

**RSAT Training Tool**

Medication-Assisted Treatment: for RSAT Programs and for Clients Transitioning to and from Community-based Treatment

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**Second Edition**

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**Note: This manual is for informational purposes only. The information provided is not intended to diagnose, treat, cure or prevent any disease or condition, including opioid addiction, nor is it intended to substitute for clinical or medical judgment. Decisions about treatment of opioid addiction and the use of medication are the sole responsibility of the client, treatment providers and the prescribing physician. Not all the options presented may be appropriate for every situation.**

**I. Introduction: New Developments and Opportunities**

Audience:

This information is geared toward programs funded through the Residential Substance Abuse Treatment for Prisoners (RSAT) program. It is intended to assist administrators, program and security staff, case managers, probation/parole, correctional health care professionals, counselors, volunteers, peer recovery support specialists, and allied community-based treatment providers. This updated edition incorporates new developments, current research and information on best practices, as well as examples of ways jurisdictions are successfully integrating MAT into RSAT programming and pre-release planning.

Purpose:

This training tool is intended to help increase access to MAT among appropriate RSAT clients, and to prepare RSAT staffs to support diverse recovery pathways by working with a wide range of community-based providers and programs - including those qualified to dispense FDA approved medications for treatment of addiction-related disorders. Achieving these objectives stands to reduce the threat untreated opioid and alcohol use disorders present to public safety and public health. MAT is not the only answer, nor is it the right approach for every client. Treatment and recovery pathways should be individualized, driven by comprehensive assessment and client choice. However, research has made it increasingly clear that MAT is an effective, yet underutilized treatment option for justice-involved individuals and an essential response to the magnitude of the current opioid epidemic. The National Institute on Drug Abuse (NIDA) outlines an important principle of evidence-based addiction treatment that applies: ***“No single treatment is appropriate for everyone.”*** [[1]](#footnote-1)

Some areas of the country have seen a sharp rise in the numbers of individuals entering custody in opioid withdrawal or in need of treatment for opioid use disorders. Many of these areas have noted an upward trend in certain property crimes and drug related crimes. Significant increases in overdose fatalities have profoundly affected many communities. These consequences are attributable to a remarkable change in opioid prescribing practices over the last two decades, illicit use of prescription opioids, as well as illegal drug use. Moreover, the prescription opioid problem is widely recognized as a driver of the supply of inexpensive heroin and illicitly manufactured fentanyl that is becoming more plentiful in many areas of the U.S., often in response to changes in the availability and cost of prescription opioids.

1. Updates to this edition

***Most of the new information appears in the first section of this edition.*** The text in the section is footnoted with references to current research and practice recommendations. Appropriate updates are also incorporated into the other sections of the manual; the sections on MAT and Re-entry and MAT for alcohol use disorders have been enhanced. This edition primarily responds to recent developments in three areas:

* Current research on the progressively worsening opioid epidemic and its unprecedented impact on communities and jurisdictions;
* Information on new strategies, practices guidelines. and tools developed in response to the epidemic; and
* Progress Implementing MAT in correctional settings - lessons learned, promising programs, and challenges.

**Consider the following…**

* Estimates suggest sentenced adults have rates of substance use disorders greater than four times those of the general population, with up to two thirds of the custody population affected.
* An estimated one third of all individuals with an opioid use disorder pass through the criminal justice system each year, making it a key opportunity for intervention and treatment.[[2]](#footnote-2)
* From 50% to 75% of juveniles involved with the justice system were under the influence of drugs or alcohol at the time of their offense.[[3]](#footnote-3)
* The National Institute on Drug Abuse (NIDA) contends underutilization of MAT among justice populations with opioid or alcohol use disorders undermines public safety and public health. [[4]](#footnote-4)

***What is MAT?***

MAT is the use of pharmacotherapy to support treatment and ongoing recovery for people overcoming addictive disorders. It combines prescribed medications ***with*** counseling and behavioral therapies, monitoring, and community-based recovery support services. As suggested by its name, MAT, behavioral treatments and other recovery support are designed to work together. Research shows MAT improves outcomes as part of a comprehensive bio-psychosocial approach to treating substance use disorders.[[5]](#footnote-5)

***An Effective Approach***

*Opioid replacement therapy* (*ORT) is strongly associated with reductions in recidivism, criminal activity, and post-release overdose fatalities among justice-involved individuals, worldwide.[[6]](#footnote-6)* Sometimes referred to as substitution therapy, a non-intoxicating, stabilizing dose of these medications significantly relieves craving and withdrawal and can diminish the euphoric effects of illicit opioid use. Individuals are able to derive maximum benefit from counseling, health care, job training, rehabilitation programs, and re-entry support when compulsion and preoccupation with drug use are reduced.

***Preventing Relapse***

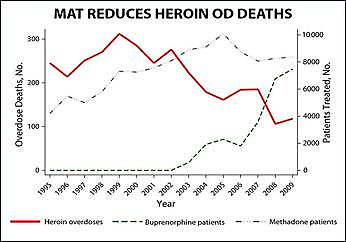
*FDA approval of long-acting, injectable naltrexone for treating alcohol problems and for preventing relapse into opioid use offers RSAT programs a unique opportunity.* Naltrexone is an opioid antagonist, which blocks the effects of all opioid drugs at the receptor sites in the brain. It has no abuse or diversion potential and does not require tapering when the medication is discontinued. Many state and local jurisdictions are successfully incorporating it into MAT pre-release and re-entry programs. Some offer injections of long-acting naltrexone, sometimes preceded by a period on the oral formulation while in custody, to help people maintain abstinence while they transition back into the community. Naltrexone is also approved for treating alcohol use disorders. Clients do not always consistently take the oral form of naltrexone when it is prescribed to self-administer at home. The long-acting injection is administered once every four weeks by a qualified medical provider and has been shown to reduce post-release relapse for re-entering individuals with opioid use disorders. It also can help reduce the number of drinking days and the amount of alcohol consumed.[[7]](#footnote-7)

All medications approved for treating opioid addiction have been shown to improve treatment engagement and retention and decrease relapse and overdose rates. Justice-involved individuals initiating MAT while in custody are ***far more*** ***likely*** to access follow-up care upon release. [[8]](#footnote-8)

***MAT and Reducing Overdose Fatalities***

*Detoxification in custody requires attention, but it does not constitute treatment. Relapse, while not inevitable, is extremely likely unless it is followed by long-term treatment*. It is important to understand the increased vulnerability to overdose fatality individuals released from custody face and the role MAT plays in preventing it.[[9]](#footnote-9) A hiatus from opioid use results in a rapid loss of tolerance. Opioid dependent individuals detoxed on a voluntary or involuntarily basis (due to incarceration) are at much higher risk for overdose because of this. Best practice is to advise them of the increased risk and offer MAT as an alternative whenever possible. *[[10]](#footnote-10)*

MAT has been shown to reduce overdose rates. Recent studies on long-action injectable naltrexone suggest antagonist treatment for re-entering individuals can reduce post-release overdose rates. ORT with methadone or buprenorphine prior to release or immediately upon release is a lifesaving practice. It diminishes the physiological/ neurological mandate to use by substituting a non-intoxicating, controlled dose of a long-acting opioid—instead of stopping abruptly. Tolerance is not completely diminished, but craving decreases along with overdose risk.

*****Education on availability of Narcan (naloxone) for a life-threatening overdose emergency is crucial.* Between 30% and 83% of opioid users have survived at least one overdose, according to the 2014 UN World Drug Report. In US studies, 53% of opioid dependent individuals recently released from custody report having overdosed at least once; 80% have witnessed an overdose; 28% witnessed a fatal overdose.[[11]](#footnote-11) A recent study found that almost 15% of all former prisoner deaths between 1999 and 2009 were related to opioids.[[12]](#footnote-12)

Source: UN Office on Drugs and Crime, 2014

Between 2009 and 2012, the overall prevalence of opioid use in the US steadily increased. Past year illicit drug use by persons age 12 and over reached the highest level of the past decade.[[13]](#footnote-13) Research suggests the impact of opioid use on crime may also be intensifying. While there has been a general downward trend in both property and violent crime, the proportion of crimes related to drug use and trafficking has increased. [[14]](#footnote-14)

A NIDA survey of 50 criminal justice agencies (prisons, jails, drug courts and probation/ parole) reported rates of opioid use disorders as high as 50% and alcohol use disorders as high as 63%. Data from a 2013 study of male arrestees in five major US cities showed the majority tested positive for illegal drugs at the time of arrest, ranging from 63% in Atlanta to 83% in Chicago.[[15]](#footnote-15)

MAT has significant advantages to offer corrections, and is more cost effective than other treatments.[[16]](#footnote-16) When MAT is part of a comprehensive opioid treatment program, studies have shown better outcomes in the following areas:

* Increased retention in treatment[[17]](#footnote-17)
* Decreased illicit opioid use
* Decreased criminal activity[[18]](#footnote-18)
* Decreased injection drug use
* Decreased hepatitis and HIV infection risk behaviors
* Lower death rates and a decrease in the incidence of overdose[[19]](#footnote-19)
* Improved birth outcomes for infants of women receiving ORT during pregnancy[[20]](#footnote-20)

**Methadone Overdose**

*It is critical for justice professionals to understand the distinctions between the*

*risks of prescribing methadone for pain and the relative safety associated with its effective use for treatment of opioid use disorders among justice populations.*

Methdone is a Schedule II long-acting opioid analgesic. It has legitimate medical uses, but has primarily been used to treat opioid use disorders for decades. Its long half-life (up to 59 hours) makes it suited for these purposes. Opioid treatment programs carefully monitor methadone patients throughout all stages, but especially at the beginning of treatment when risk of methadone overdose is higher.

Methadone is closely monitored when it is introduced to treat patients discontinuing opioid use. A correct dosage is determined by slowly increasing the amount to find a minimum dose that controls withdrawal symptoms without unwanted side effects. There is a risk of overdose during the intial weeks of treatment with methadone, even with individuals who are fully complaint and not using other opioids or substances. Risks are much greater if the patient uses alcohol, benzodiazapines or sedatives with similar properties.

Methadone’s long half-life means that its effects build up in an individual’s system. This is part of why it takes time for an appropriate dosage to become fully effective for patients starting treatment. This is also why the risk of drug interactions is high, since taking another drug, even 2 days after ingesting methadone, elevates the risk of overdose. Patients receiving treatment with methadone generally have some degree of tolerance to opioids; they also undergo regular drug testing and usually receive methadone daily in liquid form under direct observation when they begin treatment.

Until the late 1990’s, methadone was mostly prescribed for late stage cancer pain. But the explosion of OxyContin diversion and abuse prompted doctors to look for alternatives. Methadone seemed like an inexpensive, effective one; prescribing for pain began to increase significantly – along with overdose rates. Patients prescibed methadone for pain management often had no tolerance to opioids and were not closely monitored. They were usually given the pill form to take at home. By 2010, methadone was involved in one third of all prescription overdose fatalities.[[21]](#footnote-21) However, the overdoses resulted from methadone perscribed by or diverted from pain management outlets, not opioid treatment programs. [[22]](#footnote-22)

***Methadone prescriptions for pain increased 1,000 %***

***from 1997-2005***

2006 - FDA advisory about methadone for pain; “black box” warning added on labeling and dosing changed.

2008 - DEA asked drug manufacturers to restrict certain methadone products to addiction treatment and hospitals.

2012 – CDC reports methadone was involved in a third of prescription opioid overdose fatalities from 1999-2010.

2016 – CDC releases new guidelines on opioids for chronic pain cautions against methadone.

Effective measures have reduced

methadone overdoses including new prescribing guidelines. Unfortunately,

this situation increased negative

perceptions of methadone. Several

states responded by excluding

methadone from medicaid preferred

drug formularies, but failed to make

an exception for medication-assisted treatment. A few states reversed this

after evaluting the research and

weighing the costs against the

benefits, but some regions

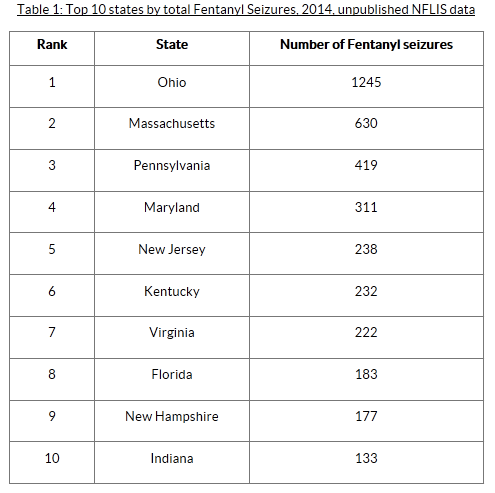
gravely affected by the opioid

epidemic continue to limited access

to methadone treatment.

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**Fentanyl and Fentanyl Analogs**

Fentanyl is a synthetic opioid

analgesic that is 50–100 times

more potent than morphine. It is approved for managing surgical

pain or cancer pain. As early as

2007, the DEA reported a rise in

illicit manufacture, trafficing and importation of fentanyl and

similar drugs (analogs).[[23]](#footnote-23) Most

of the recent fentanyl-related

deaths are associated with

illegally manfactured fentanyl,

known as nonpharmaceutical fentanyl (NPF), which is

presumably responsible for a

70% increase in synthetic

opioid fatalities in 2015.[[24]](#footnote-24) The

problem is complicated by

analogs (fentanyl formulas chemically altered just enough

to technically avoid being

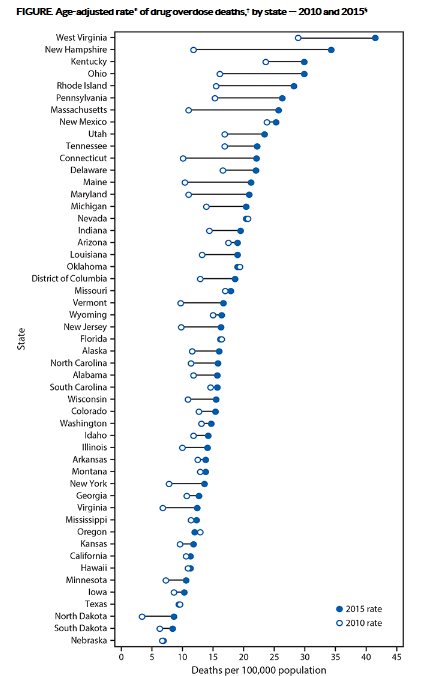
scheduled as an illegal drug).

Analogs make importation and

internet sales harder to control.

However, the US Attorney General has indicated they will pursue cases under the Federal Analogue Act of 1986, which allows prosecution of crimes realted to substances similar to an illegal drug. Acetyl fentanly, furfentanyl and carfentanyl are among the most well-known and deadly analogs, some of which can be lethal to first responders who are inadvertantly exposed.[[25]](#footnote-25) They may also be lethal when untreated opioid users recently released from custody use these drugs.

**Regional Differences in Opioid Use Rates**

There are definate regional differences in the proportion

of the incarcerated population with opioid problems. Over dose rates differ by as much

as fivefold from state to state. Some states have high rates

of prescription drug misuse, while others have higher

rates illegal opioid use. The

availibilty of jail diversion programs and other

alternatives to incaceration

and local community-based treatment capacity may also exert an influence. The accompanying chart from

the CDC report, *Increases in Drug and Opioid-Involved Overdose Deaths, 2010-2015,* shows rates of overdose fatalities by state and

how they have increased

since 2010. In order to understand the unprecendent-

ed fatality rates and other consequences it is helpful to understand the regional impacts.

b. Historical trends in opioid use, Regulation & Treatment

**Current Scope of the Opioid Epidemic**

*According to Centers for Disease Control data, overdose fatalities in 2015 surpassed the previous year’s highest ever documented rates.* It is impossible to determine whether this reflects a failure of efforts to curtail the epidemic or deeper insight into the scope of the problem.

* In 2015 there was another increase in drug overdose deaths (52,404 deaths) as compared to 2014 (47,055 deaths).
* In 2015 the proportion of drug overdose deaths attributable to opioids increased to 63.1% as compared with 60.9% in 2014.
* The age-adjusted opioid-involved death rate increased by ***15.6%,*** from 9.0 per 100,000 in 2014 to 10.4 per 100,000 in 2015, driven largely by increases in deaths involving heroin and synthetic opioids other than methadone.

Although methadone overdose deaths decreased by 9.1% in 2015, overdose fatalities in the following sub-categories of opioid drugs increased:

🢁 2.6% - natural /semi-synthetics (such as morphine, codeine, hydrocodone)

🢁 20.6% - heroin overdoses

🢁 70.2% - synthetics excluding methadone (fentanyl, meperidine,hydromorphone).[[26]](#footnote-26)

**Historical Trends**

In 2013, the American Society of Addiction Medicine noted that individuals with OUDs are now far more likely to have a history of being prescribed opioid analgesics and/or illicit use of these medications than histories of heroin use. According to the CDC, more rural and more impoverished counties tend to have higher prescription drug overdose death rates. According to a June 2106 unclassified DEA Intelligence Report, heroin prices are decreasing as purity increases. Seizures of cheap and potent illicitly manufactured fentanyl are also increasing.[[27]](#footnote-27) These factors may elevate the already high post-release risk of overdose fatality if access to continuing care is delayed upon re-entry.

The history of opioid use in the US has gone through several repetitive cycles of proliferation-sometimes fueled by soldiers returning from war with a degree of opioid dependence or aggressive marketing/prescribing of new opioid formulations touted as ‘wonder drugs.’ Attempts to limit supplies, regulate prescribers, punish users, and gradual increases in the accessibility of treatment have generally followed. The timeline includes events that have influenced US opioid use trends for the last 150 years.

