

# Medications for Opioid Use Disorder

Missy Henke, MD

*May 19, 2026*



**Opioid  
Response  
Network**

# Working with communities.

- ✦ The SAMHSA-funded *Opioid Response Network (ORN)* assists states, organizations and individuals by providing the resources and technical assistance they need locally to address the opioid crisis and stimulant use.
- ✦ Technical assistance is available to support the evidence-based prevention, harm reduction, treatment and recovery of opioid use disorders and stimulant use disorders.

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# Working with communities.

- ✧ The *Opioid Response Network (ORN)* provides local, experienced consultants in prevention, treatment and recovery to communities and organizations to help address this opioid crisis and stimulant use.
- ✧ *ORN* accepts requests for education and training.
- ✧ Each state/territory has a designated team, led by a regional Technology Transfer Specialist (TTS), who is an expert in implementing evidence-based practices.



# Contact the Opioid Response Network

✦ To ask questions or submit a request for technical assistance:

- **Visit:** [www.OpioidResponseNetwork.org](http://www.OpioidResponseNetwork.org)
- **Email:** [abby.moore.1@und.edu](mailto:abby.moore.1@und.edu)



# Disclosures

## **Commercial Support/Sponsorship:**

There is no commercial support for this training.

## **Conflict of Interest:** None

**Speaker(s):** Melissa Henke, MD, has no financial relationships with ineligible companies to disclose.

**Planning Committee Members:** Have no financial relationships with ineligible companies to disclose.

## **Mitigation Steps Implemented:**

There were no reported financial relationships to be mitigated.

Slides originally created by: Nancy Regan, FNP, CNM, CARN-AP



# OBJECTIVES

Following this training, participants will have the knowledge necessary to:

- ✦ Identify best practices for the initiation and maintenance of MOUD in the office based setting.
- ✦ Assess the use and interpretation of urine drug tests and the goals of monitoring.
- ✦ Review management of OUD in pregnancy.



# Substance Use Disorders (SUDs)



Primary, progressive, permanent, predictable, terminal.  
(1956)



A treatable, chronic medical disease involving complex interactions among brain circuits, genetics, the environment, and an individual's life experiences. (2019)



Chronic, relapsing disorder characterized by compulsive seeking and use despite adverse consequences. (2020)



# NEUROBIOLOGY OF ADDICTION

## Positive reinforcement

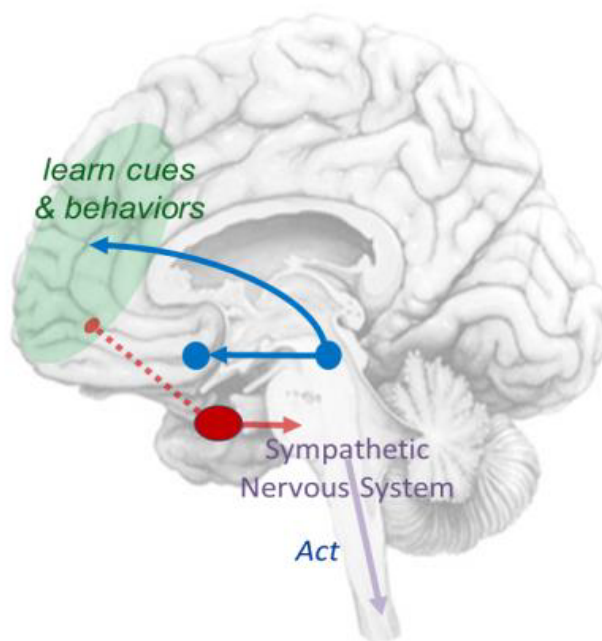
cells in the brainstem release **dopamine** in the **nucleus accumbens**



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**



Slide credit: BMC Grayken TTA

Volkow, ND., et al. NJM (2016)  
Wise, RA., et al. Neuropsychopharmacology (2014)

# SYMPTOMS OF OPIOID INTOXICATION & WITHDRAWAL

Opioid withdrawal symptoms are not life threatening, but extremely uncomfortable.

Begins ~4-12 hours after last use – onset varies based on individual metabolism, frequency, amount, and type of opioid used.



Table adapted from: The ASAM national practice guideline for the treatment of opioid use disorder: 2020 focused update. *J Addict Med.* 2020;14(2S):1-91. doi:[10.1097/ADM.0000000000000633](https://doi.org/10.1097/ADM.0000000000000633)  
SAMHSA TIP 63 (2021)

# OPIOID WITHDRAWAL

- The withdrawal from any substance is the opposite of the intoxicating effects
- Acute opioid withdrawal – agitation, anxiety, muscle aches, increased tearing, insomnia, runny nose, sweating, yawning, abdominal cramping, diarrhea, dilated pupils, goose bumps, nausea, vomiting, increased heart rate and blood pressure, tremor
- Subacute opioid withdrawal – depression, anhedonia, insomnia, fatigue, anorexia, cravings, impaired concentration, sleep disturbance
- Severity of the withdrawal contributes to the ongoing use – use just to avoid being sick
- Tolerance increases which leads to increasing doses



