Perinatal Substance Use Disorders

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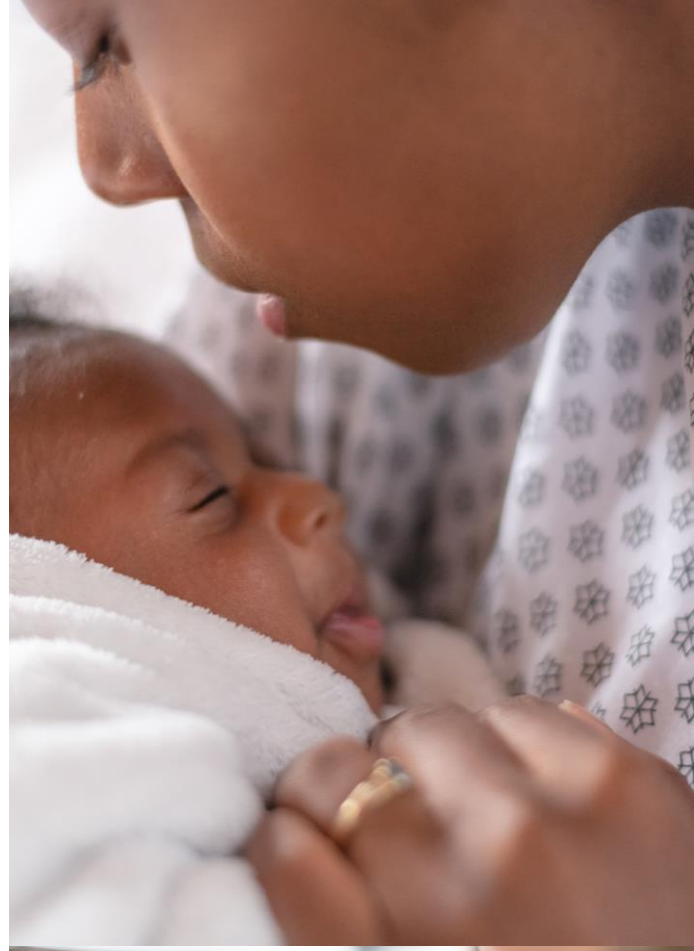
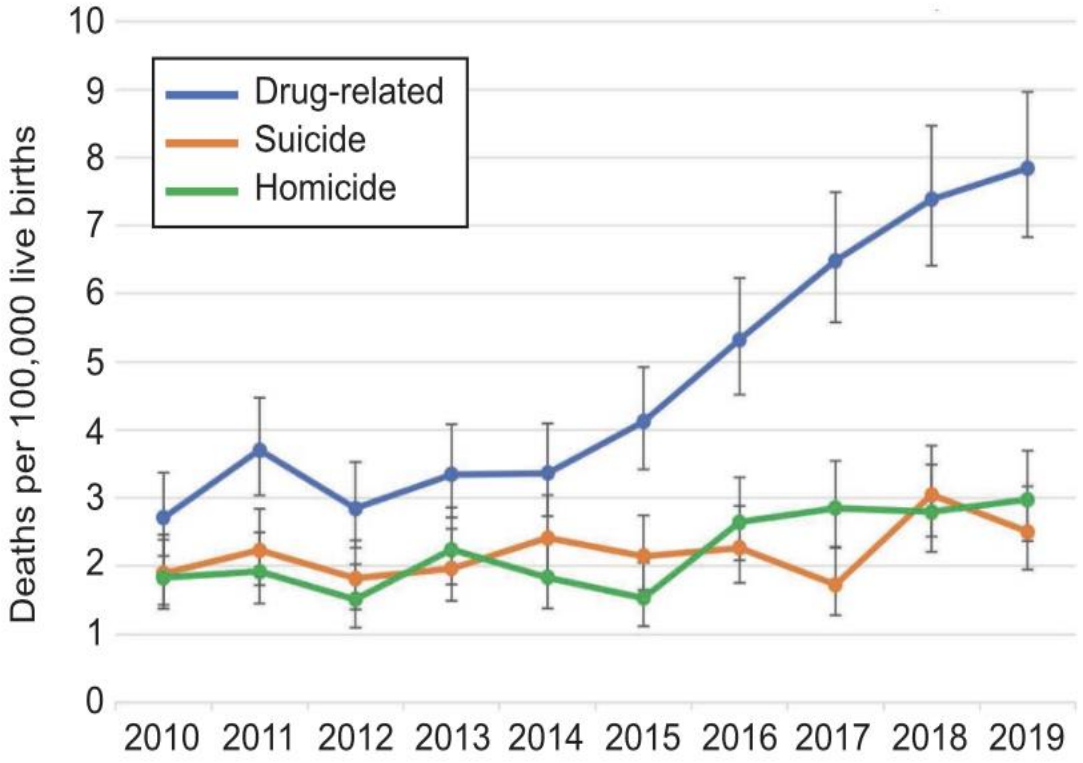
Overview

