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Management of Opioid Use Disorder

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Disclosures

★ No financial conflicts to declare
Agenda

⭐ Define opioid use disorder (OUD)
⭐ Describe screening tools for opioid use disorder
⭐ Review treatment options for opioid use disorder
⭐ Describe perioperative management of patients on maintenance therapy for opioid dependence
Clinical case – Mr. M

- 67-year-old gentleman
- Joined PACE 6 months ago
- PMH: Paranoid schizophrenia, substance use disorder (fentanyl, cocaine, heroine)
- Med: perphenazine, propranolol, trazodone, busiprone, benztropine
- Estranged from family, resides in a shelter -> at risk for lose housing after Utox repeatedly + for fentanyl
3 Waves of the Rise in Opioid Overdose Deaths

Wave 1: Rise in Prescription Opioid Overdose Deaths
Wave 2: Rise in Heroin Overdose Deaths
Wave 3: Rise in Synthetic Opioid Overdose Deaths

Opioid use disorder

★ DSM 5
- 11 criteria, at least 2 within the last 12 months
- Mild (2,3), moderate (4,5), severe (≥6)
- In early remission (3-12mon), in sustained remission (>12mon), on maintenance therapy, in a controlled environment

★ Chronic, relapsing
Opioid use disorder – DSM 5

1. Opioids are often taken in larger amounts or over a longer period than was intended
2. A persistent desire or unsuccessful efforts to cut down or control opioid use
3. A great deal of time is spent in activities necessary to obtain the opioid, use the opioid, or recover from its effects
4. Craving, or a strong desire or urge to use opioids (can still have craving while in remission)
5. Recurrent opioid use resulting in a failure to fulfill major role obligations at work, school, or home
6. Continued opioid use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of opioids
7. Important social, occupational, or recreational activities are given up or reduced because of opioid use
8. Recurrent opioid use in situations in which it is physically hazardous
9. Continued opioid use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance
10. Withdrawal
11. Tolerance
Screening tools for OUD

★ TAPS tool
https://cde.drugabuse.gov/instrument/29b23e2e-e266-f095-e050-bb89ad43472f

