Opioid Abuse: Specific Populations

Opioid Dependence in Pregnancy

When women dependent on heroin, prescription pain medicines, or other opioids become pregnant, several treatment options must be considered.

**Dangers of Opioids for Infants**

Exposure to opioids in the womb may limit a baby’s growth and brain development.[[1]](#footnote-1) These dangerous effects are worsened when harmful ingredients are present in impure drugs bought on the street. Inadequate prenatal healthcare, a poor diet, and a dangerous lifestyle often accompany opioid addiction, all of which can also lead to poor health of both mother and baby. IV Drug users are also at a higher risk of HIV and Hepatitis C, making it even more important for pregnant women dependent on injected drugs such as heroin to receive prenatal medical care.

When pregnant women try to stop using opioids without help, cycles of opioid intoxication and/or withdrawal can lead to miscarriage, stillbirth, premature (early) birth, and possible developmental abnormalities in the baby.

**Opioid Addiction Treatments in Pregnancy**

**Detoxification in pregnancy**: The process of detoxification can be dangerous for pregnant mothers and their unborn babies. In some cases, detox can lead to miscarriage or premature (early) birth. Withdrawal is especially dangerous early or late in pregnancy. Pregnant women should always talk with a physician before considering detoxification.

**Drug-free treatment in pregnancy**: Ideally, pregnant women should completely stop taking opioid drugs during pregnancy. However, this can be very difficult for opioid-dependent patients, and relapses often occur. Cycles of opioid use and withdrawal are especially harmful in pregnancy, for both the mother and her baby. Some women may choose to enter an inpatient rehab facility during pregnancy. By living at the center, women receive help avoiding opioids. However, few treatment centers for pregnant women exist. The expense and inconvenience of this treatment make it impossible for most women.

**Medication-Assisted Treatment in Pregnancy**: Medication-assisted treatment for opioid addiction is not ideal for pregnant women. However, treatment with methadone or buprenorphine can be safer for the health of mother and infant than the repeated cycles of relapse and withdrawal that often accompany attempts at abstinence without help from medication.

* Methadone is the standard treatment for opioid addiction in pregnant women, though buprenorphine is also increasingly being used. Pregnant women may need larger doses of medication, because their metabolism increases during pregnancy. They may need more than one dose of medication each day.
* Babies born to mothers using methadone are born with **neonatal opioid withdrawal syndrome** (see below). Buprenorphine has similar effects, although it may cause a milder infant withdrawal syndrome.[[2]](#footnote-2) This is not an ideal effect, but with medical care, no known birth defects are associated with prenatal exposure to methadone.[[3]](#footnote-3)
* Beginning treatment with long-acting naltrexone is not ideal in pregnancy, because this treatment requires an extended time of withdrawal that can lead to miscarriage or premature birth.

**Neonatal Opioid Withdrawal Syndrome**

Neonatal opioid withdrawal syndrome is one type of Neonatal Abstinence Syndrome (NAS). This syndrome can occur in infants born to mothers who are dependent on many different types of drugs during pregnancy.

* Babies born to mothers dependent on opioids or opioid treatment (methadone, buprenorphine) are born with the same dependence on opioids as their mothers. These babies experience withdrawal after birth, when they are cut off from their mother’s supply of opioids. Infants in withdrawal may cry, be especially irritable, and have exaggerated reflexes. They may also have tremors, seizures, vomiting, diarrhea, poor feeding, sweating, temperature instability, and a runny nose.
* **Treatment:** Withdrawal symptoms occur in a newborn within 1-3 days after birth, and may need to receive care in a hospital for up to 1 week after birth. Infants may have to be treated with opioid medications if withdrawal is severe.[[4]](#footnote-4)
* Infant withdrawal can be especially harmful if the mother does not inform her medical team that she has ben using opioid drugs. Honesty with medical providers is important so that treatment can begin as early as possible.

**[Link to Pregnancy Tri-fold]**

Opioid Addiction with Psychiatric Comorbidities

People with an opioid use disorder are at higher risk for other, co-occurring psychiatric disorders (called “psychiatric comorbidities”). For example, those who abuse opioids are more likely than their peers to suffer from depression, anxiety, PTSD, antisocial personality disorder, and/ or other substance use disorders (abuse of tobacco, alcohol, cannabis, stimulants, and/or benzodiazepines).

Some opioid users experience psychiatric symptoms **only while using** a drug or when in withdrawal from a drug. For example, opioid users often experience symptoms of depression, difficulty sleeping, and/or anxiety when in withdrawal. For some people, these problems stop after a period of time with no drug use.

Table 1.

|  |
| --- |
| **Psychiatric Diagnoses Associated with Opioid Intoxication and Withdrawal [[5]](#footnote-5)** |
| Depression  Sleep Disorders  Sexual Dysfunction  Delirium  Anxiety (in withdrawal) |

Sometimes, psychiatric disorders exist **independently** from a person’s drug use, and do not end after a person has stopped using opioids. These disorders can only be diagnosed if they continue after a person has stopped using drugs for a period of time. For example, in order for an opioid user to receive a psychiatric diagnosis of depression, he or she would have to experience depression before beginning to use opioids and/ or after stopping their use and completing withdrawal.

**Adults with a mental illness are more at risk to abuse opioids or other drugs.**

* About 20% of adults with mental illness also have substance abuse issues (8.4 million people).[[6]](#footnote-6)
* **Over half of these individuals do not receive any treatment for substance use problems.**[[7]](#footnote-7)
* People with co-occurring psychiatric disorders may find recovery from substance addiction to be more difficult, and may require more intense treatment.
* The most effective treatments address substance use disorders and all other active psychiatric disorders at the same time.

**[Link to Psychiatric Comorbidities Brochure]**

Opioid Addiction with Medical Co-Morbidities

**Opioid Abuse and Hepatitis C Virus (HCV)**

More than 3 million people in the U.S. are estimated to have long-term Hepatitis C virus (HCV) infection. Most people do not know they are infected.

Injection-drug users are at high risk for Hepatitis C Virus. In fact, injection drug use is the most common way to catch HCV in the U.S.[[8]](#footnote-8)

* **How is Hepatitis C spread?**

HCV can be spread when blood from an infected person enters the body of someone who isn’t infected. Sharing needles or other injection drug equipment can spread HCV. Sharing needles with a person who seems “healthy” doesn’t protect from infection, because most people who have HCV don’t look or feel sick and don’t know that they are infected. Each injection-drug user who is infected with HCV is likely to infect 20 other people in their lifetime.[[9]](#footnote-9) **Injection of opioids like heroin not only spreads HCV but also weakens the body’s natural defenses against infection and can worsen the infection.[[10]](#footnote-10)**

* **Symptoms of Hepatitis C**

Many cases of HCV are asymptomatic. This means that the infected person doesn’t feel sick and doesn’t know that he or she is infected. People can live with HCV for decades without signs of infection.

About a quarter of people infected with HCV will experience only an “acute” (short-term) illness, similar to a case of the flu, which occurs within the first 6 months after someone is exposed to HCV. Over time, about 75%–85% of people who are infected with HCV develop a “chronic” (long-term) infection that can last a lifetime and lead to serious liver disease.[[11]](#footnote-11) Symptoms of liver disease include fever, tiredness, loss of appetite, nausea, vomiting, dark urine, grey stools, joint pain, and/ or jaundice (yellow color).

* **Current and past injection drug users are at risk for Hepatitis C infection, and should be tested and receive treatment if necessary.**
* **To learn more about Hepatitis C testing and treatment, visit the CDC’s website**: http://www.cdc.gov/knowmorehepatitis/

**Opioid Abuse and HIV**

* **Risk of HIV with Injection Drug Use**

Heroin use involves a lot of risks. Dangerous “side effects” of heroin addiction often include involvement in criminal behavior, buying and selling illegal drugs, and risk of infectious disease through sharing drug supplies.

