



# Perinatal Substance Use Disorders: Emerging Trends in Substance Use Treatment for Perinatal Women

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**Leena Mittal, MD, FACLP**  
**Director, Division of Women's Mental Health,**  
**Brigham and Women's Hospital**  
**Associate Medical Director, MCPAP for Moms**

# Disclosure: Leena Mittal, MD

<b>Company</b>	<b>Sage Therapeutics</b>	<b>MCPAP for Moms/MA DMH</b>
Employment		I
Management		
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Consulting	I	
Speaking & Teaching		
Board, Panel or Committee Membership		
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D – Relationship is considered directly relevant to the presentation

I – Relationship is NOT considered directly relevant to the presentation

# Substance use during pregnancy poses risk to the woman, fetus, and family

Exposure to  
Teratogens and  
poor nutrition

Human  
Trafficking

Difficulties  
with labor  
management

Overdose



Limited/delayed  
engagement in  
prenatal and  
SUD care

Placental  
insufficiency

Withdrawal

Infectious risk  
(eg HIV, HCV)

**Preventable cause of maternal & infant mortality**

Keegan J et al. J Addictive Diseases. 2010. 29 (2) 175-91

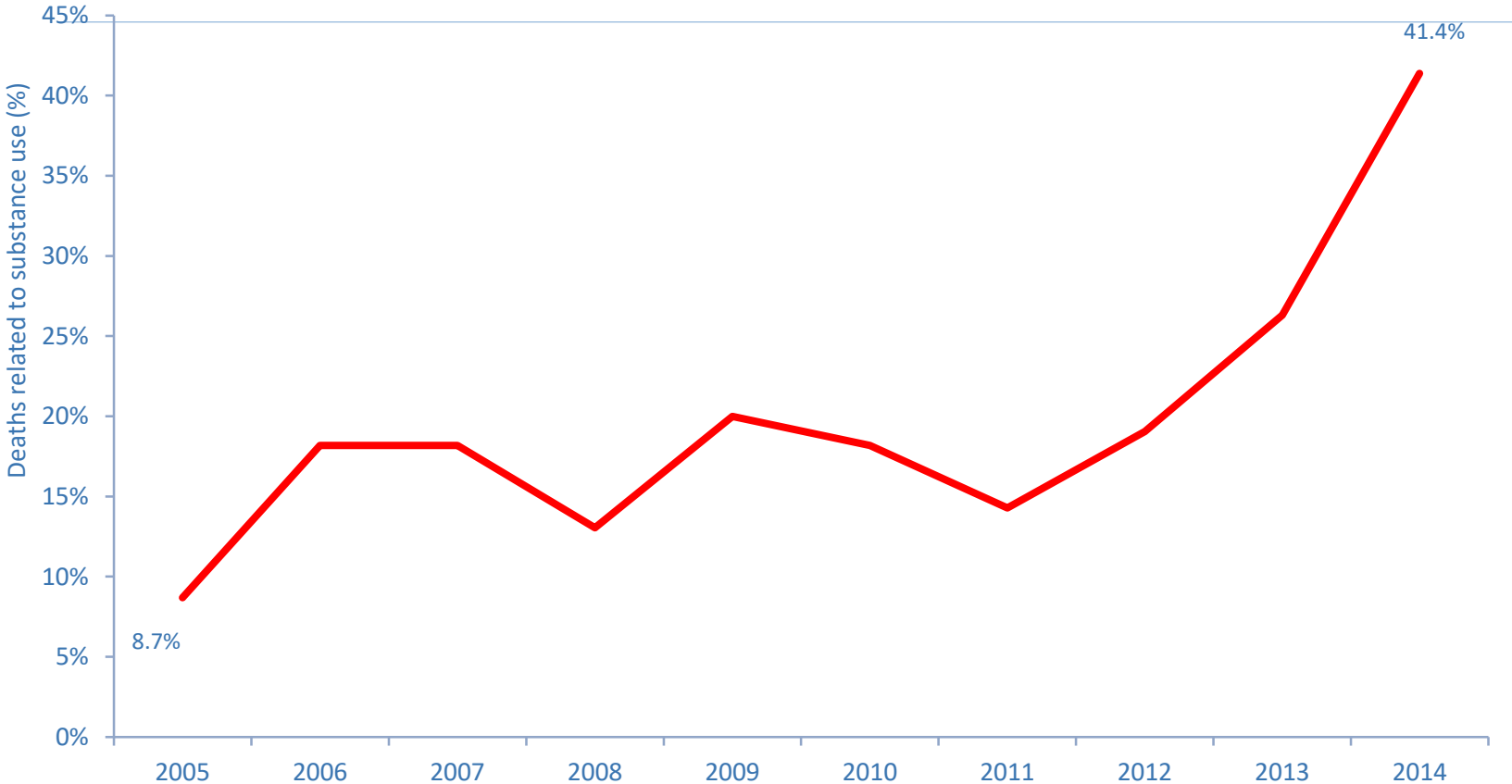
# Deaths from suicide and overdose exceed other causes

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## **211 total maternal deaths:**

