Wright OUTT
Opioid Use Treatment Training
Program
H79TI085526-01

Department of Health and Human Services
Substance Abuse and Mental Health Services
Administration
Center for Substance Abuse Treatment
What specialty are you planning to enter?

Nobody has responded yet.

Hang tight! Responses are coming in.
When you are admitting someone to the hospital with a diagnosis of OUD and this person is presenting in withdrawal and they are requesting to be started on buprenorphine, how likely are you to start this medication?
When admitting someone to the hospital who has a diagnosis of OUD and is prescribed a maintenance dose of buprenorphine, how likely are you to continue that medication in the hospital?
Objectives

• Understand the epidemiology and neurobiology of addiction.
• Utilize appropriate language that reduces stigma in treating substance use disorders.
• Complete a thorough intake and discuss / prescribe medications for opioid use disorder.
• Understand the differences of OUD and SUD in special populations and co occurring disorders.
Introduction

Much of the following content is taking from the PCSS 8 hour MOUD training. It has been amended and developed in order to be more practical and application based for you learners here today.
More than 106,000 persons in the U.S. died from drug-involved overdose in 2021, including illicit drugs and prescription opioids.

This figure shows the total number of U.S. drug overdose deaths involving select illicit or prescription drugs from 1999 to 2021.

The bars are overlaid by lines showing the number of deaths by gender from 1999 to 2021.

Source: CDC WONDER

Opioid overdose is preventable!
Benefits of MOUD: Decreased Mortality

Death Rates

Dupouy et al., 2017
Evans et al., 2015
Sordo et al., 2017
• DATA 2000 allowed patients to get treatment from their PCP or psychiatrist’s office, reducing stigma.
• DATA 2000 required most practitioners to undergo addiction treatment training (eight hours for physicians and 24 hours for APRNs and PAs).
• Compliance may be enforced with unannounced DEA inspections and potential criminal liability.
• Over 90% of physicians in the US have not attended any DATA-2000 waiver course.
• Among clinicians receiving the DATA-2000 waiver training, many do not apply to receive the X-waiver; many do not prescribe at all
• Almost all active buprenorphine clinicians prescribe well below their patient limits—often to only a handful of patients.

Barriers to Treatment

• Practitioners feel a need for more training and building of confidence to treat.
• They feel starting to treat patients with OUD would be disruptive to their practice, stigma.
• Preauthorization insurance requirements
• Limited reimbursement
• DEA monitoring
• Not having access to behavioral health providers
• Concerns about diversion
On December 29, 2022, with the signing of the Consolidated Appropriations Act of 2023 (the Act), Congress eliminated the "DATA-Waiver Program."

• A DATA-Waiver registration is no longer required to treat patients with buprenorphine for opioid use disorder.
• Going forward, all prescriptions for buprenorphine only require a standard DEA registration number. The previously used DATA-Waiver registration numbers are no longer needed for any prescription.
• There are no longer any limits or patient caps on the number of patients a prescriber may treat for opioid use disorder with buprenorphine.
• The Act does not impact existing state laws or regulations that may be applicable.

Note: The Act also introduced new training requirements for all prescribers. These requirements went into effect on June 21, 2023.

Discontinuation of the Waiver
Discontinuation of the Waiver

- The MATE Act applies to new or renewing DEA registrants.
- On or after June 27, 2023, practitioners will need to check a box on their online DEA registration form—whether they're first-time registrants or renewing—attesting that they have completed eight hours of training on the treatment and management of patients with opioid or other substance use disorders.
- The MATE Act is a one-time requirement.
- Once you have completed the training, you don’t need to do so for future registration renewals. If you have already completed eight hours of training in the required topic, you do not need to complete another eight hours to satisfy the MATE Act.
MATE Act

- Graduation within five years and status in good standing from medical, advanced practice nursing, or physician assistant school in the United States that included successful completion of an opioid or other substance use disorder curriculum of at least eight hours.
- There are no longer any patient caps. A practitioner may treat as many patients as they can support with buprenorphine.
**Please take note:** As of June 27, 2023, due to the Consolidated Appropriations Act, 2023, you are required to self-attest that you meet any one of the following circumstances in order to proceed with the DEA Form 224 Application for Registration or the DEA Form 224a, Renewal of Registration Application:

- The physician holds a board certification in addiction psychiatry or addiction medicine from the American Board of Medical Specialties;
- The physician holds a board certification from the American Board of Addiction Medicine;
- The physician holds a board certification in addiction medicine from the American Osteopathic Association
- The physician has graduated from an accredited medical/osteopathic/dental school in the United States during the 5-year period preceding the date in which they first submitted a registration or renewal; or
- The physician has obtained 8 hours of training in the United States from any of the following organizations:
  
  American Society of Addiction Medicine, the American Academy of Addiction Psychiatry, the American Medical Association, American Osteopathic Association, the American Dental Association, the American Association of Oral and Maxillofacial Surgeons, the American Psychiatric Association, or any other organization accredited by the Accreditation Council for Continuing Medical Education (ACCME) or the Commission for Continuing Education Provider Recognition (CCEPR)

If these requirements have not been met, you will not be able to continue with your application or renewal.
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I have read and understood the information and agree to the terms outlined above.

[ ] I have read and understood the information and agree to the terms outlined above.

[ ] Continue

[ ] Cancel
Addiction is a treatable, chronic medical disease, involving complex interactions among brain circuits, genetics, the environment, and an individual’s life experiences.

It is considered a brain disorder, because it involves functional changes to brain circuits involved in reward, stress, and self-control.

Prevention efforts and treatment approaches for addiction are generally as successful as those for other chronic diseases.
Biology of Motivation

**Positive reinforcement**
- Cells in the brainstem release *dopamine* in the nucleus accumbens
- Liking and wanting
- Seek out and do more

**Negative reinforcement**
- Cells in the *amygdala* are stimulated
- Anxiety, fear, distress
- Avoid things that cause, do things that relieve fear

Attention, thinking, and judgment use the *prefrontal cortex*
Which of the following dopaminergic pathways includes the nucleus accumbens and mediates addiction and associated behaviors?

- Nigrostriatal
- Mesocortical
- Mesolimbic
- Tubuloinfundibular
Which of the following dopaminergic pathways includes the nucleus accumbens and mediates addiction and associated behaviors?

<table>
<thead>
<tr>
<th>Pathway</th>
<th>Votes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nigrostriatal</td>
<td>0%</td>
</tr>
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In the reward pathways implicated in the neurobiology of addiction, dopaminergic neurons project to the nucleus accumbens. The cell bodies of these neurons reside in which of the following areas of the brain?

- Amygdala
- Raphe nuclei
- Locus coeruleus
- Ventral tegmental area
- Medial dorsal thalamus
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Opioid Receptors and Physiology

Humans have at least three types of opioid receptors:

**Endogenous opioids (produced naturally in the body):**

Part of normal physiologic responses to injury, pain and stress

<table>
<thead>
<tr>
<th>Opioids Receptors</th>
<th>Endogenous Ligands</th>
</tr>
</thead>
<tbody>
<tr>
<td>mu</td>
<td>Endorphins</td>
</tr>
<tr>
<td>kappa</td>
<td>Dynorphins</td>
</tr>
<tr>
<td>delta</td>
<td>Enkephalins</td>
</tr>
</tbody>
</table>

Most of the clinically significant effects of prescribed and illicit opioids are attributed to activity at the mu receptor.
Main target for Opioids are Mu Receptors

Densely concentrated in:

- Brain regions associated with:
  - pain perception
  - reward pathways
  - respiratory function
- Spinal cord
- GI system
- Periphereral regions
Opioid Binding in the CNS

- Cortex
- Prefrontal Cortex
- Thalamus
- VTA
- NAc

Opioids
Spectrum of Substance Use

None or Low Risk: Increasing amounts, higher-risk substances or situations
At Risk: Craving, loss of control, consequences
Mild
Moderate
Severe

Tolerance and Withdrawal can appear anywhere
Empirically derived thresholds for each substance

Measurable, epidemiological data on use-related illness, injury or other health consequences

Context is important

Age, psychosocial circumstances, health consequences, physiologic status

Does NOT imply

Existence of "harmless use" or "healthy use"
Low- or Lower-Risk Use

- Use of alcohol or other substances in a situation that is not physically or psychosocially hazardous.

- Different amount depending on the person and the substance.

- Some substances (e.g. cocaine, methamphetamine, highly potent opioids, etc) would be difficult or impossible to use in a low risk way given their inherent danger.
Activity

Categorize the following clinical scenarios:

- Non-Use
- Low or Lower Risk
- Unhealthy Use

- None or Low Risk
  - Increasing amounts, higher-risk substances or situations

- At Risk

- Mild

- Moderate
  - Craving, loss of control, consequences

- Severe
A 52-year-old man orally consumes cannabis on the weekend.
A 13-year-old boy smokes cannabis before school.

- **None or Low Risk:** Increasing amounts, higher-risk substances or situations
- **At Risk:** Craving, loss of control, consequences
A 26-year-old man drinks 3 beers after work with friends.

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<td></td>
<td></td>
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</table>
A 26-year-old man who is prescribed (and taking) clonazepam drinks 3 beers after work with friends.

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A 26-year-old man uses cocaine after work with friends.
Why is the spectrum of substance use important?

- Recognizes the potential for lower-risk use, which is a necessary step in some successful paths to recovery (e.g. “not all use is created equal”).

- Provides a shared and universal language in addiction literature and for us to use when discussing our work with policy experts, the media, etc.

