Introduction

Many publications over the last decade have documented the alarming increase in use and abuse of prescription opioids and heroin (Cicero, Inciardi, & Munoz, 2005; Davis, Severtson, Bucher-Bartelson, & Dart, 2014; GAO, 2009; Pauloizzi, Budnitz, & Xi, 2006: Pletcher, Kertesz, Kohn, & Gonzales, 2008; Reifler, et al., 2012; Schneider, et al., 2009). This surge resulted largely from the significant increase in physician/dentist prescription of opioid medications to treat chronic pain during the 1990s, when a sizeable subset of patients became dependent on and/or addicted to the medications. A report from the Substance Abuse and Mental Health Services Administration (SAMHSA) cited that 79.5 percent of heroin users had previously used prescription pain relievers for nonmedical reasons (Muhuri, Gfroerer, & Davies, 2013). More recent media reports have indicated that over 120 people die of an opiate related overdose each day (2017).

The National Institute on Drug Abuse (NIDA) has clearly established that Medication-Assisted Treatment (MAT) “increases patient retention and decreases drug use, infectious disease transmission, and criminal activity” (NIDA, 2012). This type of treatment combines counseling with medications that block opioids’ euphoric effects and relieve relapse-inducing cravings. “To
be effective, treatment must address the individual’s drug abuse and any associated medical, psychological, social, vocational, and legal problems” (NIDA, 2009).

Many authorities have recommended the use of MAT in the justice system (including criminal, civil, family and juvenile). ONDCP encourages “the use of the FDA’s approved medications to treat opioid use disorder: methadone, naltrexone (Vivitrol—a once-monthly extended release injectable formulation), and buprenorphine” (ONDCP, 2014). The National Institutes of Health has recommended that “all opiate-dependent persons under legal supervision should have access to methadone maintenance therapy” (NIH, 1997). SAMSHA’s Einstein Expert Panel recommended: “At no point should mandates for a client to consume or terminate medications be levied without the input of the client and treating physician…. Similarly, individuals already receiving MAT should not be ineligible for a particular program or service” (SAMHSA, 2013). Several recent reports and guidance documents have also supported the use of MAT for opioid use disorder in criminal justice settings (Legal Action Center, 2011; BJA, 2013; NADCP, 2013).

SAMHSA’s previously cited Einstein Expert Panel report provides an important principle:

What works for one group of clients at one stage of justice involvement does not necessarily work (and in fact may even be contraindicated) for other clients at other stages of justice involvement. This challenge is compounded when the justice system over relies on a specific treatment modality to achieve its public safety goals. The most obvious example is the reliance on residential treatment to best supervise and manage community corrections populations (SAMHSA, 2013).

An increasing amount of drug courts are referring individuals to Opioid Treatment Programs (OTPs) and DATA 2000 practices for Medication-Assisted Treatment. Additionally, correctional facilities are operating Opioid Treatment Programs within the jail setting and inducting former opioid dependent inmates on extended release injectable naltrexone prior to being released from jail.
Evidence-Based Arguments in Support of MAT for Opioid Use Disorder

MAT for opioid use disorder rests on the scientific principle that addiction is a brain disease. Dr. Alan Leshner, a former director of NIDA, first wrote about this concept in an influential 2001 article:

A core concept that has been evolving with scientific advances over the past decade is that drug addiction is a brain disease that develops over time as a result of the initially voluntary behavior of using drugs. The consequence is virtually uncontrollable compulsive drug craving, seeking, and use that interferes with, if not destroys, an individual’s functioning in the family and in society (Leshner, 2001).

NIDA (2009) has indicated that “addiction affects multiple brain circuits, including those involved in reward and motivation, learning and memory, and inhibitory control over behavior.”

This principle is also reflected in SAMHSA’s Treatment Improvement Protocol (TIP) Number 43, Medication-Assisted Treatment for Opioid Addiction in Opioid Treatment Programs:

Discussions about whether addiction is a medical disorder or a moral problem have a long history. For decades, studies have supported the view that opioid addiction is a medical disorder that can be treated effectively with medications administered under conditions consistent with their pharmacological efficacy, when treatment includes comprehensive services, such as psychosocial counseling, treatment for co-occurring disorders, medical services, vocational rehabilitative services, and case management services (SAMHSA, 2005).

