Substance Abuse and Mental Health Services Administration
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IN BRIEF
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Adult Drug Courts and Medication-Assisted Treatment for Opioid Dependence

More than 2,700 drug courts are in operation today in the United States.[1] About half of these are adult drug treatment courts. Developed to decrease recidivism among substance-involved offenders, adult drug courts oversee substance use disorder treatment for criminal offenders accepted into these programs.

Many drug court participants need treatment for opioid dependence. Medications can be an important part of effective treatment for offenders dependent on opioids,[2] decreasing craving and withdrawal symptoms, blocking euphoria if relapse occurs, augmenting the effect of counseling, and reducing recidivism and reincarceration.[2,3]

Many national and international professional bodies consider medication-assisted treatment (MAT) with methadone, buprenorphine, or extended-release injectable naltrexone an evidence-based best practice for treating opioid dependence. However, many drug courts do not recommend (or even allow) the use of MAT for opioid dependence. For example, a 2010 survey of 103 drug courts found that, whereas 98 percent reported that at least some of their drug court participants were opioid dependent, only 56 percent of the courts offered any form of MAT to participants.[4]

This *In Brief* is for the drug court team: the judge, coordinator, public defender or defense attorney, prosecutor, evaluator, treatment provider, law enforcement officer, and probation officer. Its objective is to encourage drug court personnel to increase their knowledge about the effectiveness of MAT and increase its use in drug courts.

> *MAT is the use of medications, in combination with counseling and behavioral therapies, to provide a whole-patient approach to the treatment of substance use disorders.*[5]

Opioid Use and Dependence

Disease Concept of Dependence

The concept of substance dependence, or addiction, as a brain disease is widely accepted. It is considered a disease that has "cognitive, behavioral, and physiological characteristics that contribute to continued use of drugs despite the harmful consequences."[6] The American Society of Addiction Medicine (ASAM) defines addiction, in part, as a "primary, chronic disease of brain reward, motivation, memory and related circuitry."[7]

The National Association of Drug Court Professionals (NADCP) also accepts the concept of addiction as a disease, stating that addiction is "in part, a neurological or neuro-chemical disorder characterized by chronic physiological changes to brain regions governing motivation, learning, attention, judgment, insight, and affect regulation."[8]

Extent of Opioid Use

Data from the 2012 National Survey on Drug Use and Health (NSDUH) indicate that the number of people reporting past-year use of heroin has steadily increased since 2007. Past-year heroin use was reported by 669,000 people; 467,000 reported dependence on or abuse of heroin.[9]

Nonmedical use of pain relievers continues to be more widespread than heroin use. Nearly 1.9 million people initiated nonmedical use of opioid pain relievers in 2012, second only to the number of those initiating use of marijuana, and 2.1 million reported dependence on or abuse of pain relievers (second only to marijuana).[9]

The problem of opioid use is greater among those involved with the criminal justice system than among the general population. Precise information about drug court

participants and opioid abuse is scarce, but one study found that:[10]

- Seven percent of participants entering urban drug court programs named illicit opioids as their primary drug of abuse.
- Ten percent of participants entering suburban drug court programs named illicit opioids as their primary drug of abuse.
- Twelve percent of rural participants named illicit opioids as their primary drug of abuse.

Matusow et al.[4] found that, following the national trend, more drug court participants reported nonmedical use of prescription opioids (66 percent) than reported use of heroin (26 percent). This trend was more pronounced in rural and suburban areas than in urban areas.

The 2012 NSDUH reports that:[9]

- Of individuals on parole or other supervised release from prison, 7.0 percent reported current nonmedical use of psychotherapeutic drugs (including opioid pain relievers), compared with 2.6 percent of adults not on parole or supervised release.
- Of those on probation, 10.1 percent reported current nonmedical use of psychotherapeutic drugs, compared with 2.4 percent of adults not on probation who reported nonmedical use of psychotherapeutic drugs.