**TIMELINE: US OPIOID USE, REGULATION, ADDICTION & TREATMENT**

**1865** - First increases in opioid addiction are documented following the Civil War, when the newly invented hypodermic syringe is used to administer morphine to injured soldiers.[[28]](#endnote-1)

**1874** – Heroin is synthesized and commercially marketed as a “wonder drug,” contributing to a widespread pattern of iatrogenic (doctor-originated) addiction.[[29]](#endnote-2)

**1900 -** Doctors, pharmacies, and patent medicine salesmen freely dispense heroin to an estimated 300,000 addicted Americans; the majority are middle-aged, middle-class women.[[30]](#endnote-3)

**1914** – The Harrison Act Regulates opioid distribution—all importers, manufacturers, druggists, and physicians are required to register with the Federal Government and pay an excise tax.[[31]](#endnote-4)

**1924** –Implementation of increasingly stiff criminal sanctions for possession and sale of opioids begins.[[32]](#endnote-5)

**1949 -** Researchers at the Lexington, Kentucky hospital first demonstrate that methadone could be effective in withdrawing patients from heroin, as intravenous heroin use increases among soldiers returning from World War II.[[33]](#endnote-6)

**1967** - The National Survey on Drug Use and Health (NSDUH) begins collecting data on heroin use, documenting dramatic increases in heroin that continue to rise as the war in Viet Nam comes to end.[[34]](#endnote-7)

**1972** – Access to methadone maintenance treatment is formally approved through highly regulated opioid treatment programs. Research demonstrates it can reduce crime among justice-involved individuals with addiction.[[35]](#endnote-8)

**1995** -National Survey on Drug Use and Health (NSDUH)shows increases in initiation of heroin use, which rise to epidemic proportions over the next six years.[[36]](#endnote-9)

**1996** - Approval of OxyContin for moderate to severe pain; marketed with misleading claims of low abuse and withdrawal potential, coinciding with a movement to encourage doctors to more aggressively treat pain.[[37]](#endnote-10)

**2000** – In response to National Institutes of Health recommendations, The Drug Addiction Treatment Act of 2000 (DATA) significantly reduces Federal regulations, paving the way for increased access to new pharmacotherapies.[[38]](#endnote-11)

**2002** – FDA approves buprenorphine for office-based treatment of opioid use disorders by trained physicians.[[39]](#endnote-12)

**2004** - The World Health Organization (WHO), UN Office on Drugs and Crime, and the Joint United Nations Programme on HIV/AIDS call for adoption of substitution maintenance therapy for opioid use disorders.[[40]](#endnote-13)

**2007** – Purdue Pharma, makers of OxyContin, pleads guilty to misleading and false marketing about its safety and pays $634 million in damages after years of investigations; sales revenues exceed $22 billion over a decade.[[41]](#endnote-14)

**2009** – After years of increased methadone prescribing as an alternative to OxyContin for pain, a sharp rise in methadone deaths is documented among pain patents, but not among patients in opioid treatment programs.[[42]](#endnote-15)

**2010** -Long-acting injectable naltrexone (Vivitrol) approved by FDA for preventing relapse of opioid use disorders. [[43]](#endnote-16)

**2012** – Seizures of illicitly manufactured Fentanyl, a powerful synthetic opioid, become more common as fentanyl overdose fatalities begin to skyrocket.[[44]](#endnote-17)

**2016** –CDC releases new guidelines on prescribing of opioids for chronic pain after a review of research shows limited support for efficacy; recommends less reliance on opioid medications and methadone prescribing for pain.[[45]](#endnote-18)

**2016 –** Maximum doctors can treat with buprenorphine in settings that meet specific criteria increases to 275; Comprehensive Addiction and Recovery Act allows nurse practitioners and physicians’ assistants to prescribe.[[46]](#endnote-19)

**2016 –** FDA approves Probuphine, a long acting (6 month) buprenorphine implantfor opioid use disorder maintenance therapy.[[47]](#endnote-20)

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**Incorporating Overdose Prevention into RSAT Programs**[[48]](#footnote-28)

RSAT programs can help reduce the risk of opioid overdose upon re-entry by training staff and educating clients about overdose risks and prevention measures. Facts that staff can repeat and reinforce throughout treatment include:

* Treatment can decrease tolerance and put individuals at higher risk for overdose and death.
* Patients/clients attempting to override the effect of MAT medications by taking large doses of opioids to “feel high” are at risk for overdose.
* Sustained periods of abstinence while incarcerated or engaged in residential treatment reduce tolerance and can put individuals at higher risk for fatal overdose upon release.
* Discontinuation of medication-assisted treatment due to gaps in prescription coverage, missed doses, and/or discharge or completion of treatment can put patients/clients at greater risk for fatal overdose.
* Use of alcohol, benzodiazepines or other sedatives with similar properties while taking methadone or buprenorphine for ORT can increase the risk of overdose

Overdose education and prevention can be built into all aspects of RSAT programming. Some of the ways programs can integrate overdose prevention into client care include:

* Relapse prevention groups and release planning that includes information on overdose reversal.
* Warm hand-offs for clients stepping down from residential treatment to continuing care.
* Easy access to naloxone, information on community overdose prevention programs, and education on the signs of opioid overdose.
* Distribute patient education materials and show videos on recognizing the signs of overdose and information on Good Samaritan laws that protect people who call 911 to prevent an overdose.

**Resources for Overdose Prevention:**

SAMHSA [Opioid Overdose](http://www.samhsa.gov/medication-assisted-treatment/treatment/opioid-overdose) page

SAMHSA [Naloxone](http://www.samhsa.gov/medication-assisted-treatment/treatment/naloxone) Information

HHS.gov Opioid Epidemic [Overview](http://www.hhs.gov/opioids/about-the-epidemic/index.html), [Overdose Response](http://www.hhs.gov/opioids/overdose-response/index.html) page

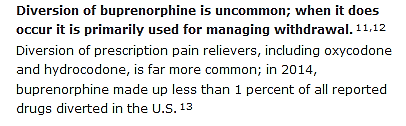
YouTube Videos on Naloxone/Narcan – there are many to choose from. The following are some examples:

* [Ohio Attorney General](https://www.youtube.com/watch?v=m9wgPiuCtGI) 14.03 min
* Using [Nasal Naloxone](https://www.youtube.com/watch?v=FZpgjRBby_M) to Reverse Opiate Overdose (8:02) and Using [Injectable Naloxone](https://www.youtube.com/watch?v=wsN0ijLnK2k) to Reverse Opiate Overdose (7:18)
* [Narcan nasal spray](https://www.youtube.com/watch?v=Jis6NlZMV2c) demonstration by the Boston Herald (3:16)

C. New Developments & Expansion of Pre-release MAT

Since the first edition of this manual, there have been notable advances in medication-assisted treatment. They include pharmacological innovations; new practice guidelines; recent research findings; policies that may improve access to MAT; and lessons learned from the significant expansion of MAT programs in jails and prisons.

**Update on Buprenorphine Diversion and a New Product**

****Potential reductions in recidivism from MAT can be overshadowed by increased disruptive institutional behavior, including diversion of prescribed medications, if programs are not carefully administered. Most criminal justice professionals working in secure settings are familiar with diversion problems associated with buprenorphine, particularly the sublingual film, which is easy to

Source: National Institute on Drug Abuse, 2015

conceal, making it difficult to control the flow of contraband into facilities. RSAT staff report that contraband Suboxone strips are sometimes divided into several pieces and sold. Revenue from sales of one strip can bring in $300 or more in some secure facilities. In some areas of the country, justice professionals who work with re-entering individuals or in probation/parole settings have noted that buprenorphine is available ‘on the street’ and report people selling or sharing their prescribed buprenorphine. But the price of illicitly sold Suboxone strips on ‘the street.’ only about $20. It is not hard to see how it has become the number one contraband issue for correctional facilities in some states.

For these reasons, criminal justice professionals may find it difficult to believe the recent statement from the National Institute on Drug Abuse in the text box above, especially in parts of the country where buprenorphine diversion is greatest. Although it is likely some individuals in custody may use contraband buprenorphine to self-medicate withdrawal symptoms, it is just as likely that others are injecting it or using other administration routes to get high. Clinical trials comparing methadone and buprenorphine outcomes of treatment programs in custody settings showed more participants in the buprenorphine group were terminated from treatment for attempting to divert their medication, but they were also more likely to enter community-based treatment upon release.[[49]](#footnote-29)

The New Hampshire Department of Corrections seized over 100 Suboxone strips from an inmate in the prison reception and diagnostic unit. [[50]](#footnote-30) The Maryland Department of Public Safety reported contraband Suboxone decrease in secure facilities when it was removed from the state Medicaid preferred drug list. Maine has tried to reduce the influx of contraband opioids into jails since 2015, when there were four non-fatal opioid overdoses in the York County jail. They have implemented video visitation and used body scanners to detect and reduce contraband. [[51]](#footnote-31)

It is important to note that ***when actual MAT programs are successfully implemented, most facilities report reduced contraband.*** [[52]](#footnote-32) Programs that administer buprenorphine in custody observe patients to make sure the medication is fully dissolved in the mouth to prevent diversion and drug test participants.

Background: Buprenorphine’s pathway to use in opioid treatment helps explain its complex properties, and why its abuse potential is lower and safety profile is higher than methadone. Buprenorphine is a Schedule III synthetic opioid developed in 1966, derived from thebaine, an extract of opium. It was approved as a pain medication by the FDA in 1985. By that time, an injectable form and a sublingual pill were already marketed as an analgesic in several countries. But long before that, addiction researchers were very interested in its application to treatment of opioid use disorders.

**Antagonists**

Medications like naltrexone block the actions of opioids. The antagonist action of naltrexone on the brain blocks the reinforcing and pain killing effects of opioids. Antagonists can deter use and may interact with opioids in the system. They can help with cravings and reduce the risk of relapse. Naloxone is a quick-acting opioid antagonist. It is not used for MAT, but it is used to reverse opioid overdose.

Medications like methadone and buprenorphine are long-acting opioids. They replace the drug of abuse and help satisfy the areas of the brain affected by opioids. They control withdrawal symptoms and reduce cravings. A person taking a therapeutic dose of the medication should feel normal, able to continue work, and perform tasks like driving. Partial agonists have similar, but more moderate effects. They occupy areas of the brain affected by opioids without fully activating them.



In 1963 the opioid antagonist, naltrexone, was first synthesized. Researchers looking to develop alternatives to methadone treatment began to focus on both opioid agonists and antagonists.

Buprenorphine is considered a partial agonist because it occupies some of the brain’s opioid receptors without fully activating them, making it less sedating than other opioids. It relieves withdrawal symptoms and craving while it diminishes the effects of heroin and other opioid drugs. In simple terms, some opioid receptors prefer buprenorphine over

**Agonists**

other opioids. This preference is so strong that when more than one opioid is in the system, other more intoxicating opioids (including heroin) will be rejected and set aside in favor of buprenorphine. This is one reason treatment is not initiated until 24-48 hours after last use.

In 1994, a single-drug buprenorphine formulation of was approved for addiction treatment in France; it was already being used ‘off label’ for these purposes in some European countries. Diversion problems grew quickly in Europe, as buprenorphine became a favorite of many injection drug users, especially in countries where heroin prices were high. For these reasons, the combination formula with added naloxone (Suboxone) was introduced in the U.S. when it was approved for treatment of opioid use disorders. When the medication dissolves in the mouth, the added naloxone is not well-absorbed and has no effect. However, when buprenorphine is injected, administered anally, or if pills or strips are crushed and made into a nasal solution, the added naloxone can also induce withdrawal symptoms in individuals who are dependent on other opioids. The bio-availability of sublingual buprenorphine when taken as directed is estimated at 30%. It may produce stronger euphoric effects if taken via other delivery routes and when used by occasional opioid users.

The ‘mono’ formula (buprenorphine only) is approved for treating opioid use disorders in the U.S., but is usually reserved for treating pregnant women.[[53]](#footnote-33) Buprenorphine definitely has a lower risk of overdose than methadone because respiratory depression is what causes most opioid overdose fatalities. Buprenorphine’s effect on respiratory depression plateaus at a certain dose and does not increase even if the dose is doubled or tripled. Methadone’s effect on respiratory depression increases at higher doses and peaks after its analgesic effects wear off. This elevates the overdose risk when it is taken to manage pain.

Community providers can take steps to reduce buprenorphine diversion. Vermont Medicaid now only authorizes a maximum 14-day supply of buprenorphine. Providers also collect packaging from prescribed Suboxone strips or ask for random pill counts to make sure it is being taken as directed.

***Probuphine and its Potential in Custody Settings***

The FDA recently approved a sub-dermal buprenorphine implant (usually placed under

the skin of the forearm). It delivers a steady low dose of medication for up to six months, eliminating the need for daily dosing. It is for individuals with opioid dependence who are already being treated with buprenorphine and who are medically stable on a low dose (8 mgs. or less). It may help reduce diversion. There is also a chance that some people will try to remove the implant and sell the buprenorphine it contains. It is too early to tell whether it will be beneficial in custody settings. It may be useful as a means of allowing people entering custody who have been maintained on a low dose of buprenorphine in community treatment to continue receiving the medication instead of discontinuing it abruptly. Additional long-acting forms of buprenorphine may become available soon.

Link to announcement: [FDA approval of a long-acting buprenorphine implant called Probuphine](http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm503719.htm) .

Link to full product label information: [https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=10fd7088-cc4a-4bda-a5e3-a82563540a9a](https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=10fd7088-cc4a-4bda-a5e3-a82563540a9a%20)

Link to the probuphine physician locator (sponsored by manufacturer): <http://probuphine.com/probuphine-physician-locator/>

**Long-acting Injectable Naltrexone for Reducing Relapse**

Opioid antagonists have been shown effective at reducing relapse among re-entering populations in several research studies. Vivitrol, a long-acting injectable form of naltrexone, was approved in 2010 for preventing relapse among people with opioid use disorders. It can only be administered after opioid-dependent individuals have been free of opioids for 7-10 days. It is not a controlled substance, has no potential for abuse or diversion, and injections are administered every 28 days, which makes it well-suited for use in secure facilities. It blocks the action of opioids, preventing euphoric and analgesic effects. If an individual who has been free of opioids for a period and has been administered a Vivitrol injection, uses opioids, they will not experience the effects. However, if an individual is dependent on opioids and has not abstained from all opioid use for at least 7-10 days before Vivitrol is administered, the injection can precipitate severe withdrawal symptoms.

A recent multisite, randomized, controlled trial on extended-release injectable naltrexone was conducted with predominantly male and minority, voluntary participants with criminal justice involvement. They were treated in an outpatient setting for 24 weeks. The rate of opioid relapse was lower among the group receiving extended-release naltrexone than among those assigned to usual treatment (43% vs. 64%). However, six months after they completed the 24-week program (and at 12 month follow up) both groups had the same rates of opioid use and re-incarceration. But no overdose events were observed among the naltrexone group one year after completing treatment; seven overdose events had occurred among participants assigned to usual treatment. [[54]](#footnote-34) Injectable extended-release naltrexone has also shown benefits in studies with alcohol dependent patients. [[55]](#footnote-35)

**More on the use of injectable extended-release naltrexone**

Outcomes for opioid treatment in two studies of parolees suggest it decreases risk of reimprisonment among people under community supervision; risk of re-arrest decreased in one preliminary study of drug court participants. Most studies have shown subjects also remain in treatment longer.[[56]](#footnote-36) These studies have generally offered a Vivitrol injection, pre-release, and six injections post-release. Most found improvements on one or more of the outcomes they tracked, which included re-arrest, re-incarceration, opioid use, overdose, other drug use, and various HIV related outcomes.

Since all forms of naltrexone block the effects of opioids, there are limitations to consider:

 *No help with acute withdrawal symptoms:* A patient must be fully withdrawn from all opioids for at least 7-10 days before starting Vivitrol.

 *No help with post-acute withdrawal:* Many opioid addicted patients choose ORT options because they report relief from ongoing withdrawal symptoms such as dysphoria.

 *Risk of overdose risk may increase:* People who relapse and use opioids after a period of treatment with naltrexone no longer have a tolerance to opioids and may be at risk for overdose. Some patients have tried to over-ride the blocking effect by using large amounts of opioids, which can lead to overdose.[[57]](#footnote-37)

Generally, recovering individuals who are motivated to abstain from opioid use are considered better candidates for treatment with naltrexone. Several state and local correctional treatment programs are offering it to individuals who have completed treatment in custody as they approach release. Some offer an injection just before release to help deter people from using during the critical post-release period. Others offer the injection one month before release, with a follow up dose upon release. At least two states offer a daily dose of oral naltrexone in custody and coordinate follow up with the injection prior to or upon release.

***What RSAT Programs and Participants Report***

The RSAT TTA Center visited MAT programs in four states that offered long-acting injectable naltrexone and talked with participants about their experiences.

* *“My cravings went away completely.”*
* *“It was like a security blanket. I was afraid to go back into the world without anything because I’ve been using so long.”*
* *“I knew that if I was on it, in my head, I couldn’t get high.”*
* *“I had no cravings, no thought of using; but once I was off the Vivitrol, the thought returned.”*

Staff comments included:

* *“There is no silver bullet.”*
* *“You really have to incorporate all the social supports and recovery supports for the program to be effective.”*
* *“If we hand somebody off to a community that is unaware, unable or unwilling, the persons going to fail.”*

For videos and more about RSAT programs that use MAT, visit: [www.rsat-tta.com](http://www.rsat-tta.com)

Also see: SAMHSA publication: ***Clinical Use of Extended-Release Injectable Naltrexone in the Treatment of Opioid Use Disorder:***

<http://store.samhsa.gov/product/Clinical-Use-of-Extended-Release-Injectable-Naltrexone-in-the-Treatment-of-Opioid-Use-Disorder-A-Brief-Guide/SMA14-4892R>

***Expanded Use of MAT in RSAT Programs***

In the four years since the first edition of this manual, in-custody use of MAT for opioid disorders has ***increased exponentially***. Traditionally, medication-assisted treatment in custody has been limited to methadone maintenance for women during pregnancy, tapering them off after delivery. Currently, several types of MAT programs are being offered.