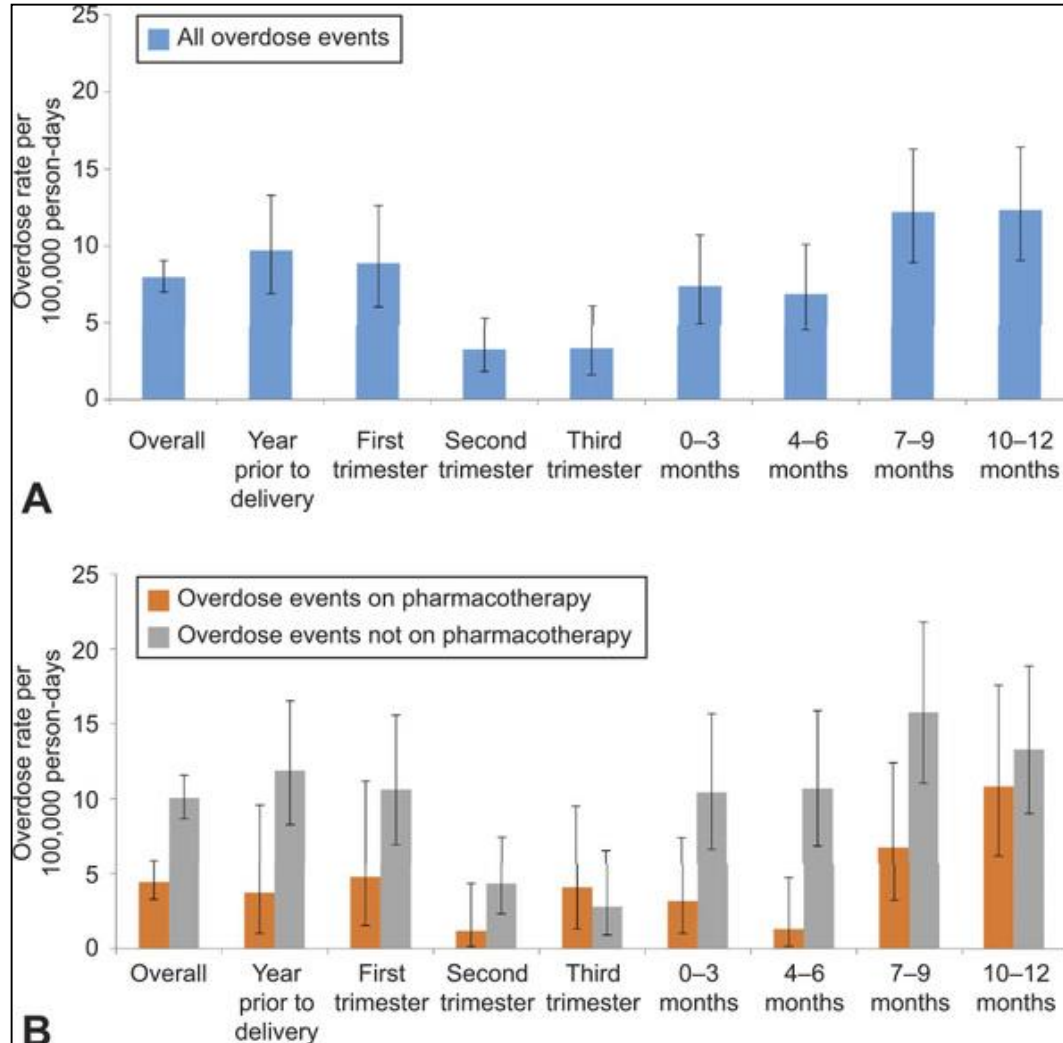
- 90% in post-partum period
- **27% PPH + PE combined**
- **30%** were classified as maternal death by self-harm (accidental overdose or suicide)
  - **31 overdose**
  - 28 suicide (5= intentional overdose)
- **48% of autopsy toxicology were + opioids**
  - **42% of these were prescription opioids**
  - 44% had 3 or more drugs detected

# Pregnancy associated deaths related to substance use are on the rise



Substance Use among pregnancy associated deaths 2005-14, MA DPH Data brief <https://www.mass.gov/service-details/maternal-mortality-and-morbidity-initiative>

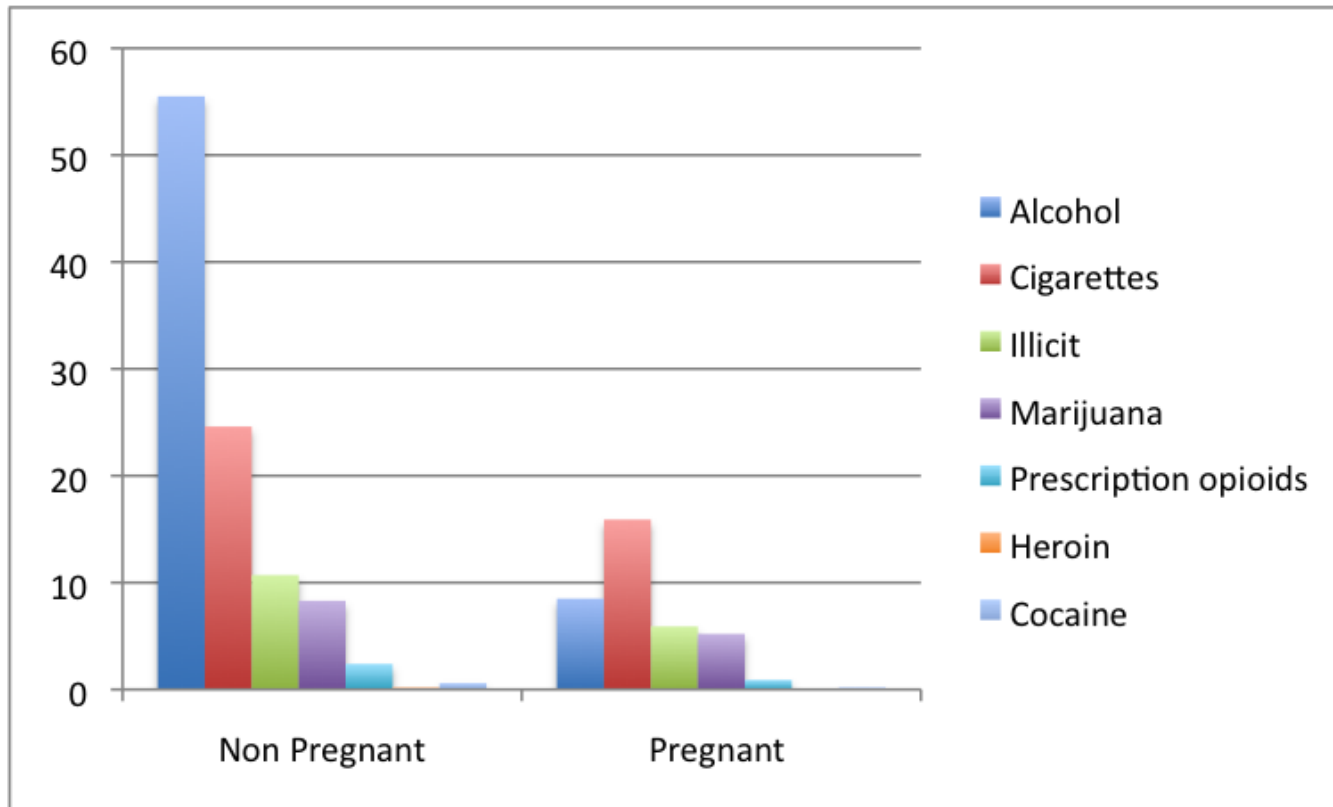
# Medication treatment for OUD decreases maternal mortality



