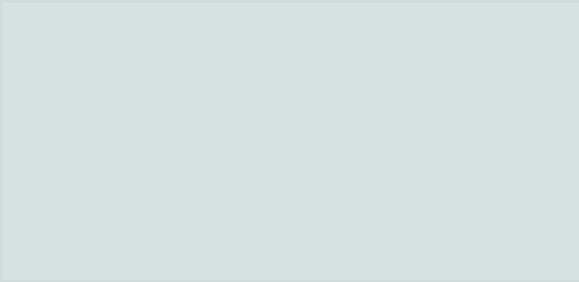


Pregnant/Post Partum People
and their Infants: often-
forgotten, but also affected,
population of the Opioid
Epidemic

Scope of the Problem

International, National, Regional, and Local



Cocaine



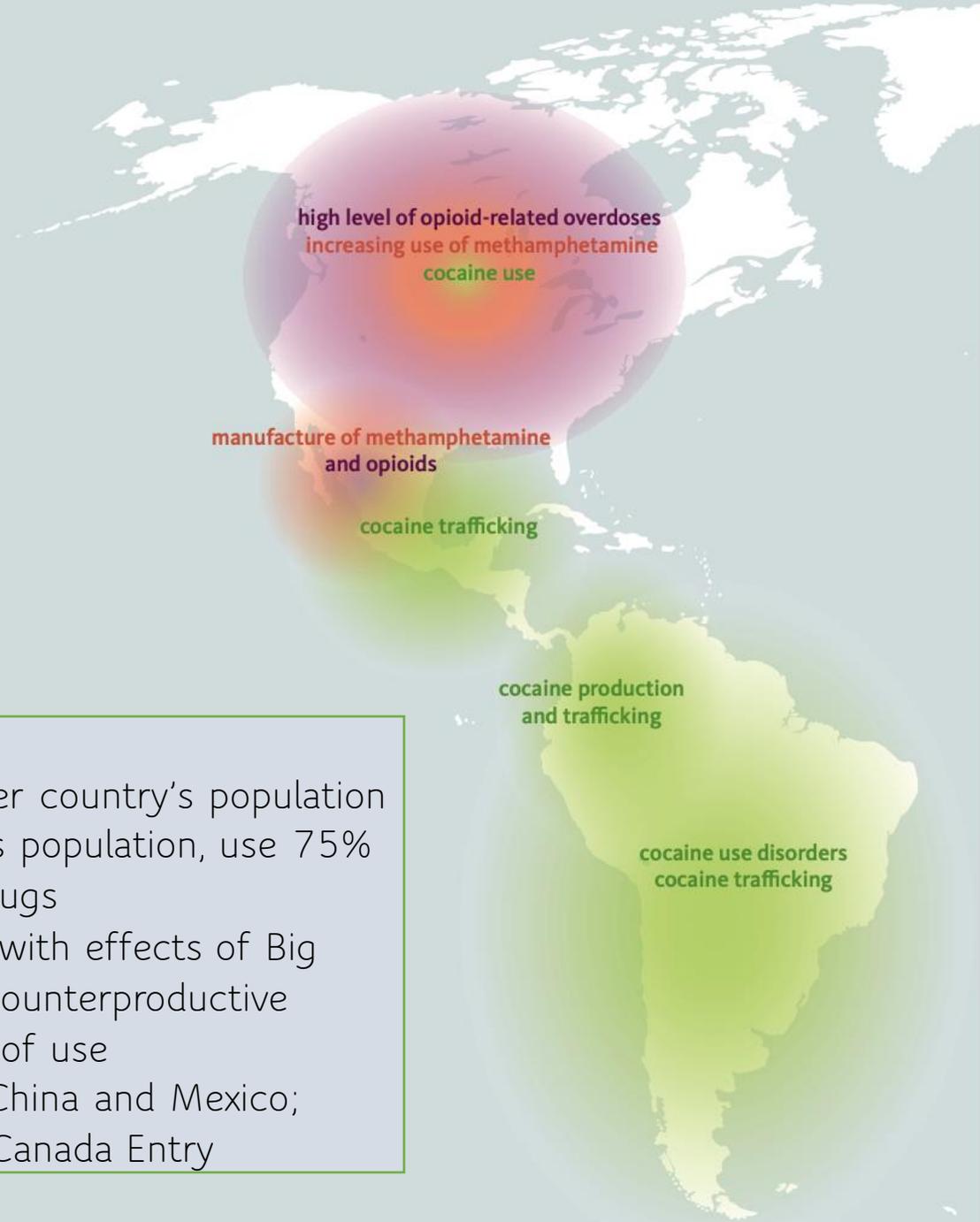
Opioids/Opiates



Amphetamine-type stimulants (ATS)

United States

- Try more drugs than any other country's population
- Represent ~5% of the world's population, use 75% of the world's prescription drugs
- The "War on Drugs" coupled with effects of Big Pharma were the two most counterproductive efforts toward our incidence of use
- Source of synthetic opioids: China and Mexico; Afghanistan sourced heroin; Canada Entry



Pregnancy-Related Deaths: Data from Maternal Mortality Review Committees in 36 US States, 2017–2019