One of the most dangerous “side effects” of injecting heroin is the increased risk of being exposed to HIV and other diseases. In 2010, about 10% of new cases of HIV in the US were among injecting drug users.[[12]](#footnote-12) Sharing needles, syringes, or other injection equipment may expose drug users to the blood or body fluids of other users who may have HIV. Drug use can also lead to unprotected sexual contact, which can also transmit HIV infection. Using non-injection drugs often does not eliminate the risk of being infected with HIV/AIDS, because people under the influence of drugs still often engage in risky sexual and other behaviors that can lead to exposure to these diseases.[[13]](#footnote-13)

* **Addiction Treatment Can Reduce the Risk of Contracting HIV**

Use of MAT like buprenorphine or methadone has been shown to reduce the risk of contracting HIV through risky behavior related to illicit drug use. Participation in methadone or buprenorphine treatment programs can dramatically reduce a patient’s likelihood to share needles or and participate in risky sexual behavior related to illicit drug use.[[14]](#footnote-14) The National Institute on Drug Abuse recommends that drug abuse treatment be combined with HIV prevention, education, and community outreach that addresses the risk factors for HIV that especially affect drug users, like sharing needles and unsafe sexual practices.[[15]](#footnote-15)

**Chronic Pain and Opioid Abuse**

Chronic pain can be defined as pain that continues more than three months beyond the usual recovery period for an illness or injury, or as pain that may continue for months or years due to a long-term illness or condition. However, definitions vary: some define chronic pain as pain that last more than six months beyond a usual recovery period, and define pain that lasts only a few weeks more than expected as a “subacute” pain syndrome.[[16]](#footnote-16) Chronic pain is usually not constant, but it can interfere with daily life at all levels. [[17]](#footnote-17) For more information on chronic pain, resources can be found at the American Chronic Pain Association’s website, **theacpa.org**.

Chronic pain affects a quarter of people seeking primary healthcare in the U.S.[[18]](#footnote-18) Opioid pain medications are commonly used to treat chronic pain.

* **Opioid medications commonly use for chronic pain treatment include**:
* Codeine
* Oxycodone (OxyContin, Oxyfast, Percocet, Roxicodone)
* Fentanyl (Actiq, Duragesic, Fentora)
* Hydrocodone (Lorcet, Lortab, Norco, VIcodin)
* Morphine (Avinza, Kadian, MS Contin, Ora-Morph SR)
* Hydromorphone (Dilaudid, Exalgo)
* Meperidine (Demerol)
* Methadone (Dolophine, Methadose)

Long-term use of these opioid medications has become a common treatment for chronic-pain. However, opioid painkillers’ strong effects in the brain sometimes lead to opioid misuse and abuse.

**A “Perfect Storm”: Chronic Pain and Long-term Opioid Use**

Chronic pain with long-term opioid use can lead to a “perfect storm” for the development of opioid dependence and addiction.

* **Chronic Pain causes changes in the brain.**

Chronic, long-lasting pain is often associated with anxiety, depression, problems in learning and memory, and reduced quality of life.[[19]](#footnote-19) For example, a part of the brain called the hippocampus decreases in size in chronic pain patients. These changes may be the underlying cause of learning and emotional problems that chronic pain patients often experience.[[20]](#footnote-20) Though things like attention and general intelligence are unaffected by chronic pain, research has shown that long-term pain can impair a patient’s everyday behavior- especially in risky or emotional situations or decisions.[[21]](#footnote-21) Patients with chronic pain also may have trouble with “prospective memory,” the process involved in remembering to do things at some future point in time. Examples include having difficulty remembering to keep an appointment, such as a visit to a clinic, or to pay a bill on time.[[22]](#footnote-22)

* **Prescription opioids may also have adverse effects on cognitive functioning, a risk that is rarely evaluated in chronic pain patients.**

Though chronic pain itself has been shown to impair some cognitive functions, long-term opioid therapy in addition to chronic pain has been shown to add further impairment. Chronic pain patients treated with long-term opioid therapy may have reduced spatial memory, less flexibility for change, and impaired working memory compared to chronic pain patients not treated with opioids.[[23]](#footnote-23)

* **Chronic pain can increase a person’s risk for opioid abuse.**

Researchers have found that chronic pain can “prime” the brain for the effects of opioids. Both chronic pain and opioid drugs share a pathway in a part of the brain called the central amygdala, which regulates emotional responses to pain as well as the “reward” effects of opioid drugs. Research in mice found that persistent pain can increase the brain’s sensitivity to the “reward” effects of opioids like morphine. [[24]](#footnote-24) Chronic pain patients may also develop other risk factors for opioid dependence and addiction, like trouble with decision-making. [[25]](#footnote-25) A significant percentage of chronic pain patients (3-19%) treated with long-term opioid therapy suffer from drug or alcohol dependency or addiction. [[26]](#footnote-26)

**How can individuals with chronic pain avoid opioid dependence?**

**1) Can pain be managed without opioids?**

**Other treatments for chronic pain:** Opioids may be effective for short-term pain relief, but the evidence is mixed for long-term therapy with opioids for chronic pain.[[27]](#footnote-27) The World Health Organization and American Pain Society recommend non-opioid pain medicines as first-line agents for the management of chronic pain. Many patients will experience pain relief with non-opioid pain medicines or alternative treatments, without the need for long-term opioid use.

**2) Are risk factors for opioid abuse present, such as a history of opioid or substance addiction? If so, what are safer options for pain management?**

**Transitioning to other pain medication.** Patients on opioid pain treatment for a long period of time may eventually develop tolerance, or the need to take more medication to achieve the same pain-relieving effects. Over time, an opioid medication may no longer provide effective pain relief.

* **Buprenorphine**: Long-term opioid users who want to transition away from strong opioid medications may choose to transition to sublingual buprenorphine. Buprenorphine is only a partial opioid agonist, and formulations often include naloxone, a built-in safety measure against abuse by injection. Opioid-tolerant patients who transition to use of buprenorphine/naloxone may experience significant reductions in pain.[[28]](#footnote-28)

**Buprenorphine/ Naloxone has great potential as a safe and effective pain-relieving medication in chronic pain patients who abuse opioids.** Buprenorphine/ Naloxone can reduce pain and manage withdrawal symptoms in chronic pain patients with long-term opioid use, as well as make use/abuse of other opioids less likely in at-risk patients with a history of opioid abuse.[[29]](#footnote-29) Doses of Buprenorphine/ naloxone are safer to use than other stronger opioids like methadone, but may need to be dosed more than once daily to relieve chronic pain in pain patients seeking treatment for opioid addiction.

* **Methadone** treatment is often not the best choice chronic pain patients. Methadone treatment not only requires daily clinic visits, but also maintains a patient’s dependence on strong opioids. One danger of taking methadone for pain is that its pain-relieving effects wear off many hours before the blood levels drop, so people may take extra doses and end up at risk for accidental overdose. Methadone can provide long-lasting pain-relieving effects, but should not be used until other options have failed. Other opioids are safer to use in pain management than methadone.
* **Naltrexone:** Chronic pain patients who wish to transition away from long-term opioid treatment may also choose to remain abstinent from opioids altogether. These patients may benefit from long-acting naltrexone doses to prevent relapse after detoxification. Although long-acting naltrexone treatment prevents all opioid medications from acting in the brain, patients can still use non-opioid pain medications during treatment.

