

Perinatal Substance Use Disorders

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We have nothing to disclose.

Overview

Background of Perinatal Substance Use Disorders (SUDs)

Screening for Perinatal SUDs

Commonly Used Substances in Pregnancy

Psychosocial Interventions for SUD

Mental Health Comorbidities



Background of Perinatal Substance Use Disorders (SUDs)

DSM 5 Criteria for Substance Use Disorder

Taking the substance in larger amounts or for longer than was intended

Persistent desire or unsuccessful efforts to cut down/control substance use

Spending a lot of time getting, using, or recovering from use of the substance

Cravings

Use results in failure to fulfill major obligations at work, home, or school

Continuing to use, even when it causes social/interpersonal problems

Giving up important social, occupational, or recreational activities because of substance use

Using substances when it is physically hazardous

Continuing to use despite knowledge of having persistent/recurrent physical or psychological problem that is caused or exacerbated by substance use

Tolerance

**Does not apply for medically managed SUD or medical use of rx drugs*

Substance-specific withdrawal syndrome or using to avoid withdrawal

**Does not apply for medically managed SUD, medical use of rx drugs, or substances that do not have a withdrawal syndrome (i.e., hallucinogens, inhalants)*



Substance Use Disorders

High rate of substance use and mental health condition comorbidity

Greatest risk of use between ages 18-29 years

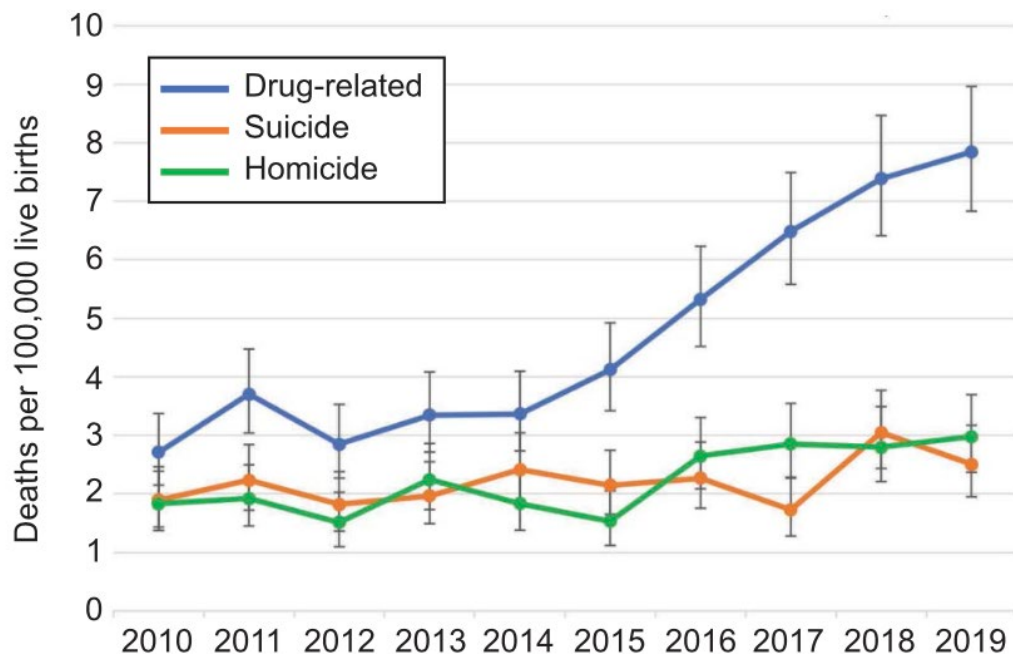
Pregnancy:

- Most common: tobacco, alcohol, cannabis
- 50% endorse polysubstance

Postpartum

- High rate of recurrent drug use and mortality

Pregnancy-Associated Deaths, 2010–2019



11,792 deaths from 33 states and DC

22.2% of all Maternal Deaths are due to:

Drug-related (11.4%)

