.3)	23 (60.5)	36 (90)
Missing, n	26					
Q10. MAT reduces or blocks the effects of heroin and other opioids.						
Agree, n (%)	185 (89.4)	34 (72.3)	47 (97.9)	34 (97.1)	31 (83.8)	39 (97.5)
Missing, n	27					
Q11. MAT reduces sexually transmitted infections and HIV.						
Agree, n (%)	68 (33)	12 (26.1)	19 (39.6)	20 (57.1)	6 (16.2)	11 (27.5)
Missing, n	28					
Q12. MAT lowers death rates.						
Agree, n (%)	172 (83.5)	35 (74.5)	37 (78.7)	33 (94.3)	29 (78.4)	38 (95)
Missing, n	28					

Position of the Staff, n (%)						
Questions	Total	Resident Supervisor 53 (22.6)	Caseworkers 54 (23.1)	Treatment Staff 37 (15.8)	Ancillary Staff 47 (20.1)	Management Staff 43 (18.4)
Q13. MAT increases program retention.						
Agree, n (%)	155 (75.2)	32 (69.6)	33 (68.7)	31 (88.6)	27 (73)	32 (80)
Missing, n	28					
Q14. MAT improves birth outcomes for children born to addicted mothers						
Agree, n (%)	149 (73.4)	28 (60.9)	35 (74.5)	31 (88.6)	23 (63.9)	32 (82)
Missing, n	31					

Using logistic regression analysis, the response of “agree” for each individual statement was modeled with the employee position, adjusting for the duration of time spent working at the agency. The adjusted odds ratios with 95% confidence intervals were predicted from this analysis. Based on the model, the odds of staff agreeing with factual statements about MAT were significantly different for some questions by position ($p < .05$). The significant odds ratio estimates from the adjusted logistic regression analysis are reported in Appendix A, which is available online at <https://www.nadcp.org/advancingjustice/journal-for-advancing-justice/volume-ii/>. The significant differences have been organized by comparisons between each position.

Resident Supervisors and Caseworkers

In comparing resident supervisors’ responses to those of caseworkers, the odds of agreeing with factual statements about MAT were significantly lower. The odds of resident supervisors agreeing with the statements “MAT reduces relapse” and “MAT reduces or blocks the effects of heroin and other opioids” were 0.1 times that of caseworkers; with the statements “MAT increases employment,” and “MAT reduces crime,” the odds were 0.2 times that of caseworkers.

Resident Supervisors and Ancillary Staff

There was little difference between the odds of resident supervisors and ancillary staff agreeing with factual statements regarding MAT. The only difference pertained to agreeing with the statement “MAT reduces crime,” in which the odds among the resident supervisors were 0.1 times that of ancillary staff.

Resident Supervisors and Treatment Staff

In comparing resident supervisors’ responses to treatment staff responses, the odds of agreeing with factual statements about MAT were significantly lower compared to treatment staff. The odds of resident supervisors agreeing with the statements “I know what buprenorphine is and how it is used in MAT,” “MAT increases employment,” “MAT reduces crime,” and “MAT reduces or blocks the effects of heroin and other opioids” were 0.1 times that of treatment staff. The odds of resident supervisors agreeing with the statements “MAT reduces relapse,” “MAT reduces sexually transmitted infections and HIV” and “MAT improves birth outcomes for children born to addicted mothers” were 0.2 times that of treatment staff.

Resident Supervisors and Management Staff

Similar to the comparison between resident supervisors and management staff, the odds of resident supervisors agreeing with factual statements about MAT were significantly lower compared to management staff. The odds of resident supervisors agreeing with the statement “I know the difference between oral naltrexone and injectable naltrexone and how it is used in MAT” were 0.2 times that of management staff. The odds of agreeing with the statements “MAT increases employment” and “MAT reduces crime” were < 0.1 times that of management staff. The odds of agreeing with the statements “MAT reduces or blocks the effects of heroin and other opioids” and “MAT lowers death rates” were 0.1 times that of management staff.

Caseworkers and Ancillary Staff

There was little difference between the odds of caseworkers and ancillary staff agreeing with factual statements regarding MAT, with the exception of “MAT reduces sexually transmitted infections and HIV,” where the odds were 3.2 times higher among caseworkers than ancillary staff.

Caseworkers and Management Staff

There was little difference between the odds of caseworkers and management staff agreeing with factual statements regarding MAT, with the exception of the statement “MAT reduces crime,” with the odds among caseworkers 0.1 times that of management staff.

Ancillary Staff and Treatment Staff

There was some difference in the odds of ancillary staff and treatment staff agreeing with factual statements regarding MAT. The odds of treatment staff agreeing with the statement “MAT increases employment” were 6.9 times that of ancillary staff; with the statement “MAT reduces sexually transmitted infections and HIV,” 5.8 times that of the ancillary staff; with the statement “MAT improves birth outcomes for children born to addicted mothers,” 4.8 times that of ancillary staff.

Ancillary Staff and Management Staff

There was little difference between the odds of ancillary staff and management staff agreeing with factual statements regarding MAT. The odds of ancillary staff agreeing with the statement “MAT increases employment” were 0.2 times that of management staff.

Table 4. Opinions About MAT, N = 234; Percentage in Agreement

Resident Supervisors						
Questions	Total	Resident Supervisor 53 (22.6)	Caseworkers 54 (23.1)	Treatment Staff 37 (15.8)	Ancillary Staff 47 (20.1)	Management Staff 43 (18.4)
Q15. MAT is just substituting a prescription drug for an illegal drug.						
Agree, n (%)	56 (26.2)	18 (38.3)	13 (26.5)	8 (22.2)	12 (28.6)	5 (12.5)
Missing, n	20					
Q16. There is not enough evidence that shows that MAT actually works.						
Agree, n (%)	53 (24.9)	22 (45.8)	9 (18.4)	4 (11.1)	10 (24.4)	8 (20.5)
Missing, n	21					
Q17. I am able to answer most questions that my clients have about the MAT programs available in my region.						
Agree, n (%)	132 (61.4)	19 (39.6)	28 (58.3)	30 (83.3)	23 (53.5)	32 (80.0)
Missing, n	19					
Q18. When I have questions about medications used in MAT, I know who to ask.						
Agree, n (%)	171 (78.8)	29 (59.2)	39 (79.6)	32 (88.9)	32 (74.4)	39 (97.5)
Missing, n	17					
Q19. MAT rewards criminals for being drug users.						
Agree, n (%)	13 (6.3)	5 (10.6)	3 (6.3)	2 (5.7)	3 (7.9)	0 (0.0)
Missing, n	26					
Q20. MAT prolongs addiction.						
Agree, n (%)	41 (20.0)	17 (36.2)	8 (17.0)	8 (23.5)	6 (16.2)	2 (5)
Missing, n	17					
Q21. When I have questions about the MAT referral process, I know who to ask.						
Agree, n (%)	152 (76.0)	28 (62.2)	36 (76.6)	29 (85.3)	24 (64.9)	35 (94.6)
Missing, n	34					

Resident Supervisors						
Questions	Total	Resident Supervisor 53 (22.6)	Caseworkers 54 (23.1)	Treatment Staff 37 (15.8)	Ancillary Staff 47 (20.1)	Management Staff 43 (18.4)
Q22. The clients are not interested in using medications as a part of their treatment plan.						
Agree, n (%)	38 (19.0)	7 (15.6)	11 (22.9)	7 (20.6)	9 (25.0)	33 (89.2)
Missing, n	34					
Q23. Clients cannot afford MAT.						
Agree, n (%)	63 (31.7)	12 (27.3)	15 (31.2)	11 (32.3)	16 (44.4)	28 (75.7)
Missing, n	35					

Treatment Staff and Management Staff

There was little difference between the odds of treatment staff and management staff agreeing with factual statements regarding MAT. The odds of treatment staff agreeing with the statement “MAT reduces sexually transmitted infections and HIV” were 5.6 times that of management staff.

Opinions About MAT

Participants were also questioned about their opinions regarding MAT. See Table 4 for the full results.

Using logistic regression analysis, the response of “Agree” for each individual statement was modeled with the employee position, again adjusting for the duration of time spent working at the agency. The adjusted odds ratios with 95% confidence intervals were predicted from this analysis. Based on the model, the odds of staff agreeing with factual statements about MAT were significantly different for some questions by position ($p < .05$). For complete odds ratios adjusted for time spent working at the agency, see Appendix B, which is available online at <https://www.nadcp.org/advancingjustice/journal-for-advancing-justice/volume-ii/>. The significant differences have been organized by comparison between each position.

Resident Supervisors and Caseworkers

The odds of agreeing with stigmatizing opinions about MAT were greater for resident supervisors than caseworkers. The odds of resident supervisors agreeing with the statement “MAT is just substituting a prescription drug for an illegal drug” were 3.1 times that of caseworkers; for “There is not enough evidence that shows that MAT actually works,” 8.7 times that of caseworkers; for “When

I have questions about medications used in MAT, I know who to ask,” 0.3 times that of caseworkers; and for the statement “MAT prolongs addiction,” the odds were 3.6 times that of caseworkers.

Resident Supervisors and Ancillary Staff

The odds of agreeing with stigmatizing opinions about MAT were greater for resident supervisors than ancillary staff. The odds of resident supervisors agreeing to the statement “There is not enough evidence that shows MAT actually works” were 3.5 times that of ancillary staff; for “MAT prolongs addiction,” 3.8 times that of ancillary staff; and for the statement “Clients cannot afford MAT,” 0.3 times that of ancillary staff.

Resident Supervisors and Treatment Staff

The odds of agreeing with stigmatizing opinions about MAT were greater for resident supervisors than treatment staff. Conversely, the odds of agreeing with statements regarding knowing whom to ask when clients have questions about MAT were greater in treatment staff. The odds of resident supervisors agreeing with the statement “MAT is just substituting a prescription drug for an illegal drug” were 3.5 times that of treatment staff; for “There is not enough evidence that shows that MAT actually works,” 12.3 times that of treatment staff; and for the statements “I am able to answer most questions that my clients have about the MAT programs available in my region,” “When I have questions about medications used in MAT, I know who to ask” and “When I have questions about the MAT referral process, I know who to ask,” 0.2 times that of treatment staff.

Resident Supervisors and Management Staff

Similar to the comparison between resident supervisors and treatment staff, the odds of resident supervisors agreeing with stigmatizing opinions about MAT were significantly higher than management staff, and the odds of agreeing with statements regarding knowing whom to ask when clients have questions about MAT were greater in management staff. The odds of resident supervisors agreeing with the statement “MAT is just substituting a prescription drug for an illegal drug” were 4.6 times that of management staff; for “There is not enough evidence that shows that MAT actually works,” 7.6 times that of management staff; for the statements “I am able to answer most questions that my clients have about the MAT programs available in my region” and “When I have questions about the MAT referral process, I know who to ask,” 0.1 times that of management staff; for “When I have questions about medications used in MAT, I know who to ask,” < 0.1 times that of the management staff; and for the statement “MAT prolongs addiction,” 7.7 times that of the management staff.

Caseworkers and Treatment Staff

There was little difference between the odds of caseworkers and treatment staff agreeing with stigmatizing opinions about MAT—the exception being that the odds of caseworkers agreeing with the statement “I am able to answer most questions that my clients have about the MAT programs available in my region” were 0.3 times that of treatment staff.

Caseworkers and Management Staff

There was little difference between the odds of caseworkers and management staff agreeing with stigmatizing opinions about MAT. The odds of caseworkers agreeing with the statements “I am able to answer most questions that my clients have about the MAT programs available in my region” and “When I have questions about the MAT referral process, I know who to ask” were 0.2 times that of management staff.

DISCUSSION

The results of this research provide evidence for three important findings. First, there are small but concerning portions of both criminal justice and treatment professionals who are unaware of the different types of MAT, as well as some of the benefits of this style of treatment. Second, knowledge and opinions regarding MAT significantly differed depending on the participant’s role: resident supervisor, caseworker, treatment staff, ancillary staff, or management staff. Third, there are some professionals who continue to hold beliefs that stigmatize the use of MAT.