**Opioid Detoxification in Chronic Pain Patients**

Chronic pain patients with opioid addiction may be especially reluctant to undergo detoxification from opioids, for fear that their pain will become unmanaged.

However, many chronic pain patients may be able to receive effective pain management from non-opioid pain medications, both during and after the detoxification process.

**Chronic Pain with Other Psychiatric Disorders**

Chronic pain often occurs along with other common psychiatric disorders, like depression and anxiety. Patients with mental health and substance abuse disorders are more likely to receive long-term opioid therapy for chronic pain. However, these patients are also more likely to have adverse outcomes from long-term opioid use. Opioid pain medications have temporary anti-anxiety and antidepressant effects, and are sometimes used by patients to “self-medicate” emotional and physical pain. These benefits rarely last for long, and instead may lead to dependence and addiction.[[30]](#footnote-30)

**Psychiatric Care for Chronic Pain Patients:** Opioids are commonly believed to be the ‘de facto’ and only treatment for patients with chronic pain. However, patients with chronic pain should also be screened for common psychiatric or mental health issues, and receive treatment if needed. The prescription opioid abuse epidemic is a symptom of a serious, unmet need for better recognition and treatment of common mental health problems in patients with chronic pain.[[31]](#footnote-31)

Opioid Abuse in Adolescents & Young Adults

A 2007 survey of American adolescents showed that about 10% of U.S. adolescents between the ages of 12 and 17 years old have used opioids for a nonmedical reason in their lifetime. Nonmedical reasons include using opioid medications for feelings they cause, or to get “high.”[[32]](#footnote-32) Teens may also choose to use opioids that are not prescribed to them by a doctor to find pain relief, to help with relaxing, or to help sleeping. Peer pressure to use opioid drugs is another common reason for nonmedical use.

Many adolescents consider prescription opioids (painkillers) to be “safer” than illicit drugs, [[33]](#footnote-33) as well as easier to get from parents’ medicine cabinets, family members, or friends.[[34]](#footnote-34) However, nonmedical use of opioids can be very dangerous, and can lead to life-threatening overdose or serious addiction if not addressed.

**Benefits of Early Treatment**

Adolescence is a critical time for intervention in opioid abuse problems to prevent serious addiction and its consequences.[[35]](#footnote-35) Many teens can are “subthreshold” substance users, meaning that they meet only a few of the criteria for full-fledged dependence on opioids. However, studies of teens have shown that these relatively minor problems early in life often worsen into more severe substance use problems in adulthood. Early identification and early treatment of opioid abuse problems could be very helpful for these teens.[[36]](#footnote-36)

However, most teens with opioid abuse do not come to the attention of adults until severe legal or physical problems develop. Many adolescents with opioid abuse problems only receive addiction treatment when they experience an addiction to an additional drug or alcohol, or become involved in the criminal justice system.[[37]](#footnote-37)

Substance abuse is especially serious in teens because their brains are still in the process of developing. Opioids act by changing neurotransmission in the brain. Drug abuse in the teenage years may cause long-lasting effects on the developing brain.[[38]](#footnote-38)

**Barriers to Treatment: Adolescents and Young Adults**

Adolescents with opioid use disorder (dependence or abuse) are unlikely to seek or use treatments, even when these are available. In a 2011 survey, only 13% of opioid-abusing teens that felt the need for substance abuse treatment had actually received treatment services in that year. This survey found that reasons for not seeking needed treatments included:[[39]](#footnote-39)

**“I don’t want help, yet.”** In 2011, about a third of opioid-abusing teens aware of their need for treatment hadn’t yet sought help because they weren’t ready to stop using.

**“I don’t need help.”** In 2011, only about 5% of adolescents with symptoms of opioid dependence or abuse reported that they felt the need for any kind of substance abuse treatment. Less that 2% reported that they felt the need specifically for treatment of opioid dependence or abuse. In the same 2011 survey, a significant percentage of opioid-abusing teens thought that they could handle the problem without treatment (21%).[[40]](#footnote-40) Teens may also not be aware of the dangers of opioid abuse, and often feel that using prescription opioids is “safer” than using other illicit drugs.[[41]](#footnote-41)

**“Treatment won’t help.”** About 10% of surveyed teens thought that treatment wouldn’t help.

**“I don’t want anyone to find out.”** In the same 2011 survey, one of the most common reasons why opioid-abusing teens didn’t seek treatment were that they didn't want others to find out (22%). Teens may be afraid or embarrassed to tell their doctors about opioid abuse.[[42]](#footnote-42)

**“People will think less of me for using substance abuse treatment.”** Another of the most common reasons why opioid-abusing teens did not seek treatment was because they thought that seeking treatment might cause neighbors to have negative opinions of them (22%). Fear of the negative stigma (disgrace, or bad reputation) that many teens and their friends and family associate with treatment for substance abuse problems may prevent teens from seeking needed treatment.

**“I can’t get help.”** In a 2011 survey, about 10% of opioid-abusing teens who were aware of their need for treatment were prevented by its cost and/or lack of insurance coverage for treatment. A similar percentage of teens didn’t know where to get treatment (8%). Though less common, reasons such as not being able to find a treatment program with openings, a lack of transportation to treatment, and worries about treatment’s effects on a job also may stop opioid-abusing teens from receiving treatment.[[43]](#footnote-43)

**Opioid Abuse in Adolescents and Young Adults: How Families and Friends Can Help**

**Talk about it.** A teen’s reluctance or fear to talk about opioid abuse with his or her parents or doctors can be a serious barrier to needed treatment. Providing a supportive environment and decreasing fear of rejection can help make teens more likely to tell an adult if they are having problems with opioid abuse. Talking with a parent, guardian, or doctor can help increase a teen’s awareness of the dangers of opioid abuse and the serious mental and physical consequences of opioid addiction.

**Be informed.** Teens who abuse opioids may not seek help because they aren’t aware of the dangers of opioid abuse. Studies have shown that adolescents who talk to their parents or guardians about the dangers of substance use were more likely to seek needed treatment.[[44]](#footnote-44)

**Be aware**. Many adolescents often find that prescription opioids are easier to find and use than illicit drugs.[[45]](#footnote-45) Parents’ medicine cabinets, family members, or friends are often reported as primary sources of opioids.[[46]](#footnote-46) Parents and families of a teen having problems with opioid abuse can be more aware of these common sources.

Opioid Abuse in the U.S. Military

Opioids are among the most commonly prescribed medications in the U.S. military for pain management. In a 2014 study, over 40% of the U.S. infantry reported chronic pain (here defined as pain lasting at least 3 months) after deployment, and 15% reported opioid use in the month prior to the survey. After combat deployment, soldiers report greater rates of both chronic pain and opioid use than does the civilian population. [[47]](#footnote-47)

Because of these high rates of chronic pain and opioid treatment, the misuse of opioid pain medication is a significant health concern in the military. Prescription drug abuse has been increasing at a greater rate in the military than in civilian populations over the past several years (though prescription opioid abuse is rising in both populations).[[48]](#footnote-48) The military has responded to these risks with the Sole Provider Program and the Controlled Drug Management Analysis and Reporting Tool. These programs are used to identify and monitor risks and misuse of opioid pain medication.[[49]](#footnote-49)

**Medication-Assisted Treatment for Opioid Use Disorder in Veteran’s Health Care**

In 2009, 39,032 patients in the Veterans’ Health Administration were diagnosed with opioid abuse or opioid dependence, up from 26,818 in 2005.[[50]](#footnote-50) Mirroring underuse of medication-assisted treatment (MAT) for opioid addiction in the US as a whole, some studies have estimated that less than half of diagnosed opioid-dependent patients receive specialty addiction care in the VA.[[51]](#footnote-51) A 2011 survey of healthcare providers for veterans found that opioid-agonist therapies like buprenorphine and methadone are not always offered to veterans struggling with opioid abuse, despite the evidence that these medications are among the most effective treatments for opioid dependence.[[52]](#footnote-52)

