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

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Disclosure: Leena Mittal, MD

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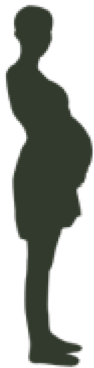
Substance use during pregnancy poses risk to the woman, fetus, and family

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

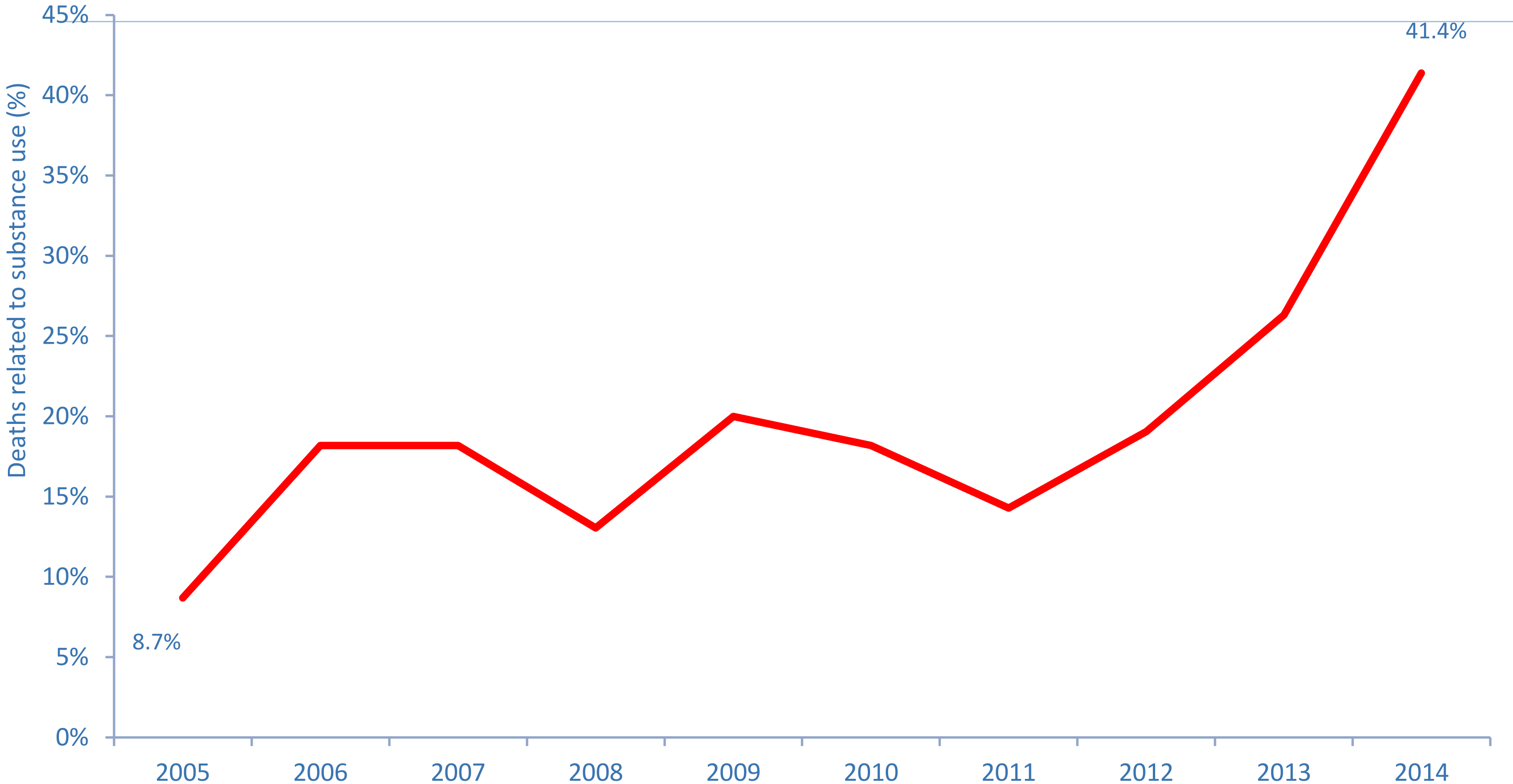
Deaths from suicide and overdose exceed other causes