Unaware of the Benefits of MAT

While the majority of participants (89.4%) were familiar with MAT as a tool to reduce or block the effects of heroin and other opioids, far fewer (66.1%) were aware of how MAT can assist individuals with controlling their alcohol use. While the majority of participants (92.6%) knew that MAT can help people diagnosed with an SUD, knowledge about the specific types of MAT—buprenorphine, methadone, and oral/injectable naltrexone—were less endorsed (81.0%, 73.3%, and 73.6%, respectively). In general, understanding of the benefits of MAT was encouraging in this sample of criminal justice and treatment professionals. Perhaps one of the most encouraging findings was that management staff indicated that they were well educated in the benefits of MAT. This is important because members of management staff occupy positions of power within the agency and are tasked with developing policies and managing programs and facilities. This is also encouraging because some criminal justice professionals have historically shown resistance to MAT. As expected, treatment professionals were also highly knowledgeable about the benefits of MAT, as well as the different types of MAT. Encouraging results aside, ideally, knowledge about MAT within an organization that serves a population that would benefit immensely from MAT should be closer to 100%. However, for the majority of the questions there was still a consistent quarter of the participants who were either unaware of the different types of MAT or their benefits. This lack of awareness about MAT was not equally distributed among the different job positions.

Difference in Opinions/Knowledge by Job Position

One of the features of this study that makes this article a unique contribution to the literature is the exploration of different perceptions of MAT by job function within the same agency. Indeed, this was an important exercise because how a participant responded to the survey questions was at least in part significantly influenced by their job. This difference was most pronounced when comparing the opinions and knowledge of the resident supervisors with other positions. Resident supervisors were consistently less informed about MAT than those in other positions, and in some cases significantly more likely to hold stigmatizing beliefs about MAT. As previously mentioned, management and treatment staff tended to be the most informed of the cohort, and the majority of significant differences in knowledge and opinions were typically found in comparing resident supervisors to these two position groups.

Stigmatizing Beliefs

The damage that stigma can do when it comes to individuals with an SUD remains an important issue. Previous research indicates that stigma can keep people from seeking SUD treatment and can damage the relationship between the client and the provider. This damaged relationship can have negative implications for both treatment and criminal justice professionals. Therefore, the results of this exploration into the stigmatizing beliefs about MAT within a large agency are important to assess and acknowledge. This research found that roughly a quarter of the participant sample agreed with the statement that MAT is just substituting a prescription drug for an illegal drug, and the statement that there is not enough evidence to show that MAT actually works. One-fifth of participants agreed that MAT prolongs addiction, and a particularly concerning 6.3% of the participants felt that MAT rewards criminals for being drug users. As previously mentioned, opinions about MAT were not distributed equally across job positions. The notion that MAT prolongs addiction was significantly more likely to be endorsed by resident supervisors than almost all the other positions; resident supervisors were

more likely to believe that MAT is just substituting a prescription drug for an illegal drug; nearly half of the resident supervisor participants agreed that there isn't enough evidence for MAT; and over a third felt that MAT prolonged addiction.

Implications

This research provides evidence for the notion that there are still stigmatizing opinions about MAT held among professionals who are in a position to best provide MAT or refer individuals to MAT programs who could benefit immensely from MAT. Similarly, many of these professionals are simply unaware of the full benefits of MAT for individuals with an SUD involved in the criminal justice system. The rate at which these stigmatizing opinions and lack of knowledge about MAT were held differed, sometimes significantly, between various positions, and this differing of opinions and knowledge was not a function of how long a professional had been working at the agency. This variability could have implications for how an organization may train staff members on MAT and its benefits by their position within the organization. Another finding from this research was that the resident supervisors seemed to be the least educated about MAT, as well as holding the majority of the stigmatizing beliefs. These frontline staff provide a crucial function within the organization, and generally have the most one-on-one contact with the clients. Resident supervisors are often entry-level positions, filled by people with a strong desire to help. It is not critical to understand all the benefits of various SUD treatments to be an effective resident supervisor. However, given the proximity these frontline staff hold to the individuals the organization serves, these staff members have the potential to greatly influence these individuals in need. For any organization with frontline staff with regular access to the people they are trying to help, this could represent a particularly salient population to educate about MAT. The results also indicated that resident supervisors based their knowledge and opinions surrounding MAT primarily from in-house trainings, whereas other positions endorsed multiple sources of information at much higher rates. This seems to indicate that what an agency offers by way of in-house trainings to its

frontline staff could go a long way in shaping their opinions, especially if they are new to the field of treatment and/or criminal justice. The results of this paper indicate a need to make such in-house training about MAT a requirement. Since reviewing these findings, the agency at which this study was conducted began consistently offering comprehensive trainings on MAT to all staff, and incorporated aspects of these trainings into its standardized onboarding training.

Future Research/Limitations

The primary limitation to this research is that the survey was conducted in 2016. It is difficult to know how opinions and knowledge may have changed within the organization in the last three years. Given the proliferation of the opioid epidemic in the United States, it is reasonable to believe that knowledge and opinions about MAT as a treatment tool for OUD have improved, especially in the Midwest, where the opioid epidemic has been particularly devastating. Another limitation is in the survey design, which did not distinguish between the different types of MAT in the majority

of the questions. As previously mentioned, the roles that the different types of MAT play as an agonist or an antagonist may be linked to different kinds of stigma. For example, the statement “MAT is just substituting a prescription drug for an illegal drug,” may make more sense as a misguided opinion when in reference to an agonist such as methadone, but not an antagonist such as XR-NTX. Future research would want to distinguish the different types of MAT to explore differences in stigma. In addition to addressing the aforementioned limitations, future research should explore opinions of MAT among other criminal justice and treatment professionals. This kind of research would be especially prudent among criminal justice professionals specifically poised to help individuals with SUD, such as drug courts (Robertson & Swartz, 2018), and probation/parole officers, to whom 68.6% of individuals under correctional supervision report (Kaeble & Cowhig, 2018). Similarly, future research should probe the opinions of individuals using MAT, and their experiences with treatment and criminal justice professionals.

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Conflict of Interest Attestation

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RESEARCH REPORT

As Stated by Criminal Justice Professionals: Perceptions and Barriers Related to Medication- Assisted Treatment

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Abstract

Opioid misuse over the past two decades has evolved into an epidemic, with thousands of communities adversely affected by deaths and injuries, lost productivity, and strains on social welfare programs. Numerous studies confirm the benefits of properly administered medication-assisted treatment (MAT) for justice-involved populations in sustained recovery, fewer overdose events, and improved justice system outcomes. The criminal justice system has been substantially impacted by the opioid epidemic; however, despite the positive effects of MAT, it is underutilized among criminal justice programs in jails, courts, and community corrections. This article describes barriers and perceptions related to MAT in the criminal justice setting across six areas of focus: The extent of the opioid problem; workforce issues; cost and healthcare reimbursement; community and systems partners; education and technical assistance; and data and evaluation. Implications for expanding the use of MAT across criminal justice settings are discussed.

INTRODUCTION

Opioid misuse over the past two decades has evolved into an epidemic with thousands of communities adversely affected by deaths and injuries (Centers for Disease Control and Prevention, 2018), lost productivity (Birnbaum et al., 2011; Hasselt, Keyes, Bray, & Miller, 2015), and strains on social welfare programs (Florence, Luo, Xu, & Zhou, 2016). Health and economic costs associated with the opioid epidemic are estimated to range between \$80 billion to \$500 billion per year, with a substantial proportion of these costs shouldered by the criminal justice system (Giftos & Tesema, 2018). The crisis prompted a declaration of a national public health emergency in response to the opioid crisis on October 26, 2017. By 2018, eight states (Dedon, 2018) and several American Indian tribes issued their own opioid-related emergency declarations, some as early as 2011 (Hodge, Wetter, & Noe, 2017).

Arguments for a public health versus criminal justice approach to substance use disorders are not new (Lancet, 2001); however, a renewed focus on public health strategies has emerged in response to the opioid epidemic (Saloner, McGinty, & Beletsky, 2018; Volkow et al., 2017). Despite this, the criminal justice system has been substantially impacted by the opioid epidemic. In the early 2000s, 22% of jails reported that 10% or more of their population is affected by opioid use disorders (OUDs) (Fiscella, Moore, Engerman, & Meldrum, 2004). An average of 18% of individuals sentenced to jail and state prisons self-report “regular use” of opioids prior to incarceration (Bronson, Stroop, Zimmer, & Berzofsky, 2017). Nearly half of drug courts serve a population where 20% or more of their participants have an OUD (Nordstrom & Marlowe, 2016). People transitioning to the community from the justice system are at heightened risk of being unable to access routine care, and thus are more likely to experience adverse health outcomes, including substance use relapse and overdose (Krinsky, Lathrop, Brown, & Nolte, 2009; Nurco, Hanlon, & Kinlock, 1991). Opioid overdose is a leading cause of death for formerly incarcerated people (Binswanger, Blatchford, Mueller, & Stern, 2013). In Rhode Island, 21% of

people who died from overdose in 2014 and 2015 had been incarcerated in the two years before their death (National Sheriffs’ Association & National Commission on Correctional Healthcare, 2018), and a recent report shows that recently released prisoners are 12 times more likely to die from drug overdose than would be expected in the general population (Groot et al., 2016).

Numerous studies confirm the benefits of properly administered medication-assisted treatment (MAT) for justice-involved populations in sustained recovery and fewer overdose events (Lee et al., 2015); fewer probation revocations and reincarcerations (Cornish et al., 1997); fewer arrests (Schwartz, Jaffe, O’Grady, Kinlock, et al., 2009); and reduced criminal activity (Ball & Ross, 1991; Joseph, Stancliff, & Langrod, 2000; Schwartz, Jaffe, O’Grady, Kinlock, et al., 2009). Despite the positive effects of MAT, it is underutilized among criminal justice programs in jails, courts, and community corrections (Chandler, Fletcher, & Volkow, 2009; Friedmann et al., 2012; Matusow et al., 2013; Miller, Griffin, & Gardner, 2015).

Barriers to MAT in Criminal Justice Settings Perceptions

Widespread acceptance and support for MAT requires that the public, providers, and justice professionals address the underlying negative—and often incorrect—information about substance use disorders and treatment. At the heart of the misinformation is the pervasive belief that addiction is a moral failing rather than an illness (Olsen & Sharfstein, 2014). Further, addiction has not been widely treated by general physicians, thus isolating the funding for MAT from other chronic or acute medical treatments, causing barriers to care based on cost. The language of addiction in the justice system further perpetuates negative views of the treatment of substance use disorder. For example, urine screens that are ubiquitous to treatment court programs are often evaluated as “dirty” or “clean” versus “unexpected” or “expected” results. This contrasts sharply with the language that providers use to describe results of clients with other medical conditions when they are not compliant with treatment.

The acceptance of MAT use in justice settings is affected by workforce perceptions about the treatment, which can come into conflict with the growing need for evidence-based treatment of OUD. A nationwide survey shows that just over half (56%) of drug court programs allow MAT medications as part of their treatment programming (Matusow et al., 2013). Overall, treatment courts include MAT as a treatment option less often than jails; and some courts are reluctant to authorize participants to start on MAT after they have detoxed (Friedmann et al., 2012). More recently, there has been an observed shift in judges' receptivity to MAT (Allison & Moore, 2011), which can be key to countering negative views of other justice professionals.

In 2015, the National Association of Drug Court Professionals (NADCP) issued advice that treatment courts allow MAT when appropriately prescribed and medically recommended for their participants (Nordstrom & Marlowe, 2016). In 2015, New York's Criminal Procedure Law was changed to not only allow for judicial diversion programs to accept individuals on MAT, but also to safeguard participants from potential release violation charges related to the use of MAT medications (Friedman & Wagner-Goldstein, 2015). The critical role of MAT as part of OUD treatment is underscored by the requirement by SAMHSA and BJA that drug court programs receiving federal grants not prohibit MAT as prescribed by a medical professional (Marlowe, 2016).

