The conference is being organized by the Opioid Abatement Coordinating Center (OACC) at North Carolina Central University and the North Carolina Community Health Center Association (NCCHCA).

Whole Hearted Evidence-based Care for Pregnant and Parenting Patients with Substance Use Disorders and Their Children

Hendrée E. Jones, LP, PhD
Senior Advisor, UNC Horizons/Professor,
Department of Obstetrics & Gynecology,
School of Medicine,
University of North Carolina at Chapel Hill

3rd Annual MOUD Conference on September 4, 2025
UNC Friday Conference Center, Chapel Hill

Learning Objectives

1. Identify common elements in programs in North Carolina that provide care for pregnant and parenting women with substance use disorders and their children.

2. Summarize the latest data on the maternal, fetal and child safety and efficacy of prenatal exposure methadone, buprenorphine formulations and naltrexone will be summarized.

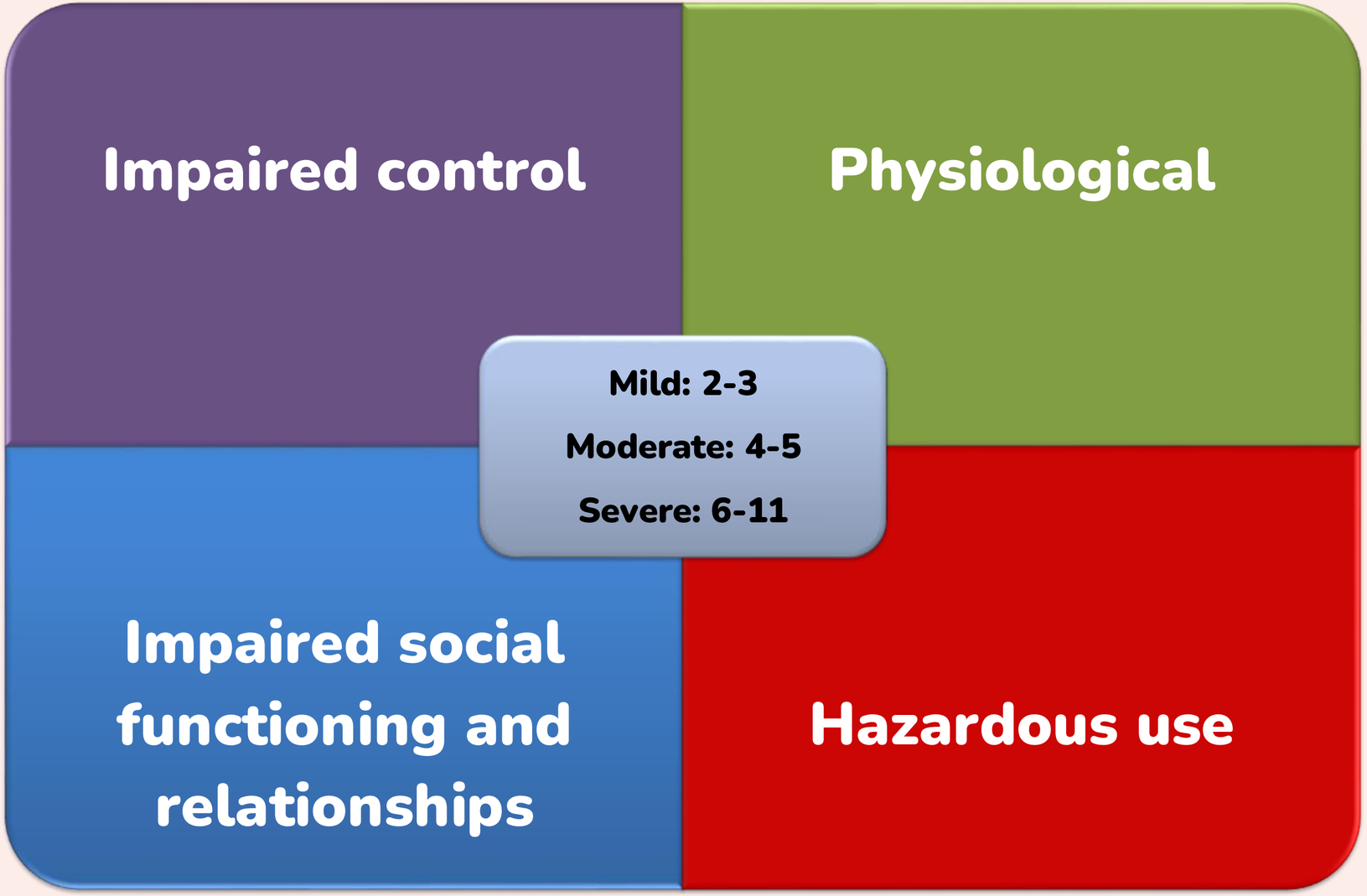
3. Name several actions practitioners can take to support the mother who has a substance use disorder and her prenatally-substance exposed neonate

Disclosures

None relevant to this presentation


Centering our Training
with Living Experience
and Wisdom

11 Signs of Substance Use Disorders

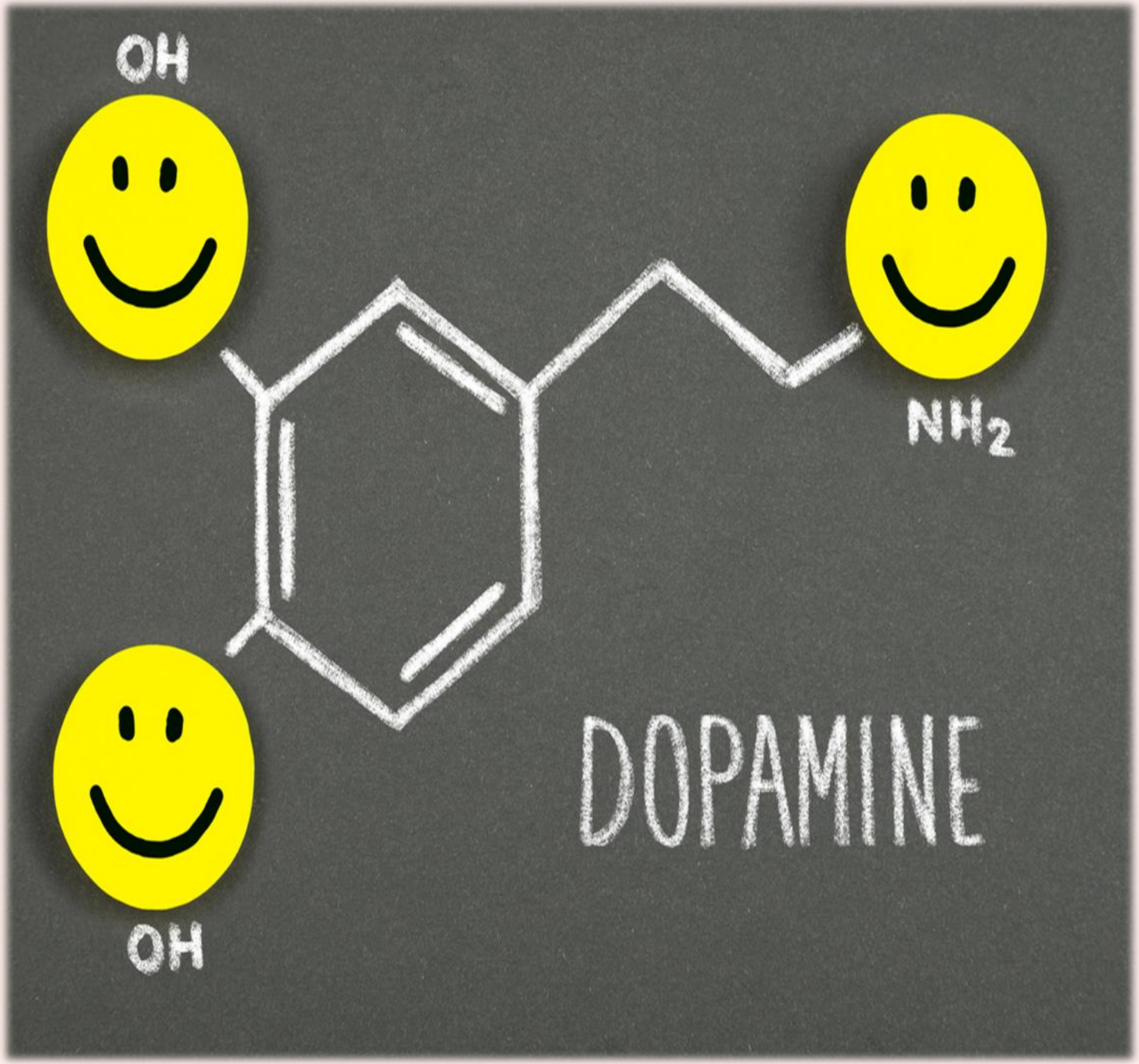


Key Points

1. Substance use disorder is a pediatric illness

2. A use disorder typically begins before pregnancy

3. There is a fundamental difference between use, prenatal exposure, and a use disorder



Why Dopamine Matters

Nanograms/deciliter	Day
40	worst
50	average
60	great
500-1,100	drugs

Credit: https://www.youtube.com/watch?v=M5Mky3Jr960

Understanding Brain and Behavior

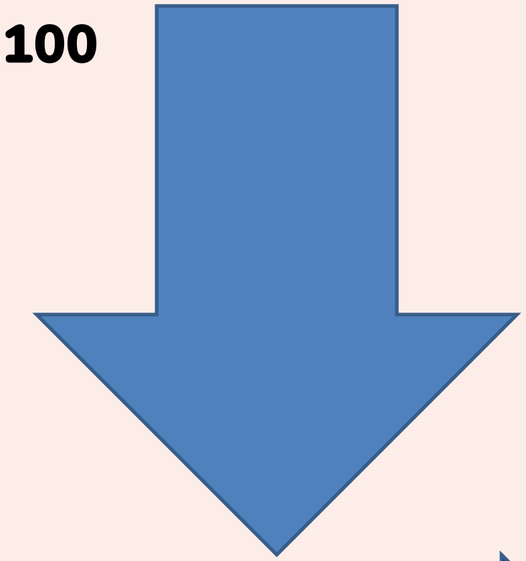
Repeated Drug Use
nanograms/deciliter of dopamine

500- 1,100

250

50

10



Credit: https://www.youtube.com/watch?v=M5Mky3Jr960

Relative Size of Craving in the Brain

Relative Size of Craving in the Brain

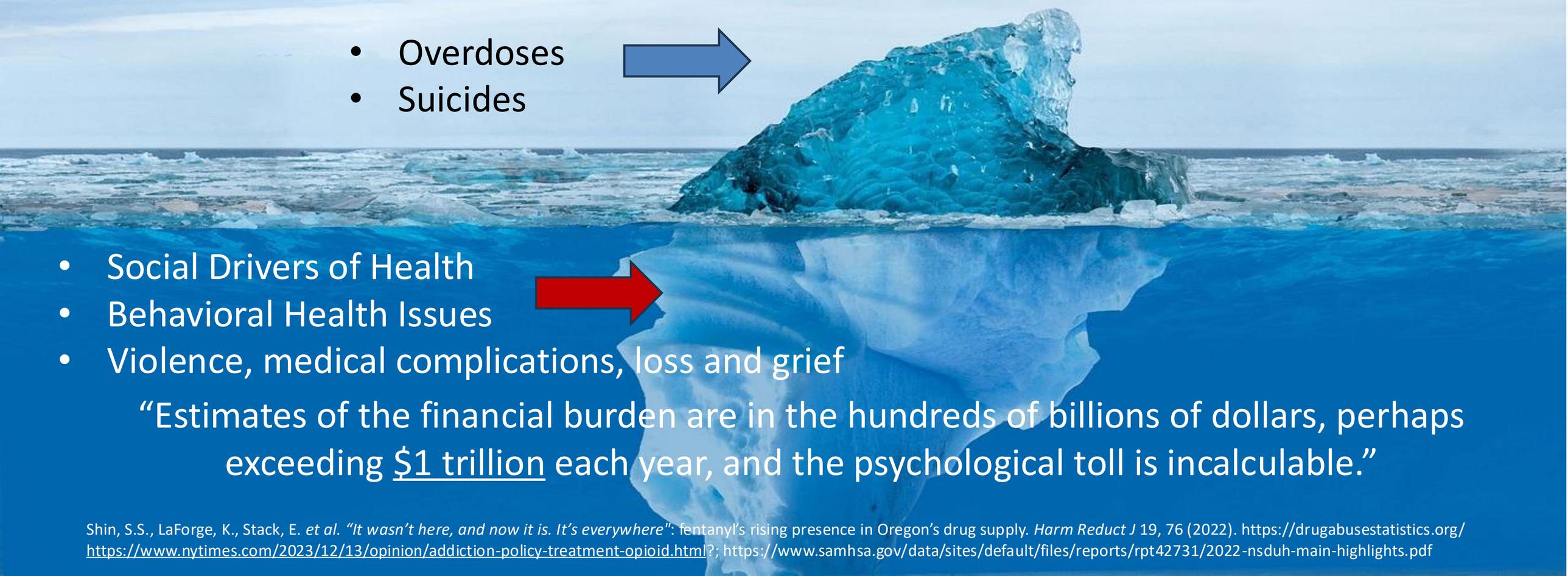
5 days without food

Relative Size of Craving in the Brain

More than 47.7 million Americans have a substance use disorder

Poisoning of the drug supply *"I think everybody who I know who's a drug user has OD'ed [overdosed] at least once this year."*

- Overdoses
- Suicides



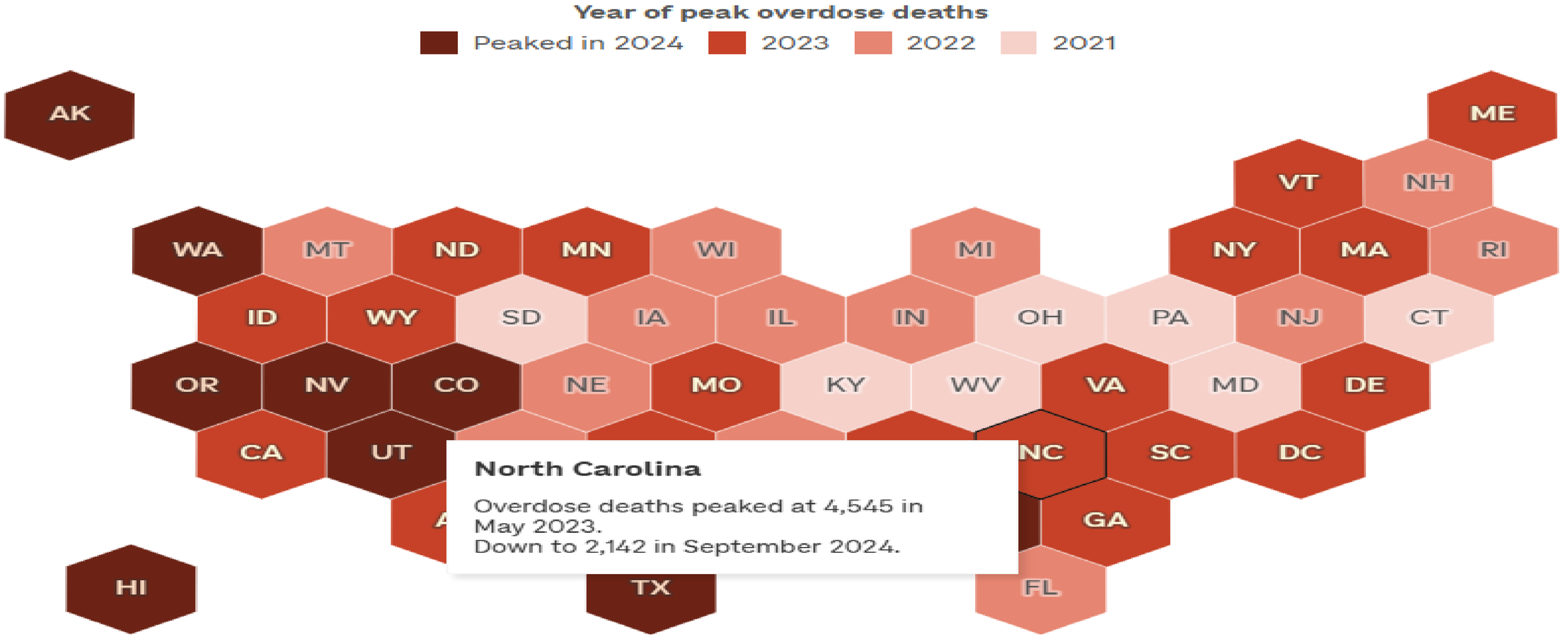
- Social Drivers of Health
- Behavioral Health Issues
- Violence, medical complications, loss and grief

"Estimates of the financial burden are in the hundreds of billions of dollars, perhaps exceeding $1 trillion each year, and the psychological toll is incalculable."