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

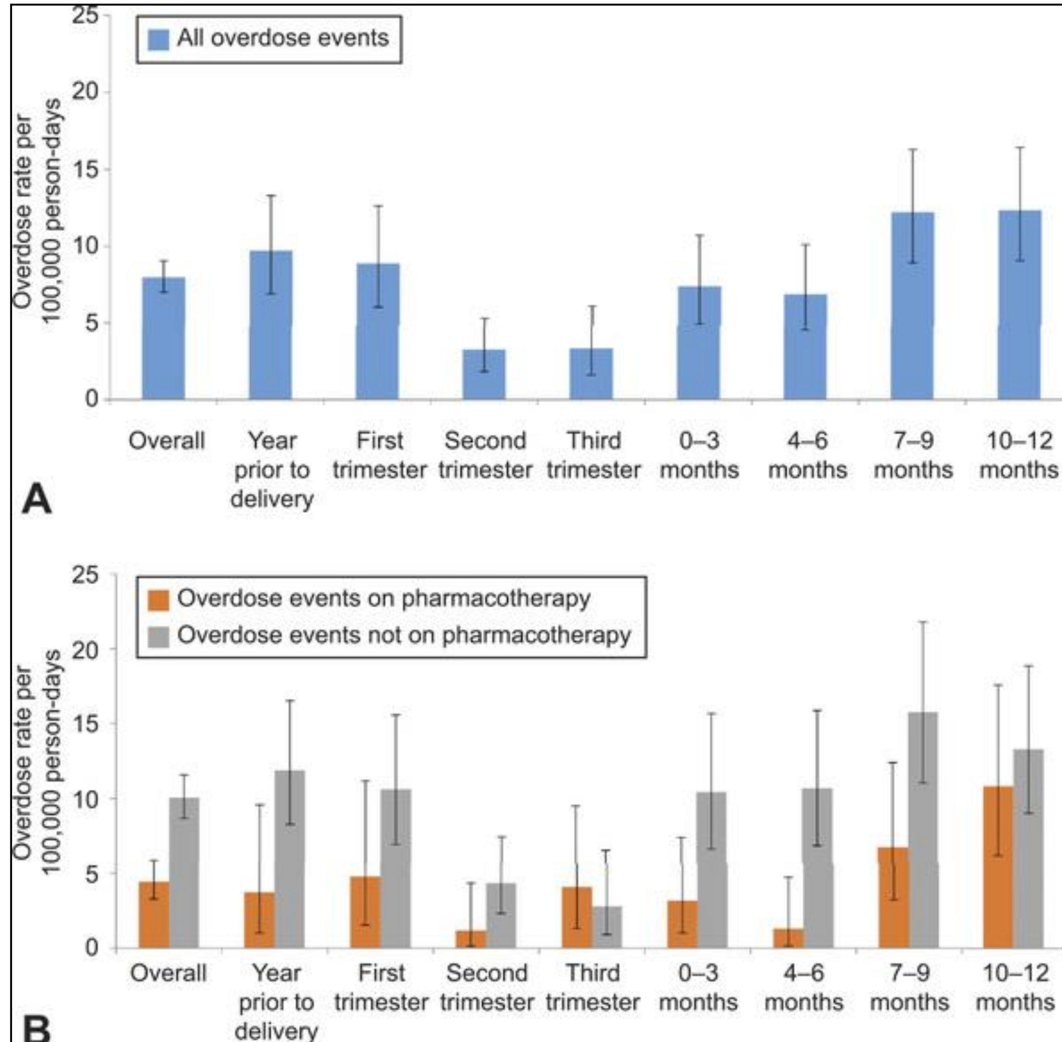
Metz et al., (2004-2012) *Maternal Deaths from Suicide and Overdose in Colorado*