When compared to treatment court programs and prisons, jails are more likely to use MAT, particularly for people who begin withdrawing from opioids during their detention. Despite some reluctance by jail administrators to provide MAT as a regular-standing service (Friedmann et al., 2012), in October 2018, the National Sheriffs' Association (NSA) released guidelines for implementation of MAT, noting that jail-based MAT programs exist in at least 30 states (NSA, 2018). They assert that MAT is a valuable tool for justice professionals in that it can help stem recidivism, promote safety in the jail, reduce costs, prevent postrelease overdose deaths, and promote recovery from addiction. Early indicators show that even getting people with an

opioid addiction who are leaving prison or jail onto an MAT medication while on a waitlist to enter a formal MAT program may lead to a reduction in arrests (Schwartz et al., 2009). Establishing people on MAT prior to release from jail could offset relapse and/or prevent overdose in someone who has detoxed and developed a lower tolerance for opioids during their incarceration. One study found a 60% reduction in overdose deaths among people who had been recently incarcerated by starting MAT inside jails (Greene et al., 2018).

Misconceptions Related to MAT Medications

As use of MAT in treatment courts is expanding, new concerns regarding the use of MAT in this setting are emerging. While treatment courts are not the prescribers of treatment and generally would not be able to officially prescribe or authorize medications (unless a prescriber was part of the treatment team), gray literature and anecdotal data indicate that some courts may limit the role of patient choice or prescriber recommendation in determining which medication is used as part of MAT. An evaluation of 25 drug courts across 13 Ohio counties shows that 89% of the clients receiving MAT are using extended-release, injectable naltrexone and that a majority (43%) of the stakeholders involved in these drug courts (judges, court staff, treatment providers, and attorneys) prefer injectable naltrexone to other MAT medications. Additionally, 48% of those stakeholders express negative views about buprenorphine/naloxone tablets (Suboxone) due to fears around diversion (Dugosh & Festinger, 2017). A study of 72 criminal justice programs (including reentry, jails, and drug court programs) shows that more than 66% view extended-release naltrexone more favorably and consider it more effective compared to methadone and buprenorphine (Festinger, Dugosh, Gastfriend, & Sierka, 2017). A number of anecdotal information sources document these perspectives among treatment court judges and personnel (Sonka, 2017).

The jail-based MAT report (NSA, 2018) and other studies (Goodnough & Zernike, 2017) find that most jails that have MAT only offer extended-

release injectable naltrexone. The underlying reasons for this preference range from concerns about medication diversion (Peteet & Tobey, 2017; Pilkinton & Pilkinton, 2014) to pharmaceutical companies' marketing campaigns (MacGillis, 2017). Research shows that continued methadone maintenance inside a jail increases the likelihood that patients will continue their treatment once released back into the community (Rich et al., 2015). Incidents of incarceration are a leading cause of disruption in MAT programs, particularly methadone treatment (Reisinger, Schwartz, Mitchell, & Kelly, 2009). Nearly a third (31%) of people receiving treatment with methadone are arrested at least once during a year (Fu et al., 2013). Yet, a national survey of jails revealed that only one in every eight jails allows methadone maintenance therapy to continue upon incarceration (Fiscella et al., 2004). Policies and practices around forced methadone withdrawal are found to negatively affect a patient's willingness to re-engage in treatment (Fu et al., 2013; Mitchell et al., 2009) and have been found by some courts to violate constitutional provisions (Legal Action Center, 2011). Further, perceptions and misconceptions about MAT held by community stakeholders can also have an impact on the provision and continuation of MAT in the criminal justice system (Alains-Hirsch et al., 2016; Molfenter et al., 2015; Bride, Abraham, Kintzel, & Roman, 2013; Matusow et al., 2013).

Funding

Linking justice-involved populations with funding for treatment is key to successful treatment. A clinical trial comparing participants leaving a correctional facility (including both jails and prisons) shows that those receiving financial assistance to cover their treatment have higher levels of treatment initiation after release (Rich, 2014). However, a number of cost-related barriers have been identified as limiting access to OUD treatment, including the following:

“lack of insurance, under-insurance, affordability of treatment, insurance and regulatory requirements ... including the buprenorphine waiver process (and the lack of mandatory training to prescribe buprenorphine in medical schools), extensive documentation, refill limitations and reauthorization rules, coverage limitations that do not align with the

evidence base (e.g. covered dose is too low, or covered course of treatment is too short), and low reimbursements for treating patients with opioid agonist therapy” (Clemans-Cope, 2017).

Financial barriers may impact entry to treatment, retention in treatment, and wait times to treatment (Fisher et al., 2017).

State Medicaid programs are a driver in access to MAT coverage (Burns et al., 2016). One study estimates that states with Medicaid coverage of methadone have an adjusted probability of using opioid agonist therapy at 45% compared to 17% in states with no coverage and 30% in states with block grant coverage (Saloner, Stoller, & Barry, 2016). Despite the expansion of Medicaid and the expectations of parity and essential health benefits through the Affordable Care Act, states still retain considerable discretion in the design of their benefits and the resulting coverage of substance use disorder treatments. A review of state Medicaid programs shows that just over half of states' Medicaid programs provide coverage for methadone, buprenorphine, and both oral and injectable naltrexone (Grogan et al., 2016). Inclusion of MAT medications in state Medicaid formularies is a critical factor in their resulting availability for treatment in the community (Ducharme & Abraham, 2008). Medicaid coverage is also associated with increasing the number of buprenorphine-waivered physicians available to provide prescriptions and treatment (Stein et al., 2015).

Provider Availability

Even when Medicaid will cover MAT costs, some programs do not accept Medicaid patients. One study observes that 35% to 38% of community-based treatment facilities will not accept Medicaid (SAMHSA, 2017; Abraham, Andrews, Yingling, & Shannon, 2018), and this is seen to vary geographically across the United States. Counties in Arkansas, Kentucky, Louisiana, Mississippi, and Tennessee have many people with OUD who are enrolled in Medicaid but lack sufficient treatment facilities that accept Medicaid. Only in the Northeast do high rates of OUD among Medicaid enrollees correspond to high capacity to treat people with Medicaid (Abraham et al., 2018).

Federal or state requirements to complete additional training to prescribe MAT may pose an additional hurdle to provider availability and could be related to the current insufficient treatment capacity across the nation in general (Jones, Campopiano, Baldwin, & McCance-Katz, 2015). A recent study finds an association between the supply of buprenorphine-waived physicians and increased MAT prescribing, as well as fewer opioid prescriptions among Medicaid recipients in Pennsylvania (Wen, Hockenberry, & Pollack, 2018).

METHODOLOGY

To investigate stakeholder perceptions related to the provision of MAT, this study examined data from two sources, both of which resulted from federally funded projects assessing the use of MAT in criminal justice settings. First, notes from expert panels on MAT were analyzed to produce thematic findings, which were organized according to a framework established by the expert panels during the convening. Five panels, including a total of 30 criminal justice stakeholders, participated in a guided discussion to identify common MAT implementation challenges and barriers relevant to their specific justice system responsibilities. The participants were representative of the entire criminal justice system, including law enforcement and prosecutors, jail administrators and sheriffs, judges and court officials, community corrections directors and officers, and treatment providers (see Table 1). The participants were selected based on their local, state, or national policy or practice

experience with MAT in the criminal justice setting. Experts were sought to ensure a wide breadth of perspectives, representing jurisdictions of varying sizes and geographic locations across 19 states.

Each panel comprised four to seven professionals who work in or with a specific part of the justice system: sheriffs/jails, judges/court administrators, law enforcement and prosecutors, probation/parole, and treatment providers. Each panel was assigned a facilitator and a note-taker, and most groups had up to three observers from national organizations affiliated with the professions. The facilitators led each group through the following discussion topics: common MAT implementation challenges and obstacles; the impact of disparities on MAT implementation; and recommendations for other MAT, criminal justice, or behavioral health system stakeholders. Following the facilitated dialogue, each group reviewed and prioritized the outputs from their discussions and organized a framework for implementing MAT in criminal justice settings. The framework that emerged from the panels' discussions was as follows: the extent of the (opioid) problem, workforce issues, cost and health care reimbursement, community and systems partners, education and technical assistance, and data and evaluation. Notes and minutes from each group and the larger group report were used as data for this study.

The second data source included transcripts from 13 semistructured interviews, conducted in 2017 and 2018, with a variety of criminal justice representatives involved in MAT programs associated with treatment

Table 1. Number of Expert Panel and Interview Participants by Role

Role	Data Sources (n)		
	Semi-structured Interviews	Both Events*	Expert Panels
Law Enforcement/Police Chief	-	-	2
Sheriff/Jail Administrator	3	2	4
Prosecutor/District Attorney	1	1	5
Judge	1	-	1
Treatment Court Coordinator/Director	5	2	3
Correctional Behavioral Health Official	2	1	3
Community-based Treatment Provider	1	1	4
Community Corrections Director/Officer	-	-	8
Total	13	-	30

*A small number of participants were involved in both the interviews and the expert panels. The numbers here denote the overlap across both groups.

courts and jail-based MAT programs (see Table 1). The semistructured interviews focused primarily on financial barriers to MAT in criminal justice settings; however, information was also gathered around descriptions of MAT programs, general barriers to MAT, and implementation processes. An interview instrument of 24 questions and several prompts was created by the research team and vetted by subject matter experts in the field. It contained questions that walked participants through a verbal process map of local MAT programs, including descriptions of the costs of various program components, initial funding sources and start-up activities, stakeholder engagement, and different ways local or state jurisdictions support MAT in criminal justice settings. The interviews were all conducted by the same member of the research team. The information gathered through the 13 interviews was transcribed directly from recordings and supplemented by notes gathered by two note-takers.

Thematic Analysis

The qualitative data from both the expert panels and semistructured interviews were analyzed and categorized using the constant comparison method (Bulmer, 1979; Miles & Huberman, 1984). Two analysts independently processed the data; through phone- and email-based peer debriefing, they discussed and came to a consensus on the identified themes that emerged from the data. The qualitative data were reviewed for themes related to barriers and criminal justice perceptions around MAT in the criminal justice system within the aforementioned framework: the extent of the (opioid) problem; workforce issues; cost and health care reimbursement; community and systems partners; education and technical assistance; and data and evaluation. The data were coded and categorized using the above framework; themes were then drawn from the qualitative data in each of the areas. Where possible, direct quotes are provided to illustrate the themes drawn from the data; some quotes were revised to improve clarity.

RESULTS

Extent of the Problem

The extent of the opioid problem was discussed by the expert panels and connected with local

issues in terms of access, disparities, and matching availability of services to comprehensively meet clients' needs. Sheriffs and jail administrators, treatment providers, law enforcement and prosecutors, and community corrections directors cite racial and ethnic disparities impacting access.

Identifying and Serving Individuals With OUD

Interview participants reported that not all justice-involved individuals will disclose opioid use or an OUD, and not all individuals want to participate in MAT. One representative shared that some individuals will not report opioid use during screening at intake and booking at the jail due to misplaced concerns that the information will be used in court.

Medication Diversion and Misuse

The existence of "cash clinics" and inappropriate prescribing ("overprescribing") by physicians were observed to be barriers to acceptance of MAT, as well as the effective use of MAT within some communities. Four of the interviewees stated diversion of buprenorphine or methadone as a major issue; however, in one jurisdiction, the diversion of methadone is related to physicians prescribing it for pain treatment rather than MAT. Three interviewees cited inappropriate prescribing of MAT medications or lack of evidence-based practices in MAT as an issue in their communities. The challenges noted appear to influence the perceptions of those stakeholders:

"We are seeing the numbers skyrocket of people who are shooting up the buprenorphine. I believe that that is because of the diversion. They want to get the most bang for the buck with the pills they have left, after they have sold enough to be able to go back to the doctor."