- Allows for a nuanced discussion of clinical work as opposed to a binary approach, which can be associated with a “good/bad” approach.
Language and Stigma

01. Addiction is one of the most stigmatized conditions.

02. Individuals with substance use disorders are viewed more negatively than people with physical or psychiatric disabilities.

03. Use of stigmatizing language (such as "substance abuser" rather than a "person with a substance use disorder) can adversely affect quality of care and subsequent treatment outcomes.

04. Broad consensus for adoption of clinical, non-stigmatizing "Person First" language for substance use:
   - American Medical Association
   - The American Society of Addiction Medicine
   - American Academy of Addiction Psychiatry
   - International Society of Addiction Journal Editors

Botticelli and Koh, 2016
Kelly et al., 2016
ONDCP, 2016
SUD as a chronic condition - common features

01 Heritability

02 Influenced by genes + environment

03 Responsive to appropriate treatment

04 Without adequate interventions, the condition progresses and can result in significant morbidity and mortality

05 Has a biological/physiological basis, ongoing and long term, can involve recurrences after full or partial remission is achieved

From PCSS training course 2: Changing Language to Change Care: Stigma and Substance Use Disorders, January 12, 2023
Like many chronic diseases, the interventions currently available for substance use disorders will not necessarily correct the essence of the problem but will:

- Reduce the number and severity of the symptoms
- Improve personal function
What if we treat SUD the same way that we treat other chronic conditions? Patient is a 56 year old man who presents to the emergency room with signs and symptoms of a myocardial infarction. What if.....

• He is told that the MI is "his fault" because of the "choices" he made in the past.
• He is denied treatment because "he did this to himself"
• He is given a list of cardiologists and cath labs to call
• He is only given medication if he agrees to go to counseling
• He is kicked out of the hospital because he has "more severe chest pain"?

From PCSS training course 2: Changing Language to Change Care: Stigma and Substance Use Disorders, January 12, 2023
What if we treated SUD like every other chronic condition?

- The only condition for receiving treatment is having a SUD
- Treatment is evidence based, involves shared decision making, centered on patient's goals, delivered with compassion
- System exists to deliver treatment on demand
- Not "fired" for having symptoms of a condition
- Patients and families would be given enough evidence to make informed decisions
- People would be offered a menu of treatment options
Many people use these terms with a basis in lived experience - I am not trying to change that.

Clinical dyads develop shared language as a normal part of a treatment relationship.

Am I policing your language?

NO
Most stigma is inadvertent

Why is language important

Research has demonstrated that stigmatizing terms negatively impact quality of care

• One study compared the use of “abuse” versus “disorder”
  ○ Providers were given surveys that described “substances abusers” and “people with substance use disorders”
  ○ “Substance abusers” were more likely to be seen as willfully engaging in social misconduct, representing a greater social threat, and more deserving of punishment compared to “people with substance use disorder”

• An additional analysis demonstrated again that “substance abusers” were personally culpable and that punitive measures should be taken

Kelly, et al., 2010.
Why else is language important

Clinical work relies on the description of inherently imprecise or difficult to describe phenomena and relaying information from one or more people to another.

A patient consumes four standard servings of alcohol and reports this to the treatment team.

I got hammered this weekend.

He went on a drinking binge.
Precision and Accuracy

- Precision refers to our ability to consistently mean the same thing when we say it (and others understanding our statements).
- Accuracy refers to how our statements align with known or accepted medical definitions.

The patient's urine is dirty vs. The patient's urine screen was positive for opioids.
Rationale: Abuse associated with increased stigma (including unintentional stigma) and attitudes that addiction is a moral failing.

Activity

Abuse

Use with specifications (lower-Risk, hazardous, harmful or addiction)
Addict, user, abuser, alcoholic, crack head, pot head, dope fiend, junkie
Addict, user, abuser, alcoholic, crack head, pot head, dope fiend, junkie

Person with a substance use disorder, or gambling disorder

Rationale: Movement toward person-first language. Avoid stereotyping and stigmatizing descriptions. Similar to other movements in medicine (e.g., a person with schizophrenia as opposed to schizophrenic; a person with diabetes and not a diabetic).
Dirty versus clean urine
Dirty versus clean urine

Positive or negative, detected or not detected

Rationale: “Dirty” can be pejorative, stigmatizing and judgemental. Often reflective of punitive not collaborative and supportive practices.
Misuse, problem
Misuse, problem

More accurate terms include at-risk or risky use, hazardous use, unhealthy use to describe the spectrum from risky/at-risk/hazardous use through disorder.

Rationale: Could be used if clearly defined and most useful for prescription drug misuse when the nature or severity of the condition is unknown. Avoid calling the person a problem or their use a problem.
Rationale: Avoiding slang / colloquialisms. Working toward using a shared, technical language given the importance of description in clinical work.
Activity

Binge

Heavy drinking episode

Rationale: Avoiding slang / colloquialisms. Working toward using a shared, technical language given the importance of description in clinical work.
Activity

Relapsed: Use, returned to use, recurrence (of symptoms) or disorder vs. remission specifiers (early or sustained) as defined by DSM-5.

Rationale: This term will likely continue to be used, but it should not imply a binary process (abstinent vs. relapse) that does not reflect real typical clinical course (that can include lapses or in-between states).
Medication assisted treatment,
Substitution, replacement
Medication assisted treatment, Substitution, replacement

Opioid agonist treatment, medication treatment, psychosocially assisted pharmacological treatment, treatment

Rationale: Can imply “substituting one addiction for another.” May place emphasis on particular psychosocial treatments that is unsupported in the literature, which can create barriers to patient accessing medication treatment.
Depressive and Anxiety Symptoms

- Mood instability and anxiety symptoms are common at treatment entry.
- Symptoms may resolve within few days of stable SUD treatment.
- Symptoms that persist beyond acute intoxication and withdrawal can be worthwhile targets for treatment:
  - For example, with Selective Serotonin Reuptake Inhibitors
Strong association between trauma and SUD

Patients with PTSD are up to 14 times more likely to have a SUD than patients without PTSD (Chilcoat & Menard, 2003)

Among patients seeking treatment for SUDs, lifetime PTSD rates range between 30% - 60% (McCauley, 2012)

If you see one of these conditions, SCREEN for the other one!
Co-occurring illness is more difficult to treat than either individual disorder. 

Treatment should include both concurrently.
- Combination of psychotherapeutic and pharmacologic management is most effective.

Adverse Childhood Experiences (including abuse, neglect, household dysfunction) and SUD have a graded relationship.
Structured therapies can be helpful in establishing recovery

- Facilitate engagement in building a social support network, e.g. NA/AA
- Relapse Prevention: use relapses as learning tools
- Integrate medication management into recovery program
• Purpose of psychosocial interventions is to
  ◦ address behaviors that maintain or reinforce drug use
  ◦ address coping strategies
  ◦ improve medication adherence
  ◦ treat co-occurring mental illness that can complicate SUD or trigger a return to use

• Some evidence shows that psychosocial treatment improves adherence and retention but findings are mixed

• Some individuals may not want to enter into counseling but medications should NOT be withheld

• Rule 4731-33-03 | Office-based treatment for opioid addiction does indicate that a psychosocial needs assessment should be done, which can include MI
You are working as an intern on an internal medicine service. Your team has just been given a new admission for community acquired pneumonia after failed outpatient treatment. You review the chart and notice the patient was also admitted for \textit{acute alcohol intoxication} in the past (3 months ago).

Work in your group to determine evidence-based screening tools, which you would use in each situation and why.
Screening Tests

Brief Tools

- **CAGE**
  - may not pickup risky drinking
- **AUDIT-C**
  - Better than CAGE
- **DAST 10**
- NIDA quick screen
- TAPS

Extended Tools

- NM Assist
- NIAAA
- AUDIT
- DAST 28

Special Populations

- CRAFFT (adolescents)
- MAST GMAST (geriatric)
- TACE TWEAK (pregnancy)
- 4P (pregnancy) - adds depression and IPV
Substance Use
Screening, Diagnosis and Assessment

• Overall Goals:
  ○ Identify at risk individuals, examples:
    ▪ patients with active substance use of other substances
    ▪ those with complicating physical or behavioral health diseases
  ○ Diagnose patients who meet Substance Use Disorders criteria
  ○ Assess social determinants of patient’s health
  ○ Develop recommendations and plan for treatment

• Consider Validated Screening/Assessment Instruments:
  ○ Drugs: Drug Abuse Screening Test (DAST-10)
  ○ Opioids: Clinical Opiate Withdrawal Scale (COWS)
  ○ Alcohol Use Disorders Identification Test (AUDIT)
  ○ PHQ-9
## AUDIT-C

Please circle the answer that is correct for you.

<table>
<thead>
<tr>
<th>Question</th>
<th>Never (0)</th>
<th>Monthly or less (1)</th>
<th>Two to four times a month (2)</th>
<th>Two to three times per week (3)</th>
<th>Four or more times a week (4)</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How often do you have a drink containing alcohol?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. How many drinks containing alcohol do you have on a typical day when you are drinking?</td>
<td>1 or 2 (0)</td>
<td>3 or 4 (1)</td>
<td>5 or 6 (2)</td>
<td>7 to 9 (3)</td>
<td>10 or more (4)</td>
<td></td>
</tr>
<tr>
<td>3. How often do you have six or more drinks on one occasion?</td>
<td>Never (0)</td>
<td>Less than Monthly (1)</td>
<td>Monthly (2)</td>
<td>Two to three times per week (3)</td>
<td>Four or more times a week (4)</td>
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**TOTAL SCORE**
Add the number for each question to get your total score.