# NATURAL TRAJECTORY OF SUBSTANCE DEPENDENCE

## Opioid Use Disorder

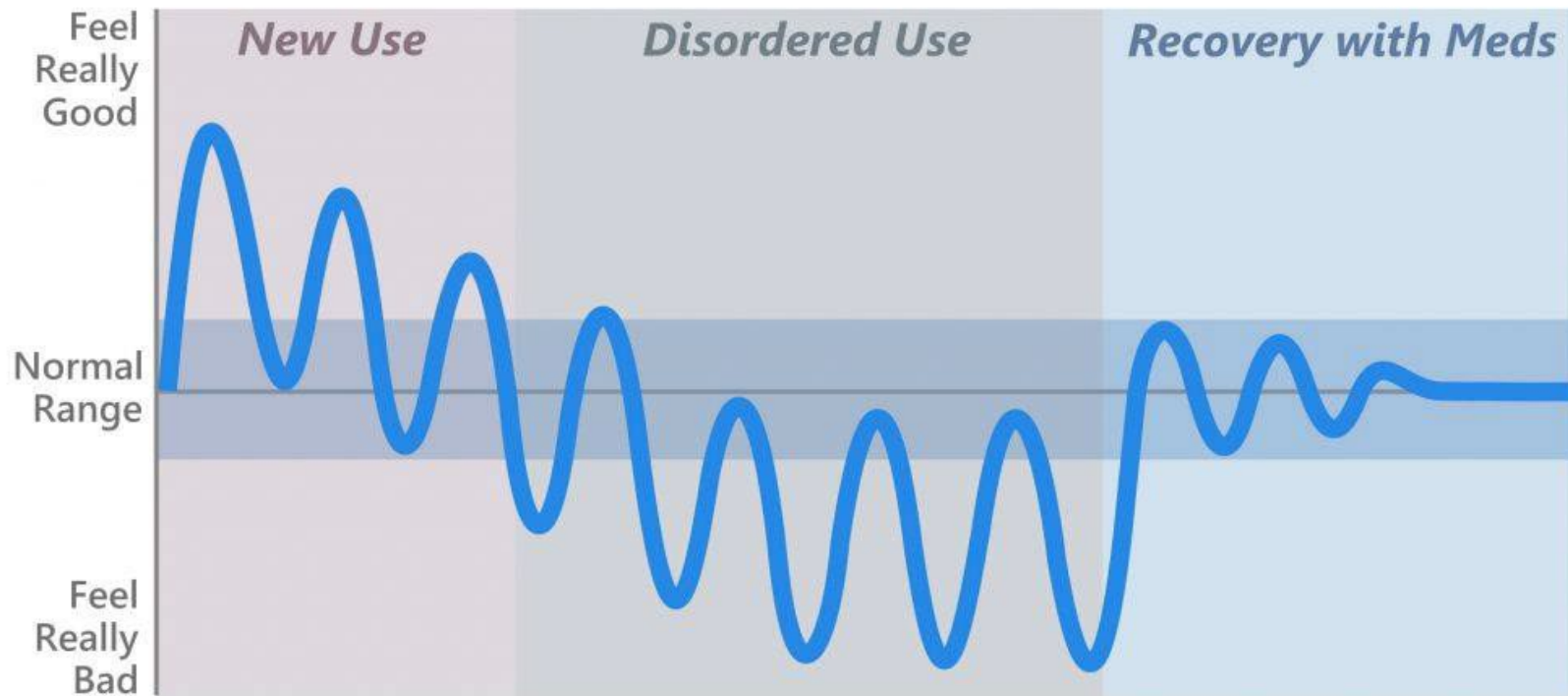


Image credit: learnabouttreatment.org



# DSM-5 CRITERIA FOR DIAGNOSING

Craving or compulsion to use

Inability to cut down or stop

Larger amounts, longer periods

Increased time obtaining, using, recovering

Social or interpersonal relationship problems

Role failure at work school or home

Reducing social or recreational activity

Physical hazards

Physical or psychological harm

Mild SUD: 2-3  
Moderate SUD: 4-5  
Severe SUD: >6

Tolerance

Withdrawal



# THE RECOVERY PROCESS: A CONTINUUM OF CARE

The continuum of care covers a range of services that address different stages of a person's pathway to recovery.



 U.S. Department of Health & Human Services

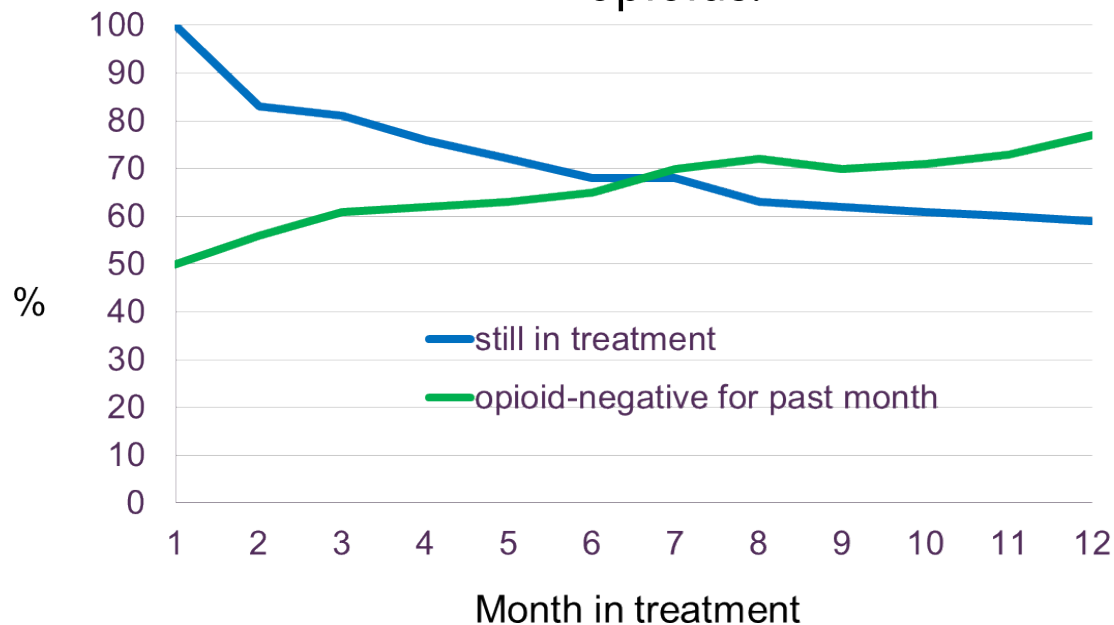
**TIP:** To locate treatment near you, visit SAMHSA's National Helpline or visit their website



**SAMHSA**  
Substance Abuse and Mental Health  
Services Administration

# BUPRENORPHINE OUTCOMES & RETENTION

Over time, buprenorphine promotes retention in treatment and those who remain in treatment become more likely to abstain from other opioids.



Soeffing, J.M., et al. J Subst Abuse Treat (2009)