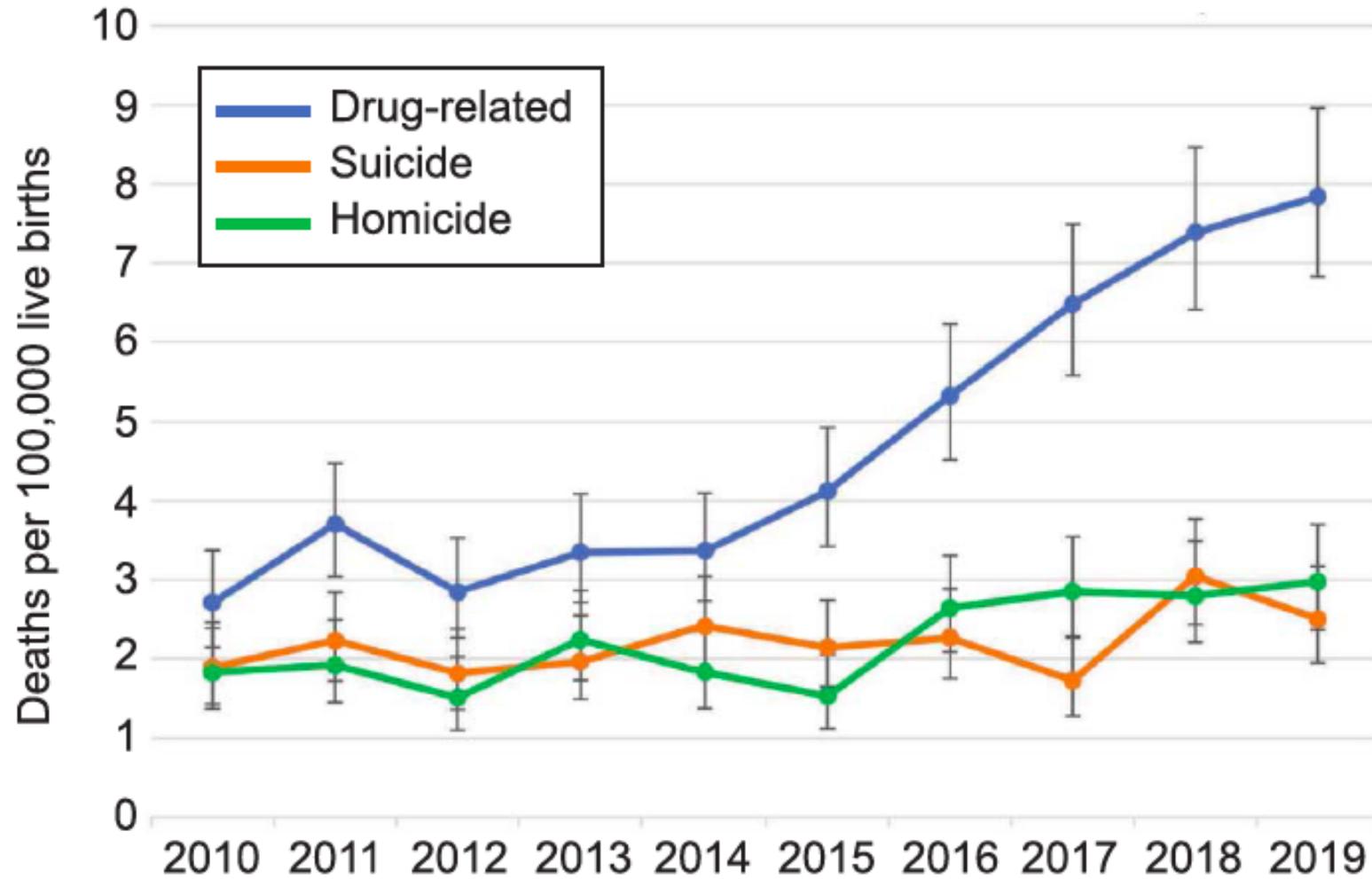


Susanna Trost, MPH; Jennifer Beauregard, MPH, PhD; Gyan Chandra, MS, MBA; Fanny Njie, MPH; Jasmine Berry, MPH; Alyssa Harvey, BS; David A. Goodman, MS, PhD

Table 4. Underlying causes of pregnancy-related deaths*, overall and by race or ethnicity¹, data from Maternal Mortality Review Committees in 36 US states, 2017–2019¹

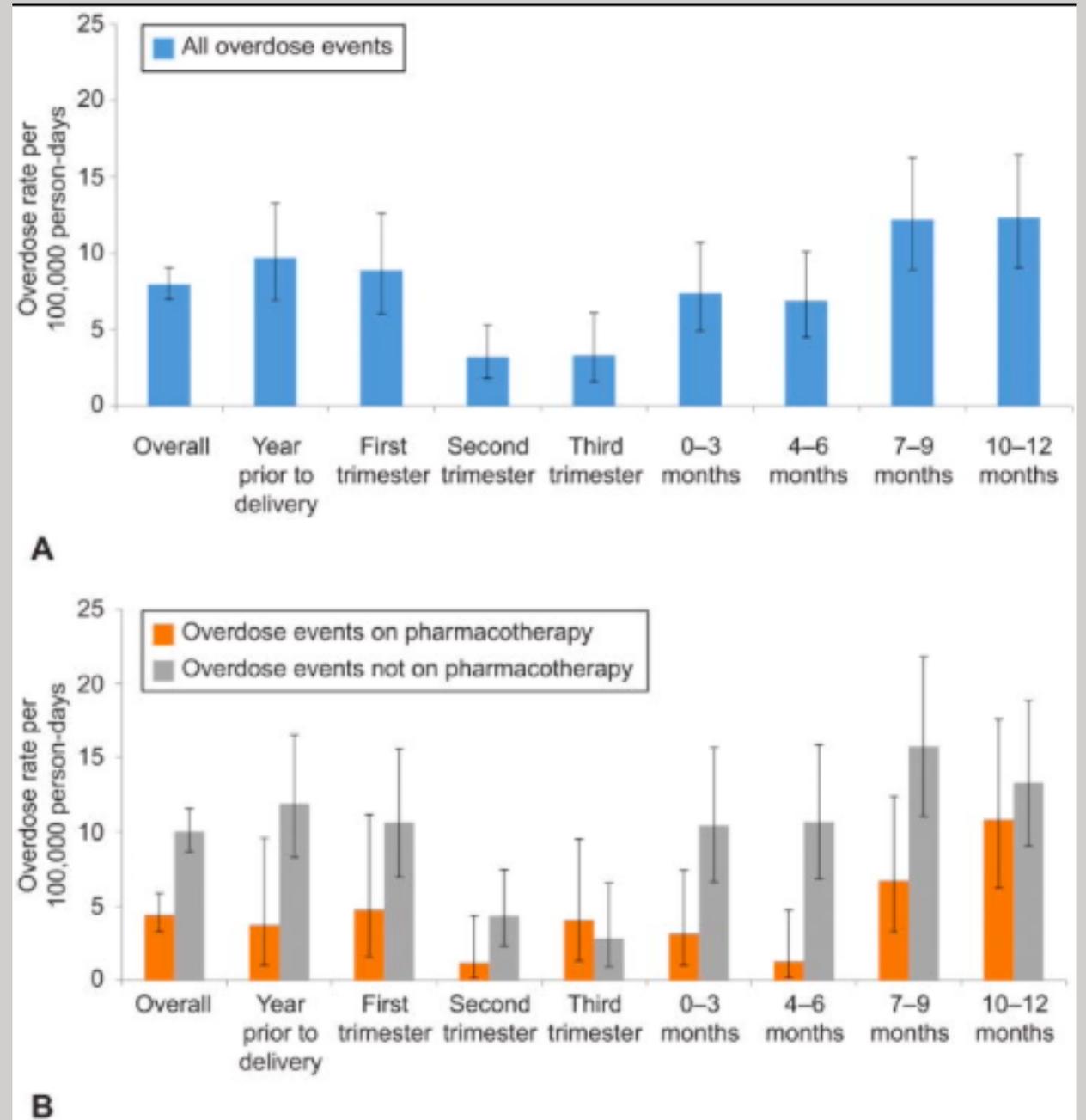
	Total		Hispanic		Non Hispanic									
					AIAN		Asian		Black		NHOPI		White	
	N	%	n	%	n	%	n	%	n	%	n	%	n	%
Mental health conditions ²	224	22.7	34	24.1	2	-	1	3.1	21	7.0	0	-	159	34.8
Hemorrhage ³	135	13.7	30	21.3	2	-	10	31.3	33	10.9	1	-	53	11.6
Cardiac and coronary conditions ⁴	126	12.8	15	10.6	1	-	7	21.9	48	15.9	0	-	49	10.7
Infection	91	9.2	15	10.6	1	-	0	0.0	23	7.6	0	-	49	10.7
Embolism-thrombotic	86	8.7	9	6.4	0	-	2	6.3	36	11.9	0	-	34	7.4
Cardiomyopathy	84	8.5	5	3.6	0	-	2	6.3	42	13.9	0	-	33	7.2
Hypertensive disorders of pregnancy	64	6.5	7	5.0	0	-	1	3.1	30	9.9	1	-	22	4.8

Breakdown of "Mental Health" Conditions



Pregnancy/Post-Partum Outcomes

- 8-12x increase in return to use in the first 12 months post-partum
 - Highest risk in 7-12 months from delivery
 - Loss of custody
 - Co-morbid mental health condition (stratified by treatment and services)
 - Traumatic birth events
 - DCF involvement/Case Plans
 - Structure of support system (family, friends, etc.)