Maximum score is 12. A score of $\geq 4$ identifies 86% of men who report drinking above recommended levels or meets criteria for alcohol use disorders. A score of $> 2$ identifies 84% of women who report hazardous drinking or alcohol use disorders.
DRUG USE QUESTIONNAIRE (DAST-10)

The following questions concern information about your possible involvement with drugs, not including alcoholic beverages, during the past 12 months. Carefully read each statement and decide if your answer is "Yes" or "No." Then, circle the appropriate response beside the question.

In the statements, "drug abuse" refers to (1) the use of prescribed or over-the-counter drugs in excess of the directions and (2) any non-medical use of drugs. The various classes of drugs may include: cannabis (e.g., marijuana, hash), solvents, tranquillizers (e.g., Valium), barbiturates, cocaine, stimulants (e.g., speed), hallucinogens (e.g., LSD) or narcotics (e.g., heroin). Remember that the questions do not include alcoholic beverages.

Please answer every question. If you have difficulty with a statement, then choose the response that is mostly right.

<table>
<thead>
<tr>
<th>These questions refer to the past 12 months.</th>
<th>Circle your response</th>
</tr>
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<tbody>
<tr>
<td>1. Have you used drugs other than those required for medical reasons?</td>
<td>Yes  No</td>
</tr>
<tr>
<td>2. Do you abuse more than one drug at a time?</td>
<td>Yes  No</td>
</tr>
<tr>
<td>3. Are you always able to stop using drugs when you want to?</td>
<td>Yes  No</td>
</tr>
<tr>
<td>4. Have you had &quot;blackouts&quot; or &quot;flashbacks&quot; as a result of drug use?</td>
<td>Yes  No</td>
</tr>
<tr>
<td>5. Do you ever feel bad or guilty about your drug use?</td>
<td>Yes  No</td>
</tr>
<tr>
<td>6. Does your spouse (or parents) ever complain about your involvement with drugs?</td>
<td>Yes  No</td>
</tr>
<tr>
<td>7. Have you neglected your family because of your drug use?</td>
<td>Yes  No</td>
</tr>
<tr>
<td>8. Have you engaged in illegal activities in order to obtain drugs?</td>
<td>Yes  No</td>
</tr>
<tr>
<td>9. Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?</td>
<td>Yes  No</td>
</tr>
<tr>
<td>10. Have you had medical problems as a result of your drug use (e.g., memory loss, hepatitis, convulsions, bleeding, etc.)?</td>
<td>Yes  No</td>
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</table>
Consider this Case:

Jane is a 37 yo woman who presents to her primary care physician to establish care. She has a history of asthma and chronic pancreatitis. She has had seven hospitalizations for pancreatitis in the past seven years.

• You decide to conduct an AUDIT and she scored a 0. She says that she quit drinking alcohol 3 years ago after her fourth hospitalization for pancreatitis.
• She scored an 8 on the DAST-10. She admits to using opioids to manage her chronic pain, but hasn’t used any opiates in the past 24 hours.
• What might your next screening tool be?
<table>
<thead>
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<th>Withdrawal</th>
</tr>
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<tbody>
<tr>
<td>&lt;5</td>
<td>None</td>
</tr>
<tr>
<td>5–12</td>
<td>Mild (Aim for ≥ 8 for Induction)</td>
</tr>
<tr>
<td>13–24</td>
<td>Moderate</td>
</tr>
<tr>
<td>25–36</td>
<td>Moderately Severe</td>
</tr>
<tr>
<td>&gt;36</td>
<td>Severe</td>
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### Clinical Opiate Withdrawal Scale (COWS)

<table>
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<tr>
<th>Resting Pulse Rate:</th>
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<tbody>
<tr>
<td>Measured after patient is sitting or lying for one minute</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>pulse rate 80 or below</td>
</tr>
<tr>
<td>1</td>
<td>pulse 81 to 100</td>
</tr>
<tr>
<td>2</td>
<td>pulse 101 to 120</td>
</tr>
<tr>
<td>4</td>
<td>pulse rate greater than 120</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gastrointestinal (GI) Upset:</th>
<th>over last 1/2 hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>no GI symptoms</td>
</tr>
<tr>
<td>1</td>
<td>stomach cramps</td>
</tr>
<tr>
<td>2</td>
<td>nausea or loose stool</td>
</tr>
<tr>
<td>3</td>
<td>vomiting or diarrhea</td>
</tr>
<tr>
<td>5</td>
<td>multiple episodes of diarrhea or vomiting</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sweating:</th>
<th>over past 1/2 hour not accounted for by room temperature or patient activity.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>no report of chills or flushing</td>
</tr>
<tr>
<td>1</td>
<td>subjective report of chills or flushing</td>
</tr>
<tr>
<td>2</td>
<td>flushed or observable moistness on face</td>
</tr>
<tr>
<td>3</td>
<td>beads of sweat on brow or face</td>
</tr>
<tr>
<td>4</td>
<td>sweat streaming off face</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tremor:</th>
<th>Observation of outstretched hands</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>no tremor</td>
</tr>
<tr>
<td>1</td>
<td>tremor can be felt, but not observed</td>
</tr>
<tr>
<td>2</td>
<td>slight tremor observable</td>
</tr>
<tr>
<td>4</td>
<td>gross tremor or muscle twitching</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Restlessness:</th>
<th>Observation during assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>able to sit still</td>
</tr>
<tr>
<td>1</td>
<td>reports difficulty sitting still, but is able to do so</td>
</tr>
<tr>
<td>3</td>
<td>frequent shifting or extraneous movements of legs/arms</td>
</tr>
<tr>
<td>5</td>
<td>unable to sit still for more than a few seconds</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Yawning:</th>
<th>Observation during assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>no yawning</td>
</tr>
<tr>
<td>1</td>
<td>yawning once or twice during assessment</td>
</tr>
<tr>
<td>2</td>
<td>yawning three or more times during assessment</td>
</tr>
<tr>
<td>4</td>
<td>yawning several times/minute</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pupil size:</th>
</tr>
</thead>
</table>

| Anxiety or Iritability: | |
|-------------------------|
### Clinical Opiate Withdrawal Scale (COWS)

#### Pupil size:
- **0**: pupils pinned or normal size for room light
- **1**: pupils possibly larger than normal for room light
- **2**: pupils moderately dilated
- **5**: pupils so dilated that only the rim of the iris is visible

#### Anxiety or Irritability:
*Measured after patient is sitting or lying for one minute*
- **0**: none
- **1**: patient reports increasing irritability or anxiousness
- **2**: patient obviously irritable or anxious
- **4**: patient so irritable or anxious that participation in the assessment is difficult

#### Bone or Joint aches:
*If the patient was having pain previously, only the additional component attributed to opiates withdrawal is scored*
- **0**: not present
- **1**: mild diffuse discomfort
- **2**: patient reports severe diffuse aching of joints/muscles
- **4**: patient is rubbing joints or muscles and is unable to sit still because of discomfort

#### Gooseflesh skin:
- **0**: skin is smooth
- **3**: piloerrection of skin can be felt or hairs standing up on arms
- **5**: prominent piloerrection

#### Runny nose or tearing:
*Not accounted for by cold symptoms or allergies*
- **0**: not present
- **1**: nasal stuffiness or unusually moist eyes
- **2**: nose running or tearing
- **4**: nose constantly running or tears streaming down cheeks

#### Total Score:
The total score is the sum of all 11 items

**Initials of person completing assessment:**

**Score:**
- **5-12** = *mild*
- **13-24** = *moderate*
- **25-36** = *moderately severe*
- More than **36** = *severe withdrawal*
• Jane's COWS score is a 15.
• What might you look for upon physical exam?
Looking for signs of:
- Intoxication or and withdrawal
- Injection drug use
- Acute or chronic disease secondary to injection drug use.

### TABLE 2. Objective Physical Signs in Substance Use Disorders

<table>
<thead>
<tr>
<th>System</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dermatologic</td>
<td>Abscesses, rashes, cellulitis, thrombosed veins, jaundice, scars, track marks, pock marks from skin popping</td>
</tr>
<tr>
<td>Ear, nose, throat, and eyes</td>
<td>Pupils pinpoint or dilated, yellow sclera, conjunctivitis, ruptured eardrums, otitis media, discharge from ears, rhinorrhea, rhinitis, excoriations or perforations of nasal septum, epistaxis, sinusitis, hoarseness, or laryngitis</td>
</tr>
<tr>
<td>Mouth</td>
<td>Poor dentition, gum disease, abscesses</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>Murmurs, arrhythmias</td>
</tr>
<tr>
<td>Respiratory</td>
<td>Asthma, dyspnea, rales, chronic cough, hematemesis</td>
</tr>
<tr>
<td>Musculoskeletal and extremities</td>
<td>Pitting edema, broken bones, traumatic amputations, burns on fingers</td>
</tr>
<tr>
<td>Gastrointestinal</td>
<td>Hepatomegaly, hernias</td>
</tr>
</tbody>
</table>
• Physical exam findings, COWS score and screening leads you to suspect opioid use disorder.
• You decide to dive deeper and take a comprehensive history.
Completion of a comprehensive assessment should not delay or preclude initiating pharmacotherapy for the patient with an opioid use disorder.

However, if not completed before initiating treatment it should be completed soon after.

The comprehensive assessment of your patient is important in establishing a treatment plan.