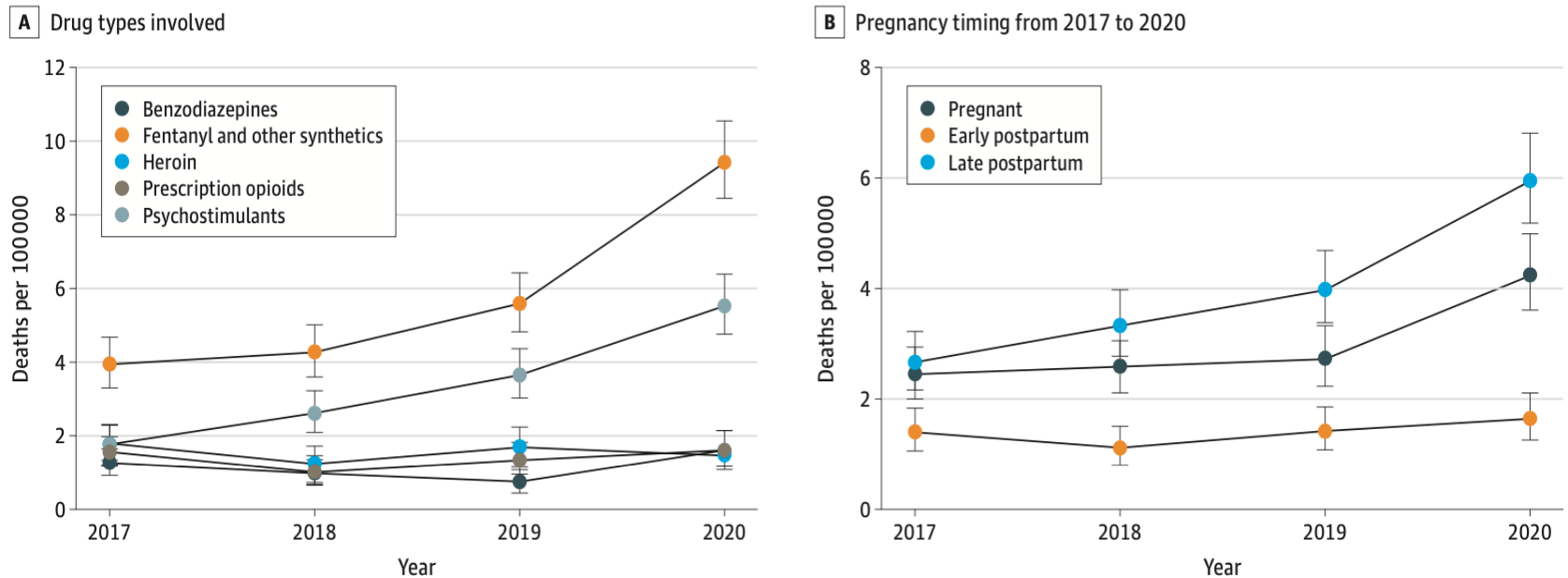
Suicide (5.4%)

Homicide (5.4%)

Drug-related deaths increased 190%

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

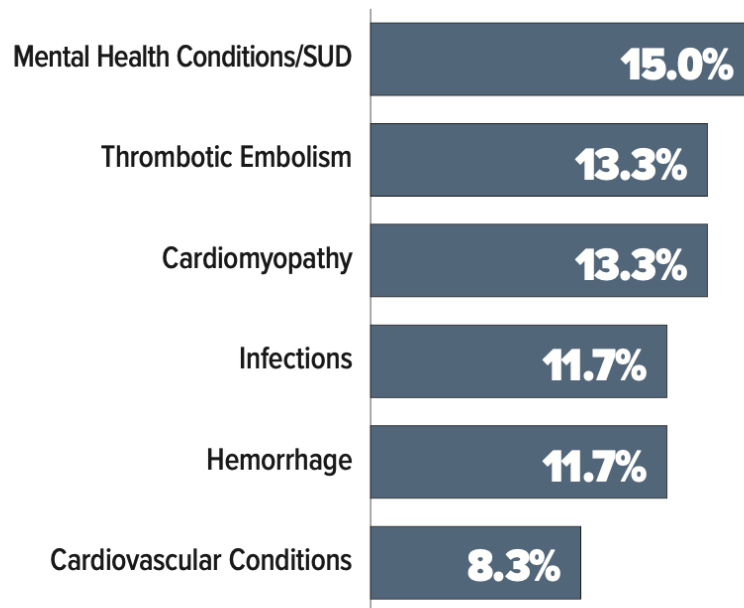
Figure. Pregnancy-Associated Drug Overdose Mortality



- 1249 of 7642 pregnancy associated deaths were overdose related
- Increased deaths due to fentanyl and psychostimulants (methamphetamine, cocaine)
- Late postpartum most common time period

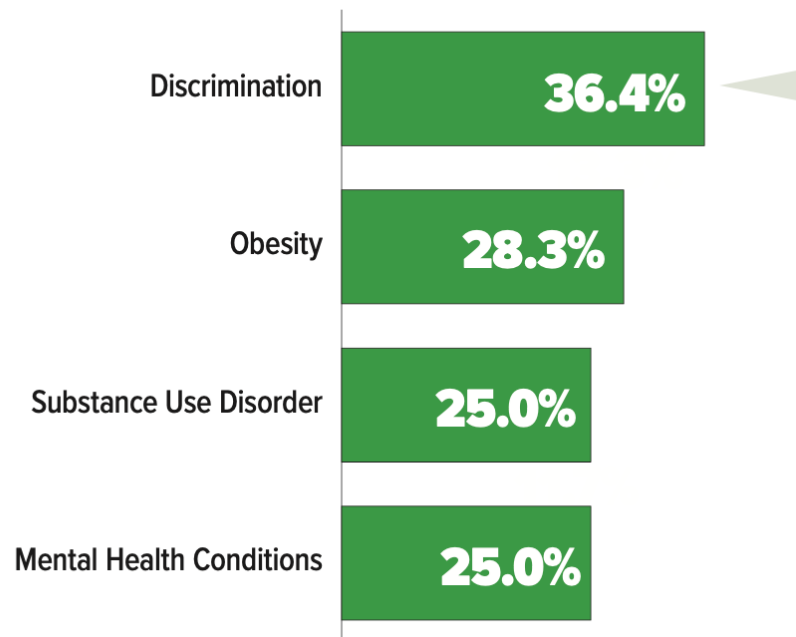
Leading Causes of Pregnancy-Related Deaths