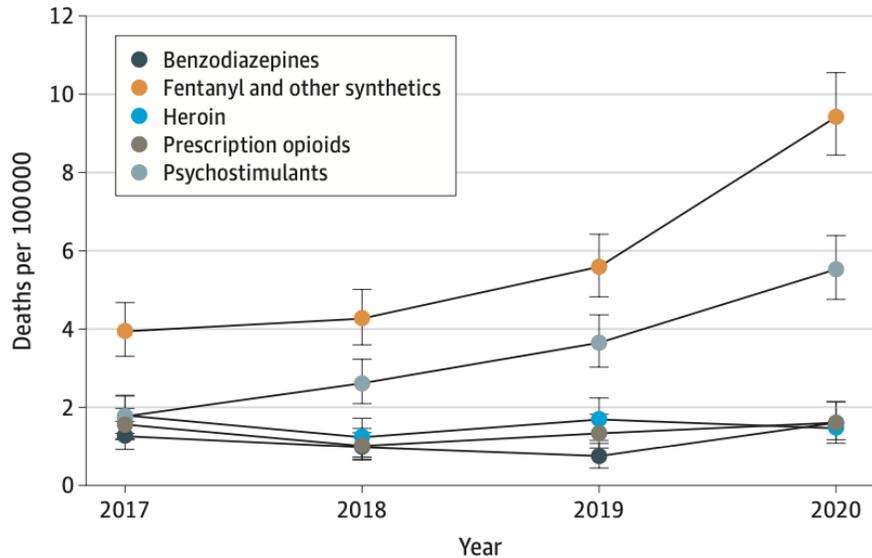


Drug Overdose Mortality Rates Among Pregnant or Postpartum Persons From 2017 to 2020

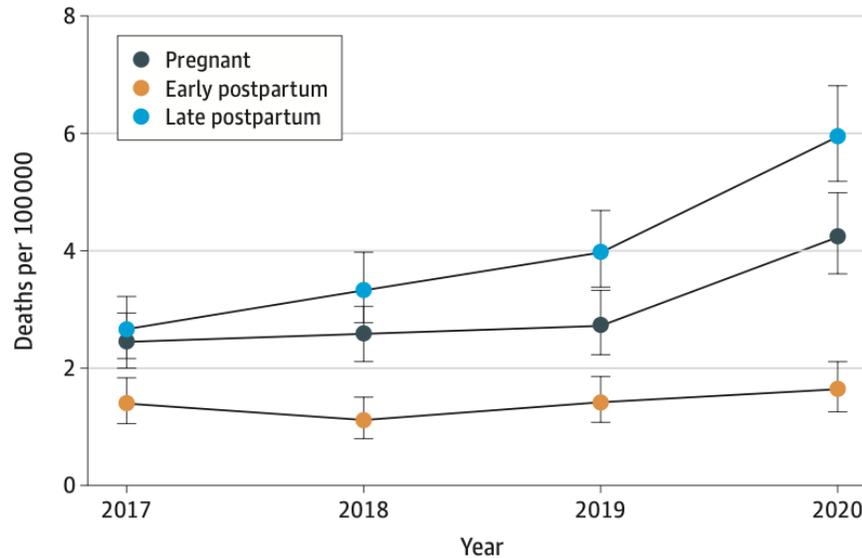
Year	Pregnant or postpartum		Drug overdose mortality rate per 100 000 (95% CI) ^d
	No. of persons	No. of live births ^c	
2017	252	3 844 260	6.56 (5.78-7.43)
2018	266	3 780 401	7.04 (6.23-7.95)
2019	304	3 736 144	8.14 (7.26-9.12)
2020	427	3 602 653	11.85 (10.77-13.05)

Figure. Pregnancy-Associated Drug Overdose Mortality

A Drug types involved



B Pregnancy timing from 2017 to 2020

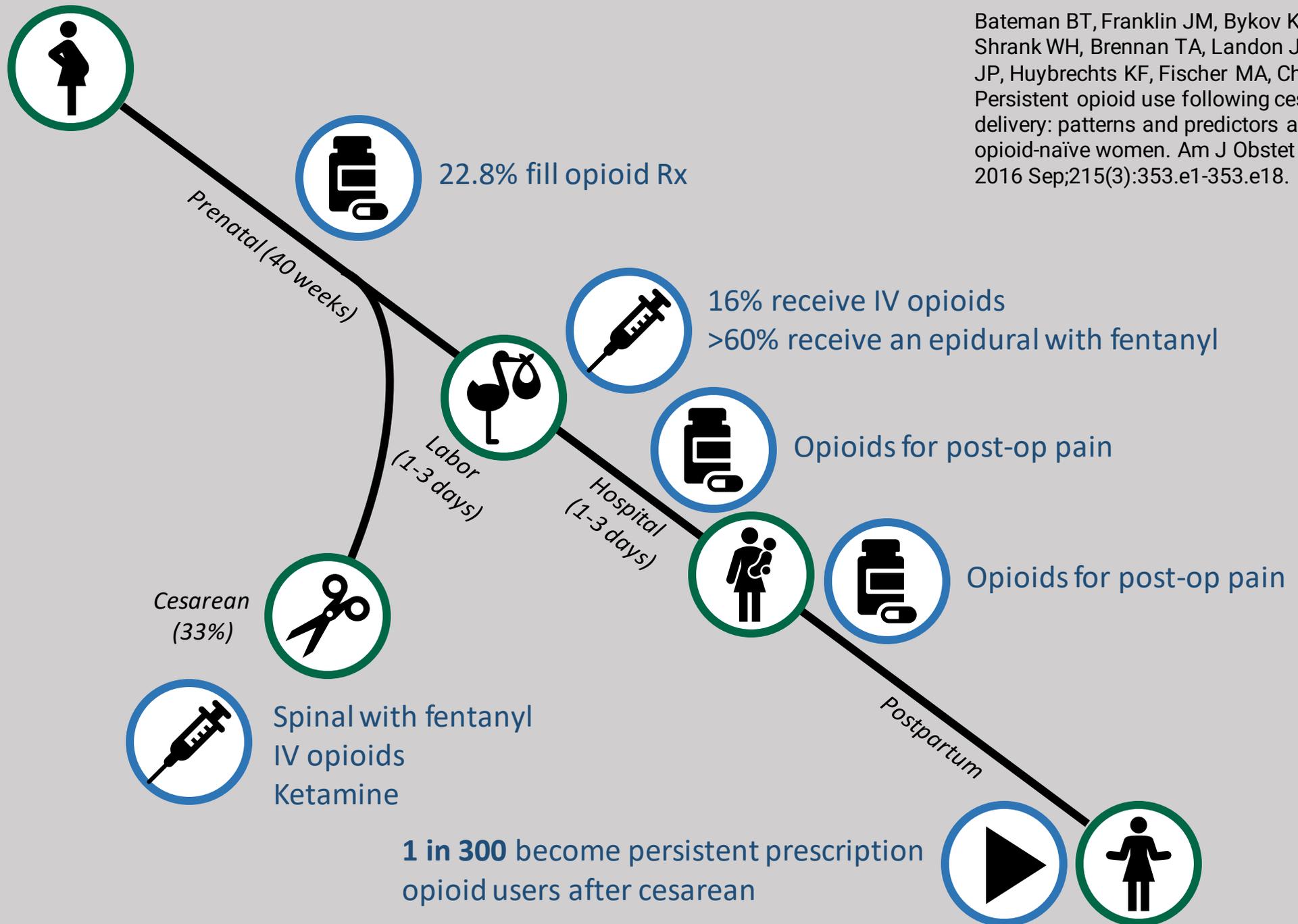


Bruzelius E, Martins SS. US Trends in drug overdose mortality among pregnant and postpartum persons, 2017-2020. *JAMA*. doi:10.1001/jama.2022.17045