The ASAM National Practice Guideline for the Treatment of Opioid Use Disorder 2020 Focused Update
• Past Medical Hx: Asthma, + pancreatitis, caused by chronic alcohol use, seven hospitalizations in the past 7 years for this. + for Hep C, negative for HIV.
• No history of pregnancies, is sexually active, not on oral contraception
• History of PTSD, sexual trauma as a teenager, currently prescribed sertraline 100 mg
Patient Evaluation

Family History

• Substance use disorders
• Other psychiatric conditions
• Other medical disorders
• Ask about all substances:
  ◦ Nicotine
  ◦ Opioids: prescription opioids, non-prescribed opioids, heroin
  ◦ Alcohol, marijuana
  ◦ Hallucinogens, sedative/hypnotics, stimulants, other
• History of alcohol use disorder. Drank 1 bottle of wine daily for six years. History of delirium tremens with detox.
• Treated for alcohol use disorder with residential detoxification, 30 day inpatient stay, 6 months of outpatient treatment. No SUD treatment in the past 3 years. She has not drank any alcohol in the past 3.5 years. But has used opiates daily for the past year.
Case Encounter: Jane

- Completed 12th grade and attended cosmotology school.
- Previously worked full-time as a hair stylist but is currently unemployed. Lost her job due to ongoing health issues.
- Divorced, no children
- Father has a history of alcohol use disorder
- Paternal grandfather completed suicide
Patient Evaluation

Substance Use History:

- Age at first use
- Determine patterns of use over time:
  - Frequency
  - Amount
  - Route
- Assess recent use (past several weeks)
- Cravings and control:
  - Assess temporality and circumstances
  - Determine if patient sees loss of control over use
• Return to use/attempts to abstain:
  ○ Determine if the patient has tried to abstain
    ▪ What happened?
    ▪ What helped?
• Longest period of abstinence
• Identify triggers to relapse
• History of MOUD in the past
SUD history:

• uses cannabis daily, started smoking cannabis at age 15.
• Started drinking alcohol around age 18
• denies any use of stimulants
• Opioid use: started with opioid pills, about two years ago, eventually progressed to IV fentanyl; has a history of three overdoses. Injects multiple times daily.
SUD History:
• History of one inpatient residential treatment center for OUD two years ago.
• After this, she was previously on extended-release naltrexone and did well on this for 6 months until insurance stopped paying for it, returned to daily use about one month later.
SUD History:

• She endorses cravings daily and has tried to quit on her own many times, but was unable to tolerate withdrawal symptoms.
• She wants to go back to work but spends much of her day trying to get well/reduce withdrawal symptoms
• She mourns the loss of a significant other who broke up with her due to her drug use.
• Treatment episodes:
  ◦ Response to treatment
  ◦ Attitudes towards various treatment settings and mutual support groups (AA, NA etc.)
  ◦ Length of abstinence
Patient Evaluation

Substance Use History:
Effects and Consequences

- Tolerance, intoxication, withdrawal:
  - Explain what is meant by tolerance
  - Determine the patient’s tolerance and withdrawal history
  - Ask about complications associated with intoxication and withdrawal
Patient Evaluation

Substance Use History:
Effects and Consequences

- Consequences of use:
  - Determine current and past levels of functioning
  - Aberrant behaviors (e.g. sedation, deterioration in function)
- Identify consequences:
  - Medical
  - Family
  - Employment
  - Legal
  - Psychiatric
  - Other
DSM V Criteria

- Impaired Control
  - Larger amounts, longer time
  - Inability to cutback
  - More time spent, getting, using, recovering
  - Craving
  - Social Impairment
  - Failure to fulfill major role obligations
  - Social or interpersonal problems related to use
  - Important social activities given up to use.
- Risky use
  - Physically hazardous use
  - Continued use despite associated recurrent physical or psychological problems.
- Pharmacological
  - Tolerance
  - Withdrawal

• A substance use disorder is defined as having 2 or more of these symptoms in the past year
• Tolerance and withdrawal criteria are not considered when taken appropriately by Rx.
• Severity is related by the number of symptoms.

  2–3 = mild
  4–5 = moderate
  6+ = severe
What is Jane's DSM-5 diagnosis?

- She endorses cravings daily and has tried to quit on her own many times, but was unable to tolerate withdrawal symptoms.
- She wants to go back to work but spends much of her day trying to get well/reduce withdrawal symptoms.
- She mourns the loss of a significant other who broke up with her due to her drug use.
DSM V Criteria

• Impaired Control
  ◦ Larger amounts, longer time
  ◦ Inability to cutback
  ◦ More time spent, getting, using, recovering
  ◦ Craving
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  ◦ Failure to fulfill major role obligations
  ◦ Social or interpersonal problems related to use
  ◦ Important social activities given up to use.

• Risky use
  ◦ Physically hazardous use
  ◦ Continued use despite associated recurrent physical or psychological problems.

• Pharmacological
  ◦ Tolerance
  ◦ Withdrawal

2–3 = mild
4–5 = moderate
6+ = severe
Legal Consequences

- Legal issues are **NOT** part of the DSM 5
- Removal from DSM IV to DSM 5
- Due to known biases in legal issues in persons who use substances
These 4 processes can be completed in the same visit, but also iteratively over multiple visits and over many encounters.

However, there should be no expectation that a single brief conversation alone will change people’s behavior.
MI TIPS TO ENGAGE

Would it be okay if we spent a few minutes talking about your drug use?

Tell me a little bit about how your drug use fits into your life

Help me understand - what are some parts about using [substance] that you like?

What are some things about using [substance] that you don't like?
What goals do you have?

What do you want to focus upon today? (If they don't have any ideas, you can suggest!)

This is where you can explore the ambivalence!

Ask yourself: Do I have different aspirations for change for this person? Are we working together with a common purpose?
MI TIPS FOR EVOKING

- What are your reasons for wanting to change?
- Is the reluctance more about confidence or importance change? Ask them about how confident they are, how important this might be to them!
- What change talk am I hearing? (Reflect back what they say)
- Am I moving too fast in a particular direction?
What would be a reasonable next step towards change?
What would help you move forward?
What barriers might stand in the way?
Is there any additional information you might need?
What support do you have in place?
Ambivalence is a normal step on the road to change.

Needs to be explored not confronted.

Can involve simultaneously conflicting motivations.

Contemplating change involves self talk, thinking about the pros and cons of available alternatives.
Partner up!

Work with a partner and practice your skills.

One person plays a health care professional and the other plays a person who smokes 1 pack per day of cigarettes.
What is Harm Reduction?
Which of the following interventions is an example of a harm reduction technique used in people with opioid dependence?

- HIV testing
- Needle exchange
- Therapeutic communities
- Contingency management
- Ultra-rapid detoxification
Which of the following interventions is an example of a harm reduction technique used in people with opioid dependence?

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV testing</td>
<td>0%</td>
</tr>
<tr>
<td>Needle exchange</td>
<td>0%</td>
</tr>
<tr>
<td>Therapeutic communities</td>
<td>0%</td>
</tr>
<tr>
<td>Contingency management</td>
<td>0%</td>
</tr>
<tr>
<td>Ultra-rapid detoxification</td>
<td>0%</td>
</tr>
</tbody>
</table>
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<table>
<thead>
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<th>Option</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV testing</td>
<td>0%</td>
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<tr>
<td>Needle exchange</td>
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<tr>
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</tr>
<tr>
<td>Contingency management</td>
<td>0%</td>
</tr>
<tr>
<td>Ultra-rapid detoxification</td>
<td>0%</td>
</tr>
</tbody>
</table>
What is Harm Reduction?

- Harm reduction is a set of practical strategies and ideas aimed at reducing negative consequences associated with drug use.
- It is also a movement for social justice, built on a belief in, and respect for, the rights of people who use drugs.
Harm Reduction for OUD

• Connect individuals to overdose education, counseling, and referral to treatment for infectious diseases/SUD
• Distribute opioid overdose reversal medications (e.g., naloxone) to individuals at risk of overdose, or to those who are likely to respond to an overdose.
• Reduce infectious disease transmission among people who use drugs (including those who inject drugs) by equipping them with sterile supplies, accurate information and facilitating referrals to resources.
• Peer support
• Safe Injection Sites
Needle Exchange for OUD

Locations

- Vogel Health Center, 6175 W. Third St., Dayton, OH on Tuesdays from 10am – 5:00 pm & Fridays from 9:00 am to 3:30 pm.

- Carepoint Mobile Unit will be located on Dover Street near the East End Community Services every Wednesday from 10am – 1pm.

- CarePoint Mobile Unit on Willard Street behind the old DayMont Behavioral Health Building every Monday 10:00 a.m. – 3:30 p.m.
Partner up!

Work with a partner and practice your skills.

Switch roles this time!

One person plays a health care professional and the other plays a person who injects IV opioids daily but does NOT want to quit. This time, as the health care professional, discuss ways to minimize harms WITHOUT cessation!
A 26-year-old patient is brought to the ED due to psychomotor retardation, drowsiness and slurred speech. On physical examination the patient's pupils are noted to be constricted. Intoxication with which of the following substances is most likely?

- Alcohol
- Opioids
- Cocaine
- Amphetamines
- Benzodiazepines
A 26-year-old patient is brought to the ED due to psychomotor retardation, drowsiness and slurred speech. On physical examination the patient's pupils are noted to be constricted. Intoxication with which of the following substances is most likely?

- Alcohol: 0%
- Opioids: 0%
- Cocaine: 0%
- Amphetamines: 0%
- Benzodiazepines: 0%
A 26-year-old patient is brought to the ED due to psychomotor retardation, drowsiness and slurred speech. On physical examination the patient's pupils are noted to be constricted. Intoxication with which of the following substances is most likely?

<table>
<thead>
<tr>
<th>Substance</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>0%</td>
</tr>
<tr>
<td>Opioids</td>
<td>0%</td>
</tr>
<tr>
<td>Cocaine</td>
<td>0%</td>
</tr>
<tr>
<td>Amphetamines</td>
<td>0%</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>0%</td>
</tr>
</tbody>
</table>
Tolerance to Opioid Effects

- With repeated exposure to opioids, tolerance (needing more to produce the same effect) develops.