Although the NSDUH does not list specific psychotherapeutic drugs for the criminal justice population, the group of psychotherapeutic drugs most used by the general population are opioid pain relievers.[9]

MAT: An Evidence-Based Best Practice for Opioid Dependence

Methadone, buprenorphine, and extended-release injectable naltrexone are effective treatments for opioid use disorder and could decrease recidivism and avert drug-related crimes. Many national and international organizations strongly support the use of MAT as an evidence-based practice for treatment of opioid dependence.

Support for MAT

National Association of State Alcohol and Drug Abuse Directors (NASADAD). In January 2013, NASADAD released its *Consensus Statement on the Use of Medications in Treatment of Substance Use Disorders*. The statement included the following:

> For some people, medication will be unnecessary. For others, it may be a helpful tool for recovery. For still others, medication will be a crucial component of treatment without which the prognosis for recovery is very poor. In all cases, the use of addiction medications should be considered and supported as a viable treatment strategy in conjunction with other evidence-based practices and as a path to recovery for individuals struggling with substance use disorders.[11]

World Health Organization (WHO). WHO strongly supports the use of MAT, stating that provision of pharmacological treatment for opioid dependence should be a healthcare priority worldwide.[12] WHO also includes methadone and buprenorphine on its list of *essential medicines* for adults.[13] Essential medicines are those that are associated with addressing priority healthcare needs; inclusion on WHO's list is based on disease prevalence, safety, efficacy, and comparative cost-effectiveness.

National Institute on Drug Abuse. Principle 12 of *Principles of Drug Abuse Treatment for Criminal Justice Populations: A Research-Based Guide* states: "Medications are an important part of treatment for many drug abusing offenders. Medicines such as methadone, buprenorphine, and extended-release naltrexone have been shown to reduce heroin use and should be made available to individuals who could benefit from them."[14]

The National Association of Drug Court Professionals. NADCP[8] supports the use of MAT and states that the use of MAT has been proven through "rigorous scientific studies" to improve addicted offenders' retention in counseling and to reduce illicit substance use, rearrests, technical violations, and reincarcerations.

MAT and Drug Courts

Despite strong support for MAT in the treatment of opioid dependence, there is very low usage of MAT among drug courts. In a survey of drug courts, 50 percent reported that MAT was not available under any circumstances to participants with opioid dependence.[4] A study funded by the U.S. Department of Justice surveyed 380 adult

drug courts nationwide on drug court practices and found low use of methadone maintenance therapy among drug courts.[15] Approximately two-thirds (67.5 percent) of courts indicated that detoxification was available. However, only 20.9 percent offered methadone-to-abstinence treatment, and only 18.0 percent stated that methadone maintenance was available. Further, many drug court programs will not admit individuals who are already using methadone.[15]

> *Medications have developed remarkably over the past five years to the point that a 'good treatment program' should have the capacity to assess for and provide medications for* [its] *addicted patients.*[16]

Effective Medication Treatments for Opioid Dependence

Methadone and buprenorphine have been approved by the U.S. Food and Drug Administration (FDA) to treat opioid dependence. Extended-release injectable naltrexone is approved for the prevention of relapse to opioid use.

How These Medications Work

Opioid receptors are found on the surface of brain cells (neurons). Opioid effects are initiated when opioids bind to these receptors. The medications used to treat opioid dependence act at these same opioid receptors, particularly the mu receptors. The medications are *full agonists*, *antagonists*, or *partial agonists*.

Full agonists bind to the mu opioid receptors and create a potentially unlimited response. The effects of full agonists are directly proportional to the dose. Methadone is a full agonist. (Opioids such as heroin, morphine, hydrocodone, and oxycodone are also full agonists. However, methadone differs from these opioids in its full spectrum of effects. Some of these differences are described in the Methadone section, below.)

Antagonists also bind to these opioid receptors, but instead of activating the receptors, they block the receptors from being activated. The effects of opioids such as heroin and opioid pain medication cannot then be activated or felt. Naltrexone is an antagonist.