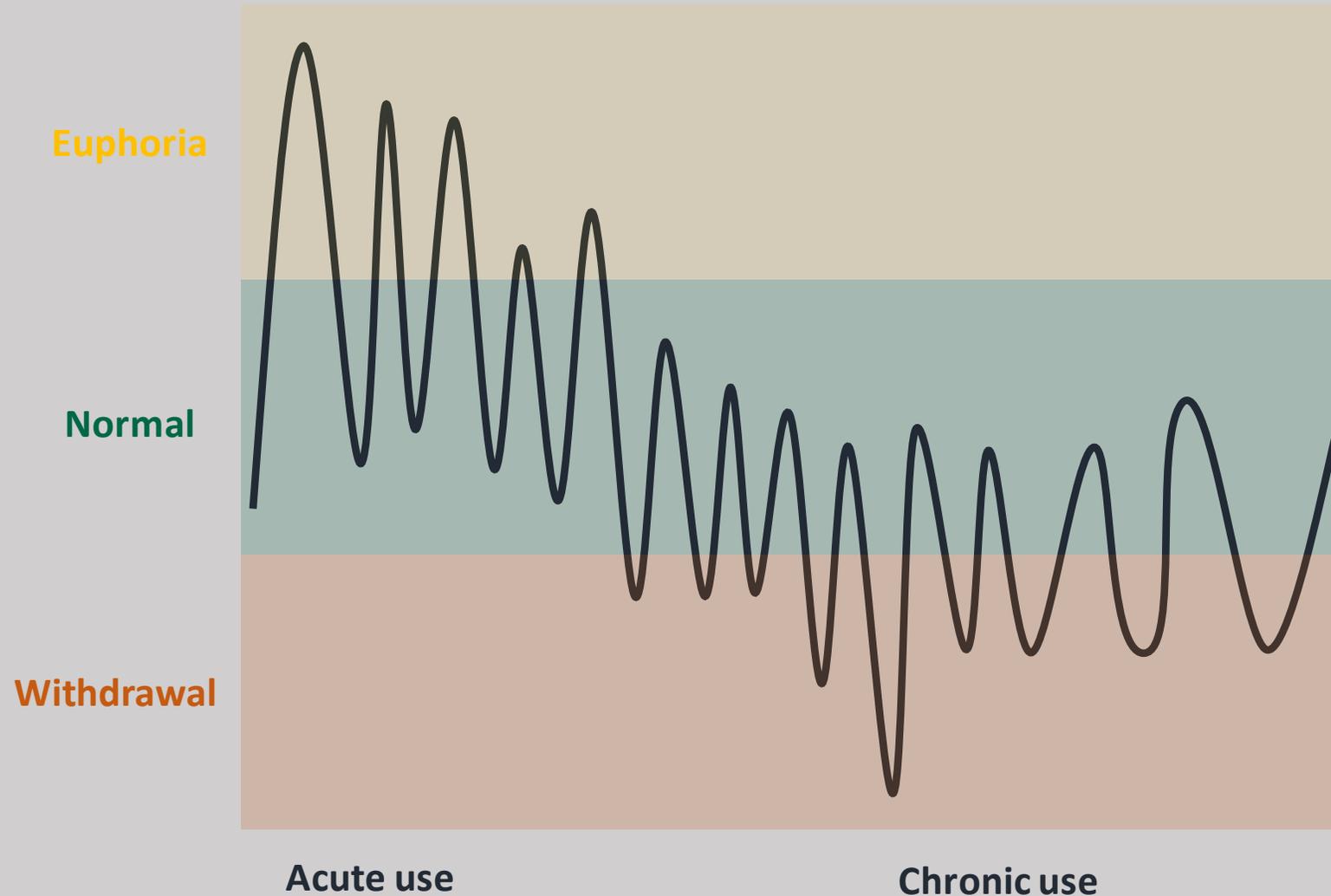
The Journey of Pregnancy

... and the complexities associated with it.

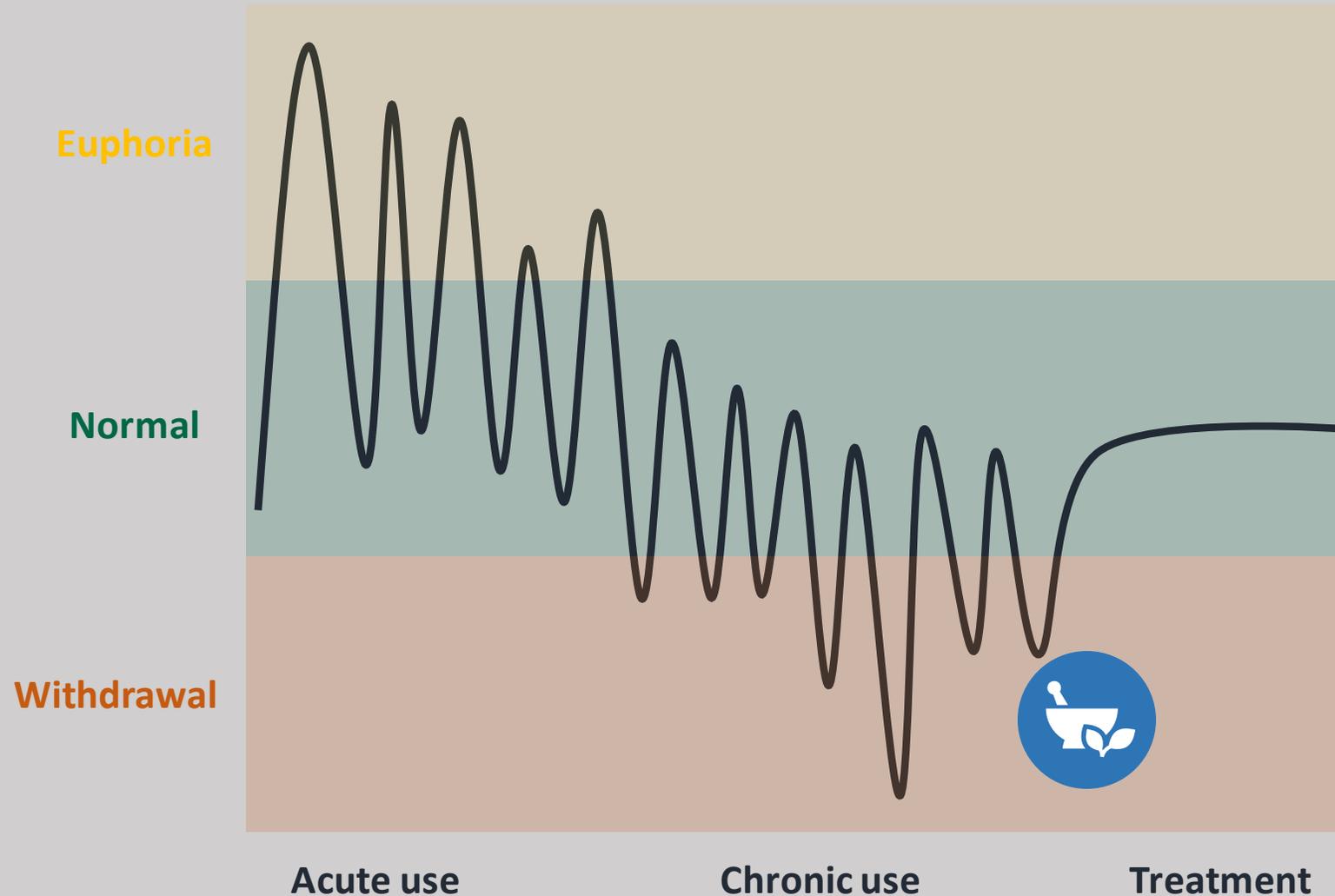
Bateman BT, Franklin JM, Bykov K, Avorn J, Shrank WH, Brennan TA, Landon JE, Rathmell JP, Huybrechts KF, Fischer MA, Choudhry NK. Persistent opioid use following cesarean delivery: patterns and predictors among opioid-naïve women. Am J Obstet Gynecol. 2016 Sep;215(3):353.e1-353.e18.