- Tolerance involves changes in receptor numbers and functions.

- Tolerance develops at different rates, and to different extents, for different effects:
  - **Rapid Tolerance**
    - sedation
    - euphoria
    - respiratory depression
    - nausea
  - **Little or no tolerance**
    - constipation
    - pupil constriction

- Tolerance is **LOST** while abstaining from opioids for extended period, including during treatment with an opioid antagonist (i.e. naltrexone).
Opioid Signs and Symptoms

- Meiosis (constricted pupils)
- Bradycardia
- Hypotension
- Respiratory depression (shallow and short breathing)
- Weight Loss
- Frequent nose bleeds (if heroin is snorted)
- Hypothermia
- Sedation
- Hypokinetik (slowed movement)
- Mood Swings (euphoria, disinhibited)
- Constipation
- Confusion/slurred speed
- Track marks on skin
Opioid Signs and Symptoms

**Signs**
- Decreased level of consciousness may lead to unresponsiveness
- Pinpoint pupils
- Respiratory depression
- Slowed or stopped breathing
- Cyanosis
Opioid Treatment

Treatment

Naloxone:
- Nasal Spray
- Prefilled auto-injection device
- Generic injectable products for nasal atomizer, intravenous, intramuscular or subcutaneous use
Opioids

- Stopping opioids abruptly after becoming physically dependent leads to a spontaneous withdrawal syndrome.

- Administering an opioid antagonist (naloxone/naltrexone), or a high affinity partial agonist (buprenorphine) may result in precipitated withdrawal when physically dependent on full agonist opioids.
# Opioid Signs and Symptoms

<table>
<thead>
<tr>
<th>Signs</th>
<th>Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tachycardia</td>
<td>Abdominal Cramps</td>
</tr>
<tr>
<td>Hypertension</td>
<td>Nausea</td>
</tr>
<tr>
<td>Hyperthermia</td>
<td>Vomiting</td>
</tr>
<tr>
<td>Insomnia, yawning</td>
<td>Diarrhea</td>
</tr>
<tr>
<td>Mydriasis (dilated pupils)</td>
<td>Muscle/Bone Aches</td>
</tr>
<tr>
<td>Hyperreflexia</td>
<td>Anxiety</td>
</tr>
<tr>
<td>Tearing, runny nose</td>
<td></td>
</tr>
<tr>
<td>Sweating</td>
<td></td>
</tr>
<tr>
<td>Piloerection &quot;gooseflesh&quot;</td>
<td></td>
</tr>
<tr>
<td>Muscle Spasms</td>
<td></td>
</tr>
</tbody>
</table>
All opioids produce similar withdrawal symptoms when stopped abruptly. Severity varies with the amount and duration of use.

Timing of withdrawal symptoms depends on the opioid:

With longer-acting opioids, symptoms usually begin later and last longer.

<table>
<thead>
<tr>
<th>Opioids Used</th>
<th>Onset of Withdrawal</th>
<th>Symptoms Peak</th>
<th>Duration of Withdrawal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-acting opioids (e.g. heroin, oxycodone)</td>
<td>6-12 hours</td>
<td>36-72</td>
<td>about 5 days</td>
</tr>
<tr>
<td>Long-acting opioids (e.g. methadone)</td>
<td>36-48 hours</td>
<td>~72 hours</td>
<td>up to 3 weeks</td>
</tr>
</tbody>
</table>
Treatment Goals

Range of treatment goals

Minimization of harms from ongoing use

Sustained recovery with abstinence from all substances

Treatment Options

• Medication for Opioid Use Disorder (MOUD); FDA approve options include:
  ◦ Buprenorphine: Partial Agonist at the mu-receptor
  ◦ Methadone: Full Agonist at the mu-receptor
  ◦ Naltrexone/Naloxone: Antagonists at the mu-receptor

• Behaviorally-Oriented Treatment
Physiologic Effects of Opioids

Activation of mu receptors in the central nervous system results in:

• analgesia
• sedation
• euphoria
• pupil constriction
• decreased respiration
• decreased heart rate
• nausea

Activation in the gut decreases motility and can cause *constipation*

Activation in peripheral tissues contributes to analgesic effects and modulates inflammatory responses

potentially lethal in overdose
# Medication for Opioid Use Disorder (MOUD)

<table>
<thead>
<tr>
<th>Mechanism of Action</th>
<th>Methadone</th>
<th>Buprenorphine</th>
<th>Naltrexone (IM) (PO)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Full Agonist on Opioid Receptor</td>
<td>Partial Agonist on mu Opioid Receptor</td>
<td>Antagonist on Opioid Receptor</td>
</tr>
<tr>
<td>Dosing</td>
<td>80mg-100mg (usual dose)</td>
<td>4-24 mg FDA approved; 16 mg target dose. Some patient may benefit from higher doses.</td>
<td>380 mg Depot Injection 50 mg tablet</td>
</tr>
</tbody>
</table>
| Advantages          | • Provided in a highly structure supervised setting where additional services can be provided on-site and diversion is unlikely  
• May be effective for those that have not benefited sufficiently from agonists or antagonists. | • Improved safety over full agonists.  
• Available by prescription from qualified provider. | • No addictive potential or risk of diversion.  
• Available by prescription  
• Preferred by individual seeking to avoid any opioids.  
• Long acting injectable shown to be significantly more effective due to improved adherence. |
Because of its high affinity for mu opioid receptors, buprenorphine can displace other agonists (such as heroin, methadone) that are already present.

The sudden drop from full-agonist to partial-agonist stimulation of opioid receptors can cause sudden withdrawal symptoms, a condition known as precipitated withdrawal.
**Partial agonist** at the mu receptor
- Comparatively minimal respiratory suppression and unlikely to lead to fatal respiratory suppression even at high doses
- Schedule III

**Long Acting**
- Half-Life $\sim 24-36$ hours

**High Affinity** for mu receptor
- Block other opioids
- Displaces other opioids
  - Can precipitate withdrawal

**Slow dissociation** from mu receptor
- Stays on receptor for a long time
Buprenorphine

- Metabolized in the liver, mainly by cytochrome P450 3A4 (CYP3A4), and has a less-active metabolite, norbuprenorphine
- Because of extensive first-pass metabolism, buprenorphine has poor oral bioavailability when swallowed (<5%),
  - all therapeutic formulations use other routes
- Sublingual administration bypasses first-pass metabolism and allows bioavailability around 30%
How does Buprenorphine work for OUDs?

• High affinity for, and slow dissociation from the mu receptor leads to:
  ◦ Prevention of withdrawal symptoms
  ◦ Decreased cravings
  ◦ Decreased effects of other opioids

• However, it is unlikely to block all effects from an opioid taken after initiation of buprenorphine treatment:
  ◦ Because binding to mu receptors is a dynamic process; while effects may be less, they are not likely to be completely eliminated.
Buprenorphine Dosing: Safety

- Nearly all fatal poisonings involve multiple substances.

- Cognitive and psychomotor effects appear to be negligible.
The purpose of adding oral naloxone to buprenorphine for opioid replacement therapy is because its opioid antagonism prevents which of the following?

- Euphoria from the buprenorphine
- Overdose if extra doses are ingested
- Intravenous abuse of the buprenorphine
- Euphoria if additional types of opioids are used
- Overdose if additional types of opioids are used
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</tr>
<tr>
<td>Euphoria if additional types of opioids are used</td>
<td>0%</td>
</tr>
<tr>
<td>Overdose if additional types of opioids are used</td>
<td>0%</td>
</tr>
</tbody>
</table>
Rationale for the Combination of Buprenorphine with Naloxone

• When used as prescribed (sublingual or buccal administration), there is minimal bioavailability of naloxone

• Compared to buprenorphine alone, the buprenorphine/naloxone combination if injected:
  ◦ is more likely to precipitate withdrawal in persons physically dependent on opioids.
  ◦ will prolong the onset of buprenorphine, and a primary driver of injection drug use is the speed in which a drug gets to the brain.
  ◦ initially will produce less euphoria (similar to placebo) in those who are physically dependent on opioids
  ◦ per prescription, is less likely to be diverted
Findings of a 2019 systematic review:
- Withdrawal stabilization will often take place between **4 and 16 mg**.
- Daily doses from **8 up to 32 mg** may be necessary to provide adequate opioid receptor blockade, thus attenuate craving and response to other opioids.

- There was no clear evidence regarding BUP dose on treatment retention or illicit opioid use.
- **Conclusion:** BUP dose in treatment of OUD should be individualized based on a continuous benefit-risk assessment.
Buprenorphine: Maintenance vs. Taper

The graph shows the treatment retention rate of patients over time in weeks. The maintenance condition shows a more gradual decline in retention compared to the taper condition, which experiences a sharp drop in retention rate following the taper period. The x-axis represents the time in study in weeks, while the y-axis indicates the treatment retention, % of patients.
Depot forms of Buprenorphine

- Two depot products approved by the FDA
  - **Sublocade** – subcutaneous injections
    - 100mg and 300mg monthly doses available
    - Patient needs to be stabilized on 8mg for at least a week.
      - There are protocols being evaluated outside this approved procedure now being trialed, e.g., ED administration.
    - Given by subcutaneous injection in the abdominal region.
    - Recommendation: two 300mg injections a month a part then 100mg monthly.
    - There are various trials underway looking at the use of this medication in alternative settings, e.g., emergency dept., and the need for SL supplement during stabilization.
Pharmacokinetic Interactions Involving Buprenorphine

• Buprenorphine and methadone are metabolized in the liver by cytochrome P450 3A4 (CYP3A4), and drugs that increase or decrease activity of this enzyme can affect serum levels of buprenorphine and methadone
  ◦ CYP3A4 inhibitors may increase bup/meth levels and lead to greater effects, such as sedation or nausea
  ◦ CYP3A4 inducers can decrease bup/meth levels, leading to loss of therapeutic effects (e.g. return of withdrawal or craving)

• Buprenorphine has many potential pharmacokinetic interactions, but few have been shown to be clinically significant
Pharmacodynamic Interactions Involving Buprenorphine

- Generally safe in combination with most other medications

- May have additive or synergistic effects with other central nervous system depressants, including benzodiazepines and alcohol

- It also has more complicated interactions with other opioids, with effects that vary depending on:
  - The degree of physiologic dependence of the user
  - Order in which the substances are used
  - Amount of time slowing for clearance of the full opioid.