According to NIDA, staying in treatment longer improves patient outcomes (NIDA, 2012; NIDA, 2009). ONDCP has also documented the increased likelihood of relapse when individuals taper
off their methadone and buprenorphine (ONDCP, 2014). The prevalence of co-occurring mental disorders in this patient population increases the likelihood of overdose and death.

As with any disease, it is important to provide care based on what the medical evidence indicates will work best for an individual. It is important to prudently apply the evidence gathered over the years to guide reasonable and impartial treatment for individuals in the justice system, who have opioid use disorder.

The Medications and Their Effectiveness

There are three federally approved medications to treat opioid use disorder, and all should be used in conjunction with counseling: methadone, buprenorphine, and extended release injectable naltrexone. SAMHSA’s TIP 43 states that “when methadone is administered daily in steady oral doses, its level in blood should maintain a 24-hour asymptomatic state, without episodes of overmedication or withdrawal” (SAMHSA, 2005). When methadone maintenance treatment is provided to a patient through one of 1,500 federally approved opioid treatment programs by knowledgeable and trained personnel, the medication stabilizes the patient and does not produce euphoric effects (a “high”). It also does not impair cognitive or motor functioning or result in over-sedation (“nodding off”) (NIDA, 2009).

Methadone has a gradual onset of action and produces stable levels of the drug in the brain; as a result, patients maintained on this medication do not experience a rush, while they also markedly reduce their desire to use opioids. If an individual treated with methadone or buprenorphine tries to take an opioid such as heroin, the euphoric effects are usually dampened or suppressed. Patients undergoing maintenance treatment do not experience the physiological or behavioral abnormalities from rapid fluctuations in drug levels associated with heroin use (NIDA, 2009).
Buprenorphine is used to treat opioid use disorder in the United States in both pill and sublingual film preparations through federally certified Drug Addiction Treatment Act of 2000 (DATA)\(^1\) physician/NP/PA practices or as another medication in the opioid treatment program. Longer acting buprenorphine implants are also being used to treat this disorder.

As a partial agonist, rather than a full agonist such as methadone or morphine, buprenorphine has pharmacological properties that are similar to but different than those of methadone. It has a therapeutic limit for most of the effects produced by opioid drugs, such as analgesia and respiratory depression. This makes buprenorphine safer, in terms of respiratory depression in case of an overdose but also may limit its efficacy for some patients” (NDCI, 2002).

When either methadone or buprenorphine maintained patients show signs of sedation, it is usually related to the use of alcohol and/or other drugs (such as benzodiazepine) beyond the use of methadone and buprenorphine. Patients in medication-assisted treatment for opioid addiction are admitted to treatment with co-occurring alcohol and other drug use.

Naltrexone is the third medication and is available both in pill and injectable formulation. SAMHSA describes naltrexone in TIP 43 as—

> ...a highly effective opioid antagonist that tightly binds to new opiate receptors. Because it has a higher affinity for these receptors than has heroin, morphine, or methadone, naltrexone displaces those drugs from receptors and blocks their effects. It can, therefore, precipitate withdrawal in patients who have not been abstinent from short acting opioids for at least seven days, and have not been abstinent from long acting ones, such as methadone, for at least ten days (SAMHSA, 2005).

\(^1\) DATA 2000 permits qualified physicians to obtain a waiver from the separate registration requirements of the Narcotic Addict Treatment Act to treat opioid use disorder with medications that have been specifically approved by the Food and Drug Administration for that indication.
The benefit of the injectable naltrexone formulation is that it is administered on a monthly basis, is not subject to diversion and it does not result in any dependence.

