Recognizing & Treating Opioid Dependence in your Clinic

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Beaumont Hospital

www.saadmd.com
DISCLOSURE

Dr. Saad is compensated by ALKERMES, Inc. for periodic speaking engagements discussing Vivitrol® and other M.A.T. options.
GOALS

1. Identify patients in clinical setting with an opioid use disorder
2. Provide treatment options once diagnosed
3. Properly manage Medication Assisted Treatment in outpatient setting
Self Assessment Questions

1) Name one screening tool used to better diagnose/treat opioid use disorder.
2) Name the three types of medications prescribed for treatment of opioid use disorder.
3) Name two strategies used to successfully monitor patients on Medication Assisted Treatment.
Overview

• Epidemiology
• Primary Care stats
• Identifying use disorder
• Mechanism of Action
• Treatment options
Epidemiology
The Opioid Epidemic in the U.S.

In 2015...

12.5 million
People misused prescription opioids

2.1 million
People misused prescription opioids for the first time

33,091
People died from overdosing on opioids

2 million
People had prescription opioid use disorder

15,281
Deaths attributed to overdosing on commonly prescribed opioids

828,000
People used heroin

9,580
Deaths attributed to overdosing on synthetic opioids

135,000
People used heroin for the first time

12,989
Deaths attributed to overdosing on heroin

$78.5 billion
In economic costs (2013 data)

Sources:
1. 2013 National Survey on Drug Use and Health (SAMHSA).
2. MMWR, 2016; 65(50-51):1445-1462 (CDC).
3. Prescription Overdose Data (CDC).
4. Heroin Overdose Data (CDC).
5. Synthetic Opioid Data (CDC).
More than 63,000 Americans died from a drug overdose in 2016.

See the full report to see the rates by state.
Heroin use is part of a larger substance abuse problem.

Nearly all people who used heroin also used at least 1 other drug.

Most used at least 3 other drugs.

Heroin is a highly addictive opioid drug with a high risk of overdose and death for users.

People who are addicted to...

- Alcohol are 2x more likely to be addicted to heroin.
- Marijuana are 3x more likely to be addicted to heroin.
- Cocaine are 15x more likely to be addicted to heroin.
- Rx Opioid Painkillers are 40x more likely to be addicted to heroin.

Primary Care Stats
Around 40% of all opioid overdose deaths involve a prescription opioid.
As many as
1 in 4
PEOPLE
receiving prescription opioids long term in a primary care setting struggles with addiction.
From 1999 to 2016, 197,000 people died from overdoses related to prescription opioids.

www.cdc.gov
Identifying patients with opioid use disorder
Signs of a potential opioid use disorder

- Self-reported risk factors (ORT)
- Opioid withdrawal symptoms (COWS)
- Recent opioid emergency or overdose
- Opioid seeking or diversion behavior (MAPS, UDS)
Tools

• Opioid Risk Tool (ORT)

• Objective Opiate Withdrawal Scale (OOWS)

• Clinical Opiate Withdrawal Scale (COWS)

• Michigan Automated Prescription System (MAPS)

• Urine Drug Screen (UDS)
Opioid Risk Tool (ORT)

**Administration**
- On initial visit
- Prior to opioid therapy

**Scoring**
- 0-3: low risk (6%)
- 4-7: moderate risk (28%)
- > 8: high risk (> 90%)

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**Mark each box that applies:**

<table>
<thead>
<tr>
<th>Family history of substance abuse</th>
<th>Female</th>
<th>Male</th>
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<tr>
<td>Alcohol</td>
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<tr>
<td>Prescription drugs</td>
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<table>
<thead>
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<tr>
<td>Prescription drugs</td>
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<table>
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<table>
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<td>□ 2</td>
</tr>
<tr>
<td>Depression</td>
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</table>

**Scoring totals:**

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MAPS and Urine Drug Testing (UDS) why?