- No clinically significant association of buprenorphine with prolonged QTc interval, in contrast to methadone
### Buprenorphine and Other Opioids

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buprenorphine followed by an agonist</td>
<td>Buprenorphine remains on the receptor and effect of agonist is decreased</td>
</tr>
<tr>
<td>Agonist followed by buprenorphine</td>
<td>Buprenorphine displaces full agonist</td>
</tr>
<tr>
<td></td>
<td>Can precipitate withdrawal</td>
</tr>
<tr>
<td>Buprenorphine followed by antagonist</td>
<td>• Buprenorphine affinity will challenge the antagonist and stay on the receptor</td>
</tr>
<tr>
<td></td>
<td>• Given together antagonists will result in a slower onset of buprenorphine</td>
</tr>
<tr>
<td></td>
<td>• Naltrexone will over time precipitate withdrawal</td>
</tr>
</tbody>
</table>
Buprenorphine and Benzodiazepines

- Benzodiazepines are present in many fatal poisonings involving buprenorphine.
  - Human studies: minimal effects on respiration when both are taken at therapeutic doses.
  - Animal studies: At elevated doses benzodiazepines may also suppress respirations allowing buprenorphine to produce fatal respiratory suppression in overdose.
- Used as prescribed benzodiazepines in combination with buprenorphine have been associated with more accidental injuries, but not with other safety or treatment outcomes.
Changes in FDA Recommendations

<table>
<thead>
<tr>
<th>08/2016</th>
<th>09/2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Boxed Warning for combined use of opioid medicines with benzodiazepines or other CNS Depressants (e.g. Alcohol)</td>
<td>• Buprenorphine and methadone should not be withheld from patients taking benzodiazepines or other drugs that depress the central nervous system (CNS).</td>
</tr>
<tr>
<td>• Risks of slowed or difficult breathing; Sedation; Death</td>
<td>• The combined use of these drugs increases the risk of serious side effects; however, the harm caused by untreated opioid addiction can outweigh these risks.</td>
</tr>
<tr>
<td></td>
<td>• Careful medication management by health care professionals can reduce these risks.</td>
</tr>
</tbody>
</table>
FDA Guidance for Health Care Professionals

• Take precautions and develop a treatment plan when buprenorphine or methadone is used in combination with benzodiazepines or other CNS depressants:
  ◦ Educate patients about the serious risks of combined use, including overdose and death
  ◦ Taper the benzodiazepine or CNS depressant to discontinuation if possible.
  ◦ Verify the diagnosis if a patient is receiving prescribed benzodiazepines or other CNS depressants for anxiety or insomnia, and consider other treatment options for these conditions.
  ◦ Coordinate care to ensure other prescribers are aware of the patient’s buprenorphine or methadone treatment.
  ◦ Monitor for illicit drug use, including urine or blood screening
Overall recommendation is to generally avoid CNS depressants with buprenorphine.

Some evidence that treatment with buprenorphine can help decrease craving for alcohol.

Alcohol use disorder is associated with higher rates of relapse to opioid use.
Overall goal:
• Assist patients in switching from full opioid agonists, whether legally prescribed or obtained from other sources, to prescribed buprenorphine.

Specific goals of buprenorphine initiation:
• Identify dose of buprenorphine at which the patient:
  ◦ Significantly decreased or absent withdrawal symptoms
  ◦ Has minimal/no side effects
  ◦ Experiences decreased cravings
  ◦ Discontinues or markedly reduces use of other opioids
Buprenorphine Initiation
Patient Education

- Sublingual tablets and films held under the tongue until dissolved and then 2 more minutes before swallowing or spitting out the sputum
- Buccal delivery films take fewer minutes to dissolve and are stuck to the buccal mucosa
- **Instruct to:**
  - Start with a moist mouth, avoid acidic drinks (coffee or fruit juice)
  - Avoid using nicotine products as this interferes with absorption
  - Avoid speaking with the sublingual medication
  - Keep dissolving medicine under tongue
  - Don’t swallow until entire tablet or film is dissolved
Buprenorphine Initiation
Supportive Medications

• Provide Symptomatic Medications based on patients usual withdrawal symptoms

• Hydroxyzine – anxiety
• Trazadone – insomnia
• Clonidine – agitation, sweating
• Imodium – diarrhea
• Zofran – nausea/ vomiting
• Ibuprofen – aches
• Muscle Relaxer – muscle aches. Tizanidine also has alpha blockade so may be more beneficial than others
Opioid Withdrawal
Management
Supportive Medications

• Opioid withdrawal can be treated symptomatically with:
  ◦ clonidine: for restlessness and anxiety
  ◦ loperamide: for diarrhea
  ◦ ondansetron: for nausea and vomiting
  ◦ ibuprofen: for muscle and bone aches

• Alternatively, an opioid such as methadone or buprenorphine can be administered to relieve symptoms, then tapered gradually over days or weeks so that withdrawal symptoms are less intense

• This approach of medically-supervised withdrawal, historically called ‘detox’, can make withdrawal less uncomfortable, however it has been shown in numerous studies to be ineffective at preventing return to opioid use
• Clonidine
  ○ Medication reduces physical withdrawal symptoms not craving.
  ○ Side-effects are sleepiness, dizziness, fainting, headache
  ○ Check postural signs (>20/10 mmHg drop on standing)
    ▪ do not administer if SBP<100, DBP<60, HR<60
Opioid Withdrawal Management
Supportive Medications

• Lofexidine
  ◦ FDA approved treatment of opioid withdrawal
  ◦ Act on the central nervous system
  ◦ Results in:
    ▪ sedation,
    ▪ mild pain relief,
    ▪ relaxation
  ◦ Has been used to treat high blood pressure or anxiety.
  ◦ Less effect on blood pressure than clonidine.

• Tizanidine – A centrally acting muscle relaxant.
  ◦ Use shown to have some utility similar to other α2 agonists in controlling withdrawal symptoms.
Buprenorphine Initiation Methods

- Home Induction – same method as in office, but different location
- In Office Induction – same method as in office, but different location
- Macro dosing Induction – different process/steps of induction
- Micro dosing Induction – different process/steps of induction
Buprenorphine Initiation Instructions

Home/Office (not micro or high dose)

Instruct the patient to abstain from any opioid use for a minimum of:

- 12-16 hours for short-acting opioids
- 24 hours for sustained-release opioid medications
- 36 hours for methadone
- 36 hours for fentanyl

Observe and document Mild vs. Moderate withdrawal:

- **NOTE**: Be aware of the prevalence/presence of fentanyl in provider’s area of practice or by the patient; do not induce unless moderate withdrawal (COWS 13 to 15/ SOWS 17) is observed.
Similar outcomes have been noted for observed and home initiation in terms of safety and efficacy.

**Process:**
- Teach patient about how bup/nx works and how it is absorbed
- Discuss process for home start
- Review typical withdrawal symptoms with patient
# Buprenorphine Initiation
## The Self Start Guide

**Buprenorphine Instructions**

Once you are ready, follow these instructions to start the medication.

### DAY 1:
- 8-16 mg of Buprenorphine

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take the first dose.</td>
<td>Wait 6 hours</td>
<td>Check one based on symptoms</td>
</tr>
<tr>
<td>8 mg</td>
<td>Still feel sick? Take next dose.</td>
<td>If your withdrawal symptoms are not getting better,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Call OneFifteen (937) 535-3713 for care-health visit with a provider. Open 24 hrs, 7 days a week.</td>
</tr>
<tr>
<td></td>
<td>Wait 6 hours</td>
<td>OR Return to the Emergency Room.</td>
</tr>
</tbody>
</table>

- Put the tablet or strip under your tongue.
- Keep it there until fully dissolved (about 15 min).
- Do NOT eat or drink while taking.
- Do NOT swallow the medicine.

Most people feel better after two doses. **8 + 8 = 16 mg**

- Stop after 2nd dose.
- Do not take more than two doses (total of 16 mg) on Day 1.

### DAY 2:
- 16 mg of Buprenorphine (unless otherwise specified)

<table>
<thead>
<tr>
<th>Check one based on symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take 8 mg twice daily</td>
</tr>
<tr>
<td>No change</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td>Appointment</td>
</tr>
</tbody>
</table>

Continue this daily dose until your next follow-up appointment.

---

**Patient Guide: Beginning Self-Start Buprenorphine Treatment**

Before you begin, you want to feel **VERY SICK** from your withdrawal symptoms. Your Subjective Opiate Withdrawal Scale (SOWS) score should be 17 or higher.