Shin, S.S., LaForge, K., Stack, E. *et al. "It wasn't here, and now it is. It's everywhere"*: fentanyl's rising presence in Oregon's drug supply. *Harm Reduct J* 19, 76 (2022). https://drugabusestatistics.org/ https://www.nytimes.com/2023/12/13/opinion/addiction-policy-treatment-opioid.html?; https://www.samhsa.gov/data/sites/default/files/reports/rpt42731/2022-nsduh-main-highlights.pdf

Drug overdose deaths peaked at different times across the U.S. They're now down everywhere

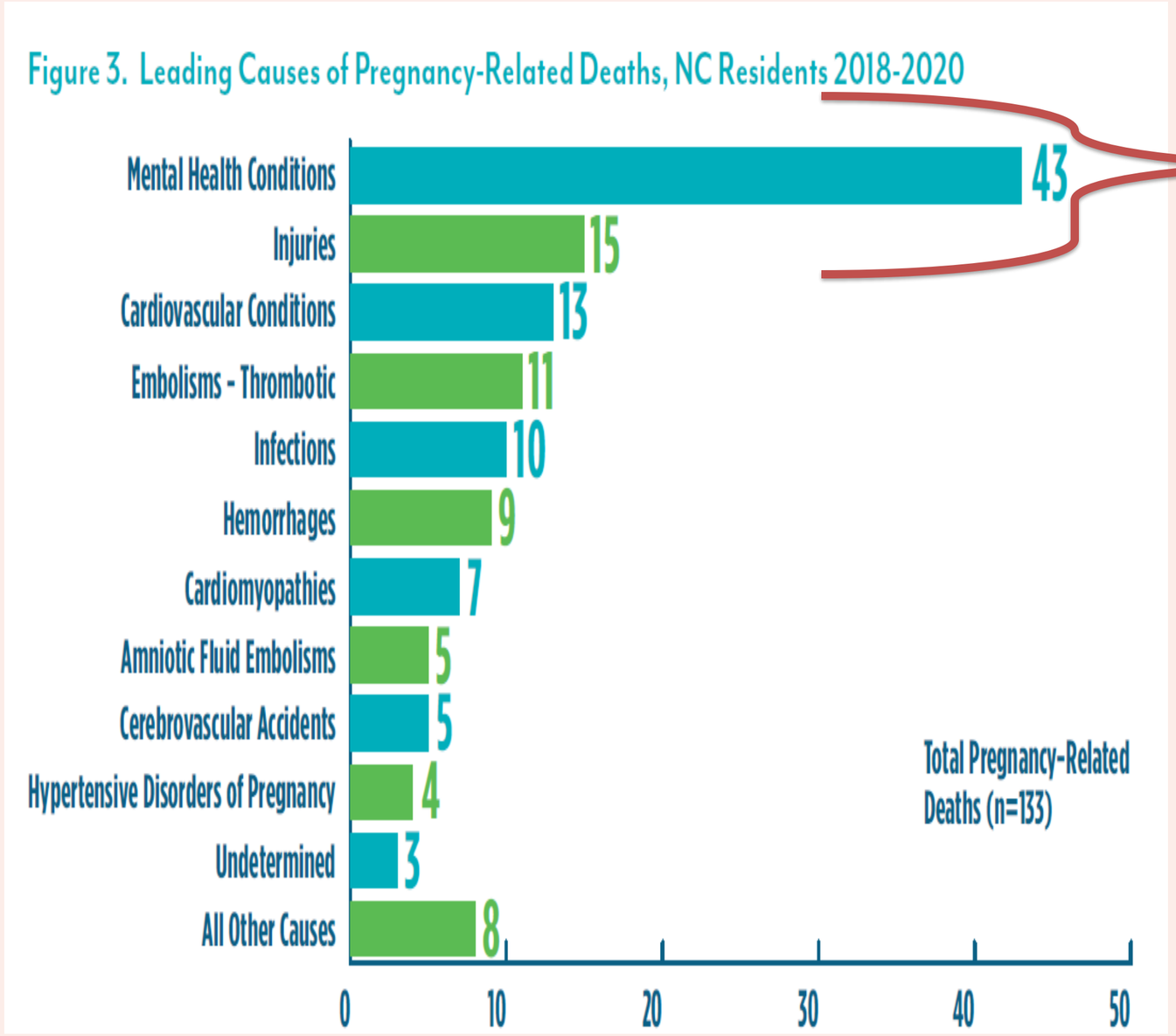
A band of states across Appalachia — Kentucky, West Virginia, Ohio, Pennsylvania and Maryland — all saw overdose deaths peak in 2021. West Coast states peaked more recently, but deaths are falling there too.

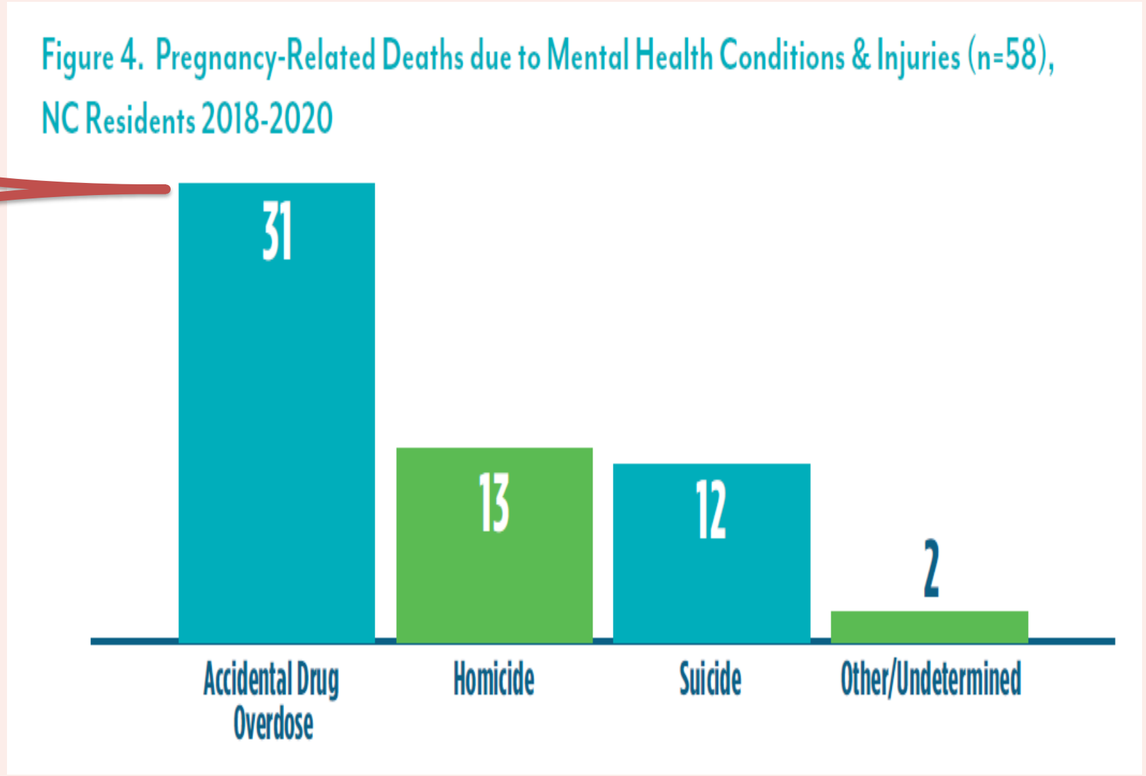


Source: Nabarun Dasgupta, University of North Carolina at Chapel Hill, based on provisional overdose data compiled by the Centers for Disease Control and Prevention

Credit: Brent Jones/NPR

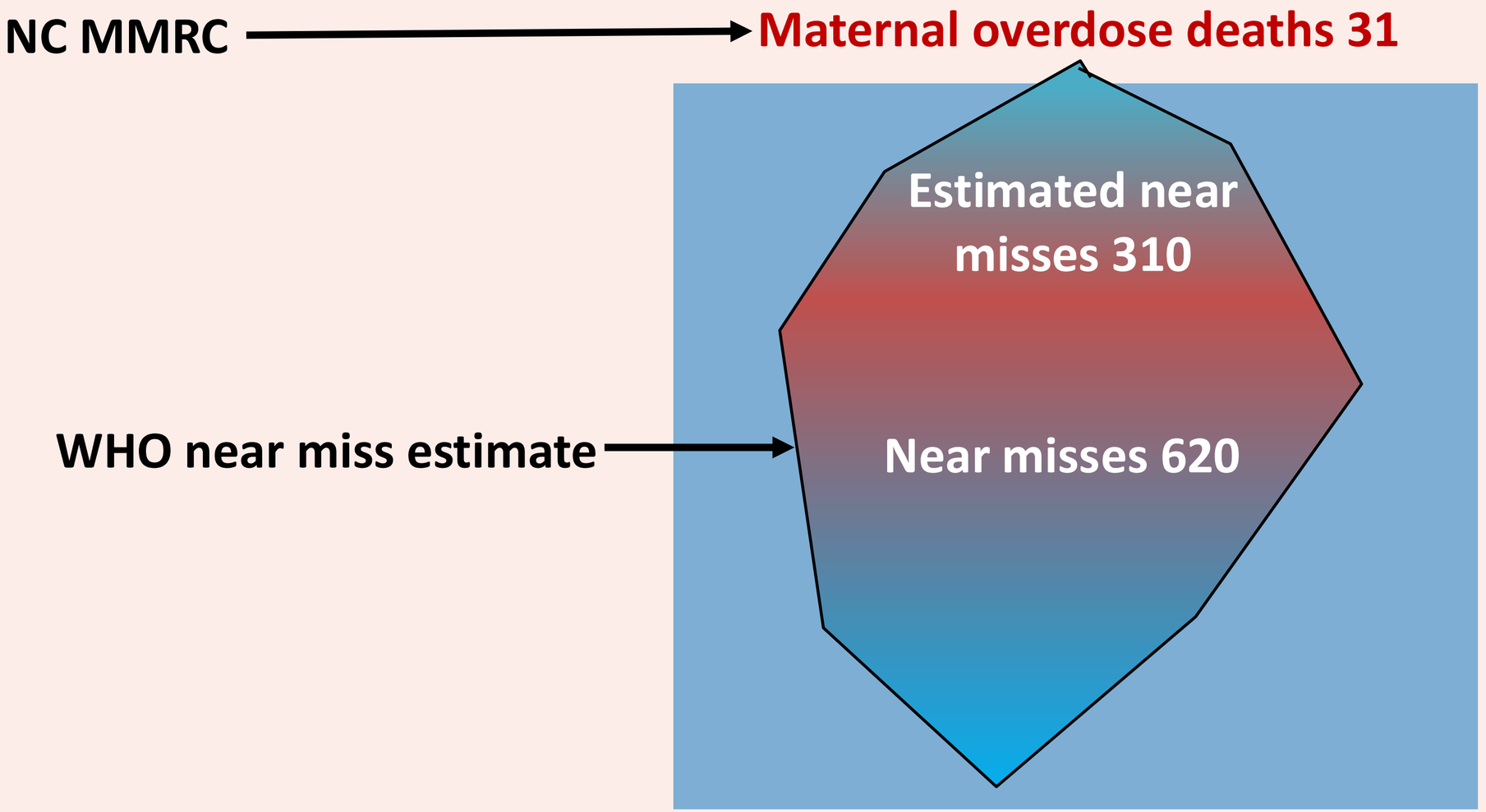
Overdose – A Driver of Maternal Mortality