1) Re-entry MAT programs that initiate antagonist medication prior to release or upon release with injectable long-acting naltrexone, along with referral to MAT providers in the community. A few programs start people on oral naltrexone in custody.

**Examples:** Montgomery County Jail in Maryland; A DOC program in Green Bay, Wisconsin; Barnstable House of Corrections & DOC programs in Massachusetts; Pennsylvania DOC; Missouri DOC; Ohio DOC; New Hampshire DOC; Kentucky DOC and others.

2) Short-term continuation of agonist maintenance (ORT) for individuals receiving treatment with methadone or buprenorphine prior to incarceration, sometimes continuing until release - if sentence is completed within a specified limited time frame - with referral to community-based MAT programs for continuing care. Individuals serving longer sentences may be tapered off medication altogether or switched from methadone to buprenorphine in some states.

**Examples:** Washington State DOC; Hawaii DOC; New Mexico DOC; Vermont DOC and others.

3) Opioid agonist induction and long-term maintenance, or induction prior to release and referral to community MAT programs for continuation upon release. **Examples:** Rikers Island Jail, New York City; Rhode Island DOC; and others.

In addition to the examples listed above, MAT programs are being implemented in Connecticut, Florida, California, Puerto Rico and other jurisdictions. Attitudes and beliefs that have impeded MAT utilization in corrections are changing. In 2003, only 8% of state prison systems were referring to MAT programs upon re-entry; now the majority of state systems make referrals to community providers that offer MAT. [[58]](#footnote-38)

MAT is not a cure-all for every individual with an opioid use disorder. But, a systematic review of studies of ORT programs for prisoners noted they consistently produce positive public health outcomes, with 55%-75% reductions in IV drug use, decreases in HIV infection and the spread of hepatitis C, and increased retention in community-based treatment after release.[[59]](#footnote-39) As of 2008, a total of 29 countries had implemented some type of MAT in prisons.[[60]](#footnote-40) MAT is a cost-effective treatment, potentially allowing corrections to treat more people. It results in more engagement in continuing care upon re-entry.[[61]](#footnote-41)

Since 1987, one such program has operated in New York City’s Riker’s Island correctional facility. The facility’s KEEP program provides methadone maintenance therapy, pre-release, and dedicated post-release treatment slots for participants. Evaluation data from the program consistently show that 76% of participants attended community–based treatment to which they were referred upon release, demonstrating it is possible to sustain MAT programs in correctional environments. [[62]](#footnote-42) Riker’s Island is also piloting MAT with the injectable, long-acting naltrexone.

**Legal challenges to depriving MAT to people in custody**

The Legal Action Center report on the constitutionality of denying MAT to individuals involved in the criminal justice system referenced a California case involving a drug court participant who died of a heroin overdose after a judge ordered him to stop taking methadone. Subsequently, California passed a law prohibiting judges from banning ORT.[[63]](#footnote-43) BJA now requires all drug court grantees to allow program participants to access MAT, as they choose.[[64]](#footnote-44) Suits have also been filed by individuals in custody who had to discontinue ORT medications they were prescribed prior to entering custody. Court opinions in Vermont in 2001, in Cuyahoga County, Ohio in 1974, and in New York State in 1994 sided with individual patients and supported continued access to prescribed methadone in custody.[[65]](#footnote-45) However, a 2015 wrongful death suit against Macomb County Jail in Michigan, filed on behalf of a man on methadone maintenance who died in custody, was dismissed.[[66]](#footnote-46) Several studies have examined the effects of forced withdrawal from methadone among individuals in custody. One study reported that nearly half of participants indicated that concern regarding forced withdrawal from methadone during incarceration deterred them from engaging in methadone maintenance therapy in the community. [[67]](#footnote-47)

New Resources

**FDA Drug Safety Communications:**

[FDA warns about several safety issues with opioid pain medicines; requires label changes 2015](http://www.fda.gov/Drugs/DrugSafety/ucm489676.htm)**:**

[FDA has reviewed possible risks of pain medicine use during pregnancy 1/9/2015](http://www.fda.gov/Drugs/DrugSafety/ucm429117.htm)

[FDA Approval of Narcan Nasal Spray Nov, 2015](http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm473505.htm)

[FDA New Safety Measures Announced for Opioid Analgesics, Prescription Opioid Cough Products, and Benzodiazepines](http://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm518110.htm)

[**What to ask When You are Prescribed Opioids – New FDA Consumer Information**](http://www.fda.gov/downloads/ForConsumers/ConsumerUpdates/UCM530038.pdf)

**SAMHSA Resources:**

[**Medication for the Treatment of Alcohol Use Disorders: A Brief Guide**](http://store.samhsa.gov/product/Medication-for-the-Treatment-of-Alcohol-Use-Disorder-A-Brief-Guide/SMA15-4907)

[**Clinical Use of Extended-Release Injectable Naltrexone in the Treatment of Opioid Use Disorder: A Brief Guide, 2015**](http://store.samhsa.gov/product/Clinical-Use-of-Extended-Release-Injectable-Naltrexone-in-the-Treatment-of-Opioid-Use-Disorder-A-Brief-Guide/SMA14-4892R)

[**MAT Pocket Guide – Opioid Use Disorders**](http://store.samhsa.gov/product/SMA16-4892PG)

**[Managing Chronic Pain in Adults With or in Recovery from Substance Use Disorders](http://store.samhsa.gov/product/Managing-Chronic-Pain-in-Adults-With-or-in-Recovery-From-Substance-Use-Disorders/SMA13-4785)**

**[KAP Keys for Clinicians Based on TIP 54 - 2013](http://store.samhsa.gov/product/Managing-Chronic-Pain-in-Adults-With-or-in-Recovery-From-Substance-Use-Disorders/SMA13-4785)**

[**Decision in Recovery: Treatment for Opioid Use Disorders**](http://store.samhsa.gov/product/Decisions-in-Recovery-Treatment-for-Opioid-Use-Disorders/SMA16-4993)**:** New online interactive tool and printable PDF handbook

[**Helping Patients who Drink Too Much, 2005. NIAAA Practice Guidelines**](https://pubs.niaaa.nih.gov/publications/Practitioner/CliniciansGuide2005/clinicians_guide.htm)

**Overdose:**

[**SAMHSA Opioid Overdose Prevention Toolkit - Updated 2016**](http://store.samhsa.gov/product/Opioid-Overdose-Prevention-Toolkit-Updated-2016/SMA16-4742)

[**When the Seconds Count Card: American Society of Anesthesiologists/ONDCP**](https://www.asahq.org/WhenSecondsCount/resources.aspx)

[**Harm Reduction Coalition: Online Training Institute**](http://harmreduction.org/our-work/training-capacity-build/online-training-institute)

**[CDC Injury Prevention: Opioid Overdose Data](https://www.cdc.gov/drugoverdose/index.html)**

Includes Reports on Drug Overdose Data

New CDC Guidelines on Opioids for Chronic Pain

Information on Prescription Drug Monitoring Programs

Prevention, Prescribing and Narcan Administration Laws and Measures by State

[**Policy Surveillance Program at Temple University Law School: Law Atlas**](http://lawatlas.org/topics)

* [Good Samaritan Overdose Prevention Laws](http://lawatlas.org/datasets/good-samaritan-overdose-laws) by state
* [Naloxone Overdose Prevention Laws](http://lawatlas.org/datasets/laws-regulating-administration-of-naloxone) by state

**Practice Guidelines:**

**[Detoxification of Chemically Dependent Inmates, 2014,](https://www.bop.gov/resources/pdfs/detoxification.pdf)** [Federal Bureau of Prisons](https://www.bop.gov/resources/pdfs/detoxification.pdf)

[**NIATx. (2010). Getting started with Medication-assisted Treatment with lessons from Advancing Recovery.**](http://www.niatx.net/PDF/NIATx-MAT-Toolkit.pdf)

[**WHO and UNODC (2008). Opioid Substitution Treatment in Custodial Settings: A Practical Guide.**](http://www.unodc.org/documents/balticstates/Library/PrisonSettings/OST_in_Custodial_Settings.pdf)

[**National Commission on Correctional Health Care 2016 Position Statement on Substance Use Disorder Treatment**](http://www.ncchc.org/substance-use-disorder-treatment-position-statement)

[**Promising Practice Guidelines for RSAT Programs**](http://www.rsat-tta.com/)**, 2016**

**Pregnancy**

**[FDA -](http://www.fda.gov/Drugs/DrugSafety/ucm503630.htm)****[Neonatal opioid withdrawal syndrome and medication-assisted treatment with methadone and buprenorphine (2016)](http://www.fda.gov/Drugs/DrugSafety/ucm503630.htm)**

**[National Institute of Health. (2012). Information page on Neonatal Abstinence](http://www.nlm.nih.gov/medlineplus/ency/article/007313.htm)**

**[Syndrome](http://www.nlm.nih.gov/medlineplus/ency/article/007313.htm).**

[**American College of Obstetricians and Gynecologists, Committee Opinion, 2016**](http://www.acog.org/Resources-And-Publications/Committee-Opinions/Committee-on-Health-Care-for-Underserved-Women/Opioid-Abuse-Dependence-and-Addiction-in-Pregnancy)

**Module II: MAT, Opioids, Addiction and Recovery**

A. Opioids and Addiction

B. Mental Disorders, Chronic Pain, HIV, and Pregnancy

C. MAT and Re-entry

Review and Resources

Learning Objectives:

After completing this module, participants will be able to:

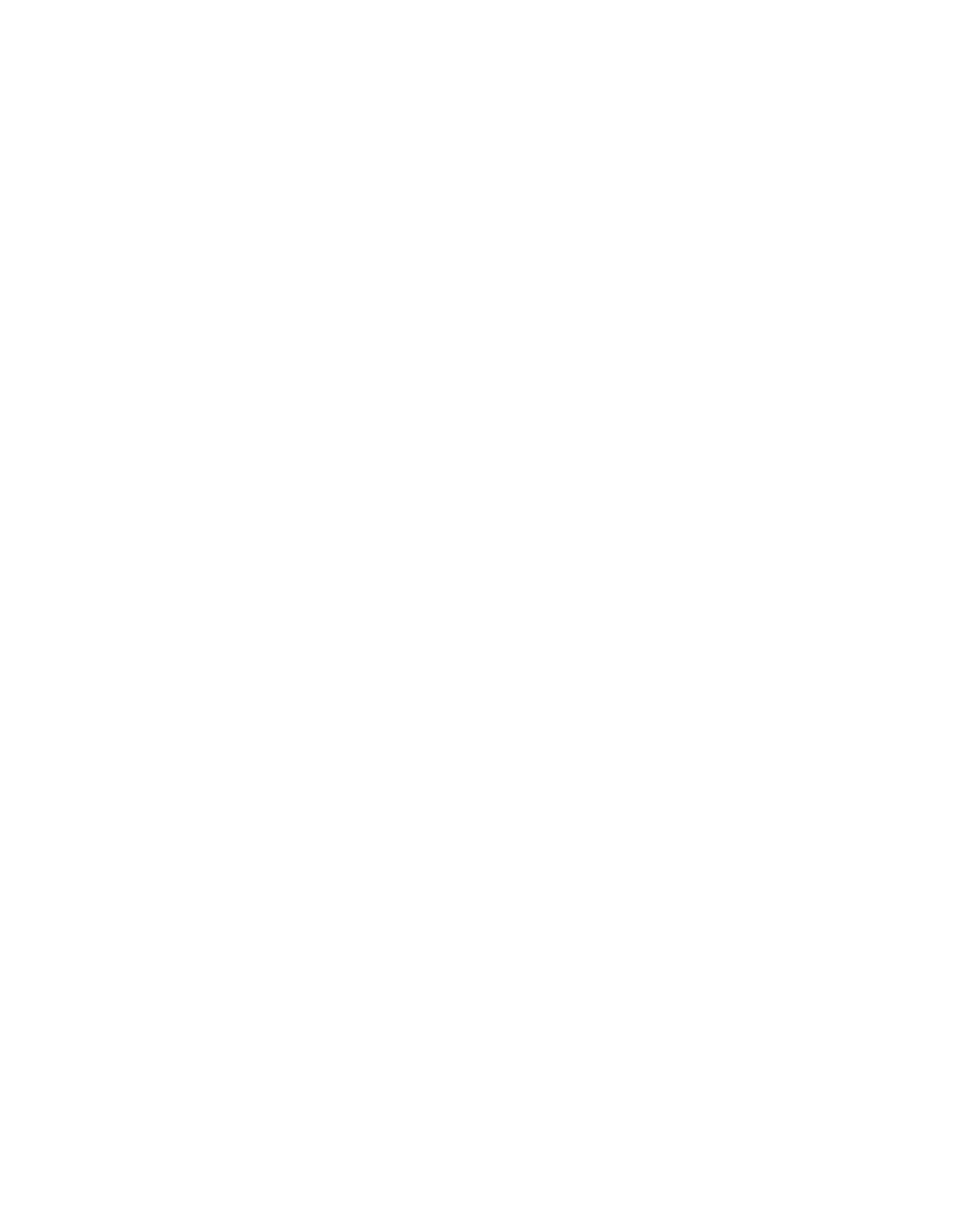
 Explain the action of opioid drugs on the brain and body.

 Discuss the different medications used to treat opioid addiction and the difference between opioid agonists and antagonists.

 List the phases of MAT with agonist medications for opioid addiction.

* Name the medications for treatment of alcohol use disorders and discuss their potential use for RSAT clients.

***Knowledge Assessment***



**Pre/Post-Test: True or False**

1. When clients receive medication-assisted treatment, the Centers for Disease Control (CDC) recommend they discontinue other therapeutic interventions to gauge the effect of the medication.

2. Methadone is the recommended course of treatment for pregnant women with opioid use disorders.

3. People who are not actively using opioids in custody should not be referred to MAT programs upon release.

4. Prison-based MAT programs find that treatment is rarely continued after released.

5. Prolonged opioid use interferes with the brain’s natural mechanisms for

controlling pain and regulating mood.

6. Methadone is an opioid agonist that is also used to relieve chronic pain, but there

is a significant risk of overdose when it is prescribed for pain management.

7. If a woman decides to go on buprenorphine during her pregnancy, it is best to file a motion with the court to order her to stop.

8. Since 2004, the FDA has approved two new medications for treatment of alcohol use disorders that can support recovery among justice-involved populations.

9. Naltrexone is a synthetic narcotic with a low potential for abuse.

10. The first phase of MAT is called detoxification and is followed by stabilization, and then induction.

A. opioids and addiction

**Why treat opioid addiction with MAT?**

This module focuses on medication-assisted treatment for opioid addiction with the medications approved by the FDA for this purpose. RSAT programs that do not offer these treatment options should refer re-entering individuals with opioid use disorders to community treatment providers that offer them. More medications for substance use disorders are likely to become available in the future, but the only ones currently approved are for opioid and alcohol use disorders.

Disulfiram (Antabuse) has been used to treat alcohol use disorders for many years. Acamprosate (brand name Campral) was approved by the FDA in 2004 fo[r alcohol dependence](http://en.wikipedia.org/wiki/Alcohol_dependence) and long-acting injectable naltrexone in 2006. Both of the newer medications are becoming more widely utilized (Abraham, Knudsen & Roman, 2011). *(For more information on MAT for alcohol use disorders see module III, section D)*

Of the three medications used for opioid treatment, one is an antagonist or opioid blocker. The other two are opioid replacement therapies (ORT), which is a type of MAT that utilizes long acting opioid compounds (agonists). There is a great deal of research on the effectiveness of ORTin reducing criminal behavior, decreasing recidivism, reducing institutional disciplinary infractions, and decreasing contraband. ORT has also resulted in fewer overdose fatalities and relapses (Gibson, Degenhardt, Mattick, White & O’Brien, 2012) and reductions in the spread of infectious diseases, including HIV and hepatitis C, as well as other negative health consequences (Gibson et al., 2012). For these reasons, the National Institutes of Health, the World Health Organization, and the National Commission on Correctional Healthcare have all recommended that opioid-dependent persons under legal supervision have access to methadone maintenance therapy (NIH, 1997). They have recently been joined by the Office of National Drug Control Policy and the United Nations.

**Opioids and Opiates: Use, Misuse, Abuse, and Dependency**

All Opioids, whether legal or illegal, synthetic or natural, have certain unique effects on the brain and body. Opioids relieve pain and give people a sense of well-being or euphoria by **changing the body and brain chemistry.** These drugs are extremely effective medications for this reason. Today, it is difficult to imagine what it was like before opioid analgesics were available for medical use and the amount of human suffering they have alleviated. But, the same mechanisms that produce the neurological alterations and physiological adaptations that make them effective also make them extremely difficult to give up.

The term *opiate* applies to drugs derived from the opium poppy such as morphine and codeine. *Opioid* refers to natural and synthetic/semi-synthetic drugs (heroin, oxycodone, and fentanyl, which emulate the actions of plant-based opiates.

**Opioids are produced three ways:**

1. **Your body makes its own opioids** that kill pain and produce feelings of joy and well-being, sometimes called *endogenous opioids.* For example, endorphins that relieve pain can be released by acupuncture.

1. **They are derived from plant-based alkaloids** obtained from the opium poppy, including codeine, morphine, and laudanum. These *opiates* emulate the effects and travel the same pathways as your own endorphins, but they are much more potent.
2. **They are partially or completely synthesized** in a lab to produce the opioid response. Examples are heroin, oxycodone, and fentanyl. The synthetic and semi-synthetic *opioids* are formulated to more efficiently trigger specific brain chemical processes and alter them.