While methadone can only be administered at specialized treatment centers, buprenorphine has been approved for prescription by trained physicians in a variety of outpatient, office-based settings, including throughout the Veterans’ Health Administration. In the last decade, new policies have been put into place that require every VHA facility to have buprenorphine available as a covered medication to all veterans for whom the treatment is indicated, such as those whose needs cannot be met by OATP (Opioid-Agonist Treatment Program) methadone centers. In a 2007 survey of VHA medical personnel, there was still wide variability in whether treatment centers were prescribing buprenorphine or connecting patients with methadone clinics. Increasing access to OAT for opioid-dependent veterans has been an ongoing priority for the VHA Office of Mental Health Services (OMHS), and several active efforts have been started to increase buprenorphine acceptance and use in the VHA, such as training more physicians in the prescribing of buprenorphine.[[53]](#footnote-53)

**Opioid Abuse and Post-Traumatic Stress Disorder**

Substance abuse disorders are common among both civilians and military personnel with Post-Traumatic Stress Disorder (PTSD). Studies have found that prescription opioid use is significantly associated with co-occurring PTSD symptom severity. PTSD patients are also more likely to use prescription opioids in combination with sedatives or cocaine. Females are more than three times as likely as males to have co-occurring PTSD symptoms and prescription opioid use problems. Younger PTSD patients (18-34 years old) are also at higher risk for opioid abuse.[[54]](#footnote-54)

**Treatments for Opioid Dependence with PTSD**

Finding the best treatment for patients struggling with both PTSD and opioid dependence can be challenging. Patients may deny symptoms of PTSD until they develop trust in their medical provider.[[55]](#footnote-55) Symptoms of PTSD and opiate dependence may also be hard to distinguish. For example, opioid withdrawal symptoms often look like the hyper-vigilance and heightened startle response of patients with PTSD. In fact, some researchers think that PTSD and opioid withdrawal may share the same neurobiologic circuit in the body. Individuals with prescription opioid problems are less likely to do well in treatment when they are also dealing with any kind of co-occurring psychiatric disorders, including PTSD.

Opioid agonist therapy with methadone has been helpful in treating opioid addiction in patients with both PTSD and opioid dependence. The use of buprenorphine has not yet been formally studied in this population, but may also be effective. Beyond medication, psychotherapy can also be very important in the treatment of PTSD. Specific kinds of cognitive behavioral therapy have been designed for individuals with both PTSD and substance abuse, such as the “Seeking Safety” approach.[[56]](#footnote-56)

LGBTQ & Opioid Abuse

**Gay and Bisexual Men: Risk for Opioid Abuse**

There has only been a limited amount of research concerning how opioid addiction and abuse affects the LGBTQ population. In a 2009 study in Chicago, researchers found that men who have sex with men are more likely than the general male population to experience substance abuse problems with prescription opioid pain relievers (analgesics).[[57]](#footnote-57) A survey of men who have sex with men attending a gay pride festival in Colorado in 2011 also showed that a significant minority of this population uses prescription medications, most commonly opioid pain relievers, without a doctor's consent. More than one third of the sample (38%) reported using prescription drugs for a nonmedical use (e.g. to change their mood or for insomnia) in their lifetime, most commonly prescription opioid pain relievers.[[58]](#footnote-58) Men who use opioid non-medically are risking negative consequences of such use, including the potential for addiction, potentially dangerous interactions between prescription and recreational drugs, and greater risk for contracting HCV and HIV.

Any history of substance abuse problems and treatment in gay and bisexual men is associated with a diagnosis of HIV.[[59]](#footnote-59) However, injection drug users (such as heroin users) are one of the main groups at risk of HIV exposure in the United States; gay and bisexual men are the other most high-risk group. [[60]](#footnote-60) A 2011 study of men who have sex with men in Australia showed that gay and bisexual men who injected drugs were more likely to be HCV-positive and HIV-positive than gay and bisexual men who did not inject drugs.[[61]](#footnote-61)

**Gay and Bisexual Men: Opioid Abuse Treatment**

Male gay and bisexual injection drug users may especially benefit from expanded substance abuse and prevention services, because other strong risk factors for HIV and HCV are also likely to be present. The strong association between injecting drug use, risky sexual practices, and blood-borne virus infection suggests the need for a special emphasis on sexual health and harm reduction services within holistic substance abuse services for gay and bisexual men.[[62]](#footnote-62)

Prescription pain pill addiction may also contribute to high-risk sexual behavior and a higher risk of HIV/AIDS. HIV testing, education, and prevention should be provided alongside substance abuse treatment and MAT for this population.[[63]](#footnote-63)

Information for Family Members of MAT Patients

**Ways of Understanding Opioid Addiction**

* **Moral/Spiritual Model of Addiction**

Many Americans understand addiction as a moral and spiritual failing. In this way of thinking, addiction treatment mainly involves improving one’s behavior through discipline and spirituality. When addicts, their families, or their peers view addiction as only a moral failure, addicted individuals may be discouraged from seeking medical help which can be life-saving. Avoiding medical help deprives individuals of a full diagnostic evaluation, which may reveal other problems related to the substance use. The resources of medication and counseling can prevent relapse and possible overdose during the most dangerous times of withdrawal and recovery. Some addicts who do seek help from medication-assisted treatment like methadone or buprenorphine may have difficulty finding support from 12-step programs, peers, or family members who may not realize the important role that medication can play in addiction recovery.An understanding of addiction that does not take into account its biological factors can make patients who seek help from medication feel “weak” and ashamed, despite the scientifically proven benefits of MAT.**[[64]](#footnote-64)** Patients who feel pressured by peers or family to stop medications prematurely may experience symptoms that lead to relapse.

* **Medical Model of Addiction**

Medication-assisted treatment programs for opioid addiction are based on a “medical model” of addiction. Physicians in these programs believe that biological factors determine addiction and its effects on the brain and body. There is a great deal of evidence to suggest that chronic drug use changes the brain, including its receptors and function, in ways that can be measured. The medical model views addiction as a chronic (long-lasting) disease, similar to life-long diseases like diabetes. In this model, addicts can benefit from medical treatment just as diabetics benefit from insulin.[[65]](#footnote-65)

**[Link to “Understandings of Addiction” Flyer]**

Motivational Interviewing:

Talking with Someone Struggling with Opioid Addiction

* Health professionals are often trained in “motivational interviewing” (MI), a way of encouraging patients struggling with substance abuse to make positive changes in their lives. Family and friends of people struggling from opioid abuse can also use these simple methods of talking to their loved ones about making changes, seeking treatment, and staying on track for recovery.
* Some of the techniques of motivational interviewing (MI) may seem surprising at first. MI can be especially difficult when discussing a topic like opioid abuse that may be emotionally charged or cause conflict. Families and friends of opioid-addicted individuals may always seek help from trained substance abuse counselors. However, these MI guidelines can be a helpful and simple start in encouraging loved ones to make a change.
* Motivational interviewing is a way of discussing an issue that draws out an individual’s own reasons for changing, instead of relying on another person’s opinions or ideas. MI recognizes that ambivalence (having mixed feelings, or not being sure) about making a change is a common part of the recovery process. Discussing this ambivalence can help to bring out an individual’s personal reasons for making a change. MI focuses on finding and strengthening a person’s own motivation to change, in accordance with their own values, beliefs, concerns, and goals.