★ NIDA quick screen

★ Opioid Risk Tool
Screening tools for OUD - TAPS

- All-in-one screening tool (tobacco, alcohol, cannabis, stimulant, heroin, opioid, sedative)
- Available in public domains
<table>
<thead>
<tr>
<th>TAPS 1</th>
<th>TAPS 2</th>
<th>TAPS SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In the PAST 12 MONTHS, how often have</strong>&lt;br&gt;<strong>you used any tobacco product?</strong></td>
<td><strong>In the PAST 3 MONTHS, did you smoke a cigarette containing tobacco? (no=0, yes=1)</strong>&lt;br&gt;• In the PAST 3 MONTHS, did you usually smoke more than 10 cigarettes each day? (no=0, yes=1)&lt;br&gt;• In the PAST 3 MONTHS, did you usually smoke within 30 minutes after waking? (no=0, yes=1)</td>
<td><strong>Tobacco Score</strong>&lt;br&gt;(0-3)</td>
</tr>
<tr>
<td><strong>In the PAST 12 MONTHS, how often have</strong>&lt;br&gt;<strong>you had 5 or more drinks (men)/4 or more drinks (women) containing alcohol in one day?</strong></td>
<td><strong>In the PAST 3 MONTHS, did you have a drink containing alcohol? (no=0, yes=1)</strong>&lt;br&gt;• In the PAST 3 MONTHS, did you have 5 or more drinks containing alcohol in a day? (no=0, yes=1)&lt;br&gt;• In the PAST 3 MONTHS, have you tried and failed to control, cut down or stop drinking? (no=0, yes=1)&lt;br&gt;• In the PAST 3 MONTHS, has anyone expressed concern about your drinking? (no=0, yes=1)</td>
<td><strong>Alcohol Score</strong>&lt;br&gt;(0-4)</td>
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<tr>
<td><strong>In the PAST 12 MONTHS, how often have</strong>&lt;br&gt;<strong>you used any drugs including marijuana, cocaine or crack, heroin, methamphetamine (crystal meth), hallucinogens, ecstasy/MDMA?</strong></td>
<td><strong>In the PAST 3 MONTHS, did you use marijuana (hash, weed)? (no=0, yes=1)</strong>&lt;br&gt;• In the PAST 3 MONTHS, have you had a strong desire or urge to use marijuana at least once a week or more often? (no=0, yes=1)&lt;br&gt;• In the PAST 3 MONTHS, has anyone expressed concern about your use of marijuana? (no=0, yes=1)</td>
<td><strong>Cannabis Score</strong>&lt;br&gt;(0-3)</td>
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<td><strong>In the PAST 12 MONTHS, how often have</strong>&lt;br&gt;<strong>you used any prescription medications just for the feeling, more than prescribed or that were not prescribed for you?</strong></td>
<td><strong>In the PAST 3 MONTHS, did you use cocaine, crack, or methamphetamine (crystal meth)? (no=0, yes=1)</strong>&lt;br&gt;• In the PAST 3 MONTHS, did you use cocaine, crack, or methamphetamine (crystal meth) at least once a week or more often? (no=0, yes=1)&lt;br&gt;• In the PAST 3 MONTHS, has anyone expressed concern about your use of cocaine, crack, or methamphetamine (crystal meth)? (no=0, yes=1)</td>
<td><strong>Stimulant Score</strong>&lt;br&gt;(0-3)</td>
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<td><strong>In the PAST 3 MONTHS, did you use heroin? (no=0, yes=1)</strong>&lt;br&gt;• In the PAST 3 MONTHS, have you tried and failed to control, cut down or stop using heroin? (no=0, yes=1)&lt;br&gt;• In the PAST 3 MONTHS, has anyone expressed concern about your use of heroin? (no=0, yes=1)</td>
<td><strong>Heroin Score</strong>&lt;br&gt;(0-3)</td>
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<td><strong>In the PAST 3 MONTHS, did you use a prescription opiate pain reliever (for example, Percocet, Vicodin) not as prescribed or that was not prescribed for you? (no=0, yes=1)</strong>&lt;br&gt;• In the PAST 3 MONTHS, have you tried and failed to control, cut down or stop using an opiate pain reliever? (no=0, yes=1)&lt;br&gt;• In the PAST 3 MONTHS, has anyone expressed concern about your use of an opiate pain reliever? (no=0, yes=1)</td>
<td><strong>Opioid Score</strong>&lt;br&gt;(0-3)</td>
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<td><strong>In the PAST 3 MONTHS, did you use a medication for anxiety or sleep (for example, Xanax, Ativan, or Klonopin) not as prescribed or that was not prescribed for you? (no=0, yes=1)</strong>&lt;br&gt;• In the PAST 3 MONTHS, have you had a strong desire or urge to use medications for anxiety or sleep at least once a week or more often? (no=0, yes=1)&lt;br&gt;• In the PAST 3 MONTHS, has anyone expressed concern about your use of medication for anxiety or sleep? (no=0, yes=1)</td>
<td><strong>Sedative Score</strong>&lt;br&gt;(0-3)</td>
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<td><strong>In the PAST 3 MONTHS, did you use a medication for ADHD (for example, Adderall, Ritalin) not as prescribed or that was not prescribed for you?</strong>&lt;br&gt;• In the PAST 3 MONTHS, did you use a medication for ADHD (for example, Adderall, Ritalin) at least once a week or more often? (no=0, yes=1)&lt;br&gt;• In the PAST 3 MONTHS, has anyone expressed concern about your use of medication for ADHD (for example, Adderall or Ritalin)? (no=0, yes=1)</td>
<td><strong>Stimulant Score</strong>&lt;br&gt;(0-3)</td>
</tr>
<tr>
<td></td>
<td>In the PAST 3 MONTHS, did you use any other illegal or recreational drug (for example, ecstasy molly, GH, poppers, LSD, mushrooms, special K, bath salts, synthetic marijuana (‘spice’), whips, etc.)? (no=0, yes=1)&lt;br&gt;• In the PAST 3 MONTHS, what were the other drug(s) you used? (fill in response)</td>
<td><strong>Not Scored</strong></td>
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Screening tool for OUD – NIDA quick screen

★ Stepwise approach
Ask -> Assist -> Assess Risk

★ Provides scripts for making assessment and describing risks

“If it's okay with you, I'd like to ask you a few questions that will help me give you better medical care. The questions relate to your experience with alcohol, cigarettes, and other drugs. Some of the substances we'll talk about are prescribed by a doctor (like pain medications). But I will only record those if you have taken them for reasons or in doses other than prescribed. I'll also ask you about illicit or illegal drug use—but only to better diagnose and treat you.”