**Mortality is greatest after delivery**

**Methadone and Buprenorphine save lives**

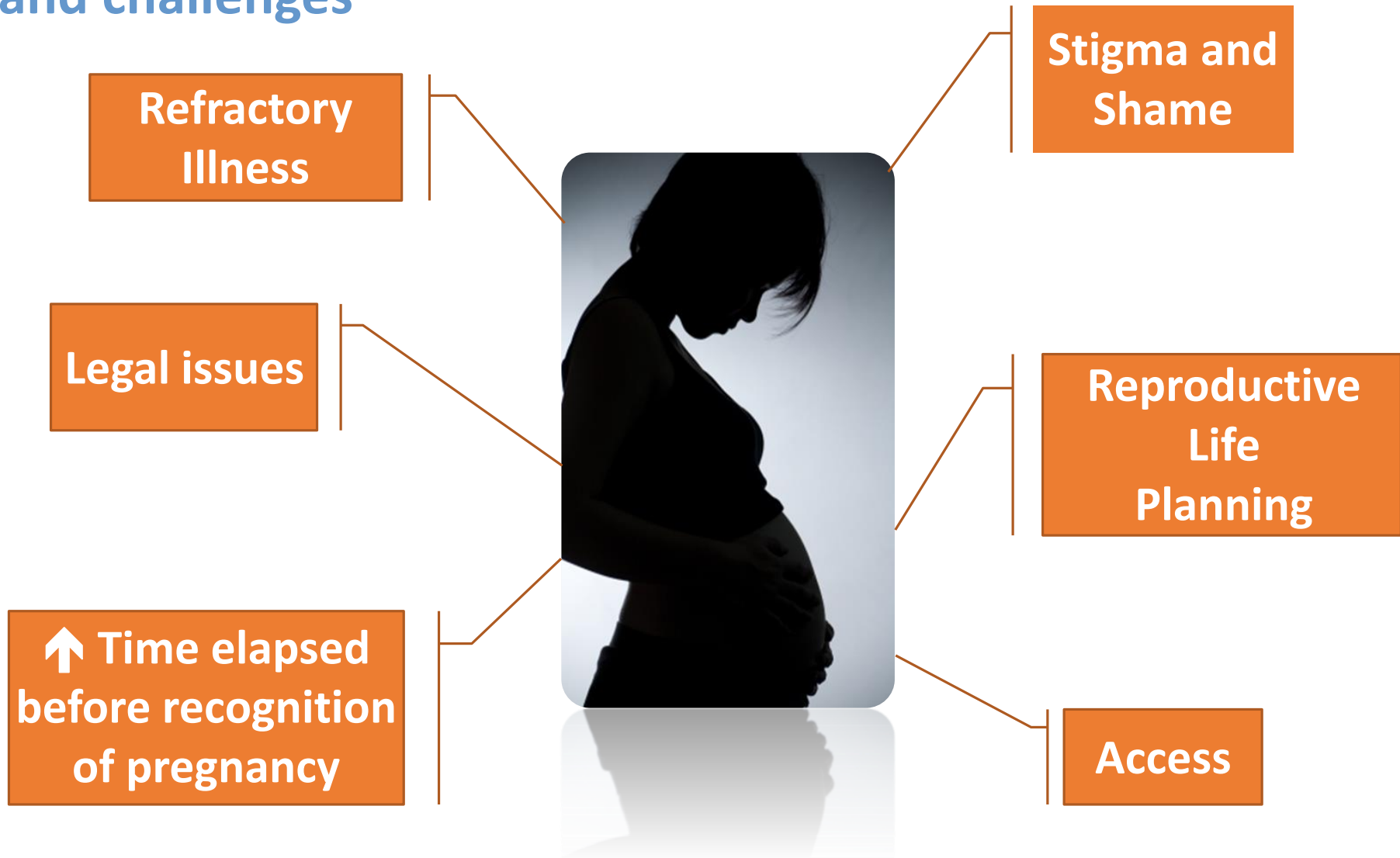
# Pregnancy is a window of opportunity during which women stop using substances



Drug use in the past month, females 15-44

Havens JR et al. Drug and Alcohol Dependence 99 (2009) 89–95; NSDUH 2012 National Survey on Drug Use and Health (2012); Harrison et al Maternal Child Health J (2009) 13:386–394