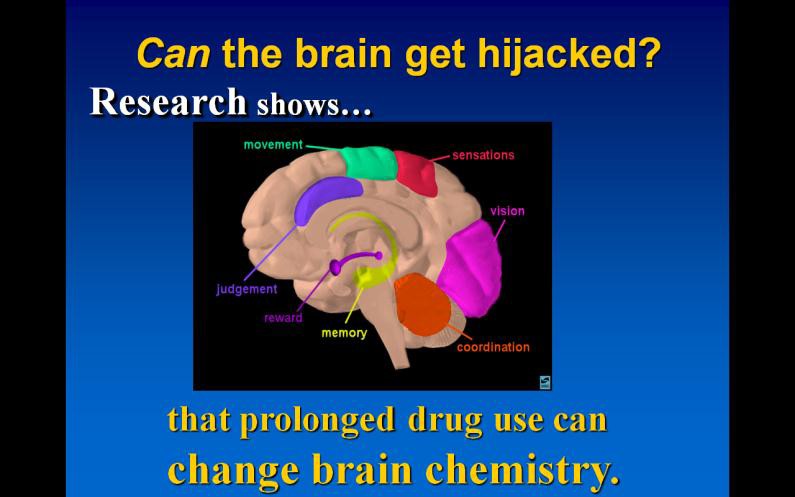
There is nothing “natural” about the action of opiates derived from plant-based alkaloids. The plant-based drugs and their synthetic counterparts both bombard the brain and body with powerful chemicals that dramatically alter primitive brain functions that govern our responses to pain and pleasure. Once this occurs on a regular basis, lasting changes result (Volkow, 2004). The first noticeable change is tolerance, or the need to take increasingly larger amounts of the drug to get the desired effects.

With continued use, the internal “factories” that produce, distribute and process our own natural opioids shut down and cease operations. The system begins to rely on an external supply of these substances in order to function at a normal level. Once this adaptation has taken place, a person is physically dependent on opioid drugs. This change is a persistent and protracted master interrupter of an array of metabolic functions. Physical dependence can result from consistent use of opioids over a period of as little as two weeks. This adaptation can occur even if opioids are only taken as directed when prescribed by a physician for pain management. If opioids are abruptly discontinued, the system reacts to not having the substance with withdrawal symptoms (NIH, 2010). Withdrawal occurs whether a person has lots of will power or none. It doesn’t matter if the person is using opioids for enjoyment, for escape, or to relieve physical or psychic pain.

Addiction is when the physiological need for the drug becomes a psychological obsession and the individual’s dominant motivation. Avoidance of withdrawal becomes a powerful incentive to keep using, even when there is a desire to stop. When people need the drug to function normally, they are no longer using it to feel good, but rather to feel normal and stop feeling sick. The enjoyment or pleasure they once derived from using diminishes or disappears; they are on the treadmill of using to survive. Most people find they cannot simply walk away from opioid addiction, no matter how motivated they are to change their life (CSAT, 2005). Although they may get through the relatively short period of acute withdrawal and overcome the body’s demand for opioids, returning the brain to stable functioning in the long run is far more difficult and perhaps, in some cases, impossible (Dennis & Scott, 2008).

**This is your brain on opioids**

*One practical lesson that clinical experience and research has shown: short-term MAT for withdrawal from opioids rarely results in sustained recovery. Detoxification can be unpleasant, but it is quick and relatively easy compared to preventing relapse into opioid use (Dennis & Foss, 2008).*

Positive outcomes are achieved with long-term MAT (12 months or more). It takes time to correct the brain’s impaired ability to regulate stress, pain, and mood. Although recovery from addiction is certainly possible without medications for some individuals, for many users, recovery involves a continuous battle against intense cravings that result from deeply conditioned response memories and the brain’s adaptations to the substance. Administration of long acting opioids, over time, can begin to restore or partially restore some of the brain's regulation of metabolic functions. But most experts agree medications alone are only part of what recovery requires.

It is widely accepted that one of the hallmarks of addiction is altered neurological processing involving specific regions, receptors and endogenous chemicals in the brain. Certain triggers, or cues, stimulate these urges and cravings in ways that are not fully understood (WHO, 2004). New research shows that addiction seems to reorganize survival mechanisms connected to incentive, motivation and reward. All metabolic functions are involved in "reinforcement" systems linked to reward, survival and deep primary learning neurological functions. The changes “make these regions of the brain hypersensitive (sensitized) …. Adaptations following chronic drug exposure extend well beyond reward circuits to other brain areas, notably those involved in learning and stress responses” (WHO, 2004, p. 81).

The rewarding effects of opioids and the onset of withdrawal seem to be linked to powerful survival instincts and potent memories that trigger the **autonomic nervous system**, stimulating the release of hormones that cause an extreme stress response, while inhibiting other endorphin responses that help the system cope with the effects of extreme stress (Chandler, Fletcher & Volkow, 2009). Medications can support the brain’s healing process, but lifestyle changes are also required to sustain recovery.

**Reasons some people are at higher risk.** Some individuals are more susceptible to addiction than others, although the reasons for this are not completely clear. Some researchers speculate that a metabolic/neurologic disorder may pre-exist and predispose individuals before first use. Beyond the theoretical, we know certain factors are associated with the development of addictive disorders.

**Genetics:** *Researchers assign 40%-60 % of the responsibility for a predisposition to drug and alcohol problems to genetics (Uhl & Grow, 2004). Scientist can now identify a host of specific inherited indicators that point to addiction or alcoholism and markers that influence the way substances are metabolized*. Geneticists have even found a marker associated with the need for higher doses of methadone and a gene variant that predicts a good response to naltrexone in alcoholics (Dick & Agrawal, 2008). These hereditary makers increase susceptibility, and interact with environmental, psychosocial and economic risk factors.

**Drug access and drug delivery:** *In addition to genetics, factors related to the type of opioid used and the route of administration can have an influence.* For example, chemically engineered pharmaceuticals are designed to target brain responses more efficiently than opiates from natural sources, with IV or nasal delivery as the most high-risk routes (Chandler, Fletcher & Volkow, 2009).

**Age at first use*:*** *Apparently, the alterations that take place as a result of addiction affect younger brains more profoundly. Developmental factors also determine susceptibility to drugs or alcohol. Age at first use is a strong determinant.* About 90% of those with chronic substance use disorders and severe behavioral problems began using drugs under age 18 (Dennis et al., 2004). Almost all adult pathological drinkers (96.8%) began drinking before age 21 (Grant & Dawson, 1997). Those who initiate alcohol use prior to age 15 are four times more likely to become alcohol dependent than those who start drinking regularly at age 21 or older.

**Childhood trauma & family stressors:** *Up to two thirds of clients in substance treatment report early childhood abuse (Clark, 2001).* A landmark study conducted by the Centers for Disease Control and Kaiser Permanente (an HMO) looked at individuals who reported several different types of abuse and family stressors during childhood. Their risk of becoming IV drug users was multiplied many times when compared with those who reported no abuse and fewer family stressors (Feletti, 2007). A factor that may be closely related to early initiation of substance use is early childhood trauma (NIDA, 1998). Multiple studies have documented high rates of early exposure to abuse, violence, and multiple family stressors among drug addicted individuals.

**Exercise One:** We also know that not everyone becomes addicted. Even some people who become physically dependent on narcotic pain medications as a result of a surgery or injury successfully discontinue use with minor difficulty; while others will go on to rob pharmacies in their desperation to continue to use these drugs. What factors account for the different responses?

***Directions:*** *Look over the list of items below.*

*Put a check*  *in the box if you think the item has been shown to pre-dispose people to addiction. Put an X in the box if you think it has little or no effect.*

 **Heredity/Genetics**

 **Environment**

 **Willpower**

 **Modeling**

 **Access**

 **Age of first use**

 **Education level**

 **Chronic pain**

 **Mental illness**

 **Illegal or legal substance**

 **Strength of character**

 **Childhood trauma**

 **Intelligence**

 **Early cigarette smoking**

b. Mental Health, Chronic Pain, HIV and Pregnancy

**MAT for special populations**

While opioids tend to create ***euphoria*** and provide ***relief from pain***, people recovering from their effects tend to experience ***dysphoria*** and develop ***hyper sensitivity to pain*** (opioid-induced hyper-analgesia). Many recovering people point to ongoing protracted states of physical and psychological distress as the reason they chose to try MAT or return to MAT (CSAT, 2011).

**Researchers have found that prolonged opioid use results in a functional endorphin deficiency that does not self-correct** (WHO, 2004). Many people in long-term recovery from opioid addiction speak of the prolonged psychological/ emotional stress associated with post-acute opioid withdrawal, including unyielding depression and continual sensitivity to physical pain. However, for many people addicted to opioids, chronic pain and or mental health disorders may have existed prior to initiating opioid use.

**1) Chronic Pain:** *An estimated 29%-60% of people with opioid addiction have chronic pain (CSAT, 2012a). Individuals with opioid use disorders and chronic pain require specialists experienced in both addiction and pain management to sustain recovery. RSAT staff should make sure clients with ongoing pain management needs are referred to appropriate follow-up care as they re-enter the community (CSAT, 2012a).*

Nationwide, there has been a four-fold increase in prescribing of opioid analgesics over the last 15 years. Illicit use of a new generation of powerful opioid drugs has also increased. Many opioid users have replaced pharmaceuticals with illicit street drugs in response to fluctuations in price and availability, which has led to increased heroin and fentanyl use and increases in overdose rates. The use of pain medication for physical problems can be a direct route to dependency and addiction. A recent study of a large sample of patients in opioid treatment programs found more than a third reported their reason for seeking treatment was related to opioid use for physical pain (AT Forum, 2011). Yet, pain management is a real issue for a lot of clients, even if they have abused pain medications in the past. It can also be a facilitating factor that may lead to relapse among individuals in recovery unless managed with care. Many VA hospitals have specialized pain management programs for recovering individuals.

**2) Mental health disorders:** *Approximately 4% of adults in the U.S. have co-occurring disorders. It is estimated that up to 45% of people in prisons and jails have them.*

*Co-occurring disorders are the expectation and not the exception, especially for women addicted to opioids (Glaze & James, 2006).*

Cross training with mental health staff and providers is desirable. The issue of drug interactions between medications prescribed to treat` addiction and those prescribed for mental health is important for RSAT staff and clients to understand. Co-occurring mental health disorders among offenders tend to be very common. Cook County Jail in Illinois, for example, found 45% of those in custody had both a mental health and substance use disorder (GAINS, 2004). Studies outside the United States have found similar associations. An Australian 2004 study of 825 people in opioid replacement therapy, mostly with criminal justice involvement, found 49% reported severe psychological distress, 28% had current major depression, 37% had attempted suicide, and 42% had a history of post-traumatic stress disorder (Ross et al., 2005). A study of 109 outpatients, treated mostly for heroin addiction, conducted in the European Union, found the rate of ADHD was 20%, and the rate of bipolar disorder was 43.2%, with a number meeting the criteria for both (Ceraudo et al.,2012).

**Implications for RSAT programs:**

 Screening for mental health disorders should be ongoing for those in RSAT programs with a history of opioid addiction and for those in MAT at all stages (CSAT, 2007).

 Collaboration with mental health staff within facilities is important, but also with community mental health centers during re-entry planning (Hills, Siegfried & Icowitz, 2004).

 Medication interactions between MAT and Selective Serotonin Re-uptake Inhibitors (SSRIs) and Monoamine Oxidase Inhibitors (MAOs), certain anti- depressant medications, as well as other psychiatric medications are not unusual. Sometimes dosage adjustments of one or both medications are necessary (Saber-Tehrani, Bruce & Altice, 2011).

**3) Pregnancy:** *Increasing numbers of pregnant women with opioid use disorders that require specialized care are entering prisons and jails. Any pregnancy in custody is high risk. RSAT programs that serve women pregnant find careful management and collaboration with pre-natal care providers is required.*

Frequently, pregnant women who were using opioids before being incarcerated do not have the social support they need. Drug and alcohol use during pregnancy is associated with having relatives that used substances during pregnancy, high rates of undetected fetal alcohol effects (in mothers) and a history of trauma. Treatment planning for pregnant women in RSAT programs should consider the special challenges of this population.

Sometimes they are judged harshly and subjected to discrimination and harassment in drug treatment programs where males are predominant (Pursley-Crotteau, 2001). Many of them are young and may be too embarrassed, afraid or ashamed to seek pre-natal care or help with substance use. As a result, they may try to stop using on their own and end up relapsing repeatedly. This cycle can be very dangerous for the developing fetus and can result in miscarriage, early birth, and other dangerous complications (CSAT, 2009).

It is risky to go off opioids too quickly during pregnancy. When a pregnant woman uses opioids, they pass into the baby’s bloodstream. If the mother quits cold turkey, the baby begins to experience withdrawal symptoms, which lead to dangerous complications. For this reason, most correctional facilities that house women provide them with methadone during pregnancy. MAT is often terminated very soon after delivery. However, women are at very high-risk for relapse after delivery and need follow-up care (Unger, Metz & Fischer, 2012). Pregnant women can best consider their options by discussing them with a doctor experienced in addiction treatment during pregnancy:

 Methadone is the safest, most widely researched, and recommended course of treatment. There is no known permanent serious harm to babies born to mothers treated with methadone. It controls withdrawal symptoms and helps stabilize heart rate, blood pressure and other maternal and fetal functions. Pregnant women treated with methadone are three times more likely to remain in treatment (CSAT, 2009).

 Shortly after birth, most babies have signs of withdrawal symptoms, such as fussiness, trouble feeding or shaking. This is called neonatal abstinence syndrome (NAS). Symptoms can be mild, requiring no special treatment; but at least half of the time NAS symptoms are more intense, requiring medication and delaying hospital discharge (NIH, 2012).

 There are promising studies on buprenorphine and pregnancy that suggest NAS may be milder for babies born to women treated with buprenorphine as compared to methadone (Jones et al., 2010). Subutex, the medication that contains only buprenorphine, is considered safe for pregnancy (NIDA, 2010). Products that contain naloxone should not be used (ACOG, 2012). Current guidelines suggest pregnant women who are already being treated with buprenorphine or who prefer it may be treated with it during pregnancy.

Methadone dosages often require adjustment during pregnancy, since methadone is metabolized faster during pregnancy. In community-based treatment settings doses are often split into two daily doses. It is important to monitor and adjust the dosage to prevent fetal distress (Bransetter, Bower, Kamien & Amass, 2008; Gil-Rivas, Florentine & Anglin, 1996).

**4) People Living with HIV/AIDS:** *Research shows that incarceration can be a prime opportunity to detect, prevent and treat HIV, hepatitis C, and related conditions. Prevention education and risk reduction counseling are essential in RSAT programs (CSAT, 2000; Tran et al., 2012).*

Entry into a correctional facility may be the first contact with treatment that many people with substance use disorders have had. It is often their first chance at medical care in a long time and the first time they have been offered HIV testing. Many individuals with HIV are learning about their status in these settings as testing in jails, prisons, and substance treatment has become more available (Ullman et al, 2010).

Studies show that methadone and other opioid replacement therapies have reduced HIV and hepatitis C infection rates and significantly improved adherence to treatment with anti-retroviral medications among re-entering populations (Springer, Chen, Altice, 2010; Ullman et al., 2010). Dosages of opioid replacement medications may need to be adjusted while undergoing treatment for HIV with certain drug combinations.

C. MAT and Re-entry

Increases in prescription drug use, diversion of pharmaceutical opioids, and the increased availability of MAT through private doctors has changed the demographic of clients seeking treatment in the community. New data suggest clients at opioid treatment programs (OTP) are as likely to be there for problems with prescription opioids as they are for heroin or other illegal drug use (AT Forum, 2011). A study of people in treatment for heroin addiction showed that 70% of those who began using opioids after 2000 started out using prescription opioids; but 80% of those who began using opioids in the 1960s – started out on heroin (CDC, 2016). As a result, many more people on probation or parole will require community-based MAT. Overdose prevention information and resources for RSAT clients is a critical part of pre-release preparation.

* Since the 1970s relatively few probationers and parolees have been treated with methadone maintenance therapy (BJS, 2007).
* Although MAT is not widely available to those under community supervision, studies have shown significant decreases in opioid use and criminal behavior during treatment (Desmond & Maddox, 1996).
* However, probationers on methadone treatment are more likely to be incarcerated than patients who are not under community supervision - due to technical violations (Hiller, Knight & Simpson, 1999).
* A study of federal probationers receiving oral naltrexone showed they remained in treatment longer than the control group and were less likely to be incarcerated during the six-month treatment period (Cornish et al., 1997).

***A few facts and considerations related to re-entry and MAT:***

RSAT staffs’ roles include staying informed about MAT options and offering unbiased referrals and information, including facts on changes in tolerance, education on overdose prevention, information on women’s programs, and connections to advocacy and support for people in medication-assisted recovery.

 If a client discontinued MAT when they became incarcerated, but wants to resume upon release, a referral to a provider is appropriate.

 Even if an RSAT graduate has been free of opioids for many months, he or she may still derive great benefit from MAT in the community upon re-entry, and a referral is appropriate.

 People who choose medication-assisted recovery are often stigmatized, sometimes even within sectors of the recovery community. It is important to connect people to recovery support and counseling, especially those who are treated by private physicians with buprenorphine.

 Prolonged opioid use leads to physiological tolerance. **That tolerance is reversible** after a period of abstinence; a dosage that was tolerated months earlier can lead to overdose fatality.

 Risk of death in the first two weeks following release from prison is estimated to be between 12.7 and 40 times the risk of the general population; 90% of those deaths are due to drug overdose (Bingswanger et al., 2007; Stover & Michels,

2010).

 Research has shown that 53% of recently released opioid dependent individuals had overdosed at least once; 80% had witnessed an overdose; 28% witnessed a fatal overdose; and 72% knew someone who had died from an overdose (Wakeman et al., 2009).