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

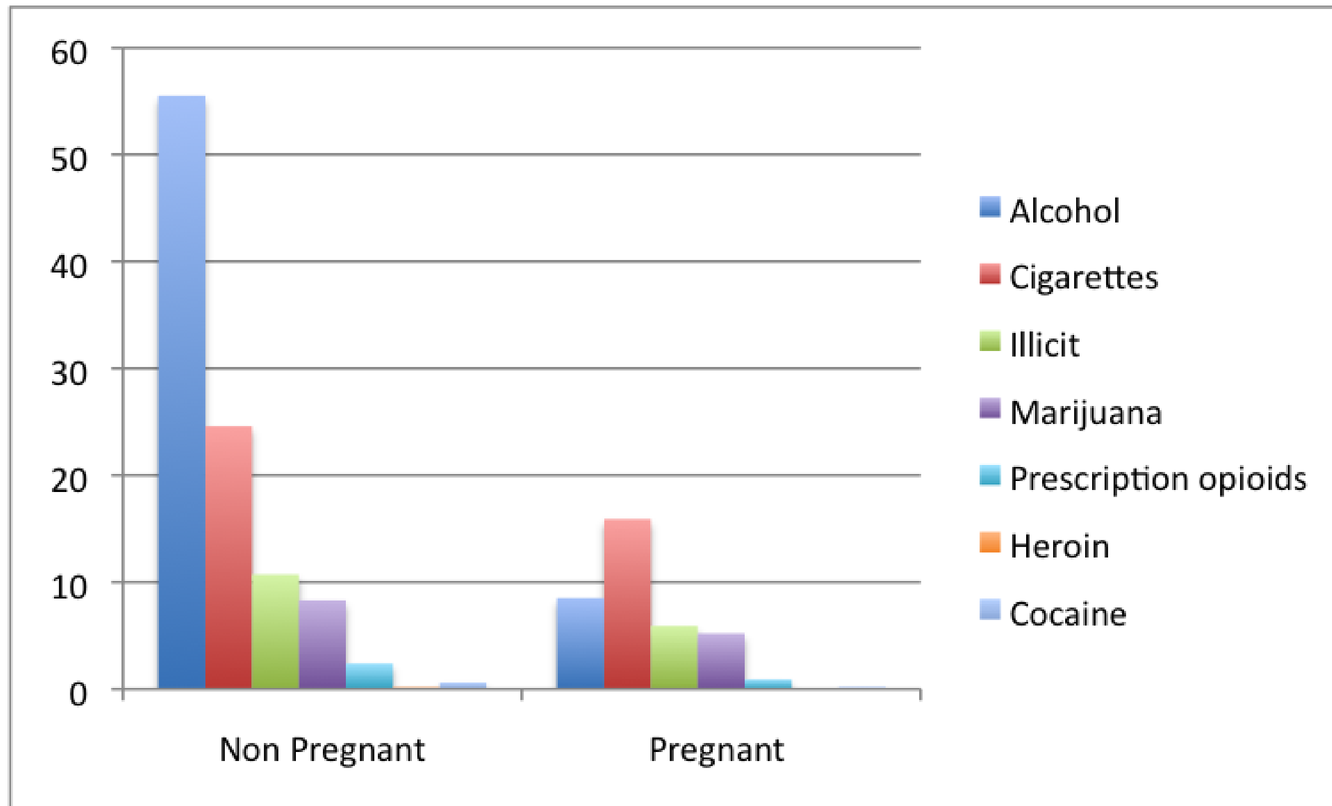


Mortality is greatest after delivery

Methadone and Buprenorphine save lives

D Schiff et al 2018 *Ob Gyn*

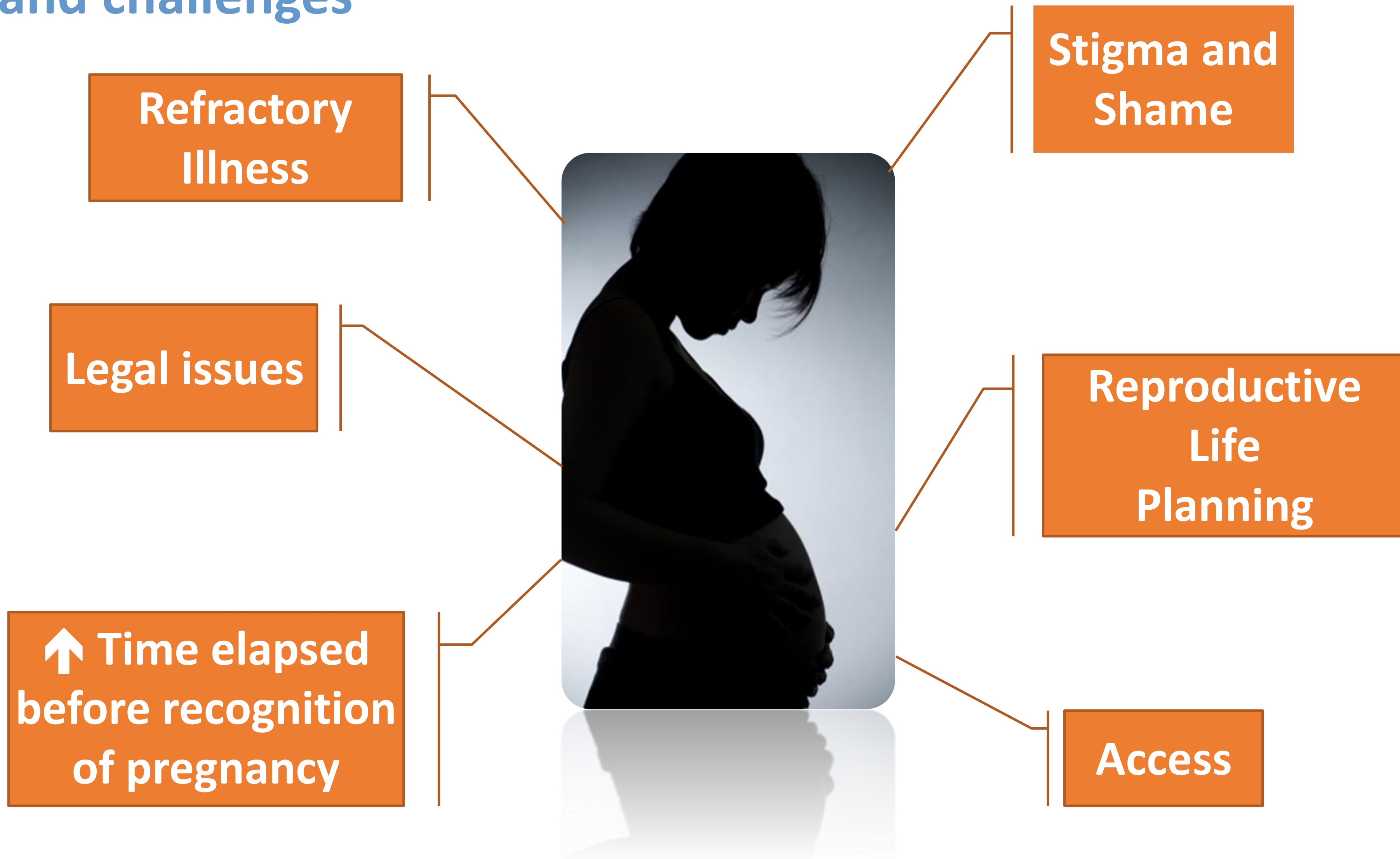
Pregnancy is a window of opportunity during which women stop using substances