• Confirm compliance to a treatment plan
• Rule out other substances of abuse (poly-substance abuse)
• Uncover potential contraindications
• Combat diversion
• Protect prescribers and pharmacists from fraud
### Narx Scores

<table>
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<th>Type</th>
<th>Score</th>
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<tr>
<td>Narcotic</td>
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<tr>
<td>Sedative</td>
<td>220</td>
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<tr>
<td>Stimulant</td>
<td>000</td>
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</table>

### Overdose Risk Score

- **Score**: 680
- **Range**: 000-999

### Additional Risk Indicators (3)

- >= 4 opioid or sedative dispensing pharmacies in any 90 day period in the last 2 years
- >= 5 opioid or sedative providers in any year in the last 2 years
- > 100 MME total and 40 MME/day average
*Per CDC guidance, the MME conversion factors prescribed or provided as part of the medication-assisted treatment for opioid use disorder should not be used to benchmark against dosage thresholds meant for opioids prescribed for pain. Buprenorphine products have no agreed upon morphine equivalency, and as partial opioid agonists, are not expected to be associated with overdose risk in the same dose-dependent manner as doses for full agonist opioids. MME = morphine milligram equivalents. LME = Lorazepam milligram equivalents. mg = dose in milligrams.
## Summary

<table>
<thead>
<tr>
<th>Summary</th>
<th>Narcotics* (excluding buprenorphine):</th>
<th>Sedatives*</th>
<th>Buprenorphine*</th>
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<tr>
<td>Total Prescriptions: 56</td>
<td>Current Qty: 0</td>
<td>Current Qty: 0</td>
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<tr>
<td>Total Prescribers: 6</td>
<td>Current MME/day: 0.00</td>
<td>Current MME/day: 0.00</td>
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<td>30 Day Avg MME/day: 0.00</td>
<td>30 Day Avg MME/day: 0.00</td>
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<td></td>
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<td>30 Day Avg MME/day: 0.00</td>
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## Rx Data

### PRESCRIPTIONS

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<th>Drug</th>
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<th>Days</th>
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<td>ICC</td>
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<td>05</td>
<td>0</td>
<td>5</td>
<td>R</td>
<td>98</td>
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</table>
Urine Drug Testing (UDS)

Point of Care Testing - **Subjective**
Immediate results

Chromatography – **Objective**
Discrete data results in a few days

Abdulhassan Saad, MD
Medical Clinic
<table>
<thead>
<tr>
<th>Drug Adherence Assessment Report</th>
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<tbody>
<tr>
<td><strong>Benzodiazepines</strong></td>
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<tr>
<td>2-Hydroxyethylflurazepam</td>
</tr>
<tr>
<td>Cocaine</td>
</tr>
<tr>
<td>Benzoylcegonine</td>
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<tr>
<td><strong>Buprenorphine Panel</strong></td>
</tr>
<tr>
<td>Buprenorphine</td>
</tr>
<tr>
<td>Norbuprenorphine</td>
</tr>
<tr>
<td>Fentanyl</td>
</tr>
<tr>
<td>Fentanyl</td>
</tr>
<tr>
<td>Norfentanyl</td>
</tr>
<tr>
<td><strong>Heroin</strong></td>
</tr>
<tr>
<td>6-MAM</td>
</tr>
<tr>
<td><strong>Methadone</strong></td>
</tr>
<tr>
<td>EDDP</td>
</tr>
<tr>
<td>Methadone</td>
</tr>
<tr>
<td><strong>Methylenedioxymethamphetamine</strong></td>
</tr>
<tr>
<td>MDMA</td>
</tr>
<tr>
<td>Drug</td>
</tr>
<tr>
<td>-----------------------</td>
</tr>
<tr>
<td>Fentanyl</td>
</tr>
<tr>
<td>Norfentanyl</td>
</tr>
<tr>
<td>Heroin</td>
</tr>
<tr>
<td>Methadone</td>
</tr>
<tr>
<td>Methadone EDDP</td>
</tr>
<tr>
<td>Methylenedioxyamphetamine</td>
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<td>MDMA</td>
</tr>
<tr>
<td>MDEA</td>
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<tr>
<td>MDA</td>
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<tr>
<td>Methylphenidate</td>
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<tr>
<td>Muscle Relaxant</td>
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<tr>
<td>Opiates</td>
</tr>
<tr>
<td>Morphine</td>
</tr>
<tr>
<td>Codeine</td>
</tr>
<tr>
<td>Hydrocodone</td>
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<tr>
<td>Hydromorphone</td>
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<tr>
<td>Opioids</td>
</tr>
<tr>
<td>Meperidine</td>
</tr>
<tr>
<td>Normeperidine</td>
</tr>
<tr>
<td>Oxycodeone</td>
</tr>
<tr>
<td>Oxymorphone</td>
</tr>
<tr>
<td>Phencyclidine (PCP)</td>
</tr>
<tr>
<td>PCP</td>
</tr>
<tr>
<td>Propoxyphene</td>
</tr>
<tr>
<td>Tapentadol</td>
</tr>
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</table>
Other possible signs of an abuse problem