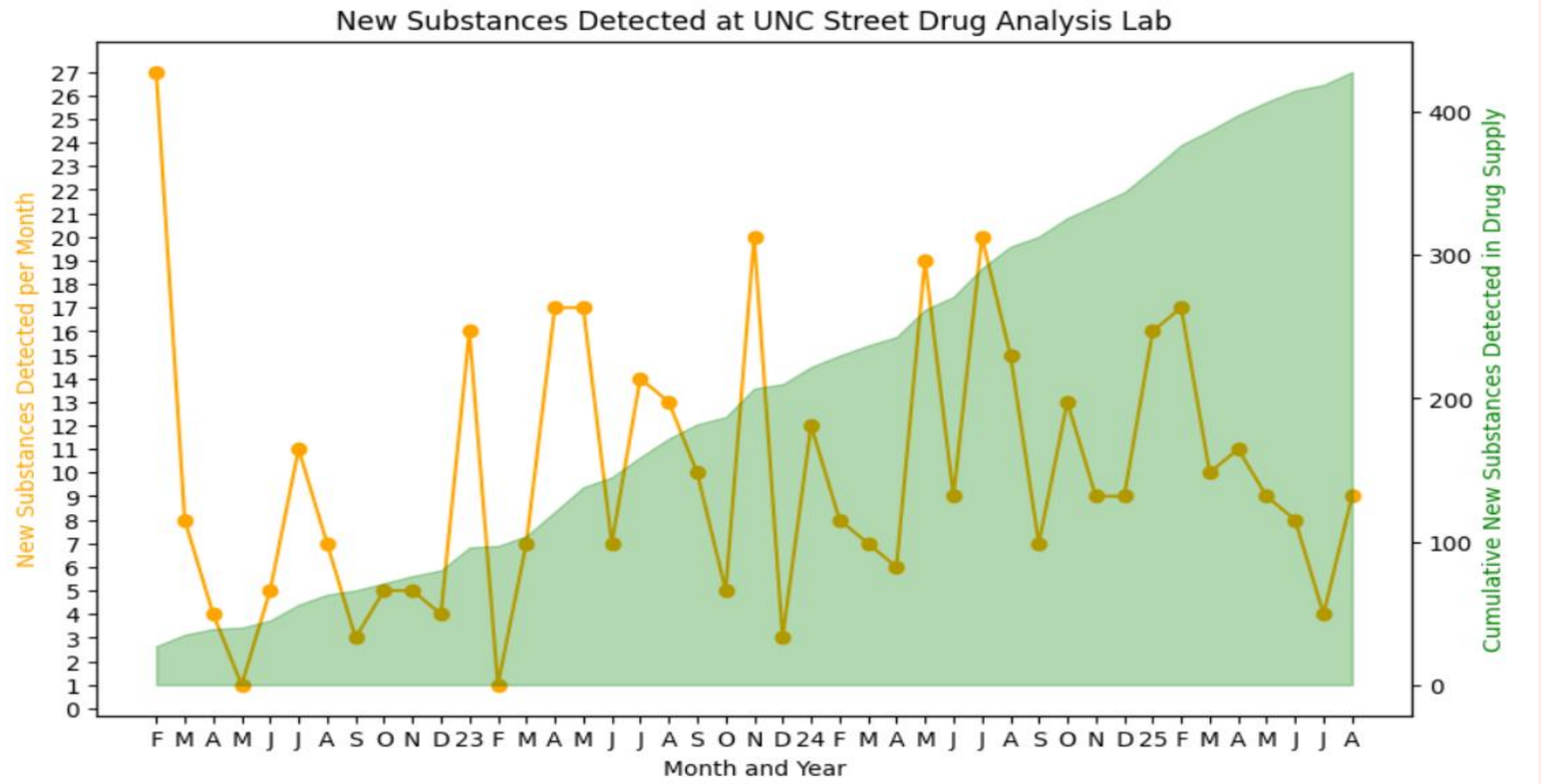


Source: NC MMRC Report

Visible and Hidden Impact of Maternal Substance Use Disorder



The Drug Supply Remains Concerning



Detections by Month

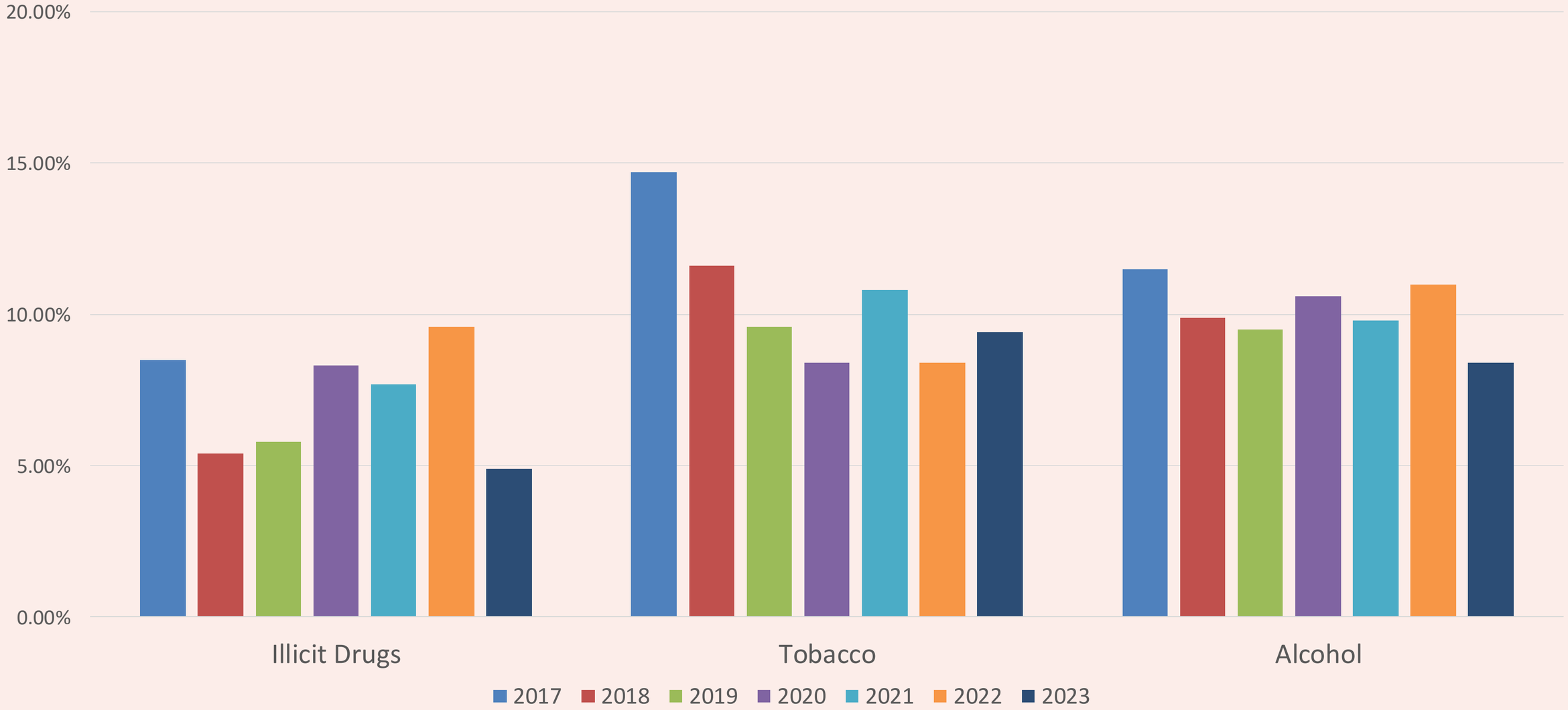
This is a record of new-to-us substances detected by month at the UNC Street Drug Analysis Lab, from February 2022 to today.

- **August 2025:** 2,5-dimethoxybenzaldehyde, alpha-pyrrolidinopentiophenone (a-PVP), benorilate, doxepin, pheniramine, propofol, tetrahydrozoline, theophylline, tizanidine
- **July 2025:** 3-hydroxy desalkylgidazepam, bupropion, clonidine, despropionyl chlorofentanyl (isomer not determined)
- **June 2025:** 1-boc-4-hydroxypiperidine, 4-hydroxy MiPT, N,N-dipropyltryptamine (DPT), boldenone undecylenate, ethylbromazolam, loratadine, ortho-methyl 4-AP-1-ethyl Carbamate, sample-lab constraints
- **May 2025:** 4-phenyl-2-pyrrolidinone, alpha-pyrrolidinoisohexanophenone, biphenyl, bromobenzene, chloromethcathinone (isomer to be determined), estradiol undecylate, methylclonazepam, mifepristone, tirzepatide

Source: https://opioiddatalab.ghost.io/

Substance Use During Pregnancy

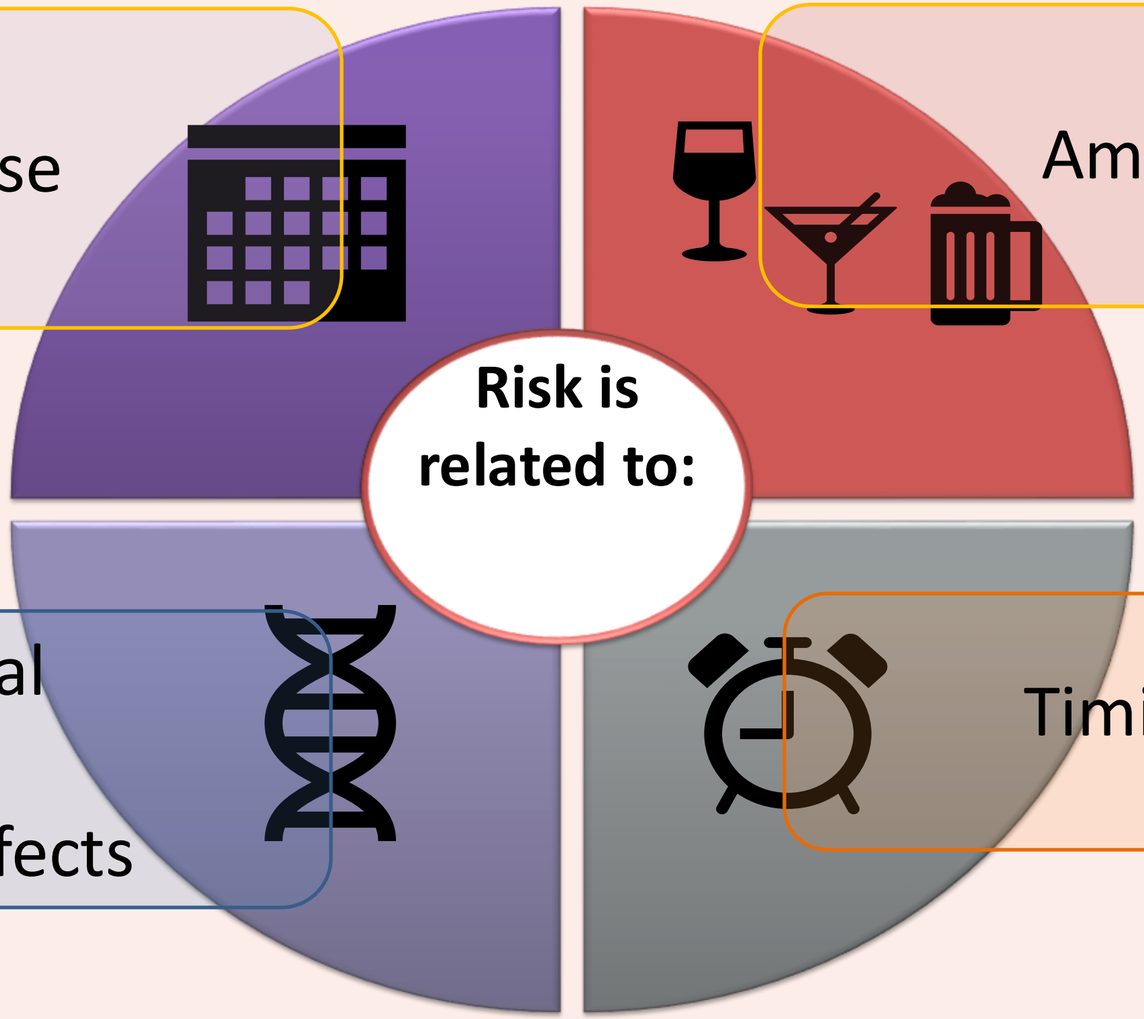
Substance Use in Past Month: Among Pregnant Women Aged 15-44



SAMHSA NSDUH Detailed Tables 2017-2024 publications

SAMHSA Office of Applied Statistics

Prenatal Effects of Alcohol and Other Drug Use During Pregnancy Depend on…



Frequency of use

Amount consumed

Genetics, maternal factors, and environmental effects

Timing of exposure

(Reviewed in DeJong et al., 2019; Kesmodel et al., 2002; Patra et al., 2011; Williams and Smith, 2015)

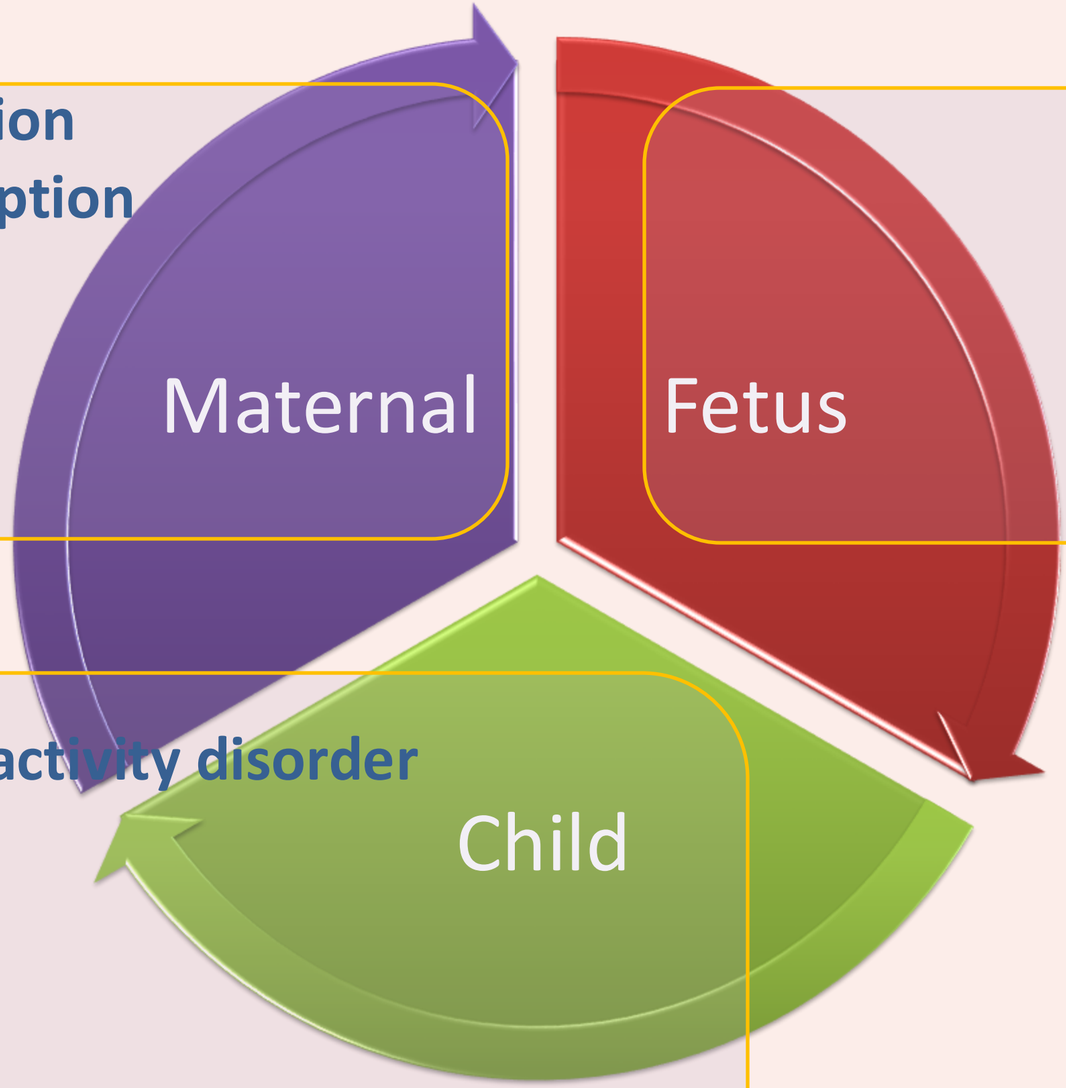
Possible Outcomes of Untreated Prenatal Alcohol Exposure

- Miscarriage and stillbirth
- Low birth weight, preterm birth and small for gestational age
- Fetal structural anomalies (e.g. craniofacial)
- Neurodevelopmental effects
- Fetal Alcohol Spectrum Disorder

(Reviewed in DeJong et al., 2019; Kesmodel et al., 2002; Patra et al., 2011; Williams and Smith, 2015)

Possible Outcomes of Untreated Tobacco Exposure

Impaired Immune Function
Reduced Nutrient Absorption
Ectopic pregnancy
Placental abruption
Placenta previa
Preterm labor



Growth Restriction
Preterm Birth
Fetal Hypoxia
Stillbirth and Miscarriage

Attention-deficit/hyperactivity disorder
Behavioral Problems
Cognitive delays
Learning disabilities
Respiratory Issues
Increased Risk of Nicotine Dependence in Adolescence

(e.g., Buka et al., 2003, Cnattingius, S. 2004, DiFranza, J. R., & Lew, R. A. 1995, Tong, V. T., et al. 2013, Wakschlag et al., 2002)

Possible Outcomes of Untreated Cannabis Exposure

Maternal

- Concurrent use of tobacco, alcohol, or other substances
- Higher rates of anxiety, depression, and stress
- Gestational hypertension
- Preeclampsia
- Weight gain less than or greater than guidelines
- Placental abruption