**Note**: Although Narcan (naloxone) is not considered MAT, education regarding its use

in reversing an opioid overdose is important. Emergency responders now administer it and it is becoming increasingly available to the general public. Many areas have overdose hotlines that re-entering individuals need to be informed about; they should understand the immunity laws that apply to 911 calls for an emergency to prevent an opioid overdose. All facilities should have naloxone available to administer in case of an overdose. Some jails and prisons have begun to provide Narcan education and offer kits to at-risk re-entering individuals and to the people that they will live with upon release.

**Guidelines for Referring to Community MAT Programs**

RSAT programs operate in accordance with the correctional facilities and jurisdictions they serve. RSAT staff may not be able to begin offering MAT just because it is an evidence-based practice. **However, there are concrete ways RSAT staff can make good use of knowledge about MAT, even when it is not accessible within their facilities.**

* **Connect people to care and coverage:** Help people enroll in health benefit programs, if they are eligible. Help them determine what MAT services and which providers are covered and the co-pays involved. Arrange a ‘warm hand off’ to community providers by phone or in person, if circumstances allow.
* **Expectations about length of treatment**: An important message to send people considering MAT upon release is that it requires a LONG TERM commitment. People entering treatment with the idea that they will just stay on medication for a few months…tend to drop out of MAT. They are not likely to achieve the success associated with long-term treatment.

* **Offer education:** Learning the facts about opioid addiction and effective treatment helps overcome negative views many people who use opioids have about MAT. Education allows those with alcohol and opioid problems to understand their options and make informed choices. It is also an opportunity to address some of the misinformation that contributes to stigma and discourages treatment.

 **Hold staff training on MAT for the entire facility:** This puts everyone on the same page. They don’t all have to embrace MAT, but when staff has accurate information they usually understand that they are not really qualified to disparage MAT for others who may find it essential to recovery.

 **Support choices and decisions about treatment:** This involves supporting those who want to give MAT a try and those who do not. It means informing them about MAT providers in their area and allowing them to choose what works for them. MAT may be medically contra-indicated in some cases. Certain MAT approaches may not be accessible in certain geographic regions. MAT may also work when other attempts at treatment and sustained recovery have failed repeatedly.

**Note:** The new SAMHSA shared decision tool is available online. Programs can print patient information, motivational exercises, and tools that prepare individuals to locate and work with MAT providers by downloading the PDF handbook: ***Decisions in Recovery: Medications for Opioids*** <http://archive.samhsa.gov/MAT-Decisions-in-Recovery/Default.aspx>

 **Offer hope:** Whensomeone who is motivated to stop using hasn’t been able to do so, it can become very discouraging. Research suggests those with a high degree of craving for alcohol and/or opioids may have a stronger physiological response to addiction and may respond well to treatment with medications, even when other approaches have not been successful. Referral to a MAT provider can renew hope and motivation (NIAAA, 2005, Dennis, Foss & Scott, 2007).

* **Single State Agency:** RSAT programs can enlist the state agency in charge of substance use services to help them set up referral networks. Each state agency has a designated person responsible for supervising MAT programs. A link to a listing by state to these designees is included in the resources at the end of this module. They can help identify quality providers, those that work effectively with criminal justice populations, and those who are covered by various health benefit programs.

 **Make use of what providers and payers offer:** In some states, the duties that Medicaid Managed Care contractors are tasked with include conducting outreach to eligible individuals re-entering communities. Providers that accept criminal justice referrals may also be able to help with benefit enrollment or pre-release admission screening and patient placement. Build a network of healthcare partners willing to assist re-entering RSAT clients.

**Preparing People for Referrals to MAT Upon re-entry**

Below are some tips and information to help prepare re-entering clients referred to a MAT provider in the community. When potential patients understand the process of initiating MAT and the type of information providers will require at the first appointment, it can streamline the intake process and help re-entering individuals immediately access the treatment and recovery support they require during the critical post-release period.

**Starting MAT: Phases of Treatment**

Most community providers begin with an assessment of opioid and other substance use disorder severity (including alcohol), a withdrawal severity assessment, and a medical examination, which may include labs (such as a liver function panel, drug testing, and a pregnancy test for women). Some providers routinely check prescription drug monitoring programs to see which controlled drugs patients may have been receiving (Lembke, 2012). They also take a psychosocial history and ask about current levels of support, housing situation, and current functioning. Then they will talk with the patient about treatment options and work with them to develop a treatment plan.

There are four basic stages of MAT that apply to opioid replacement therapies, but the first three stages are also applicable to antagonist therapy (naltrexone). Antagonist medications do not require tapering when the medication is discontinued. Progress through these stages varies, depending on use history, level of motivation, and health history.

**1. *Induction:*** The information gathered during the assessment process and medical examination helps the treatment team determine if an individual is a candidate for MAT and helps **arrive at a reasonable starting dose of medication for opioid replacement therapy**.

***Patients starting methadone*** *are at highest risk for overdose during this stage (42% of methadone overdoses among MAT patients take place within the first week). It is very important for RSAT staff to refer to a vigilant provider who individualizes starting dosages.*Doctors should make sure clients adjust to the medication safely by starting with a low dose and increasing it slowly. Side effects may be pronounced at this stage. Providers should caution patients about tasks like driving while they are adjusting to ORT. Patients should remain in the office for observation. If withdrawal symptoms persist after 2-3 hours, another small dose may be administered. The full effect of the medication should not be expected until 5 days after initial induction.

**Maximum buprenorphine dosage** is 32 mgs., but most people are started on a lower dose. Some state Medicaid policies dictate a maximum dose or a starting dose. Some doctors will start with a lower dose and then adjust it as needed. Others may begin with a higher dose and then reduce it. The patient is usually stabilized on the right dose and making good progress before they are prescribed a 30 supply to take at home.

**In the case of antagonist therapy**, the physician needs to make certain that the patient has abstained from all opioid use for at least 7-10 days. This is especially important prior to administering an injection of extended-release naltrexone (Vivitrol). Usually, the patient undergoes drug testing to ensure no opioids are detected. But, clinical best practice also requires the physician to perform a naloxone challenge. A small dose of the short acting opioid antagonist, naloxone, is administered to ensure there are no adverse reactions, such as precipitated withdrawal. In some settings doses of oral naltrexone are administered for this purpose. Once the injection is administered, patients should remain in the office for observation to make sure there are no adverse reactions. In rare cases individuals may be allergic to the medication, but injection site reactions are common.

**2. *Stabilization*** begins when the client is on the right dose and the body and brain have adjusted to the new medication. There will be fewer highs and lows and withdrawal and craving will be under control. If the dosage is correct, the client will not continue to feel drowsy or sedated, will be able to drive, and will not experience withdrawal symptoms. Dosages that are too low are associated with relapse and program attrition when patients reach maintenance. In the case of methadone, after 7 days on a stable dose, blood levels may be checked after a dose is administered and re-checked three hours later to ensure peak levels are not overly sedating and that the onset of withdrawal symptoms does not occur early. In some cases, the provider may administer a split dose of methadone.

**3. *Maintenance*** is the long-term phase of treatment. It can free people from addictive use, craving, and anxiety for a sustained period while they build a life in recovery. People may remain on maintenance for many months or even years. The length of time an individual can benefit from MAT varies. They can periodically be reassessed for continuation or begin a program of medically managed withdrawal. No additional risks are associated with long-term methadone or buprenorphine treatment (or naltrexone). However, there are relapse risks associated with discontinuing treatment too soon.

During the maintenance phase individuals making good progress can receive a limited number of take home doses of methadone; patients receiving buprenorphine products can generally receive a supply of up to 30 days of medication from their provider between appointments; and, patients receiving long-acting injectable naltrexone can continue to receive an injection every 28 days. During this period participation in counseling and other recovery support activities is encouraged, and MAT providers are mandated to refer clients to the services they require. In some states, Medicaid requires documentation of participation in counseling before they reimburse for MAT.

Administration of long-action opioid agonist medications, over time, stabilizes metabolic functions and may help to restore a degree of normal regulation. Some individuals who have been in long-term medication-assisted recovery also have co-occurring persistent symptoms of depression and/or chronic pain issues. Some of them do very well when they are maintained on a low therapeutic dose of methadone, which can sometimes be administered by their primary care provider as part of a pain management regime.

**4. *Tapering*** is medically managed withdrawal through gradually reduced doses of opioid replacement medications over a period of months. The more gradual the withdrawal process, the greater the chance of success. Tapering minimizes withdrawal symptoms that occur when opioid replacement medications are discontinued. Methadone withdrawal can be unpleasant and protracted. Withdrawal from buprenorphine is reported to be less severe, but many patients report it is difficult to withdraw from the last two milligrams and that dysphoria is the most problematic symptom. Researchers speculate this is due to Kappa receptor involvement, which may mediate dysphoria. There is no withdrawal with naltrexone, and discontinuing the medication does not require tapering.

***Preparing for the First Appointment***

Ideally, a re-entering RSAT graduate who is a candidate for MAT, is linked to a community-based provider, has direct or mediated contact with the provider agency, and completes all or part of the intake process prior to the date of release. These are some of the elements that characterize a **‘warm hand-off’** to post-release continuing care. In some cases, collaborative arrangements between corrections and community-based providers allow for additional in-reach activities such as completing assessments, health plan enrollment or pre-authorization (if required). In other cases, fewer of these pre-treatment activities are underway before individuals are released. The further RSAT staff can move the pre-release planning process beyond merely providing a name and address of a local treatment center, the better chances the client will follow through with the referral. The following list of additional steps can help prepare re-entering individuals to make the most out of their first appointments:

* Have them prepare a list of all current prescribed medications, over the counter

medications and vitamins or supplements they are taking.

* Have them gather all medical tests, documentation of health conditions, and medical records prior to release, including behavioral health conditions and treatments. Determine if these records can be transferred prior to release or if they can be hand-carried by the client.
* Make sure the client has signed any necessary releases and that copies of all releases have reached the referral agency and are retained in the client’s file.
* Make sure clients understand that they need to tell the doctor the details of any substances taken (prescribed or otherwise) so drug interactions can be avoided.
* Prepare them for frequent drug screenings; urine samples are typical but sometimes an oral swab is used.
* If they are beginning ORT, have them arrange rides home from their first few appointments until the side effects of methadone or buprenorphine are stable.
* They will need a long-term plan for daily transportation if they are considering methadone. They should also know frequent appointments will be required at the beginning of treatment with buprenorphine.
* If they are considering long-acting naltrexone, they should understand they must be free of all opioids for 7-10 days before the injection is administered and that the effects of the injection will continue for at least 28 days.
* If possible, they should enroll in any health insurance coverage for which they are eligible. If this is not possible, link them to enrollment assistance and/or have them fill out an application for health benefits.

**Exercise Two: MAT myth or fact **

Now that you are on your way to becoming a MAT expert, you can help separate myth from fact!

***Directions:*** *For each item below, decide if it represents a fact or a myth about*

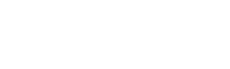
*MAT and mark the corresponding circle.*

**a. If an individual has not used opioids during a prison or jail stay, they do not need MAT and should not be referred to a MAT provider upon re-entry.**

 

**Myth or Fact?**

**b. Alcohol and drug addiction are major drivers of recidivism that affect up to 70% of the re-entry population; 50% of the re-entry population with substance use problems will relapse within one month of release.**

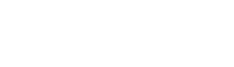


 

**Myth or Fact?**

**c. Alcoholics Anonymous (AA) and Narcotics Anonymous (NA) do not support the use of**

**medications.**



 

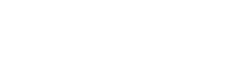
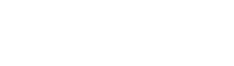
**Myth or Fact?**

**d. Medications are drugs, and you cannot be “clean” if you are taking any kind of drug.**

 

**Myth or Fact?**

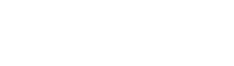
**e. If a client is dealing with mental illness as well as drug addiction or alcoholism, MAT should still be considered.**



 

**Myth or Fact?**

**f. Entering a MAT program upon release will expose RSAT clients to criminal associates and compromise their ability to stay out of trouble in the community.**



 

**Myth or Fact?**

Review and Resources

 The body produces its own opioids that can activate and inhibit adrenaline, endorphins and other biochemical and neurochemical messengers. When opioid drugs such as heroin, morphine and hydrocodone are misused it results in lasting changes which can interfere with survival mechanisms, memory, motivation, deep learning, and stress responses mediated by the autonomic nervous system.

 Heredity can affect susceptibility to opioid addiction along with other factors, including co-occurring mental health disorders and chronic pain. The interaction of environment and genetics can greatly contribute to the risk of developing an addictive disorder.

 As increasing numbers of women entering the criminal justice system, more high-risk pregnancies require collaboration with pre-natal care. Opioid use during pregnancy is usually treated with methadone, which is the recommended approach, although buprenorphine has shown promising results.

 The FDA has approved two medications for ORT (methadone and buprenorphine) that are effective and widely used in combination with counseling and recovery support. These treatments are typically underutilized by corrections but more RSAT programs are beginning to make use of them.

 Long-acting naltrexone injections are approved for treating alcohol and opioid use disorders. They can help prevent relapse upon release. Acamprosate and disulfiram (Antabuse) are the other medications approved for treating alcoholism. The use of MAT for alcohol use disorders is slowly increasing in community-based treatment.

 MAT providers conduct an assessment to determine if clients with opioid use

disorders are candidates for treatment and the best medication option for them. There are four phases of MAT: induction, stabilization, maintenance, and tapering.

RSAT staff can help prepare appropriate clients for re-entry by referring them to MAT providers and educating them about the process, expectations, and

requirements.

**Resources**

*Medication-Assisted Treatment for Opioid Addiction: Facts for Families and Friends.*

(2009). HHS Publication No. (SMA) 09-4443.

*Substance Abuse Treatment Advisory: Naltrexone for Extended-Release Injectable Suspension for Treatment of Alcohol Dependence*. (2007). Volume 6, Issue 1. HHS Publication No. (SMA) 07-4267.

*Substance Abuse Treatment Advisory: Emerging Issues in the Use of Methadone.*

(2009). Volume 8, Issue 1. HHS Publication No. (SMA) 09-4368.

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

*Programs.* (2005). HHS Publication No. (SMA) 08-4214.

*TIP 45: Detoxification and Substance Abuse Treatment.* (2006). HHS Publication No. (SMA) 08-4131.

*TIP 51: Addressing the specific needs of women.* (2009). (HHS Publication No. SMA

09-4426).

*Treatment Improvement Protocol (TIP) 40: Clinical Guidelines for the Use of Buprenorphine in the Treatment of Opioid Addiction.* (2004). HHS Publication No. (SMA) 07-3939.

National Institutes of Health. Clinical Trails Database: ClinicalTrails.gov. [www.clinicaltrials.gov/ct2/results?term=Vivitrol&Search=Search](http://www.clinicaltrials.gov/ct2/results?term=Vivitrol&amp;Search=Search)

State Opioid Treatment Authority Listing <http://dpt2.samhsa.gov/regulations/smalist.aspx>

National Treatment Locators [www.dpt.samhsa.gov/treatment/treatmentindex.aspx](http://www.dpt.samhsa.gov/treatment/treatmentindex.aspx)

SAMHSA Treatment Locator <http://findtreatment.samhsa.gov/>

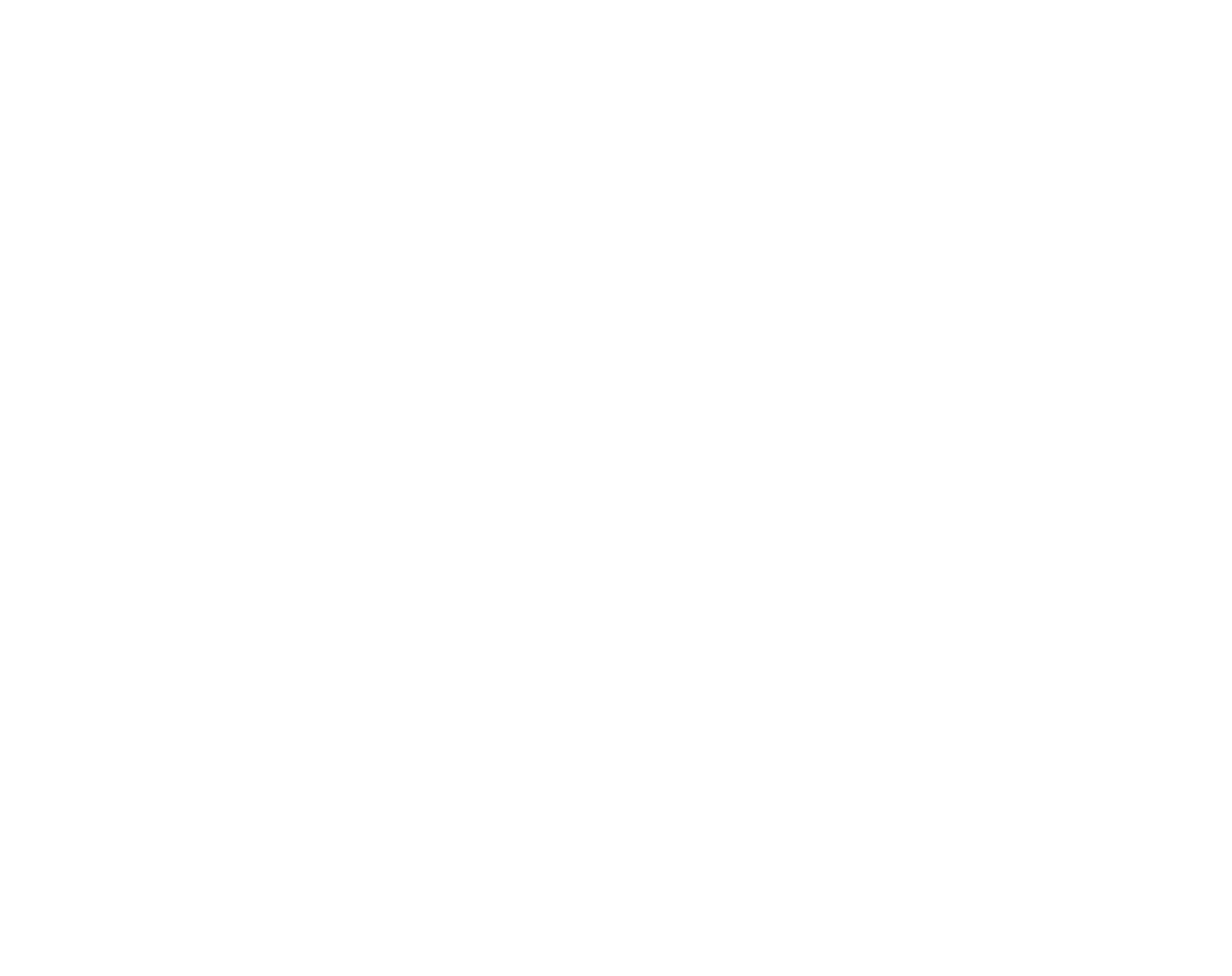
Opioid Treatment Program Locator <http://dpt2.samhsa.gov/treatment/directory.aspx>