- ER/Admission report with overdose diagnosis
- Patient reports meds lost or stolen
- Patient is asking for early refills
- Patient asking for a brand name analgesic
- Patient reporting withdrawal-like symptoms
Withdrawal symptoms

DURATION and SEVERITY of Opioid withdrawal symptoms can depend on many variables such as:

• Patient age
• Opioid type / half life
• Severity of opioid dependency (Quantity)
• Duration of dependency (Time)
Withdrawal symptoms

- Agitation, Anxiety
- Nausea, Pain
- Insomnia, Restlessness
- Fatigue, Chills, Sweats
- Overdose: Non-responsive/Respiratory Distress (emergency)
Mechanism of Action
Receptors

• 3 main type of receptors = MU – μ, DELTA – δ, KAPPA – κ,

• MU (μ) is the most important with respect to exerting euphoric effects, analgesic effects, overdose and withdrawal

• Important effects: respiratory depression, miosis, euphoria, decreased GI motility, hypotension, itchiness and bradycardia
Receptor binding action

1) Full Agonists

bind and exert the full effects possible at that receptor;

*Heroin, Codeine, Fentanyl, Hydrocodone*

• bind the receptor completely – how long they bind [dissociation rate], and how fast + strongly they bind [affinity] need to be considered
2) **Partial Agonists:**

bind but do not exert full effects at that receptor; *Buprenorphine*

- How strongly they bind [receptor affinity], and how much an effect they have [receptor efficacy/intrinsic activity] need to be considered
- They are DOSE DEPENDENT, meaning the higher the dose, the greater the partial agonist effect. May even become an antagonist
Receptor binding action

3) **Antagonists**

  bind at receptors but **do not** activate effects at that receptor: *Naloxone and Naltrexone*

• Prevent agonists from exerting their effects by competitively binding the receptor (Blocking action)

• Not Inverse agonists
Medication Assisted Treatment Options
Patient Type Considerations

1. Fully engaged in recovery? (Best results)
2. Participating due to threat of adverse situation? (significant other, or legal ramifications of non-compliance)
3. M.A.T. – Appropriate medication selection for the individual’s medical situation and current mindset.
4. Pregnancy? Coordinate care with OB and PCP?
Methadone
(agonist)
METHADONE

• Part of a licensed (LARA) comprehensive treatment program including therapy and counseling.

• Prescribing Dr. must be licensed as a controlled substance treatment program prescriber. (LARA)

• By law, methadone treatment for substance abuse can only be dispensed through an opioid treatment program (OTP) certified by SAMHSA.
Methadone is invented by German doctors during world war 2, and entered United States in 2002 to treat extreme pain.

Methadone is available under brand names: methadose and dolophine

Methadone is μ-receptor agonist and releases neurotransmitters

This reduce cravings for opioids, not induce intoxication, reduce the euphoria effects of opioids
Methadone Maintenance Therapy for Opioid Addiction

• In the early 1960s, it was discovered that when taken daily at an appropriate maintenance dose, methadone benefited patients experiencing withdrawal from other opioids, including morphine and heroin.

• Strict criteria are in place for persons to be admitted to MMT. These may include a history of at least six months' daily opioid use, positive urine screening for opioids, and the presence of active withdrawal symptoms.

• During the first 30 to 60 days, when daily attendance is required, the proper methadone maintenance dose is determined. Participants are monitored regularly with urine drug screening.
Methadone Maintenance Therapy for Opioid Addiction

• Methadone is longer acting (24 to 36 hours) than most other opioids. For example, heroin, which is short acting (three to six hours), is often injected several times a day while, in MMT, methadone is administered only once a day.

• Tolerance to methadone develops slowly, so clients can be maintained in MMT indefinitely.

• A variety of studies have found that MMT is associated with a reduction in the use of other opioids, mortality, injection drug-related risk behaviors, high-risk behavior associated with the transmission of HIV and other sexually transmitted diseases, criminal activity.
METHADONE

- EKG all potential patients, screening for QT wave prolongation
- Induction max is 30mg / day
- Patient is off opioids and entering withdrawal phase prior to induction
- Complete medication review / and laboratory workup recommended
Buprenorphine
(partial agonist)
BUPRENORPHINE


• Physicians must qualify for a physician waiver, which includes completing required buprenorphine training.

• Physicians can also request a patient limit increase from the initial 30 patients to 100 and then after one year to 275.
Suboxone: the Best of Both Worlds?