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

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

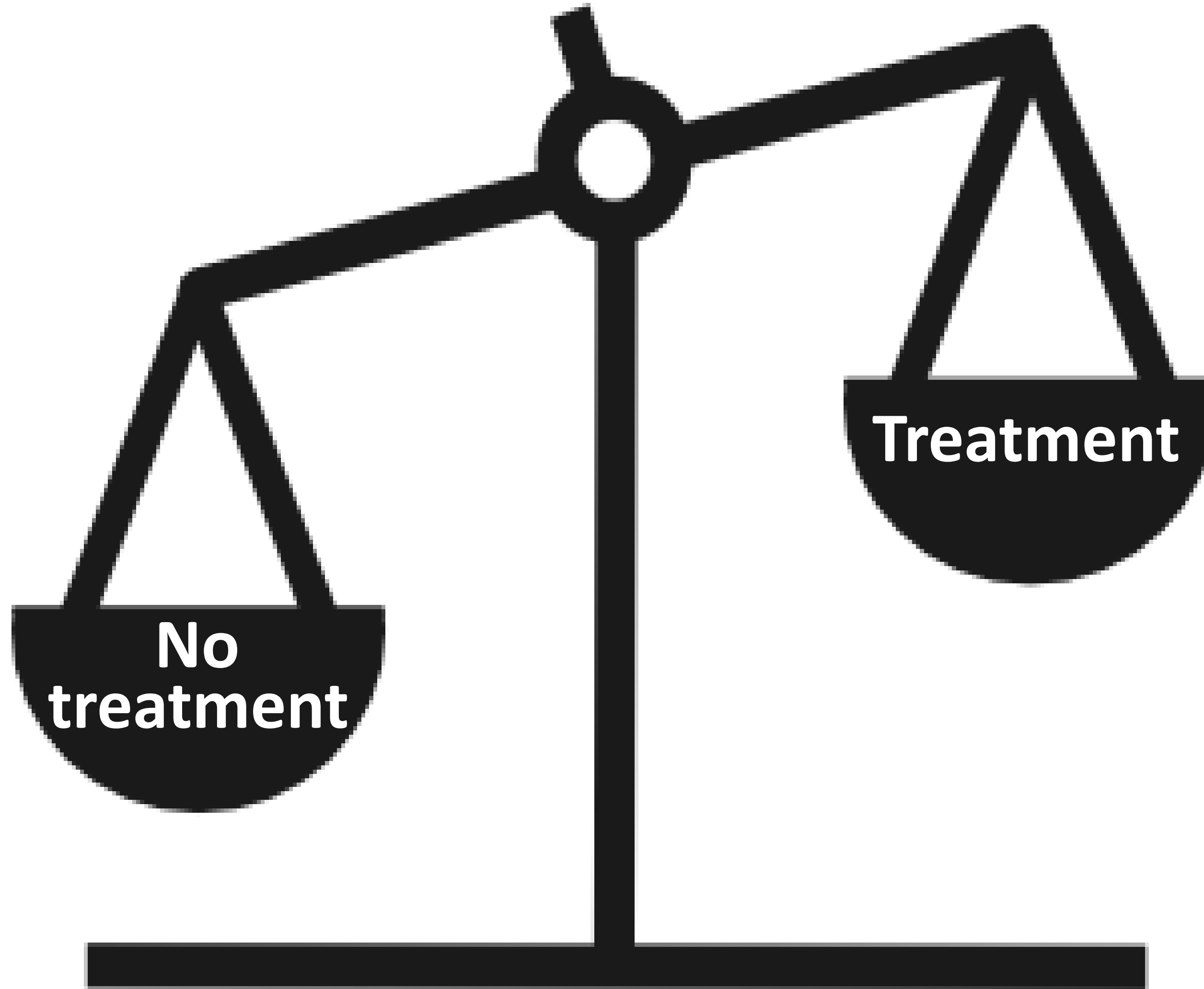
Ask the woman, “In the past year, how often have you used:”