**Principles of Motivational Interviewing**

* **Collaboration vs. Confrontation**

MI encourages the idea of collaboration (working together to find a solution), instead of confrontation (arguing). One person is not the “expert” and the other is not the “student.” MI’s goal is mutual understanding, -- not one person or the other being proven “right.”

* **Drawing out vs. Forcing ideas about change**. No matter how good another person’s ideas and reasons are, long-lasting change is more likely when a person discovers his or her *own* reasons for change. It is a common instinct to want to give a loved one advice and to try to “convince” them to change. However, this approach often results in more arguments than change. In MI, the interviewer’s goal is to “draw out” a person’s own motivations and skills for change, not to tell them what to do or why they should do it.
* **Autonomy vs. Authority**. The true power for change rests with the person dealing with opioid abuse, not in their friends, family, or doctor. Ultimately, it is up to the individual to make changes happen. In MI, the interviewer encourages the affected individual to take the lead in brainstorming ideas about how to achieve change.
* **Roll with Resistance**. This is one of the principles of MI that is hardest to follow. When discussing change, an opioid-dependent individual may often resist treatment suggestions and others’ ideas. In MI, the listener “rolls with” this resistance. The listener does not attempt to challenge or argue with the person who needs to change, since arguing often leads to the other person playing “devil’s advocate” -- an ineffective situation. It is often our instinct to correct or advise a person struggling with change, and to try to solve the problem for them. However, it is often more effective to let the person come up with his or her own ideas for change. New points of view can be suggested for consideration, but shouldn’t be forced.

**OARS**

The basic principles of Motivational Interviewing are represented by the acronym **OARS.** Using each of these components help make the discussion more successful in encouraging change.

**O Open-Ended Questions**: Ask questions that can’t be answered with yes or no.

**A Affirmations:** Recognize and encourage a person’s strengths!

**R Reflections**: Respond in a way that makes it obvious that you’ve been listening carefully. The other person can then make corrections if they did not express themselves fully. This also allows the listener to express “empathy,” the ability to see the world through another’s eyes and share in their feelings and experiences. This can make the other person feel heard and understood.

**Examples of reflections:** “That must be difficult.” “I hear that you’re upset.” “It sounds like…” “What I hear you saying is…” “So on the one hand it sounds like… And, yet on the other hand…”

**S Summaries**: Summaries allow the listener to “recap” what has been discussed. The summary can highlight the other person’s strengths and reasons for change.

**What Does a “Motivational Interview” Look Like?**

Below are some examples of questions often used in MI. Successful discussions all look different, but these examples can be a useful starting point to help your loved one begin to think about change.

* **Asking permission**: Asking permission shows respect for the other person, and avoids the feeling of “lecturing.”
* “I’ve noticed that you’ve gotten into trouble a lot lately/ been having trouble with friends/[other problems]. Is it all right if we talk about your heroin/ prescription pain pill use?”
* **Explore the persons’ reasons for change.** 
  + **Pros**: “People usually use \_\_\_\_\_ because it benefits them in some way. What are the good things about \_\_\_\_\_? What do you like about \_\_\_\_\_?”
  + **Cons**: “Can you tell me about the downsides? What are some aspects of using \_\_\_\_\_ that you’re not happy about? What are some things you wouldn’t miss?”
  + **Look back**: Ask about a time before the person’s opioid addiction. “How were things better/ different?”
  + **Look forward**: “What may happen if things continue as they are? What would be different if you went for treatment?”
  + **Ask for examples:** “In what ways?” “Tell me more.” “What does that look like?” ”When was the last time that happened?”
  + **Explore Extremes:** “What are the worst things that may happen if you keep using \_\_\_\_\_? What are the best things that might happen if you stop using \_\_\_\_\_?”
* **Help a person find his or her motivation for change**.
  + Motivation for change comes from a person recognizing a “mismatch” between their current situation and where they want to be. A good listener can help their friend or family member to examine how their current situation and behavior conflicts with their own values and future goals.
  + **Explore life goals/ values.** “What sorts of things are important to you? What sort of person would you like to be?” “If things worked out in the best possible way for you, what would you be doing a year from now?” (Support positive goals and values!) “How does opioid addiction fit in with these values?”
  + **Bring out discrepancies.** “I hear that you have [goals, plans, values]. On the other hand, you’re telling me that heroin is causing [negatives]. “What would happen if you don’t change? What will your life be like if you stop?” “It sounds like when you stated using prescription pain meds there were many positives, but that now using them is causing you to lose friends and skip school. How would seeking treatment affect your life?”
  + **Reasons for change: “**What makes you think you need to change? Why do you think I/others are concerned about \_\_\_\_\_?”
* **Explore a person’s readiness for change.** 
  + **Scales of 1-10 can be helpful.** “On a scale of 1 to 10, how important is it to you to quit, where 1 is not at all important and 10 is very important?” Ask why they did not give a higher or lower answer. “Why are you at a ‘6’ and not a ‘5’? Why not a ‘7’? What would it take to move from a ‘6’ to a ‘7’?
  + **Explore confidence/ fears**. “How confident are you that you could cut down/ quit/ stay in treatment, if you decided to? Why?”
* **Provide Summaries**
  + **Summarize their choices and ambivalence (mixed feelings).** “It sounds like you are concerned about heroin use because it is costing you a lot of money and causing family problems. You also said quitting will probably mean not hanging out with your best friends any more. That doesn’t sound like an easy choice.”
  + **Encourage a person to fall on the positive side of their ambivalence, by siding with the negative status quo.** “Perhaps using [opiate drug] is so important to you that you won’t give it up, no matter the cost.”
* **Ask about a decision.** 
  + “You were saying that you were trying to decide whether to continue/ cut down/ go to treatment. If you decide to change, what would you have to do to make it happen?”
  + “After talking about it, are you more clear about what you would like to do?”
* **State Goals**: If the person is ready, help them set goals.
  + **Good goals are SMART**: Specific, Meaningful, Assessable (Measurable), Realistic, and Timed.
  + “What will be your first step? What will you do in one or two days?”
  + “Have you ever done any of these things before? What’s worked/ not worked in the past? Why?”
  + “Who will be helping/ supporting you?”
  + “On a scale of 1 to 10, what are the chances that this goal is possible for you?”
* **Provide Affirmations**: MI is a **Strengths-Based Approach**. MI tries to emphasize the other person’s strengths instead of weaknesses. Many people have tried to change before and failed, creating many doubt and fears. Listeners can help support and highlight an individual’s strengths and skills, to encourage the belief that change is possible.
  + “It shows a lot of strength/courage/determination to…”
* **Show Empathy:** If the person isn’t ready to make a decision, empathize with their difficulty.
  + “**How can I help you get past some of these difficulties?** Is there something else that could help you make a decision?”
  + “What could you do to reduce some of these problems while you’re deciding what to do?”