A treatment court representative stated that:

"[T]he opinion in the general medical community and law enforcement is that they hear too much about buprenorphine in connection to crimes or probation violations [whereas] naltrexone is not able to be diverted and does not impair their ability to engage in treatment or put them at risk to commit further crimes [through diversion]."

There were concerns expressed as well of how methadone specifically is viewed in some communities, that “the methadone clinic is looked at much more as a distribution center than a methadone clinic,” sparking concerns within the community regarding the treatment’s evidence base.

Serving Complex Individuals

The clients served by these MAT programs are complex and face multiple challenges in addition to participating in MAT. All five expert panels discussed insufficient infrastructures to meet demand, including lack of housing and other wraparound services. The interview participants described these challenges in depth. One jail-based MAT program representative reported having to remind staff and partners that the OUD observed among the justice population is the same disease often impacting their own friends and family members; however, “the same disease manifests itself a bit different when you are poor.”

Many clients were reported to have comorbid chronic diseases, such as hepatitis C and serious mental illness, and they often have used multiple substances (methamphetamines, benzodiazepines, clonazepam, and gabapentin). All five expert panels and one of the interview participants discussed the lack of hospital psychiatric beds, affecting participants with co-occurring mental illness.

Three of the expert panels—treatment providers, law enforcement and prosecutors, and community corrections directors—cited lack of transportation as a barrier to treatment, particularly in rural areas where a lack of providers requires travel to urban regions to access care. Other needs discussed included adequate housing, employment with a livable wage, and childcare.

Workforce Issues

The expert panels and interview participants discussed workforce issues in terms of local capacity to provide treatment and training. Federal restrictions on the number of MAT prescriptions that can be written is cited by sheriffs and jail administrators as having an impact on availability of MAT.

Staffing Issues

All panels cited gaps in workforce education and training as impacting staff buy-in, licensing, cultural competency, and sensitivity to working with individuals with severe mental illness. Across all five expert panels, stakeholders reported an inability to hire staff quickly enough to meet demand. Several interview participants indicated that the support of MAT among staff within criminal justice agencies that provide MAT or allow individuals to participate in MAT while under criminal justice supervision is important. Staff can pose a barrier if they lack buy-in or are unprepared. Interviewees shared that examining the staffing model is important for ensuring that the right staff are in place to guarantee the success of the MAT program. Similarly, the expert panels noted that insufficient staff education on the roles of program partner workforce can be an issue (e.g., the difference between security personnel versus treatment personnel in a jail setting). Clear messaging about the MAT program is important, as reflected by a jail-based MAT representative who stated that when considering “staffing barriers with regards to program implementation and communication, communication was the biggest issue.”

Ongoing Training

General education and training to create buy-in among staff is often an important step to creating and sustaining jail-based MAT programs. Correctional staff may need support transitioning from a correctional focus to more of a clinical approach. Training and informational activities should include the contracted or in-house jail medical provider, which may sometimes resist creating an MAT program or implementing it quickly enough to reach clients during their time in the jail. Private jail medical staff processes may be slowed by limited physician availability and liability concerns.

Funding/Healthcare Reimbursement

Funding for MAT was discussed as a need across all panel and interview participants. Sheriffs and jail administrators noted the problem of competing priorities within the jail, such as funding programs for hepatitis C at the expense of funding MAT.

Funding Medications

Several of the interviewees indicated that they were able to start or supplement their MAT program due to the involvement of the pharmaceutical company that produces extended-release injectable naltrexone, with three programs using the medication exclusively and receiving free doses to provide to participants. Two programs were paying subsidized pricing for the medication. Two programs were “in talks” with the company regarding the use of extended-release injectable naltrexone in their MAT programs; one program used a pharmaceutical representative from the company to provide trainings. In contrast, one representative from a jail-based program stated that managing a drug vendor was not a top priority, thus they turn down “free” medication and have incorporated the cost of MAT medications into the county’s jail budget. However, even in receiving free doses, interviewees noted that sustaining the program’s ability to provide MAT medications inside correctional facilities would be challenging. For example, one interviewee indicated that:

“Medicaid will not pay for [MAT medications] inside our institutions. And, even if there were to be some donation of shots like naltrexone, if people were to be on it on the outside, and then we were to either maintain it on the inside or start them up on the inside, the financial barriers to that are just astronomical. It seems like a great opportunity, but the financial barrier will be a significant issue.”

Timely access to funding—and whether or not Medicaid is available to pay for MAT expenses—is a constant barrier and source of frustration cited by persons interviewed. The expert panels discussed how a lapse in Medicaid coverage during incarceration can lead to a discontinuation of or change in medications. There are a variety of time-related issues that prevent MAT continuation in the community upon discharge. Even if someone qualifies for Medicaid, that is not assurance that MAT will be seamlessly available. The time lag in Medicaid activation is cited as a major source of difficulty in assuring continuity of care upon discharge from detention. One interviewee volunteered that their jail provides a 30-day supply

of medication upon discharge and “for now, we’re just eating the cost of it.”

Sheriffs and jail administrators, treatment providers, and community corrections directors cited Medicaid expansion specifically as a source of funding. The challenges of funding MAT for justice-involved populations were reported to be greater in states that are not Medicaid-expansion states. Among those interviewed in states that did not expand Medicaid, funding for MAT is a significant issue and is only possible through public or private grants, state funds (such as “region dollars”), or self-payment. As described by a treatment court professional, “I don’t know of anybody in the state through our association that really has a vibrant [MAT] program. Because we’re not an expansion state, there’s very limited access for a lot of our populations.” Another treatment court representative stated:

“I’ve simply never had someone with an opioid use disorder that’s on Medicaid. The men that we serve . . . don’t have any insurance at all. We have one guy over there that is on disability that has [Medicaid], but the others that we have, they don’t have any health coverage. The females we have in that court don’t have custody of any of their children and won’t have any insurance coverage.”

Funding Driving Treatment Decisions

Many of the individuals interviewed expressed concerns that the type of funding available for an individual with OUD can drive decisions regarding what type of medication they are prescribed. As an adult drug treatment court professional stated, “It’s just a matter of this person has funding at this place, so we can refer them there. Or they do have insurance, so that opens up options as far as where we can refer them.” Additionally, the community corrections expert panel discussed how, despite Medicaid expansion, treatment providers may still refuse to treat individuals with justice involvement, which can limit their access to specific medications used for MAT.

Community and Systems Partners

All panels and interview participants noted various stakeholder biases, perceptions, and beliefs about MAT as barriers to effective programming. Misperceptions about the role of jails in MAT, stigma around MAT patients who have committed a violent offense, “non-believers,” and bias against MAT were described.

Community Perceptions

Prior to a community allocating resources to provide MAT to the justice-involved population, a shift in attitudes and understanding of addiction and treatment is necessary. Many of the justice professionals interviewed shared about how community perceptions have an impact on the use of MAT in justice settings. Two individuals involved with MAT programs in treatment court settings shared that they have even encountered pushback from Narcotics Anonymous groups that are more comfortable with abstinence-only approaches.

Another community concern about MAT is that justice-involved people move to the front of the treatment line, “that people in the criminal justice system shouldn’t have access to MAT when people who aren’t involved in the criminal justice system don’t have access to it, and they need it.” There was further concern expressed in the community that people use MAT to get high, or that they do not want treatment centers in their neighborhood: “Thousands of people signed a petition and showed up at meeting after meeting to protest the methadone clinic...” One interviewee summarized the community perceptions about addiction and addiction treatment as follows:

“I don’t know that the general public, the person off the street, unless they’ve had relative, friend, family member, whatever and they’ve been educated in that form, really understand that sometimes you may need this other medication to combat the cravings or to help you get over the hump along with the counseling requirement. I think there are still people who believe it’s just a matter of willpower, and if you stay away from [opioids], everything will be fine.”

Cross-systems Coordination

Across the expert panels, treatment providers, law enforcement and prosecutors, and community corrections directors discussed the importance of understanding partner roles, such as treatment providers understanding the role of community corrections officers in maintaining safety and compliance. Those interviewed noted the importance for all stakeholders to be part of the cross-systems coordination in providing MAT. Participants described partnerships where funds are shared between departments of the same jurisdiction, such as the sheriff’s office and the health department of the county or city, enabling that jurisdiction to see the impact of the return on investment directly in their budget. Participants also described partnerships established through memorandums of understanding, linkage agreements, or fee-for-service contracts between treatment courts/jails with treatment providers that provided mutually beneficial arrangements, ensuring treatment capacity for MAT participants in the program and also providing a referral source for clients to the treatment agencies. However, these arrangements work best where healthcare coverage is prevalent, and clients do not struggle to cover the cost of treatment in the community. In states that did not expand Medicaid, partnerships were observed between provider agencies and treatment courts/jails that utilize grant funds or local/state funding sources to cover the cost of treatment and medication. A few examples of cross-systems collaboration provided by the participants include the following:

“We are strongly linked to community health. We do not start programs inside the correctional facility that do not have a community component. Our Health and Human Services at the county level is a very robust program, so ... we have programs that start in the facility [and] transfer to the community ... It’s a partnership between the Department of Corrections and Health and Human Services and that’s where our [MAT program] flows out.”

“We’re fortunate in that our medical director, [the] forensic psychiatrist for our treatment

court, is also the doctor that oversees the buprenorphine clinic, and she's on our team every week. So, we have a really great understanding of how the medicine is distributed, how it's monitored, how they monitor for abuse, how they regulate prescriptions and injections and have a really good oversight. So, [there is] a lot of confidence in their ability to manage that from a treatment perspective."

Some programs partner with existing resources to provide additional supports to their MAT participants to overcome barriers to providing a comprehensive MAT program. For example, benefits counselors or reentry specialists, funded through other sources, are engaged to increase the level of supportive services available to people in the MAT program.

Engaging Partners

The need to educate the stakeholders about MAT was voiced by many of the participants interviewed about MAT. The treatment providers and community corrections directors, as well as some interview participants, discussed the need for consistent use of guidelines, such as the American Society of Addiction Medicine (ASAM) criteria, to ensure consistency and evidence-based treatment across partners. Buy-in is not automatic from one stakeholder or another; and often, interview participants reported having to provide the education and foster conversations to increase buy-in from partners. For example:

"[I]t's a good idea to get a good buy-in from the sheriffs because a lot of times they are not happy with [MAT]; they may not want this treatment to be in their facility because of the diversion, the problem with medications being misused. So, it's important to have a lot of stakeholders and to show them the bigger picture that these people [with OUD] are the same people who are possibly dying in the street, who keep on coming back to the [correctional] facility, and so we have to do something while they are in the facility in order to break this chain of addiction and relapse."

"[Initially], the hospitals, the community health centers, [they] didn't really understand [MAT]. That's really crucial. It takes some time to meet and work with them to get them on board. I think for our parole and probation, at one point parole wouldn't put anyone out on MAT..."

"Historically, our adult drug court has not allowed MAT, and so they are an abstinence-only model and [use] no medication for someone that has an opioid use disorder. I've been planting that mustard seed for a little while with our adult drug court and, this year, they actually had us come and do a presentation. They were pretty interested in looking at the possibility of our opportunities of offering MAT services to their participants that have an opioid use disorder ... I think, they are probably seeing the challenge of those individuals, because it's particularly difficult to engage in long-term recovery without the assistance of medication to get them started and maintained."

Education and Technical Assistance

All panels and interviewees stated the need for education and training. Treatment providers, law enforcement and prosecutors, and community corrections directors discussed the need for standardized training and practice standards. Judges and court coordinators stated that policies and guidelines for MAT are needed. Law enforcement and prosecutors cited the need for education to reframe policing to include aspects of recovery. Sheriffs, jail administrators, and community corrections officers stated the need to educate individuals about MAT, including opportunities for treatment inside the jail and community, and what is expected of individuals while undergoing MAT. Treatment providers, law enforcement, and prosecutors noted education is needed to counter unrealistic expectations for people in recovery, misinformation about withdrawal severity, and a lack of understanding of the risk and benefits of medication.