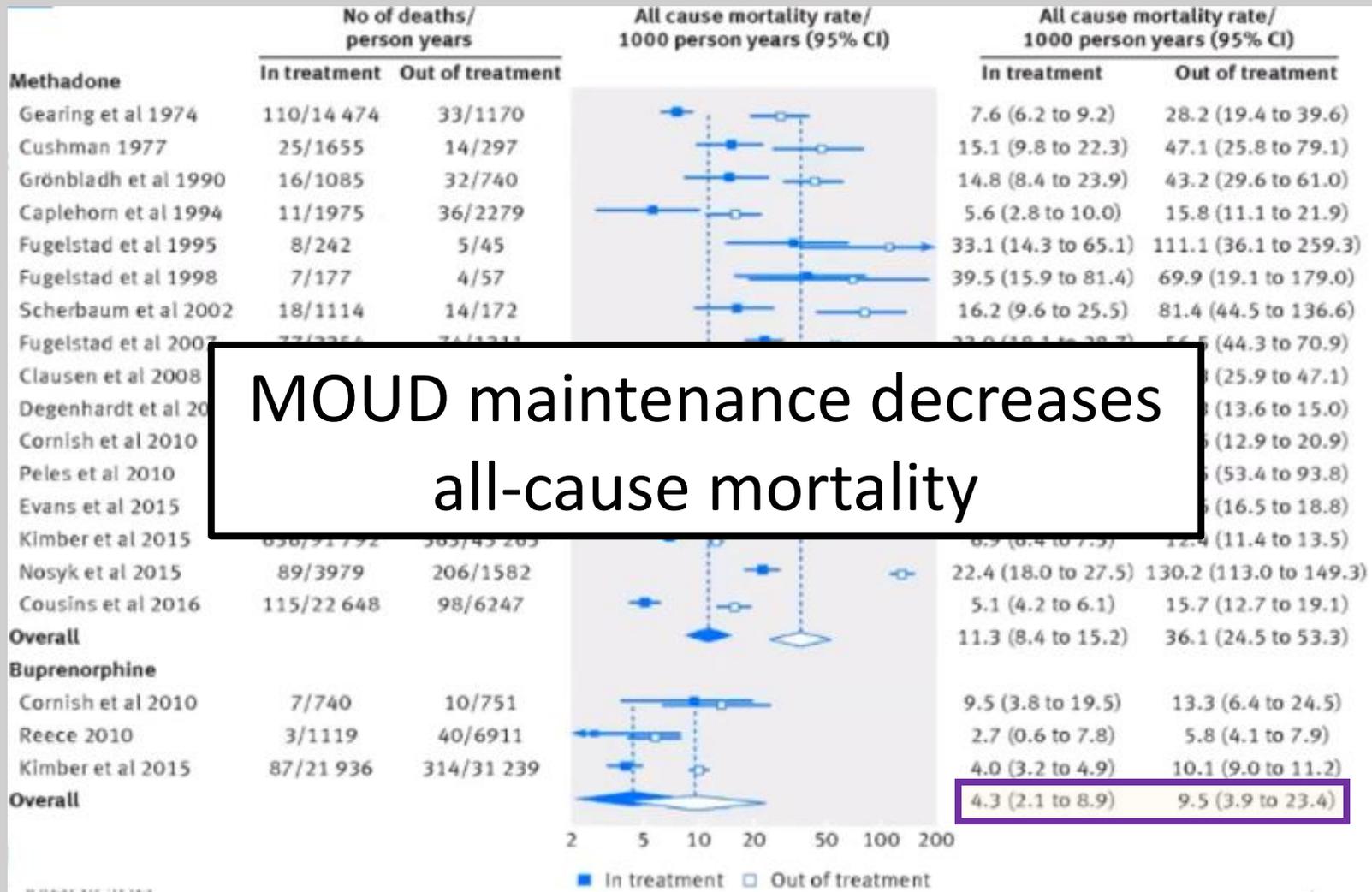


Progression to “Disordered” Use



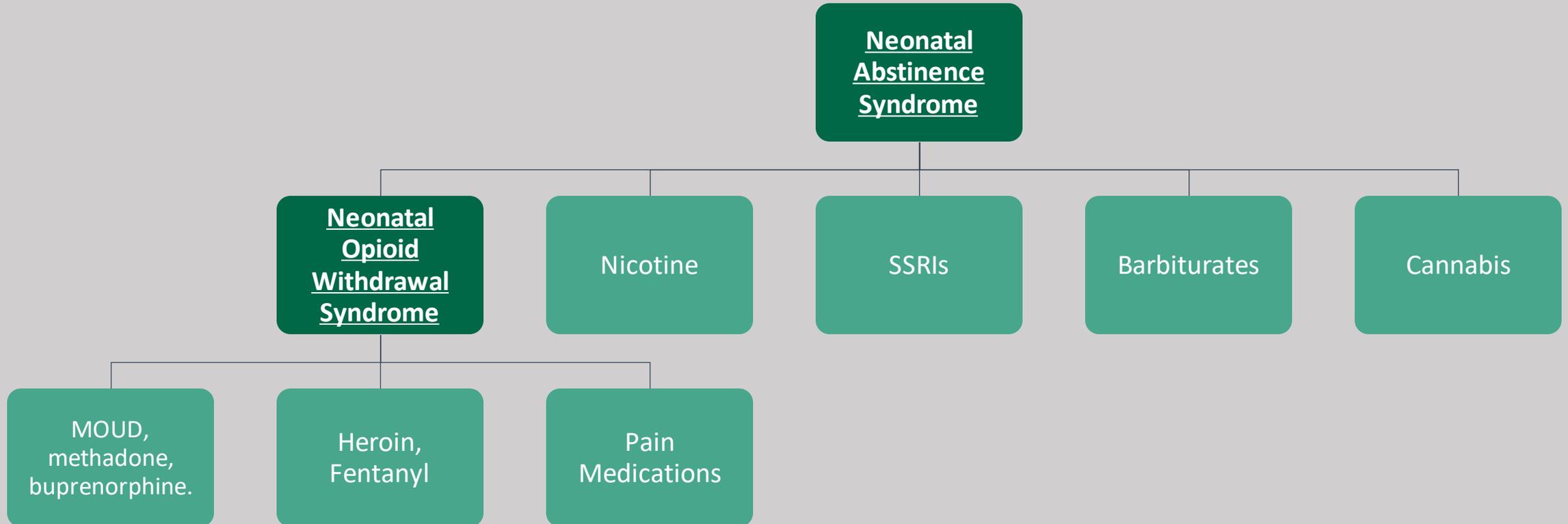
Treatment of Opioid Use Disorder in Pregnancy