Percent of pregnancy-related deaths; 2018-2020



Circumstances of Pregnancy-Related Deaths

Percent of pregnancy-related deaths; 2018-2020

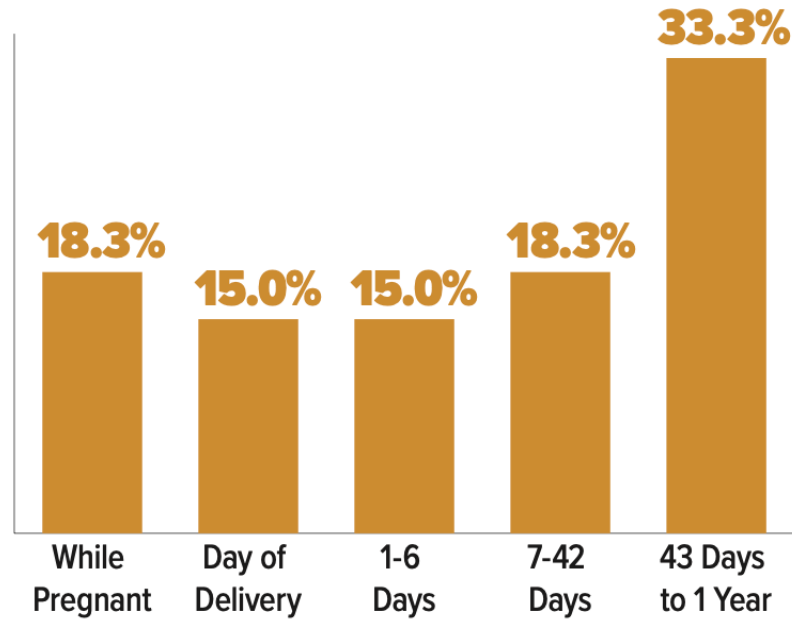


South Carolina 2024 MMRC Brief

SC DHEC (2024).

Timing of Pregnancy-Related Deaths

Percent of pregnancy-related deaths; 2018-2020



South Carolina 2024 MMRC Brief

SC DHEC (2024).

Delayed Care

pOUD: Typically present at approximately 20-24wga

- delays in prenatal care
- delays in treatment
- Lack of knowledge of pregnancy
- Fears: separation from baby, DSS case, other legal consequences, judgement
- Other social determinants of care: transportation, etc
- Lack of understanding of what treatment looks like

“

Judgment. That's the main thing. I mean, from everyone, but mainly the doctor, because, you know... Some doctors... they're just not very receptive of anything like [taking Suboxone during pregnancy]. And automatically, even if they don't say it, you can kind of tell by the way they act that they're judgmental of you... I didn't want, like, the state or something stepping in and saying, 'you know, you're right, you've been using [drugs] throughout your pregnancy' or whatever... And I wanted to [be prescribed Suboxone] really, really bad, talked to my fiancée about it multiple times and just went back and forth... And eventually, I mean, I made it through my pregnancy, was taking small doses of [Suboxone illicitly], just enough to keep me from withdrawing and feeling really bad.

31-year-old mother of 2

”



Screening for Perinatal Substance Use Disorders



Screening

- Identify risk and promote health
- Early detection and intervention
- Prevent progression to severe substance use
- Improve treatment outcomes

Screening Methods

- Screening tools/questionnaires
 - *e.g., AUDIT, DAST-10, SBIRT, NIDA quick-screen*
- Clinical interviews
- Observation of physical and behavioral signs
- Labs are *not* screening tools
 - *Limitations in universal screening*
 - *Should only be considered if there is clinical indication and with consent*

"Seeking obstetric–gynecologic care should not expose a woman to criminal or civil penalties, such as incarceration, involuntary commitment, loss of custody of her children, or loss of housing. These approaches treat addiction as a moral failing. Addiction is a chronic, relapsing biological and behavioral disorder with genetic components... Substance abuse reporting during pregnancy may dissuade women from seeking prenatal care and may unjustly single out the most vulnerable, particularly women with low incomes and women of color. Although the type of drug may differ, individuals from all races and socioeconomic strata have similar rates of substance abuse and addiction."

-ACOG 2011

Substance Use Disorder Screening

"Screening for substance use should be a part of comprehensive obstetric care and should be done at the first prenatal visit in partnership with the pregnant woman...

...obstetric care providers have an ethical responsibility to their pregnant and parenting patients with substance use disorder to discourage the separation of parents from their children solely based on substance use disorder, either suspected or confirmed. In states that mandate reporting, policy makers, legislators, and physicians should work together to retract punitive legislation and identify and implement evidence-based strategies outside the legal system to address the needs of women with addictions...