Using a Medical Model of Addiction

At the heart of changing community and stakeholders' minds about MAT is promoting a more widespread acceptance of the medical model of addiction. The need to redefine and reframe the narratives of addiction and treatment was illustrated by a common sentiment expressed by justice professionals during the interviews—that substance use disorders are not something “you can think yourself out of.” Across the programs, the individuals interviewed indicated that shifting the approach from a criminal justice perspective to more of a clinical perspective is important to overcoming barriers to MAT.

One interview participant said, “I think the biggest point is, when we're working with the criminal justice system, to [make] sure that our provider or our referral sources, such as pretrial intervention or probation and parole, really understand that this is a chronic medical disease....” Another participant expressed:

“It's the same philosophy for any kind of illness. You're required to be educated about the illness. You're required to take whatever medications or whatever that a physician feels are appropriate, but it should be coupled with ongoing education or treatment or counseling or whatever is required to deal with the fact that you have an illness.”

Misconceptions Related to MAT

Other major barriers to effective implementation of MAT are the misconceptions and biases about MAT and/or the particular medications used for MAT. While the increased use of naltrexone and a more consistent use of psychosocial therapies in addition to medications have increased acceptance of MAT, there are still lingering concerns regarding long-term use of MAT and expectations that individuals would eventually be tapered off whichever medication they were prescribed. In particular, some interviewees viewed using methadone as continuing an addiction and were concerned that individuals do not “wean off,” as is the case with naltrexone or buprenorphine. They volunteered that some court professionals see “people who were getting very addicted to methadone. [W]e had all

had such bad experiences because nobody was ever taught about anything else.” However, other interviewees noted that criminal justice programs need to be open to all MAT medications, including methadone. For example, “Initially when I came on board, they really wanted to get rid of methadone because buprenorphine was on, and I just said you have to have all your options. Methadone has been around a long time; it's worked great for a lot of people.”

Data and Evaluation

All panels and many interview participants discussed the need for screening and assessment for factors such as criminal risk, mental health disorder, substance use disorder, and trauma. Sheriffs, jail administrators, and treatment providers noted the need for using evidence-based screening tools, and delays in assessments were noted as the result of staff shortages, lack of staff buy-in, and absence of data sharing. Community corrections officers also added the need for periodic reassessment at key intervals during a person's involvement in the criminal justice system. Sheriffs and jail administrators, law enforcement and prosecutors, treatment providers, and community corrections officers discussed how opportunities for information and data sharing between systems partners would improve their ability to identify the substance use and mental health status of individuals and to discuss treatment plans and progress with partners in a timely fashion.

Participants shared that providers, patients, and professionals can be “true believers” in MAT, citing case after case of individuals whose lives are saved by MAT initiated as part of their justice involvement. However, without data and continuous evaluation, successes are anecdotal. This view is voiced by jail MAT program professionals during the interviews, underscoring the necessity of studying the outcomes of MAT:

“We're focusing on some operational metrics ... so how does the transition of care happen? How does the sharing of data occur? Was there any break in continuity of care or treatment, were the appropriate criteria followed? Was

the [client] put in the appropriate [treatment], was s/he assessed appropriately? We're doing a lot of basic evaluation of what's happening."

"It's important to note that this individual who does collect the data does not necessarily have to be highly trained or qualified to collect data. It's baseline data. It's demographics. It's very basic information. I think it's important that [data collection] is not an additional barrier as long as there's somebody motivated to keep on top of the data."

DISCUSSION

Successful implementation of MAT for justice-involved individuals will require both logistical and attitudinal changes across criminal justice stakeholders and their partners. The participants in this study confirmed that providing access to or direct delivery of MAT programming across the justice system is possible and showing promising results. Where resources such as adequate health insurance and access to properly trained health care providers are available, justice professionals should move to the next step of providing all forms of MAT medications in justice settings, with as little treatment interruption as possible as someone moves from the community, through the criminal justice process, and back into the community. Brinkley-Rubinstein et al. (2018) describe how the Sequential Intercept Model (Griffin et al., 2015) is a useful tool to demonstrate how each stakeholder in the criminal justice system plays a key role in implementing and supporting MAT for justice-involved individuals with substance use disorder and OUD. Not only would coordinated implementation allow for cross-professional education, training, and cost-sharing, it would be a step toward providing continuous treatment, regardless of the status of the individual in the justice system (e.g., community corrections or incarcerated).

In those states where Medicaid was not expanded, criminal justice stakeholders will need financial support to create and sustain MAT programs, as well as to ensure that patients will be able to continue their treatment once back in the community.

Across the interview participants, those in states that expanded Medicaid expressed no concerns regarding the ability of individuals in their programs to continue treatment once in the community. They often had mechanisms in place to ensure that those individuals would have their health care coverage reinstated as quickly as possible upon release, and treatment would be maintained throughout reentry back into the community. These statements contrasted substantially from the remarks of interview participants from nonexpansion states. A majority of their MAT participants have no health insurance and were at greater risk of not being able to access MAT once out from under criminal justice oversight.

Education and training are also required to provide criminal justice stakeholders and the public with accurate information about MAT as an evidence-based treatment for persons with addictions. Stakeholder interviews analyzed for this study demonstrate that not all are "on board" with MAT, and some continue to have views based on outdated or incorrect information. Justice system leaders, such as sheriffs and judges, play crucial roles in providing a supportive environment for MAT, while their staff play crucial roles in implementing and ensuring the success of MAT programs in criminal justice settings. Participants involved in this study did not indicate a widespread use of cross-systems trainings involving both criminal justice and behavioral health partners, despite the evidence that cross-trainings are particularly important to ensuring a cohesive approach to both criminal justice and treatment goals (Farabee et al., 1999). Stakeholders overseeing MAT in criminal justice settings should ensure routine cross-trainings that involve both criminal justice and behavioral health treatment provider staff.

Across all points of the justice system, education and training should be leveraged to encourage MAT programs that allow participants to be prescribed the appropriate MAT medication in accordance with their substance use, treatment, and medical histories. Studies of MAT within correctional settings confirm that, when administered correctly, use of agonist medications in the form of liquids or dissolving strips are effective in reducing medication

diversion (Gordon et al., 2014; Magura et al., 2009). Interview discussions with representatives from jail-based MAT programs reinforced that jails should be discouraged from creating MAT programs that only provide one or two injections of extended-release naltrexone without ensuring continuity of care of those patients once they are released back into the community (Linden et al., 2018).

The interviews and expert panel discussions also revealed that it is not only justice professionals who might retain negative biases about MAT or persons with addiction. One interviewee stated:

“Right, the medication is to me the easy part. It’s just the counseling and all the other support that goes around that, that I’m worried about. Having the appropriate space within the jail to do it, getting custody to buy into the fact that this is critical to do. There’s a lot of cult-like stigma around this. I sit in meetings and it’s shocking to me where even healthcare providers will be like, ‘Well, that’s just a junkie; that’s just a drug dealer.’”

This quote illustrates the critical need to remove the culture of stigma associated with substance use disorder and OUD across treatment and community settings, as well as within correctional facilities.

Changes in resources and shifts in attitudes may eventually happen as evidence mounts that MAT decreases recidivism, promotes recovery from addiction, and reduces costs. However, as the participants in this study reported, performance monitoring and evaluations of MAT programs in criminal justice settings need support. Programs that offer MAT need to measure short- and long-term outcomes to provide the accumulated data

that demonstrate program success. These findings may be sufficient to convince policy-makers and funding sources that substance use disorder treatment is effective social policy.

Finally, this study confirms the tremendous opportunity for cross-systems partnerships and integration of care to address the opioid epidemic. Effective criminal justice and community-based provider relationships are essential to helping individuals with OUD begin their recovery while under criminal justice oversight, and to continue that progress once that oversight ends. These partnerships may involve identification of shared clients, creative funding arrangements, upfront investments in strategies that should result in reduced costs, shared staffing models, cross-training involving both criminal justice and behavioral health staff, and other mechanisms that are not traditionally seen in criminal justice settings. One participant involved in this study explained how a community-based substance use treatment agency provided MAT services in the local jail at no cost, recognizing that many of the individuals it served would continue to be its patients upon release. The agency recognized its role in ensuring continuity of care and invested in providing treatment services upfront, knowing that the services would later be covered by Medicaid or other health insurance coverage following the patient’s release back into the community. By attempting such innovations, it is possible that many criminal justice and behavioral health agencies could reduce the impact of the opioid epidemic on their communities by providing an effective link to treatment at a critical time of engagement.

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EDITOR'S NOTE

Introduction to *Two Cases That Will Make a Difference*

In the landmark case of *Robinson v. California* (1962), the United States Supreme Court held that a statute criminalizing drug addiction amounted to cruel and unusual punishment prohibited by the Eighth Amendment to the U.S. Constitution. Although states were free to criminalize the use, possession, sale, or manufacture of illicit drugs, they could not punish persons for having a medical disease or condition. The opinion raised more questions than it answered:

1. If, as the Court concluded, addiction is a chronic neurological disease characterized by an extreme compulsion to use drugs, then at what point, if any, does use or possession reflect a symptom of the illness rather than punishable misconduct?
2. If addiction is a debilitating and life-threatening disease, at what point, if any, does the State incur an obligation to treat persons under its control who are suffering from that illness, such as prisoners or jail inmates?

Six years later, in *Powell v. Texas* (1968), the Supreme Court declined to answer these questions, concluding that medical science had not advanced sufficiently to know whether, and under what circumstances, addiction overcomes one's conscious will to resist drugs. Moreover, the Court concluded that because there were no generally effective treatments at the time for alcohol or drug addiction, states could rationally rely on the criminal justice system to deal with substance-involved crime rather than focusing on treatment or civil commitment.

Little changed for the next 50 years. State and federal governments were free to criminalize the use and

possession of illicit drugs (witness the War on Drugs) or experiment at their discretion with diversion programs like drug courts. Jails and prisons were under no mandate to treat addiction, except perhaps when necessary to avoid wanton pain or discomfort from withdrawal (e.g., *Davis v. Carter*, 2006; *Pace v. Fauver*, 1979). Even pretrial detainees, who are presumed to be innocent until proven guilty, could in many cases be denied or taken off addiction medications for mere purposes of institutional efficiency (e.g., *Fredericks v. Huggins*, 1983; *Inmates v. Pierce*, 1979).

Until now. Spurred, in no small part, by the opioid crisis and recent advancements in neuroscience, appellate courts are reconsidering the blurry line between sickness and malfeasance, and whether a fundamental right to treatment attaches at some point along that shadowy continuum. Rejecting the notion that addiction robs persons of free will to control their actions, but nevertheless requiring state and federal governments to offer effective treatment where indicated, some courts appear to be embracing a philosophy emphasizing both accountability and treatment—the hallmark of drug courts. And no longer abiding blanket assumptions or stereotypes about addiction, these courts are demanding fact-sensitive inquiries concerning best practices in each case, guided by scientific knowledge and clinical expertise—yet another defining ingredient of drug courts.

In the case note that follows, a drug court scholar and seasoned jurist reviews recent cases heralding this new line of jurisprudence and considers the implications of these decisions for drug courts and other criminal justice programs.

—Douglas B. Marlowe, JD, PhD
Editor in Chief

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Robinson v. California, 370 U.S. 660 (1962).

LEGAL COMMENTARY

Two Cases That Will Make a Difference

Judge William G. Meyer (ret.)
Judicial Arbitrator Group, Inc.

INTRODUCTION

Since the advent of drug courts in 1989, there has been enduring growth in both the number of courts and a concomitant development of case law addressing drug court issues.¹ However, virtually all of the case law has keyed on operational procedures,² with virtually no case law focusing on addiction³ and treatment.⁴ Two recent cases, neither from a drug court, both out of Massachusetts, have squarely confronted drug court concerns—using rationality, practicality, and the law to reach their conclusions.