Fetal

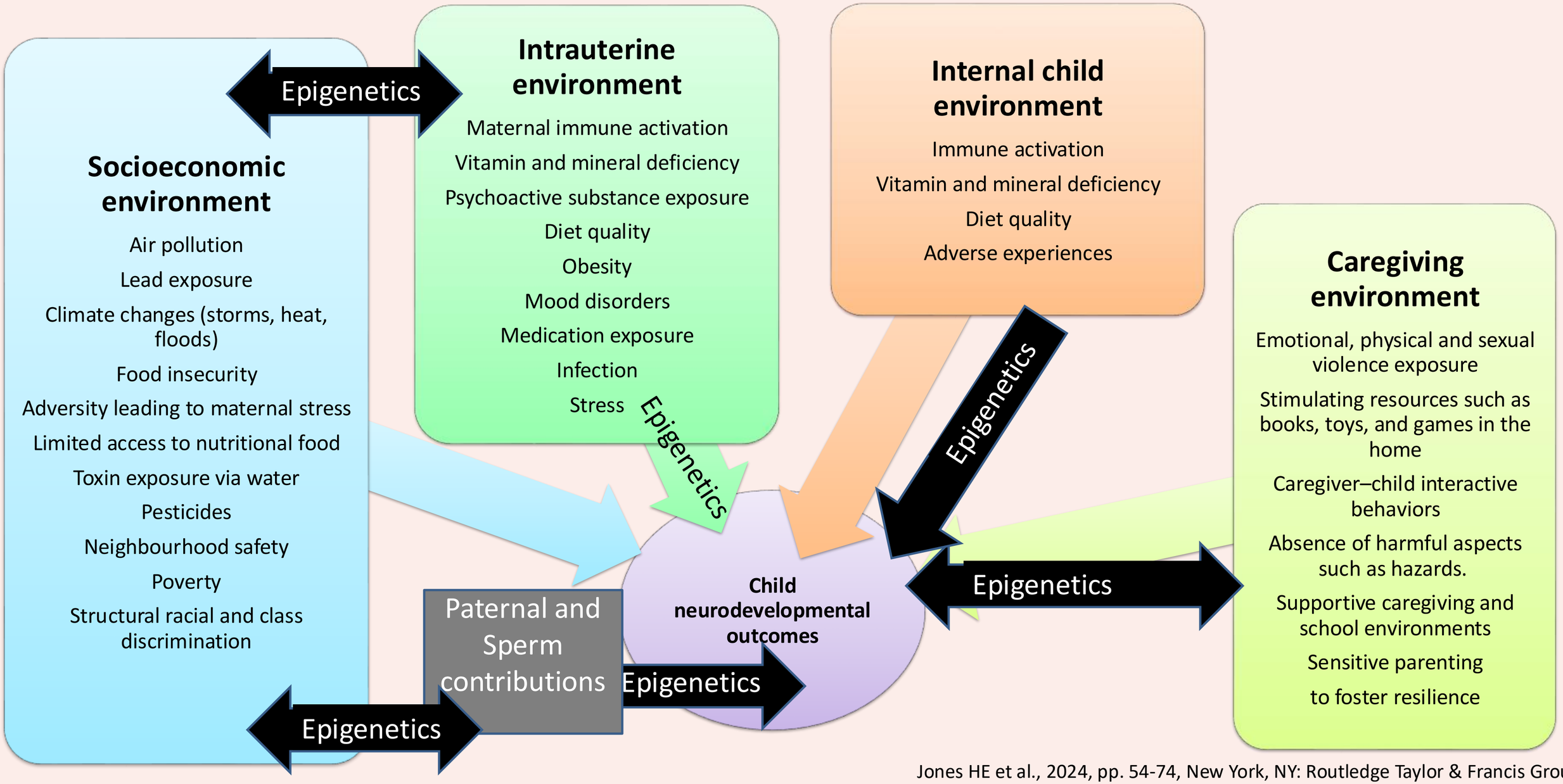
- Preterm birth
- Small for Gestational Age
- Perinatal mortality even after accounting for prenatal tobacco use

Child

“but there is little evidence that prenatal cannabis exposure adversely impacts behavioral or cognitive outcomes in early childhood, with the exception of attention and externalizing problems.”

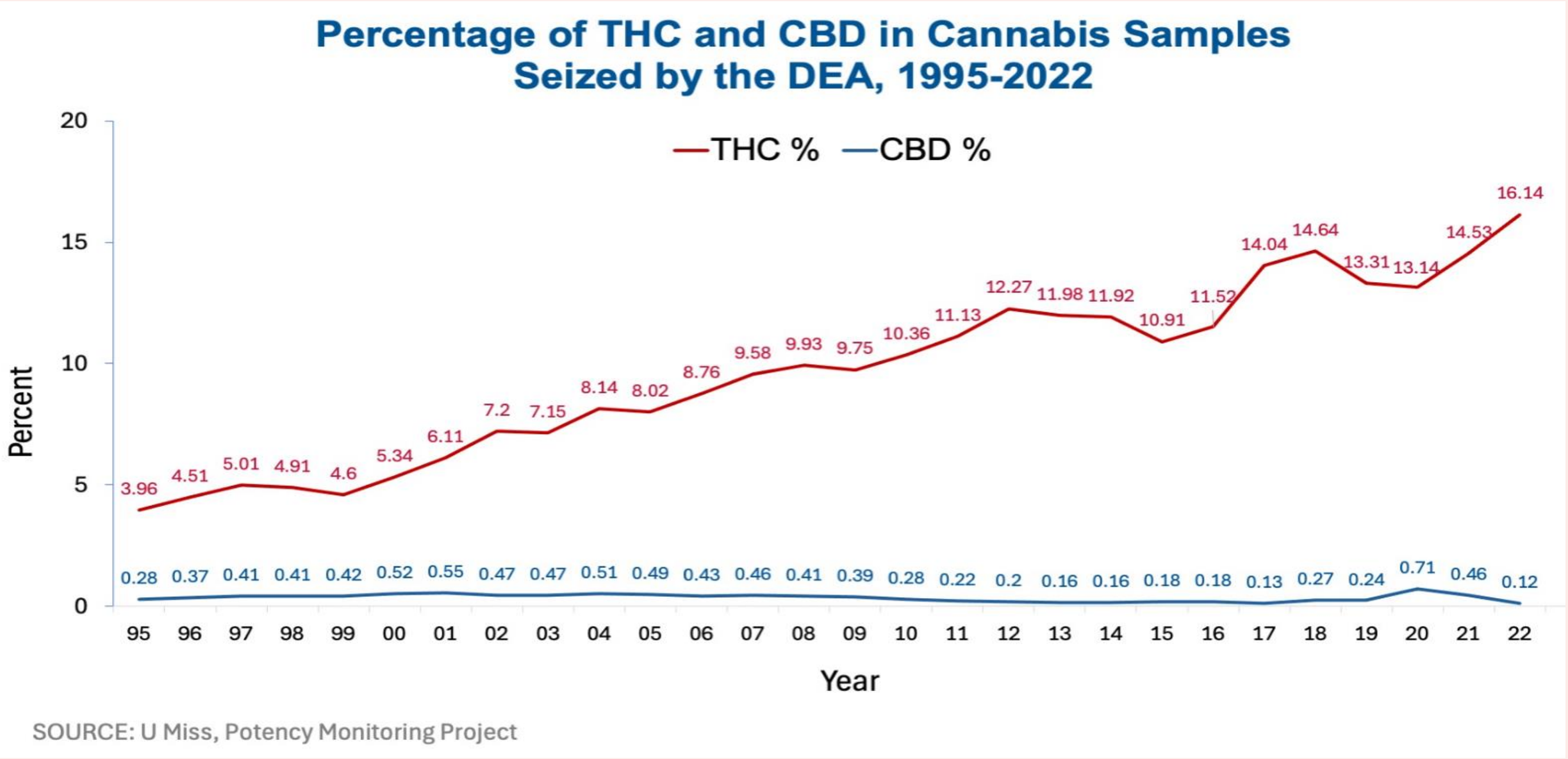
Young-Wolff et al., 2019, 2024, Lo et al. 2024, Sorkhou M, et al. 2024

Prenatal Exposure to Substances: One of Many Factors That May Influence Child Outcomes



Jones HE et al., 2024, pp. 54-74, New York, NY: Routledge Taylor & Francis Group.

Stronger and More Potent THC Products



https://nida.nih.gov/research/research-data-measures-resources/cannabis-potency-data

Question

What barriers do pregnant women face in seeking treatment for substance use disorders?

Barriers to Care

FEAR is the biggest and most common answers

- **Fear of loss of custody**
- **Fear about stigma/shame and privacy**
- **Fear over not wanting to be away from children/partner**

Other barriers to treatment

- **Lack of childcare**
- **Lack of transportation**

1971

Fewer studies have examined the stated reasons women do not seek medical care during their pregnancies. Slatin (1971) in an attempt to demonstrate the effectiveness of a maternal and infant care project, studied a sample of women who received no prenatal care and found that 30% of the sample of 64 women had no reason for not obtaining care during their pregnancies. The other 70% of the sample noted financial problems and transportation problems or were fearful or were new to the city.

1977

pulation to seek enrollment in a methadone maintenance program. An active history of illicit drug use was associated with less prenatal care (Table I), due possibly to the addict's fear of identification. Although methadone maintenance led to more consistent prenatal care, 15% of this group received no prenatal medical attention, reinforcing the urgency for treatment programs to encourage and assure prenatal clinic attendance for their patients.

1983

present problems for some women, but that more often it is the internal barriers which prevent pregnant women from obtaining prenatal care. Younger women especially cite reasons of fear, depression, and denial as reasons for not seeking medical care until delivery. If one assumes that an answer of "no particular reason" for not seeking care can also be interpreted as a form of denial, a larger proportion of the older groups fall into the internal barriers category.

Frazer, Z., McConnell, K., & Jansson, L. M. (2019). Treatment for substance use disorders in pregnant women: Motivators and barriers. *Drug and alcohol dependence*, *205*, 107652

Joyce, K., Diffenbacher, G., Greene, J., & Sorokin, Y. (1983). Internal and external barriers to obtaining prenatal care. *Social work in health care*, *9*(2), 89–96..

Kandall, S. R., Albin, S., Gartner, L. M., Lee, K. S., Eidelman, A., & Lowinson, J. (1977). The narcotic-dependent mother: fetal and neonatal consequences. *Early human development*, *1*(2), 159–169.

Myth, Stigma, Bias and Discrimination remain the #1 Barriers

Living Experience

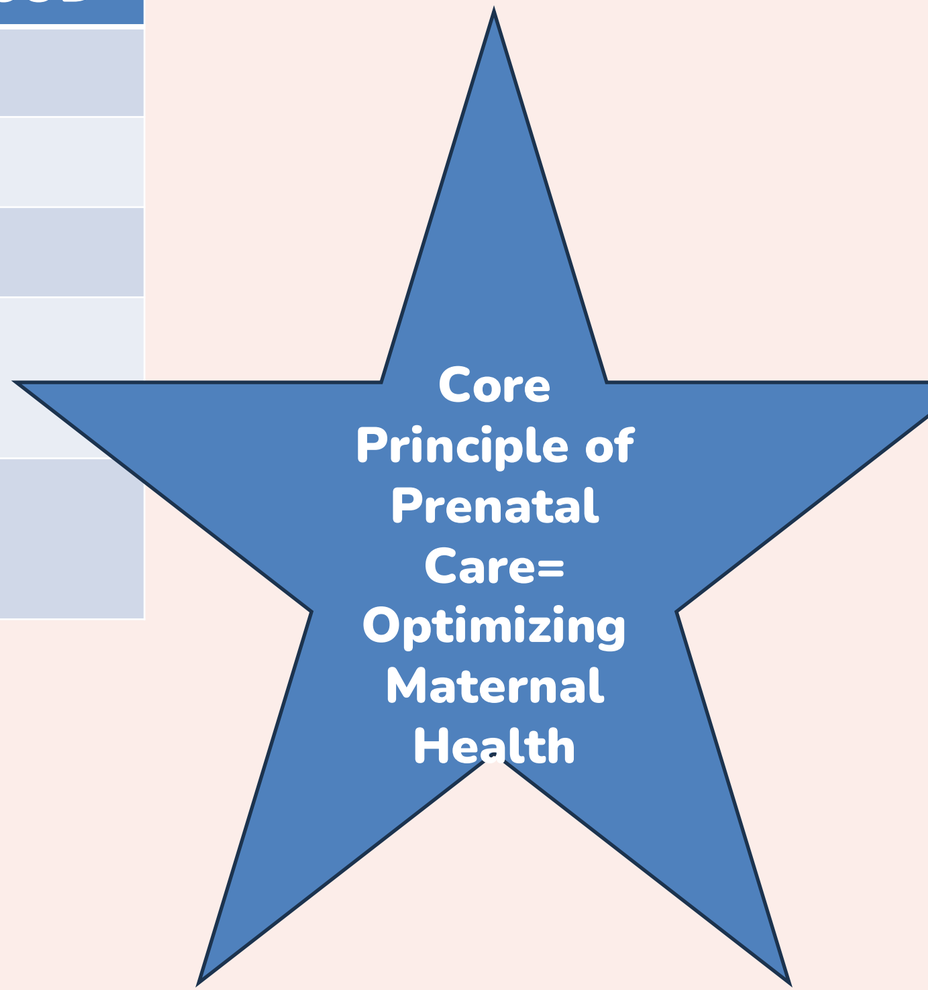
How you see me dictates how you treat me.

How you treat me affects my sense and feelings of safety and trust.

I go where I feel safe and avoid unsafe places

Treated vs Un-Treated Substance Use Disorder

	No SUD	Treated SUD	Untreated SUD
Preterm Birth	8.7%	10.1%	19.0%
Low Birthweight	5.5%	7.8%	18.0%
Fetal Death	0.4%	0.5%	0.8%
Neonatal Mortality	0.4%	0.4%	1.2%
Post Neonatal Mortality	0.05%	0.03%	0.1%



Kotelchuck M et al., The Prevalence and Impact of Substance Use Disorder and Treatment on Maternal Obstetric Experiences and Birth Outcomes…Matern Child Health J. 2017 21:893-902.

Question

Knowing we need to earn trust, where are the places we can interact with individuals who are pregnant and might be considering treatment for substance use disorders?

Clinical Pearls for Starting the Conversation

Ask and be curious: Start with open ended questions
Have talking points and have objective information ready to share

Listen: What is the role cannabis is playing in their life?

You are not alone!
There are multiple resources available and caring professionals for you to consult with, email, and call

Have a dialogue: I am here to support you- I want to learn about what helps you; may I give some information?