Urine drug testing... should be performed **only with the patient's consent** and in compliance with state laws. Pregnant women **should be informed** of the potential ramifications of a positive test result, including any mandatory reporting requirements"

-ACOG 2017

Substance Use Disorder Screening

NIDA Quick Screen Question:

In the past year, how often have you used the following?

	Never	Once or Twice	Monthly	Weekly	Daily or Almost Daily
Alcohol • For men, 5 or more drinks a day • For women, 4 or more drinks a day					
Tobacco Products					
Prescription Drugs for Non-Medical Reasons					
Illegal Drugs					

NIDA Quick Screen

SBIRT and DAST-10

Annual questionnaire

Once a year, all our patients are asked to complete this form because drug and alcohol use can affect your health as well as medications you may take. Please help us provide you with the best medical care by answering the questions below.

Patient name: _____

Date of birth: _____

Are you currently in recovery for alcohol or substance use? ☐ Yes ☐ No

Alcohol:

One drink =



12 oz.
beer



5 oz.
wine



1.5 oz.
liquor
(one shot)

	None	1 or more
MEN: How many times in the past year have you had 5 or more drinks in a day?	☐	☐
WOMEN: How many times in the past year have you had 4 or more drinks in a day?	☐	☐

Drugs: Recreational drugs include methamphetamines (speed, crystal), cannabis (marijuana, pot), inhalants (paint thinner, aerosol, glue), tranquilizers (Valium), barbiturates, cocaine, ecstasy, hallucinogens (LSD, mushrooms), or narcotics (heroin).

	None	1 or more
How many times in the past year have you used a recreational drug or used a prescription medication for nonmedical reasons?	☐	☐

Drug Abuse Screening Test, DAST-10

The following questions concern information about your possible involvement with drugs *not including alcoholic beverages* during the past 12 months.

"Drug abuse" refers to (1) the use of prescribed or over-the-counter drugs in excess of the directions, and (2) any nonmedical use of drugs.

The various classes of drugs may include cannabis (marijuana, hashish), solvents (e.g., paint thinner), tranquilizers (e.g., Valium), barbiturates, cocaine, stimulants (e.g., speed), hallucinogens (e.g., LSD) or narcotics (e.g., heroin). Remember that the questions *do not* include alcoholic beverages.

Please answer every question. If you have difficulty with a statement, then choose the response that is mostly right.

In the past 12 months...	Circle	
1. Have you used drugs other than those required for medical reasons?	Yes	No
2. Do you abuse more than one drug at a time?	Yes	No
3. Are you unable to stop abusing drugs when you want to?	Yes	No
4. Have you ever had blackouts or flashbacks as a result of drug use?	Yes	No
5. Do you ever feel bad or guilty about your drug use?	Yes	No
6. Does your spouse (or parents) ever complain about your involvement with drugs?	Yes	No
7. Have you neglected your family because of your use of drugs?	Yes	No
8. Have you engaged in illegal activities in order to obtain drugs?	Yes	No
9. Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?	Yes	No
10. Have you had medical problems as a result of your drug use (e.g. memory loss, hepatitis, convulsions, bleeding)?	Yes	No
Scoring: Score 1 point for each question answered "Yes," except for question 3 for which a "No" receives 1 point.	Score:	

Interpretation of Score		
Score	Degree of Problems Related to Drug Abuse	Suggested Action
0	No problems reported	None at this time
1-2	Low level	Monitor, re-assess at a later date
3-5	Moderate level	Further investigation
6-8	Substantial level	Intensive assessment
9-10	Severe level	Intensive assessment

Drug Abuse Screening Test (DAST-10). (Copyright 1982 by the Addiction Research Foundation.)

Stigma is a Barrier to Care

- Authorities in at least 45 states have sought to prosecute women for exposing their unborn child to drugs
- The fear of being reported to the police or child welfare was strongly related associated with lack of prenatal care
- One of the most powerful tools to overcome and reduce stigma is to practice empathy



Importance of Screening

- Increases awareness and understanding of individual risk
- Facilitates timely intervention and access to treatment
- Screening in various settings
- By integrating substance use disorder screening into **routine** healthcare practices, stigma associated with seeking help for SUDs can be reduced, making it more likely for individuals to seek and accept treatment



Key Considerations



- Confidentiality and privacy
- **Stigma** associated with SUDs
- Cultural sensitivity and awareness
- Incorporation into routine healthcare practice
- Training and resources for effective screening



Commonly Used Substances in Pregnancy

Rate of tobacco use in pregnancy:
7.2% (2016)

- Decreased from 13.2% (2006)

54% of women will discontinue with pregnancy

- 50-60% will return to smoking within 1 year postpartum

Greatest benefit if quit <15 weeks

Tobacco Use Disorder

Risks of Tobacco use in Pregnancy

Perinatal Risks:

- Orofacial clefts
- Fetal growth restriction
- Placenta Previa
- Placental abruption
- PPRM
- Low birth weight
- Increased perinatal mortality
- Ectopic pregnancy
- Decreased thyroid function

Childhood Risks:

- Respiratory infections
- Asthma
- Colic
- SIDS
- Bone fractures
- Childhood obesity

Breastfeeding

- Transfers at 2x rate of placental transfer

Treatment

Psychosocial Interventions

Motivational Interviewing

Cognitive Behavioral Therapy

Pharmacologic Therapy (*insufficient evidence*)

Nicotine replacement

- Possible benefit in cessation
- Risks of nicotine remain; need cessation plan (6-12 weeks)

Varenicline

- Partial agonist for nicotine receptors
- Limited data; none with lactation

Bupropion

- Limited data
- No known fetal anomalies or adverse effects in pregnancy
- Low RID



Pregnant South Carolinians

There is no better time to quit for you and your baby. If you are pregnant, a new parent, or are thinking about becoming pregnant, the SC Tobacco Quitline can support you. Pregnant participants can receive up to 10 coaching sessions that extend beyond delivery to prevent postpartum relapse. Currently, the SC Tobacco Quitline does not offer quit medications to pregnant participants. Instead, talk to your doctor to see if quit medications are recommended to support your quit effort.

Pregnant tobacco users can also receive free help from **BABY & ME - Tobacco Free**. [Click here](#) to see if services are available in your area.

South Carolina Resources



South Carolina Department of Health & Environmental Control

IN PERSON TELEHEALTH

In Person & Telehealth Service Available

400 South Logan St.
Gaffney, South Carolina 29341, USA

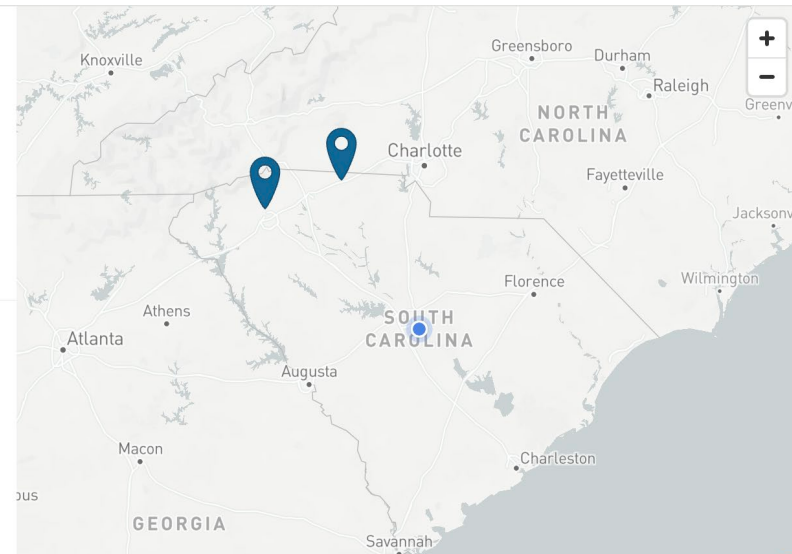
864-518-0216

South Carolina Department of Health & Environmental Control

In Person & Telehealth Service Available

200 University Ridge
Greenville, South Carolina 29601, USA

864-518-0212



Alcohol Use Disorder in Pregnancy

Pregnancy complications

- Spontaneous abortion (miscarraige)
- Preterm labor
- Placental abruption
- Bleeding in pregnancy
- Intra-amniotic infection
- Low birth weight
- Congenital anomalies
- Fetal demise

Fetal Alcohol Spectrum Disorders (FASD)

- Fetal alcohol syndrome (FAS)
- Abnormal appearance (short height, low weight, small head)
- Low intelligence
- Behavioral problems
- Hearing/sight problems
- Developmental Delay
- Cognitive deficits

Leading preventible cause of birth defects and developmental disabilities

Treatment for AUD

Behavioral Interventions

- Rehabilitation, Support Groups, Psychotherapy

Management of Withdrawal

- Benzodiazepines

Maintenance Medications

- Acamprosate
- Naltrexone
- Disulfiram – possible malformation, hypertension

Cannabis Use Disorder

Estimated that prenatal cannabis use occurs in 4-7% of women

CUD rates increasing

- 18.5/10,000 in 1993 to 93.6/10,000 in 2014
- 5 fold increase

Reasons for Use

Anxiety

Pain

Stress

Nausea/Vomiting

Pharmacokinetics of THC

Readily crosses placenta

Highly lipophilic

- Distributes to fetal fat and brain

Infant plasma levels are about 10% of maternal serum levels

- Higher with repetitive use

Cannabis: Effects on Mother and Infant

Cannabinoid receptors found as early as 14 weeks gestation and expression fluctuates throughout gestation, particularly in the limbic regions

Conflicting evidence on effect of cannabis on pregnancy complications

Effects on Mother and Infant, Cont.