Slide credit: BMC Grayken TTA

# MOUD OUTCOMES & RETENTION

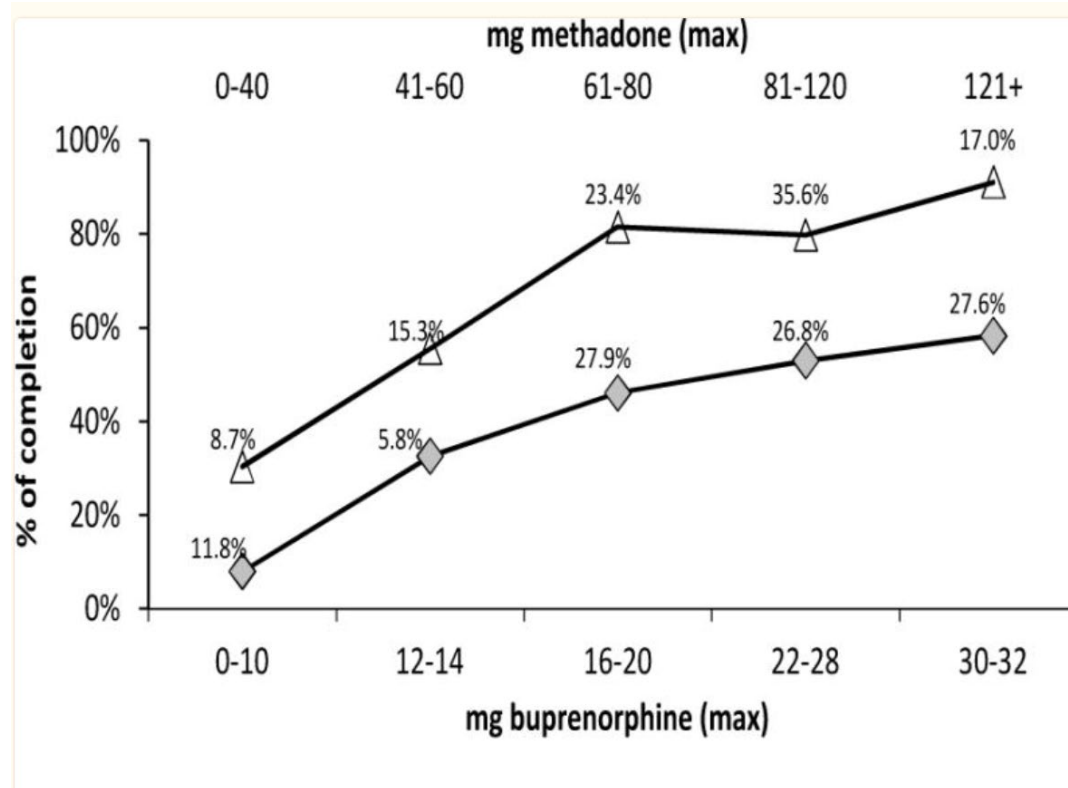
Table 2

Treatment Completion and Dropout Reasons (%)

	<b>Buprenorphine/Naloxone (n=738)</b>	<b>Methadone (n=529)</b>	<b>Total (n=1,267)</b>
Dropout during the first 30 days of treatment, % <sup>**</sup>	24.8	8.3	17.9
Completed the 24-week trial, % <sup>**</sup>	46.1	74.1	57.8
Retention (days in treatment), Mean (SD) <sup>**</sup>	103.8 (66.9)	141.3 (50.8)	119.4 (63.5)
Dropout reasons, % <sup>**</sup>	<i>n=398</i>	<i>n=137</i>	<i>n=535</i>
Missed 14 or more days	63.1	68.6	64.5
No longer wish to participate	25.6	12.4	22.2
Administrative discharged	3.5	4.4	3.7
Not medically appropriate	3.8	3.7	3.7
Other reasons (incarceration, moved)	4.0	11.0	5.8
Participants who stayed in treatment more than 30 days	<i>n=555</i>	<i>n=529</i>	<i>n=1,040</i>
Completed the 24-week trial, % <sup>**</sup>	61.3	80.8	70.4
Retention (days in treatment), Mean (SD) <sup>**</sup>	133.3 (49.2)	152.8 (34.8)	142.4 (44.1)



# DOSAGE MATTERS



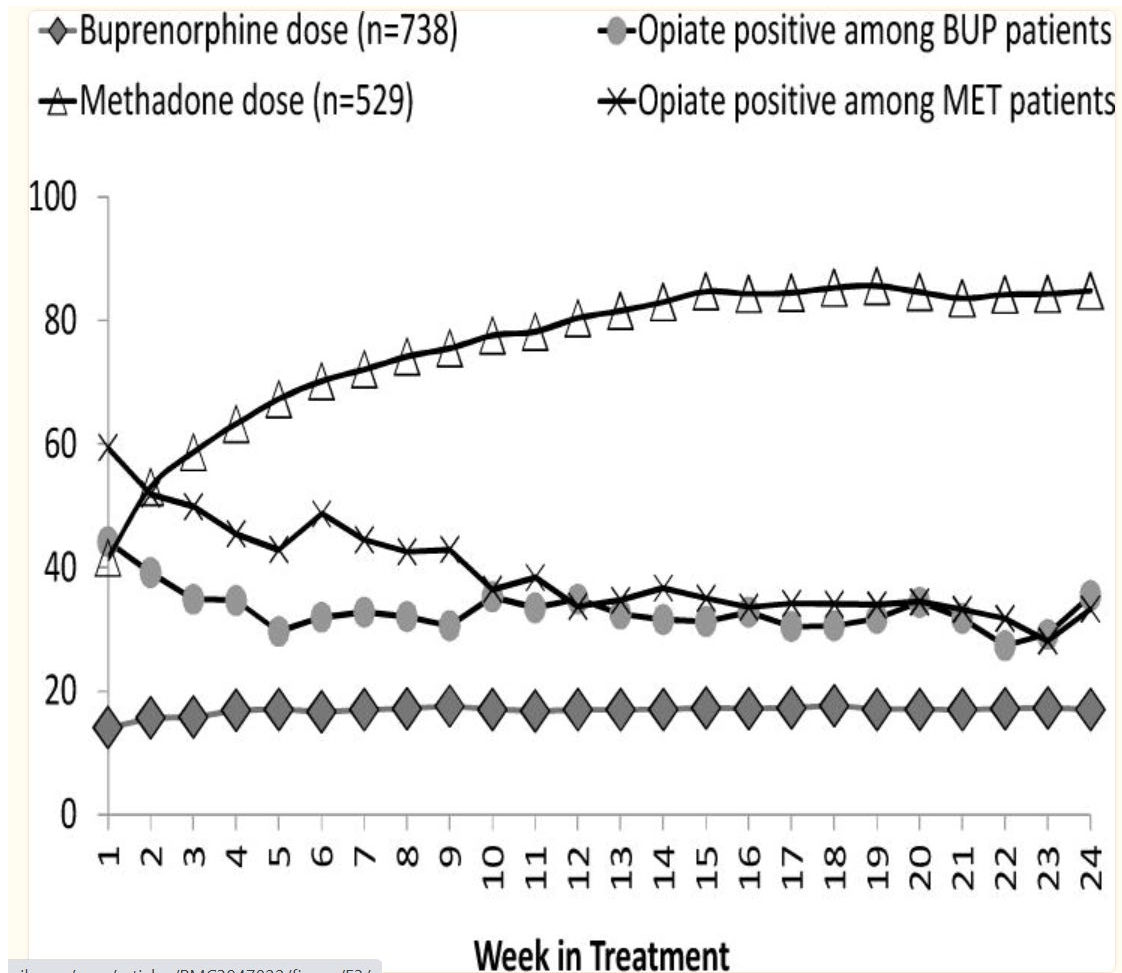
Hser YI, Saxon AJ, Huang D, Hasson A, Thomas C, Hillhouse M, Jacobs P, Teruya C, McLaughlin P, Wiest K, Cohen A, Ling W. Treatment retention among patients randomized to buprenorphine/naloxone compared to methadone in a multi-site trial. *Addiction*. 2014 Jan;109(1):79-87. doi: 10.1111/add.12333. Epub 2013 Oct 9. PMID: 23961726; PMCID: PMC3947022.

