



UNIVERSITY *of* MARYLAND  
SCHOOL OF PHARMACY

INTERDISCIPLINARY STRATEGIES  
for  
MANAGING MATERNAL OPIOID USE DISORDER

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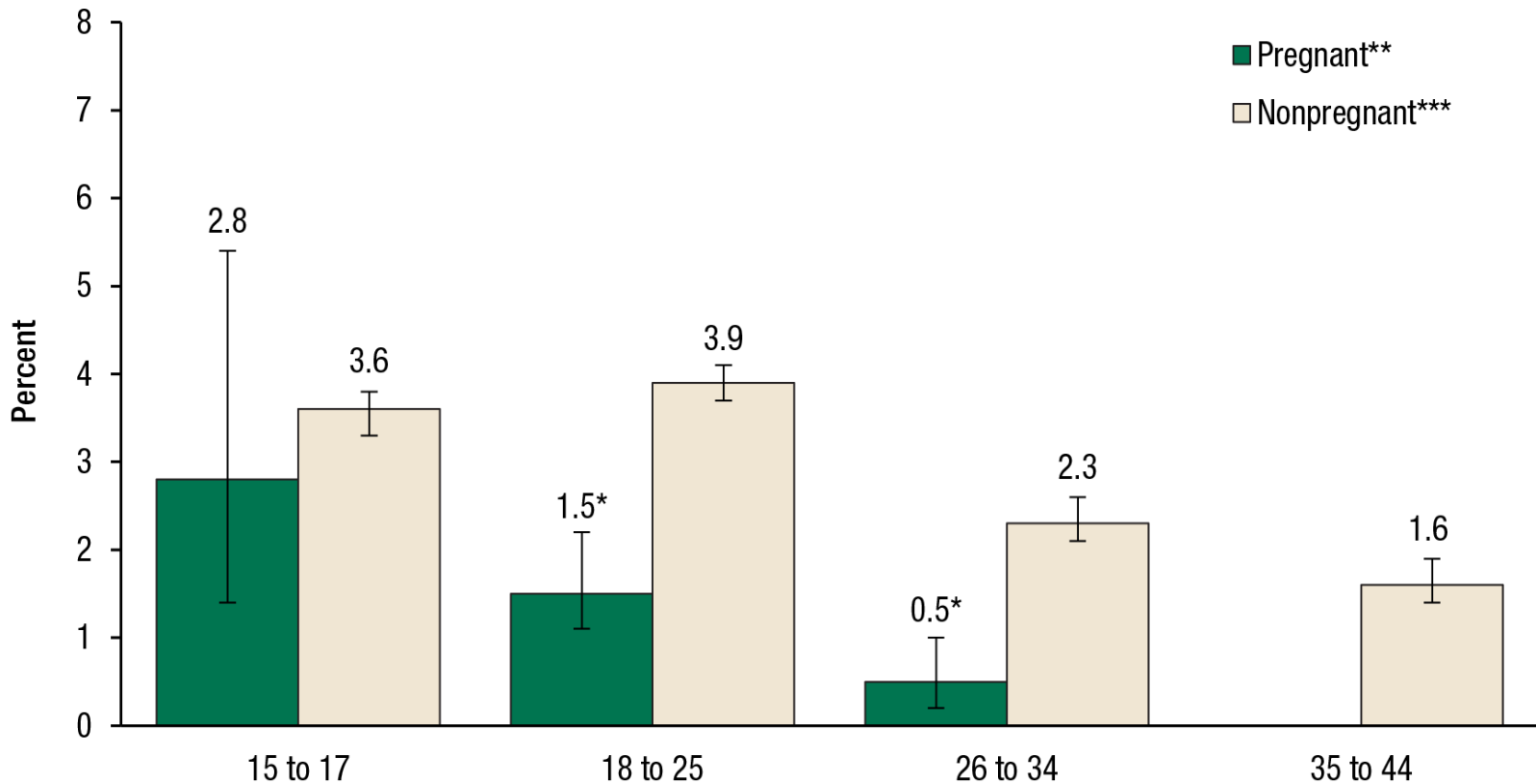
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# Why measure the problem

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- Opioid Use 4X in last 10 years; 259M scrips 2012 in US
- 1/3 insured reproductive-aged women fill a prescription for opioid each year.
- Increased prevalence of opioid in pregnancy has led to 5X increase in NAS /10yr (1.2 to 5.8 per 1,000 hospital births).
- 22,000 neonates born with NAS/yr.; in US; 1 every 30 mins; \$1.5B (2012)
- States /Medicaid bearing cost
- State of TN study:
  - 2/3 of NAS cases were associated with legal prescriptions .
  - 28% of women enrolled in TN Medicaid program received an opioid script.