# Substance use during pregnancy opportunities and challenges





# Women with substance use disorders can present throughout pregnancy and the postpartum period



# Toxicologic Screens have limits and are only part of an assessment of substance use

**Maternal vs Neonatal testing**

**Clarify the characteristics of your institution's test**



# Universal screening for substance use in pregnancy is recommended by many organizations



# ACOG

The American College of  
Obstetricians and Gynecologists



CENTERS FOR DISEASE  
CONTROL AND PREVENTION

American Academy  
of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN™



AMERICAN MEDICAL  
ASSOCIATION

## MCPAP for Moms recommends a modified version of the TAPS for universal screening in OB settings

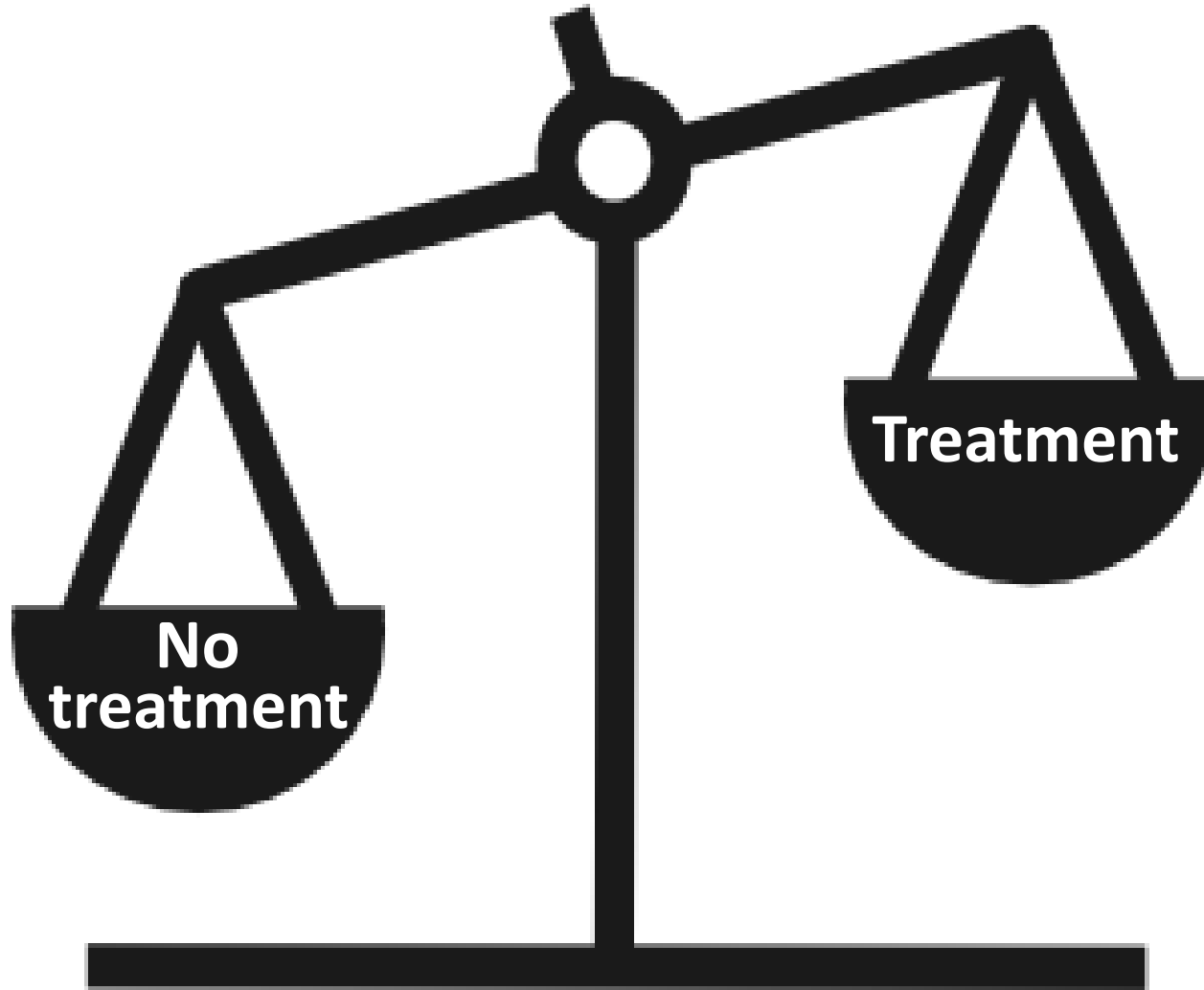
Ask the woman, “In the past year, how often have you used:”

<b>Alcohol (4 or more drinks a day)</b>	Never	Once or twice	Monthly	Weekly	Daily
<b>Tobacco Products</b>	Never	Once or twice	Monthly	Weekly	Daily
<b>Prescription Drugs for Non-Medical Reasons, (including Marijuana) Prescriptions Drugs used not as prescribed or any marijuana</b>	Never	Once or twice	Monthly	Weekly	Daily
<b>Illegal Drugs</b>	Never	Once or twice	Monthly	Weekly	Daily

Any response other than never is a **positive screen**, and should prompt follow up questions to further characterize which substance(s), amount, time course.

McNeely et al. (2016). Annals of Internal Medicine

The risk of untreated symptoms must be balanced against the risk of treatment



**Women with any history of substance use should be counseled as early as possible about possible social service reporting after delivery**



# Pregnant and Parenting women with SUD benefit from the development of a team of providers

Please work with patients to develop a Plan of Safe Care

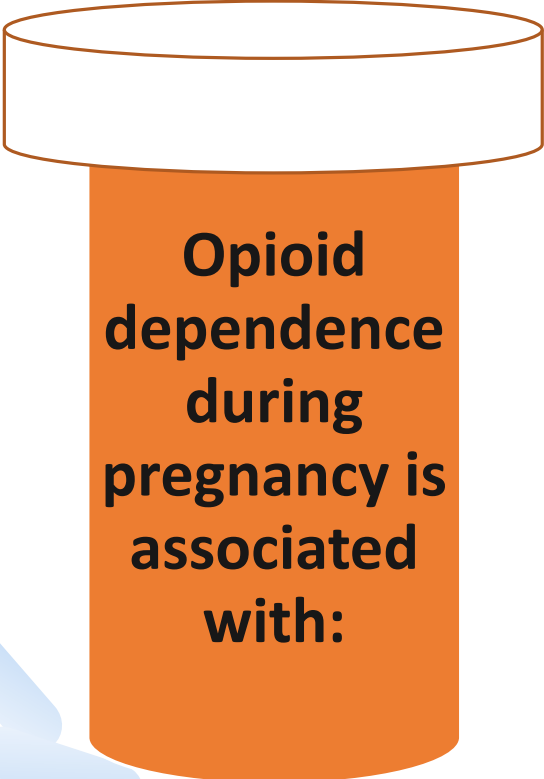
<http://www.healthrecovery.org/safecare>