Buprenorphine Patient - Physician Matching System <http://www.naabt.org/>

**Answers to Exercises**

Exercise One

The following are not associated with a higher or lower risk of addiction: Intelligence; Illegal or legal substance; Education level; Strength of character; Willpower



**Exercise Two**: Myth or Fact

a. Myth: An inmate who has a history of opioid addiction, but who has been free from opioid use during a stay in prison or jail may still benefit greatly from a period of MAT once he or she is released to the community.

b. Fact: Relapse rates and recidivism rates are high for re-entering offenders with drug and alcohol problems. Treatment during incarceration improves an offender’s chances of staying in recovery and out of custody, but followed up by community-based treatment and continuing care improves outcomes. If MAT is also available, chances improve further.

c. Myth: Alcoholics Anonymous and Narcotics Anonymous take no stand on MAT. The Narcotics Anonymous (NA) website states the following: *“In Narcotics Anonymous, members are encouraged to comply with complete abstinence from all drugs including alcohol. It has been the experience of NA members that complete and continuous abstinence provides the best foundation for recovery and personal growth. NA as a whole has no opinion on outside issues, including prescribed medications. Use of psychiatric medication and other medically indicated drugs prescribed by a physician and taken under medical supervision is not seen as compromising a person’s recovery in NA.”*

d. Myth: It is clear which drugs reinforce the pathways for addiction. Some medications have no abuse potential, including several of those used for MAT. Others have moderate or high abuse potential. If they are misused, abused or diverted, the person taking them illicitly may not be considered clean. If they are used as directed, they can play an important role in long-term recovery from addiction.

e. Fact: Most opioid dependent individuals are likely to deal with mental health disorders at some point. They can still benefit from MAT and from integrated treatments for co-occurring substance use and mental health disorders. Medication interactions should be considered.

f. Myth: Most types of MAT are now available through private physicians. The demographic of people seeking MAT for opioid addiction has changed significantly. More people with addiction to pain medications are receiving treatment.

**Module III: The Medications**

* 1. Methadone
  2. Buprenorphine
  3. Naltrexone
  4. Medications for alcohol use disorders
  5. Detox and Regulatory requirements

Review and resources

Learning Objectives:

After completing this module, participants will be able to:

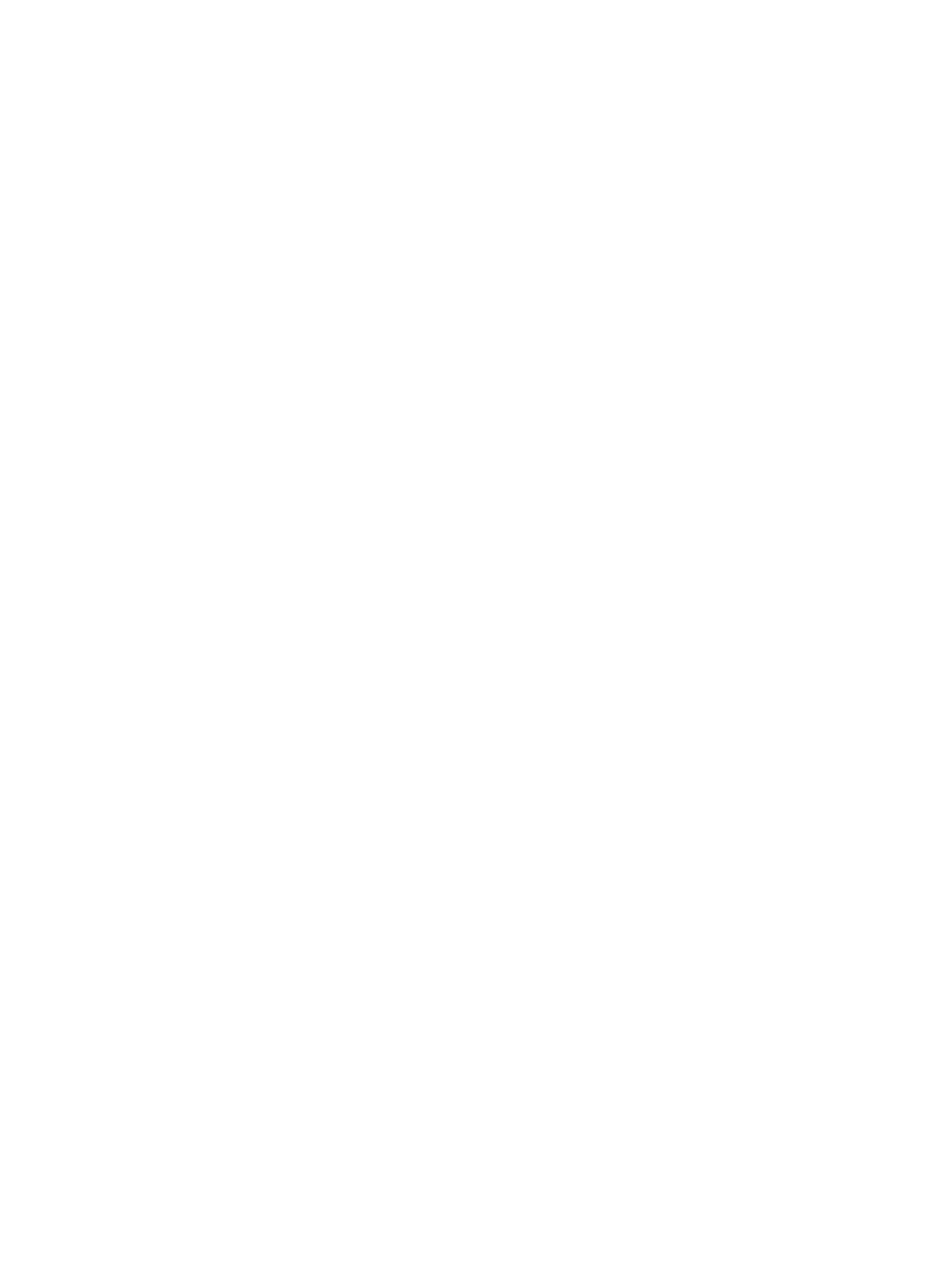
1. Discuss the different medications used to treat opioid addiction, explain how they work, and their risks and benefits.

2. List the medical providers qualified to dispense the various medications and examples of at least one regulation or restriction that applies.

3. Identify the medications approved for treating alcohol use disorders and one characteristic of each.

4. Name the regulatory requirements that govern the dispensing and prescribing of agonist medications used for opioid replacement therapy and discuss safe

alcohol and opioid detoxification practices.

**Knowledge Assessment**

**Pre/Post-Test: True or False**

1. Physicians and other qualified medical providers eligible to prescribe buprenorphine must complete a required training before they can prescribe it.

2. Methadone must not be started until 12-24 hours after the last opioid use.

3. It is illegal for employers to fire someone because they are receiving MAT, but it is legal to drug test them and ask for documentation from the treating physician if they test positive for buprenorphine or methadone.

4. The maximum amount of time someone in custody should receive MAT

is 90 days.

5. Treatment with long-acting injectable naltrexone has reduced opioid overdoses and relapse rates in the immediate post-release period, but it should not be expected to work for everyone.

6. Buprenorphine has a lower risk of overdose as compared to methadone and has proven to be very effective for MAT for opioid addiction.

7. Since naltrexone is not a controlled substance, there is no risk of opioid overdose among individuals with opioid use disorders who are treated with it.

8. Acamprosate is an opioid agonist that can help relieve chronic pain.

9. If a pregnant woman is treated with buprenorphine, she cannot be treated with Suboxone. She is treated with the formula that contains only buprenorphine.

A. Methadone

**WHAT IT IS:**

Methadone is a long-acting opioid medication that reduces cravings and withdrawal symptoms. It is usually given daily in a liquid form, but other forms such as pills and wafers may be available. Some of the brand names for methadone are: Dolophine, Methadone Diskets, and Methadose.

**WHAT IT DOES:**

Methadone is classified as a long acting opioid agonist. It can have an evening-out-effect with fewer highs and lows than other opioids because it leaves the body very slowly. It satisfies the areas of the brain that opioids act on, stopping withdrawal symptoms and reducing craving. It can diminish the effects of heroin and other illicit opioids. A person taking the correct prescribed dose of methadone will not experience the euphoric effects of short acting opioids. Patients feel normal, can continue to work, and perform tasks like driving. Since it controls withdrawal symptoms and blocks craving, people who are dependent on opioids tend to stick with it. This allows them to rebuild a life in recovery and avoid the health hazards and criminal lifestyle of illegal drug use.

**WHERE IT IS DISPENSED:**

Methadone is only dispensed at specially licensed and registered clinics.

**WHO IT WORKS FOR:**

Methadone is generally used to treat adults 18 and older who are heavy opioid users. It is often recommended for people with longer use histories, intense cravings, and severe withdrawal symptoms. It is the recommended treatment for opioid dependent women during pregnancy. It can work for people who have made other unsuccessful attempts to stop using. Methadone has also been effective for people who are undergoing treatment for HIV/AIDS. It may be a good choice for people who also have chronic pain. People who are considering methadone have to be able to get to a clinic each day for several months. Some take-home doses are permitted as people make progress in treatment.

**RESEARCH OUTCOMES:**

Methadone has been in use for many years. It is the best studied medication use for MAT for opioid dependence. Research shows methadone maintenance treatment combined with counseling and recovery support is highly effective and can reduce recidivism among re-entering individuals.

**STARTING METHADONE:**

Methadone can be started at any time. There is no need to wait after the last use until withdrawal symptoms begin, although providers won’t dispense it to anyone showing signs of opioid intoxication. After the first dose of methadone, patients stay at the

clinic for a few hours under observation. If withdrawal symptoms are a problem,

2-4 hours after the first dose another small dose may be given. The goal is to find the dose that controls withdrawal symptoms with the fewest side effects by starting out slowly and building up as needed. This lowers the risk of methadone overdose. It takes about five days before the therapeutic effects of treatment are fully realized.

**SIDE EFFECTS:**

Most people have side effects from methadone. Common side effects include constipation, sleepiness, and sweating. People who use methadone on a long-term may have moderate sexual side effects. It can also make heart problems worse or cause them.

**WARNINGS**

 Higher risk of overdose in the initial week and days of treatment

 Risk of fatality when combined with benzodiazepines

 High risk of overdose when combined with other substances, including alcohol

 Risk of driving impairment at the start of treatment or during dosage adjustments

 Increased risk of serious heart problems and/or sudden cardiac death

Note: Methadone now has a black-box warning about heart problems. To reduce this risk, experts recommend the following:

• Inform people about the heart risks

• Screen patients for heart health and history

• Include heart tests as part of the treatment program

• If a problem is found, the methadone dose should be lowered or stopped

**LENGTH OF TREATMENT:**

The decision of how long to take methadone is an individual choice. Generally, treatment with methadone for less than 90 days has little effect. People who stay in maintenance treatment for a year or more have the best rates of success. Some people stay on it for extended periods, and others choose to taper off very gradually when their provider feels they have derived the maximum benefit from maintenance treatment. There is some research that has shown that a high number of people return to drug use when they stop taking methadone. This is one reason patients may stay on methadone for as long as they wish to do so. When methadone is abruptly discontinued withdrawal symptoms are extremely unpleasant and protracted. Tapering patients who are discontinuing maintenance treatment is accomplished by gradually decreasing the dosage of methadone over several months. The more gradual the tapering process, the better the outcome.

**LEGAL ISSUES:**

Once a person is stabilized on the right dose of methadone, there is no impairment to physical and mental functioning, reaction times and judgment. Methadone does not affect the ability to get a driver’s license, but some commercial licenses may be restricted. People receiving methadone treatment are protected by confidentiality laws and anti-discrimination laws as long as they are not using illegal drugs or misusing their medication. Methadone may show up on a drug screen. An employer cannot legally fire someone for being treated with methadone as long as he or she is forthright about receiving treatment and can document that it is medically prescribed.

 It is illegal to discriminate against people because they are receiving MAT.

 Government services, student loans and food stamps cannot be denied to people receiving methadone as MAT for an opioid use disorder.

 Child welfare, drug courts or probation/parole cannot **legally** require people to stop methadone for MAT.

 Opioid treatment programs are required to help with medical, counseling, and vocational needs.

There have been successful legal challenges by individuals who were receiving methadone maintenance treatment in the community when it has been denied during incarceration. The Legal Action Center document listed in the resources below has more information.

**INFORMATION AND EDUCATIONAL MATERIALS**

**More Information on Methadone:**

<http://www.nlm.nih.gov/medlineplus/druginfo/meds/a682134.html>

[**Legality of Denying Access to Medication Assisted Treatment in the Criminal Justice System (2011)**](http://www.lac.org/doc_library/lac/publications/MAT_Report_FINAL_12-1-2011.pdf). Legal Action Center: <http://www.lac.org/doc_library/lac/publications/MAT_Report_FINAL_12-1-2011.pdf>

**How to Use Methadone Safely:**

[store.samhsa.gov/product/Follow-Directions-How-to-Use-Methadone-Safely/SMA09-4409](http://store.samhsa.gov/product/Follow-Directions-How-to-Use-Methadone-Safely/SMA09-4409)

**Methadone Treatment for Pregnant Women:** [store.samhsa.gov/product/Methadone-Treatment-for-Pregnant-Women/SMA14-4124](http://store.samhsa.gov/product/Methadone-Treatment-for-Pregnant-Women/SMA14-4124)

**Know Your Rights: Rights for People on MAT:**

[store.samhsa.gov/product/Rights-for-Individuals-on-Medication-Assisted-Treatment/SMA09-4449](http://store.samhsa.gov/product/Rights-for-Individuals-on-Medication-Assisted-Treatment/SMA09-4449)

B. Buprenorphine

**WHAT IT IS:**

Buprenorphine is a long acting opioid medication that reduces craving and withdrawal symptoms. It is usually taken once a day but may sometimes be taken every other day. Buprenorphine comes as a film and in pill form, both of which should be allowed to melt under the tongue or in the mouth. It should not be chewed or swallowed. Two formulations are used in MAT:

 Buprenorphine with naloxone [brand names Suboxone, Zubsolv, Bunavial] is the combination formula most commonly prescribed for MAT. The naloxone is added to prevent misuse. It can cause withdrawal symptoms in people who do not take it as directed and try to inject it.

 Buprenorphine mono formula [brand name Subutex] is the formulation that contains buprenorphine only without the added naloxone. It is sometimes used for MAT with pregnant women and people who are switching from methadone.

**WHAT IT DOES:**

Both formulas work the same way to satisfy some of the areas of the brain that opioids act on but without activating them fully. It is classified as a long acting partial opioid agonist. There is a much lower risk of overdose among patients treated with buprenorphine as compared to methadone. It may also have milder withdrawal symptoms for some patients when discontinued. A person taking a prescribed dose of buprenorphine as MAT for an opioid use disorder feels normal, can continue to work and perform tasks like driving. It controls withdrawal symptoms and craving and can diminish the effects of heroin and other illicit opioids. People can receive buprenorphine for MAT at a doctor’s office. Qualified nurse practitioners and physicians’ assistants are also able to prescribe it. Once patients are stabilized on the medication and making good progress, they may be prescribed up to a 30 day supply of medication to take at home. This allows people who cannot or will not get to an Opioid Treatment Program that dispenses daily doses of methadone to access MAT. Long term treatment with buprenorphine combined with counseling and recovery support is very effective. Maintenance treatment allows people to rebuild a life in recovery and avoid the health hazards and criminal lifestyle of illegal drug use.

**WHERE IT IS DISPENSED:**

Doctors can prescribe buprenorphine for addiction treatment if they complete special training and certification (8 hours of training). Qualified nurse practitioners and physicians’ assistants are now also able to prescribe it. Many substance use disorder treatment programs and certified Opioid Treatment Programs that dispense methadone also offer the option of buprenorphine. Providers can write a prescription for up to a 30 day supply of buprenorphine that can be filled at a public pharmacy.

**WHO IT WORKS FOR:**

Buprenorphine is approved for use in persons age 16 or older. Individuals with heavier use histories have success with buprenorphine and may even prefer it to methadone. It can also work well for people switching from methadone. It can help people who are dependent on oral opioid pain medications and/or illicit opioid drugs. It works best for individuals who are able to take the medication as prescribed and adhere to a treatment plan.

**RESEARCH OUTCOMES:**

Buprenorphine was more recently approved for MAT, so there are not as many studies on safety and effectiveness as there are for methadone. However, studies to date have found long-term MAT with buprenorphine, combined with counseling and recovery support is very effective. Outcomes among criminal justice populations include reduced recidivism and fewer relapse and overdose. Although methadone is the safest treatment for pregnant women, recent studies have shown good outcomes for treatment of pregnant women.