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



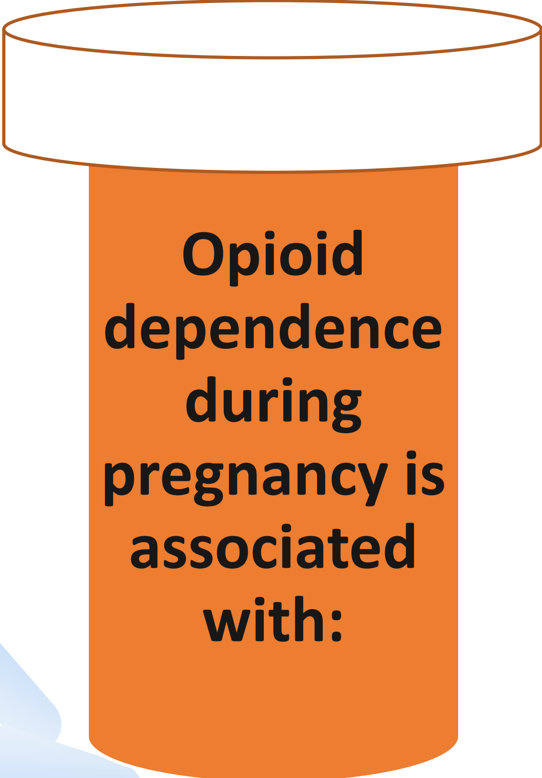
Women with any history of substance use should be counseled as early as possible about possible social service reporting after delivery

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

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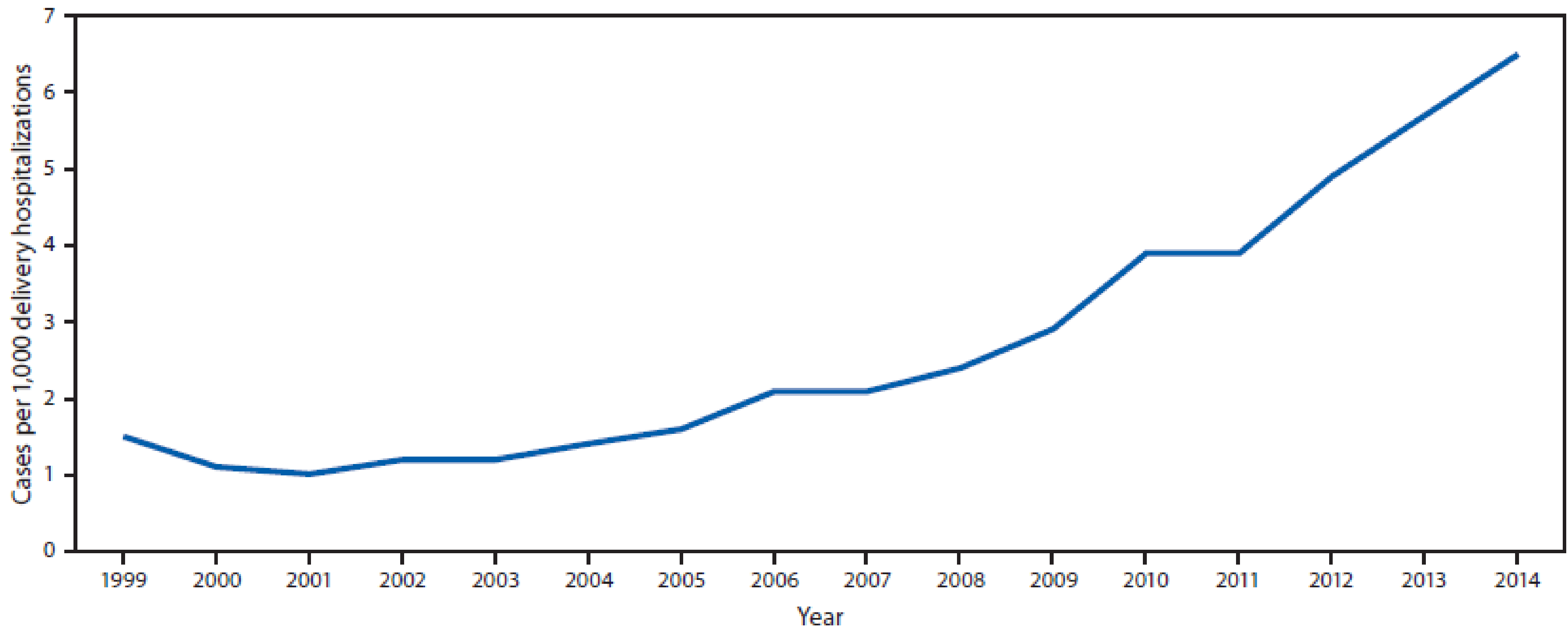
Kaltenbach Obstetrics and Gynecology Clinics. 1998 Jick et al JAMA. 1981