In *Commonwealth v. Eldred* (2018),⁵ the Massachusetts Supreme Court addressed whether abstinence from illegal drugs is a valid probation condition for a defendant diagnosed with a substance use disorder

(SUD), and the potential legal consequences resulting from a probation violation for illegal drug use. In *Pesce v. Coppinger* (2018),⁶ the Federal District Court for the District of Massachusetts analyzed the Americans with Disabilities Act (ADA)⁷ and the U.S. Constitution's Eighth Amendment through the Civil Rights Act⁸ to determine whether an opioid-addicted offender in active recovery, with the assistance of methadone, was entitled to such medication during his or her mandatory minimum incarceration sentence of 60 days.⁹

This article will address first the factual background, any significant procedural aspects of the cases, each court's holdings, and the potential ramifications for problem-solving courts.

¹ Douglas B. Marlowe, Carolyn D. Hardin, and Carson L. Fox (2016), *Painting the current picture: A national report on drug court & other problem-solving courts in the United States* (Alexandria, VA: National Drug Court Institute) pp. 13, 34, retrieved from <https://www.ndci.org/wp-content/uploads/2016/05/Painting-the-Current-Picture-2016.pdf>; William G. Meyer, *Constitutional and other legal issues in drug court* (2018), *webiography* found at <https://www.ndci.org/law-2-2/>

² See, e.g., *Hanas v. Inner City Outreach Program*, 542 F. Supp. 683 (E.D. Mich.) (drug court program manager civilly liable for 42 U.S.C. § 1983 violation of the establishment clause for forcing defendant into objected to faith-based program); *Malone v. State*, 2012 Ark. App. 280 (upholding association probation restriction in drug court program); *Tate v. State*, 313 P.3d 274 (Okla. Crim. 2013) (mental health courts, like drug courts, require due process upon termination from program including hearing, notice, right to counsel, cross-examination, etc.); *State v. LaPlaca*, 27 A.3d 719 (N.H. 2011) (waiver of termination hearing in drug court contract upon entry is unenforceable); *State v. Brookman*, 460 Md. 291, 190 A.3d 282 (2018) (as a matter of due process, defendant is entitled to hearing if he/she denies the basis for imposition of sanction in drug court); *In re O.F.*, 773 N.W.2d 206 (N.D. 2009) (imposition of drug court sanctions did not bar a subsequent prosecution and conviction for the identical conduct upon which the sanctions were based).

³ See, e.g., *State v. Stewart*, No. W2009-00980-CCA-R3-CD (Tenn. Crim. App. 8-18-2010) (Not Selected for Official Publication) (the drug court program explicitly recognizes that alcohol and drug addiction "is a chronic, relapsing condition," that "many participants [will] exhibit a pattern of positive urine tests," and expressly contemplates that many participants will experience periods of relapse "[e]ven after a period of sustained abstinence").

⁴ See, e.g., *Evans v. State*, 667 S.E.2d 183, 183 (Ga. Ct. App. 2008) (because defendant's condition constituted a medical management problem due to his AIDS, it was not a denial of equal protection or a violation of ADA to refuse him admittance to drug court); *Watson v. Commonwealth*, Civil No. 15-21-ART (E.D. Ky. 2015) (federal court abstains from contention that requiring proof of professional approval to use MAT violates the ADA, the Rehabilitation Act, the Equal Protection and Due Process Clauses of the United States Constitution).

⁵ *Commonwealth v. Eldred*, 480 Mass. 90 (2018).

⁶ *Pesce v. Coppinger*, Civil Action 18-11972-DJC (D. Mass. Nov. 26, 2018), available at https://scholar.google.com/scholar_case?case=7883918426999187938&q=pesce+v+coppinger&hl=en&as_sdt=4,147. Since the *Pesce* opinion, the federal district court of Maine in *Smith v. Aroostook*, 1:18-cv-352-NT (D. Me. March 27, 2019) granted a preliminary injunction against a jail using a similar rationale and citing *Pesce*, where the detention facility refused to provide the defendant MAT (buprenorphine) during the defendant's 40 days of incarceration. Case retrieved from <https://www.courtlistener.com/recap/govuscourts.med.54793/govuscourts.med.54793.116.0.pdf>. The *Smith v. Aroostook* case was affirmed by the First Circuit Court of Appeals in *Smith v. Aroostook*, No. 19-1340 (1st Cir. April 30, 2019), retrieved from https://scholar.google.com/scholar_case?case=919088879011053716&q=Aroostook&hl=en&scisbd=2&as_sdt=4,82,84,89,94,95,105,119,145,147,152,157,158,379

⁷ Americans with Disabilities Act 42 U.S.C. § 12101 et. seq. (2006).

⁸ 42 U.S.C. § 1983; a plaintiff has no direct cause of action under the Constitution, but must use the Civil Rights Act, 42 U.S.C. § 1983 to vindicate a constitutional wrong. *Azul-Pacifico, Inc. v. City of Los Angeles*, 973 F.2d 704, 705 (9th Cir. 1992).

⁹ The length of incarceration does not govern the result here. What is determinative is the deprivation of medication-assisted treatment (MAT) during the period of incarceration.

Commonwealth v. Eldred

Julie Eldred admitted to a factual basis for felonious larceny, a crime fueled by her addiction to heroin. Adjudication was deferred, and Ms. Eldred was granted probation and required to remain drug free, submit to random drug tests, and attend outpatient drug treatment three times per week. Within several days, Ms. Eldred tested positive for fentanyl.¹⁰ After her probation officer recommended that Ms. Eldred go to an inpatient program, and she refused, a probation detention hearing was held on her violation of the drug free condition of her probation. After a hearing, probable cause was found, and Ms. Eldred was detained awaiting a placement at an inpatient facility.¹¹

During the proceedings, Eldred admitted she used fentanyl, but asserted she was incapable of remaining drug free because she was diagnosed with an SUD. Arguing various constitutional prohibitions, the defendant moved to vacate the drug free condition of her probation; and subsequently, the finding that she “willfully” violated her probation. The trial court denied her motions but reported or certified the matter to the appellate court for review.

The Massachusetts Supreme Court, as part of its general supervisory court authority, determined that the matter was of significant magnitude and ripe for resolution. The Supreme Court reframed three questions for review:¹²

1. Where a person who committed a crime is addicted to illegal drugs, may a judge require that person to abstain from using illegal drugs as a condition of probation?
2. If that person violates the “drug free” condition by using illegal drugs while on probation, can that person be subject to probation revocation proceedings?
3. Additionally, at a detention hearing, if there is probable cause to believe that a person with a

“drug free” condition of probation has violated that condition by using an illegal drug, may that person be held in custody while awaiting admission into an inpatient treatment facility, pending a probation violation hearing?

The Massachusetts Supreme Court answered all three questions in the affirmative. The court’s overview revealed that it was well-versed in the issue of offenders with SUD:¹³

“The circumstances of the defendant’s case exemplify why the imposition of a drug free condition of probation and the enforcement of such condition are permissible within the confines of the probation process. From crafting special conditions of probation to determining the appropriate disposition for a defendant who has violated one of those conditions, judges should act with flexibility, sensitivity, and compassion when dealing with people who suffer from drug addiction. The rehabilitative goals of probation, coupled with the judge’s dispositional flexibility at each stage of the process, enable and require judges to consider the unique circumstances facing each person they encounter—including whether that person suffers from drug addiction. This individualized approach to probation fosters an environment that enables and encourages recovery, while recognizing that relapse is part of recovery.”

The court then went on to analyze the probative condition, the probation revocation, and the dispositional issues presented.

The “Drug Free” Condition of Probation

Initially, the court observed that probation conditions should serve both the rehabilitation needs of the offender and the safety concerns of the community. For authority, the court cited its own Standing Committee Standards on

¹⁰ Fentanyl is a synthetic opioid 80 to 100 times more powerful than morphine; <https://www.dea.gov/factsheets/fentanyl>. The staggering increase in opiate overdose deaths is frequently attributed to fentanyl. See <https://www.drugabuse.gov/related-topics/trends-statistics/overdose-death-rates>

¹¹ Ms. Eldred was placed in inpatient treatment 10 days later, when a bed became available.

¹² Commonwealth v. Eldred, 480 Mass. at 94.

¹³ Commonwealth v. Eldred, 480 Mass. at 94–95.

Substance Abuse, which created a framework that would “promote public safety, provide access to treatment, protect due process, reduce recidivism, [and] ensure offender accountability.” One of the standards requires courts to “specifically and unambiguously prohibit the party from all use of alcohol and illicit drugs,” when that person’s substance use has been a factor in the case. Citing numerous Massachusetts cases, the court found that an abstinence condition of probation was proper because it was reasonably related to probationary goals. In particular, the “drug free” condition in Ms. Eldred’s case promoted the rehabilitative goals of probation through facilitating treatment and promoting public safety—both germane because the defendant admitted her larcenous behavior was motivated by her desire to obtain drugs.

Ms. Eldred maintained that because she is drug-addicted, the probation condition constitutes cruel and unusual punishment when the inevitable relapse occurs. First, the court observed that any consequences for illegal drug use, including a probation revocation or modification, are linked to the underlying crime, and thus not attached to the relapse. The court rejected the defendant’s proffered science that she was unable to comply with the “drug free” condition as inadequately developed in the trial court below.¹⁴ The court rebuffed any notion that the “drug free” probation condition was based upon some outdated concept of morality, and recognized that the abstinence probation condition was grounded in the actuality that the defendant’s crime was committed to support her drug use.

Probation, Detention, and Violation Hearings

In Massachusetts, as in most states, probation violation processing is divided into two parts. First, there is the detention hearing, in which the prosecution must prove there is probable cause to believe that the defendant has violated the terms of probation; and if proven, an assessment of whether the defendant should be detained pending the probation revocation hearing. Second is the probation violation hearing itself, which

includes the adjudication phase, wherein the court determines whether by a preponderance of the evidence the defendant willfully violated the terms of probation. If proven, the court must decide whether to revoke probation, modify probation, or sentence the offender on the original charge.

The defendant challenged the trial court’s order of detention after the probable cause determination that Ms. Eldred violated the drug free condition of her probation. The Massachusetts Supreme Court reflected on the trial court’s challenging decision on detention:¹⁵

“Trial court judges, particularly judges in the drug courts, stand on the front lines of the opioid epidemic. Judges face unresolved and constantly changing societal issues with little notice and, in many situations, without the benefit of precedential guidance. In circumstances where a defendant is likely addicted to drugs and the violation in question arises out of the defendant’s relapse, judges are faced with difficult decisions that are especially unpalatable. This is particularly true at a detention hearing where a judge must decide whether the defendant should be detained prior to a final violation hearing. The core of this dilemma is that although probation violations often arise out of a defendant’s relapse, we recognize that relapse is part of recovery. See Standards on Substance Abuse, supra at 5 (“Treatment does not always work the first or even the second time, [and] relapse should not be a cause for giving up on a substance abuser”). To achieve this delicate balance, judges must have the authority to detain a defendant facing a probation violation based on illicit drug use pending a final violation hearing for the safety of the defendant and the community. See Rule 5 of the District/Municipal Court Rules for Probation Violation Proceedings. Such decisions should be made thoughtfully and carefully, recognizing that addiction is a status that may not be criminalized. See *Robinson v. California*, 370

¹⁴ See the subsection following on the court’s disposition of the free will versus neurodeterminism arguments.

¹⁵ *Commonwealth v. Eldred*, 480 Mass. at 99.

U.S. 660, 666 (1962) (unconstitutional to criminalize status of addiction). But judges cannot ignore the fact that relapse is dangerous for the person who may be in the throes of addiction and, often times, for the community in which that person lives.”

The Supreme Court perceived that the defendant was particularly vulnerable: having tested positive for fentanyl the Friday before a holiday weekend; having no home support network; and having previously refused an inpatient bed. The Massachusetts high court approved of the trial court’s decision holding that upon a probable cause determination of the probation violation, stabilization through detention, pending an inpatient bed, was warranted until the violation hearing.