“Based on the screening results, you are at high risk of having or developing a substance use disorder. It is medically in your best interest to stop your use of [insert specific drugs here]. I am concerned that if you do not make a change quickly, the consequences to your health and well-being may be serious.”
Helpful for identifying patients at risk for OUD

### Opioid Risk Tool (ORT)

<table>
<thead>
<tr>
<th>Date:</th>
<th></th>
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<tbody>
<tr>
<td>Patient name:</td>
<td></td>
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</tr>
</tbody>
</table>

#### 1. Family history of substance abuse
- Alcohol: [ ] 1 3
- Illegal drugs: [ ] 2 3
- Prescription drugs: [ ] 4 4

#### 2. Personal history of substance abuse
- Alcohol: [ ] 3 3
- Illegal drugs: [ ] 4 4
- Prescription drugs: [ ] 5 5

#### 3. Age (mark box #16 to 45)
- [ ] 1 1

#### 4. History of preadolescent sexual abuse
- [ ] 3 0

#### 5. Psychological disease
- Attention deficit disorder: [ ] 2 2
- Obsessive compulsive disorder: [ ]
- Bipolar: [ ]
- Schizophrenia: [ ]
- Depression: [ ] 1 1

**TOTAL:**

<table>
<thead>
<tr>
<th>Mark each box that applies</th>
<th>Item score (female)</th>
<th>Item score (male)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</table>

**Total score risk category:**
- Low risk: 0 to 3
- Moderate risk: 4 to 7
- High risk: ≥8

Withdrawal

- Objective Opioid Withdrawal Scale (OOWS)
- Subjective Opioid Withdrawal Scale (SOWS)
- Clinical Opioid Withdrawal Scale (COWS)
Treatment of opioid use disorder

- Naltrexone
- Buprenorphine
- Methadone
Naltrexone

- Competitive mu, kappa and delta opioid receptor antagonist
- Daily oral tablet (approved for AUD), IM injection every 28 days (approved for OUD and AUD)
- Treatment outcome inferior to methadone and buprenorphine maintenance
- Contraindicated in advanced liver disease, acute hepatitis, moderate to severe renal impairment, advanced psychiatric disease, opioid dependence
- May need to consider naloxone challenge
Injectable Naltrexone (Vivitrol)

- Review and sign agreement
- Need to abstain opioid 7-10 days prior to therapy
- Baseline LFTs (< 3X ULN), bilirubin, Cr
- Need naltrexone challenge (administer 25mg PO, no withdrawal symptoms 1hr after oral dose)
Buprenorphine

- Nonselective partial opioid agonist
- Oral transmucosal, injectable, sub-dermal implant
- Waiver requirement for MD and NP/PA
- Patient limit
- Milder withdrawal syndromes
- Naloxone added to buprenorphine to deter misuse
- Induction -> maintenance -> stabilization
Buprenorphine induction

- Review and sign agreements
- Bloodwork, UDS
- Abstain from opioid use (duration vary based on type of opioid)
- Mild-moderate withdrawal at the time of induction (COWS > 10) to avoid precipitated withdrawal
Methadone

- Full opioid agonist
- Outside contract
- SNFs – rules against admission
- Use VNA service and/or transportation daily
- Out of touch with function - often overmedicated
- Daily dosing potentially less effective for patients with concurrent chronic pain
Switching from methadone to buprenorphine-naltrexone

★ Advantage: decrease risk of overdose
★ Integrated care
★ Need to be low dose methadone (20mg to 40mg)
★ Once COWS score of 13 – 15, start buprenorphine/naloxone at 2mg/0.5mg sublingually
★ Continue to dose until physical withdrawal symptoms reduced to manageable level