# DOSAGE MATTERS

- Doses of methadone greater than 60mg demonstrated 80% or better retention
- Methadone doses of 120mg or higher showed a 91% completion rate
- Buprenorphine doses and retention rates showed a linear relationship, with increasing dose yielding improved retention
- Highest dose category of 30–32 mg buprenorphine resulting in a completion rate of about 60%
- Participants receiving a lower medication dose were 3.09 times more likely than those receiving a higher dose to drop out of treatment



# MOUD and OPIOID USE



Hser YI, Saxon AJ, Huang D, Hasson A, Thomas C, Hillhouse M, Jacobs P, Teruya C, McLaughlin P, Wiest K, Cohen A, Ling W. Treatment retention among patients randomized to buprenorphine/naloxone compared to methadone in a multi-site trial. *Addiction*. 2014 Jan;109(1):79-87. doi: 10.1111/add.12333. Epub 2013 Oct 9. PMID: 23961726; PMCID: PMC3947022.



# MOUD and OPIOID USE

- Increased dose was negatively related to continued opioid use with buprenorphine participants relative to methadone participants
- Lower likelihood of positive opioid test results for every mg dose increase
- Opioid use was significantly lower among buprenorphine than methadone participants during the first 9 weeks of the treatment



# MOUD and OPIOID USE

- Buprenorphine and Methadone both raise dopamine to normal levels of 40-60 ng/dL in the brain
- Patients with low dopamine levels have extremely low retention rates for treatment (less than 10%)
- Mortality rate for patients with OUD who pursue abstinence-based recovery is 10 times higher than individuals who receive MAT





# GETTING STARTED

# PUTTING ETHICS INTO PRACTICE

- ✧ A substance use disorder is a chronic medical condition that responds best when treated with evidence-based, patient-centered, ongoing, comprehensive medical care.
- ✧ Office Based Addiction Treatment philosophy based on patient-centered goals



# TREATMENT PRINCIPLES

- **No single treatment is right for everyone**
- Effective treatment addresses the patient holistically
- Many treatment modalities

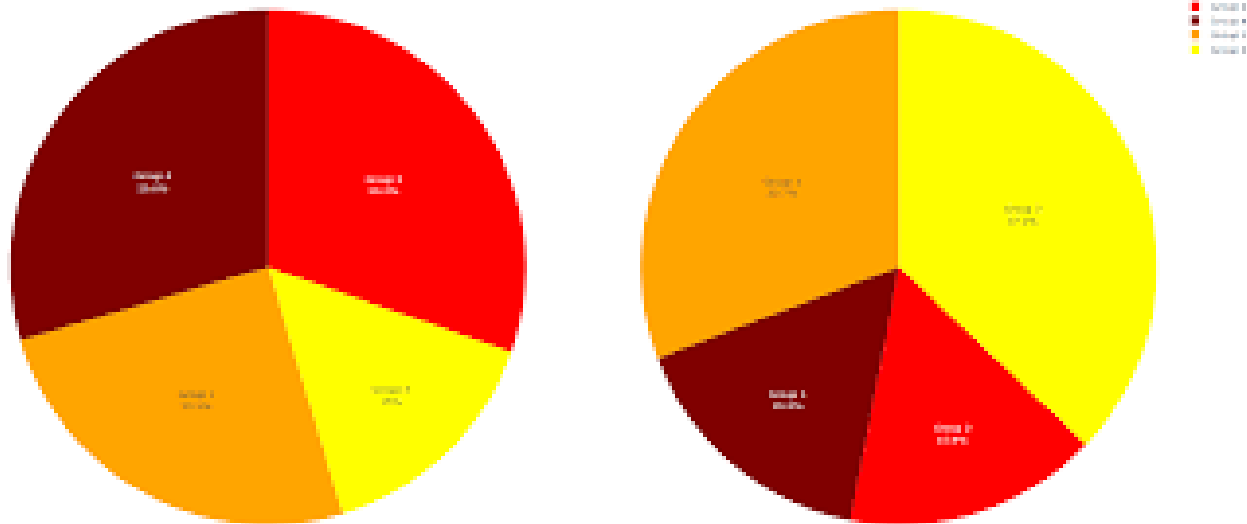


NIDA (2019)



# Recovery

- No recovery looks the same



# GATHERING A SUBSTANCE USE HISTORY

- Substances used (illicit/licit, past/present) and most recent use
- Patterns of use: frequency, route of administration, quantity, age of first use
- Withdrawal potential
- History of SUD treatment (meds, counseling, programs, support groups, etc.)
- Overdose history
- Behavioral health comorbidities
- Family and social history
- Each individual's goals for recovery



# CREATING A PATIENT-CENTERED TREATMENT PLAN

## Considerations:

- Is the patient currently physically dependent on a substance?
  - If opioid dependent: What opioid(s) and timing of last use?
- Would the patient benefit from daily interaction in a highly structured setting, or is an outpatient setting with longer intervals between visits and prescriptions more appropriate?
  - Prior experience with buprenorphine?
  - Risk factors for overdose or other adverse events?
- Prior treatment successes? If taken meds before, at what doses?
- **Most important:** Shared decision-making with the patient



Patient Care - Photos by Canva. Canva. Accessed April 4, 2022.  
<https://www.canva.com/photos/MACTGQcdKIQ-patient-care/>





# INITIATION OF MOUD

# OPIOID WITHDRAWAL

## Spontaneous Withdrawal

- Person physiologically dependent on opioids suddenly stops or reduces use
- Onset and severity depends on pharmacology of the opioid(s), duration of use, patient-specific factors
- Timing of mild-moderate withdrawal:
  - **Short-acting opioids** (e.g., heroin, oxycodone): 6-12 hrs after last use
  - **Long-acting opioids** (e.g., methadone): up to 36+ hrs after last use
  - **Fentanyl:** up to 24+ hrs after last use

## Precipitated Withdrawal

- Rapid onset of withdrawal symptoms following a dose of partial-agonist, or antagonist in someone dependent on full-agonist
- With buprenorphine, symptoms peak in 1-6 hrs and subside over 24 hrs
- Risk factors:
  - Transitioning from long-acting full-agonist to buprenorphine
  - Recent benzodiazepine use
  - No prior experience with buprenorphine
  - Fentanyl use

Kosten & Baxter, 2019  
Oakley, B, et al., 2021  
Varshneya, N, et al, 2022



# Opioid Withdrawal Assessment

COWS Scale for Opioid Withdrawal	
Pulse Rate 0-4 _____	GI Upset 0-5 _____
Sweating 0-4 _____	Tremor 0-4 _____
Restlessness 0-5 _____	Yawning 0-4 _____
Pupil Size 0-5 _____	Anxiety/Irritability 0-4 _____
Bone or Joint Aches 0-4 _____	Piloerection 0-5 _____
Rhinnorea/Lacrimation 0-4 _____	Total Score _____ 5-12 = mild; <b>13-24 = moderate</b> 25-36 = moderately severe; >36 = severe withdrawal