- Screening for Perinatal SUDs
- MOUD for OUD



Pregnancy-Associated Deaths Due to Drugs, Suicide, and Homicide in the United States, 2010–2019 (n=11,792)



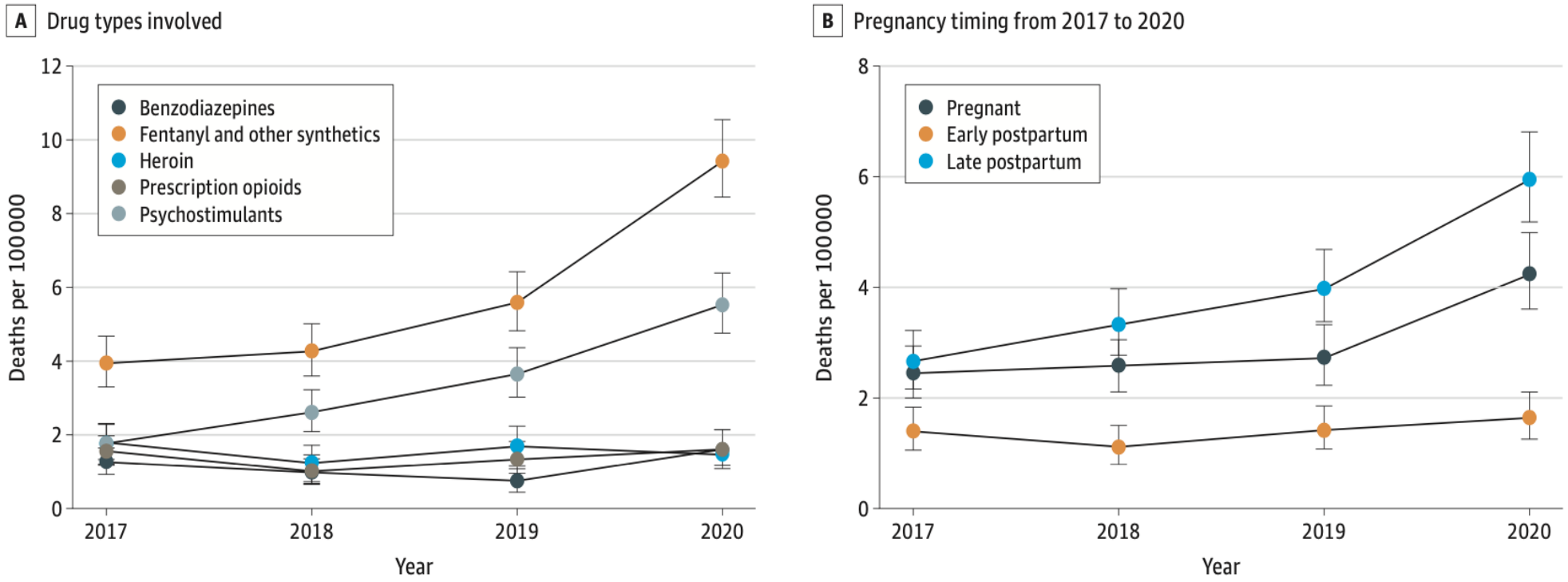
- 22.2% of all Maternal Deaths are due to:
- Drugs (11.4%)
- Suicide (5.4%)
- Homicide (5.4%)