The Infant

NAS vs NOWS



Non-pharmacologic Interventions



Rooming in



Parent/caregiver presence



S2S contact



Holding



Safe/effective swaddling



Optimal feeding



Non-nutritive sucking



Quiet, low light environment



Rhythmic movement



Additional help/support



Limit visitors



Cluster care & assessments

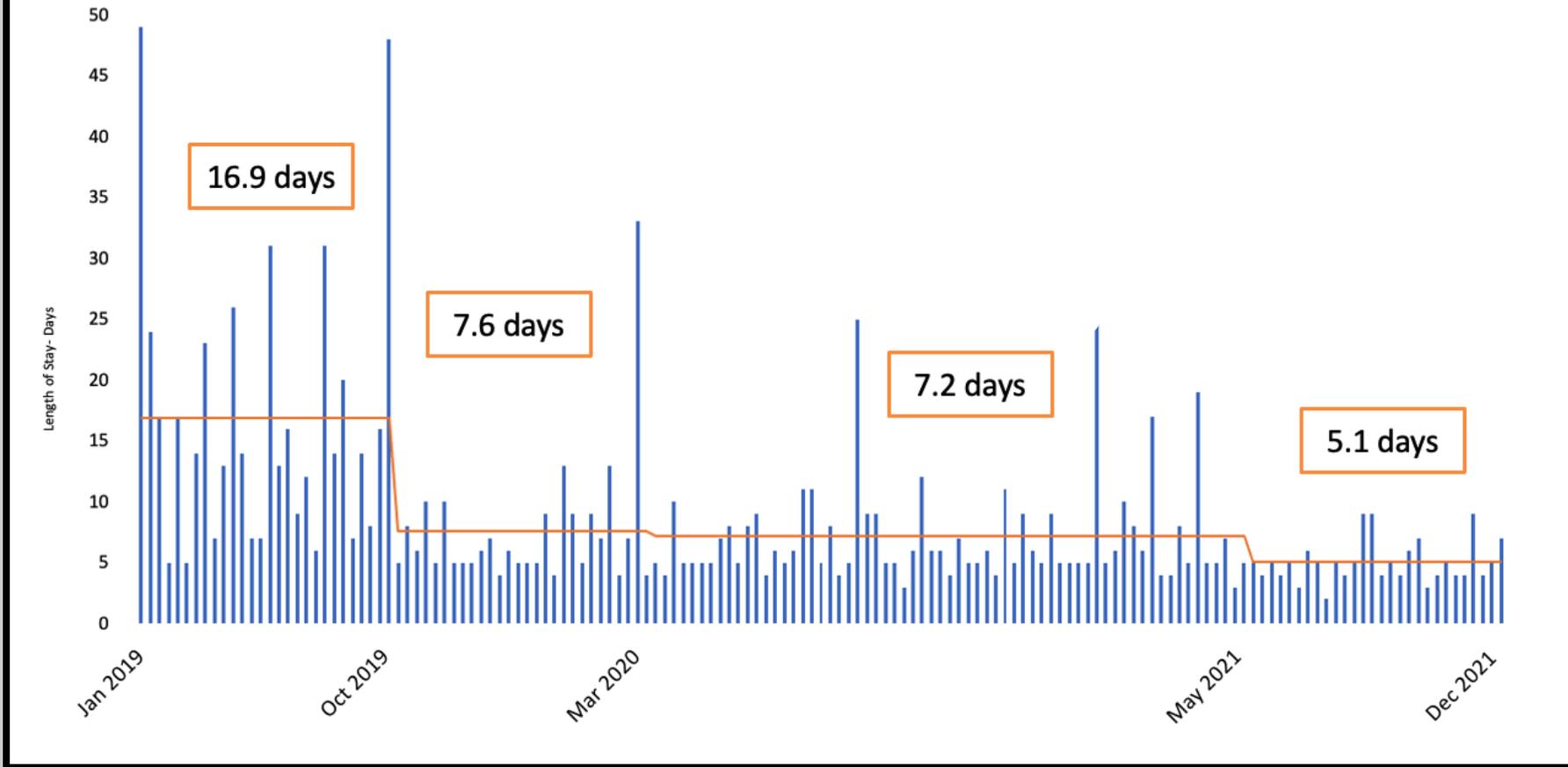


Safe sleep/fall prevention

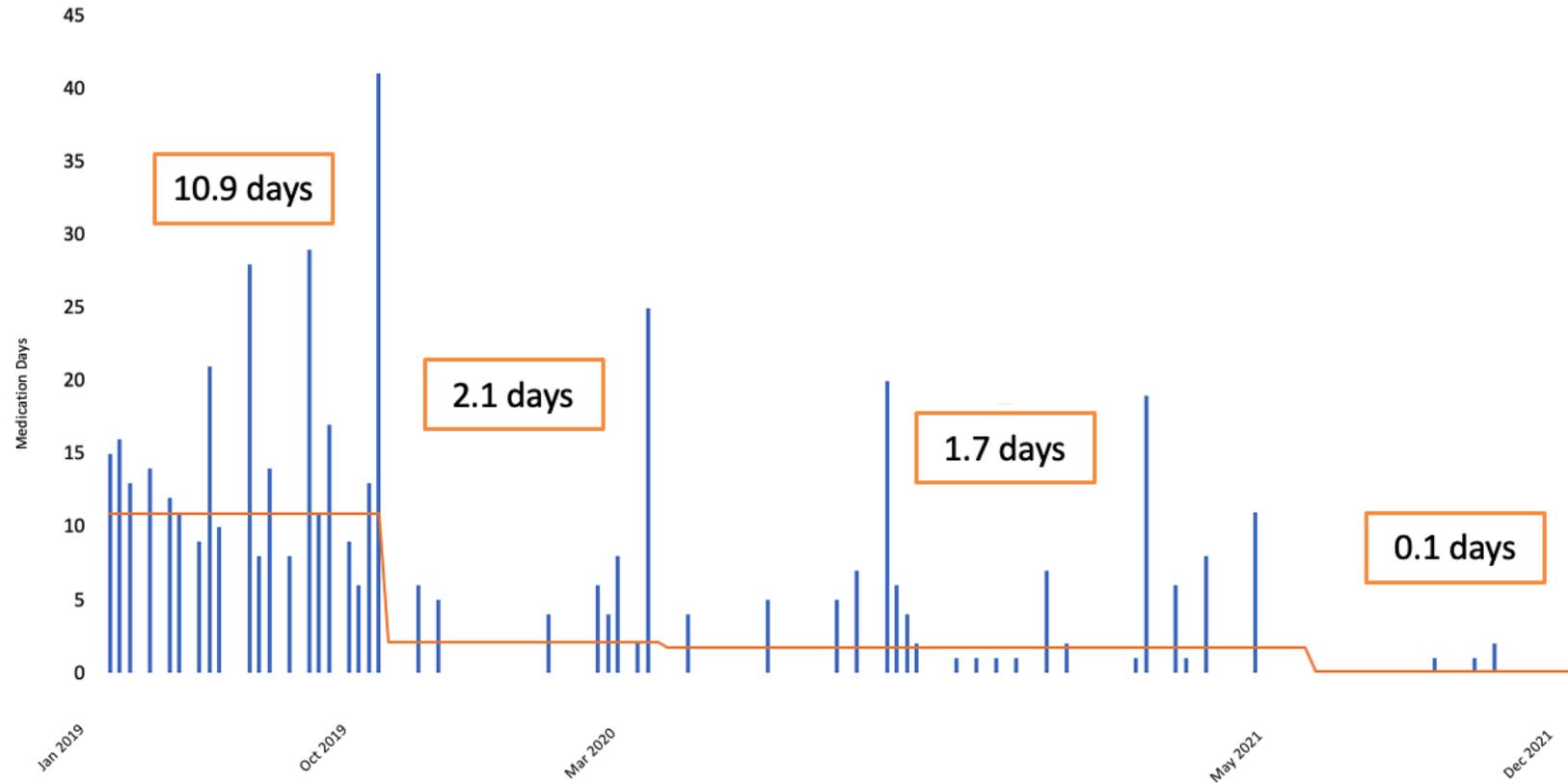


Parent/caregiver self care & rest

Run Chart Depicting Newborn Length of Stay January 2019-December 2021



Run Chart Depicting Newborn Medication Days January 2019-December 2021