Wesson D.R. Ling, W. J Psychoact Drugs (2003) BMC  
Grayken Center for Addiction TTA (2022)



Slide credit: BMC Grayken TTA

# FENTANYL COMPLICATES INITIATION

- Fentanyl pharmacokinetics
  - Rapid onset and short duration of action.
  - Lipophilic - results in distribution to the tissues that is not dose-dependent. Consequently, continuous and prolonged use of fentanyl can result in slow dissipation overall<sup>1</sup>
- High prevalence in the illicit drug market
- As a result, there is increasing incidences of precipitated withdrawal during transition to buprenorphine<sup>1</sup>



# MANAGING OPIOID-RELATED WITHDRAWAL

Symptom	Adjunctive Treatment Options
Anxiety	<ul style="list-style-type: none"> <li>• Antihistamine (e.g. Hydroxyzine)</li> <li>• <math>\alpha_2</math>-Adrenergic agonists (e.g. clonidine, lofexidine)</li> </ul>
Insomnia	<ul style="list-style-type: none"> <li>• Sedating antidepressant (e.g., trazodone)</li> <li>• Antihistamine (e.g., hydroxyzine, diphenhydramine)</li> <li>• Quetiapine</li> </ul>
Musculoskeletal Pain	<ul style="list-style-type: none"> <li>• NSAIDs</li> <li>• Acetaminophen</li> <li>• Heat packs</li> <li>• Topical analgesics</li> </ul>
Gastrointestinal Distress	<ul style="list-style-type: none"> <li>• Antiemetic (e.g., ondansetron)</li> <li>• Antispasmodics (e.g., dicyclomine)</li> <li>• Antidiarrheal (e.g., bismuth subsalicylate)</li> <li>• Oral hydration</li> </ul>
Restless legs	<ul style="list-style-type: none"> <li>• Muscle relaxant (e.g., tizanidine, cyclobenzaprine)</li> <li>• Dopamine promoter (i.e., ropinirole)</li> </ul>
Rhinorrhea	<ul style="list-style-type: none"> <li>• Antihistamines (e.g., hydroxyzine, diphenhydramine)</li> </ul>



# BMC MAT QUICK START

## A Guide for Patients Beginning Buprenorphine Treatment Before you begin you want to feel sick from your withdrawal symptoms

It should be at least . . .

- 12 hrs since you last used heroin or opioid pills
- 24 hrs since you last used fentanyl
- 36-72 hrs since you used methadone
- \*\* Talk to your provider about medications to manage withdrawal that may be helpful for this process.

You should feel at least four of these symptoms increasing from normal . . .

- Restlessness
- Anxiety
- Body aches
- Enlarged pupils
- Goosebumps
- Runny nose or eyes
- Yawning
- Tremor/twitching
- Sweating or chills
- Stomach cramps, nausea or diarrhea

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

DAY 1: 16-24mg of buprenorphine			DAY 2: 8-16mg of buprenorphine
STEP 1.	STEP 2.	STEP 3.	Take 8 to 16 mg dose
<p>Take the first dose</p> <p><b>2 to 4 mg</b></p> <p><b>Wait 45 minutes</b></p> <ul style="list-style-type: none"> <li>- Put the tablet or film under your tongue.</li> <li>- Keep it there until fully dissolved (about 15 min.)</li> <li>- Do NOT eat, drink or smoke 15 min before or after</li> <li>- Do NOT swallow the medicine.</li> </ul>	<p>Still feel sick? Take next dose</p> <p><b>2 to 4 mg</b></p> <p><b>Wait 2 hours</b></p>	<p>Still uncomfortable? Take 4mg every 2 hours</p> <p><b>4 mg</b></p> <p><b>STOP</b> Do not take more than 24mg</p> <ul style="list-style-type: none"> <li>- You may take 4 mg every 2 hours as needed to treat withdrawal symptoms</li> <li>- Day 1 max dose = 24 mg</li> </ul>	<p><b>8 to 16 mg</b></p> <ul style="list-style-type: none"> <li>- If you took 16mg or more on day 1 take a total of 16mg</li> <li>- If you took less than 16mg and felt well, take that dose.</li> <li>- If you have questions or troubles follow up with the clinical team.</li> </ul>

Contact the clinic or emergency number given to you if your symptoms get worse.

Boston Medical Center Grayken Center for Addiction Training and Technical Assistance 09/2022



To use BMC Grayken TTA Quick Start APP

[BMC MAT Quick Start | Grayken Center for Addiction TTA | Boston Medical Center \(addictiontraining.org\)](#)

# SAMPLE BUPRENORPHINE INITIATION PRESCRIPTION: Alternative Method

## Go Big or Go Home

When the person has at least 2 symptoms of withdrawal that are visible to another person, begin with 8 mg Buprenorphine dose

- If withdrawal worsens in one hour – give another 8 mg dose
- If withdrawal worsens again in the following hour – give another 8 mg dose
- Max daily dose of 24 mg the first day
- Utilize other medications for ongoing withdrawal symptoms
- Whatever the total dose was on the first day, divide that into 2-3 doses on subsequent days (example – first day dose was 16 mg, dose on subsequent days would be 8 mg BID)



# SAMPLE BUPRENORPHINE INITIATION PRESCRIPTION: NON-OPIOID DEPENDENT

Persons who are non-opioid dependent may experience opioid effects when using buprenorphine.

- Examples include: persons recently released from incarceration, persons in early or sustained recovery from OUD, persons with intermittent opioid use

**Start Low and Go Slow** when initiating treatment in persons who are non-opioid dependent.

Buprenorphine-naloxone 2-0.5 mg: Take one film/tablet once daily for three days, then increase to twice daily as tolerated. Follow-up visit within one week.

Wason, K.F., et al. Clinical Guidelines (2021)



Slide credit: BMC Grayken TTA

# NALTREXONE INITIATION

- ✦ Avoid initiation if patient is actively using
- ✦ Increased risk for overdose if subsequent injection is missed.



PubMed Central Image  
Viewer: [https://www.ncbi.nlm.nih.gov/core/lw/2.0/html/tileshop\\_pmc/tileshop\\_pmc\\_inline.html?title=Photo%3A%20iStock&p=BOOKS&id=481477\\_inject-disorder-01-20f1.jpg](https://www.ncbi.nlm.nih.gov/core/lw/2.0/html/tileshop_pmc/tileshop_pmc_inline.html?title=Photo%3A%20iStock&p=BOOKS&id=481477_inject-disorder-01-20f1.jpg). Accessed 24 Mar. 2023.



Scott, Chris. "The Sinclair Method: Everything You Need to Know." *Fit Recovery*, 22 Dec. 2015, <https://fitrecovery.com/the-sinclair-method/>.