Partial agonists possess some of the properties of both antagonists and full agonists. Partial agonists bind to receptors and cause a limited reaction. Taking more of a partial agonist does not create a bigger effect. Partial agonists may displace or block full agonists (like heroin) from mu receptors and prevent the euphoric and analgesic effects of opioids. Buprenorphine is a partial agonist.

Methadone

Used to treat opioid dependence for decades, methadone is the most widely used medication for this purpose in the world,[17] and a large body of literature supports its effectiveness.[18] Methadone both reduces cravings for illicit opioids and prevents withdrawal symptoms, enabling people taking it to lead productive and fulfilling lives.

Although methadone is a full agonist, it does not produce the same euphoric effects as heroin, morphine, and other full agonists. Methadone is orally administered. It distributes widely throughout the body and is broken down slowly. Because of this, methadone is slower to start working and remains active in the body for a long time.

Methadone must be dispensed by opioid treatment programs (OTPs) that are regulated at federal and state levels. OTPs do not exist in every state, and they may be particularly hard to find in rural areas. Generally, oral methadone is dispensed daily in liquid form at OTPs; the medication may be taken safely for years.[19]

Patient education and careful and close monitoring of patients by treatment professionals when methadone therapy is started are critical to preventing adverse events, withdrawal symptoms that may lead to relapse, and accidental overdose and death. Methadone's common side effects include nausea, constipation, sweating, sleep difficulties, and decreased sexual desire. The medication can interact with many other medications and illicit drugs.[19]

A patient is allowed methadone doses to take home if, during ongoing assessments, the OTP physician considers the patient to have made sufficient progress in recovery based on length of time in treatment and additional objective criteria.[19]

OTPs routinely provide other services, such as counseling; referral to mutual-help groups; routine urine drug testing; physical examination; screening for other behavioral health issues; and assistance with housing, medical care, and vocational services.

Effectiveness of methadone

When doses are appropriate, methadone improves treatment retention and, as a result, decreases relapse and the health and criminal problems associated with illicit opioid use.[20] Long-term methadone maintenance therapy is more effective than either detoxification with methadone or medication-free treatment in decreasing heroin use and retaining patients in treatment.[17,21] A review of the literature showed that, in 11 clinical trials involving 1,969 people, methadone improved treatment retention and reduced heroin use compared with nonmedication treatment.[17] Bhati et al.[22] found that if outpatient methadone treatment were expanded to all eligible offenders, 3.3 million nondrug crimes could be averted. Every dollar spent on ongoing methadone treatment yields almost $38 in benefits through reduced crime, better health, and gainful employment.[23]

It is important to understand that methadone is a *maintenance* medication, not a cure. A maintenance medication is one taken to stabilize and control an illness or symptoms of illness over time. It is effective only for as long as the patient takes it. Some individuals may be able to discontinue methadone and continue in recovery without it. However, long-term maintenance with methadone is not unusual.

Buprenorphine

Buprenorphine, a partial agonist, received FDA approval in 2002 to treat opioid dependence. It comes as a mono-product and a combination product: buprenorphine alone, and a buprenorphine/naloxone combination. Naloxone is an antagonist. It is added to block any euphoric effects of buprenorphine that would occur if a person were to abuse the medication by injecting it, thus decreasing the desirability of the medication for abuse/misuse. For this reason, the combination product is (and should be) more frequently used than buprenorphine alone. The mono-product should be used only for pregnant women or those allergic to naloxone.

Buprenorphine:

- Reduces cravings for and withdrawal symptoms from opioids.
- Has limited side effects and contraindications.
- Has less abuse potential than methadone and is less likely to result in medically significant harm if misused.

Unlike methadone, buprenorphine may be dispensed or prescribed in a medical office by specially trained and approved physicians. The physicians must meet federal criteria to treat patients with buprenorphine. It is also provided by some OTPs that meet federal and state requirements.[24] Physicians who can provide treatment with buprenorphine may be available in locations (e.g., rural areas) where methadone is not available, improving access to MAT for opioid dependence. However, buprenorphine treatment is more expensive than methadone treatment (on the basis of dose-to-dose price comparison) and may, consequently, be perceived as cost prohibitive.