The defendant advanced at the trial court and on appeal that her violation was not willful, because she had an SUD.¹⁶ The Supreme Court rejected the amicus briefs’ arguments on the free will versus neurodeterminism issue, holding that the trial court record was insufficient to overrule the trial court’s determination that Eldred willfully used fentanyl.¹⁷

“Although the appellate record before this court is inadequate to determine whether SUD affects the brain in such a way that certain individuals cannot control their drug use, based on the evidence presented to the judge who conducted the violation hearing, that judge did not abuse her discretion in concluding that there was a willful violation of the defendant’s drug free probationary condition. The affidavits submitted by the defendant in support of her position that her

violation was not willful because SUD affects the brain in such a way that certain individuals cannot control their drug use did not require the judge to accept her argument. We conclude that, based on the evidence presented at the violation hearing, the judge did not err in concluding that the defendant violated the drug free condition of her probation by testing positive for fentanyl.”

Based upon the proof of the probation violation condition, the trial court modified the defendant’s probation to include a period of inpatient treatment. Defendant did not appeal this disposition. In affirming the trial court, the Supreme Court noted the exemplary actions of the probation department and trial court because they “embodied the flexibility, sensitivity and thoughtfulness in furtherance of the overreaching goal of probation to rehabilitate, rather than incarcerate, whenever possible, while fulfilling their duty to protect the public.”

Pesce v. Coppinger

In this civil action,¹⁸ plaintiff Geoffrey Pesce requested the Massachusetts Federal District Court issue a preliminary injunction¹⁹ compelling the Essex County Correctional Facility to provide him with access to his physician-prescribed methadone to treat his opioid addiction. Initially, Judge Denise Casper found that plaintiff had struggled with opiate addiction for several years. Mr. Pesce had overdosed on opioids at least six times, and on several occasions paramedics had administered naloxone to revive him. Plaintiff had enrolled in four detoxification programs and had taken both buprenorphine and naltrexone to address his addiction. Neither of these medications produced long-term sobriety. In December of 2016, Mr. Pesce began a course of methadone and behavioral

¹⁶ On appeal, opposing amicus briefs were filed by the leading authorities on addiction in the country. These briefs constitute a classic debate between Calvin, St. Augustine, and Descartes under the umbrella of neuroscience. In all seriousness, if the reader wants to be informed of the current state of the science and the discord between the pre-eminent scientists in the field, the author recommends the amicus briefs. The National Association of Drug Court Professionals filed an amicus brief arguing: (1) graduated sanctions, including brief periods of incarceration for positive drug tests are an appropriate and effective treatment for SUDs, and (2) individuals suffering from SUD retain the ability to exercise free choice.

¹⁷ Commonwealth v. Eldred, 480 Mass. at 104.

¹⁸ *Pesce v. Coppinger*, Civil Action 18-11972-DSC (D. Mass. Nov. 26, 2018), retrieved from https://scholar.google.com/scholar_case?case=7883918426999187938&q=Pesce+v.+Coppinger&hl=en&as_sdt=4006

¹⁹ A preliminary injunction is an extraordinary intermediate remedy where the proponent has to prove: (1) probable success on the merits; (2) likelihood of irreparable harm if the injunction is not granted; (3) the balance of the equities favor granting the injunction; and (4) granting the injunction is in the public interest. *Winter v. Natural Resources Defense Council, Inc.*, 555 U.S. 7, 20 (2008). The movant has the burden of establishing that the four factors clearly weigh in favor of granting the injunction. *Winter*, supra at 22.

therapy, and at the time of the injunction hearing (November 2018), was in active recovery. While undergoing his medication-assisted treatment (MAT), he was working, contributing financially to his family, and spending time with his son. During the methadone-assisted treatment, Mr. Pesce's random urine screens had been negative and he was faithfully attending his treatment sessions. Mr. Pesce's doctor opined that Mr. Pesce was not ready to taper off methadone, and if required to do so, Mr. Pesce would likely no longer remain in remission. Mr. Pesce's physician testified that Mr. Pesce's tolerance for opioids would be significantly reduced if he were to go off MAT, and that the physician had seen numerous patients relapse, overdose, and die after being denied MAT during incarceration. Judge Casper also recounted the statistics regarding opioid use disorder, including the rising national and Massachusetts death tolls from opioid overdoses.

Before his current period of sobriety, Mr. Pesce picked up two charges, both of which were pending, and if convicted, would require Mr. Pesce to do at least 60 days at the Essex County Correctional Facility at Middleton. Middleton does not permit MAT to opioid-addicted inmates and requires forced withdrawal under medical supervision.

Because his incarceration was imminent, Mr. Pesce moved the Federal District Court for a preliminary injunction asserting that the correctional facility's denial of access to methadone treatment violated Title II of the ADA and constituted cruel and unusual punishment under the Eighth Amendment to the United States Constitution.

The ADA Claim

Quoting the ADA, the court stated: "No qualified individual with a disability shall, by reason of such disability, be excluded from participation in or be denied the benefits of the services, programs, or activities of a public entity, or be subjected to discrimination by any such entity."²⁰ The parties

did not dispute that Mr. Pesce's opioid use disorder made him a "qualified individual with disabilities" under the ADA. Relying on *Kinman v. New Hampshire Dept. of Corrections* (2006), the defendants asserted that mere disagreement with reasoned medical judgment was not sufficient to state a disability discrimination claim. Effortlessly distinguishing defendants' authority, Judge Casper remarked that *Kinman* involved an individualized assessment of the inmate, whereas here the correctional facility had a blanket ban on MAT for opioid addiction. Citing *Kinman*, Judge Casper observed that medical decisions based on stereotypes of the disabled, rather than individual assessments, may be considered discriminatory.²¹

Judge Casper recognized that defendants raised legitimate safety and security reasons for prohibiting opioid-based medication treatment in correctional facilities. However, the defendants' concerns were generalized—Judge Casper noted that many jails and prisons in the United States, and at least two in Massachusetts, safely administer methadone in their facilities.

Pronouncing a \$1.5 million grant from Health & Human Services for providing Vivitrol (extended-release, injectable naltrexone) to inmates with SUD upon release from incarceration, the defendants asserted they had a well-regarded correctional addiction treatment program. While conceding that courts are extremely reluctant to debate adequacy of jail treatment or second-guess informed medical judgments,²² Judge Carter found that defendants' proposed treatment program for Pesce had previously been ineffective and could place him at higher risk for relapse and overdose.

Concluding that the correctional policy of excluding methadone-assisted treatment for Pesce was either arbitrary and capricious or facially discriminatory, Judge Casper held that Pesce was likely to succeed on his disability discrimination claim under the ADA.

²⁰ 42 U.S.C. § 12132 (2006).

²¹ *Kinman v. New Hampshire Dept. of Corrections*, 451 F.3d 274, 285 (1st Cir. 2006).

²² The court cited *Graham ex rel Graham v. County of Washtenaw*, 358 F.3d 377 at 385 (6th Cir. 2004).

The Eighth Amendment Claim

To establish his Eighth Amendment cruel and unusual punishment claim, petitioner had to prove deliberate indifference to inadequate or delayed medical care.²³ Proof of deliberate indifference mandates: (1) an objective finding that the inmate had a serious medical condition and (2) the jail, while subjectively aware of the serious medical condition, consciously disregarded the inmate's medical needs.²⁴ Judge Carter found that plaintiff would likely be able to satisfy the objective prong because “the treatment he would be denied has been documented as the only adequate treatment for his opioid use disorder.”²⁵

Addressing the second prong of the Eighth Amendment cruel and unusual punishment test, the court found that the correctional facility's blanket policy of a methadone treatment ban, without even assessing or considering Mr. Pesce's individual condition, his course of treatment, his doctor's medical recommendation, and the opinions of his prior treatment professionals, constituted a conscious disregard for Mr. Pesce's personal medical needs.

Again, Judge Carter distinguished the defendants' authority because these cases were not based on the individualized assessments of the inmates or were based upon inmate statements without corroborating medical and factual support. Here, Mr. Pesce presented sufficient evidence to satisfy the deliberate indifference standard that prison officials were denying “recommended treatment by medical officials.”²⁶ The court found that Mr. Pesce would probably prevail on his cruel and unusual punishment claim under the Eighth Amendment.

Mr. Pesce also established the likelihood of

irreparable harm because he had a high risk of overdose upon release without methadone treatment in jail—the court found that the overdose death rate for jail releasees is 120 times higher than for the rest of opioid-involved offenders. Furthermore, the court found the balance of the equities (harms) and the public interest would be served by requiring that “Pesce receives the medically necessary treatment that will ensure he remains in active recovery.”

The court granted the preliminary injunction requiring the Essex County Correctional Facility provide him with the medically prescribed methadone necessary for his treatment and sustained abstinence.

GUIDANCE FOR DRUG COURTS FROM *ELDRED*

In *Eldred*, the Massachusetts Supreme Court was fully justified in characterizing the trial court's and probation department's action as exemplary. Both the trial court and probation department adhered to strict due process protections and appropriate therapeutic responses to Ms. Eldred's violation of the abstinence probation condition.

First, the trial court accorded Ms. Eldred a probable cause determination hearing on the probation violation and did not consider the issue of detention until the evidence satisfied that standard. As required by the U.S. Constitution, the preliminary probable cause hearing was promptly held.²⁷

Second, after finding there was sufficient evidence to establish probable cause that defendant violated her probation, the trial court looked at a variety of factors in determining whether detention was appropriate.²⁸

²³ *Estelle v. Gamble*, 429 U.S. 97, 104 (1976).

²⁴ *Farmer v. Brennan*, 511 U.S. 825, 827 (1994). Using controlling First Circuit authority, Judge Carter framed the second subjective prong as: the defendants acted with intent or a wanton disregard when providing inadequate medical care. *Perry v. Roy*, 782 F.3d 73, 79 (1st Cir. 2015).

²⁵ Courts have found that forced withdrawal from methadone presents objectively a serious medical need. *Foelker v. Outagamie*, 394 F.3d 510, 513 (7th Cir. 2005); *Mayo v. County of Albany*, 357 F. App'x. 339, 341–42 (2nd Cir. 2005).

²⁶ *Alexander v. Weiner*, 841 F. Supp. 2d 486, 493 (D. Mass. 2012).

²⁷ *U.S. v. Santana*, 526 F.3d 1257, 1259 (9th Cir. 2008), acknowledging defendant's constitutional right to a prompt preliminary hearing in a probation revocation proceeding, citing *Gagnon v. Scarpelli*, 411 U.S. 778, 782 (1973) and *Morrissey v. Brewer*, 408 U.S. 471, 485 (1972); see also *Fowler v. Cross*, 635 F.2d 476 (5th Cir. 1981) (denying qualified immunity and finding civil liability for denial of a prompt preliminary hearing in probation revocation).

²⁸ *Commonwealth v. Eldred*, 480 Mass. at 98–99.

1. Probationer's criminal record;
2. The underlying offense;
3. Any new offense the defendant has been charged with;
4. The nature of the violation;
5. Likelihood of reappearance, if released on bond; and
6. Probability of incarceration, if a probation violation is found.

The trial court concluded that the most appropriate disposition was inpatient treatment, pending final disposition of the revocation petition. Because a bed was not available, there was an upcoming holiday weekend, and defendant had admitted fentanyl use and lacked a family support system, the court ordered detention pending inpatient bed availability.²⁹ The defendant was placed in an inpatient bed within ten days, and a probation hearing was held thereafter.

Third, after the defendant was found at a revocation hearing to be in violation of her probation, the court's response was consistent with the National Association of Drug Court Professionals *Adult Drug Court Best Practice Standards*:³⁰

“If a Drug Court imposes substantial sanctions for substance use early in treatment, the team is likely to run out of sanctions and reach a ceiling effect before treatment has had a chance to take effect. Therefore, Drug Courts should ordinarily adjust participant's treatment requirements in response to positive drug tests during the early phases of the program. Participants might, for example, require medication, residential treatment or motivational-enhancement therapy to improve their commitment to abstinence.” (Citation omitted)³¹

The trial court reprobated Ms. Eldred, adding the inpatient treatment probation condition. Thus, the trial court and probation department followed the highest legal and therapeutic standards in dealing with Ms. Eldred's fentanyl use.

