



# OUD IN PREGNANCY: SCREENING, DIAGNOSIS, DRUG TESTING

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# DISCLOSURES

- We have no pertinent disclosures.
- This slide set is adapted from one prepared with Dr. Carol Ott in July, 2020

# LEARNING OBJECTIVES

- Review appropriate screening tools for OUD in prenatal/perinatal care
- Discuss the diagnostic parameters for OUD in pregnant women
- Describe the clinical use of urine drug screening and confirmatory testing in pregnant women

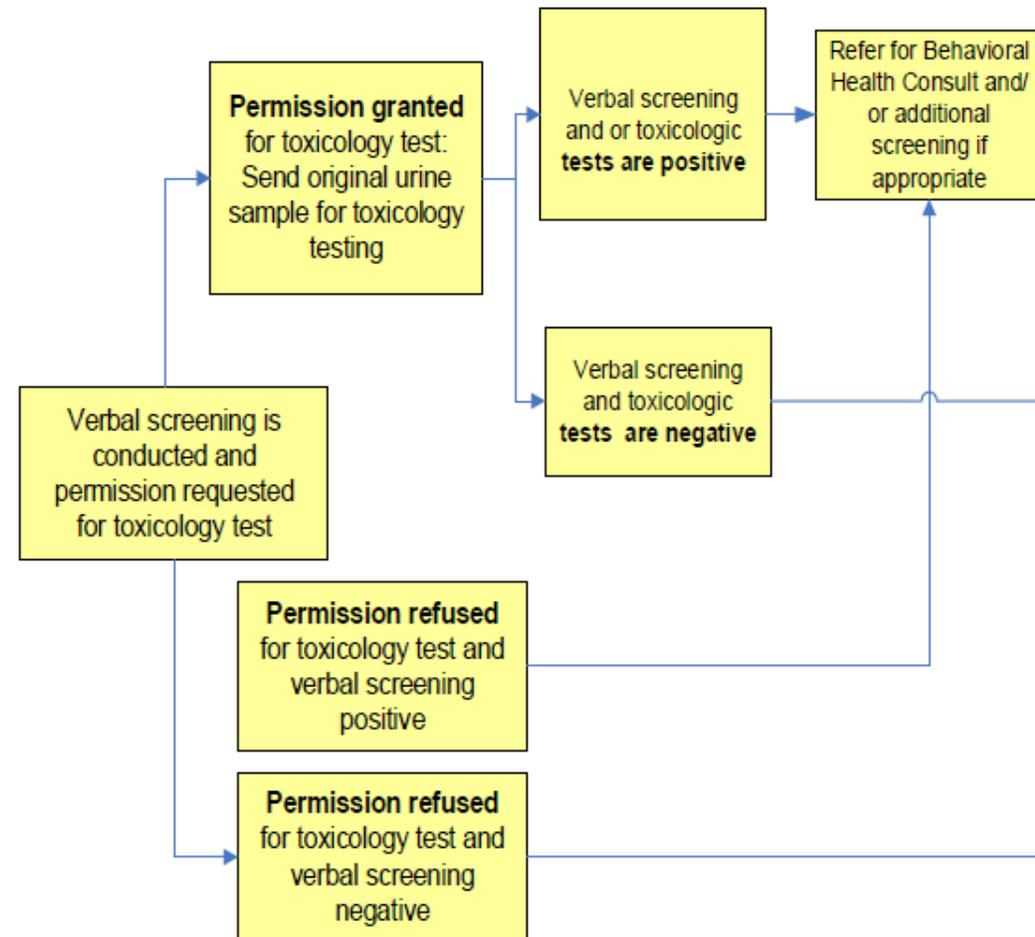
# SCREENING IN THE PERINATAL BUNDLE

If either screen is positive at delivery, cord blood should be sent for toxicological testing using a custom-panel:

- Amphetamine
- Cocaine
- Opiates
- Cannabinoids
- Barbiturates
- Methadone
- Benzodiazepines
- Oxycodone
- Buprenorphine
- Fentanyl

<https://www.in.gov/laboroflove/files/perinatal-substance-use-protocol-bundle.pdf>

**UNIVERSAL MATERNAL TESTING:** verbal screening and toxicology testing for maternal use of illicit drugs, opiates or alcohol at the first prenatal visit and again at presentation for delivery.