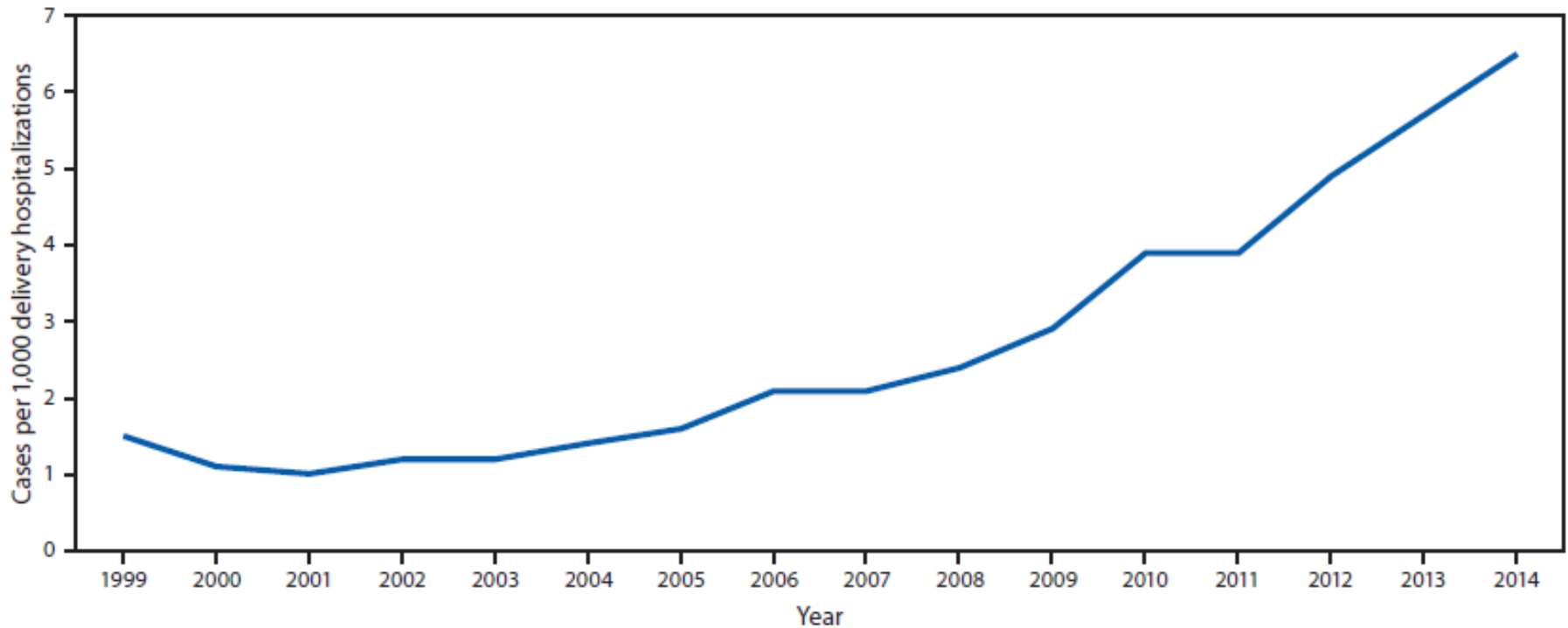
# Opioids are not teratogenic, though opioid use disorder carries risk



- Intrauterine fetal demise and stillbirth**
- Intrauterine growth restriction**
- Placental abruption**
- Preterm labor**
- Postpartum hemorrhage**
- Reduced cognitive function in exposed children**

# Rates of opioid use in pregnancy in the United States are increasing

FIGURE 1. National prevalence of opioid use disorder per 1,000 delivery hospitalizations\* — National Inpatient Sample (NIS),<sup>†</sup> Healthcare Cost and Utilization Project (HCUP), United States, 1999–2014



# Opioid use disorders in pregnancy are treated pharmacologically with methadone and buprenorphine



**No FDA approved treatment**

**Mainstays of treatment:**

**Methadone**

**Buprenorphine (single or **combination\***)**

**Naltrexone (emerging)**

**High risk of relapse after discontinuation of opioids**

Rementeria et al. *AJOG*. 1973; 2. Zuspan *AJOG*.. 3. Fricker *Arch of Pedi & Adol Med*. 1978 4 Luty *J of Sub Abuse Treat*. 2003 5. Towers et al *AJOG* 2015 6 Jones et al. *The American Journal on Addictions*. 2008

# Microdosing of buprenorphine may allow for more rapid engagement in a high risk population

## Micro dosing: Bernese Method

Buprenorphine dosing and use of street heroin in case 1

Day	Buprenorphine (sl)	Street heroin (sniffed)
1	0.2 mg	2.5 g
2	0.2 mg	2 g
3	0.8+2 mg	0.5 g
4	2+2.5 mg	1.5 g
5	2.5+2.5 mg	0.5 g
6	2.5+4 mg	0
7	4+4 mg	0
8	4+4 mg	0
9	8+4 mg	0

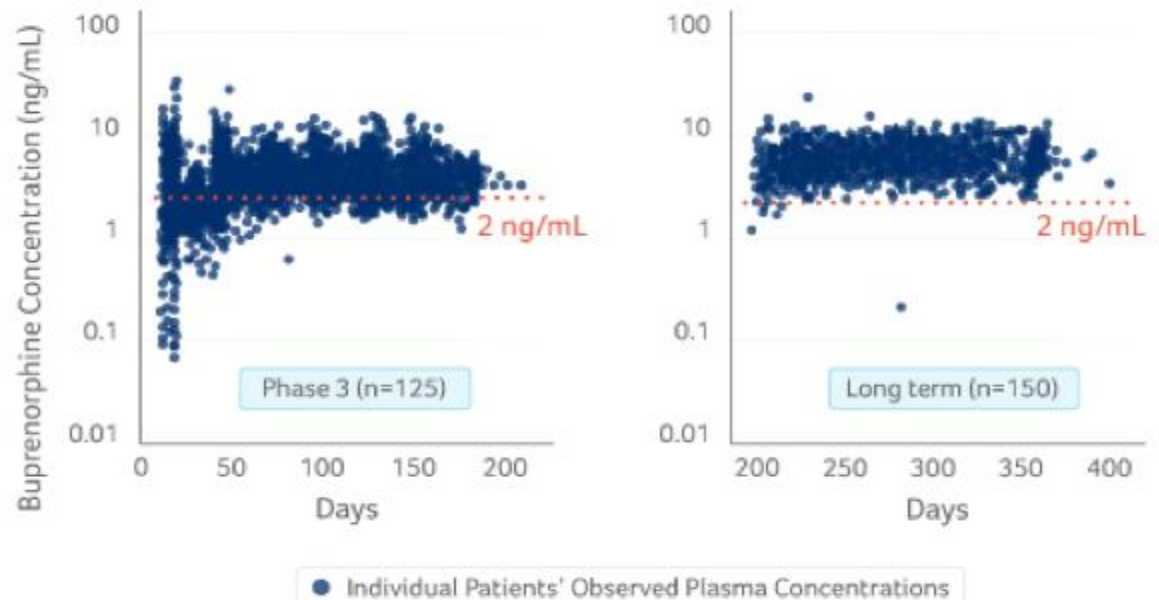
- Overlapping induction of buprenorphine with full M opioid antagonist feasible

# Depot formulations of buprenorphine have not been studied in pregnancy though may have an important role in high risk populations

Long acting buprenorphine injection

## Sublocade

- Buprenorphine extended release monthly injection
- First two doses: 300 mg IM monthly
- Maintenance: 100 mg IM monthly