BORN retrospective cohort study:

- Cannabis use significantly associated with SGA, placental abruption, admission to NICU

Retrospective cohort study (Journal of Perinatology):

- Exposure to cannabis associated with SGA and increased abnormal 12 month developmental screenings

Ottawa Prenatal Prospective Study:

- No differences in growth measures

Effects on Mother and Infant, Cont.

Generation R Study:

- Use associated with reduced fetal growth and LBW independent of multiple lifestyle and SES factors; results suggested a dose-response relationship between heavier use and LBW

Large cohort study in Australia:

- Use during pregnancy associated with LBW, preterm birth, SGA, and admission to NICU independent of sociodemographic characteristics, use of drugs, or nicotine use

Cannabis: Long Term Effects of Prenatal Exposure

OPPS (Ottawa Prenatal Prospective Study)	MHPCD (Maternal Health Practices & Child Development Study)
4yo: ↓ Verbal reasoning, memory tasks	9mo: Impaired mental development
6yo: ↓ language comprehension, memory, visual fxn, perceptual fxn, reading tasks, sustained attn 6yo: ↑ impulsivity and hyperactivity (dose responsive) 6-9yo: ↑ behavioral problems	3,4,6yo: ↓ executive fxn, ↓ memory and verbal measures 6yo: ↓ sustained attn and verbal reasoning, ↑ impulsivity and hyperactivity 10yo: ↑ depression,, externalizing behaviors
9-12yo: ↓ executive functioning, impulse control, visual problem solving	9-12yo: ↑ hyperactivity, impulsivity, inattn 10yo: lower reading and spelling scores (*** unlike OPPTS)
13-16yo: attn, problem-solving, visual integration, analytic skills requiring sustained attn	14yo: ↓ reading, spelling, and math scores
16-21yo: ↑ depression, ↑ substance use 18-22yo: fMRI changes in neuronal activity	14-21yo: ↑ THC and tobacco use Young adults: ↑ psychosis
*** Deficits in executive functioning, not intelligence	

Cannabis and Breastfeeding

Cannabinoids can accumulate in breast milk due to lipophilic nature

- Within four hours of a single inhalation of cannabis, breastfed infants ingest about 2.5% of the maternal THC dose

Encourage abstinence while breastfeeding

- If continued use --> encourage decrease as much as possible
- Cannabis can remain in breastmilk for days to weeks and infant can test positive via urine or feces → legal implications?

Second hand smoke/residue exposure

Cannabis: Treatment

Encourage Treatment via:

- Early screening at prenatal visits
- Patient education if screen is positive (not punishment)
- Management of nausea/vomiting

CBT, MI

- Target sleep and treating comorbid psychiatric disorders

No FDA approved medications

Methamphetamine: Effects on Mother and Infant

Hypertension

MI

Cerebral ischemia, stroke

Seizure

Maternal death

Preterm birth

Placental abruption

Methamphetamine: Effects on Mother and Infant

- Vascular constriction, uteroplacental insufficiency, acidosis, fetal hypoxia
- LBW
- Neonatal lethargy
- Delayed motor development by age 1-2
- Preschool: attention and executive function deficits

Methamphetamine: Treatment

No FDA-approved pharmacologic interventions

Behavioral therapies

- CBT, Contingency management, 12 step facilitation therapy

Given rate of comorbidity, it is very important to treat comorbid psychiatric illness

Opioid Use Disorder in Pregnancy

Risks of Untreated Illness:

Cycles of intoxication and withdrawal

High risk behaviors involved in substance use

- STI/infections
- Victim of violence
- Legal and social ramifications

Reduced engagement in prenatal care

Significant preterm birth and low birth weight

Increased infant mortality

Additional poor OB and birth outcomes

Opioid overdose and death by opioid overdose

Treatment for Perinatal Opioid Use Disorder

Medications for OUD (MOUD):

Standard of treatment is to offer/continue opioid agonists:

- Methadone
- Buprenorphine (Suboxone/Subutex)

Medication assisted withdrawal is NOT recommended during pregnancy

Transitioning between Methadone and Buprenorphine is not recommended

Breastfeeding is recommended for women on Buprenorphine or Methadone

- Minimal concentrations in human breastmilk
- Potential positive impact on NOWs symptoms

Suboxone vs Subutex

Active ingredient is buprenorphine

- Partial opioid agonist

Subutex = mono product

- Only buprenorphine

Suboxone = combined product

- Naloxone + buprenorphine
- Naloxone is bio-inactive in Suboxone if used as directed

Suboxone vs Subutex in pregnancy and BF

Risks of Medications for OUD (MOUD) in pregnancy

Preterm birth (PTB)

Low Birth Weight (LBW)/Small for Gestational Age (SGA)

Neonatal Opioid Withdrawal Syndrome (NOWS)

Neonatal Opiate Withdrawal Syndrome

~ 50% chance.

Not directly influenced by dosing or length of time mother used.

Risk increases with

- Benzodiazepines
- Antidepressants
- Tobacco products

Most babies show signs starting on the second day of life. However, some may not show for 5-7 days.