BMC Grayken Center for Addiction TTA,  
2022



# NALTREXONE INITIATION

- Always start treatment with oral formulation
- Increased adherence rates with IM formulation
- Patients should be advised to carry medical alert information

Network of Care. <https://www.trilogyr.com/Cancellation>.  
Accessed 22 Feb. 2023.



# ONGOING VISIT MANAGEMENT



- Identify barriers and progress to recovery
- Review MOUD dose and administration and potential side-effects
- Assess other recovery activities such as: counseling, peer support, exercise supported therapy, etc.
- Review and address medical needs: preventative healthcare, HIV, HCV, mental health
- Lab tests as clinically indicated
- Build trust and support recovery goals



# STABILIZATION & MAINTENANCE

## Stabilization

- Follow tenets of chronic disease management
- Start with weekly visits



ASAM  
THE **NATIONAL  
PRACTICE  
GUIDELINE**  
For the Use of Medications  
in the Treatment of  
Addiction Involving Opioid Use

**TIP:** View online - ASAM's  
comprehensive clinical guides

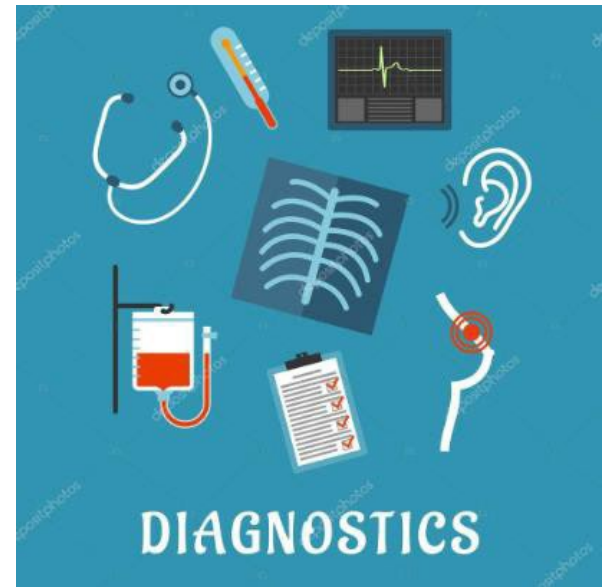




# MONITORING

# GOAL OF MONITORING

- Is the current treatment plan helping the patient in recovery?
- If not, what can we do to support the patient to reach their goals?
- Monitoring may include: clinical assessment, toxicology screens, call-back visits, observed dosing, medication counts, and/or confirmatory testing of toxicology sample.



# GOALS OF TOXICOLOGY SCREENING

## **A Therapeutic Tool to Improve Patient Care and Safety**

- Provide objective data
- Assist in identifying threats to progress and patient safety concerns.
- Support or confirm use of prescribed medication (adherence) or illicit substances
- Support or confirm lack of use of non-prescribed medications or illicit substances
- Facilitate provider-patient communication



# SAMPLE COLLECTION FOR CLINICAL MANAGEMENT

Trauma-responsive approach recommends non-observed collection

✦ High prevalence of trauma history

✦ Supervised vs observed can still reduce risk of tampering



Plastic Container with Urine Analysis- Photos by Canva. Canva. Accessed April 4, 2022.



Selective focus close up flushing toilet bowl for sanitary - Photos by Canva. Canva. Accessed April 4, 2022.

ASAM (2013)

Donroe, J.H., et al. Drug and Alcohol Dependence (2017)



# SCREENING AND CONFIRMATORY TESTING

## SCREENING (IMMUNOASSAY)

Positive/negative at predetermined cutoff

Easy to interpret

Quick results

False positives/negatives can occur

Limitations in what substances can be tested

Inexpensive

## CONFIRMATORY (GAS CHROMATOGRAPHY/ MASS SPECTROMETRY GC/MS)

Substance levels & metabolites given as numeric values

More difficult to interpret

Longer time to result

More precise and specific

Many substances & metabolites tested

Expensive

Slide credit: BMC Grayken TTA

Moeller, K.E., et al. Mayo Clinic Proceedings (2017)  
SAMHSA (2012)



# Common Reasons for Unexpected Results

## Lab error

- *Cross-reactivity, Contamination, Improper handling*

## Substance use

- *Fear of punishment, Fear of disappointing treatment team, Fear of notifying outside agencies, Unaware of what they are using*

## Medication management

- *Sharing, Swapping, Taking more than prescribed*

ASAM Expert Panel and Quality Improvement Council (2017)

Slide credit: BMC Grayken TTA

**TIP:** PCSS is an excellent resource for healthcare providers treating addiction, offering free pre-recorded and live trainings, as well as opportunities for mentorship



# ADDRESSING UNEXPECTED TEST RESULTS

- Discuss rationale for testing
- Review test
- Review medication list
- Confirmatory testing
- Review goals of care
- Consider patient's presentation as part of your clinical assessment

*Toxicology results are only one part of the clinical assessment.*

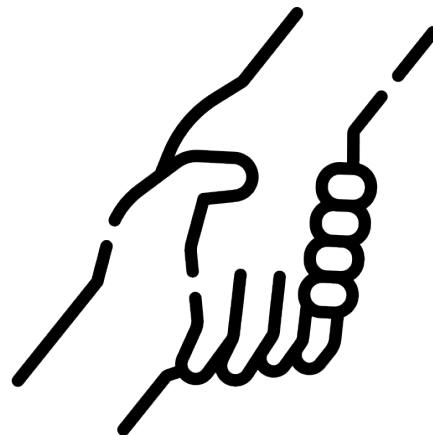




# ADDRESSING SUBSTANCE USE DURING TREATMENT

# ADDRESSING SUBSTANCE USE

- No requirement of abstinence from opioids or other substances to continue MOUD
- Provide staff with education
- Offer treatment options
- Alter treatment plan to increase ability to meet treatment goals



"SupportFree Icons Designed by Freepik." Flaticon,  
[https://www.flaticon.com/free-icon/support\\_4185345](https://www.flaticon.com/free-icon/support_4185345). Accessed 24 Feb. 2023.

National Institute of Drug Abuse (2021)  
Taylor, J.L., et al. J Gen Intern Med (2021)



# RESPONDING TO CONTINUED OR RECURRENT USE

- Address safety concerns with patient
- Assess effectiveness of MOUD
- Dose adjustment or formulation change may be indicated
- Ask the patient about circumstances surrounding substance use to identify appropriate interventions
- Augment or intensify the treatment plan
- Continue treatment as long as benefit outweighs risk
- **“Are we reducing harm?”**



# STRATEGIES TO ENHANCE THE TREATMENT PLAN

- Adjust medication dose/formulation/schedule
- More frequent visits
- Shorten prescriptions or adjust refills
- Risk reduction interventions
- Treat other substance use disorders
- Warm hand-off to another level of care - residential treatment, OTP, syringe service program, acute treatment setting
- Involvement with social services
- Family/support person(s) involvement
- Connection with a peer support specialist
- Increase team collaboration and integrate addiction treatment throughout care
- Behavioral health services - individual/group counseling, intensive outpatient program, psych evaluation



# NON-ABSTINENCE AS A GOAL?

Non-abstinence is a philosophy and a skillset aimed at reducing the negative health effects of behaviors that increase risk for harm without discontinuing the primary behavior.

