

# Beacon Clinical Topic

## MAT Options for People with Opioid Addiction

---



### 1. DEFINITIONS<sup>1</sup>

**Medication-assisted treatment for opioid addiction (MAT):** Type of addiction treatment, usually provided in a certified, licensed outpatient treatment programs (OTPs) or a physician's office-based treatment setting, that provides maintenance pharmacotherapy using an opioid agonist, a partial agonist, or an antagonist medication, which may be combined with other comprehensive treatment services, including medical and psychosocial services

**Dependence:** State of physical adaptation that is manifested by a drug class-specific withdrawal syndrome that can be produced by abrupt cessation, rapid dose reduction, and/or decreasing blood level of a substance and/or administration of an antagonist

**Addiction:** Combination of the physical dependence on, behavioral manifestations of, the use of, and subjective sense of need and craving for a psychoactive substance, leading to compulsive use of the substance, either for its positive effects or to avoid negative effects associated with abstinence from that substance

**Prevalence:** There are currently ~ 2 million prescription opioid addicts, and 500,000 heroin addicts in the US. This addiction cuts across all segments of our society. Some people started with legitimately prescribed pain medications during a time when physicians were encouraged to screen and treat for pain more liberally. As prescription pain medication has been more tightly controlled, heroin use is again on the rise. Opioid-related deaths have tripled in the US since the 1990s, now outnumbering motor vehicle accident deaths. Those with chronic pain, certain psychiatric diagnoses; addiction or use of other substances; family history of addiction; or early sexual or other trauma are at increased risk of opioid addiction. There is likely a polygenic predisposition to opioid addiction.

**Treatment challenges:** Denial, stigma, legal and social issues, chronic brain changes, inadequate and often inappropriate treatment resources



### 2. EVALUATION

Clinical diagnosis based on history, signs and symptoms of use or specific withdrawal. There are also numerous brief screening tools (e.g., CAGE-AID<sup>2</sup>, ASI<sup>1</sup>, DAST-10<sup>3</sup>).

#### MAT Treatment Options:

**Methadone** is a long-acting, synthetic opioid agonist. Methadone maintenance therapy (MMT) has been the standard treatment for heroin addiction since the FDA approved its use in 1972, but only in highly regulated OTPs (i.e., methadone clinics). Prior to MMT, the opioid dependence-related US death rate was 21 per 1000 users; with the advent of MMT, the rate fell to 13/1000. The death rate for opioid dependent persons receiving MMT is 30% lower than for those individuals not in treatment. In 2005, 22% (235,836) of >1.7 million people seeking opioid addiction treatment in the US received MMT.

**Buprenorphine** is a partial  $\mu$  opioid receptor agonist and kappa ( $\kappa$ ) opioid receptor antagonist approved by the FDA in 2002 for office-based maintenance therapy (BMT). It may be used both for medical maintenance pharmacotherapy and for medically supervised withdrawal from an opioid addiction treatment medication. Used in inpatient settings, the buprenorphine alone form (Subutex) is abusable if injected intravenously; as a result, the most common outpatient form is a combination with naloxone (Suboxone), which blocks the opioid effects when injected. Buprenorphine has a ceiling effect that prevents larger doses from producing greater agonist effects, although larger doses lengthen its duration of action.

Physicians take an eight-hour certification training to prescribe buprenorphine for office-based induction and maintenance treatment. In 2007, the FDA increased its original limit of 30 patients per physician, now allowing a certified physician to manage up to 100 patients concurrently. From 2003 to 2006, 300,000 people in the US received buprenorphine treatment.<sup>4</sup>

Because buprenorphine is a partial antagonist:

- some highly addicted individuals will not feel adequately treated on this medication, or will need the highly structured treatment of an OTP and may have a better chance of remaining abstinent on methadone; and
- patients may need to be switched to methadone if they require opioid pain management, since the antagonism of buprenorphine will limit the effectiveness of other opioids.

Because naloxone has not been proven safe in first trimester pregnancy:

- Subutex is recommended over Suboxone for patients anticipating pregnancy, or newly pregnant; and
- there does not seem to be any increase in adverse outcomes for naloxone in the second or third trimesters.

Naltrexone is an opioid receptor antagonist. For those individuals with opioid addiction and a bias, or a professional mandate (e.g., physicians) against opioid substitution therapy, naltrexone is a non-opioid alternative.

- **Oral naltrexone (ReVia)** totally blocks the effects of opioids and may also decrease cravings for opioids (as well as for alcohol).
- **Long-acting injectable naltrexone (Vivitrol)** has been shown to be effective and to overcome the adherence issues of the oral preparation.<sup>4</sup>



### 3. PROGNOSIS

Decreased opioid-related deaths; decreased illicit drug use; improved overall health; and better productivity when people are adequately treated, monitored and followed for the long run



### 4. KEY TAKEAWAYS

MAT is cost-effective because of the better outcomes; decreased use of acute services; the improved functionality of treated individuals; and the decreased crime and legal expense associated with untreated addiction. Comprehensive treatment programs can include individual or group therapy, education, peer support, case management, primary care, etc. Over time, these medications may be managed much in the same way as those for other chronic illnesses. They may be managed by PCPs, psychiatrists, addiction medicine specialists, in private offices (except for methadone) or clinics. Access remains an issue, and more resources for MAT are needed, including, and especially, PCPs trained and willing to prescribe, and addiction specialists willing to consult and provide decision support.



### 5. THREE QUESTIONS FOR CLINICAL TEAM DISCUSSION

- When would Suboxone be an appropriate first choice for MAT, and when would naltrexone IM be a first choice for MAT?
- Does every person on MAT require ongoing psychosocial interventions?
- What would be reasonable options for the individual who repeatedly relapses on:
  - Methadone?
  - Suboxone?



### 6. KEY REFERENCES AND RESOURCES FOR FURTHER INFORMATION

<sup>1</sup>Center for Substance Abuse Treatment. Medication-Assisted Treatment for Opioid Addiction in Opioid Treatment Programs. Rockville (MD): Substance Abuse and Mental Health Services Administration (US); 2005. (Treatment Improvement Protocol (TIP) Series, No. 43.) Appendix C: Glossary. Available from: <http://www.ncbi.nlm.nih.gov/books/NBK6466/> Accessed on 7/18/15.

<sup>2</sup>[http://www.hopkinsmedicine.org/johns\\_hopkins\\_healthcare/downloads/CAGE%20Substance%20Screening%20Tool.pdf](http://www.hopkinsmedicine.org/johns_hopkins_healthcare/downloads/CAGE%20Substance%20Screening%20Tool.pdf). Accessed on 7/18/15.

<sup>3</sup>Instrument: Drug Abuse Screening Test (DAST-10); <http://cde.drugabuse.gov/instrument/e9053390-ee9c-9140-e040-bb89ad433d69>. Accessed on 7/18/15.

<sup>4</sup>Confronting the Crisis of Opioid Addiction: A Beacon Health Options White Paper. Beacon Health Options, Boston, MA, June 2015.

For more information, please read our white paper, “Confronting the Crisis of Opioid Addiction” at [beaconlens.com](http://beaconlens.com).