**[Link to MI Tri-Fold]**

**Sources for Motivational Interviewing**

* “An Overview of Motivational Interviewing,” obtained from MotivationalInterview.org http://www.motivationalinterview.org/Documents/1%20A%20MI%20Definition%20Principles%20&%20Approach%20V4%20012911.pdf
* “An Example of an MI ‘Session’” from the work of WR Miller and S Rollnick. http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0CC0QFjAB&url=http%3A%2F%2Fwww.motivationalinterview.org%2FDocuments%2FHow%2520it%2520Works.docx&ei=8km4U7DXNu3JsQTPtYGYDQ&usg=AFQjCNE0Y7wlbnx1zJ0\_WDKmtAvCvbZOMA&sig2=kgVvQB3UWz4EHcHDaUAY\_A&bvm=bv.70138588,d.cWc
* Sobell & Sobell. (2008.) Motivational Interviewing Strategies and Techniques: Rationales and Examples. From http://www.nova.edu/gsc/forms/mi\_rationale\_techniques.pdf

1. Behnke, M., & Smith, V. C. (2012) Committee on Substance Abuse: Committee on Fetus and Newborn Prenatal substance abuse: short- and long-term effects on the exposed fetus. *Pediatrics, 131i,* 1009–1024. [↑](#footnote-ref-1)
2. Sutter, M. B., Leeman, L., & His A. (2014). Neonatal opioid withdrawal syndrome. *Obstet Gynecol Clin North Am. Jun 41(2*), 317-34. [↑](#footnote-ref-2)
3. Polydorou, S., & Kleber, H. D. (2008). Detoxification of Opioids. In M Galanter & H Kleber (Eds.), *Textbook of Substance Abuse and Treatment* (4th ed.) Arlington, VA: American Psychiatric Publishing. [↑](#footnote-ref-3)
4. M. Behnke, V.C. Smith, Committee on Substance Abuse, Committee on Fetus and Newborn Prenatal substance abuse: short- and long-term effects on the exposed fetus. Pediatrics, 131 (2012), pp. e1009–e1024 [↑](#footnote-ref-4)
5. American Psychiatric Association. (2013). Substance-Related and Addictive Disorders. In *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing. [↑](#footnote-ref-5)
6. Substance Abuse and Mental Health Services Administration, Results from the 2012 National Survey on Drug Use and Health: Summary of National Findings, NSDUH Series H-46, HHS Publication No. (SMA) 13-4795. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2013. [↑](#footnote-ref-6)
7. Substance Abuse and Mental Health Services Administration, Results from the 2012 National Survey on Drug Use and Health. [↑](#footnote-ref-7)
8. Hepatitis C FAQs for the Public. (n.d.). *Centers for Disease Control and Prevention*. Retrieved June 30, 2014, from http://www.cdc.gov/hepatitis/c/cfaq.htm#cFAQ23. [↑](#footnote-ref-8)
9. Magiorkinis, G., Sypsa, V., Magiorkinis, E., Paraskevis, D., Katsoulidou, A., Belshaw, R., Fraser, C.;,Pybus, O.G., & Hatzakis, A. (2013.) Integrating phylodynamics and epidemiology to estimate transmission diversity in viral epidemics. *PLoS Comput Biol 9(1)*, e1002876. [↑](#footnote-ref-9)
10. Moore, K. & Dusheiko, G. (2005). “Opiate Abuse and Viral Replication in Hepatitis C.” Am J Pathol **167**(5): 1189–1191. [↑](#footnote-ref-10)
11. Hepatitis C FAQs for the Public. (n.d.). *Centers for Disease Control and Prevention*. Retrieved June 30, 2014, from http://www.cdc.gov/hepatitis/c/cfaq.htm#cFAQ23 [↑](#footnote-ref-11)
12. Broz, D. et al. (2014). HIV Infection and Risk, Prevention, and Testing Behaviors Among Injecting Drug Users - National HIV Behavioral Surveillance System, 20 U.S. Cities, 2009. [Division of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, CDC, Atlanta, Georgia](http://www.ncbi.nlm.nih.gov/pubmed?term=Division%20of%20HIV%2FAIDS%20Prevention%2C%20National%20Center%20for%20HIV%2FAIDS%2C%20Viral%20Hepatitis%2C%20STD%2C%20and%20TB%20Prevention%2C%20CDC%2C%20Atlanta%2C%20Georgia%5BCorporate%20Author%5D). *MMWR Surveill Summ. Jul 4;63 Suppl 6*, 1-51. [↑](#footnote-ref-12)
13. Why does heroin use create special risk for contracting HIV/AIDS and hepatitis B and C? (2014). From: http://www.drugabuse.gov/publications/research-reports/heroin/why-are-heroin-users-special-risk-contracting-hivaids-hepatitis-b-c. [↑](#footnote-ref-13)
14. Saxon, A. J., Hser, Y. I., Woody, G., & Ling, W. (2013.) Medication-assisted treatment for opioid addiction: methadone and buprenorphine. *J Food Drug Anal. Dec 21(4)*, S69-S72. [↑](#footnote-ref-14)
15. Why does heroin use create special risk for contracting HIV/AIDS and hepatitis B and C? (2014). From: http://www.drugabuse.gov/publications/research-reports/heroin/why-are-heroin-users-special-risk-contracting-hivaids-hepatitis-b-c. [↑](#footnote-ref-15)
16. Apkarian AV, Baliki MN, Geha PY. Towards a theory of chronic pain. Prog Neurobiol. 2009;87(2):81–97. [↑](#footnote-ref-16)
17. American Chronic Pain Association - FAQs. (2014, July 30). Retrieved August 19, 2014, from http://theacpa.org/faqlisting.aspx [↑](#footnote-ref-17)
18. Toblin  RL, Mack  KA, Perveen  G, Paulozzi  LJ.  (2011.) A population-based survey of chronic pain and its treatment with prescription drugs. *Pain. 152(6),* 1249-1255. [↑](#footnote-ref-18)
19. Apkarian AV, Sosa Y, Krauss BR, Thomas PS, Fredrickson BE, Levy RE, Harden RN, Chialvo DR. (2004). Chronic pain patients are impaired on an emotional decision-making task. *Pain. Mar;108(1-2),* 129-36. [↑](#footnote-ref-19)
20. Mutso AA, Radzicki D, Baliki MN, Huang L, Banisadr G, Centeno MV, Radulovic J, Martina M, Miller RJ, Apkarian AV. (2012.) Abnormalities in hippocampal functioning with persistent pain. *J Neurosci. Apr 25;32(17),* 5747-56. [↑](#footnote-ref-20)
21. Apkarian AV, Sosa Y, Krauss BR, Thomas PS, Fredrickson BE, Levy RE, Harden RN, Chialvo DR. (2004). Chronic pain patients are impaired on an emotional decision-making task. *Pain. Mar;108(1-2),* 129-36. [↑](#footnote-ref-21)
22. [Ling J](http://www.ncbi.nlm.nih.gov/pubmed?term=Ling%20J%5BAuthor%5D&cauthor=true&cauthor_uid=17327213), [Campbell C](http://www.ncbi.nlm.nih.gov/pubmed?term=Campbell%20C%5BAuthor%5D&cauthor=true&cauthor_uid=17327213), [Heffernan TM](http://www.ncbi.nlm.nih.gov/pubmed?term=Heffernan%20TM%5BAuthor%5D&cauthor=true&cauthor_uid=17327213), [Greenough CG](http://www.ncbi.nlm.nih.gov/pubmed?term=Greenough%20CG%5BAuthor%5D&cauthor=true&cauthor_uid=17327213). (2007.) Short-term prospective memory deficits in chronic back pain patients. *Psychosom Med. Feb-Mar;69(2)*,144-8. [↑](#footnote-ref-22)