# Data regarding the use of naltrexone during is emerging

**Limited human data**

**If the patient is stable on naltrexone may be reasonable to continue**

**Available as daily oral treatment or monthly injectable**



# Naloxone should be prescribed to perinatal women receiving opioids or at risk for overdose



**Opioid overdose is a leading cause of death in the US**

**Suicide and OD leading causes of maternal mortality**





# Shifting from NAS to Neonatal Opioid Withdrawal Syndrome (NOWS)

**More  
descriptive and  
specific**

**NAS and the  
other NAS**



# Non pharmacologic treatment for NOWS is first line – Eat Sleep Console (ESC) decreases time in the hospital and enhances mother infant relationships



**30%**

decrease in the development of NAS

**50%**

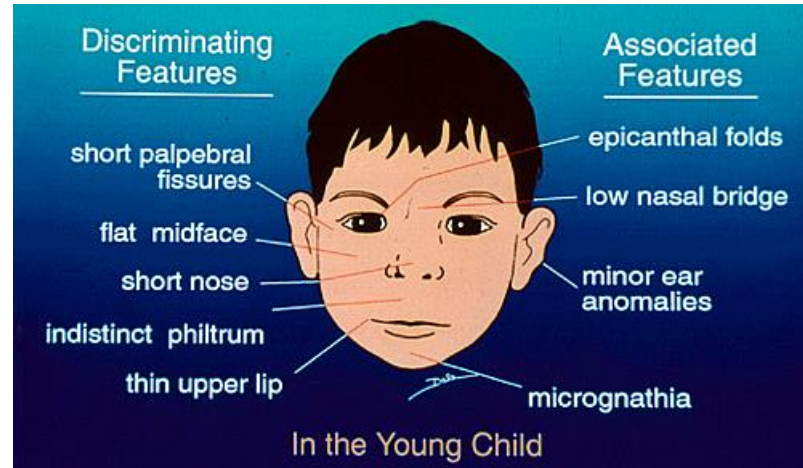
decrease in neonatal hospital stay

**Breastfeeding should be encouraged for women on medication for addiction treatment (MAT) if SUD stable though criteria vary**

Pritham UA et al. *J Obstet Gynecol Neonatal Nurs.* 2012., Welle-Strand GK et al. *Acta Paediatr.* 2013., Wachman EM et al. *JAMA.* 2013., Abdel-Latif ME et al. *Pediatrics;* Grossman *Pediatrics* 2017



# Alcohol Use during Pregnancy is common and is associated with obstetric and neurodevelopmental consequences



**Rates of use rising  
in pregnancy  
4% binged past 30d  
12 % any ETOH**

**FASD are more  
prevalent 1.5-  
5% school aged  
pop**

**No safe amount  
defined in  
pregnancy**

Streissguth A *Effects of Alcohol in pregnancy* Teratology Primer-2nd Edition (2010); CDC MMWR 2019

# Medication treatment for alcohol use disorder is dependent on the presenting symptom

## Treatment for cravings

- Naltrexone has emerging data in pregnancy
- Little to no data
  - Disulfiram
  - Acamprosate
  - Topiramate

## Treatment for withdrawal

- Benzodiazepine taper
- Lorazepam is preferred
- Monitor vital signs
- Collaborate with OB
  - Complicates labor and eval for PET



# Cannabis is the most commonly used illicit substance in pregnancy in the United States

**48-60%** of users continue during pregnancy

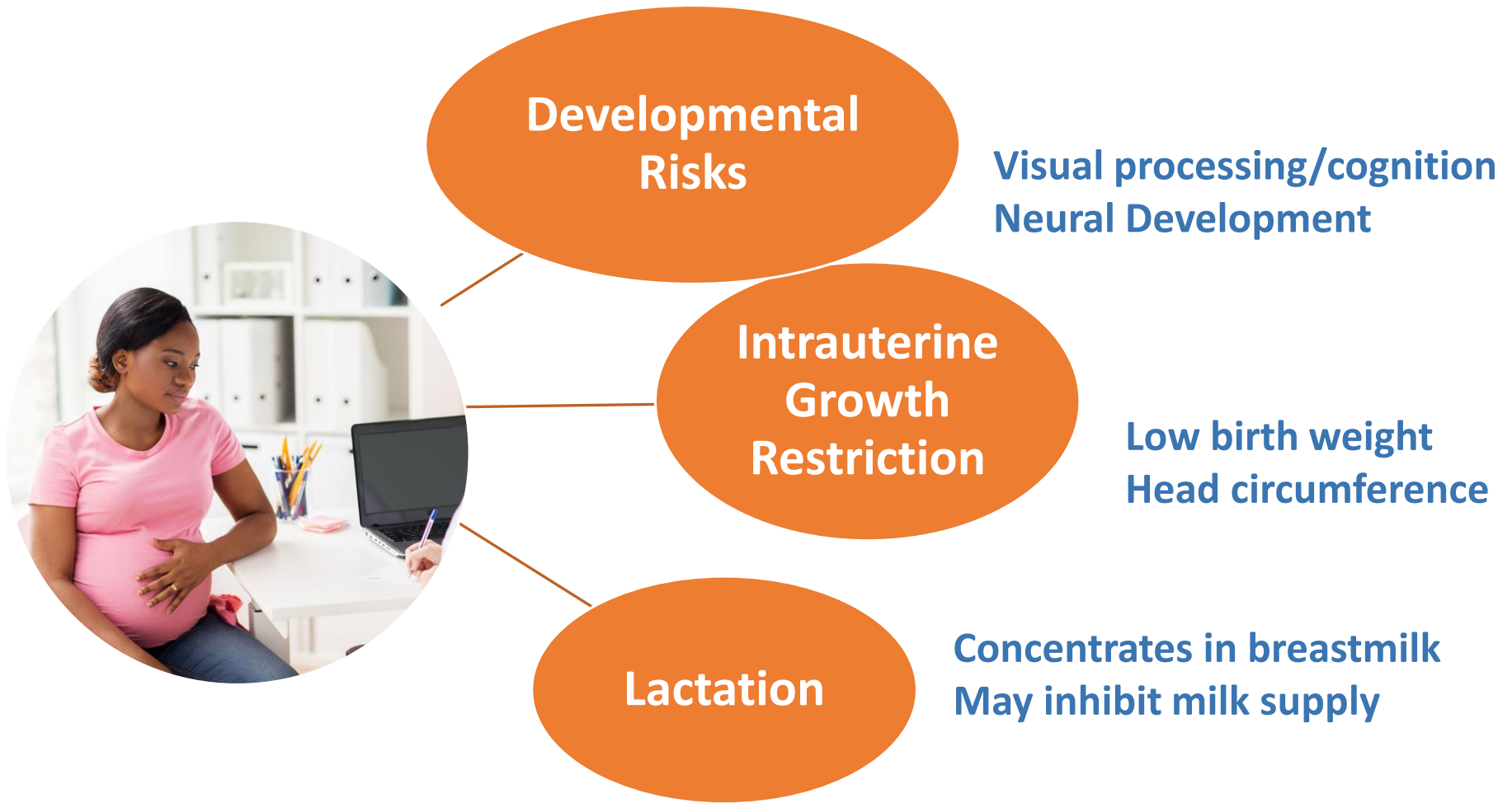
There are no human data available for CBD use in pregnancy