Acknowledge patient perspective: I can understand that this is hard, I can see how you think cannabis is natural and natural is safe

Provide education and recommend reduction and quitting: You may not be able to change someone's mind but you may be able to raise doubts and that can lead to behavior change considerations

Remember that some women may trust the cannabis retailer and view them as the specialist

Practical Points For Engagement

1. Lead with Nonjudgmental Compassion
Pearl: *“Be Curious, not corrective.“*

2. Let the patient guide you
Pearl: “*What matters to them, not what is the matter with them”*

3. Lower the Barrier to Entry
Pearl: *"Make the first step easy to take."*

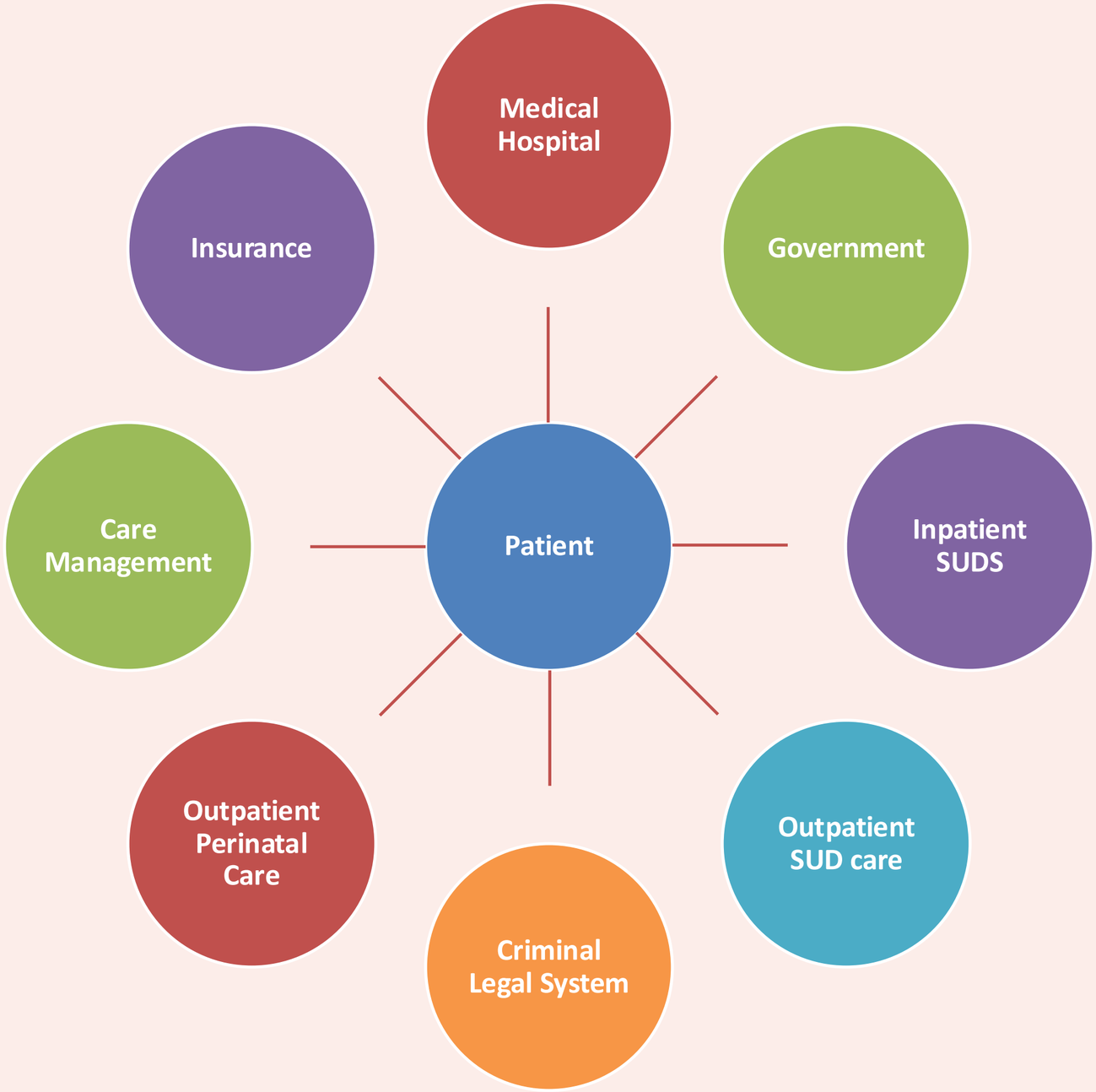
4. Partner with Trust Anchors
Pearl: *"Leverage the trust she already has.“*

5. Focus on the Baby as a Motivator, Not a Threat
Pearl: *"Use the baby to build bridges, not walls.“*

6. Transparency is Key to Trust
Pearl” “Nothing about me without me”

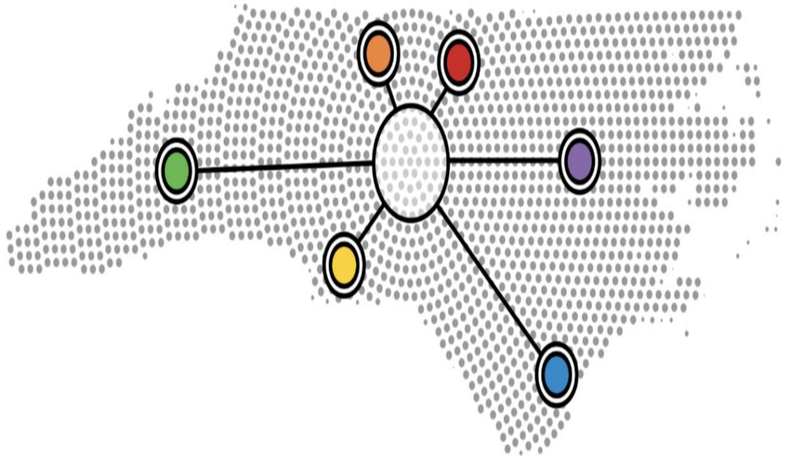
Consider polysubstance use in treatment planning!

Siloed Model of Care



North Carolina: Perinatal Substance Use Disorder Network

NC PSUD NETWORK



https://psudnetwork.org/nc-psud-network/

PROJECT CARA of Western North Carolina

SUN Project Substance Use Network

HORIZONS HEALING CENTRATIONS

THE TIDES Healthy Mothers Having Healthy Babies

ECU IMPACT Integrated Model of Perinatal Addiction Care and Treatment

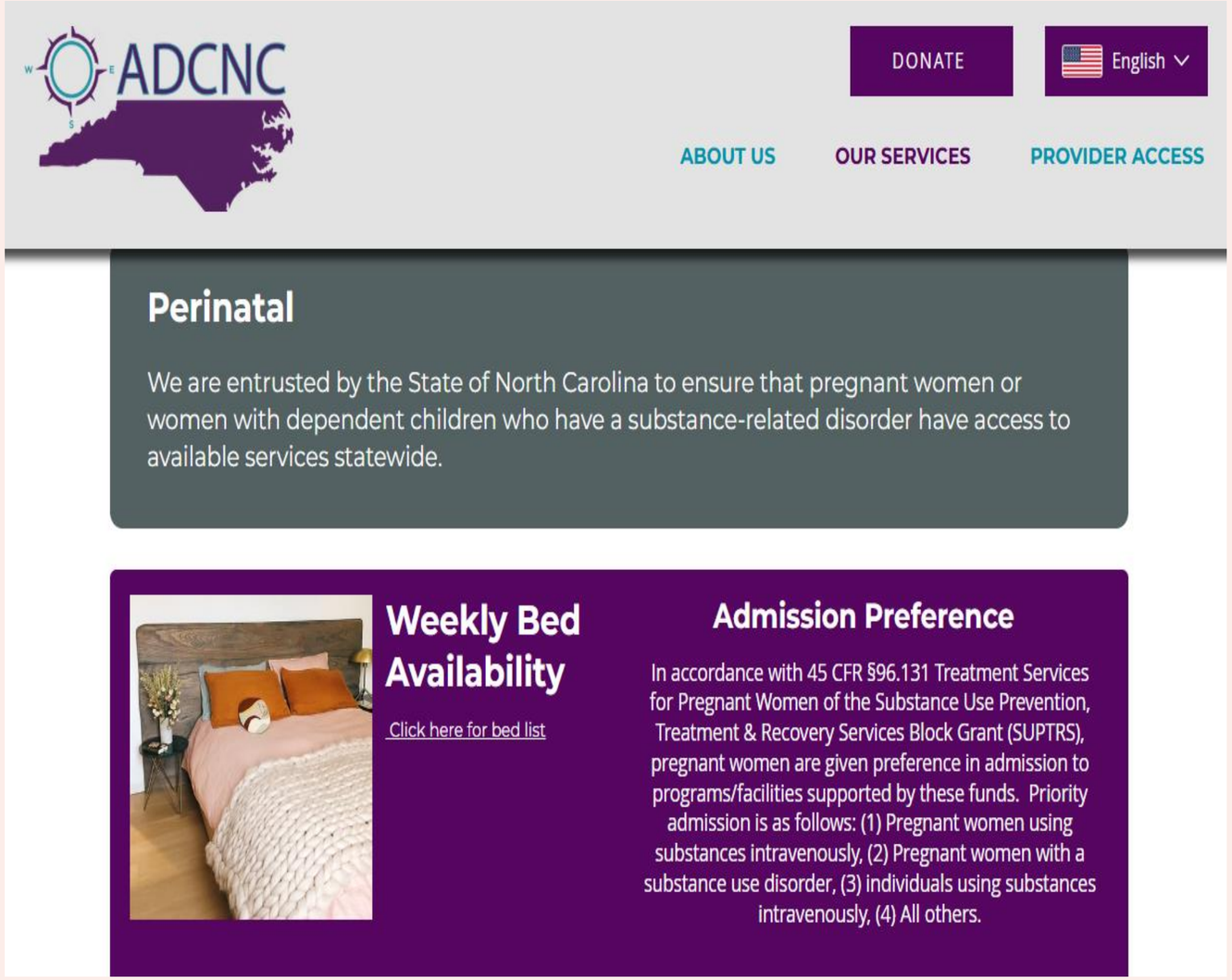
CONE HEALTH

North Carolina: Perinatal Substance Use Disorder Resources

Connecting Women to Treatment in North Carolina

The NC Perinatal Substance Use Specialist at the Alcohol Drug Council of North Carolina, provides information and referral to alcohol and drug treatment for pregnant and parenting women. She can be contacted at 1-800-688-4232.

17 programs with residential services for pregnant and/or parenting women and their children



https://www.alcoholdrughelp.org/perinatal

UNC Horizons – Outpatient and Residential

Trauma and SUD Treatment

2 Residential sites and/or Outpatient Care

Childcare and Transportation

Medical Care
Integrated OB/GYN clinic
Psychiatry
Opioid use disorder medication

Vocational Rehabilitation
Housing
Legal aid

Parenting Education and Early Intervention

Completer Family Outcomes

- Birth outcomes are similar to general population of North Carolina
- 77% of RESIDENTIAL WOMEN HAD A JOB WHEN THEY LEFT
- 95% of residential families MAINTAINED OR IMPROVED CPS CASE STATUS

Jones, H.E., Andringa, K., Carroll, S., et al., 2024. Comprehensive treatment for pregnant and parenting women with substance use disorders and their children: the UNC Horizons story. *Maternal and child health journal*, *28*(3), pp.409-425.

Project CARA- Outpatient

Hub and Spokes

PROJECT CARA of Western North Carolina

Collaborative Partnerships

The Hub

CLINICAL CARE
Medical Director
Lead RN
Lead LCAS Lead Navigator

Operations
Medical Director
Program Coordinators

RESEARCH

EDUCATION & TRAINING

NETWORK

JFKADATC

VAYAHEALTH Care Coordination

MAHEC

Community Care of North Carolina
Carolina Community Health Partnership
OB Pregnancy Care Managers

Insight Human Services
Women's Recovery Ctr

BHG Behavioral Health Group

Buncombe County
Buncombe County DHHS
Prevention and START

PISGAH LEGAL SERVICES
On-site legal assistance

Mary Bacon House
Residential treatment center

Mission Hospital

Cleveland County North Carolina
Cleveland Health Department

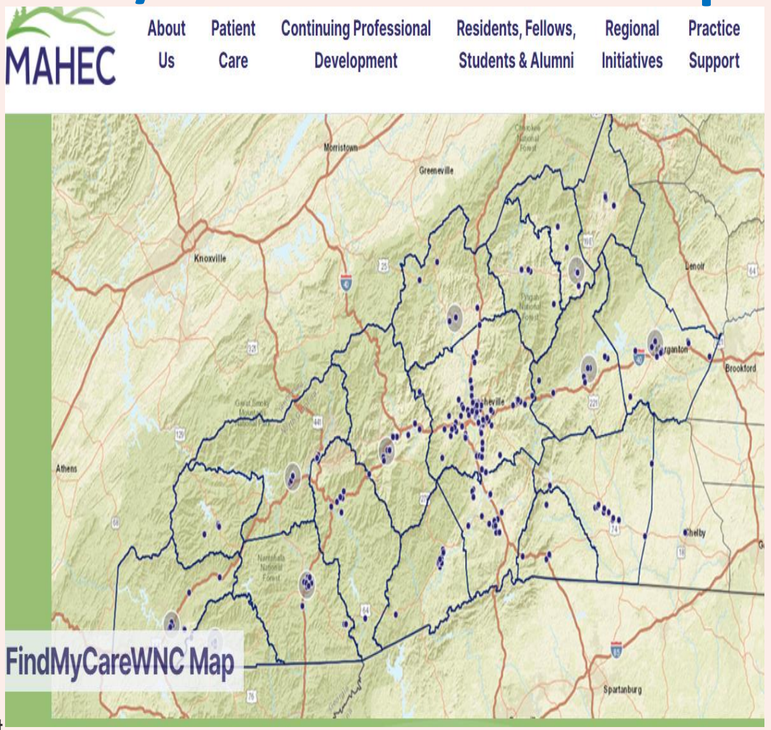
MAHEC
MAHEC Ob/Gyn Specialists at Franklin
MAHEC Women's Care at Brevard

Blue Ridge Health
Blue Ridge Health Columbus
Blue Ridge Health Henderson
Blue Ridge Health Haywood

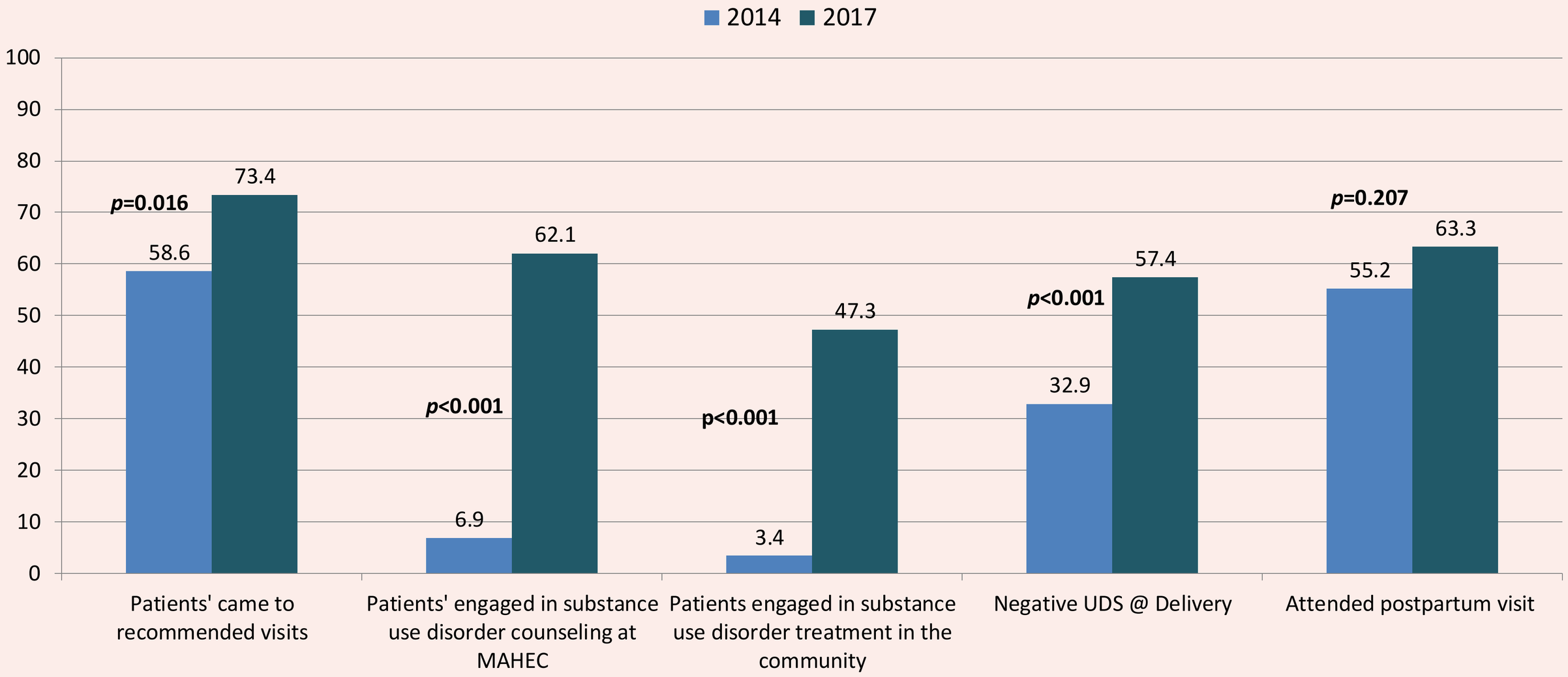
Mission Health
McDowell Women's Care

Carolina Family Health Centers, Inc.
Freedom Hill Community Health Center
Edgecomb - Carolina Family Health Center

https://mahec.net/regional-initiatives/itacc-resource-map



Integrated Care Changes Outcomes



Project CARA Outcomes Pre- and Post-Integration

Jenna's Project Outcomes

- Connected with two prisons, 40 jails, and one federal prison
- Reduced perinatal incarceration by intervening at the jails

- n=132 unduplicated pregnant and postpartum for 6 months
  - 1.5% return to illicit substances
  - 1.5% return to incarceration
  - 0% opioid related-deaths or injuries

- In 2021, integrated a SUD counselor at NCCIW's prenatal clinic

HORIZONS

HEALING GENERATIONS

UNC Horizons Program
Post-release Substance Use Disorder Treatment Services for Women

- THE UNC HORIZONS PROVIDES TRAUMA-INFORMED INTEGRATED POST-RELEASE SUBSTANCE USE DISORDER TREATMENT FOR PREGNANT, POSTPARTUM, AND PARENTING PEOPLE RETURNING TO THEIR COMMUNITY UPON RELEASE FROM A PRISON SETTING.
- OUR GOAL IS TO WORK WITH COMMUNITY AGENCIES AND HELP PEOPLE HAVE HEALTHY CAREGIVER AND CHILD CONNECTIONS, OBTAIN AND MAINTAIN LONG-TERM RECOVERY, REDUCE THE LIKELIHOOD OF LEGAL INVOLVEMENT DUE TO SUBSTANCE USE, AND HELP PROMOTE HOPE AND HEALING.