- 2010-2019
- Drug-related deaths increased 190%
- Suicide increased 30%
- Homicide increased 63%

Margerison, Claire E. MPH, PhD; Roberts, Meaghan H. MA; Gemmill, Alison MPH, PhD; Goldman-Mellor, Sidra MPH, PhD Pregnancy-Associated Deaths Due to Drugs, Suicide, and Homicide in the United States, 2010–2019, Obstetrics & Gynecology: February 2022 - Volume 139 - Issue 2 - p 172-180

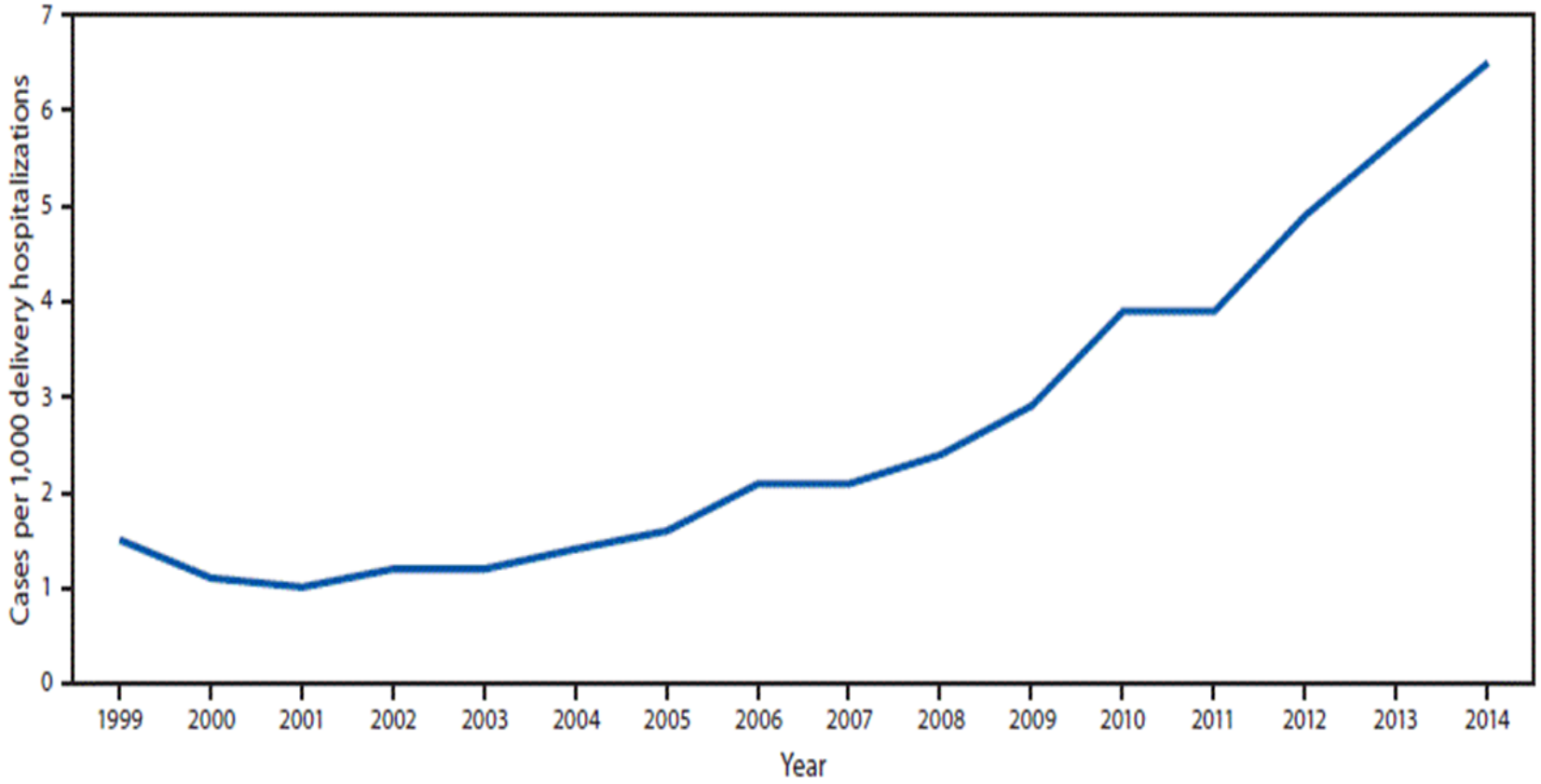
US Trends in Drug Overdose Mortality Among Pregnant and Postpartum Persons, 2017-2020