**It should be at least:**
- 24-36 hours or more since you last used Heroin
- 12-24 hours since you last used Methadone
- 12-24 hours since you last used pain pills (Oxycodone, OxyContin)
- 36 hours since you last swallowed Oxycodone
- 33 hours or more since you last used Methadone

**You should feel at least three of these symptoms. Refer to SOWS, if needed:**
- Nausea
- Anxiety
- Body aches
- Goosenecks
- Heavy yawning
- Increased tears
- Cravings
- Tremors/shaking
- Stomach cramps, nausea, vomiting or diarrhea
- Enlarged pupils
- Sweating
- Chills
- Hot flashes
- Butterfly nose
- Irritable
- Feel like using now

**Subjective Opiate Withdrawal Scale (SOWS)**

- Before you begin Buprenorphine, you want to feel **VERY SICK** from your withdrawal symptoms.
- If you are not sure if you are sick enough, try adding up your SOWS score.
- When your score is 17 or higher, you may begin Buprenorphine.

**Instructions:** For each symptom, write a number from 0-4 about how you feel right now. Use this scale to determine when to take the first dose of Buprenorphine. After your first day of Buprenorphine treatment, you no longer need to use the SOWS tool.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>SYMPTOM</th>
<th>SCORE</th>
<th>SCORE</th>
<th>SCORE</th>
<th>SCORE</th>
<th>SCORE</th>
<th>SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.</td>
<td>flaky</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2.</td>
<td>flaky</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3.</td>
<td>flaky</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4.</td>
<td>flaky</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**OneFifteen**

- Download the app using the QR codes below.
- **It is important to keep your follow-up appointments.**

---

**Premier Health**
### Buprenorphine Instructions

Once you are ready, follow these instructions to start the medication.

#### DAY 1:
8-16 mg of Buprenorphine

**Step 1**
- Take the first dose.

**Step 2**
- Wait 45 minutes
- Still feel sick? Take next dose.

**Step 3**
- Wait 6 hours
- If your withdrawal symptoms are not getting better,
- Check one based on prescription
  - [ ] Take 8 mg twice daily
  - [ ] Other
  - [ ] Appointment

- Most people feel better after two doses
  \[ 8 + 8 = 16 \text{ mg} \]

- Stop after 2nd dose.
- Do not take more than two doses (total of 16 mg) on Day 1.

#### DAY 2:
16 mg of Buprenorphine (unless otherwise specified)

- Call OneFifteen (937) 535-5115 for Telehealth visit with a provider. Open 24 hrs, 7 days a week. OR Return to the Emergency Room.

- Continue this daily dose until your next follow-up appointment.

---

**IF YOU HAVE QUESTIONS, PLEASE CALL (937) 535-5115 AND ASK FOR HELP WITH THE ER SELF-START BUPRENORPHINE PROGRAM.**

**DOWNLOAD THE APP USING THE QR CODES BELOW.**

***IT IS IMPORTANT TO KEEP YOUR FOLLOW-UP APPOINTMENTS.***

[OneFifteen Apple Appstore]

[OneFifteen Playstore]
Patient Guide: Beginning Self-Start Buprenorphine Treatment

Before you begin, you want to feel **VERY SICK** from your withdrawal symptoms. Your Subjective Opiate Withdrawal Scale (SOWS) score should be **17** or higher.

**It should be at least:**
- **24-36 hours** or more since you last used Fentanyl
- **12-24 hours** since you last used Heroin
- **12-24 hours** since you last sniffed pain pills (Oxycodone)
- **12-24 hours** since you last swallowed pain pills (hydrocodone, Oxycodone)
- **36 hours** or more since you last swallowed Oxycodone
- **72 hours** or more since you last used Methadone

**You should feel at least three of these symptoms. Refer to SOWS, if needed:**
- Restlessness
- Anxiety
- Body aches
- Goosebumps
- Heavy yawning
- Increased tears
- Cravings
- Tremors/twitching
- Stomach cramps, nausea, vomiting or diarrhea
- Enlarged pupils
- Sweating
- Chills
- Hot flashes
- Runny nose
- Irritable
- Feel like using now

---

**Subjective Opiate Withdrawal Scale (SOWS):**

Before you begin Buprenorphine, you want to feel **VERY SICK** from your withdrawal symptoms.

If you are not sure if you are sick enough, try adding up your SOWS score.

When your score is **17 or higher**, you may begin Buprenorphine.

**Instructions:** For each symptom, write a number from 0-4 about how you feel **right now**. Use this scale to determine when to take the first dose of Buprenorphine. After your first day of Buprenorphine treatment, you no longer need to use the SOWS tool.

**Scale:**
- **0** = not at all
- **1** = a little
- **2** = moderately
- **3** = quite a bit
- **4** = extremely

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Symptom</th>
<th>Score</th>
<th>Score</th>
<th>Score</th>
<th>Score</th>
<th>Score</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1. I feel anxious.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. I feel like yawning.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>3. I am perspiring (sweating).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>4. My eyes are tearing.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>5. My nose is running.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. I have goosebumps.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>7. I am shaking.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>8. I have hot flashes.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>9. I have cold flashes.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10. My bones and muscles ache.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>11. I feel restless.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>12. I feel nauseated.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>13. I feel like vomiting.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>15. I have stomach cramps.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>16. I feel like using now.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Premier Health
<table>
<thead>
<tr>
<th>Score</th>
<th>Withdrawal</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;5</td>
<td>None</td>
</tr>
<tr>
<td>5–12</td>
<td>Mild (Aim for ≥ 8 for Induction)</td>
</tr>
<tr>
<td>13–24</td>
<td>Moderate</td>
</tr>
<tr>
<td>25–36</td>
<td>Moderately Severe</td>
</tr>
<tr>
<td>&gt;36</td>
<td>Severe</td>
</tr>
</tbody>
</table>
**Clinical Opiate Withdrawal Scale (COWS)**

<table>
<thead>
<tr>
<th>Resting Pulse Rate:</th>
<th>GI Upset:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measured after patient is sitting or lying for one minute</td>
<td>over last 1/2 hour</td>
</tr>
<tr>
<td>0</td>
<td>no GI symptoms</td>
</tr>
<tr>
<td>pulse rate 80 or below</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>nausea or loose stool</td>
</tr>
<tr>
<td>pulse 81 to 100</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>multiple episodes of diarrhea or vomiting</td>
</tr>
<tr>
<td>pulse 101 to 120</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>pulse rate greater than 120</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sweating:</th>
<th>Tremor:</th>
</tr>
</thead>
<tbody>
<tr>
<td>over past 1/2 hour not accounted for by room temperature or patient activity.</td>
<td>Observation of outstretched hands</td>
</tr>
<tr>
<td>0</td>
<td>no tremor</td>
</tr>
<tr>
<td>no report of chills or flushing</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>slight tremor observable</td>
</tr>
<tr>
<td>subjective report of chills or flushing</td>
<td>2</td>
</tr>
<tr>
<td>flushed or observable moistness on face</td>
<td>3</td>
</tr>
<tr>
<td>beads of sweat on brow or face</td>
<td>4</td>
</tr>
<tr>
<td>sweat streaming off face</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Restlessness:</th>
<th>Yawning:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observation during assessment</td>
<td>Observation during assessment</td>
</tr>
<tr>
<td>0</td>
<td>no yawning</td>
</tr>
<tr>
<td>able to sit still</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>yawning three or more times during assessment</td>
</tr>
<tr>
<td>reports difficulty sitting still, but is able to do so</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>frequent shifting or extraneous movements of legs/arms</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>unable to sit still for more than a few seconds</td>
<td>4</td>
</tr>
</tbody>
</table>
**Clinical Opiate Withdrawal Scale (COWS)**

### Pupil size:
- 0: pupils pinned or normal size for room light
- 1: pupils possibly larger than normal for room light
- 2: pupils moderately dilated
- 5: pupils so dilated that only the rim of the iris is visible

### Anxiety or Irritability:
- Measured after patient is sitting or lying for one minute
- 0: none
- 1: patient reports increasing irritability or anxiousness
- 2: patient obviously irritable or anxious
- 4: patient so irritable or anxious that participation in the assessment is difficult

### Bone or Joint aches:
- If the patient was having pain previously, only the additional component attributed to opiates withdrawal is scored
- 0: not present
- 1: mild diffuse discomfort
- 2: patient reports severe diffuse aching of joints/muscles
- 4: patient is rubbing joints or muscles and is unable to sit still because of discomfort

### Gooseflesh skin:
- 0: skin is smooth
- 3: piloerection of skin can be felt or hairs standing up on arms
- 5: prominent piloerection

### Runny nose or tearing:
- Not accounted for by cold symptoms or allergies
- 0: not present
- 1: nasal stuffiness or unusually moist eyes
- 2: nose running or tearing
- 4: nose constantly running or tears streaming down cheeks

### Total Score:
- The total score is the sum of all 11 items
- Initials of person completing assessment:
  - Score: 5-12 = mild; 13-24 = moderate; 25-36 = moderately severe; more than 36 = severe withdrawal
Fentanyl – often sold as heroin in the street drug supply is:
• a synthetic opioid
• with strong affinity to the opioid mu receptor
• highly lipophilic

• The problem with initiation to buprenorphine is both the competitive binding to the opioid receptor and the persistent slow release of fentanyl from patient adipose cells if having been used repetitively.
• Some patients having tried buprenorphine on the street and experiencing withdrawal symptoms will present choosing to initiate methadone.
• Evaluate patient on Day #2:
  ◦ In-person
  ◦ Phone/ Video Visit
• Assess opioid use, symptoms since first dose:
  ◦ If tolerated continue with Day#1 dose
  ◦ Increase dose for significant cravings or withdrawal symptoms
  ◦ Lower dose if patient appeared to be lethargic or sedated

• Note: It takes ~ 5-days to reach steady state. Patients may experience mild withdrawal symptoms during that time period
Precipitated Withdrawal Management

If a patient has precipitated withdrawal, consider:

- This will be short lived. The patient will stabilize on the buprenorphine. You may give an alpha 2 agonist, e.g. clonidine, or other symptomatic meds.

