Naloxone, Now What?
MAT in your ED

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Disclosure

• I have no relevant financial relationships with the manufacturer(s) of any commercial product(s) and/or provider(s) of commercial services discussed in this CME activity

• I do intend to discuss unapproved uses of commercial products in my presentation
Learning Objectives:

• Identify current barriers in the treatment of opioid dependence in the ED.

• Interpret current literature surrounding the medical therapies available for treating opioid dependence in the ED.

• Outline best practices currently employed in ED’s who currently provide Medication Assisted Therapy in the ED, including how to obtain a X-waiver to provide ED treatments (such as buprenorphine) and link patients to the outpatient setting.
The Problem

2016: ~64,000 Deaths
2017: ~72,000 Deaths
2019: ~69,000 Deaths
Change in Overdose Deaths in 2017

Ahmad FB. National Center for Health Statistics. 2018.

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Change in Overdose Deaths in 2018

Legend for Percent Change in Drug Overdose Deaths Between 12-Month Ending Periods

-19.5

Ahmad FB. National Center for Health Statistics. 2019.

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Based on data available for analysis on: 9/1/2019

Figure 1a. 12 Month-ending Provisional Counts of Drug Overdose Deaths: New Jersey

Ahmad FB. National Center for Health Statistics. 2019.

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"...a chronic illness that we must approach with the same skill and compassion with which we approach heart disease, diabetes, and cancer."
Naloxone, Now What?
Mechanism of Opioid Withdrawal

• Mu-, kappa-, and delta-receptors
• Mu-receptor activation decreases noradrenergic activity from the locus coeruleus
• Abrupt cessation of opioid use results in rebound activity
**Opiate withdrawal timeline** [digital image]. Retrieved with permission from: https://americanaddictioncenters.org/withdrawal-timelines-treatments/opiate/

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Approaching a patient in withdrawal

• Identify
  – Opioid used
  – Duration of use

• Explain withdrawal process

• Determine symptomatic management
Withdrawal Assessment Scales

- **Clinical Opiate Withdrawal Scale (COWS)**
  - 11 subjective and objective items

- **Subjective Opiate Withdrawal Scale (SOWS)**
  - 16 subjective items

- **Objective Opiate Withdrawal Scale (OOWS)**
  - 13 objective items
Traditional Withdrawal Management

**Methadone**
- Opioid receptor agonist
- **Benefits**
  - PO
  - Long-acting
- **Drawbacks**
  - Dosing
  - Half-life
  - DDIs

**Buprenorphine**
- Partial opioid receptor agonist
- **Benefits**
  - Ceiling effect
  - Coformulation with naloxone
- **Drawbacks**
  - Precipitation of withdrawal
  - Prescriber certification
Supportive Care

- Fluids
- Antiemetics
- Antidiarrheals
- Benzodiazepines
- Pain management
Additional Agents

• $\alpha_-2$ Agonists
  – Clonidine, lofexidine

• Hydroxyxzine

• Baclofen

• Gabapentin
MAT Saves Lives......

Title 21 Code of Federal Regulations
§1306.07 Administering or Dispensing of Narcotic Drugs

(a) Administer or dispense for detox if registered narcotic treatment program

(b) Emergency treatment “72 hour rule”

(c) Maintain or detox in hospital as an adjunct to other medical conditions

DEA DATA 2000 “X” Waiver
SUPPORT for Patients and Communities Act of 2018

- Expanded privileges to midlevel providers
- Expands treatment to 100 patients first year with conditions

https://www.samhsa.gov/medication-assisted-treatment
Buprenorphine

- Partial $\mu$-agonist/$\kappa$-antagonist
- High affinity (10x) to $\mu$-receptors, long disassociation
- Ideal drug for addiction
- Less AE vs methadone (i.e. respiratory depression)
Buprenorphine in the ED

- No need for complex psychosocial evaluation
- Does not require inpatient treatment
- Initiated even if follow-up unavailable
- Important stand-alone for socially unstable
Negative Impacts of MAT in the ED?

- Precipitated withdrawal
- Malingering and abuse/misuse
- Overdose
Does it work?

D’Onofrio 2015, Yale

Screening and referral (Referral)

VS.

Screening, brief intervention and referral (Brief Intervention)

VS.

Screening, brief intervention, ED buprenorphine and referral (Buprenorphine)
Engagement in Treatment at 30 days:

Referral: 37% (95% CI, 28%-47%)

vs.

Brief Intervention: 45% (95% CI, 36%-54%)

vs.