All three federally approved medications should be considered in treating opioid use disorder in the United States. Deciding on the appropriate medication is a matter of clinical discretion, taking into consideration the relevant medical standards and patient choice. People who are not addiction specialists—including judges, probation, and other justice personnel—do not have the expertise to make these medical decisions, just as they do not have the expertise to make other health-related decisions for individuals under their supervision.

When exercising medical judgment, addiction specialists generally consider certain principles. Typically, opioid-addicted individuals, who have not used opioids for a long period of time are more appropriate for use of buprenorphine or naltrexone products. For patients using opioids for a longer period of time, whether prescription or heroin, methadone is preferred because of the patients’ higher opioid tolerance.

Extended release injectable naltrexone can be effective with different populations through general medical practice settings. A physician or medical practitioner does not require a special license to use extended release injectable naltrexone, unlike methadone, which may only be dispensed through a registered Opioid Treatment Program, and buprenorphine products, which may only be prescribed by trained certified physicians/NP/PA in practice settings or opioid treatment programs. Extended release injectable naltrexone may also be used in effective relapse prevention strategies when the patient or treatment provider decides to taper the patient away from the use of methadone maintenance or buprenorphine maintenance.

Research shows that when treating SUDs, a combination of medication and behavioral therapies is the most effective. Behavioral therapies help patients engage in the treatment process, modify their attitudes and behaviors related to drug and alcohol
abuse, and increase healthy life skills. These treatments can also enhance the
effectiveness of medications and help people stay in treatment longer. Treatment
programs that combine pharmacological and behavioral therapy services increase the
likelihood of cessation relative to programs without these services.
(CMS/SAMHSA/CDC/NIH-NIDA/NIH-NIAAA/Bullentin/July, 2014)

Myths About Medication

Many people view methadone and buprenorphine as merely “substituting one addiction for
another” because the medications are opioid based. In truth, they are fundamentally different
from short-acting opioids such as heroin or fentanyl. Heroin goes right to the brain and
narcotizes the individual, causing sedation. In contrast, as a SAMHSA fact sheet states—

Methadone does not create a pleasurable or euphoric feeling; rather it relieves
physiological opioid craving ... and normalizes the body’s metabolic and hormonal
functioning that were impaired by the use of heroin or other opioids (SAMHSA,
2003).

The same is true for buprenorphine when used by knowledgeable practitioners. The FDA
approved these medications after years of rigorous scientific research demonstrated that they
are beneficial in the treatment of opioid use disorder.

People often mistakenly believe that a lower dose of methadone and buprenorphine is
preferable to a higher dose. The literature and clinical practice have long established
therapeutic dosage ranges for methadone and buprenorphine. The key is to prescribe the
appropriate dosage based on the presenting needs of the individual. The principle is prescribing
an effective dose, not a low dose. The use of substandard dosages is countertherapeutic since
the patient will continue to use opioids if the maintenance dosage is too low. The dose for injectable naltrexone is standard.

Dosing, however, is an individualized medical decision. For example, most patients require a methadone dose of 60-120 milligrams per day; studies show that patients on higher doses stay in treatment longer and use less heroin and other drugs than those on lower doses. Pre-conceived beliefs, without scientific basis, that lower doses are preferable, detract from the potential value of MAT. (Center for Court Innovation/Legal Action Center - 2015)

Length of time in treatment is another often misunderstood aspect of MAT. As stated by NIDA, the duration of treatment typically depends on the patient’s presenting problems and needs. It is generally accepted that a minimum of 12 months is required for methadone maintenance to be effective (NIDA, 2009). As stated in the SAMHSA fact sheet, “When taken as prescribed, long-term administration of methadone causes no adverse effects to the heart, lungs, liver, kidneys, blood, bones, brain, or other vital body organs” (SAMHSA, 2003).

Longer treatment is typically recommended. Drs. Stephen Magura and Andrew Rosenblum wrote an influential article in 2001 focusing on duration of treatment with regard to methadone.

The detrimental consequences of leaving methadone treatment are dramatically indicated by greatly increased death rates following discharge. Until more is learned about how to improve post-detoxification outcomes for methadone patients, treatment providers and regulatory/funding agencies should be very cautious about imposing disincentives and structural barriers to discourage or impede long term opioid replacement therapy (Magura & Rosenblum, 2001).