# 5 PS SCREENING TOOL

- 5Ps = Parents, Peers, Partners, Past, Present
- Also includes questions about violence, emotional health, and smoking
- Brief interventions noted
  - Did you state your medical concern?
  - Did you advise to abstain or reduce use?
  - Did you check your patient's reaction?
  - Did you refer for further assessment?
- Also screens for at risk drinking

<https://www.in.gov/laboroflove/files/5%20Ps%20Screening%20Tool.pdf>

**Institute for Health and Recovery  
Integrated Screening Tool**

Women's health can be affected by emotional problems, alcohol, tobacco, other drug use, and domestic violence. Women's health is also affected when those same problems are present in people close to us. By "alcohol," we mean beer, wine, wine coolers, or liquor.

|   |                              |                              |                              |  |
|---|------------------------------|------------------------------|------------------------------|--|
| <b>Parents</b><br>Did any of your parents have a problem with alcohol or other drug use?  | YES <input type="checkbox"/> |                              |                              | NO <input type="checkbox"/>                              |
| <b>Peers</b><br>Do any of your friends have a problem with alcohol or other drug use?   | YES <input type="checkbox"/> |                              |                              | NO <input type="checkbox"/>                              |
| <b>Partner</b><br>Does your partner have a problem with alcohol or other drug use?  |                              |                              | YES <input type="checkbox"/> | NO <input type="checkbox"/>                              |
| <b>Violence</b><br>Are you feeling at all unsafe in any way in your relationship with your current partner?   |                              | YES <input type="checkbox"/> |                              | NO <input type="checkbox"/>                              |
| <b>Emotional Health</b><br>Over the last few weeks, has worry, anxiety, depression, or sadness made it difficult for you to do your work, get along with people, or take care of things at home?  |                              |                              |                              | YES <input type="checkbox"/> NO <input type="checkbox"/> |
| <b>Past</b><br>In the past, have you had difficulties in your life due to alcohol or other drugs, including prescription medications?   |                              |                              | YES <input type="checkbox"/> | NO <input type="checkbox"/>                              |
| <b>Present</b><br>In the past month, have you drunk any alcohol or used other drugs?<br>1. How many days per month do you drink? _____<br>2. How many drinks on any given day? _____<br>3. How often did you have 4 or more drinks per day in the last month? _____ |                              |                              | YES <input type="checkbox"/> | NO <input type="checkbox"/>                              |
| <b>Smoking</b><br>Have you smoked any cigarettes in the past three months?  |                              |                              | YES <input type="checkbox"/> | NO <input type="checkbox"/>                              |

Review Risk

Review Domestic Violence Resources

Review Substance Use, Set Healthy Goals

Consider Mental Health Evaluation

**Advise for Brief Intervention**

|  | Y                        | N                        | NA                       |
|--|--------------------------|--------------------------|--------------------------|
| Did you State your medical concern?      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Did you Advise to abstain or reduce use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Did you Check patient's reaction?        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Did you Refer for further assessment?    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| At Risk Drinking                      |                                    |
|---------------------------------------|------------------------------------|
| Non-Pregnant                          | Pregnant/<br>Planning<br>Pregnancy |
| > 7 drinks / week<br>> 3 drinks / day | Any Use is<br>Risky Drinking       |

# NIDA QUICK SCREEN

- Step 1: Ask about *past year* drug use
  - Introduce yourself and establish rapport
  - Ask about alcohol, tobacco, other drugs, including medications that may be taken for reasons/doses other than those prescribed for the patient
  - If the answer is “yes” for use of illegal or prescription drugs for non-medical reasons, move to Step 2
- Step 2: NIDA-Modified ASSIST
  - Asking about lifetime drug use
- Step 3: Determine risk level
- Step 4: Advise (patient about drug use), Assess (readiness to quit), Assist (patient in making changes), and Arrange (treatment or follow-up care)

<https://archives.drugabuse.gov/publications/resource-guide-screening-drug-use-in-general-medical-settings/screen-then-intervene-conducting-brief-intervention>

# URINE DRUG SCREENING

- Educated, informed consent for biologic testing is required unless there is a medical situation that warrants testing, and the benefits outweigh the risk of any potential harms
- Medical situations:
  - Obtunded or unconscious patient
  - Falling asleep mid-sentence or showing other evidence of intoxication
  - No prenatal care at the time of delivery
  - Recent physical evidence of injection use
  - Unexplained soft tissue infections or endocarditis
  - As part of MAT prescribing
  - At the time of delivery in a patient previously identified as having a history of substance use or inappropriate prescription use at any point in the pregnancy
  - Acute clinical complications (placental abruption or unexplained severe hypertension)

Substance Abuse and Mental Health Services Administration (SAMHSA). Clinical Guidance for Treating Pregnant and Parenting Women with Opioid Use Disorder and Their Infants. 2018. Available at: [store.samhsa.gov/product/Clinical-Guidance-for-Treating-Pregnant-and-Parenting-Women-With-Opioid-Use-Disorder-and-Their-Infants/SMA-18-5054](https://store.samhsa.gov/product/Clinical-Guidance-for-Treating-Pregnant-and-Parenting-Women-With-Opioid-Use-Disorder-and-Their-Infants/SMA-18-5054).