Effectiveness of buprenorphine

Studies have shown that buprenorphine is more effective than placebo.[25,26] Studies comparing the effectiveness of buprenorphine to that of methadone have been mixed. Buprenorphine does appear to be as effective as *moderate* doses of methadone. (Like methadone, buprenorphine is a maintenance medication.) However, buprenorphine is unlikely to be as effective as *higher* doses of methadone and therefore may not be the treatment of choice for patients with higher levels of physical dependence.[25] Magura et al.[27] found that among people who were incarcerated, most preferred buprenorphine to methadone when released back into the community.

> *The accumulated data demonstrate that treatment of opioid dependence with buprenorphine is a major public health tool in the management of opioid dependence and in HIV/AIDS prevention and care for opioid dependent injecting drug users.*[28]

Extended-Release Injectable Naltrexone

FDA approved extended-release injectable naltrexone in 2010 to prevent relapse to opioid use. Unlike methadone, buprenorphine, and oral naltrexone, which are administered daily, extended-release injectable naltrexone is given via injection once a month. In addition, healthcare practitioners can provide the medication without special training or credentialing (it is also available in some OTPs).

Naltrexone is an opioid antagonist; it fully blocks the effects of opioids such as heroin and oxycodone. Because of this, a person who is dependent on opioids must

be withdrawn from all opioids for 7 to 10 days before receiving extended-release injectable naltrexone, or he or she will undergo withdrawal symptoms immediately.

Extended-release injectable naltrexone is not a controlled substance and has no abuse or diversion potential, offering an alternative to agonist therapy with methadone or buprenorphine as well as expanding access to MAT.

Extended-release injectable naltrexone is relatively safe and well tolerated. Major adverse effects include severe, acute precipitated opioid withdrawal (if the patient is not fully detoxified), risk of injection site problems, and the potential for adverse liver effects if given in "excessive doses"; it is contraindicated for patients with acute hepatitis or liver failure.[29]

Effectiveness of extended-release injectable naltrexone

Extended-release injectable naltrexone has not been studied for as long as either methadone or buprenorphine, but research indicates that it is a promising treatment for opioid dependence. For example, studies have found that the injectable form of naltrexone can improve patient adherence to the medication and increase treatment retention.[18,30,31] Treatment retention is particularly important because it provides clinicians sufficient time to engage patients in psychotherapy or counseling so that they can learn to make psychological and social adjustments that support a life without opioids.[30]

Injectable naltrexone has been found to be effective in reducing relapse to opioid use in people who are involved in the criminal justice system. For example, a recent multisite study of people under legal supervision (e.g., probation, parole, drug court) found that those who completed a treatment program where they received six monthly injections of naltrexone had, 6 months after their last injection, significantly fewer positive urine tests for opioids than those who did not complete treatment (i.e., did not receive all six injections). They were also less likely to be reincarcerated than those who did not complete treatment.[32]

Increasing the Use of MAT in Drug Court Programs

A first step toward increasing the use of MAT in drug court programs is to examine barriers to its use. One potential barrier is that not all communities have access to OTPs for methadone. For example, OTPs are mainly located in urban areas.[33] However, the use of buprenorphine and extended-release injectable naltrexone for opioid treatment in physicians' offices is improving access to MAT.

Individual drug court personnel may also lack sufficient knowledge about MAT, or they may be biased against using medications to treat substance use disorders. As a result, they may be reluctant to refer participants to MAT.[4] Some people believe MAT to be "exchanging one addiction for another," but MAT is actually much like taking maintenance medication to control heart disease or diabetes. Further, naltrexone is not a controlled substance, and buprenorphine has limited potential for misuse. Both methadone and buprenorphine will continue a patient's physical dependence on opioids. However, when used properly, these medications help people manage their addiction so that the benefits of recovery can be achieved and maintained.