71% of babies treated with medications → 11% of babies treated with medications

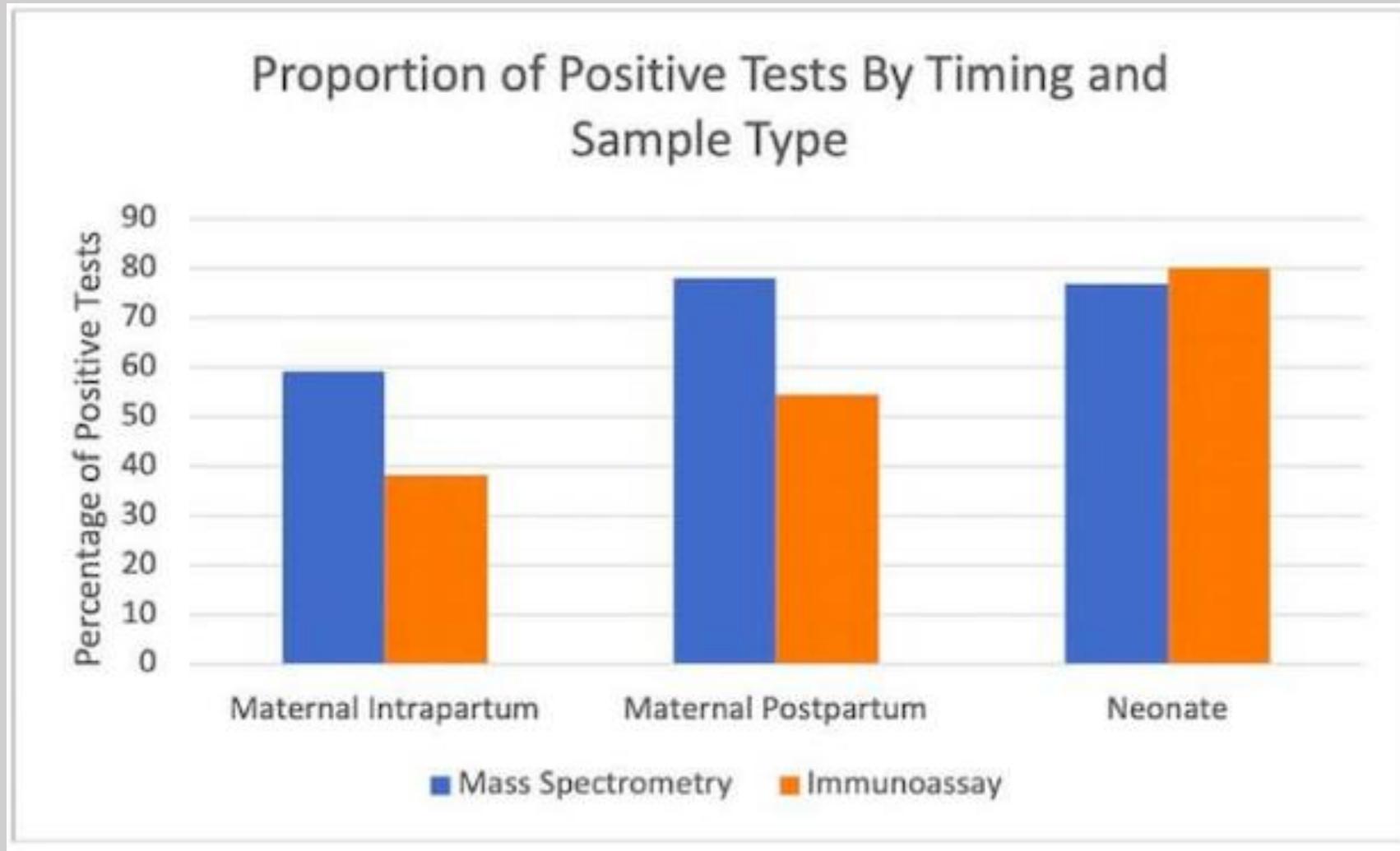
Toxicology:

UDS/Meconium Screen/Umbilical Cord

- The practice of drug testing by health care professionals is based on misinformed assumptions:
 - Tests accurately capture recent drug use (they don't)
 - Tests identify people with addiction (they don't)
 - Federal law requires testing and the reporting of positive results to local child welfare agencies (it doesn't)
 - Illicit drug exposure causes significant developmental harm (it doesn't)