# URINE DRUG SCREENING

- Pregnant people may not always be aware of what they are taking; substances may be sold as another substance or mixed with other substances (e.g. fentanyl sold as heroin or mixed with cocaine); ask if the patient expects anything to be detected and give an opportunity to discuss
- Biologic testing may not include synthetic drugs, including fentanyl, buprenorphine, ketamine, inhalants
- Review the risks and limitations of each type of screening test and need for confirmatory testing
- If objective clinical findings or reported history increase provider concern during pregnancy or postpartum period, repeat screening and consideration for testing is warranted

Substance Abuse and Mental Health Services Administration (SAMHSA). Clinical Guidance for Treating Pregnant and Parenting Women with Opioid Use Disorder and Their Infants. 2018. Available at: [store.samhsa.gov/product/Clinical-Guidance-for-Treating-Pregnant-and-Parenting-Women-With-Opioid-Use-Disorder-and-Their-Infants/SMA-18-5054](https://store.samhsa.gov/product/Clinical-Guidance-for-Treating-Pregnant-and-Parenting-Women-With-Opioid-Use-Disorder-and-Their-Infants/SMA-18-5054).

# URINE DRUG SCREENING

- Preliminary rapid test results (UDS) may not be definitive; urine testing should not be relied upon as the sole or valid indication of drug use; confirmatory tests/definitive drug assays should be requested when rapid test results are positive
- Preliminary screening tests are more likely to yield false-positive results compared to confirmatory tests
- False-negative screening tests may occur when the urine sample is adulterated or the patient provides a sample that is not her own; the urine sample should be at body temperature when submitted to staff; the sample can be tested for human chorionic gonadotropin

Substance Abuse and Mental Health Services Administration (SAMHSA). Clinical Guidance for Treating Pregnant and Parenting Women with Opioid Use Disorder and Their Infants. 2018. Available at: [store.samhsa.gov/product/Clinical-Guidance-for-Treating-Pregnant-and-Parenting-Women-With-Opioid-Use-Disorder-and-Their-Infants/SMA-18-5054](https://store.samhsa.gov/product/Clinical-Guidance-for-Treating-Pregnant-and-Parenting-Women-With-Opioid-Use-Disorder-and-Their-Infants/SMA-18-5054). Ecker J, Abuhamad A, Hill W, Bailit J, Bateman BT, Berghella V et al. Substance use disorders in pregnancy: clinical, ethical, and research imperatives of the opioid epidemic: a report of a joint workshop of the Society for Maternal-Fetal Medicine, American College of Obstetricians and Gynecologists, and American Society of Addiction Medicine. 2019. Available at: [smfm.org/publications/275-smfm-special-report-substance-use-disorders-in-pregnancy-clinical-ethical-and-research-imperatives-of-the-opioid-epidemic](https://smfm.org/publications/275-smfm-special-report-substance-use-disorders-in-pregnancy-clinical-ethical-and-research-imperatives-of-the-opioid-epidemic).

# URINE DRUG SCREENING – ORDERING AND CLINICAL INTERPRETATION

- Reasons for positive results:
  - Use of illicit drug or non-prescribed medication
  - False positive or cross-reactivity
  - Contamination of sample
- Reasons for unexpected negative results:
  - Has not used recently (uses “as needed” or ran out early)
  - Test doesn’t detect specific drug/medication (e.g., synthetic opioids)
  - High cutoff values
  - Fast metabolizer
  - Diversion
  - Laboratory error
  - Tampering with sample or dilution of urine

# EXPECTED METABOLITES IN UDS; EVALUATION OF URINE SAMPLE

|               |   |
|---------------|---|
| Morphine      | Morphine, Hydromorphone                   |
| Codeine       | Codeine, morphine, hydrocodone            |
| Hydrocodone   | Hydrocodone, hydromorphone                |
| Hydromorphone | Hydromorphone                             |
| Heroin        | 6-monoacetylmorphine (6-MAM),<br>Morphine |
| Oxycodone     | Oxycodone, oxymorphone                    |