Drug court personnel may also believe that MAT is not appropriate for individuals with co-occurring mental disorders. It is estimated that up to 45 percent of people who are incarcerated have both substance use and mental disorders[34]—this percentage represents a significant number of people in need of effective treatment for substance use disorders. The fact is that MAT is appropriate for individuals with co-occurring disorders, along with integrated treatment for their disorders that includes monitoring for possible medication interactions.[34]

To increase referrals to MAT, drug court staff can:

- Examine reasons that MAT is not being used (e.g., lack of knowledge, long-standing community beliefs about MAT, bureaucratic issues, potential cost).
- Learn more about the actions and benefits of MAT from the Center for Substance Abuse Treatment, state ASAM chapters, state Opioid Treatment Authorities, and the American Association for the Treatment of Opioid Dependence (see Resources).
- Identify local providers of MAT, using the Substance Abuse and Mental Health Services Administration's OTP Directory and Buprenorphine Physician and Treatment Program Locator (see Resources).
- Contact local OTP directors and discuss the effectiveness of MAT.

- Develop relationships with behavioral health facilities that can provide integrated treatment for drug court participants who have co-occurring substance use and mental disorders (or with professionals who have experience working as part of integrated care teams).
- Consult regularly with treatment professionals; use their expertise to set the best course for each drug court participant.
- Identify local physicians who can prescribe buprenorphine and extended-release injectable naltrexone and who are willing to coordinate such care with drug court staff.
- Work with local substance abuse coalitions to educate the community and change attitudes about the treatment of opioid dependence, to increase understanding of MAT and change drug court policies.

Resources

Web Resources

American Association for the Treatment of Opioid Dependence
http://www.aatod.org

American Society of Addiction Medicine
http://www.asam.org

Behavioral Health Treatment Services Locator
http://findtreatment.samhsa.gov

Buprenorphine Physician and Treatment Program Locator
http://buprenorphine.samhsa.gov/bwns_locator

Medication-Assisted Treatment for Substance Use Disorders
http://www.dpt.samhsa.gov

National Alliance for Medication Assisted Recovery
http://www.methadone.org

National Alliance of Advocates for Buprenorphine Treatment
http://www.naabt.org

National Commission on Correctional Health Care
http://www.ncchc.org

National Drug Court Institute
http://www.ndci.org

Opioid Treatment Program Directory
http://dpt2.samhsa.gov/treatment

State Opioid Treatment Authorities
http://dpt2.samhsa.gov/regulations/smalist.aspx

Relevant Publications From SAMHSA

(see back page for electronic access and ordering information)

Advisory, An Introduction to Extended-Release Injectable Naltrexone for the Treatment of People With Opioid Dependence

The Facts About Buprenorphine for Treatment of Opioid Addiction (consumer publication)

Medication-Assisted Treatment for Opioid Addiction: Facts for Families and Friends (consumer publication)

Methadone Treatment for Pregnant Women (consumer publication)

Opioid Overdose Toolkit

Treatment Improvement Protocol (TIP) 40: *Clinical Guidelines for the Use of Buprenorphine in the Treatment of Opioid Addiction*

TIP 43: *Medication-Assisted Treatment for Opioid Addiction in Opioid Treatment Programs*

TIP 44: *Substance Abuse Treatment for Adults in the Criminal Justice System*

What Every Individual Needs To Know About Methadone Maintenance Treatment: Introduction to Methadone (consumer publication)

Other Publications

Advancing Access to Addiction Medications: Implications for Opioid Addiction Treatment
http://www.asam.org/docs/advocacy/Implications-for-Opioid-Addiction-Treatment

Guidelines for the Psychosocially Assisted Pharmacological Treatment of Opioid Dependence
http://www.who.int/substance_abuse/publications/opioid_dependence_guidelines.pdf

RSAT Training Tool: Medication Assisted Treatment (MAT) for Offender Populations (curriculum)
http://www.rsat-tta.com/Files/Trainings/FinalMAT

Notes

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