Individual Services Offered to Support Your Unique Needs:

- Comprehensive clinical assessments
- Substance use treatment plans to promote a healthy lifestyle for mother-baby post-incarceration and reduce recidivism.
- Tools to help manage emotional and behavioral changes through counseling and case management
- Referral to physical and behavioral health services
- Referral to medication-assisted treatment programs to access medication for opioid and alcohol use disorders post-release
- Telehealth evidence-based recovery and parenting groups and individual services
- Referral to legal services to support caregiver-child reunification efforts and visitation post-release, when appropriate

Who is Eligible for Services:

- individual residing at North Carolina Correctional Institute for Women. Anson Correctional and Western Correctional Center. and Black Mountain Treatment Center for Women with a substance use disorder
- Individual preparing to transition from a federal or private prison and returning to North Carolina

How to Get Connected to Our Services:

- For immediate services, please contact your case manager, ACDP counselor
- Other referrals will be accepted by family members, court officials, or other supports.
- **Phone: 919-903-0591**
- **Email: HorizonsWake@med.unc.edu**

A justice-involved clinical team member is in the vicinity near the following prisons:

North Carolina Correctional Institute - Pre and post-release
Anson Correctional - Post-release only
Western Correctional - Post-release only

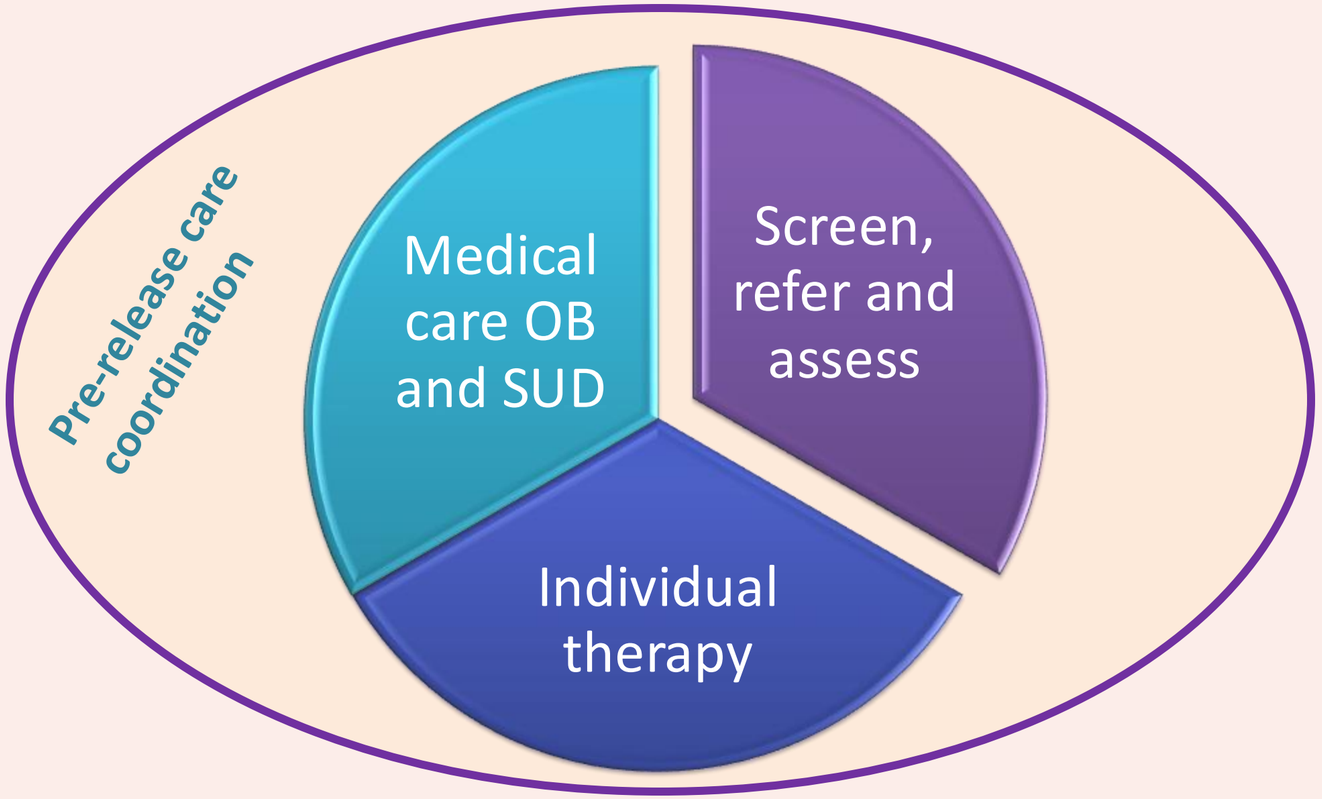
Providing behavioral health resources and creating a safe space for people impacted by substance use returning to the community from a women's prison in North Carolina

Director of Community Engagement and Treatment Services: Essence Hairston, MSW, LCSW3, LCAS, CSI
essence_hairston@med.unc.edu

This flyer was created using CANVA

Hairston E, Jones HE, Johnson E, Alexander J, Andringa KR, O'Grady KE, Knittel AK. J Addiction Medicine. 2024;12:10-97.

Working Inside and Outside Prison Walls



Justice-Involved and Reentry Services:
919.903.0591

Perinatal SUD and Reentry Housing Services:
919.698.9721

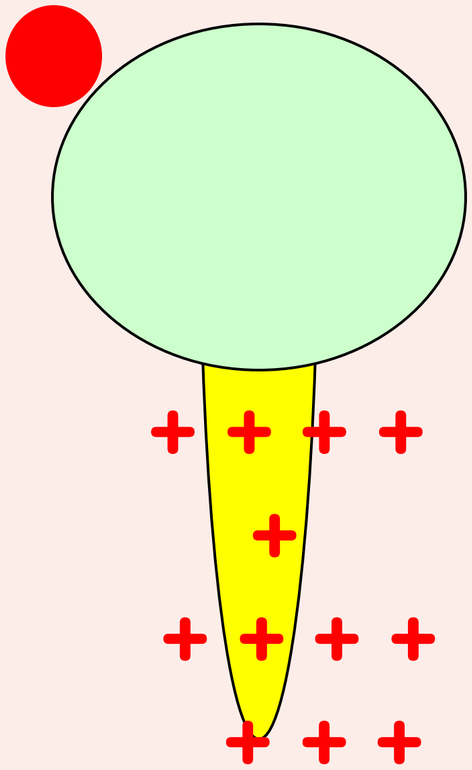
Incarcerated Perinatal Behavioral Health Services

Source: https://forefdn.org/policy-brief-integrating-obstetrical-and-substance-use-disorder-treatment-for-pregnant-and-postpartum-people-in-prisons/

Medication for Opioid Use Disorder

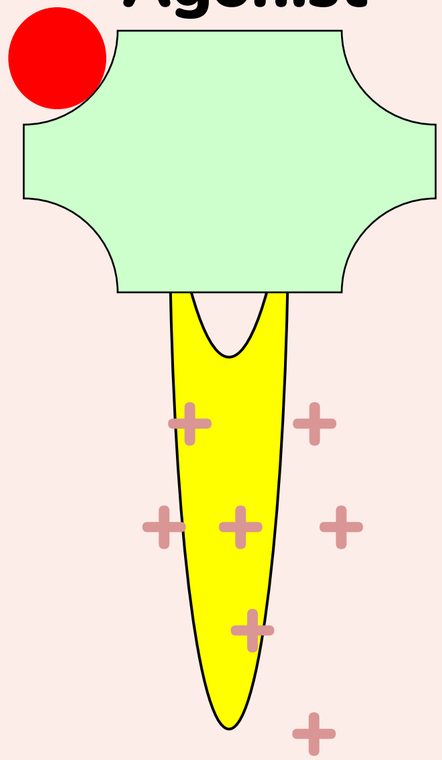
Methadone

Agonist



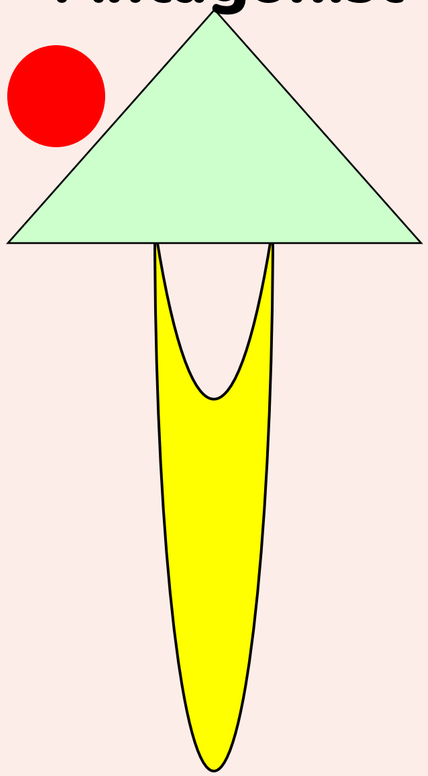
Buprenorphine

Partial Agonist



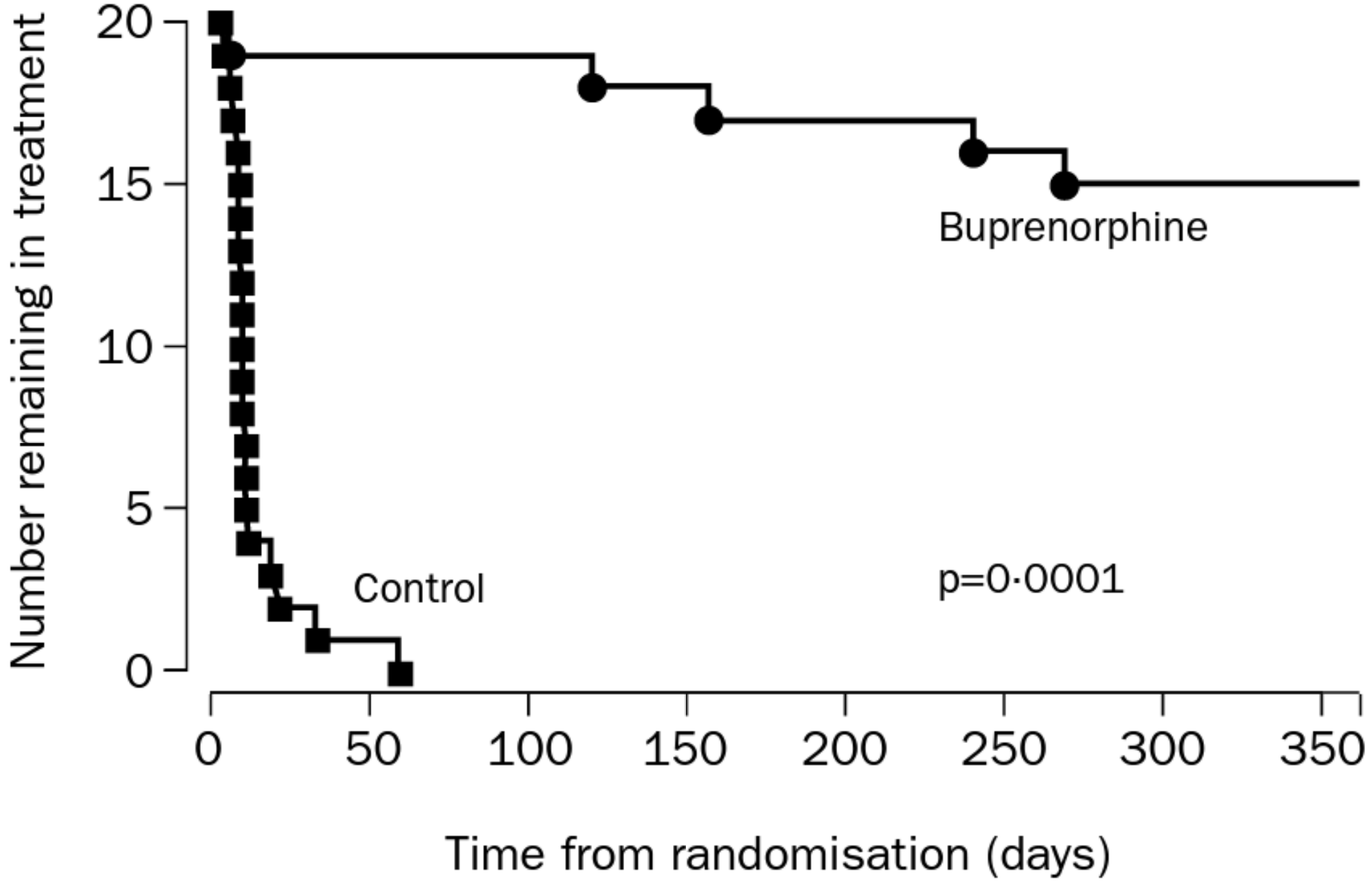
Naltrexone

Antagonist



Jones HE. Buprenorphine. In Fischer GL, Roget NA (Eds). Encyclopedia of Substance Abuse Prevention, Treatment, and Recovery, 2009, pp. 146-148, Thousand Oaks, CA: Sage; Jones HE. Practical considerations for the clinical use of buprenorphine. Science & Practice Perspectives. 2004;2:4-20.

People Died Without Medication



Use of illicit drugs in the buprenorphine group was rare; results from thrice-weekly supervised urine analyses showed that a mean of 74·8% (SD 59·6%) of samples obtained were negative for the substances analysed. We noted a significantly impaired survival in the controls, in which four people died during the treatment period, versus none in the buprenorphine group (Cox's regression, p=0·015).