Neonatal Opiate Withdrawal Syndrome

High pitched cries

Tremor/jitters

Increased heart rate

Difficulty feeding

Poor weight gain

Increased respiratory rate

Hyperactive reflexes

Irritability/fussiness

Trouble sleeping

Sneezing

Increased muscle tone

Vomiting

Diarrhea

Sweating

NOWS Treatment

Treatment is based on the severity of baby's withdrawal symptoms

- System of monitoring and scoring

Medications, such as Morphine or Methadone

Kangaroo care

Baby may remain in hospital longer than mom for treatment

Pain management and MOUD

Maintain standard of care as for a birthing patient without OUD/SUD, while continuing MOUD

- *Administering additional pain medication if necessary*
- *Avoiding opioid antagonist medication*
- *Use of epidural or spinal anesthesia when appropriate*
- *Use of nonsteroidal anti-inflammatory drugs and acetaminophen*

Informed Decision Making:

Risk vs Risk vs Benefit

Risks of MOUD	Risks of Untreated Illness (Return to Opioid Use)
PTB/LBW Access to Care - time, travel, cost NOWS (~50%) -Extended hospital stay Wish to be medication free	More significant PTB/LBW Cycles of intoxication/withdrawal High risk behaviors involved in substance use -STI/infections -Victim of violence -Legal ramifications Poor OB outcomes Opioid overdose and death by opioid overdose



Psychosocial Interventions for Substance Use Disorders

Psychosocial Interventions for SUD



RELAPSE
PREVENTION



COGNITIVE
BEHAVIORAL
THERAPY
(CBT)



“THIRD-WAVE”
CBTS



CONTINGENCY
MANAGEMENT

Relapse Prevention



Two primary components

- 1) **Functional analysis** of substance use cues (“triggers”)
 - *People, places, & things (& emotions)*
- 2) **Preventative strategies** to avoid high-risk situations that may contribute to likelihood of use (including emotion coping)

Consider:

- *Perinatal stressors (e.g., stigma, parenting stress, sleep deprivation)*
- *Utilizing support system*

Not effective on its own

Cognitive Behavioral Therapy for SUD



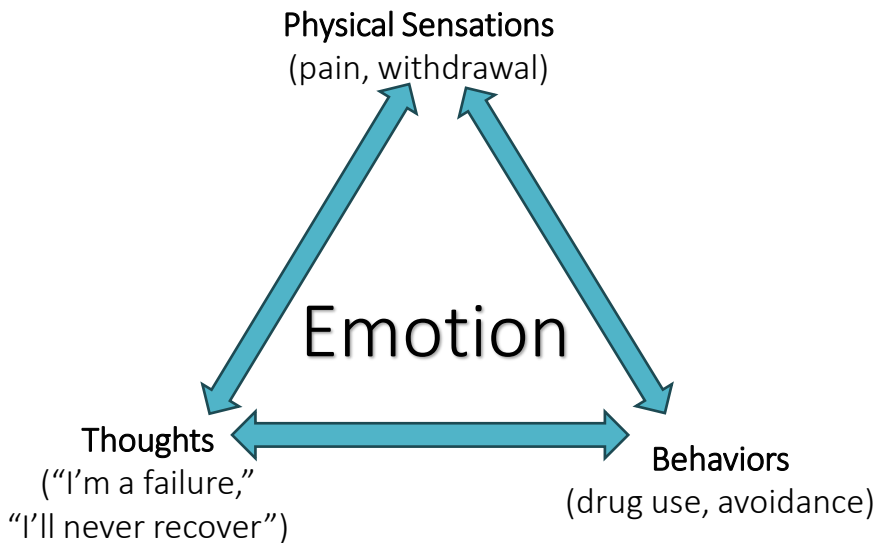
Short-term, skills-based, goal-oriented approach with between session “homework” assignments

Acknowledges & addresses risks that maintain substance use:

- **Cognitive** – inaccurate/unhelpful thinking patterns
- **Behavioral** – avoidance, self-isolation
- **Affective** – emotions
- **Environmental** – peer groups, family hx, stigma

Incorporate relapse prevention strategies

CBT Strategies



Psychoeducation

Behavioral activation

Exposure therapy/behavioral experiments

Cognitive restructuring

Motivational enhancement

CBT for Perinatal SUD

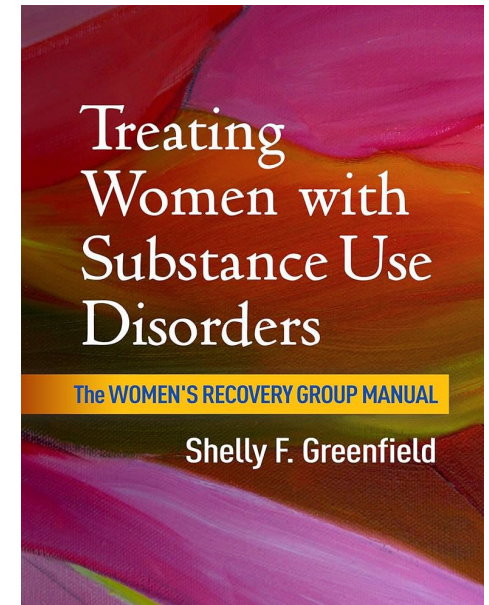


Strong evidence base for treating SUD

In pregnancy, CBT may reduce substance use but data is limited

Women's Recovery Group (not perinatal specific)