23. Schiltenwolf M, Akbar M, Hug A, Pfüller U, Gantz S, Neubauer E, Flor H, Wang H. (2014.) Evidence of specific cognitive deficits in patients with chronic low back pain under long-term substitution treatment of opioids. *Pain Physician. Jan-Feb;17(1)*, 9-20. [↑](#footnote-ref-23)
24. Zhang, Z., Tao, W., Hou, Y. Y., Wang, W., Kenny, P. J., & Pan, Z. Z. (2014). MeCP2 Repression of G9a in Regulation of Pain and Morphine Reward. *J Neurosci. Jul 2;34(27)*, 9076-87. [↑](#footnote-ref-24)
25. Apkarian, A.V., Sosa, Y., Krauss, B. R., Thomas, P.S., Fredrickson, B. E., Levy, R. E., Harden, R.N., & Chialvo, D. R. (2004). Chronic pain patients are impaired on an emotional decision-making task. *Pain. Mar 108(1-2)*, 129-36. [↑](#footnote-ref-25)
26. [Fishbain DA](http://www.ncbi.nlm.nih.gov/pubmed?term=Fishbain%20DA%5BAuthor%5D&cauthor=true&cauthor_uid=1633386), [Rosomoff HL](http://www.ncbi.nlm.nih.gov/pubmed?term=Rosomoff%20HL%5BAuthor%5D&cauthor=true&cauthor_uid=1633386), [Rosomoff RS](http://www.ncbi.nlm.nih.gov/pubmed?term=Rosomoff%20RS%5BAuthor%5D&cauthor=true&cauthor_uid=1633386). (1992.) Drug abuse, dependence, and addiction in chronic pain patients. *Clin J Pain. Jun;8(2)*, 77-85. [↑](#footnote-ref-26)
27. Trescot AM, Helm S, Hansen H, Benyamin R, Glaser SE, Adlaka R, Patel S, Manchikanti L. (2008.) Opioids in the management of chronic non-cancer pain: an update of American Society of the Interventional Pain Physicians' (ASIPP) Guidelines. *Pain Physician. Mar;11(2 Suppl),* S5-S62. [↑](#footnote-ref-27)
28. [Daitch J](http://www.ncbi.nlm.nih.gov/pubmed?term=Daitch%20J%5BAuthor%5D&cauthor=true&cauthor_uid=22786462), [Frey ME](http://www.ncbi.nlm.nih.gov/pubmed?term=Frey%20ME%5BAuthor%5D&cauthor=true&cauthor_uid=22786462), [Silver D](http://www.ncbi.nlm.nih.gov/pubmed?term=Silver%20D%5BAuthor%5D&cauthor=true&cauthor_uid=22786462), [Mitnick C](http://www.ncbi.nlm.nih.gov/pubmed?term=Mitnick%20C%5BAuthor%5D&cauthor=true&cauthor_uid=22786462), [Daitch D](http://www.ncbi.nlm.nih.gov/pubmed?term=Daitch%20D%5BAuthor%5D&cauthor=true&cauthor_uid=22786462), Pergolizzi J. (2012.) Conversion of chronic pain patients from full-opioid agonists to sublingual buprenorphine. *Pain Physician Jul 15(3).* [↑](#footnote-ref-28)
29. Roux P, Sullivan MA, Cohen J, Fugon L, Jones JD, Vosburg SK, Cooper ZD, Manubay JM, Mogali S, Comer SD. (2013.) Buprenorphine/naloxone as a promising therapeutic option for opioid abusing patients with chronic pain: reduction of pain, opioid withdrawal symptoms, and abuse liability of oral oxycodone.*Pain. Aug;154(8)*:1442-8. [↑](#footnote-ref-29)
30. Howe, C. Q., Sullivan, M. D. (2014.) The missing 'P' in pain management: how the current opioid epidemic highlights the need for psychiatric services in chronic pain care. *Gen Hosp Psychiatry. Jan-Feb;36(1)*, 99-104. [↑](#footnote-ref-30)
31. Howe, C. Q., Sullivan, M. D. (2014.) The missing 'P' in pain management: how the current opioid epidemic highlights the need for psychiatric services in chronic pain care. *Gen Hosp Psychiatry. Jan-Feb 36(1)*, 99-104. [↑](#footnote-ref-31)
32. Wu, L.T., Ringwalt, C.L., Mannelli, P., & Patkar, A.A. (2008). Prescription pain reliever abuse and dependence among adolescents: a nationally representative study. *Journal of the American Academy of Child and Adolescent Psychiatry. 47,* 1020–1029. [↑](#footnote-ref-32)
33. Office of National Drug Control Policy. (2007). Teens and prescription drugs: an analysis of recent trends on the emerging drug threat. Washington, DC: Office of National Drug Control Policy, Executive Office of the President. [↑](#footnote-ref-33)
34. Schepis, T.S., Krishnan-Sarin, S. (2009). Sources of prescriptions for misuse by adolescents: differences in sex, ethnicity, and severity of misuse in a population-based study. *Journal of the American Academy of Child and Adolescent Psychiatry. 48*, 828–836. [↑](#footnote-ref-34)
35. Wu, L.T., Blazer, D.G., Li, T. K., & Woody, G.E. (2011). Treatment use and barriers among adolescents with prescription opioid use disorders. *Addictive Behaviors. 36*, 1233–1239. [↑](#footnote-ref-35)
36. Shankman, S.A., Lewinsohn, P.M., Klein, D.N., Small, J.W., Seeley, J.R., & Altman, S.E. (2009). Subthreshold conditions as precursors for full syndrome disorders: a 15-year longitudinal study of multiple diagnostic classes. *Journal of Child Psychology and Psychiatry. 50*, 1485–1494. [↑](#footnote-ref-36)
37. Wu, L.T. , Blazer, D. G., Li, T-K., & Woody, G. E. (2011.) Treatment use and barriers among adolescents with prescription opioid use disorders. *Addictive Behaviors. 36*, 1233–1239. [↑](#footnote-ref-37)
38. National Institute on Drug Abuse. Drugs, brains, and behavior: the science of addiction. Bethesda, MD: National Institute on Drug Abuse, National Institutes of Health, U.S. Department of Health and Human Services; 2007. NIH PubNo. 07-5605. [↑](#footnote-ref-38)
39. Wu, L. T. et. al. (2011). [↑](#footnote-ref-39)
40. Wu, L. T. et. al. (2011). [↑](#footnote-ref-40)
41. Office of National Drug Control Policy. (2007). Teens and prescription drugs: an analysis of recent trends on the emerging drug threat. Washington, DC: Office of National Drug Control Policy, Executive Office of the President. [↑](#footnote-ref-41)
42. Wu, L. T. et. al. (2011). [↑](#footnote-ref-42)
43. Wu, L. T. et. al. (2011). [↑](#footnote-ref-43)
44. Wu, L. T. et. al. (2011). [↑](#footnote-ref-44)
45. Office of National Drug Control Policy. Teens and prescription drugs: an analysis of recent trends on the emerging drug threat. Washington, DC: Office of National Drug Control Policy, Executive Office of the President; 2007. [↑](#footnote-ref-45)
46. Schepis TS, Krishnan-Sarin S. Sources of prescriptions for misuse by adolescents: differences in sex, ethnicity, and severity of misuse in a population-based study. Journal of the American Academy of Child and Adolescent Psychiatry. 2009;48:828–836. [↑](#footnote-ref-46)