Minimal Clinical Utility

Fentanyl in epidural and drug toxicology



Long-term concerns in Infants

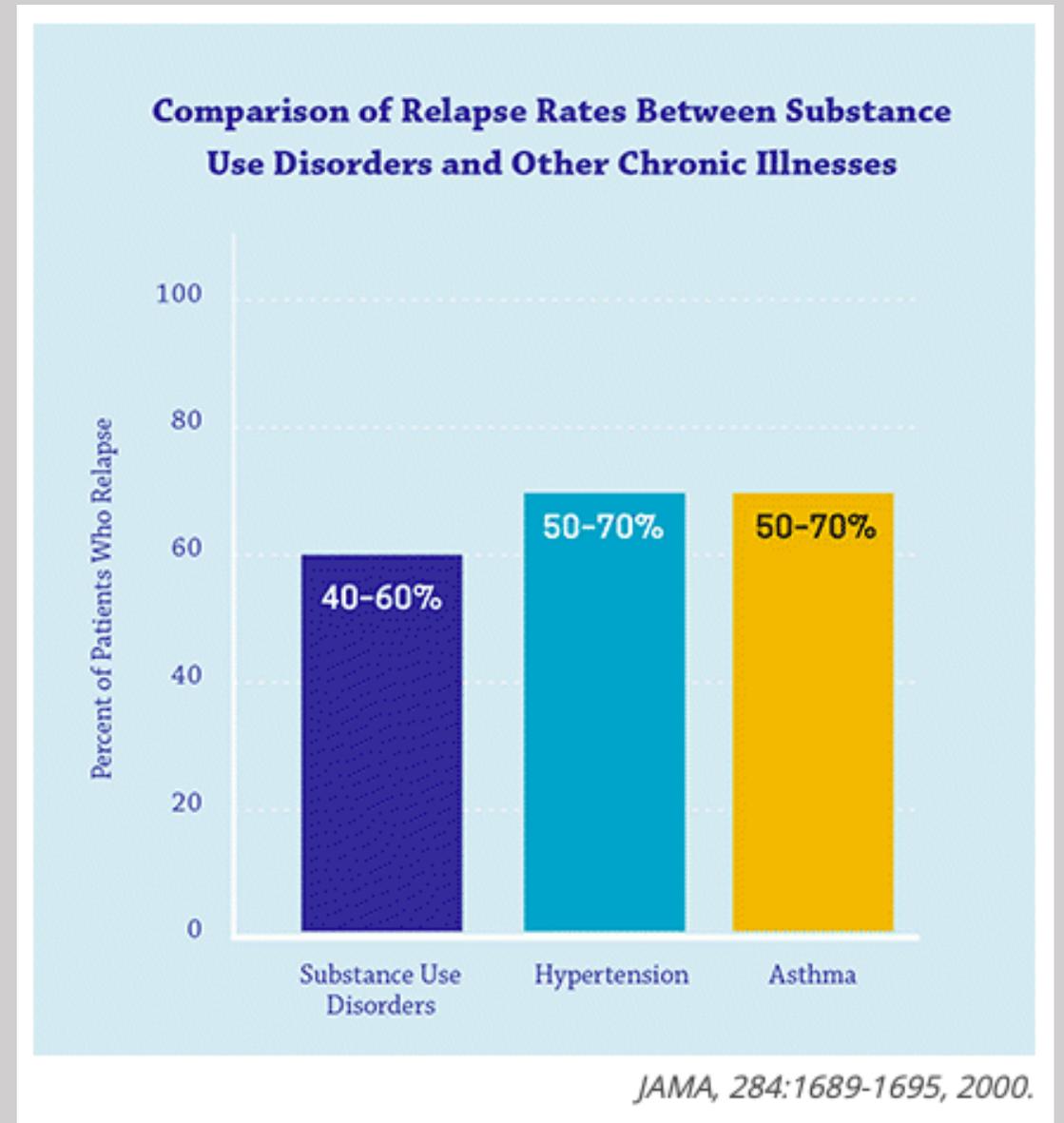
- What has been reported:
 - Developmental delay, behavior concerns, ADHD, lower IQ, poor academic testing
- What the research really says:
 - No data supports negative short-term (3 years) neurodevelopmental effects
 - Inconsistent data on long-term neurodevelopmental outcomes
 - When you control for social determinants of health, the differences are not seen
- What exposure is really being described?
 - Parental mood disorders, trauma history, polysubstance use, parenting practices, inadequate nutrition, health care access, and other social determinants of health.
- Focus on family and surrounding components- providing resource, showcase strengths, support care, etc. to mitigate risks.

1- Kaltenbach K, O'Grady KE, Heil SH, et al. Prenatal exposure to methadone or buprenorphine: early childhood developmental outcomes. Drug Alcohol Depend 2018;185:40-49

2- Jones HE, Kaltenbach K, Benjamin T, Wachman EM, O'Grady KE. Prenatal Opioid Exposure, Neonatal Abstinence Syndrome/Neonatal Opioid Withdrawal Syndrome, and Later Child Development: Research Shortcomings and Solutions. J Addict Med. 2019 Mar/Apr;13(2):90-92.

Return to Substance Use

- NOT failure, serves as sign for resumed, modified, or new treatment
- Average 6 returns to use before long-term recovery
- Risk factors:
 - <6 months from delivery
 - Loss of custody
 - Mental health condition
 - Traumatic birth





Neonatal Exposures Program



PEDI CLINIC
At Mary Lee's House

How to approach?

Co-located, Integrated, Coordinated Care



USF Health

Center for Families
Impacted by Substance Use

Stigma vs. Discrimination

A systematic review found that health care providers' negatively biased views of individuals with SUDs result in worse health care delivery

- Stigma is the negative stereotype associated with a real or perceived difference (gender, age, sexual orientation, behavior, condition, etc.).
- Discrimination is the behavior that results from the negative stereotype.



Source: Leonieke C van Boekel, Evelien PM Brouwers, Jaap van Weeghel, et al., *Stigma among health professionals towards patients with substance use disorders and its consequences for healthcare delivery: Systematic review*, (*Drug and Alcohol Dependence*, July 2013); doi: 10.1016/j.drugalcdep.2013.02.018.

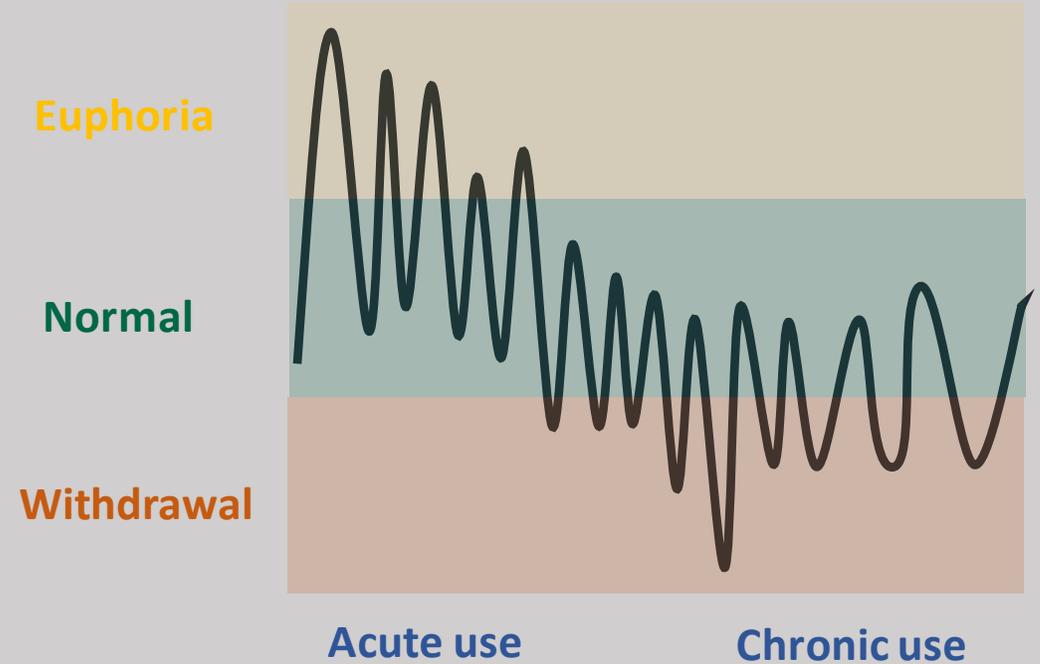
Outcomes-Consequences of Discrimination

Healthcare Providers, Social Workers, CPS Workers, etc.

- Difficulty in access to prenatal care
- Suboptimal prenatal care
- Increase risk of not breastfeeding
- Withdrawing early from treatment
- Increase rate of return to use
- *Worsened health care delivery and treatment outcomes*
- *Death*

Educational Approach: Portrayal of Addiction

Portraying addiction as the treatable medical condition it is can reduce stigma and judgement of persons with SUD



- Optimal educational approach would include:
 - science and societal causes of addiction
 - trauma informed care
 - solution messaging
 - sympathetic lived-experience narrative

Source: Alexandra E Zgierska AE, Michael M Miller, David P Rabago, et al., *Language Matters: It Is Time We Change How We Talk About Addiction and its Treatment*, (*Journal of Addiction Medicine*, January-February 2021);

doi: 10.1097/ADM.0000000000000674.

Perinatal Psychiatry – Behavioral Therapy & Pharmacotherapy