Kakko, J., et al. (2003). 1-year retention and social function after buprenorphine-assisted relapse prevention treatment for heroin dependence in Sweden: a randomised, placebo-controlled trial. *Lancet (London, England)*, *361*(9358), 662–668.

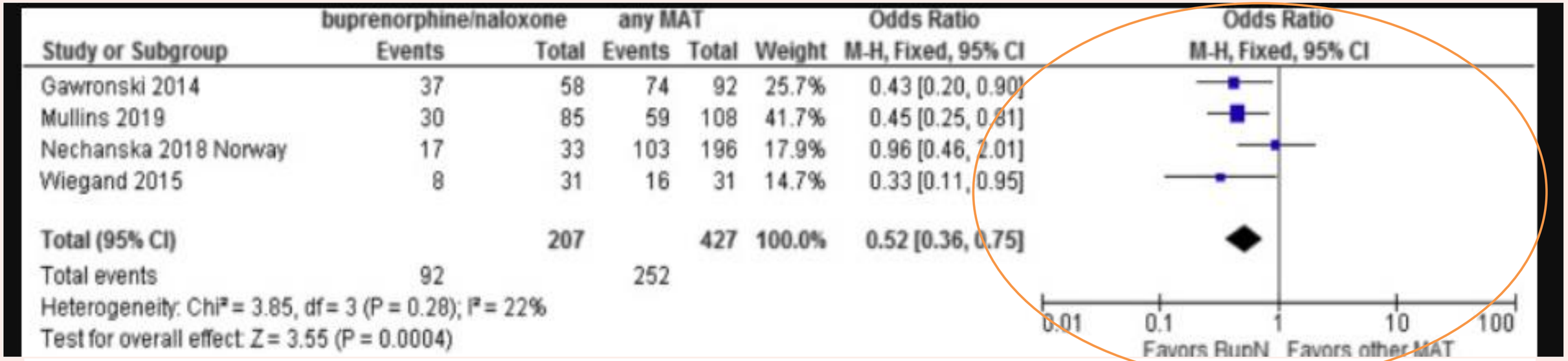
SAMHSA Clinical Guide Recommendations

- **Medication assisted withdrawal is not recommended during pregnancy**
- **Buprenorphine and methadone are the safest medications for managing OUD during pregnancy**
- **Transitioning from methadone to buprenorphine or from buprenorphine to methadone during pregnancy is not recommended**
- **Breastfeeding is recommended for women on buprenorphine and methadone**
- **Neonatal abstinence syndrome (NAS) should not be treated with dilute tincture of opium**

The *Clinical Guide* consists of 16 factsheets: Prenatal Care (Factsheets #1–8); Infant Care (Factsheets #9–13); and Maternal Postnatal Care (Factsheets #14–16) and 4 NEW ones on Plans of Safe Care

https://store.samhsa.gov/product/working-child-protective-services-support-pregnant-and-parenting-people-their-infants-and

Advances Regarding Medications To Treat OUD During Pregnancy



	BUP-NX, n (%)	BUP, n (%)	Crude, OR (95% CI)	Adjusted OR* (95% CI)
Return-to-opioid use	12 (36)	17 (23)	1.88 (0.77 to 4.60)	1.93 (0.78 to 4.76)
Received pharmacologic treatment for NOWS	13 (39)	33 (45)	0.76 (0.32 to 1.76)	0.65 (0.27 to 1.54)
	BUP-NX, mean ± SD	BUP, mean ± SD	Crude ß (95% CI)	Adjusted ß² (95% CI)
NOWS opioid treatment days	3 ± 6	8 ± 5	−4.18 (−8.07 to −0.30)	0.59 (−3.04 to 4.24)

Link HM, Jones H, Miller L, Kaltenbach K, Seligman N. Buprenorphine-naloxone use in pregnancy: a systematic review and metaanalysis. Am J Obstet Gynecol MFM. 2020 Aug;2(3):100179.

Perry, B. , Vais, S. , Boateng, J. , Jain, M. , Wachman, E. & Saia, K. (2022). Buprenorphine-naloxone Versus Buprenorphine for Treatment of Opioid Use Disorder in Pregnancy. *Journal of Addiction Medicine, 16* (6), e399-e404. d

Evidence Based Medication Recommendations to Treat Opioid Use Disorder – Perinatal Period

1. **Medication initiations in the complex drug supply era need an individualized approach**
2. **Split dosing may improve maternal adherence to treatment**
3. **It can help stabilize methadone and buprenorphine levels, reducing withdrawal symptoms.**
4. **Research indicates potential benefits for fetal outcomes with methadone exposure compared to single dosing.**
5. **Split dosing may minimize side effects such as sedation in pregnant patients.**
6. **Individualized dosing schedules are essential for optimizing treatment, many pregnant patients need dose increases as pregnancy advances and may need a reduction after delivery**

Khan NZ, Hand DJ, Qian E, Conklin JL, Johnson E, McCarthy JJ, Ramage M, Rudolf V, Schauberger C, Stoller KB, Terplan M, Jones HE. Split-dosing of Methadone During Pregnancy and Postpartum Period: A Systematic Review of Outcomes. J Addict Med. 2025 Jul-Aug 01;19(4):358-364. Martin CE, Shadowen C, Thakkar B, Oakes T, Gal TS, Moeller FG. Buprenorphine dosing for the treatment of opioid use disorder through pregnancy and postpartum. Curr Treat Options Psychiatry. 2020 Sep;7(3):375-399.

What About Long Acting Buprenorphine Formulations in Pregnancy?

Monthly BUP-XR during pregnancy in patients with OUD

Case studies (*N* = 4) from clinical practice, reviewing >5 years of pregnancy and postpartum surveillance data (quantitative [*N* = 322] and qualitative) and PubMed literature (*N* = 4).

Results

- **All four neonates were delivered full-term with normal birthweight, no fetal anomalies, and no medication required for neonatal opioid withdrawal syndrome.**
- **Additionally, over 300 pregnancies have been reported through postmarketing surveillance, of which 68 have known outcomes consistent with information described in the product label.**
- **Findings from literature, postmarketing surveillance, and clinical practice case studies were consistent with the established safety profile of buprenorphine.**

Three sources of data illustrate that the use of monthly BUP-XR during pregnancy has demonstrated no increased risk and is consistent with the established buprenorphine safety profile.

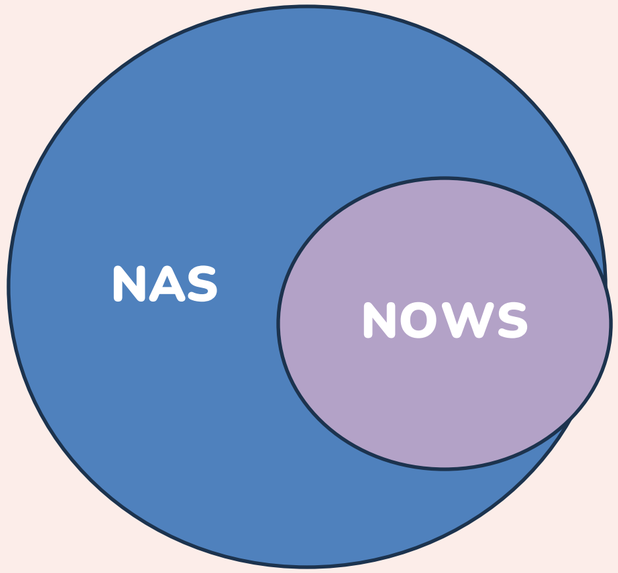
Ramage M, Bishop B, Mangano V, Mankabady B. Monthly buprenorphine depot injection (SUBLOCADE®) for opioid use disorder during pregnancy. Am J Addict. 2025 Apr 28. doi: 10.1111/ajad.70034. Epub ahead of print. PMID: 40296235.

Treatments for Perinatal Patients with Substance Use Disorders (think *and* not *or*)

Substance	Behavioral Treatments	Medication Treatments
Alcohol	Cognitive Behavioral Therapy (CBT) Contingency Management Motivational Interviewing (MI) 12-Step Programs (e.g., AA)	Naltrexone Acamprosate Disulfiram (do not use in pregnancy!)
Benzodiazepines	CBT (especially for anxiety management) MI	Tapering with benzodiazepines (e.g., diazepam) No FDA-approved maintenance meds
Cannabis	CBT MI	No FDA-approved medications
Stimulants (Methamphetamine, Cocaine)	CBT Community Reinforcement Approach Contingency Management (most effective) MI	No FDA-approved medications
Opioids	CBT Community Reinforcement Approach Contingency Management MI	Methadone Buprenorphine Naltrexone (oral or injectable)

Defining Neonatal Drug Withdrawal

Neonatal Abstinence Syndrome (NAS)/Neonatal Opioid Withdawal (NOWS)



- **Newborns cannot be “born addicted”**
- **NAS is treatable**
- **Interactions between the caregiver and child can impact resiliency/risk with potential long-term effects in some cases**

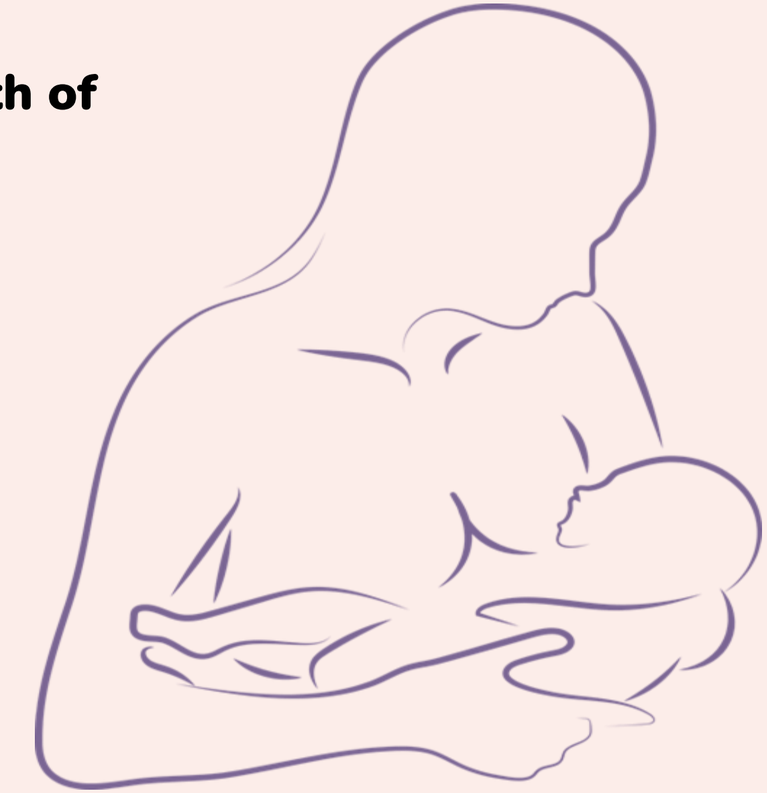
Table III. Foundational principles for the clinical definition of opioid withdrawal in the neonate

1. Substance use disorder is a disease requiring compassionate, ethical, equitable, and evidence-based care.
2. The maternal–neonate dyad is the appropriate subject of care; this definition is intended to identify clinical and supportive care needs of the dyad; shared interests should be prioritized.
3. A diagnosis of NAS or NOWS does not imply harm, nor should it be used to assess child social welfare risk or status. It should not be used to prosecute or punish the mother or as evidence to remove a neonate from parental custody.
4. Environmental factors, family influences, and social structures strongly influence neonatal outcome and should be recognized.

e.g, Finnegan et al., Addict Dis, 1975; Desmond & Wilson, Addict Dis, 1975; Jones & Fielder, Preventive Medicine, 2015. Jilani SM, Jones, HE et al., Standardizing the Clinical Definition of Opioid Withdrawal in the Neonate. J Pediatr. 2022; 243:33-39.e1

Hospital Policies Exacerbate or Mitigate Baby's Withdrawal

Policy factors that contribute to NAS, need for medication, and length of stay in neonates exposed to opioid agonists in utero:



<u>Reduces NAS Severity</u>

- **Presence of a protocol**
- **Breastfeeding**
- **Mother and baby together**

<u>Increases NAS Severity</u>

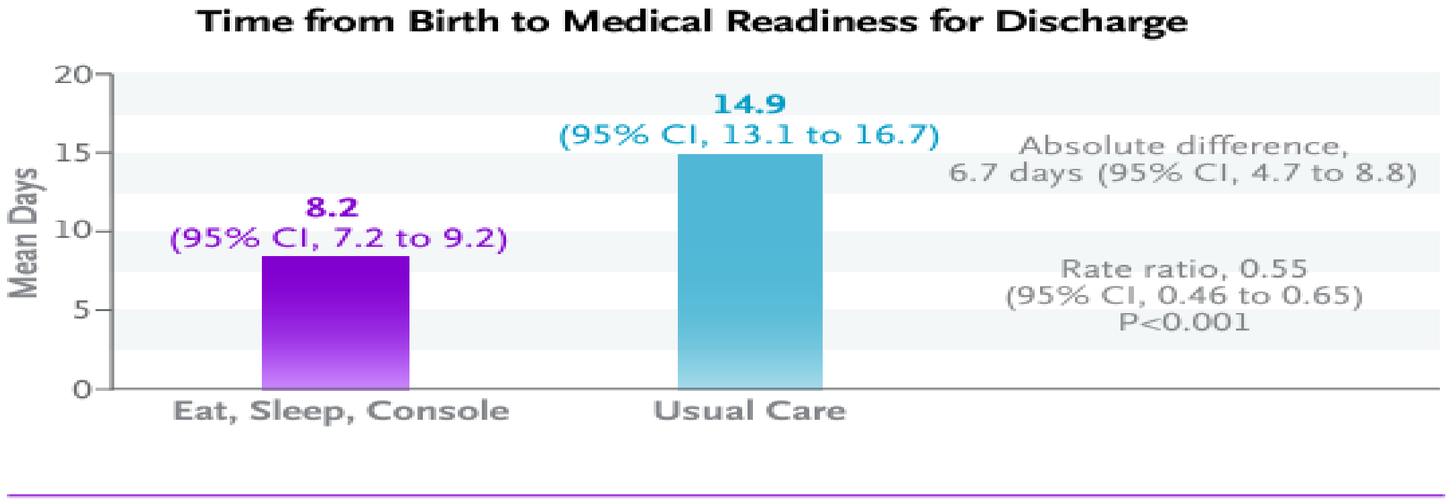
- **NICU setting**

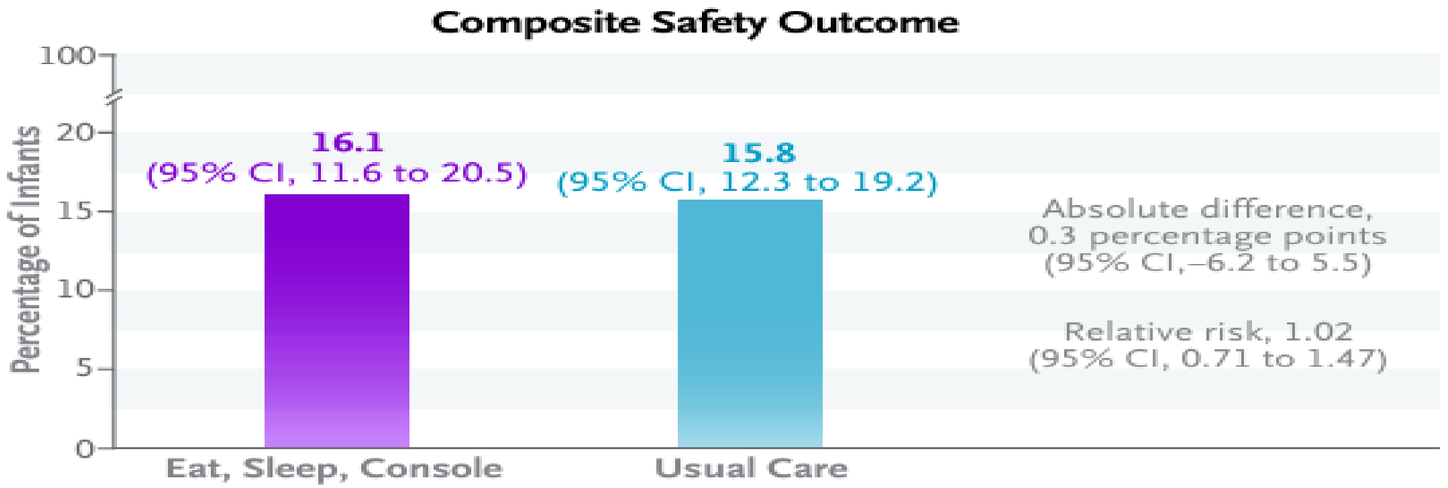
<u>Can Reduce or Increase NAS Severity- Depends</u>

- **The NAS assessment choice**
- **NAS medication choice**
- **Initiation and weaning protocols**

Kaltenbach et al., Addiction, 2012; Jansson and Velez, Curr Opin Pediatrics, 2012; Hall ES et al., Pediatrics, 2014; Patrick S et al., Pediatrics, 2016; Davis JM, et al. JAMA Pediatr, 2018; Kraft WK, et al. N Engl J Med, 2017

Eat, Sleep and Console: A New Paradigm for Treating Baby's Withdrawal





CONCLUSIONS

In infants with neonatal opioid withdrawal syndrome, use of the Eat, Sleep, Console approach significantly reduced the time from birth until medical readiness for discharge, as compared with usual care.