- “Meet people where they are”
- Supports any positive change but does not require change
- Utilizes evidenced-based interventions to reduce negative consequences of behaviors

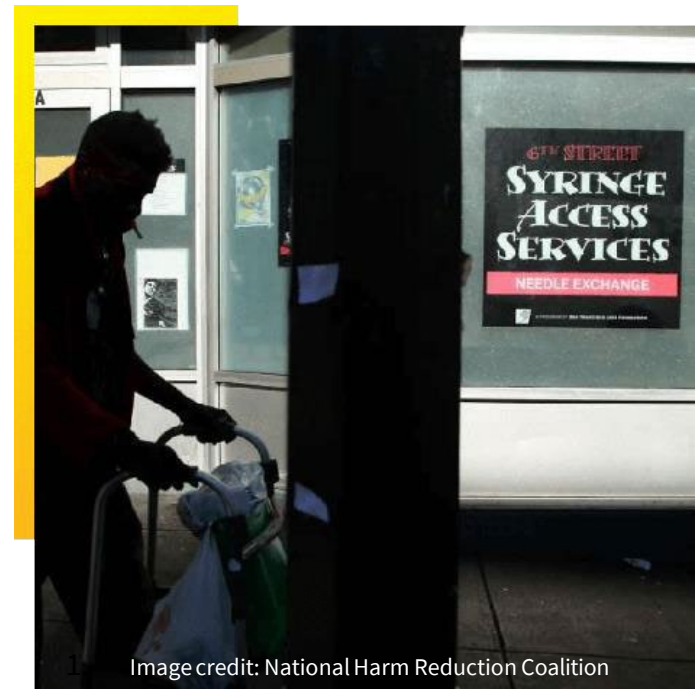


Image credit: National Harm Reduction Coalition



Injury Free North Carolina (2022)  
Hawk et al (2017)  
SAMHSA (2022)

**TIP:** Visit our website for a list of  
[Harm Reduction Resources](#)



Grayken Center for Addiction  
Training & Technical Assistance  
Boston Medical Center

# ALTERNATIVE STRATEGIES

- Low barrier access to MOUD
- Naloxone access and education for all non-prescribed substance use
- Access to sterile consumption supplies
- Education about safer routes and patterns of polysubstance use
- Engage patients who are upset or agitated



## Syringe Services Programs

*A Technical Package of Effective Strategies and Approaches for Planning, Design, and Implementation*

**TIP:** For more information about syringe service programs visit the [CDC: Syringe Service Programs Technical Package](#)

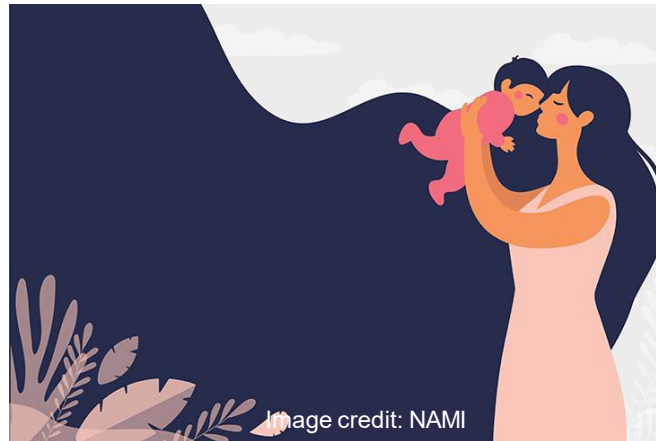




# **SPECIAL POPULATIONS**

# OPIOID USE DURING PREGNANCY

- Opioid exposure during pregnancy linked to poor health outcomes for birthing persons and babies
- Potential fetal complications
- Pregnant persons with OUD often have co-occurring mental health conditions
- Pregnancy can be a powerful catalyst for patients to engage in treatment



# RISK THROUGH POSTPARTUM

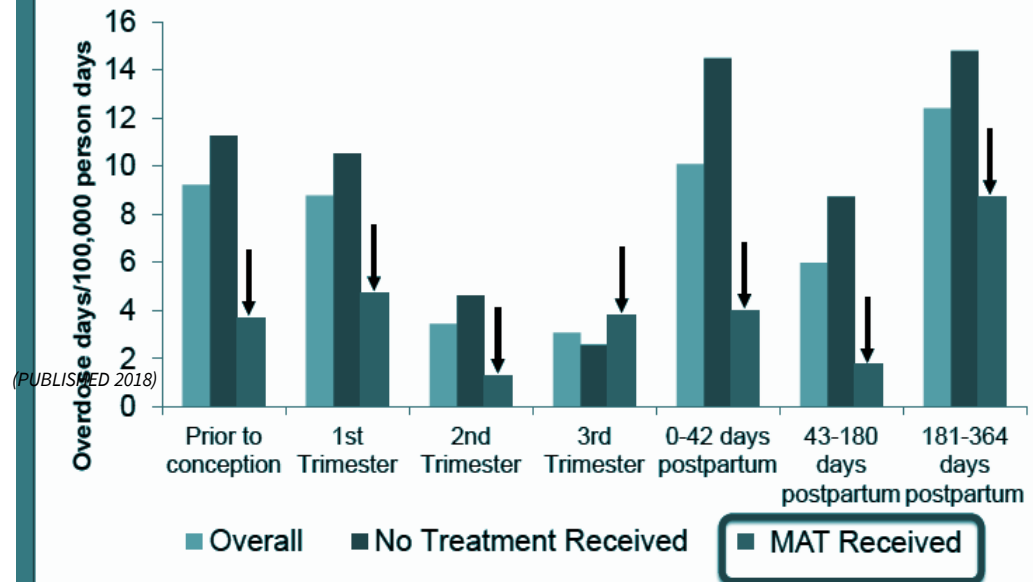
- Overdose rates **highest 7–12 months after delivery**
  - Lowest in 3<sup>rd</sup> trimester
- Overall, 64.3% of patients with OUD in the year before delivery received any pharmacotherapy
- Individuals receiving MOUD had reduced overdose rates

## Fatal and Nonfatal Overdose Among Pregnant and Postpartum Women in Massachusetts

Schiff, Davida M. MD, MSc; Nielsen, Timothy MPH; Terplan, Mishka MD, MPH; Hood, Malena MPH; Berson, Dana MPH; Diop, Hafsatou MD, MPH; Bharel, Monica MD, MPH; Wilens, Timothy E. MD;