Suboxone is the combination of Buprenorphine and Naloxone

**Buprenorphine**
- Partial opioid AGONIST
- Can mimic some of heroin’s effects
- Can satisfy heroin cravings
- No euphoric “high”
- Less habit-forming than full opioid agonists such as heroin or methadone
- Less respiratory depression compared to methadone

**Suboxone**
- Can satisfy heroin cravings
- No euphoric “high”
- Less habit-forming than full opioid agonists such as heroin or methadone
- Less respiratory depression compared to methadone
- Low risk of overdose

**Naloxone**
- Opioid ANTAGONIST
- Blocks heroin’s actions
- Eliminates risk of opioid overdose
Day 1

An induction dosage of up to 8 mg/2 mg SUBOXONE Film is recommended.

– Clinicians should start with an initial dose of 2 mg/0.5 mg or 4 mg/1 mg buprenorphine/naloxone and may titrate upwards in 2 or 4 mg increments of buprenorphine, at approximately 2-hour intervals, under supervision, to 8 mg/2 mg buprenorphine/naloxone based on the control of acute withdrawal symptoms.

Day 2

A single daily dose of up to 16 mg/4 mg SUBOXONE Film is recommended.

– Medication should be prescribed in consideration of the frequency of visits. Provision of multiple refills is not advised early in treatment or without appropriate patient follow-up visits.

– It is recommended that an adequate maintenance dose, titrated to clinical effectiveness, be achieved as rapidly as possible. In some studies, a too-gradual induction over several days led to a high rate of drop-out of buprenorphine patients during the induction period.

• Induction day 1 and day 2
Maintenance phase of opioid dependence treatment

The dosage of SUBOXONE Film from Day 3 onwards should be progressively adjusted in increments/decrements of 2 mg/0.5 mg or 4 mg/1 mg buprenorphine/naloxone to a level that holds the patient in treatment and suppresses opioid withdrawal signs and symptoms.

After treatment induction and stabilization, the maintenance dose of SUBOXONE Film is generally in the range of 4 mg/1 mg buprenorphine/naloxone to 24 mg/6 mg buprenorphine/naloxone per day depending on the individual patient and clinical response.

The recommended target dosage of SUBOXONE Film during maintenance is 16 mg/4 mg buprenorphine/naloxone/day as a single daily dose. Dosages higher than 24 mg/6 mg daily have not been demonstrated to provide a clinical advantage.
Patient considerations

**Patients dependent on methadone or long-acting opioid products**

– Buprenorphine monotherapy is recommended in patients taking long-acting opioids when used according to approved administration instructions

– Following induction, the patient may then be transitioned to once-daily SUBOXONE Film

**Patients dependent on heroin or other short-acting opioid products**

– Patients dependent on heroin or short-acting opioid products may be induced with either SUBOXONE Film or with sublingual buprenorphine monotherapy

– The first dose of SUBOXONE Film or buprenorphine should be administered when objective signs of moderate opioid withdrawal appear, and not less than 6 hours after the patient last used an opioid
Naltrexone
(antagonist)

Vivitrol
(naltrexone for extended-release injectable suspension)

Revia
(naltrexone hydrochloride tablets, USP)

Abdulhassan Saad, MD
Medical Clinic
• Naltrexone is the generic name for the medication in the Vivitrol® injection, and Revia® tablets

• Covered by Michigan Medicaid and Medicare

• No special training, licenses or certifications

• For private insurance or cash-pay, company offers co-pay assistance up to $500 per month
Vivitrol is an extended release injectable given once a month for Alcohol and Opioid dependence.

What are the Benefits of Vivitrol Treatment?

- Vivitrol is non-addictive
- It does not create a "high"
- Easier than daily oral medications
- Successful for both alcohol and opioids
- Effective for relapse prevention
Facts for NALTREXONE

• Blocks opiate receptors (Mu), as an Antagonist.
• Can be used in both alcohol and opiate dependent patients
• Vivitrol; Once monthly, time released injection to prevent relapse
• Works best in combination with therapy and support agencies (AA, NA, etc.)
• The treatment is recommended for 24 months
The risk of opioid overdose with VIVITROL® or Revia®

One serious side effect of VIVITROL, Revia or other abstinence plans is the risk of opioid overdose. Relapse, using opioids, even in amounts that were tolerated before VIVITROL treatment, or abstinence can lead to accidental overdose, serious injury, coma, or death.
Thank You!

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