The Massachusetts Supreme Court deferred on the issue of whether drug usage by an offender with SUD sufficiently destroys the offender's free will or whether addiction creates such a compulsion to use illegal drugs as to negate culpability or choice. Obviously, such a determination is factually laden, and the record was not sufficiently developed for the trial court to make a decision or for the appellate court to review same. In all probability, the issue will be reasserted in other jurisdictions, thereby requiring other trial courts to determine the question based upon a full record, which will be reviewed by the appellate courts.

Binding precedent on the free will/neurodeterminism debate could impact how drug courts handle offender accountability for noncompliance with an abstinence condition of probation. The field awaits future guidance from the courts.

IMPLICATIONS FOR DRUG COURTS FROM PESCE

Over the last 50 years, there has been a smattering of cases dealing with access to and ramifications of using methadone as part of the treatment regimen for addiction. In *New York City Transit Authority v. Beazer*, 440 U.S. 568 (1979), the transit authority in New York City refused to employ persons who used methadone as part of their treatment for opioid addiction. The court ultimately determined that the transit authority's no-hire policy was neither discriminatory under Title VII of the Civil Rights Act³² nor a denial of equal protection

²⁹ Compare the court's studied assessment of detention after a probable cause determination based on stability needs of the individual and protection of the community in this case with *Hoffman v. Jacobi*, 894 F.3d 836 (7th Cir. 2018) (where the drug court judge and many members of the drug court team were sued for imposing detention on defendants awaiting inpatient beds and/or indefinite detention, without a probable cause hearing or a detention hearing). The actions of the federal court closed the drug court and ultimately resulted in the resignation of the judge.

³⁰ National Association of Drug Court Professionals (2013), *Adult Drug Court Best Practice Standards* (Vol. 1, p. 31). Alexandria, VA: Author. Retrieved from <https://jpo.wrlc.org/bitstream/handle/11204/3678/Volume%201.pdf;sequence=3&isAllowed=y>.

³¹ Of course, as the Standards make clear, any therapeutic adjustments must be based upon a clinical determination, not judicial fiat. *Id.*

³² 42 U.S.C. § 1981 and 42 U.S.C. § 2000e.

under the Constitution. Initially, the court found that defendant Beazer's statistical proof was lacking because it failed to establish that African Americans and Hispanics were disproportionately discriminated against because of the policy or that racial animus motivated the no-employment rule.³³ The court also held that there was a rational basis for the transit authority to differentiate between methadone users and other transit employees. Thus, the refusal to employ individuals who used methadone-assisted treatment was upheld.

As it relates to the criminal justice system, a few federal courts have permitted MAT (invariably methadone), for pretrial detainees, if methadone was legally prescribed before their incarceration.³⁴ The legal rationale justifying such decisions was the due process clause of the Fourteenth Amendment, because the refusal to supply legally prescribed methadone implicates a liberty interest when dealing with a pretrial detainee.³⁵ However, subsequent cases held that even initial jail MAT administration for detainees was subject to discontinuance.³⁶ Other cases held that forcing pretrial detainees to undergo mandatory "cold turkey" withdrawal from their methadone maintenance therapy was not unconstitutional.³⁷ For those convicted inmates, the burden was even higher—demanding proof of deliberate indifference to the inmates' medical needs.³⁸ Thus, offenders had to establish objectively a serious medical condition and that the prison guards or

employees knew of the condition and consciously disregarded or ignored the serious medical need.³⁹

There are at least two distinguishing features of the *Pesce* decision from the prior MAT access decisions in correctional facilities litigation. First, virtually all of the past criminal justice MAT deprivation decisions, whether based on a Fourteenth Amendment due process deprivation argument or the Eighth Amendment cruel and unusual punishment assertion, were after the fact—meaning the harm had already been caused and the plaintiffs were suing to vindicate their constitutional rights under 42 USC § 1983. Here, Mr. Pesce was requesting injunctive relief⁴⁰—to obtain a determination of his right to methadone treatment pre-incarceration. Legally, Mr. Pesce's burden was much greater because he had to establish the four factors favoring a preliminary injunction, plus his legal entitlement under the Eighth Amendment and/or the ADA.⁴¹ Second, although several groups have advocated for MAT in correctional facilities citing the ADA,⁴² *Pesce* is the first case this author is aware of that has used and adopted the ADA as the rationale for inmate access to MAT.⁴³

As for implications for drug courts, *Pesce* may convey a message to jails and prisons that blanket prohibitions against MAT for inmates and detainees are no longer constitutionally or statutorily

³³ *New York City Transit Authority v. Beazer*, 440 U.S. 568, 586–87 (1979).

³⁴ See *Norris v. Frame*, 585 F.2d 1183, 1188 (3rd Cir. 1978) (pretrial detainee receiving prescribed methadone before incarceration stated a cause of action for deprivation of a liberty interest without due process). *Cudnik v. Kreiger*, 392 F. Supp. 305 (N.D. Ohio 1974).

³⁵ *Norris v. Frame*, 585 F.2d at 1187–88.

³⁶ *Inmates v. Pierce*, 612 F.2d 754 (3rd Cir. 1979) (not unconstitutional to titrate individual off prescribed methadone—even a pretrial detainee).

³⁷ *Fredericks v. Huggins*, 711 F.2d 31 (4th Cir. 1983), although some subsequent cases have noted that such a procedure states a 42 U.S.C. § 1983 claim. See *Idyle v. North Carolina Dept. of Corrections*, No. 5:12-CF-3190-FL (E.D.N.C. Feb. 4, 2014).

³⁸ See, e.g., *Davis v. Carter*, 452 F.3d 686, 695–96 (7th Cir. 2006); *Alvarado v. Westchester County*, 22 F. Supp. 3d 208, 216–17 (S.D.N.Y. 2014).

³⁹ *Estelle v. Gamble*, 429 U.S. 97, 104 (1976).

⁴⁰ The author could not find any other case on the issue where a sentenced offender sought injunctive relief for MAT while in custody. In 1974, *Cudnik v. Kreiger*, 392 F. Supp. 305 (N.D. Ohio, 1974) granted an injunction permitting MAT for pretrial detainees. In *Pace v. Fauver*, 479 F. Supp. 456 (D. N.J. 1979) the court summarily denied a preliminary injunction requesting access to alcohol treatment for convicted offenders at Rahway State Prison.

⁴¹ See note 18.

⁴² Legal Action Center (2011), *Legality of denying access to medication assisted treatment in the criminal justice system* (2011), retrieved from https://lac.org/wp-content/uploads/2014/12/MAT_Report_FINAL_12-1-2011.pdf; Akin Gump Strauss Hauer & Feld LLP (2018), *A legal right to access to medications for the treatment of opioid use disorder in the criminal justice system* (Baltimore, MD: Johns Hopkins Bloomberg School of Public Health), retrieved from https://americanhealth.jhu.edu/sites/default/files/inline-files/Initiative_Memo_Opioids_012319_0.pdf

⁴³ See note 6 supra, discussing *Smith v. Aroostook*, a Maine federal district court opinion announced March 27, 2019, following the same rationale as *Pesce* and citing same.

acceptable. Following the same ADA rationale and preceding the *Pesce* opinion, the Department of Justice has begun sending inquiry letters to prisons informing them that individuals with opioid use disorders are protected under the ADA, and it is a violation of the disability laws to deny individuals MAT for opioid addiction if the individuals were receiving such treatment pre-incarceration.⁴⁴ If your jails and prisons do not permit MAT, especially for opioid addiction, maybe now is a good time to bring this authority to their attention.

FINAL THOUGHTS

The author was tempted to caption this article “One if by land, two if by sea.”⁴⁵ The location for both cases was right (Massachusetts), the analogy to an invasion was alluring, and the cases have significant precedential value.⁴⁶ The legal analysis by both courts was consistent with the developing philosophy known as therapeutic jurisprudence.⁴⁷ As in therapeutic jurisprudence, both the *Eldred* and *Pesce* decisions were person- and outcome-directed. In *Eldred*, the court observed:

“From crafting special conditions of probation to determining the appropriate disposition for a defendant who has violated one of those

conditions, judges should act with flexibility, sensitivity, and compassion when dealing with people who suffer from drug addiction. The rehabilitative goals of probation, coupled with the judge’s dispositional flexibility at each stage of the process, enable and require judges to consider the unique circumstances facing each person they encounter—including whether that person suffers from drug addiction. This individualized approach to probation fosters an environment that enables and encourages recovery, while recognizing that relapse is part of recovery.”⁴⁸

In *Pesce*, the court focused on the individual psychological and physical consequences of the legal order of incarceration, repeatedly referencing the probability of an untoward result if Mr. *Pesce* did not continue to receive MAT while incarcerated.⁴⁹

Ultimately, the author elected not to use the Paul Revere analogy—two cases do not make an invasion, but rather an incursion into legal thought and a foundation for future case development.

⁴⁴ Letter from DOJ to Mass. Dept. of Corrections 3/16/18; retrieved from <http://d279m997dpfwgl.cloudfront.net/wp/2018/03/20180322172953624.pdf>

⁴⁵ See note 6 supra, discussing *Smith v. Aroostook*, a Maine federal district court opinion announced March 27, 2019, following the same rationale as *Pesce* and citing same.

⁴⁶ Technically, *Pesce v. Coppinger* is not precedent, but the subsequent case *Smith v. Aroostook* relies heavily on it and was affirmed by the First Circuit and is precedent. See note 6.

⁴⁷ Therapeutic jurisprudence is the study of law as a therapeutic agent—how legal enactments and court conduct and precedent promote or detract from the psychological and physical well-being of the people it impacts. See David B. Wexler and Bruce J. Winick (1996), *Law in a therapeutic key: Developments in therapeutic jurisprudence* (Durham, NC: Carolina Academic Press); Peggy F. Hora, William J. Schma, and John T. A. Rosenthal (1999), *Therapeutic jurisprudence and the drug treatment court movement: Revolutionizing the criminal justice system’s response to drug abuse and crime in America*, *Notre Dame Law Review*, 74, 439.

⁴⁸ *Commonwealth v. Eldred*, 480 Mass. at 104.

⁴⁹ See *Pesce v. Coppinger*, supra note 6.

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Hon. William G. Meyer (ret.) was a general jurisdiction judge from 1984 to 2000 in Denver, CO, and founder and first presiding judge of the Denver Drug Court (1993)—the twelfth drug court in the country. In 2000, he joined Judicial Arbiter Group (a mediation/arbitration firm comprised of 26 former judges) and became majority owner in 2011. For the last seven years, he has been recognized by US News and World Report as a “Best Lawyer in America” in the field of mediation. He also received Colorado’s “Barrister Best” awards in both mediation (2011, 2014, & 2016) and arbitration (2017). In addition, he serves as a senior judicial fellow for the National Drug Court Institute (NDCI) and provides training and curriculum development for over 3,000 drug courts. Judge Meyer was the chair of the committee that wrote “Defining Drug Courts: The Key Components” (Department of Justice [DOJ] 1997). He is an alumnus of the National Judicial College and is on the NJC’s Wall of Honor; in 2017 he received the National Association of Drug Court Professionals Stanley Goldstein Hall of Fame Award for preeminent service to the drug court field. He authored “Drug Courts Work” (Federal Sentencing Reporter, Summer 2002). The fifth edition of his book “Colorado Rules of Evidence with Objections” was published in 2017. He was a contributing author and coeditor of “The Drug Court Judicial Bench Book” (DOJ/NDCI, 2011). Judge Meyer established and maintains a national webliography, which is published online and updated regularly (last updated December 2018) that compiles caselaw on constitutional and other legal issues arising in the drug court field.

Conflict of Interest Attestation

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