Medication-Assisted Treatment Basics and Beyond

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American Society of Addiction Medicine’s Definition of Addiction (Short Version)

Addiction is a primary, chronic disease of brain reward, motivation, memory and related circuitry. Dysfunction in these circuits leads to characteristic biological, psychological, social and spiritual manifestations. This is reflected in an individual pathologically pursuing reward and/or relief by substance use and other behaviors.

Addiction is characterized by inability to consistently abstain, impairment in behavioral control, craving, diminished recognition of significant problems with one’s behaviors and interpersonal relationships, and a dysfunctional emotional response. Like other chronic diseases, addiction often involves cycles of relapse and remission. Without treatment or engagement in recovery activities, addiction is progressive and can result in disability or premature death.
Differences Between Use & Misuse

- Route of administration
- Dose & frequencies
- Expectation of effects
- Context of administration

What is an Opioid?

- Opioids and opiates are substances derived from the poppy plant that act on the opioid receptor.
- Opioids/opiates are swallowed, smoked, snorted, or injected.
- The effects can include euphoria, pain relief (physical and emotional), warmth, and relaxation.

<table>
<thead>
<tr>
<th>Direct from the Poppy</th>
<th>Opiate Alkaidos</th>
<th>Opioids (semi-synthetic)</th>
<th>Opioids (full synthetic)</th>
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</thead>
<tbody>
<tr>
<td>Opium</td>
<td>Morphine</td>
<td>Oxycodone</td>
<td>Methadone</td>
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<td></td>
<td>Codeine</td>
<td>Hydrocodone</td>
<td>Fentanyl</td>
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<td>Heroin</td>
<td>Carfentany</td>
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Opioid Use Disorder

**DSM 5**

An individual has impairment or distress related to opioid use with two or more criteria being present:

- Decreased social/recreational activities
- Using in physically dangerous situations
- Opioids impacting health
- Tolerance
- Withdrawal
- Using more than intended
- Unable to decrease use
- Excessive time spent seeking
- Cravings
- Functional impact at work/school
- Social/interpersonal consequences


What it is like to have opioid use disorder:

*A two-faced drug*

- Opioids initially fill a void and have few visible negative signs.
- Opioid dependent individuals become skilled at hiding their dependence.
- There is an eventual attempt to break the addiction, starting the relapse cycle.
- Life falls into chaos, with great physical and spiritual pain, loss of dignity, and alienation.

Opioid Withdrawal

- Starts within 4-6 hours of last use.
- Intensity increases 24-72 hours.
- May last up to 14 days.
- Symptoms: craving, anxiety, irritability, restlessness, nervousness, insomnia, rhinorrhea, lacrimation, nausea, myalgias, arthralgias, abdominal cramping, profound diarrhea.
- Symptoms are alleviated by using more opioids.

How do people overdose?

- By using too much or too potent of a dose
- By detoxing and then returning to a previous dose
- By combining an opioid with another substance
  - Alcohol
  - Benzodiazepine
Naloxone (Narcan)

- Antidote for an opioid overdose
- Competes with the opioid for the opioid receptor
- Administered intravenously, injected into the muscle, or as a nasal spray

Waves of the Opioid Epidemic

- First Wave – Opioid Analgesics
- Second Wave – Heroin
- Third Wave – Fentanyl
Medication-Assisted Treatment

The combination of medicine and behavioral therapies to treat substance use disorders

MATP Medication Options

- Do nothing at all
- Drugs to treat symptoms of withdrawal
- Options of Opioid Use Disorder
  - Methadone
  - Buprenorphine
  - Naltrexone
- Options for Alcohol Use Disorder
Methadone Maintenance

• Approved by the FDA in 1972
• Full opioid agonist
• Daily administration
• Taken orally as a liquid concentrate, tablet, or oral solution
• Prescribed in Opioid Treatment Programs (OTP)

Opioid Treatment Programs

• Highly regulated federal/state programs
• Routine drug testing/daily visits
• Mental health counseling is required
Methadone Clinics

Would you like a tour of methadone clinic?
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Buprenorphine

- Approved by the FDA in 2002
- Due to the Drug Addiction Treatment Act of 2000, buprenorphine does not need to be dispensed in an OTP. It can be prescribed in any office setting and provided by any pharmacy.
- Prescribers need to be board certified in addiction medicine or addiction psychiatry or qualify for a federal waiver.