Young LW et al., ACT NOW Collaborative. Eat, Sleep and Console Approach or Usual Care for Neonatal Opioid Withdrawal NEJM. 2023 388:2326-2337.

Drug Testing: Potential for Misinterpretation

BREASTFEEDING MEDICINE
Volume 11, Number 1, 2016
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Correspondence

Maternal Epidural Fentanyl Administered for Labor Analgesia Is Found in Neonatal Urine 24 Hours After Birth

Albert Moore, Aly al-Bahrawy, Roupen Hatzakorzian, and William Li-Pi-Shan

American Journal of Obstetrics and Gynecology

Available online 23 November 2022

In Press, Corrected Proof ⓘ What's this?

ELSEVIER

Original Research

Obstetrics

Fentanyl in the labor epidural impacts the results of intrapartum and postpartum maternal and neonatal toxicology tests

Molly R. Siegel MD [a], Grace K. Mahowald MD, PhD [b], Sacha N. Uljon MD, PhD [b], Kaitlyn James PhD [a], Lisa Leffert MD [c], Mackenzie W. Sullivan MD [a], Susan J. Hernandez CNM [a], Jessica R. Gray MD [d], Davida M. Schiff MD [e], Sarah N. Bernstein MD [a]

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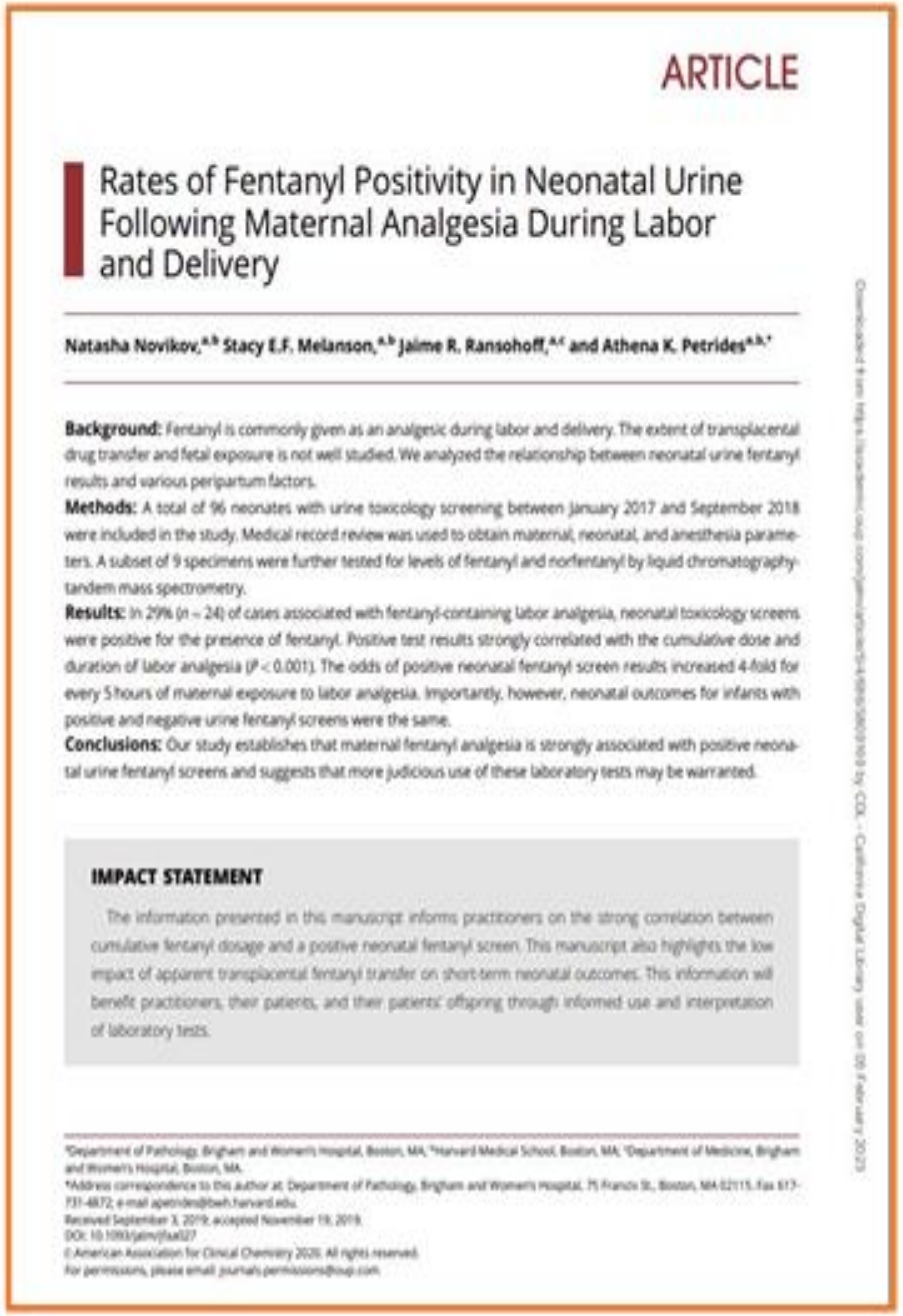
https://doi.org/10.1016/j.ajog.2022.11.1293   Get rights and conte

Background

A positive urine fentanyl toxicology test may have considerable consequences for peripartum individuals, yet the extent to which fentanyl administration in a labor epidural may lead to such a positive test is poorly characterized.



ARTICLE

Rates of Fentanyl Positivity in Neonatal Urine Following Maternal Analgesia During Labor and Delivery

Natasha Novikov,[a,b] Stacy E.F. Melanson,[a,b] Jaime R. Ransohoff,[a,c] and Athena K. Petrides[a,b,*]

Background: Fentanyl is commonly given as an analgesic during labor and delivery. The extent of transplacental drug transfer and fetal exposure is not well studied. We analyzed the relationship between neonatal urine fentanyl results and various peripartum factors.
Methods: A total of 96 neonates with urine toxicology screening between January 2017 and September 2018 were included in the study. Medical record review was used to obtain maternal, neonatal, and anesthesia parameters. A subset of 9 specimens were further tested for levels of fentanyl and norfentanyl by liquid chromatography-tandem mass spectrometry.
Results: In 29% (n = 24) of cases associated with fentanyl-containing labor analgesia, neonatal toxicology screens were positive for the presence of fentanyl. Positive test results strongly correlated with the cumulative dose and duration of labor analgesia (P < 0.001). The odds of positive neonatal fentanyl screen results increased 4-fold for every 5 hours of maternal exposure to labor analgesia. Importantly, however, neonatal outcomes for infants with positive and negative urine fentanyl screens were the same.
Conclusions: Our study establishes that maternal fentanyl analgesia is strongly associated with positive neonatal urine fentanyl screens and suggests that more judicious use of these laboratory tests may be warranted.

IMPACT STATEMENT

The information presented in this manuscript informs practitioners on the strong correlation between cumulative fentanyl dosage and a positive neonatal fentanyl screen. This manuscript also highlights the low impact of apparent transplacental fentanyl transfer on short-term neonatal outcomes. This information will benefit practitioners, their patients, and their patients' offspring through informed use and interpretation of laboratory tests.

What is the Fourth Trimester?

- **It is 12 weeks following the birth of a baby**
- **The World Health Organization recommends routine postpartum care for women at**
  - **3 days**
  - **1-2 weeks**
  - **6 weeks**
- **ACOG recommends postpartum care that is “individualized and person-centered” over the 4th trimester**

https://www.obgproject.com/2022/04/25/acog-revises-redefines-postpartum-visit/

Supporting Postpartum Patients

- **Breastfeeding is recommended for mothers prescribed buprenorphine and methadone.**
- **Extended skin-to-skin contact is recommended.**
- **Mothers and infants rooming together at the hospital is associated with reduced need for medication and shorter hospital stays.**
- **Tell mom what she is doing well!**
- **Ways to talk about guilt, shame, and stigma**

BREASTFEEDING MEDICINE
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DOI: 10.1089/bfm.2023.29256.abm

ABM Protocol

Open camera or QR reader and scan code to access this article and other resources online.

SAMHSA 2018, HHS Publication No. (SMA) 18-5054

Involving Fathers in the Newborn Period

What You Can Do: Use Words with Compassion and Clarity

Older Terms	Alternative Terms
Addict, Abuser, Junkie, Alcoholic, User	Person with a substance use disorder
Addicted baby NAS baby	Exposed neonate or baby with withdrawal signs
Drug of Choice / Drug Habit	Drug of Use / Substance Use Disorder
Clean or Dirty	Positive / Negative
Lapse or Relapse	Return to use, recurrence
Opioid Replacement or Methadone Maintenance	Medication to treat Opioid Use Disorder (MOUD)

https://www.drugabuse.gov/nidamed-medical-health-professionals/health-professions-education/words-matter-language- showing-compassion-care-women-infants-families-communities-impacted-substance-use-disorder

What You Can Do

With Patients

- Honesty and transparency
- Before you ask any question- why/what/how
- Include patient in decisions
- Point out strengths
- Use person-first recovery language

- **Know the resources in your area where help is found**

With Colleagues

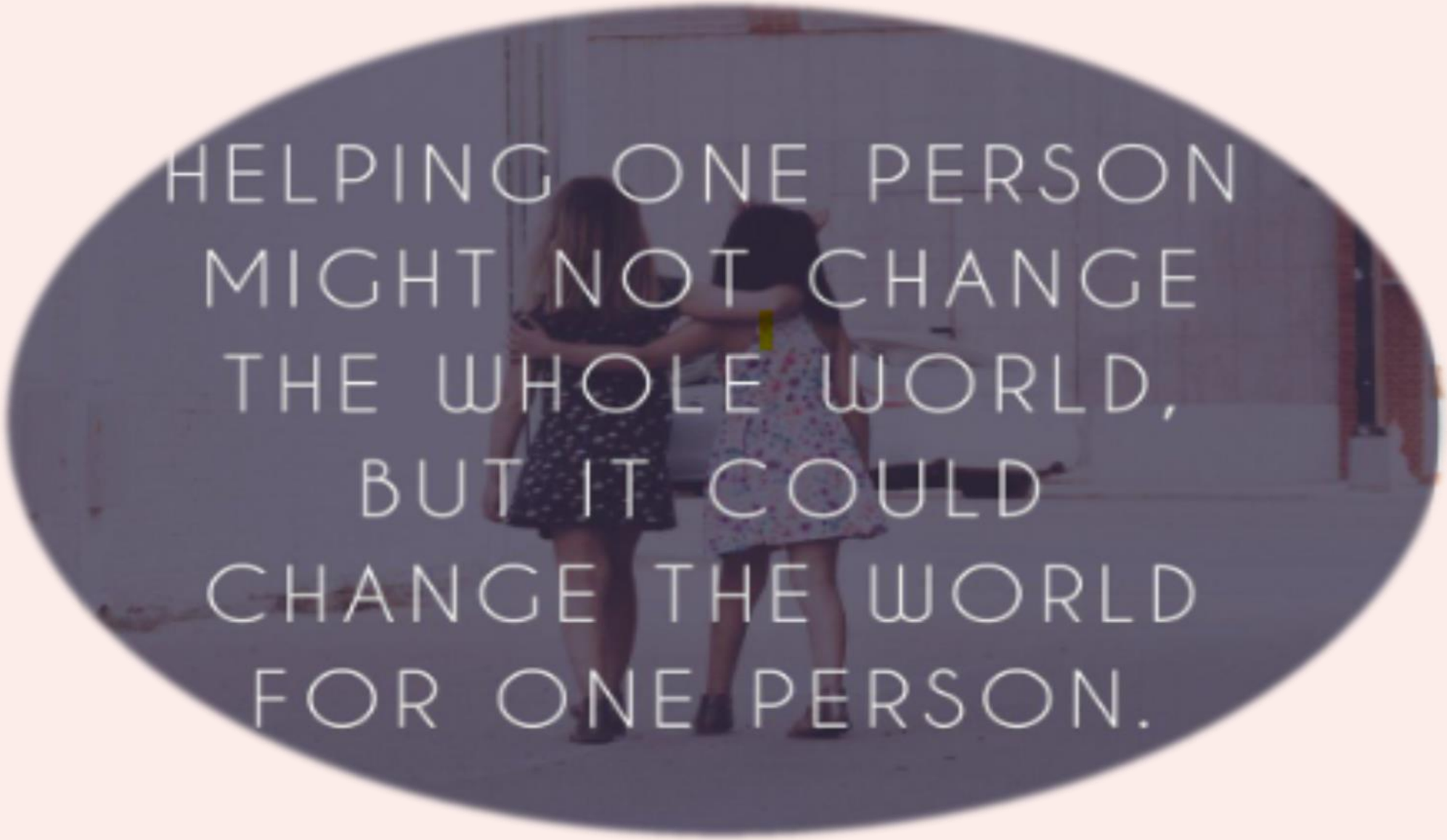
- Tell stories of recovery and success
- Distribute naloxone to all families and connect those to care after naloxone administration
- Advocate for compassionate care for dyads (e.g., NAS/NOWS hospital policies)
- Narcan can be used for all ages

Learning Objectives

1. Identify common elements in programs in North Carolina that provide care for pregnant and parenting women with substance use disorders and their children.

2. Summarize the latest data on the maternal, fetal and child safety and efficacy of prenatal exposure methadone, buprenorphine formulations and naltrexone will be summarized.

3. Name several actions practitioners can take to support the mother who has a substance use disorder and her prenatally-substance exposed neonate



Hendrée E. Jones, LP, PhD
Contact: Hendree_jones@med.unc.edu
Linkedin: hendree-jones-9657b786