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



Haight et al MMWR, 8/10/18

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

- Overlapping induction of buprenorphine with full M opioid antagonist feasible

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

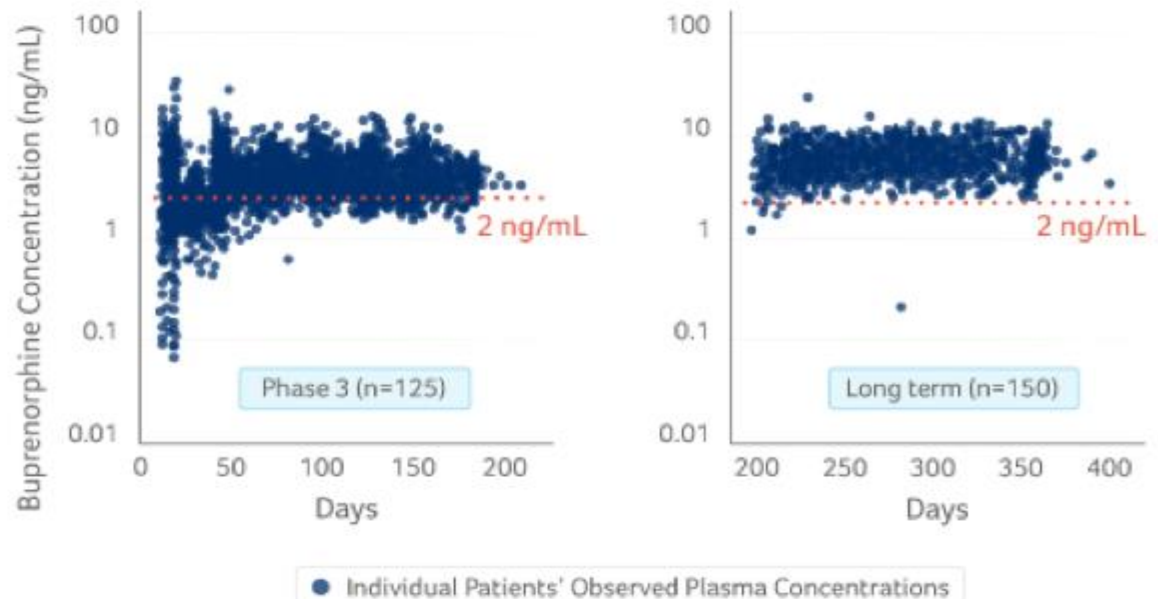
Slide courtesy of Dr Neeta Shenai

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



Slide courtesy of Dr Neeta Shenai