**STARTING BUPRENORPHINE:**

It is necessary to wait 12-24 hours after last opioid use before starting buprenorphine in order to avoid uncomfortable symptoms after taking the medication. After the first dose, patients stay at the doctor’s office or treatment center for a few hours for observation to monitor their reaction to the medication. If withdrawal symptoms are a problem, 2-4 hours after the first dose another small dose may be given. The goal is to find the dose that controls withdrawal symptoms with the fewest side effects.

**SIDE EFFECTS:**

Many people have some side effects from buprenorphine. These may include constipation, some sleepiness, sweating, and headache. Some people using buprenorphine for long-term MAT have reported sexual problems.

**WARNINGS:**

 Moderate to low risk of buprenorphine overdose

 High risk of overdose when combined with benzodiazepines

 Moderate to high risk of overdose when combined with other substances, including alcohol

**LENGTH OF TREATMENT:**

The decision of how long to take buprenorphine is an individual medical choice. There is not as much research on long-term treatment with buprenorphine, but most studies show that the longer patients are treated with buprenorphine, the fewer complications and relapses they have. It is safe to stay on buprenorphine for long-term maintenance treatment. Stopping treatment early, before nine months or less, increases the chances of returning to drug use. Patients discontinuing treatment are gradually tapered off the medication by slowly reducing the dosage. Withdrawal from buprenorphine tends to be less intense than withdrawal from methadone for most patients, but can still be unpleasant. Buprenorphine has been used with adolescents and others with shorter opioid use histories but is also effective for patients with heavy or longer use histories.

**LEGAL ISSUES:**

Once a person has stabilized on the right dose of buprenorphine, there is no impairment to physical and mental functioning, reaction times and judgment. It does not affect the ability to get a driver’s license, although some commercial licenses may be restricted. People receiving buprenorphine treatment are protected by confidentiality laws and anti-discrimination laws as long as they are not using illegal drugs or misusing their medication. Buprenorphine may show up on a drug screen.

An employer cannot legally fire someone for being treated with buprenorphine as long as he or she is forthright about receiving treatment and can document that it is medically prescribed.

 It is illegal to discriminate against people because they are receiving

buprenorphine as MAT for an opioid use disorder.

 Government services, student loans and food stamps cannot be denied because of MAT.

 Child welfare, drug courts or probation/parole cannot **legally** require people to

stop MAT with buprenorphine.

 Providers that prescribe buprenorphine are required to refer patients to counseling and other recovery support services that they need such as housing and vocational programs.

**INFORMATION AND EDUCATIONAL MATERIALS**

**More information about buprenorphine:**

[**http://www.nlm.nih.gov/medlineplus/druginfo/meds/a605002.html**](http://www.nlm.nih.gov/medlineplus/druginfo/meds/a605002.html)

**The Facts About Buprenorphine:** [**store.samhsa.gov/shin/content/SMA09- 4442/SMA09-4442.pdf**](http://store.samhsa.gov/shin/content/SMA09-4442/SMA09-4442.pdf)

**Know Your Rights: Rights for People on MAT:** [**store.samhsa.gov/product/Rights-for-Individuals-on-Medication-Assisted-Treatment/SMA09-4449**](http://store.samhsa.gov/product/Rights-for-Individuals-on-Medication-Assisted-Treatment/SMA09-4449)

**Article on a study of the advantages of buprenorphine during pregnancy:**

[**www.docguide.com/buprenorphine-favoured-over-methadone-opiate-addiction-pregnancy-presented-acog**](http://www.docguide.com/buprenorphine-favoured-over-methadone-opiate-addiction-pregnancy-presented-acog)

C. Naltrexone

**WHAT IT IS:**

Naltrexone blocks the action of opioids at the receptor sites in the brain. When people taking naltrexone use opioids, the euphoric and pain relieving effects are blocked. It also reduces craving among some people and help them avoid relapse. Naltrexone has a similar blocking action on the reinforcing effects of alcohol.

The long-acting injection is marketed under the name Vivitrol and is administered once every 28 days. It is approved for preventing relapse into opioid use. Naltrexone also comes in pill form that is usually taken daily. Some of the brand names for naltrexone pills are ReVia and Depade.

Naltrexone is not a controlled substance and it has no potential for addiction, diversion or misuse. Most people feel completely normal while taking naltrexone; however, it does have risks. If people take opioids while using naltrexone, they will not get the desired effect. If they are dependent on opioids, they may experience severe withdrawal symptoms after taking naltrexone unless they wait 7-10 days after last use. If they attempt to take enough opioids to override the blocking effect, they can overdose. There is also a risk of overdose if people return to opioid use after a period of being treated with naltrexone due to decreased tolerance.

If people drink alcohol while taking naltrexone, they will not experience any bad effects, but they also may not experience the reinforcing effects of alcohol, and this may impede cravings for more.

**WHAT IT DOES:**

Naltrexone is not used to help with opioid withdrawal symptoms. It cannot be taken safely until a person dependent on opioids has stopped all use for at least 7-10 days. People who have used it say it helps reduce their cravings, but it does not reduce craving and withdrawal symptoms the same way methadone and buprenorphine do.

The long-acting injection (Vivitrol) has been the most effective way to administer naltrexone for MAT. It resolves the problem of medication adherence associated with the self-administered pill. It can give people the extra motivation they need, help discourage a return to using, and give them a chance to benefit from counseling and recovery support.

An injection can help people coming out of jails, prisons, or long-term treatment programs avoid using or drinking for a month or more. This gives them a chance to locate counseling and community support. For some people, it may also help decrease the chances of using opioids or overdosing on opioids during the initial weeks following release.

**WHERE IT IS DISPENSED:**

Any doctor, physician’s assistant, or nurse practitioner can administer a Vivitrol injection or write a prescription for naltrexone pills that can be filled at a public pharmacy. They do not need special training and can treat people at their office.

**WHO IT WORKS FOR:**

Naltrexone works well for adults age 18 and older who have less intense withdrawal symptoms and cravings and are able to stop opioid use for 7-10 days prior to beginning treatment. It is a good option for people who want to eliminate all opioids from their

body right away. It works well for people who are highly motivated, such as those who may lose a job or go to jail unless they stay drug and alcohol free. Some preliminary research indicates it may be effective for probationers and parolees (Coviello et al.,

2012) and for adolescents who use opioids (Fishman et al., 2010).

It is also a good option for people who have difficulty keeping up with daily pills and do better with a monthly injection. People who have alcohol problems may find it helps relieve craving and helps them avoid or reduce drinking. It is more effective when patients have already withdrawn from alcohol and have stopped drinking for at least four days. People who must or may need to take opioid medication for pain are not good candidates for MAT with naltrexone.

**RESEARCH OUTCOMES:**

Vivitrol was approved for MAT with opioid addiction in 2010, so there are fewer studies on safety and effectiveness. The pill form has not worked well for people who are not motivated to stick with treatment. They simply stop taking the pills when they want to get high. Research on long-acting injectable naltrexone among justice-involved populations has shown when it is combined with behavioral treatment it reduces overdose rates, recidivism and relapse during the immediate post-release period. People receiving naltrexone tend to stay in treatment longer and are less likely to be re-incarcerated.

Vivitrol has a substantial effect on alcohol craving and has performed best in clinical trials with patients that have abstained from alcohol for at least four days prior to beginning treatment. Of those who were abstinent when they began treatment 32% remained abstinent during the entire six-month trial compared to 11% in the placebo group (O’Malley et al. 2007). It has demonstrated significant effects on six-month abstinence rates and reduced the number of days spent drinking and the number of drinks consumed (O’Malley et al., 2007).

**STARTING NALTREXONE:**

Naltrexone cannot be started until at least 7-10 days after the last opioid use, since it triggers withdrawal symptoms among dependent individuals when opioids are in the system. Patients are drug tested before naltrexone is administered and a small amount of naltrexone or a similar opioid antagonist (naloxone) is usually administered before the injection is given. It can be started anytime for patients using alcohol, including those who are actively drinking. People should stay at the doctor’s office for initial observation after receiving an injection, but can leave if their response is normal. The pill form can be started at home; the injection can be given in any medical office or at a treatment center.

**SIDE EFFECTS:**

Most people do not have many side effects from naltrexone. It is one of the safer medications used in MAT. The most frequent side effects are soreness in the area of the injection. Some people may experience one or more of these side effects: stomach pain or nausea, difficulty sleeping, feeling tired, headache, dizziness, or nervousness, or in rare cases, they may have sensitivity to naltrexone.

Overdose risk is high for people who try to use opioids while they are taking naltrexone. Risk is also elevated for those who return to opioid use after treatment due to decreased tolerance.

**WARNINGS**

 High risk of overdose if people treated with naltrexone use large amounts of opioids to override blocking effect.

 High-risk of overdose during relapses into opioid use due to lowered tolerance.

 Risk of triggering withdrawal symptoms with opioid use.

 Risk of drug interactions if opioids are given in a medical emergency.

 Risk of depression and suicidal thoughts

**LENGTH OF TREATMENT:**

The decision of how long to take naltrexone is an individual choice. Like other medications used for long-term MAT, it is safe to stay on it for as long as it is helpful. Some research has shown that a high number of people return to drug use when they stop taking naltrexone. There is no withdrawal from naltrexone. It can be stopped at any time. However, after a long acting injection is given, the effects will remain for a 30 day period.

**LEGAL ISSUES:**

Not a controlled substance; legal issues are not a concern.

**INFORMATION AND EDUCATIONAL MATERIALS**

**More information about naltrexone:**

[**www.nlm.nih.gov/medlineplus/druginfo/meds/a609007.html**](http://www.nlm.nih.gov/medlineplus/druginfo/meds/a609007.html)

**Facts about Naltrexone:**

[**store.samhsa.gov/product/The-Facts-about-Naltrexone-for-Treatment-of-Opioid- Addiction/SMA13-4444**](http://store.samhsa.gov/product/The-Facts-about-Naltrexone-for-Treatment-of-Opioid-Addiction/SMA13-4444)

**Helping Patients Who Drink Too Much: A Clinician’s Guide:**

[**http://pubs.niaaa.nih.gov/publications/Practitioner/CliniciansGuide2005/clinicians\_guide.htm**](http://pubs.niaaa.nih.gov/publications/Practitioner/CliniciansGuide2005/clinicians_guide.htm)

D. medications for Alcohol Use Disorders

**Research to Practice: MAT and alcohol use disorders**

In every discipline, a period of time is required by the field to take information from research and incorporate it into practice. This is sometimes referred to as diffusion of evidence-based practices or the science-to-service gap (Lamb, Greenlick & McCarty, 1998). The corrections field is no stranger to this phenomenon. It has also taken time for the criminal justice field to embrace certain data-driven approaches to rehabilitation. However, the literature on the science to service gap in the addiction treatment field points to a pressing need to encourage effective treatments that are supported by research (McGovern et al., 2004; IOM, 2005).

Despite recent FDA approval of two newer medications for treating alcohol problems, adoption by community providers is still limited (Abraham, Knudsen & Roman, (2011). A national survey of treatment providers found these medications were only used in 15%-17% of community programs (OAS, N-SSATS, 2009). One researcher points out that although more than 19 million people were estimated to have alcohol problems, only 1.6 million accessed treatment, and only 720,000 prescriptions for medications for alcohol addiction were filled (Mark et al., 2009). Utilization of research-supported pharmacological interventions for the treatment of alcohol problems is beginning to increase among community providers.

* For RSAT programs, it is important to keep in mind that none of the medications used to treat alcohol use disorders are controlled substances and have no potential for misuse or diversion.
* MAT for alcohol dependence was associated with fewer inpatient admissions and a 30% reduction in total healthcare costs each year. Healthcare costs for people with untreated AUDs are double that of those who receive treatment.

Some researchers speculate these medications are underutilized because the foundation of recovery for countless alcoholics has been rooted in complete abstinence, and treatment providers may be reluctant to deviate from the “formula.” According to the National Institute of Alcohol and Alcohol Abuse (NIAAA), all of the approved medication have been demonstrated as effective adjuncts to treatment and help to reduce relapses, the number of drinking days, the number of drinks, and to increase periods of abstinence (2005). Research on the use of MAT for alcoholism with incarcerated populations is scarce, with the exception of a few recent studies and older research on disulfiram or Antabuse during community supervision.

**Disulfiram** – Disulfiram has been in use for many years, but is no longer considered a first-line treatment choice (NIAAA, 2005). The action of the drug interferes in processing of alcohol, resulting in aversive physical responses to any alcohol intake. NIAAA clinical guidelines state: “The utility and effectiveness of disulfiram are considered limited because compliance is generally poor when patients are given it to take at their own discretion” (2005, p. 2). Its use is limited to highly motivated patients and those who can be directly observed while they take the medication. It is contraindicated for patients who are still drinking.

**Vivitrol** is the newest medication to be approved for treating alcohol problems and has demonstrated effectiveness. It is the only medication that has shown results when prescribed to patients who are actively drinking, but better results are achieved with patients who stop drinking four or more days before taking it (O’Malley et al., 2007). The National Institute for Alcohol Abuse and Alcoholism (NIAAA) Clinicians Guide (2005) provides a quick comparison of the medications. The new SAMHSA brief guide (2015) also has information on Vivitrol for alcohol problems. Both are listed in the resource sections of this manual.

**Acamprosate (Campral)** acts on the GABA and glutamate neurotransmitter systems to help relieve post-acute withdrawal symptoms. Post-acute withdrawal from alcohol is characterized by depression, anxiety, restlessness, and insomnia, among other complaints. GABA moderates and maintains balance of the excitatory neurotransmitters that lead to anxiety. Too little GABA tends to result in anxiety. Acamprosate is thought to control the anxiety, restlessness, and dysphoria that lead to relapse in abstinent alcoholics.

A meta-analysis of 17 clinical trials of acamprosate use in Europe showed that 36% of patients taking acamprosate were continuously abstinent at six months, compared to 23% of the placebo group. U.S. trials failed to confirm the results of the European studies, but there were several conditions that were not replicated. For example, the European subjects had more severe alcohol problems and were abstinent longer prior to beginning the medication (NIAAA, 2005).

Although the utilization of medications for alcoholism is not widespread among community-based providers, some private physicians are willing to prescribe them. Re-entering RSAT clients with alcohol use disorders with access to health care coverage may find this especially helpful if they have had difficulty remaining sober in the past. Since there is no potential for abuse with any of the approved medications, as long as they are seen as an adjunct to treatment and recovery support, there is every reason to let patients know about them and suggest appropriate patients consider trying them. If one doesn’t work for them, there is no harm in trying another. Education about medications that support abstinence from alcohol is an appropriate topic for clients in RSAT programs.

E. Detox Protocols and Regulatory Requirements

In custody settings, especially jails and lock-ups, detoxification must be addressed early in the intake process, ideally within two hours of admission, to reduce the risk of medical complications and potential fatalities. Medically managed detoxification for justice-involved individuals also reduces demand for contraband in custody settings; for probationers and parolees with opioid or alcohol use disorders, it can reduce the likelihood of violating conditions of community supervision (United Nations, 2008).

Justice-involved individuals usually undergo screening for substance use disorders. However, it is unwise to assume that an individual who self-reports a history of opioid use is exempt from the potentially life-threatening consequences of alcohol withdrawal. Opioid dependent individuals are likely to use other substances, including alcohol, and may increase their alcohol consumption when they attempt to curtail opioid use (VHA, 2014). Universal withdrawal severity screening of all arrestees and other justice-involved individuals with an established or suspected history of substance use is recommended (CorrectCare, 2016; CSAT, 2016), but studies have indicated that only approximately half of jails have implemented such protocols and practices (Fiscella, Moore, Engerman & Meldrum, 2005).

**BOP clinical practice guidelines**

A link to the updated Federal Bureau of Prisons Clinical Practice Guidelines for Detoxification of Chemically Dependent Inmates (2014) is listed on the resource page at the end of the first section of this manual. In addition to recommending taking a detailed substance use history, the guidelines suggest use of withdrawal severity scales, and the substitution of long-acting medication for short acting drugs of abuse when possible. The guidelines contain specific protocols for various substances. For example, they specify that alcohol withdrawal may be treated with:

Benzodiazepines Clonidine Thiamine Carbamazepine

These clinical guidelines can serve as a useful starting point for any facility that wishes to improve its medical management of withdrawal for individuals with SUDs entering their facilities. Unfortunately, the amount of suffering an addict endures does not correlate with the level of motivation to recover. Medications to relieve withdrawal symptoms combined with psychological support are humane measures and good medical practice.

Prescription medications that are used off label, on a short-term basis, for opioid withdrawal include:

Clonidine – normally used for blood pressure

Baclofen – derivative of gamma-aminobutyric acid (GABA) and a muscle relaxant

Lofexidine – alpha 2-adrenergic receptor agonist, used for blood pressure

Methocarbamal – normally used as muscle relaxant

**Managing withdrawal symptoms –** The National Commission on Correctional Health Care (2015) offers detoxification guidelines and information. They recommend the use of a standardized brief withdrawal severity assessment to help stratify risk levels:

* Low - should be monitored but do not require medical attention;
* Medium - require immediate medical attention but do not have complicating medical conditions;
* High - require immediate medical attention and intensive monitoring due to other medical conditions that elevate risk.

In community settings, justice professionals should refer individuals in acute withdrawal from alcohol or chemically related sedative/hypnotic drugs (e.g. benzodiazepines, barbiturates) to a community-based provider that offers medically managed detoxification services or a hospital emergency department if high risk. Common factors that can elevate risk levels include: a history of delirium tremens or withdrawal-associated seizures; a history of traumatic brain injury; advanced age; major medical or psychiatric comorbidity; and pregnancy (Fiscella, 2015).