- Designed to address SUD-related issues specific to women
- No cognitive restructuring or required homework; relies on mutual support from other participants and group cohesiveness



“Third-wave” CBTs for SUD



Acceptance and Commitment Therapy (ACT)

- Increasing psychological flexibility & promote valued living
- As effective as CBT (but fewer studies)

Dialectical Behavior Therapy (DBT) & DBT Skills

- Synthesizes acceptance & change processes
- Reduces substance use, promotes retention



Mindfulness-based interventions

- Emphasizes role of present-moment awareness
- Mindfulness-based Relapse Prevention reduces # of using days

Contingency Management

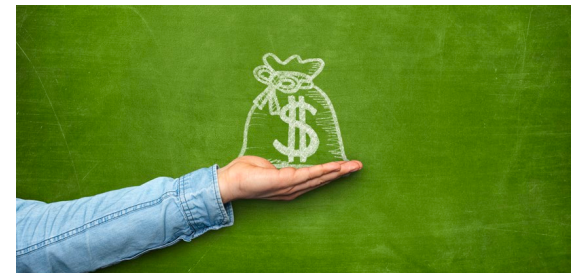


Use of monetary incentives/non-drug reinforcers following demonstration of desired behavior (e.g., negative UDS)

Demonstrates the largest effect of any psychosocial SUD treatment

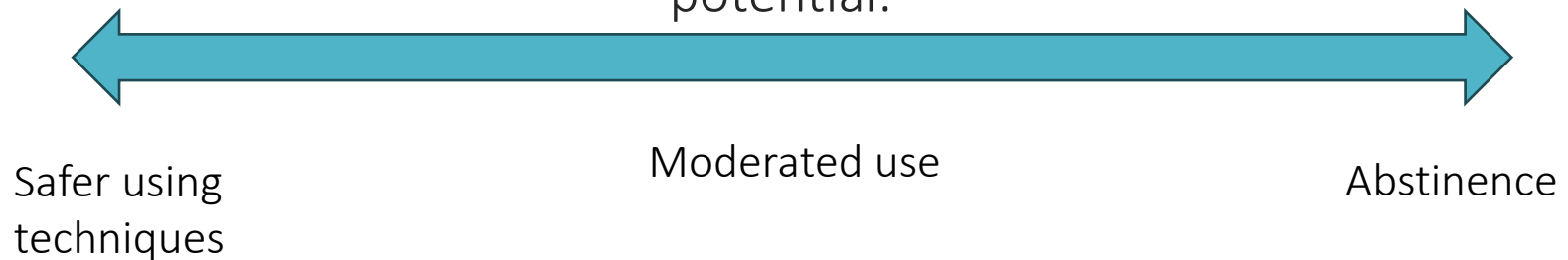
Mixed effects for perinatal SUD

- Little evidence for reducing illicit drug use/achieving abstinence; postpartum recurrence of use
- Some evidence for increasing engagement with residential and outpatient therapy (~1 additional day)



Harm Reduction

Recovery is a process of change through which individuals improve their health and wellness, live a self-directed life, and strive to reach their full potential.



Harm reduction:

- Practical strategies and ideas aimed at reducing negative consequences associated with drug use, sex work, & other behaviors.
- A social justice movement built on a belief in, and respect for, the rights of people who use drugs.
- Is trauma informed
- Acknowledges the social and structural barriers that underlie drug initiation, continued use, and recurrence.

Risk Reduction Strategies

- **Overdose education & naloxone distribution**

- *Exs: never use alone or behind locked doors; stagger use with others; don't share needles, spoons, cottons, etc.*

- **Low-barrier buprenorphine**

- *No requirement for abstinence, psychotherapy*

- **Fentanyl and xylazine test strips**

- **Risk-reducing use behaviors**

- *Exs: arranging sober transportation, alternating alcoholic drinks with water*
- Preventing and reducing infectious disease transmission
- Housing first
- Syringe exchange programs

Harm Reduction Outcomes



Harm reduction goals = any positive change

Substance use/recurrence is not seen as a failure of treatment

Harm reduction approaches:

- Reduce occurrence of HIV and hepatitis C
- Treatment initiation
- Prevent overdose deaths
- Reduce ED visits and other healthcare utilization



Mental Health Comorbidities

Treating Co-Occurring Mental Health Disorders and pSUDs

- PTSD, ADHD, MDD and anxiety disorders commonly co-occur with SUDs
- Reduced risk of relapse due to addressing underlying factors that contribute to substance use and mental health symptoms
- Improved adherence to treatment
- Integrating treatment for co-occurring disorders helps reduce the stigma with mental health and substance use issues





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