Figure. Pregnancy-Associated Drug Overdose Mortality



Bruzelius E, Martins SS. US Trends in Drug Overdose Mortality Among Pregnant and Postpartum Persons, 2017-2020. *JAMA.* 2022;328(21):2159–2161. doi:10.1001/jama.2022.17045

Prevalence of Opioid Use Disorder in Pregnancy



Per 1,000 Delivery Hospitalizations in US 1999-2014

Haight SC, Ko JY, Tong VT, Bohm MK, Callaghan WM. Opioid Use Disorder Documented at Delivery Hospitalization — United States, 1999–2014. MMWR Morb Mortal Wkly Rep 2018;67:845–849.

Screening for Substance Use

- Routine screening with validated questionnaires (VQ) (i.e. **4 P's or 4 P's Plus ©**, NIDA Quick Screen, CRAFTT (adolescents) should be performed on all pregnant persons at least once. (Universal screening reduces biases age, race, ethnicity, or socioeconomic status).
- Validated questionnaires (VQ) are superior to urine drug screening (UDS) for detection of specific substance use or absence of use.
- South Carolina SBIRT Screening Tool Pregnant & Postpartum Individuals

https://www.scdhhs.gov/sites/default/files/SBIRT%20Universal%20Screening%20Tool%20June%202015_1.pdf

Delafield R, Wright TE. Insights in Public Health: Substance Use in Pregnant Women in Hawai'i: Extending Our Capacity and Compassion. *Hawaii J Med Public Health* 2016;75(11):348–52.
Alcohol abuse and other substance use disorders: ethical issues in obstetric and gynecologic practice. Committee Opinion No. 633. American College of Obstetricians and Gynecologists. *Obstet Gynecol* 2015;125:1529–37.

Limitations of UDS for screening and detecting use

- UDS do not testing for alcohol or tobacco.
- Drugs metabolize out of the urine in relatively short amounts of time.
  - UDS only detects use (other than MJ) in past 2-3 days.
- Most tests do not include semi or fully synthetic opioids (i.e., prescription opioids, fentanyl)
- Lots of false positives with qualitative (yes/no) tests
- Provider knowledge gaps about the need for:
  - Confirmatory testing with +UDS qualitative (yes) result
  - Informed consent for testing, and patient's right to refuse testing
- Mandatory reporting and criminalization of use during pregnancy
- UDS is not mandatory for assessment of SUD during pregnancy (ACOG)