Switching from methadone to naltrexone

★ Advantage: q28 day schedule and daily schedule
★ Treatment of both AUD and OUD
★ Can stop at anytime without having to undergo opioid withdrawal
★ No psychoactive effect
★ Need to be completely withdrawn from methadone, may take 7-14 days
★ Naltrexone challenge maybe needed

Switching from buprenorphine to naltrexone

- Reduce daily buprenorphine to 2mg for 1 week
- Need to wait 5-7 days after final buprenorphine dose
- UTS negative for all opioids
- Negative naloxone/naltrexone challenge
- Symptoms mgmt (clonidine, trazodone, etc)

Patient with HIV

- Buprenorphine/naloxone has better drug interaction profile than methadone
- 
- **PI:** may increase buprenorphine/naloxone levels: *atazanavir* and *atazanavir/ritonavir* associated with sedation and cognitive impairment, may need lower dose
- 
- **NNRTIs such as Efavirenz (Sustiva):** may decrease buprenorphine/naloxone level and cause withdrawal symptoms, may need to increase dose

Patients with HCV

★ Need baseline hepatic testing and retest
★ May consider buprenorphine monotherapy in cases of severe liver disease

Urine toxicology

★ Screening -> confirmatory
★ Confront participant with therapist/SW/RN immediately with + screen
  - More frequent visit
  - Higher level of care
★ Absence of med may require enhanced nurse monitoring: locked box and BID nursing visit
  - Lost/stolen/destroyed medication
  - Diversion
  - If dose of buprenorphine < 4-6 mg, may need confirmatory testing
Substance use during treatment

- Harm reduction model
- Risks versus benefits
- Assess circumstances (home environment, work environment)
- Revise treatment plan, intensify therapy
- Warm handoff

LaBelle, C. T.; Bergeron, L. P.; Wason, K. W.; Ventura, A. S.; and Beers, D. Clinical Guidelines of the Office Based Addiction Treatment Program for the use of Buprenorphine and Naltrexone Formulations in the Treatment of Substance Use Disorders. Unpublished treatment guidelines, Boston Medical Center, Mar 2018
Opioid use

★ Increase frequency of visits
★ Counseling
★ Relapse prevention education
★ Overdose prevention education

LaBelle, C. T.; Bergeron, L. P.; Wason, K.W.; Ventura, A. S.; and Beers, D. Clinical Guidelines of the Office Based Addiction Treatment Program for the use of Buprenorphine and Naltrexone Formulations in the Treatment of Substance Use Disorders. Unpublished treatment guidelines, Boston Medical Center, Mar 2018
Substance use during treatment

- Return for assessment in 24-48hr
- Intensification of treatment
- Overdose prevention
- BH referral
- Check PDMP
- Alcohol use – consider acamprosate or disulfiram (cannot receive naltrexone while on buprenorphine/naloxone)

OPT versus OBOT

- Opioid treatment program (OPT)
  - Methadone (daily dosing)
  - Buprenorphine (increasingly)

- Office-based opioid treatment (OBOT)
  - Buprenorphine (weekly or monthly dosing)
  - Waivered provider
When to consider OPT

★ Patients not suitable for OBOT
- Active alcohol use disorder
- Sedative, hypnotic, or anxiolytic use disorder
- Unsuccessful on buprenorphine
★ Daily (M-F) check-in with BH/SW
★ Daily nursing administrator (PACE RN weekdays, agency RN weekends)
★ Q1-2 week appointments with MD/NP and therapist
★ UDS tested positive for cocaine -> assessed by Medical and BH found to have increased paranoia -> switched from perphenazine to Invega
Challenges

- Complex social issues – housing
- Lack of local specialist in addiction psychiatry
- Time-consuming: staff burden
Strengths – psychosocial support

★ Psychosocial needs assessment
★ Counseling
★ Close collaboration with behavioral health providers
  - Cognitive behavioral coping skills (relaxation, activity-resting cycle, medications, mindfulness exercises, visualization/guided imagery, counting backwards)
  - Contingency management
  - Motivational enhancement
  - Cognitive restructuring
  - Behavioral activation (goal setting, pleasant activity scheduling)
Case 2 - RC