Buprenorphine: 78% (95% CI 70-85%)

Self-reported illicit opioid use ↓ ↓buprenorphine
MAT in the ED at St. Joseph’s Health

1. Patient Identification and inclusion

   a) Desire to begin MAT w/ buprenorphine and agrees to recovery support services

   b) "Contraindications"
      1) Actively taking methadone or use within 72 hrs
      2) Intoxicated
      3) Incarceration
      4) Pregnancy > 20 weeks (admission)

   c) Precautions
      1) Refusal to agree to recovery
      2) Active liver disease
MAT in the ED at St. Joseph’s Health

2. Clinical Evaluation:
   a) Quantify daily use and assess last use
   b) Clinical Opiate Withdrawal Score (COWS) > 8

3. Medication Administration:
   a) Buprenorphine **8 mg** SL once
   b) Reassess at 45 mins
   c) Significant improvement in COWS but > 10, second dose of **8 mg** SL once
   d) Observe for 60 mins after last dose prior to discharge
MAT in the ED at St. Joseph’s Health

4. Counseling and Follow up:
   a) Next day appointment w/ treatment center

5. Overdose Education and Naloxone Overdose Kit
Next Steps

• Inpatient use

• Micro-dsoing for pain
Naloxone, What’s Next?
MAT in your ED

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References


### Clinical Opioid Withdrawal Scale (COWS)

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resting Pulse Rate:</strong> Record Beats per Minute</td>
<td></td>
</tr>
<tr>
<td>Measured after patient is sitting or lying for one minute</td>
<td></td>
</tr>
<tr>
<td>0 = pulse rate 80 or below</td>
<td>1 = pulse rate 81-100</td>
</tr>
<tr>
<td>2 = pulse rate 101-120</td>
<td>4 = pulse rate greater than 120</td>
</tr>
<tr>
<td><strong>Sweating:</strong> Over Past 1/2 Hour not Accounted for by Room Temperature or Patient Activity</td>
<td></td>
</tr>
<tr>
<td>0 = no report of chills or flushing</td>
<td>3 = beads of sweat on brow or face</td>
</tr>
<tr>
<td>1 = subjective report of chills or flushing</td>
<td>4 = sweat streaming off face</td>
</tr>
<tr>
<td>2 = flushed or observable moistness on face</td>
<td></td>
</tr>
<tr>
<td><strong>Restlessness Observation During Assessment</strong></td>
<td></td>
</tr>
<tr>
<td>0 = able to sit still</td>
<td>3 = frequent shifting or extraneous movements of legs/arms</td>
</tr>
<tr>
<td>1 = reports difficulty sitting still, but is able to do so</td>
<td>5 = Unable to sit still for more than a few seconds</td>
</tr>
<tr>
<td><strong>Pupil Size</strong></td>
<td></td>
</tr>
<tr>
<td>0 = pupils pinned or normal size for room light</td>
<td>2 = pupils moderately dilated</td>
</tr>
<tr>
<td>1 = pupils possibly larger than normal for room light</td>
<td>5 = pupils so dilated that only the rim of the iris is visible</td>
</tr>
<tr>
<td><strong>Bone or Joint Aches if Patient was Having Pain Previously, only the Additional Component Attributed to Opiate Withdrawal is Scored</strong></td>
<td></td>
</tr>
<tr>
<td>0 = not present</td>
<td>2 = patient reports severe diffuse aching of joints/muscles</td>
</tr>
<tr>
<td>1 = mild diffuse discomfort</td>
<td>4 = patient is rubbing joints or muscles and is unable to sit still because of discomfort</td>
</tr>
<tr>
<td><strong>Runny Nose or Tearing Not Accounted for by Cold Symptoms or Allergies</strong></td>
<td></td>
</tr>
<tr>
<td>0 = not present</td>
<td>2 = nose running or tearing</td>
</tr>
<tr>
<td>1 = nasal stuffiness or unusually moist eyes</td>
<td>4 = nose constantly running or tears streaming down cheeks</td>
</tr>
<tr>
<td><strong>GI Upset:</strong> Over Last 1/2 Hour</td>
<td></td>
</tr>
<tr>
<td>0 = no GI symptoms</td>
<td>3 = vomiting or diarrhea</td>
</tr>
<tr>
<td>1 = stomach cramps</td>
<td>5 = multiple episodes of diarrhea or vomiting</td>
</tr>
<tr>
<td>2 = nausea or loose stool</td>
<td></td>
</tr>
<tr>
<td><strong>Tremor Observation of Outstretched Hands</strong></td>
<td></td>
</tr>
<tr>
<td>0 = no tremor</td>
<td>2 = slight tremor observable</td>
</tr>
<tr>
<td>1 = tremor can be felt, but not observed</td>
<td>4 = gross tremor or muscle twitching</td>
</tr>
<tr>
<td><strong>Yawning Observation During Assessment</strong></td>
<td></td>
</tr>
<tr>
<td>0 = no yawning</td>
<td>2 = yawning three or more times during assessment</td>
</tr>
<tr>
<td>1 = yawning once or twice during assessment</td>
<td>4 = yawning several times/minute</td>
</tr>
<tr>
<td><strong>Anxiety or Irritability</strong></td>
<td></td>
</tr>
<tr>
<td>0 = none</td>
<td>2 = patient obviously irritable/anxious</td>
</tr>
<tr>
<td>1 = patient reports increasing irritability or anxiousness</td>
<td>4 = patient so irritable or anxious that participation in the assessment is difficult</td>
</tr>
<tr>
<td><strong>Gooseflesh Skin</strong></td>
<td></td>
</tr>
<tr>
<td>0 = skin is smooth</td>
<td>5 = prominent piloerception</td>
</tr>
<tr>
<td>3 = piloerection of skin can be felt or hairs standing up on arms</td>
<td></td>
</tr>
</tbody>
</table>