Referral to community-based detoxification services that are not medically managed (‘social detox’) is permissible for low-risk individuals and those withdrawing from opioids who do not report heavy or recent alcohol use, are not displaying alcohol withdrawal symptoms, and do not have other serious medical conditions. Such facilities monitor individuals and transport them to the hospital when necessary. Outpatient detoxification is not uncommon for individuals withdrawing from opioids (CSAT, 2005).

In custody settings, the medical consequences of acute withdrawal from alcohol or chemically related sedative/hypnotic drugs (e.g. benzodiazepines, barbiturates) can be reduced or eliminated when protocols are implemented (BOP, 2014). Symptoms of opioid withdrawal should be treated in accordance with correctional health care guidelines, but they usually do not present a serious threat. The exception to this is pregnancy which is discussed in-depth in the section on specific practice guidelines for pregnant women with opioid use disorders.

**Medication-assisted detoxification and regulatory issues**

Most treatment professionals think of detoxification and maintenance as clinical terms; however, they are also legal terms. Medication-assisted treatment for opioid use disorders with agonist medications (methadone and buprenorphine) is carefully regulated and overseen by federal agencies. The Controlled Substance Act of 1974 was amended to structure opioid treatment programs by statute. It authorizes federally regulated clinics and opioid treatment programs to use methadone for short-term medication-assisted detoxification for 21 days or less, or to offer maintenance treatment, which is anything in excess of 21 days, or to offer both.

Detoxification alone is not considered treatment, and research shows that short-term detox rarely results in sustained recovery. Along with medication dosage, “*treatment dosage*” must be sufficient. Research consistently demonstrates offenders do not begin to show behavioral changes until they complete at least 90 days of treatment (Letessa, 2010; Marlowe, 2002). MAT specifically, has very little effect unless an offender receives a minimum of six months treatment, but people who stay with MAT for at least one year have the best outcomes (CSAT, 2005; Roberts, Hayes, Carlise & Shaw, 2007). Therefore, maintenance treatment usually refers to long-term MAT of one year or more.

To avoid confusion between clinical and legal definitions the term detox is replaced with medically managed withdrawal when referring to MAT. With medically managed withdrawal from opioids a variety of prescription and over-the-counter medications may be used on a short-term basis to help ease the physical symptoms of withdrawal.

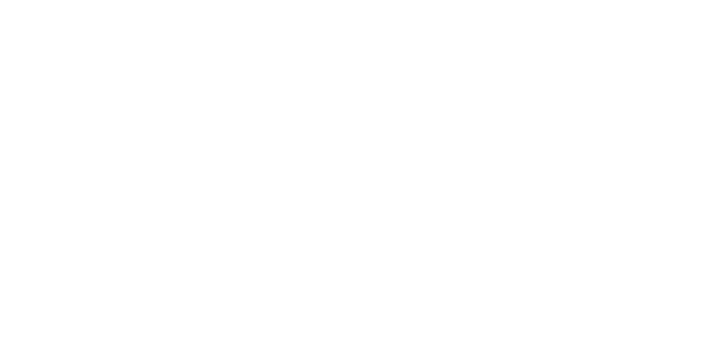
**A final word**

The Drug Treatment Act of 2000 has made it possible for people to access MAT for opioids who may not have otherwise been able to receive treatment. Prior to 2000, opioid-like medications for the treatment of addiction could be dispensed by physicians, but not prescribed. They were only available through registered clinics. Additional new legislation is making MAT with buprenorphine more available. Physicians will be able to treat up to 275 patients, and nurse practitioners and physicians’ assistants will also be able to prescribe it. The FDA approval of Vivitrol in 2006 for alcohol and in 2010 for opioids provides additional MAT options available through primary care physicians. Some of the newer medications and formulations are well-suited for treatment in custody settings. This could mean many thousands of people who have never had access to effective treatment may now have choices.

The criminal justice system can motivate individuals with opioid and alcohol use disorders and make treatment adherence desirable. It can offer long-term treatment in custody settings, beyond what is offered in most community-based treatment programs, and it can bring to bear its partnerships across human services to affect referrals to continuing care during transitions to community supervision. If effective pharmacological treatments become available within facilities – or upon re-entry, RSAT clients and the rest of society face a brighter, more secure and safer future.

**Exercise Three**

*Now that you know about the medications, take a look at these offender profiles. Decide if the client is a candidate for MAT by endorsing the yes or no box. If you endorse “yes” then check off the medication or medications that might be appropriate. Check off all that apply.*



 Yes  No

**Methadone** **Suboxone**

**Subutex** **Vivitrol**

**Antabuse** **Acamprosate**

**Naltrexone**

**LENA:** 30 years old, mother of twin boys age 7

Uses prescription opioids and heroin (snorts- no IV use)

3 counts of forgery; 1 count of prescription fraud

Boys in kinship placement with sister

Worked as LPN, but license revoked due to drug use Arrested when her boyfriend stole a prescription pad Repeated parole violations; multiple treatment failures; sexual abuse, trauma

“***I just want my boys back. I’ll do whatever I have to.”***

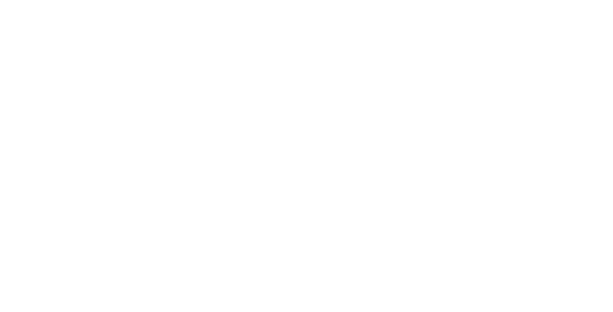
**NICK:** 26 years old, heroin addict

Gang affiliation; numerous arrests for violent crimes Awaiting trial for aggravated felonious sexual assault Was on parole after serving 4 years for a home invasion when arrested

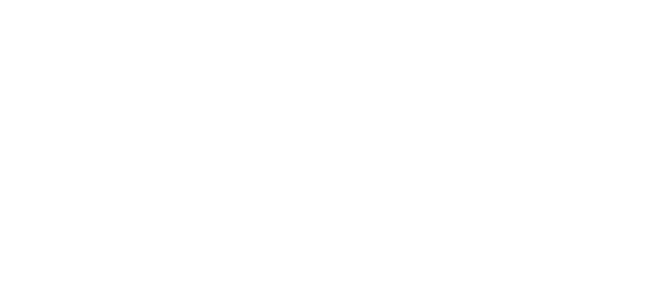
Scars on his neck from IV drug use

Has been on and off methadone before

“***I can do good if I get back on the clinic.”***



 Yes  No



**Methadone** **Suboxone**

**Subutex** **Vivitrol**

**Antabuse**  **Acamprosate**

**Naltrexone**

 Yes  No

**Methadone** **Suboxone**

**Subutex** **Vivitrol**

**Antabuse** **Naltrexone**

**Acamprosate**

**STAN**: 42 years old, Addicted to heroin

Does speedballs (injects heroin/cocaine mix) Early criminal justice involvement

Early tobacco, alcohol, and drug use

Repeated arrests; multiple treatment failures When he has stopped heroin, he drinks instead Daily criminal activity to support his habit

Family history of alcoholism and mental illness

“***I’m getting too old for this crap.”***

 Yes  No

**Methadone** **Suboxone**

**Subutex** **Vivitrol**

**Antabuse** **Acamprosate**

**Naltrexone**

**Renee:** 36 years old, pregnant; her drug of choice is oxycodone, but she has used heroin and other opioids. Long history of arrests for prostitution and shoplifting Juvenile detention, foster homes, and multiple traumas Daughter placed in foster care by Child Welfare Services Wants to get in pre-release program for mom’s and babies

“***I can’t lose this baby. This is my time to step up and***

***be a mom.”***

**RICKY:** 57 years old, alcoholic; served 7 years-vehicular homicide.

Multiple DWI’s; Simple assault

Has beginning stage cirrhosis

Moving in with daughter after release

Many failed treatments

“***I just want to live a simple life and***

***stay on the right side of the law”***

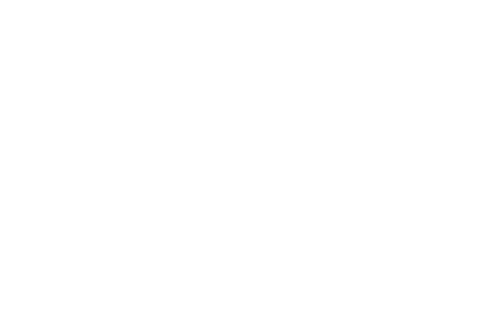
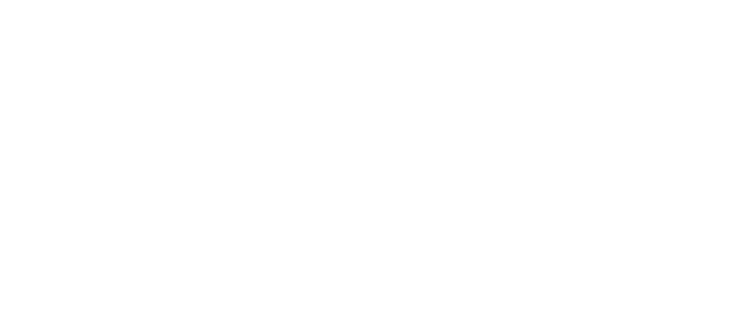
 Yes  No

**Methadone** **Suboxone**

**Subutex** **Naltrexone**

**Antabuse** **Acamprosate**

**Vivitrol**



Review and Resources

 The medications approved by the FDA for MAT are for the treatment of opioid and alcohol use disorders. They differ in their availability, their mechanisms of action, and in their effectiveness. There are risks associated with all of the medications. Clients should be aware of the risks, as well as the benefits.

 Methadone and buprenorphine are both used for ORT. They are long-acting opioid agonists (methadone –a full agonist and buprenorphine –a partial agonist). They

are extremely effective when combined with counseling and recovery support. Buprenorphine can be prescribed by private physicians and other qualified medical professionals. Both have been used in correctional facilities, but not to any great degree. They are controlled substances and are carefully regulated.

 Vivitrol is the long-acting injectable form of the opioid antagonist, naltrexone, which is also available in pill form. Both forms are used to treat alcohol and opioid use disorders by blocking the action of opioids at the receptor site. The injectable form is best, since medication adherence is a problem with the self-administered pill form. Naltrexone is not a controlled substance and may be especially well suited for correctional treatment.

 Disulfiram (Antabuse) and Acamprosate are approved for treatment of alcoholism and alcohol abuse, but disulfiram use is limited mostly to patients who can be observed taking the medication daily. Acamprosate has been successful in European studies at increasing abstinence rates. It works by relieving some of the anxiety and dysphoria associated with post-acute withdrawal from alcohol. Vivitrol

has demonstrated significant results in reducing craving, drinking days, the number of drinks, and in increasing abstinence rates.

 Many medications are used to help ease withdrawal symptoms. The BOP has clinical guidelines for safe detoxification from alcohol, opioids, barbiturates, and other substances. Although detoxification is not treatment and relapse is likely to occur without long-term services, assisting inmates who are in withdrawal is good practice and an ethical responsibility.

 Increased access to MAT has the potential to bring effective treatment to more justice-involved individuals. RSAT programs can help re-entering individuals obtain medical coverage, refer to MAT providers in the community and education clients about overdose risk and prevention.

**Resources**

*Detoxification of Chemically Dependent Inmates - Federal Bureau of Prisons. Clinical Practice*

*Guidelines*, 2015:

*TIP Series 45: Detoxification and substance abuse treatment.* (2006). DHHS Publication No. SMA 06-

4131. Rockville, MD: Substance Abuse and Mental Health Services Administration.

*TIP Series 54: Managing chronic pain in adults with or in recovery from substance use disorders.(*2012a). HHS Publication No. SMA 12-4671. Rockville, MD: Substance Abuse and Mental Health Services Administration.

**Peer support:**

 NA meeting locator: <http://www.na.org/?ID=home-content-fm>

 Cocaine Anonymous: http://[www.ca.org](http://www.ca.org/)

 Heroin Anonymous: <http://www.heroin-anonymous.org/>

 Methadone Anonymous: <http://www.methadonesupport.org/>

 SmartRecovery: http:/[/www.smartrecovery.org](http://www.smartrecovery.org/)

 Dual Recovery Anonymous: [http://draonline.org](http://draonline.org/)

**National and local advocacy** – **may also offer education and peer-based support:**

 Faces and Voices of Recovery: <http://www.facesandvoicesofrecovery.org/>

 National Alliance of Methadone Advocates: [www.methadone.org](http://www.methadone.org/)

 Advocates for Recovery through Medicine (ARM): [www.methadonetoday.org/armhelp.htm](http://www.methadonetoday.org/armhelp.htm)

 National Alliance of Advocates for Buprenorphine Treatment (NAABT): [www.naabt.org](http://www.naabt.org/)

 Opioid Dependence Resource Center [http://www.methadone.net](http://www.methadone.net/)

 National Advocates for Pregnant Women <http://www.advocatesforpregnantwomen.org/>

**Substance Abuse and Mental Health Services Administration, Division of Pharmacologic**

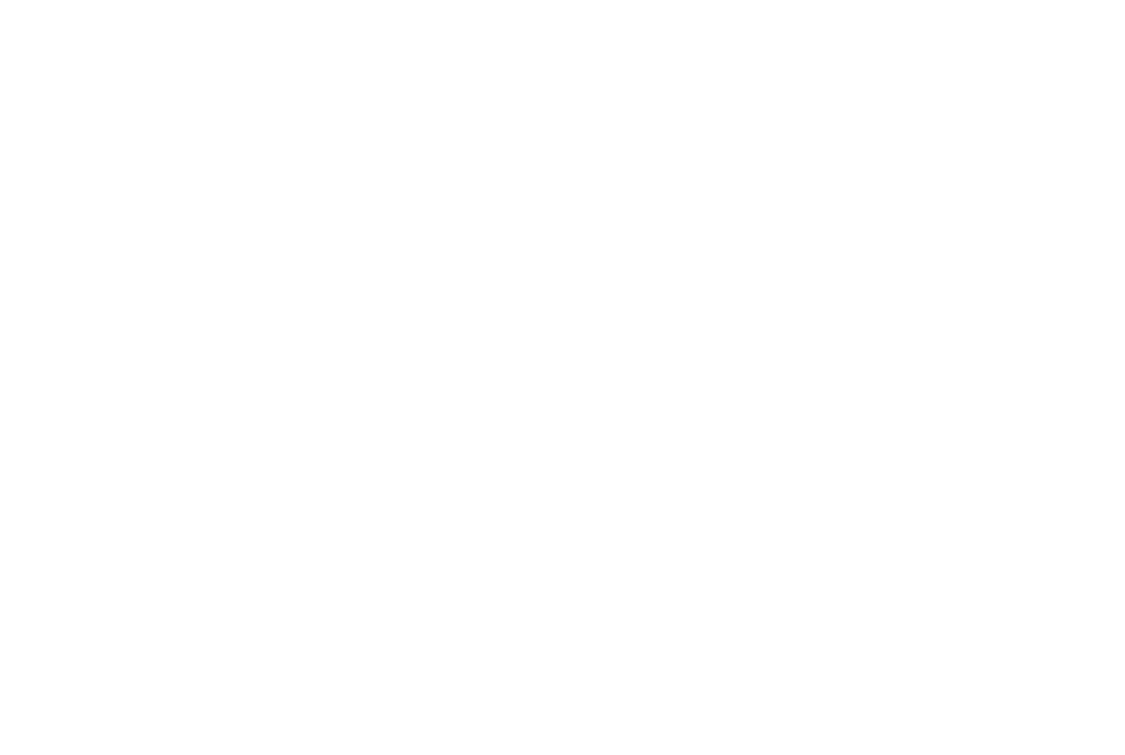
**Therapies.** Patient education materials-retrieved from <http://dpt.samhsa.gov/index.aspx>

 Medication Assisted Treatment (MAT) for substance use disorders

 The facts about naltrexone for treatment of opioid addiction (SMA) 09-4444

 Medication Assisted Treatment for opioid addiction: Facts for families and friends (SMA) 09-4443

Introduction to methadone (SMA) 06-4123



Answers to **Exercise Three**

Lena: Yes. Suboxone is likely first choice for Lena, since she does not have an extremely severe and long- term history of opioid addiction, but has significant consequences. She is motivated, so she could be a candidate for Vivitrol. Methadone is also acceptable.

Nick-:No. Nick may not be appropriate for treatment at this time since he will serve remaining time on his home invasion sentence and may be facing additional time if convicted on current charges. His history of gang affiliation may suggest he is a risk for diversion or trafficking while in custody. When he is closer to release he may be reevaluated for MAT.

Stan: Yes. Methadone is likely the best choice for Stan, due to his long addiction history. Suboxone may also work for Stan, if it controls his withdrawal symptoms and is offered as part of a highly structured treatment program. Vivitrol is also possible and might help Stan not to substitute alcohol.

Renee: Yes. Methadone is indicated for Renee. If she were unable to be treated during her pregnancy with methadone or if she wanted to be treated with buprenorphine, Subutex would be acceptable.

Ricky: Yes. Vivitrol for Ricky’s alcohol addiction would likely be the first choice. Ricky’s daughter would have to take responsibility for monitoring medication compliance if Antabuse were prescribed. Acamprosate might also work for Ricky and would be and option if Vivitrol did not help; however, compliance could be an issue.

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[%20for%20Underserved%20Women/co524.pdf?dmc=1&ts=20120829T1500331769](http://www.acog.org/%7E/media/Committee%20Opinions/Committee%20on%20Health%20Care%20for%20Underserved%20Women/co524.pdf?dmc=1&amp;ts=20120829T1500331769)

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