47. [Toblin RL](http://www.ncbi.nlm.nih.gov/pubmed?term=Toblin%20RL%5BAuthor%5D&cauthor=true&cauthor_uid=24978399), [Quartana PJ](http://www.ncbi.nlm.nih.gov/pubmed?term=Quartana%20PJ%5BAuthor%5D&cauthor=true&cauthor_uid=24978399), [Riviere LA](http://www.ncbi.nlm.nih.gov/pubmed?term=Riviere%20LA%5BAuthor%5D&cauthor=true&cauthor_uid=24978399), [Walper KC](http://www.ncbi.nlm.nih.gov/pubmed?term=Walper%20KC%5BAuthor%5D&cauthor=true&cauthor_uid=24978399), [Hoge CW](http://www.ncbi.nlm.nih.gov/pubmed?term=Hoge%20CW%5BAuthor%5D&cauthor=true&cauthor_uid=24978399). (2014.) Chronic Pain and Opioid Use in US Soldiers After Combat Deployment. *JAMA Intern Med. Jun 30.* [↑](#footnote-ref-47)
48. [Servies T](http://www.ncbi.nlm.nih.gov/pubmed?term=Servies%20T%5BAuthor%5D&cauthor=true&cauthor_uid=23231051), [Hu Z](http://www.ncbi.nlm.nih.gov/pubmed?term=Hu%20Z%5BAuthor%5D&cauthor=true&cauthor_uid=23231051), [Eick-Cost A](http://www.ncbi.nlm.nih.gov/pubmed?term=Eick-Cost%20A%5BAuthor%5D&cauthor=true&cauthor_uid=23231051), [Otto JL](http://www.ncbi.nlm.nih.gov/pubmed?term=Otto%20JL%5BAuthor%5D&cauthor=true&cauthor_uid=23231051). (2012). Substance use disorders in the U.S. Armed Forces, 2000-2011. *MSMR. Nov;19(11)*, 11-6. [↑](#footnote-ref-48)
49. [Sharpe Potter J](http://www.ncbi.nlm.nih.gov/pubmed?term=Sharpe%20Potter%20J%5BAuthor%5D&cauthor=true&cauthor_uid=24806501), [Bebarta VS](http://www.ncbi.nlm.nih.gov/pubmed?term=Bebarta%20VS%5BAuthor%5D&cauthor=true&cauthor_uid=24806501), [Marino EN](http://www.ncbi.nlm.nih.gov/pubmed?term=Marino%20EN%5BAuthor%5D&cauthor=true&cauthor_uid=24806501), [Ramos RG](http://www.ncbi.nlm.nih.gov/pubmed?term=Ramos%20RG%5BAuthor%5D&cauthor=true&cauthor_uid=24806501), [Turner BJ](http://www.ncbi.nlm.nih.gov/pubmed?term=Turner%20BJ%5BAuthor%5D&cauthor=true&cauthor_uid=24806501). (2014.) Pain management and opioid risk mitigation in the military. *Mil Med. May;179(5)*, 553-8. [↑](#footnote-ref-49)
50. Gordon, A. J., Trafton, J. A., Saxon, A. J., Gifford, A. L., Goodman, F., Calabrese, V. S., . ., Liberto, J. (2007). Implementation of buprenor- phine in the Veterans Health Administration: Results of the first 3 years. *Drug and Alcohol Dependence, 90,* 292–296. [↑](#footnote-ref-50)
51. Dalton, A., Saweikis, M., & McKellar, J. D. (2006). Health services for VA substance use disorder patients. Comparison of utilization in fiscal years 2005, 2004, 2003, and 2002. Retrieved from http://www.chce .research.med.va.gov/pdf/2005Yellowbook.pdf [↑](#footnote-ref-51)
52. Gordon, A. J., et al. (2011). "Facilitators and barriers in implementing buprenorphine in the Veterans Health Administration." *Psychol Addict Behav 25(2)*, 215-224. [↑](#footnote-ref-52)
53. Gordon, A. J., et al. (2011). "Facilitators and barriers in implementing buprenorphine in the Veterans Health Administration." *Psychol Addict Behav 25(2)*, 215-224. [↑](#footnote-ref-53)
54. [Meier A](http://www.ncbi.nlm.nih.gov/pubmed?term=Meier%20A%5BAuthor%5D&cauthor=true&cauthor_uid=24809229), [Lambert-Harris C](http://www.ncbi.nlm.nih.gov/pubmed?term=Lambert-Harris%20C%5BAuthor%5D&cauthor=true&cauthor_uid=24809229), [McGovern MP](http://www.ncbi.nlm.nih.gov/pubmed?term=McGovern%20MP%5BAuthor%5D&cauthor=true&cauthor_uid=24809229), [Xie H](http://www.ncbi.nlm.nih.gov/pubmed?term=Xie%20H%5BAuthor%5D&cauthor=true&cauthor_uid=24809229), [An M](http://www.ncbi.nlm.nih.gov/pubmed?term=An%20M%5BAuthor%5D&cauthor=true&cauthor_uid=24809229), [McLeman B](http://www.ncbi.nlm.nih.gov/pubmed?term=McLeman%20B%5BAuthor%5D&cauthor=true&cauthor_uid=24809229). (2014.) Co-occurring prescription opioid use problems and posttraumatic stress disorder symptom severity. *Am J Drug Alcohol Abuse. Jul 40(4)*:304-11. [↑](#footnote-ref-54)
55. PCSS-MAT Powerpoint. [↑](#footnote-ref-55)
56. Fareed A, Eilender P, Haber M, Bremner J, Whitfield N, Drexler K. (2013.) Comorbid posttraumatic stress disorder and opiate addiction: a literature review. *J Addict Dis. 32(2)*, 168-79. [↑](#footnote-ref-56)
57. Mackesy-Amit, M. E., Fendrich, M., Johnson, T. P. (2009). Substance-related problems and treatment among men who have sex with men in comparison to other men in Chicago. [*Journal of Substance Abuse Treatment*](http://www.sciencedirect.com/science/journal/07405472)*. 36(2), 227–233.* [↑](#footnote-ref-57)
58. [Benotsch, E.G](http://www.ncbi.nlm.nih.gov/pubmed?term=Benotsch%20EG%5BAuthor%5D&cauthor=true&cauthor_uid=20838365)., [Martin, A.M](http://www.ncbi.nlm.nih.gov/pubmed?term=Martin%20AM%5BAuthor%5D&cauthor=true&cauthor_uid=20838365)., [Koester, S](http://www.ncbi.nlm.nih.gov/pubmed?term=Koester%20S%5BAuthor%5D&cauthor=true&cauthor_uid=20838365)., [Cejka, A](http://www.ncbi.nlm.nih.gov/pubmed?term=Cejka%20A%5BAuthor%5D&cauthor=true&cauthor_uid=20838365)., [Luckman, D](http://www.ncbi.nlm.nih.gov/pubmed?term=Luckman%20D%5BAuthor%5D&cauthor=true&cauthor_uid=20838365). (2011). Nonmedical use of prescription drugs and HIV risk behavior in gay and bisexual men. *Sex Transm Dis. Feb;38(2)*, 105-10. [↑](#footnote-ref-58)
59. Mackesy-Amit, M. E,m et al. 2009. [↑](#footnote-ref-59)
60. Ibanez, G.E., Purcell, D.W., Stall, R., Parsons, J.T., Gomez, C.A. (2005). Sexual risk, substance use, and psychological distress in HIV-positive gay and bisexual men who also inject drugs. *AIDS. Apr 19 Suppl 1, S49*-55. [↑](#footnote-ref-60)
61. Lea, T., Mao, L., Bath, N., Prestage, G., Zablotska, I., de Wit, J.. Holt, M. (2013). Injecting drug use among gay and bisexual men in Sydney: prevalence and associations with sexual risk practices and HIV and hepatitis C infection. *AIDS Behav*. *May 17(4),*1344-51. [↑](#footnote-ref-61)
62. Lea, T., et al. 2013. [↑](#footnote-ref-62)
63. Mackesy-Amit, M. E., et al. 2009. [↑](#footnote-ref-63)
64. Frank, D. (2011). "The trouble with morality: the effects of 12-step discourse on addicts' decision-making." *J Psychoactive Drugs 43(3)*: 245-256. [↑](#footnote-ref-64)
65. Frank, D. (2011). [↑](#footnote-ref-65)