THC in marijuana  
**↑ 25x**  
since 1970s



NSDUH 2018; Ryan et al Pediatrics 2018

# The US Surgeon General, FDA, ACOG and AAP advise women to abstain from cannabis use in pregnancy and lactation



Marijuana use during pregnancy and lactation. Committee Opinion No. 637. American College of Obstetricians and Gynecologists. Obstet Gynecol 2015;126:234–8; Marroun et al (2009) JAACAP; Jacques Journal of Perinatology (2014)





# Methamphetamine use is increasing in Massachusetts including in pregnant women

## RISKS

Agitation, psychosis, hypertension, no pharmacological tx, Contingency Mgmt

### Vasoconstriction

Spontaneous abortion

Placental abruption

Placental insufficiency

### Effects growth and neurodevelopment

Neurotoxic in animal studies

Increased risk for neonatal ICU

Risk ↑  
anxiety/depression/  
ADHD

**Stimulants carry some risk so therapeutic use should be assessed based on risks of untreated symptoms**



**VS**



**Therapeutic use**

**Abuse**

# Synthetic Cannabinoids are increasingly available and carry significant risks

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## Examples:

**K2**

**Spice**

**Bonsai**

## Effects in pregnancy:

Eclampsia like syndrome in once report

Fetal loss

Neonatal loss –

ocular defects,

neonatal

abstinence

syndrome defined

# Cathinones are less common though carry risks in pregnancy and postpartum

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**Examples:**  
**Khat –**  
**amphetamine**  
**like structure**  
**and effect**

**Maternal Effects in pregnancy:**

Confusion  
agitation  
stillbirth  
mHTN  
PTL

Neonatal  
withdrawal

**Plant based are easily accessible and increasingly perceived to be natural with underappreciated risk**

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**Kratom –  
can cause  
intoxication  
and  
tolerance/  
withdrawal**

**Animal Studies:  
neural tube  
defects**

**Neonatal  
withdrawal**

# Nonmedical use of psychoactive medications is also increasingly common

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**Examples:**  
**Quetiapine**  
**Promethazine**  
**Dextromethorphan**  
**Ketamine**

**Effects in pregnancy:**

**Ketamine – cardiac and neuronal development anomaly in animal**

**Neonatal hypotonia**

**Neonatal withdrawal**

Massachusetts Child Psychiatry Access Program

# MCPAP

For Moms



**Education**

**855-Mom-MCPAP**

**Resource and Referral**



# Who can call MCPAP for Moms?

**Primary care providers**

**Obstetric providers/  
Midwives**

**Pediatric providers**

**Family  
Medicine**

**Psychiatric providers**

**SUD care providers**



# Educational materials focused on perinatal SUD available on our website

### SUD1

#### Screening and Brief Intervention for Substance Use in Pregnancy

All women should be screened for substance use at the first prenatal visit using a screening tool (e.g., the Modified NIDA Quick Screen (Modified NIDA) (see SUD2)).

If positive screen on Modified NIDA, had aberrant urine test, or clinical suspicion (see SUD2), woman is at risk

If negative screen, then woman is lower risk

#### Brief Assessment

- "What substances have you been using in the past 3 months? During this pregnancy?"
- "How much of each substance have you been using at a time?"
- "How frequently are you using them?"
- "How does this affect your life (job, home life, self-care, health, emotions)?"
- "Are you being treated for an SUD? Have you had prior treatment?"

#### Educate

- Provide brief education about recommendations to not use alcohol, tobacco, cannabis, illicit opioids, or other drugs.
- Encourage the patient to seek help in the future, as needed.

Identify into risk group

#### High Risk

Current: Opioid use or binge pattern/heavy use of any substance(s) in history of SUD

#### Moderate Risk

Current: Low-level use of non-opioid substances, engaged in MAT, or other SUD treatment. History: High use in past year or past treatment for SUD

#### Low Risk

Current: No use. History: Low-level use prior to learning of pregnancy

Is the patient currently missing any substance?

#### Brief Intervention

- "How ready are you to quit now?" Ask the patient to rate this motivation on a scale from 1-10.
- "How confident are you that you can stop?" Ask the patient to rate their confidence on a scale from 1-10.
- "Why did you rate that way?"
- "How can we increase this score?"

#### Brief Intervention

- "How ready are you to quit now?" Ask the patient to rate this motivation on a scale from 1-10.
- "How confident are you that you can stop?" Ask the patient to rate their confidence on a scale from 1-10.
- "Why did you rate that way?"
- "How can we increase this score?"

#### Monitor

- Repeat Modified NIDA and Brief Assessment at least once per trimester.
- Urine testing at least once per trimester.
- Check MeaUPAT at each visit.
- Identify who will coordinate Plan of Safe Care (see SUD3)
- Call MOPAP for Moms with questions.

Is there an active need for a referral to treatment?