Duration of time in treatment is therefore best determined by the healthcare provider and patient.
Many have reported on the diversion of methadone and buprenorphine (e.g., Lavonas, et al., 2014; Bazazi, Yokell, Fu, Rich, & Zaller, 2011; Sokya, 2014). Five national reports (GAO, 2009; U.S. Department of Justice, 2007; SAMHSA, 2010, 2007, 2004) have stated, however, that most methadone-related diversion is the result of methadone prescribed by general medical practitioners to treat pain, and not by opioid treatment programs. Federal and State regulations (e.g., SAMHSA, 2001) govern how much methadone can be provided to a patient—depending on success in treatment—and guide clinical decisions in the Opioid Treatment Program. Justice agencies have controls in place to minimize diversion of buprenorphine and methadone. Accordingly, such take-home medication is under tight regulatory oversight.

Criminal justice agencies can put controls in place to minimize diversion of buprenorphine and methadone. Successful models in the drug court context are explained in “Medication-Assisted Treatment in Drug Courts: Recommended Strategies,” a guide published by the New York Office of Court Administration, Center for Court Innovation, and the Legal Action Center.

There is also discussion about whether an individual is in true “recovery” when taking these addiction medications. William White and Lisa Mojer-Torres wrote:

> For stabilized methadone maintenance patients, continued methadone maintenance or completed tapering and sustained recovery without medication support represent varieties/styles of recovery experience and matters of personal choice, not the boundary between and point of passage from the status of addiction to the status of recovery (White & Torres, 2010)

This paper by White and Mojer-Torres discusses the value of Medication-Supported Recovery for opioid use disorder for people who choose to use medication as part of sustaining their continued health.
Policy and Legal Considerations Related to Use of MAT for Opioid Use Disorder

In 2011, the Legal Action Center reported that—

...an estimated 65% of individuals in United States prisons or jails have a substance abuse disorder, and a substantial number of these individuals are addicted to opioids. Rates are at least as high in all other phases of the criminal justice system. This enormous amount of substance use among individuals with criminal justice involvement has far reaching consequences, including higher recidivism rates, harm to families and children of criminal justice involved individuals, and negative public health effects, including the transmission of infectious diseases and overdose deaths (Legal Action Center, 2011).

During a public health crisis of opioid use disorder in the United States, decision makers must be careful not to limit the use of these medications. The Legal Action Center also concludes that denying access to MAT can constitute illegal discrimination:

Denial of access to MAT at any level of the criminal justice system violates the Americans with Disabilities Act and the Rehabilitation Act where the denial is pursuant to a blanket policy prohibiting MAT or is carried out on a case by case basis without the required objective, individualized evaluation (Legal Action Center, 2011).

Conclusion

Medications to treat chronic opioid use disorder are among the most rigorously researched medications in the world. Study after study has shown that MAT is a highly effective treatment for opioid use disorder. The National Association of Drug Court Professionals (NADCP) has
emphasized the need to include MAT in the toolkit for treating addiction of criminal justice involved individuals:

Numerous controlled studies have reported significantly better outcomes when addicted offenders receive medically assisted treatments including opioid agonist medications such as methadone, opioid antagonists such as naltrexone, and partial agonist medications such as buprenorphine. Therefore, a valid prescription for such medications should not serve as the basis for a blanket exclusion from a drug court. A unanimous resolution of the NADCP Board of Directors provides that drug courts should engage in a fact sensitive inquiry in each case to determine whether and under what circumstances to permit the use of medically assisted treatments. This inquiry should be guided in large measure by input from physicians with expertise in addiction psychiatry or addiction medicine (NADCP, 2013).

It is important to maintain an impartial view of how individuals, who are opioid addicted and under legal supervision, should have access to the federally approved medications to treat this illness. In other words, utilizing evidence based treatment interventions take precedence over anecdote and ideology.

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