### MAT DECREASES MATERNAL OVERDOSES

Opioid Overdose Rates Among MA Mothers with Evidence of OUD in Year Prior to Delivery by Receipt of Treatment, 2011-2015  
n = 4,154 Deliveries



# OPIOID AGONIST THERAPY DURING PREGNANCY

- Opioid agonist therapy includes methadone and buprenorphine
- Prevents opioid withdrawal symptoms
- Prevents complications of non-medical opioid use by reducing risk of recurrent use
- Improves adherence to prenatal care and treatment
- In conjunction with prenatal care, reduces OB complications
- Racial and ethnic disparities persist in access to MOUD during pregnancy



Slide credit: BMC Grayken TTA

ACOG (2017)  
Peeler, M., et al. Am J Public Health (2020)

**TIP:** See ACOG's Committee  
Opinion on *Opioid Use and  
Opioid Use Disorder in  
Pregnancy*



**ACOG**  
The American College of  
Obstetricians and Gynecologists

# METHADONE

- 50 years of data support safety in pregnancy
- Was the “gold standard”
- Alleviates withdrawal symptoms and cravings
- Daily clinical interaction
- Dose increases are common
- Split dosing is expected
- Postpartum dose reductions require frequent clinical assessment



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ACOG (2017)  
Pace, C.A., et al. J Subst Abuse Treat (2014)



# BUPRENORPHINE

- Evidence supports the use of buprenorphine as a first-line therapy for OUD in pregnancy
- Alleviates withdrawal symptoms and opioid cravings
- Dose increases may occur during pregnancy
- Less stringent structure with office-based treatment
- Transition from methadone to buprenorphine not recommended during pregnancy
- Buprenorphine combo product no longer contraindicated during pregnancy



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ACOG (2017)  
SAMHSA (2018)



Slide credit: BMC Grayken TTA



# MOTHER STUDY

- Patients taking buprenorphine were more likely to discontinue treatment; greater rate of satisfaction with methadone
- Neonates requiring NAS treatment did not differ significantly between groups, nor did they differ in peak NAS score or head circumference
- Neonates exposed to buprenorphine experienced shorter hospital stays
- Children exposed to buprenorphine or methadone before birth exhibited normal development in early childhood



# NALTREXONE

- Antagonist that blocks the effects of opioids and helps to prevent recurrent opioid use
- Current evidence on safety during pregnancy is limited
- If a patient is stable on naltrexone prior to pregnancy, decision to continue it should involve risk vs benefit discussion
- Must be **fully withdrawn** from opioids before starting naltrexone



# MOUD IS RECOMMENDED DURING PREGNANCY

- ACOG has concluded that both methadone and buprenorphine are first-line options for peripartum persons with OUD
- Currently limited data re: the safety of naltrexone during pregnancy

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Hulse, G., et al. J Obstet Gynaecol (2002)  
Hulse G., O'Neil G., Arnold-Reed D.E. Int J Gynaecol Obstet. (2004)  
SAMHSA (2018)  
Wachman, E.M., et al. Clin Ther. (2019)



# BREASTFEEDING

## Eligibility

- **Breastfeeding should be encouraged in patients who are stable on opioid agonists,** are not using illicit drugs, and have no other contraindications (i.e HIV infection).

## Pharmacokinetics

- Methadone concentrations in breastmilk are low.
- Due to poor oral bioavailability of buprenorphine, the breastfeeding infant is exposed to only 1/10 of the buprenorphine ingested.

## Neonatal Abstinence Syndrome (NAS)/NOWS

- Cessation of breastfeeding is not associated with onset of NAS/NOWS.
- Skin-to-skin contact between infant and caregiver assists with NAS/NOWS and enhances maternal-child/caregiver-infant bonding.



# NAS/NOWS

- NOWS is an expected and treatable condition seen in 30–80% of infants born to persons taking opioid agonist therapies
- Affects GI, autonomic, and central nervous systems
- Symptoms of NOWS include irritability, high-pitched cry, poor sleep, overactive reflexes, poor feeding and sucking, trembling
- Multiple factors contribute to the duration and severity of NOWS
- No long term complications of NOWS

ACOG (2017)  
Smith, J., et al. Am J Perinatol (2020)  
Devlin, L.A., et al. J Perinatol (2021)



# TAKE HOME POINTS

- MOUD is evidence based and life saving
- Non-abstinence is a reasonable consideration
- Primary care providers are the front lines for SUD treatment
- Get comfortable with being uncomfortable
- Be able to have normal conversations about things you think are abnormal
- Ask questions!!!!
- Find your own starfish!

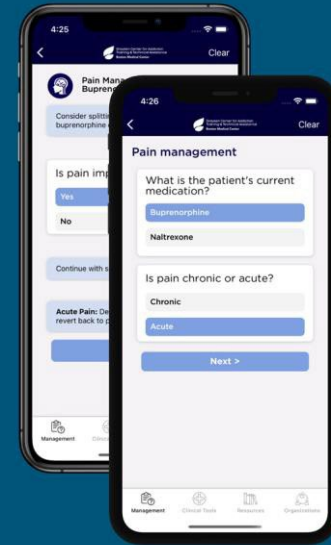
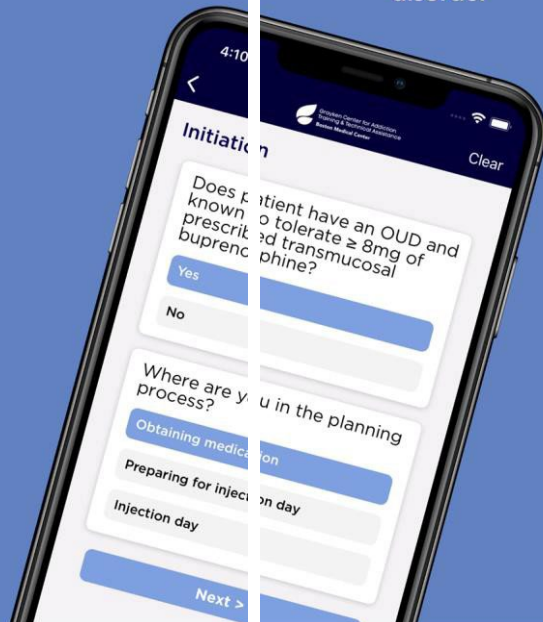


# MAT QUICK START APP

Guidelines for office-based addiction treatment at your fingertips

Up-to-date evidence based recommendations for treatment of opioid use disorder

Interactive clinical algorithms walk you through each step of the clinical decision-making process



## UPDATED VERSION NOW AVAILABLE!

Provides real-time access to:

- Algorithms for the initiation of buprenorphine and naltrexone
- Links to guidelines and resources covered in this training and on our website

Available for download on [iOS](#) and [Android](#), free of charge! [Web version](#) also available.



*This initiative was made possible with funding from the SAMHSA Opioid Response Network and the Massachusetts Department of Public Health.*