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

Saia 2016

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

Metz 2016, Schiff et al 2018

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

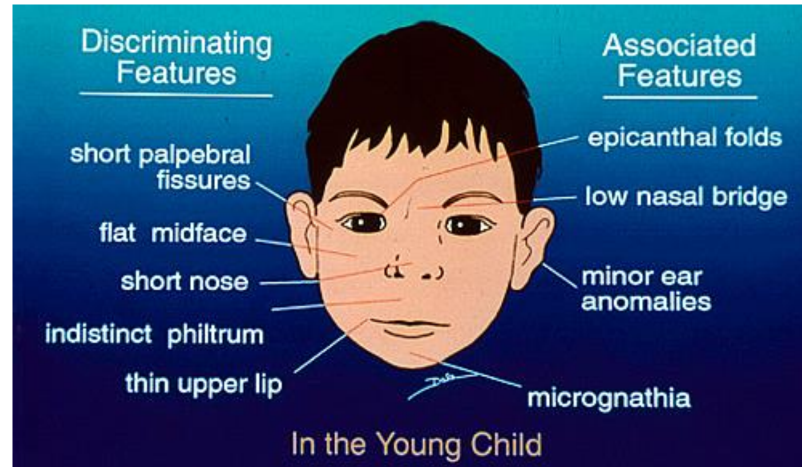
30% decrease in the development of NAS

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

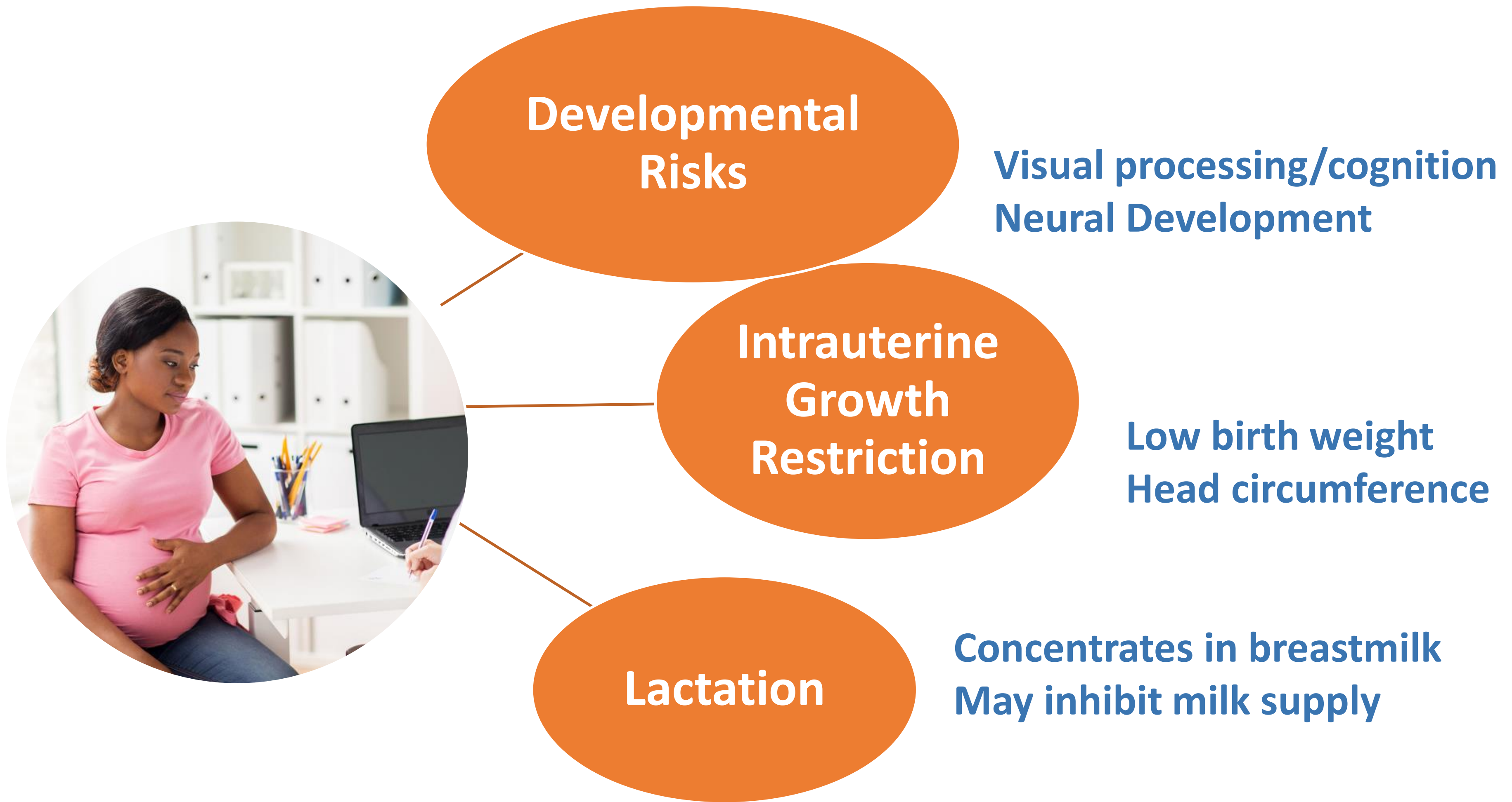
48-60% of users continue during pregnancy