Buprenorphine

- Opioid partial agonist
  - Ceiling effect
- Most common administration is as a sublingual film
- Extended-release Injectable version (Sublocade)
Naltrexone

- Opioid Antagonist
  - Blocks opioid receptors preventing opioids from binding to them
  - Reduces cravings
  - Counteracts the effects of opioids
  - Misuse is not a concern
  - Can be prescribed without a waiver

Extended-release naltrexone (Vivitrol)

- Monthly blockade from opioids
- Many individuals opt out of treatment early or never get their first injection (Jarvis et al., 2018)
Naltrexone

- The most notable barrier to naltrexone treatment is that clients must fully detoxify from all opioids for 7 to 10 days prior to administration.
- Those who do not fully detoxify will enter a precipitated withdrawal.

Alcohol Use Disorder

- Acamprosate
  - Stabilizes chemical signaling in the brain.
- Disulfiram
  - Unpleasant side effects occur within ten minutes of drinking alcohol when on disulfiram.
- Naltrexone
  - Blocks the euphoric effects and feelings of intoxication.
Kratom

• Mitragyna speciosa [evergreen]
• Southeast Asia
• Banned in some countries, but not in the U.S.
• MU opioid agonist
• Has been used to relieve opioid withdrawal

Kratom

• The DEA has identified Kratom as a “drug of concern.”
• Department of Health and Human Services recommended that Kratom be classified as a Schedule 1 drug.
• Fluyau and Revadiga (2017) reported that the benefits of Kratom are likely mitigated by the potential side effects.
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Imodium (Loperamide)

- Opioid agonist – not absorbed in the brain
- Treats diarrhea – 100x opiate receptors bowel/brain
- Absorbed at high doses into the blood
- Cardio toxic

What’s it like to receive MAT?

- MAT offers relief from an opioid dependent lifestyle.
- There is grieving for the losses caused by dependency.
- MAT can have a double stigma (dependency and participation in MAT).
- There are difficulties with the medication (side effects, emotional blunting).
- MAT participants can begin to feel like a normal person again.

Is Counseling Necessary in MATPs?

- Dugosh et al. (2016) reported that research generally supported the efficacy of counseling in MAT, noting, however, that the literature base was severely limited.
- In a survey of experts completed by (Farmer et al., 2015), they agreed that psychosocial counseling from a qualified provider was a necessary component.
- Weiss et al. (2014) added that, in their study, counseling was effective at promoting opioid abstinence in MAT, but only if adequate exposure to counseling was achieved.

- There are times when counselor shortages prevent clients from receiving the necessary counseling component of MAT.
- Situations where comprehensive treatment was delayed or unavailable, interim methadone or buprenorphine treatment, without counseling, has been demonstrated to offer benefits to clients and should not be delayed based on the availability of counseling (Schwartz, Kelly, O’Grady, Gandi, & Jaffe, 2012; Streck, Ochalek, Badger, & Sigmon, 2018).
Counseling in MATPs

• Build Rapport
  • Treat clients like humans!
• Discuss the risks of MAT
  • Side effects of the medication
  • Stigma attached to MAT
  • Client will become physically dependent on opioid replacement medication
  • Precipitated withdrawal

Counseling in MATPs

• Assist in enhancing motivation for treatment
  • Motivational Interviewing
• Develop a comprehensive treatment plan
  • Identify high-risk triggers
  • Develop coping strategies
Counseling in MATPs

- Use a strengths-based approach and avoid a punitive style that focuses on program adherence
- Focus on team-based collaboration with the treatment team
  - Communicate pertinent information while maintaining confidentiality

The first two weeks is key!
- McDermott et al. (2015) found that being abstinent from opioids during the first two weeks of treatment moderately predicted treatment success (71%), while opioid use during the first two weeks strongly predicted unsuccessful treatment (84%).
- At least weekly counseling is recommended during the early stages of counseling.
- Counseling can be titrated down after the client enters the maintenance phase.
Tapering and Termination

- Discontinuation of MAT comes with a significant risk of overdose
- OUD should be considered a chronic disease
- Close monitoring should be utilized if discontinuation occurs
- Counseling should continue post MAT to ensure a successful transition

MAT Beyond

- Naltrexone in prison/jail populations
- MAT and Neurofeedback
- MAT and EMDR
- Psychedelic Therapies
Jail Release Programs - Naltrexone

- Extended-Release Naltrexone has been used in jail release programs with good success.
- Cost of extended-release naltrexone may be a barrier.

Neurofeedback

- A specialized form of biofeedback where clients are provided real-time feedback on brain waves to teach control and enhance functionality.
- Neurofeedback enhances emotional regulation and assists in stabilizing the brain.
Eye Movement Desensitization and Reprocessing

• EMDR is a form of psychotherapy that is used to treat the symptoms of posttraumatic stress and complex trauma.
• Combining EMDR with MAT treats the co-occurring trauma that is associated with OUD.

Psychedelic Therapies

• Psychedelic experiences can alter an individual's mindset and/or belief system.
• Psilocybin has demonstrated effectiveness in treating alcohol use disorder.
Questions?

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References


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