#### Monitor and Refer to Treatment

- Consent on MAT in pregnancy (see SUD5) and non-pharmacological treatment (see SUD3)
- Formulate a monitoring plan including:
  - Repeat Modified NIDA and Brief Assessment at least once per trimester
  - Urine testing at least once per trimester
  - Check MeaUPAT at each visit
- If already in treatment, contact SUD provider who will coordinate Plan of Safe Care (see SUD3)
- Call MOPAP for Moms with questions

#### For all screens with any opioid use or on MAT for OUD, discuss:

- Overdose prevention (see SUD6)
- MAT during pregnancy/childbirth (see SUD6)
- Neonatal Opioid Withdrawal Syndrome (NOWS): a.k.a. Neonatal Abstinence Syndrome (NAS)
- Pain management (see SUD5)
- Plan of Safe Care and SCD reporting (see SUD5)

Call MOPAP for Moms at: 855-MOM-MOPAP (855-666-6272) [www.mopapformoms.org](http://www.mopapformoms.org)

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### SUD2

#### Modified NIDA Quick Screen (Modified NIDA)

Identify into risk group

High Risk:  Daily,  Weekly,  Monthly

Moderate Risk:  Daily,  Weekly,  Monthly

Low Risk:  Daily,  Weekly,  Monthly

#### Is there an active need for a referral to treatment?

Yes:  Yes,  No

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### SUD3

#### Plan of Safe Care (PSC)

Identify who will coordinate Plan of Safe Care (see SUD3)

Call MOPAP for Moms with questions

For all screens with any opioid use or on MAT for OUD, discuss:

- Overdose prevention (see SUD6)
- MAT during pregnancy/childbirth (see SUD6)
- Neonatal Opioid Withdrawal Syndrome (NOWS): a.k.a. Neonatal Abstinence Syndrome (NAS)
- Pain management (see SUD5)
- Plan of Safe Care and SCD reporting (see SUD5)

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### SUD4

#### Disorder (OUD)

Identify who will coordinate Plan of Safe Care (see SUD3)

Call MOPAP for Moms with questions

For all screens with any opioid use or on MAT for OUD, discuss:

- Overdose prevention (see SUD6)
- MAT during pregnancy/childbirth (see SUD6)
- Neonatal Opioid Withdrawal Syndrome (NOWS): a.k.a. Neonatal Abstinence Syndrome (NAS)
- Pain management (see SUD5)
- Plan of Safe Care and SCD reporting (see SUD5)

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### SUD5

#### Recovery Position

Advise the person not to place the victim in an ice or water bath, induce vomiting, or try to wake by slapping/shaking.

The Massachusetts Good Samaritan Law protects people from prosecution for drug possession if seeking help for an overdose.

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### SUD7

#### Management during the Perinatal Period

Withdrawal	Ongoing Management
diarrhea, abdominal muscle lacticulosis, neck/neckness, flashes, tachycardia, and	Pharmacologic treatment is the first line to decrease relapse risk. <b>Methadone</b> can only be obtained through a federally licensed clinic. <b>Buprenorphine (Suboxone, Subutex)</b> must be prescribed by a waived provider.
relaxation to decrease risk for regarding the negative impact of	Psychosocial treatments like peer supports, counseling, and sober living should be offered concurrently.
increased blood pressure, stress, nausea, hallucinations,	<b>Naloxone</b> : Emerging data suggests low risk of adverse birth outcomes. <b>Diazepam (Anstaban)</b> : Not recommended for use in pregnancy due to risk of fetal malformation and severe reaction with ETOH use.
taper: Lorazepam (Ativan) is preferred. If the patient is using taper with same medication being tapered, the impact of withdrawal management is in elective status, gestational	<b>Acamprosate (Campral)</b> : No human pregnancy data. Psychosocial treatments such as peer supports, counseling, or sober living should be offered concurrently.
increased blood pressure, stress, nausea, hallucinations,	The primary goal is to manage underlying symptoms and psychiatric comorbidity.
taper: Lorazepam (Ativan) is preferred. If the patient is using taper with the same medication being tapered, the impact of withdrawal management is in elective status, gestational	Psychosocial treatments such as peer supports, counseling, or sober living should be offered concurrently.

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Can refer moms to [www.mcpapformoms.org](http://www.mcpapformoms.org)

The screenshot shows the homepage of the Massachusetts Child Psychiatry Access Program (MCPAP) For Moms. At the top left is the logo with the text "Massachusetts Child Psychiatry Access Program" above "MCPAP For Moms". To the right, it lists the contact number for providers: "855-Mom-MCPAP (855-666-6272)". There is a search bar with the text "Google Custom Search" and a magnifying glass icon. Below the logo and contact information is the tagline "Promoting Maternal Mental Health During and After Pregnancy". A navigation bar contains the following links: "About MCPAP for Moms", "How We Help Providers", "Toolkits and Resources", "Our Team", and "For Mothers and Families". The main visual is a photograph of a woman kissing a baby on the cheek. At the bottom left, there is a section titled "Click Below For Video" with two small video thumbnails. At the bottom right, a blue banner contains the text: "MCPAP for Moms promotes maternal and child health by building the capacity of providers serving pregnant and postpartum women and their children."

In summary, our aim is to promote maternal and child health by building the capacity of front line providers to address maternal mental health and substance use needs



# Acknowledgements

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### Leadership

#### **Nancy Byatt, DO, MS, MBA, FACLP**

Medical Director,  
UMass Memorial Medical Center /  
UMass Medical School

#### **Leena Mittal, MD, FACLP**

Assoc. Medical Director,  
Brigham and Women's Hospital /  
Harvard Medical School

### Beacon Health Options Team

John Straus, MD

Beth McGinn LICSW

Sarah Rosadini

### Consulting Psychiatrists:

#### **Margo Nathan, MD**

Brigham and Women's Hospital /  
Harvard Medical School

#### **Wendy Marsh, MD, MSc**

UMass Memorial Medical Center /  
UMass Medical School

#### **Valerie Sharpe, MD**

Baystate Medical Center

### RRS team:

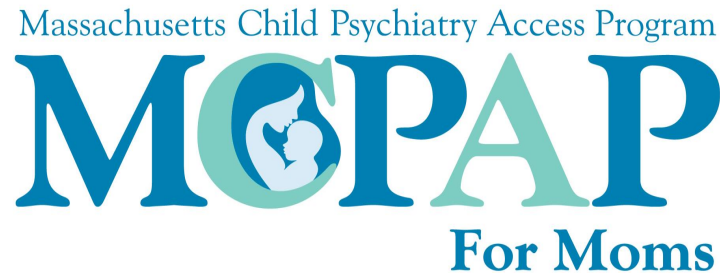
Liz Spinosa – Umass

Asha Janay – BWH

### SUD Project Manager:

Gina Kelleher -- BWH

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**[www.mcpapformoms.org](http://www.mcpapformoms.org)**



**Thank you!**

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