UDS Window of Detection 2-3 Days

Length of Time Drugs of Abuse Can Be Detected in UrineDrug	Time
Alcohol	7-12 h
Amphetamine	48 h
Methamphetamine	48 h
Barbiturate	
Short-acting (eg, pentobarbital)	24 h
Long-acting (eg, phenobarbitol)	3 wk
Benzodiazepine	
Short-acting (eg, lorazepam)	3 d
Long-acting (eg, diazepam)	30 d
Cocaine metabolites	2-4 d
Marijuana	
Single use	3 d
Moderate use (4 times/wk)	5-7 d
Daily use	10-15 d
Long-term heavy smoker	30 d
Opioids	
Codeine	48 h
Heroin (detected as morphine)	48 h
Hydromorphone	2-4 d
Methadone	3 d
Morphine	48-72 h
Oxycodone	2-4 d
Propoxyphene	6-48 h
Phencyclidine	8 d

-- Mayo Clinic Proc. 2008; 83(1)66-76

Fentanyl 24-72 hours

Commonly Used Obstetric Medications That May Cause False Positives on UDS

UDS RESULT	Amphetamine/ Methamphetamine	Benzodiazepine	Barbiturate	Phencyclidine (PCP)	Opiates
MEDICATION					
Bupropion	X				
Dextromethorphan				X	
Diphenhydramine					X
Doxylamine					X
Fioricet/Fiorinal			X		
Labetalol & Methyldopa	X				
Metformin	X				
Phenylephrine	X				
Promethazine	X				
Quetiapine (≥ 125 mg)					X
Sertraline (>150 mg)		X			
Tramadol				X	X
Trazadone	X				
Venlafaxine				X	
Verapamil					X

UDS Qualitative (Yes/No)

Many opioids are not part of standard EIA so may need to order specifically (bup/nor-bup)

IF UDS IS + FOR:	SPECIFIC ENOUGH TO MAKE CLINICAL DECISIONS WITHOUT CONFIRMATORY TEST?
AMPHETAMINES	NO send *GC/MS
BARBITURATES	YES
BENZODIAZEPINES	YES
CANNABINOIDS	YES
COCAINE	YES
METHADONE	YES
OPIATES	NO send *GC/MS
OXYCODONE	NO send *GC/MS

*GC/MS: Confirmatory: –Gas Chromatography/ Mass Spectrometry

Pregnancy/Postpartum + UDS Qualitative Yes- Send for GC/MS

When is a UDS useful and how is the test obtained?

UDS is useful in circumstances where:

- Maternal health is impacted (e.g., emergency, loss of consciousness, impaired or altered mental status)
- Patient requests UDS
- Starting MOUD (not always needed especially if delays care or creates punitive consequences)
- Suspect diversion of Suboxone, or confirm patient is taking medication
  - Order test for **norbuprenorphine**

Alcohol abuse and other substance use disorders: ethical issues in obstetric and gynecologic practice. Committee Opinion No. 633. American College of Obstetricians and Gynecologists. *Obstet Gynecol* 2015;125:1529–37. Amnesty International. Criminalizing pregnancy: policing pregnant women using drugs in the USA 2017. ASAM National Practice Guideline, 2015

How is UDS test obtained?

- Informed consent is ethically obligated and recommended by ACOG, Amnesty International, ASAM, WHO, SAMHSA.
- Written consent is preferred during pregnancy due to higher stakes and unintended consequences.
- If anything is positive, send for confirmatory testing due to higher stakes and unintended consequences.

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UDS Practice

- Standardized protocol
  - Biased screening disproportionately affects low-income birthing people of color, particularly African Americans.
- Formal informed consent process
- Communicate and document clear utility for the test
  - Reason(s) for ordering UDS (e.g., signs and symptoms consistent with intoxication, withdrawal, or altered mental status, patient request etc.)
  - Documents verbal or written informed consent or reason for absence of consent (e.g., emergency, loss of consciousness)
- Wait for confirmatory test before assuming use or changing patient care.
- Review chart for possible cross-reacting medications prescribed and OTC.
- Pay attention to false positive potential prior to counseling patients or calling CPS.