- Explaining to the patient what has happened and how this experience will be short lived.

- Consider giving 24 mg Bup/ nal
Stabilization will occur for most patients between 8 to 16mg per day:
- Most individuals do not need more than 16mg per day but occasionally higher doses may be needed for persistent symptoms/ongoing opioid use
  - Most insurance companies limit daily doses to 24 mg
  - Though there is approval for a maximum dose of 32mg, doses at or above 24mg may increase risk of diversion
- Note – If there are concerns for diversion:
  - Consider more intensive monitoring [e.g. more frequent urine testing, shorter prescription durations, supervised dosing]
52 yo hispanic cisgender male diagnosed with Severe OUD

+ history of opioid withdrawal with sweating, NV, agitation in the past when tried to stop on his own. Typically starts at 12 hours after last use

Uses fentanyl, intravenously, daily

Multiple male and female sexual partners when intoxicated

PMHx Hypertension stable on cozaar
Mental Health: bipolar disorder stable on abilify daily, asymptomatic
Lives with supportive partner, no sud or aud in the home
1. Labs/ Screening for medical comorbidities
2. Sexual Health: Contraception, PreP, PEP
3. Mental Health: assess and develop plan of care
4. Harm Reduction: assess and develop plan of care
5. ASAM Level of Care (Site of Care)
6. Acute Withdrawal Management
7. Medications for treatment of SUD
49 year old male veteran of Iraq is admitted for a COPD exacerbation yesterday afternoon. He was admitted to step down overnight, requiring bipap. This morning he was weaned to 4 L NC.

On morning rounds, he is sweating, uncomfortable and has had 2 episodes of diarrhea. He shares a history of opioid use disorder and asks for help. This was not discussed during the admission history and physical.

States has been using intranasal fentanyl once per day for the last 1 year.
1. Labs/ Screening for medical comorbidities
2. Sexual Health: Contraception, PreP, PEP
3. Mental Health: assess and develop plan of care
4. Harm Reduction: assess and develop plan of care
5. ASAM Level of Care (Site of Care)
6. Acute Withdrawal Management
7. Medications for treatment of SUD
Using Alternative Methods in Transitioning Patients from Fentanyl to Buprenorphine

“High Dose Initiation”

• There is literature primarily out of emergency medicine using “high dose” buprenorphine in the transition.

• Patients presenting in withdrawal, COWS > 13, known to have been using fentanyl, can be given 8 to 16mg on first dose. If withdrawal continues you may increase this 8mg at a time up to 24 mg as needed.
  - If given 24 mg, this may have the additional benefit of holding off withdrawal for greater than 24 hours to get to follow-up care.

Herring AA, JAMA Network Open. 2021;4(7):
Using Alternative Methods in Transitioning Patients from Fentanyl to Buprenorphine

"Micro or Low Dose Initiation"

- This protocol has been established in a variety of ways.
  - Beneficial for those on high dose chronic opioids, fear of precipitated withdrawal or patient preference
  - May continue to wean full agonist opioid during 7 days (licit or illicit)

- Start with a very low dose and titrates up to a standard maintenance dose.
  - The most available method conducive to use in the outpatient setting involves instructing the patient to split a 2mg BPN/NTX film or tablet in quarters initially.
  - Example:
    - Day 1: 0.5 mg once a day
    - Day 2: 0.5 mg twice a day
    - Day 3: 1 mg twice a day
    - Day 4: 2 mg twice a day
    - Day 5: 3 mg twice a day
    - Day 6: 4 mg twice a day
    - Day 7: 12 mg (stop other opioids in patients with co-occurring pain)

- Note: It is prudent to use alpha 2 agonist medications, Clonidine or Lofexidine, and other comfort medications to assist in reducing any discomfort patient may experience during the transition.
Buprenorphine Initiation
Stabilization and Maintenance

• Continue to reassess patient technique of medication administration:
  ◦ Usual administration of buprenorphine/naloxone dosing is daily however preferably no more than twice-daily dosing
  ◦ For proper absorption, no more than two film strips or two tablets should be taken at once

• Adjust daily dose by increments of 2–4 mg as needed:
  ◦ Increase primarily for persistent cravings
• Continue maintenance if patient is benefitting from treatment (decreased substance use, meeting employment, educational, relationships goals, etc.):
  ◦ Note: Provider can have discussions regarding reduction in dose with improving stability or patient preference however:
    ▪ Caution patients about discontinuing medication too early in treatment
• Improved retention rates in treatment with continued buprenorphine dosing
Optimal Duration of MOUD

Lo-Ciganic et al., 2016

proportion of days when buprenorphine was taken

months since starting treatment

14% fewer ED visits
18% fewer admissions

continuous

1-3 months
3-5 months
5-8 months
8-12 months
Treatment Retention and Buprenorphine Dosage

Fiellin et al., 2014
Case of Mr. C

Mr. C, age 42

Mr. C, Age 42

CC: Mr. C presents to a primary care clinic hoping to establish care with a PCP upon release from incarceration.

HPI: Mr. C was released from prison about a month ago. He has a history of opioid use disorder and hypertension. He has no records with him and the EMR also indicates no additional information.
Case #3 - Mass Incarceration

- It’s critical that we understand the context of the criminal legal system to best care for our patients.
- A racist and classist system of mass incarceration has been, and continues to be, policy in the US.
- This system is built on intentional policies to punish substance use and poverty with long periods of incarceration.
- Even after release, a criminal record imparts continued stigma and barriers to care and life needs (e.g., housing, employment, etc.) that equates to lifelong punishment.

Case of Mr. C - Mass Incarceration

- 70-100 million people in the US have a criminal record
- ALL clinicians will see patients with this history. Mass incarceration disproportionately impacts racialized and minoritized people and their families (The Sentencing Project https://www.sentencingproject.org/).
Case of Mr. C – Taking a History

- What important questions do we want to ask this patient about his incarceration?
- What components should we document in the medical record?
Case of Mr. C - Taking a History

• When asking questions about someone’s history of criminal legal involvement, take a trauma-informed approach.

• This means putting power back into the patient’s hands by asking permission to talk about their experience and giving context as to why you’re asking these questions.

• Taking a history on criminal legal involvement is similar to taking a SUD history. Ask questions about the pattern of periods of incarceration and when it started. Were there precipitating events that led to incarceration? (e.g., the onset of mental health conditions, financial difficulties, increasing substance use, etc.)
Case of Mr. C - Taking a History

Key components are:

• Age at first incarceration
• Dose and density of incarceration (i.e., length of periods of incarceration and frequency)
• How long since they’ve been released?
• Are they on any community supervision (probation or parole)?
• Longest period of time living in the community? Talk through what helped them avoid incarceration during those periods of time.
• Ask about positives and negatives
Case of Mr. C - Taking a History

• No need to ask why they were incarcerated but it is important to ask if their episodes of incarceration related to things they do to make money, substance use, untreated mental health conditions, or something else? Focus on ways we can help with those situations.

• Avoid documenting reasons for incarceration as it can lead to overt stigma. Stigma is transmitted from provider to provider through the medical chart and has tangible negative consequences (e.g., difficulty placing patients in skilled nursing facilities)

Case of Mr. C - Taking a History

Only document things that will be helpful to their care going forward!
Case of Mr. C - Health Risks

- Criminal legal exposure is associated with higher rates of asthma, COPD, cardiovascular disease, infectious disease.
- Solitary confinement is associated with an increased risk of mortality, particularly from suicide or overdose in the weeks following release.
- Transitioning to the community doesn’t mean the consequences of incarceration end. They face barriers to getting housing, employment, licenses, etc.
Case of Mr. C - Health Risks

• Transitioning from incarceration to the community is an incredibly high-risk time. The risk of death from opioid overdose is extremely high.
• Physiologic dependence/tolerance has been reduced.
• It’s critical to remember that MOUD, particularly methadone and buprenorphine, are life-saving medications that are the gold standard of care for OUD.
Mr. C, Age 42

Mr. C says that he was on MOUD previously, but had to stop when he was incarcerated.

He does not want to go back onto MOUD at this time. He is on probation right now and he is worried about what his PO will think. He also does not want to experience withdrawal symptoms while incarcerated, if that were to ever happen again. He states that buprenorphine was effective for him in the past and he has struggled with cravings since his release.

What options are available for him?
Case of Mr. C - MOUD

• Understanding a person’s prior experience with MOUD, how this has been impacted by the criminal legal system, and always returning to the principle of treating the person in front of you.

• Access to MOUD for criminal legal involved people remains poor and inconsistent. (Dunn, 2009, Krawczyk 2018).
Case of Mr. C - Other important points

• For initiation of buprenorphine in someone without recent use, start low and go slow!

• Consider start buprenorphine at 2mg BID with frequent follow-up. Naltrexone/vivitrol is an option. Discuss all options with your patient!

• Overdose education is critical as well. The current drug supply is incredibly toxic, with fentanyl and other adulterants incredibly prevalent, but this may not have been the case when the person was incarcerated. Ensure access to naloxone and encourage patients to avoid using substances alone.
Case of Mr. C - Other important points

• In instances of community supervision, even small violations (including drug or alcohol use) can lead to revocation of community supervision and immediate incarceration (Human Rights Watch, 2020).

• Advocate for your patient!

• Substance use is one of the most frequent reasons for revocation of parole/probation (Human Rights Watch, 2020).
Any Questions?