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

Cressman et al JOGC 2014; Cain et al Clin OG 2013

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

VS

Therapeutic use

Abuse

Bolea- Alamanac et al Br Journ Pharmac 2013; Freeman AJP 2014

Synthetic Cannabinoids are increasingly available and carry significant risks

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

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

Kratom – can cause intoxication and tolerance/ withdrawal

Animal Studies: neural tube defects

Neonatal withdrawal

Nonmedical use of psychoactive medications is also increasingly common

Examples:
Quetiapine
Promethazine
Dextromethorphan
Ketamine

Effects in pregnancy:

Ketamine – cardiac and neuronal development anomaly in animal

Neonatal hypotonia

Neonatal withdrawal

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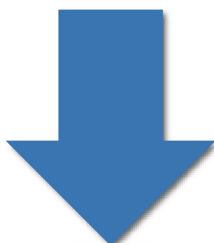

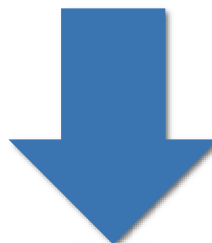

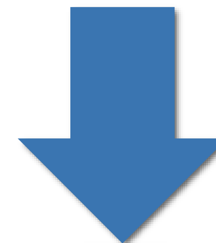

Education

855-Mom-MCPAP

Resource and Referral

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Who can call MCPAP for Moms?

Primary care providers

Pediatric providers

Psychiatric providers

Obstetric providers/ Midwives

Family Medicine

SUD care providers

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Educational materials focused on perinatal SUD available on our website

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Can refer moms to www.mcpapformoms.org

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Contact number for providers: 855-Mom-MCPAP (855-666-6272)

Google Custom Search

Promoting Maternal Mental Health During and After Pregnancy

About MCPAP for Moms | How We Help Providers | Toolkits and Resources | Our Team | For Mothers and Families

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MCPAP for Moms promotes maternal and child health by building the capacity of providers serving pregnant and postpartum women and their children

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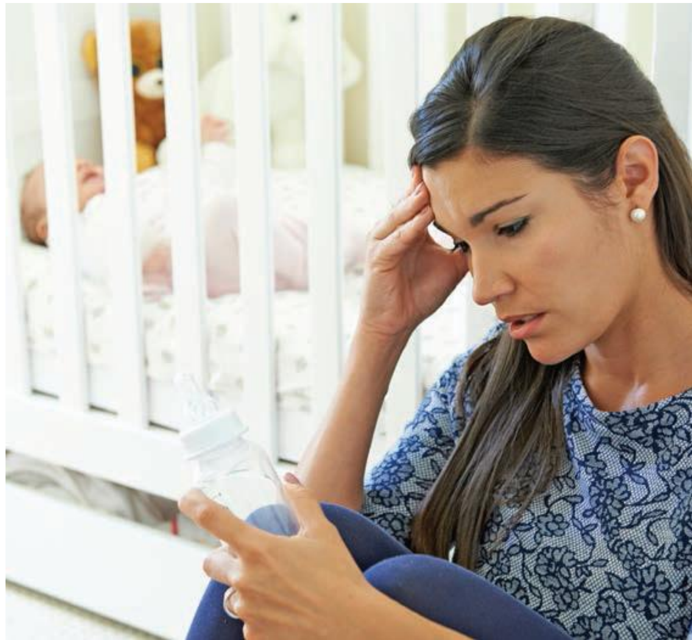
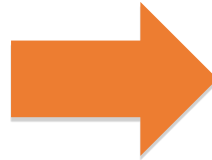
In summary, our aim is to promote maternal and child health by building the capacity of front line providers to address maternal mental health and substance use needs





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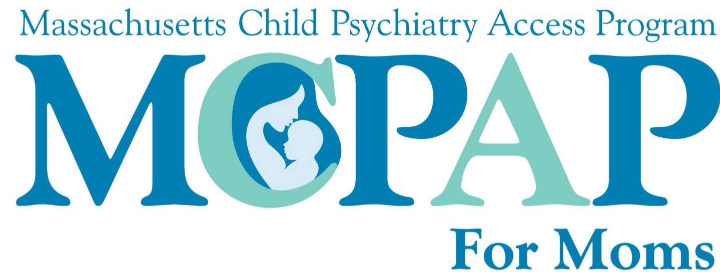

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