★ 56-year-old woman
★ Lives with son, independent of ADLs
★ On naltrexone (50mg daily) for alcohol use disorder
★ Scheduled for hysterectomy due to abnormal uterine bleeding with concern for endometrial CA
★ ? Plan for pain management
★ Discussion with IDT - ? Need for Rehab afterwards
For acute pain, utilize multimodal pain management with NSAID, acetaminophen, epidural/spinal analgesia, nerve blocks
On methadone maintenance therapy

★ Confirm methadone dose
★ Continue usual dose of methadone the day of surgery (clarify would receive the dose at PACE, MMTP, or hospital)
★ If NPO, should receive 50-70% of their usual methadone dose given IV, divided into 2-4 doses/day (i.e. 120mg PO daily, 40mg IV BID or 10mg IV TID)

Boston Medical Center. Perioperative Management of Non-Pregnant Patients on Maintenance Therapy for Opioid Dependence. Issued April 2012, Revised February 2017
Buprenorphine maintenance therapy

☆ Take AM dose of buprenorphine on the day of procedure
☆ Consider splitting total daily dose into q8h for better pain coverage
☆ Consider multimodal coverage
☆ If opioids are required for breakthrough pain, patients with OUD may require higher than usual doses due to cross tolerance and increased pain sensitivity

Naltrexone

★ Discontinue oral naltrexone 72 hr before surgery
★ Discontinue depot naltrexone 1 months prior to elective surgery
★ If unable to d/c naltrexone, higher than usual doses of opioids may be attempted, need to closely monitor for respiratory depression

# Opioid prescribing recommendation for surgery – Michigan OPEN

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Hydrocodone (Norco)</th>
<th>Oxycodone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5 mg tablets</td>
<td>5 mg tablets</td>
</tr>
<tr>
<td>Codeine (Tylenol #3)</td>
<td>30 mg tablets</td>
<td>Hydromorphone (Dilaudid)</td>
</tr>
<tr>
<td>Tramadol</td>
<td>50 mg tablets</td>
<td>2 mg tablets</td>
</tr>
<tr>
<td>Laparoscopic Cholecystectomy</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>Laparoscopic Appendectomy</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>Inguinal/Femoral Hernia Repair (open/laparoscopic)</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>Open Incisional Hernia Repair</td>
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<tr>
<td>Laparoscopic Colectomy</td>
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<tr>
<td>Open Colectomy</td>
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<tr>
<td>Ileostomy/Colostomy Creation, Re-siting, or Closure</td>
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<tr>
<td>Open Small Bowel Resection or Enterolysis</td>
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<tr>
<td>Thyroidectomy</td>
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<td>Hysterectomy</td>
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<td>Vaginal</td>
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<td>Laparoscopic &amp; Robotic</td>
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<tr>
<td>Abdominal</td>
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<tr>
<td>Breast Biopsy or Lumpectomy Alone</td>
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<tr>
<td>Lumpectomy + Sentinel Lymph Node Biopsy</td>
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<tr>
<td>Sentinel Lymph Node Biopsy Alone</td>
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<tr>
<td>Simple Mastectomy ± Sentinel Lymph Node Biopsy</td>
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<tr>
<td>Modified Radical Mastectomy or Axillary Lymph Node Dissection</td>
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<td>30</td>
</tr>
<tr>
<td>Wide Local Excision ± Sentinel Lymph Node Biopsy</td>
<td>30</td>
<td>20</td>
</tr>
</tbody>
</table>
Discussed with participant regarding concerns and expectation
Discussed with surgeon – on naltrexone, has sleep apnea, will likely require overnight admission if needing to use opioid for pain management
Nerve block utilized
Pain managed with NSAID
References


Acknowledgment

★ Dr. Elisabeth Broderick
★ Staff at Element Care – it truly takes a team!
★ Boston Medical Center (BMC) Office Based Addiction Treatment (OBAT) Training and Technical Assistance (TTA)
https://www.bmcobat.org/user/