Urine Creatinine: > 20 mg/dL  
Specific Gravity: > 1.002  
pH: 4.5 – 8.0  
Temperature: 32 - 38°C  
(89.6 – 100.4°F)  
Appearance: yellow, free of bubbles or abnormal smells

# POTENTIAL FALSE POSITIVES AND URINE DETECTION TIME

| Substance       | Potential Positives   |  | Length of Time Detected in Urine                 |
|-----------------|---|--|--|
| Amphetamines    | L-methamphetamine<br>Amantadine<br>Aripiprazole<br>Atomoxetine<br>Bupropion<br>Chlorpromazine<br>Desipramine<br>Ephedrine<br>Labetalol<br>Methylphenidate | MDMA<br>Phentermine<br>Promethazine<br>Pseudoephedrine<br>Phenylephrine<br>Ranitidine<br>Selegiline<br>Thioridazine<br>Trazodone | 48 hours   |
| Benzodiazepines | Oxaprozin   | Sertraline   | Short-acting – 3 days<br>Long-acting - > 30 days |
| Cocaine         | Coca leaf products  | Topical anesthetics containing cocaine   | 2 – 4 days                                       |
| Opiates/Opioids | Dextromethorphan<br>Quinolones/Fluoroquinolones   | Quinine<br>Rifampin  | 2 – 3 days                                       |

# POTENTIAL FALSE POSITIVES AND URINE DETECTION TIMES

| Substance              | Potential Positives  | Length of Time Detected in Urine                             |
|------------------------|--|--|
| Marijuana              | Baby wash products<br>Dronabinol<br>Efavirenz  | NSAIDs<br>Pantoprazole                                       |
|                        |  | Single use – 3 days<br>Chronic heavy use - > 30 days         |
| Methadone              | Diphenhydramine<br>Doxylamine  | Verapamil  |
| PCP                    | Dextromethorphan<br>Diphenhydramine<br>Doxylamine<br>Ibuprofen<br>Imipramine<br>Ketamine | Lamotrigine<br>MDPV<br>Meperidine<br>Tramadol<br>Venlafaxine |
| Synthetic Cannabinoids | Lamotrigine  |  |
|                        |  | 3 days   |

# SCREENING IS ONLY THE BEGINNING

- Once you obtain positive screens you need to do a diagnostic interview
- A proper interview can take 30-60 minutes
- Questions that involve diagnostic criteria for SUD as well as general psych conditions
- Only after such an interview can we properly diagnose someone with an OUD

# COMORBIDITY AND OPIOID USE DISORDER

- Comorbidity is the name of the game
- Many patients may be using opioids plus...
  - Methamphetamine
  - Benzodiazepines
  - Alcohol
  - Cannabis
- Most (98% in some studies) are also using tobacco

# CRITERIA

- Substance is often taken in larger amounts or over a longer period than was intended
- There is a persistent desire or unsuccessful effort to cut down or control use
- A great deal of time is spent in activities necessary to obtain, use or recover from its effects
- Craving or a strong desire or urge to use a specific substance
- Recurrent use resulting in failure to fulfill major role obligations at work, school or home
- Continued use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects
- Important social, occupational or recreational activities are given up or reduced because of use
- Recurrent use in situations in which it is physically hazardous
- Use continues despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have be caused or exacerbated by the substance

American Psychiatric Association. Diagnostic and statistical manual of mental disorders: DSM-5.TM 5th ed. Arlington, VA: American Psychiatric Publishing, Inc.

# CRITERIA

- Tolerance, as defined by either of the following:
  - a need for markedly increased amounts of the substance to achieve intoxication or desired effect
  - markedly diminished effect with continued use of the same amount of the substance
- Withdrawal, as manifested by either of the following:
  - the characteristic withdrawal syndrome or the substance (can vary by class of drug)
  - the same (or a closely related) substance is taken to relieve or avoid withdrawal symptoms

American Psychiatric Association. Diagnostic and statistical manual of mental disorders: DSM-5.TM 5th ed. Arlington, VA: American Psychiatric Publishing, Inc.

# PSYCHIATRIC COMORBIDITIES

- Range of rates of pregnant women with OUD and a psychiatric co-morbidity was broad 21%-72%
- Mood Disorders were most commonly reported with rangers of 28—58% of samples
- Anxiety Disorders next most common with rages from 40—42% of samples
- PTSD diagnosis ranged from 3%-26%
  - These women more likely to have a second Axis I (50% vs. 27%)
- Personality disorders - 23% in one study (Moylan)
- Treatment of OUD/SUD can actually increase symptoms of underlying psychiatric illnesses