# Past month opioid misuse among women aged 15 to 44, by pregnancy status and age: 2007 to 2012



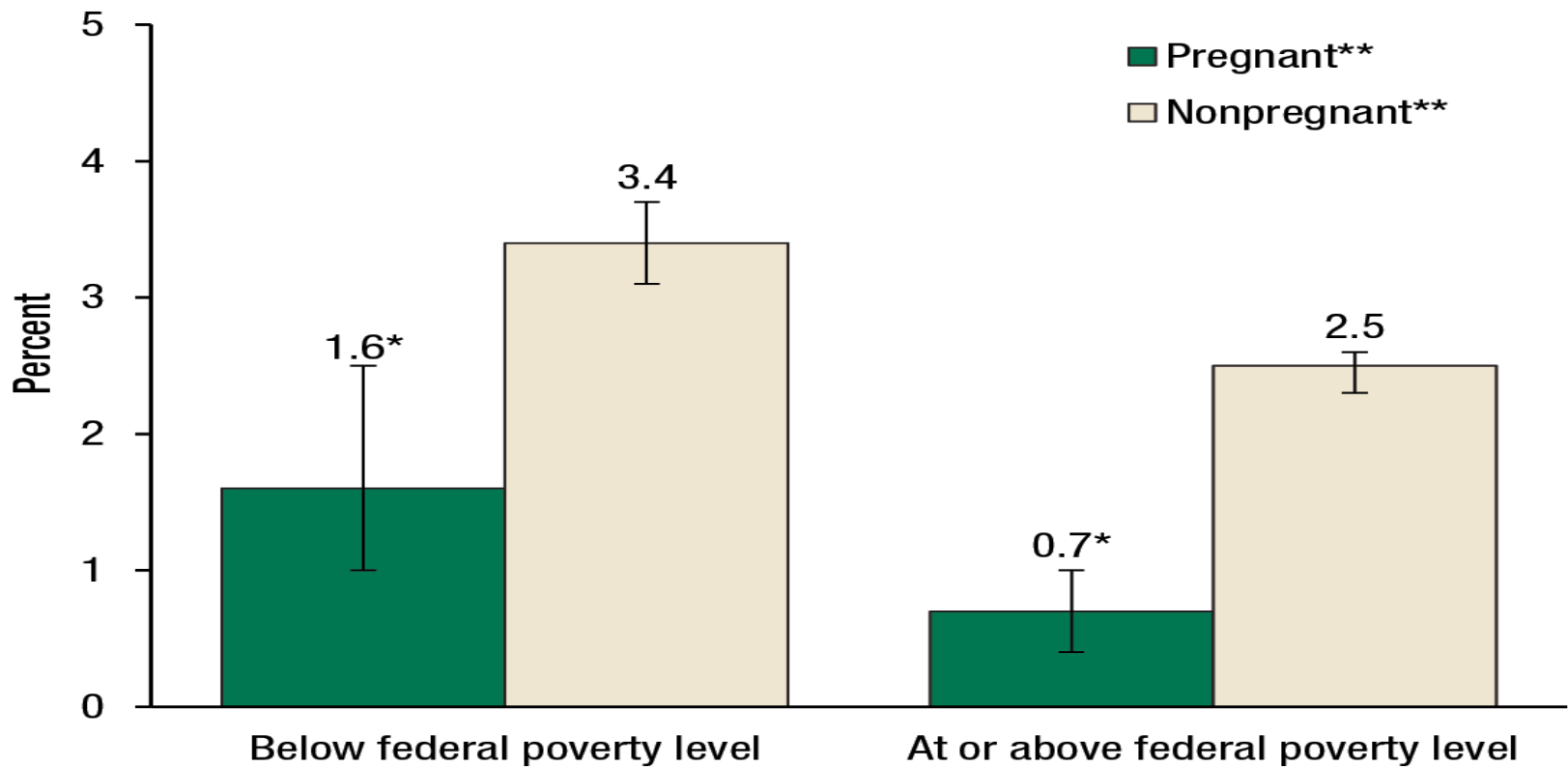
\* Difference between the estimates for pregnant women and nonpregnant women is statistically significant at the .05 level.

\*\* Difference between the estimates for the two youngest age groups (i.e., 15 to 17 and 18 to 25) and the 26 to 34 age group is statistically significant at the .05 level.

\*\*\* Difference between the estimates for the two youngest age groups and the two oldest age groups (i.e., 26 to 34 and 35 to 44) is statistically significant at the .05 level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Surveys on Drug Use and Health (NSDUH), 2007 to 2012.

# Past month opioid misuse among women aged 15 to 44, by pregnancy status and federal poverty level: 2007 to 2012

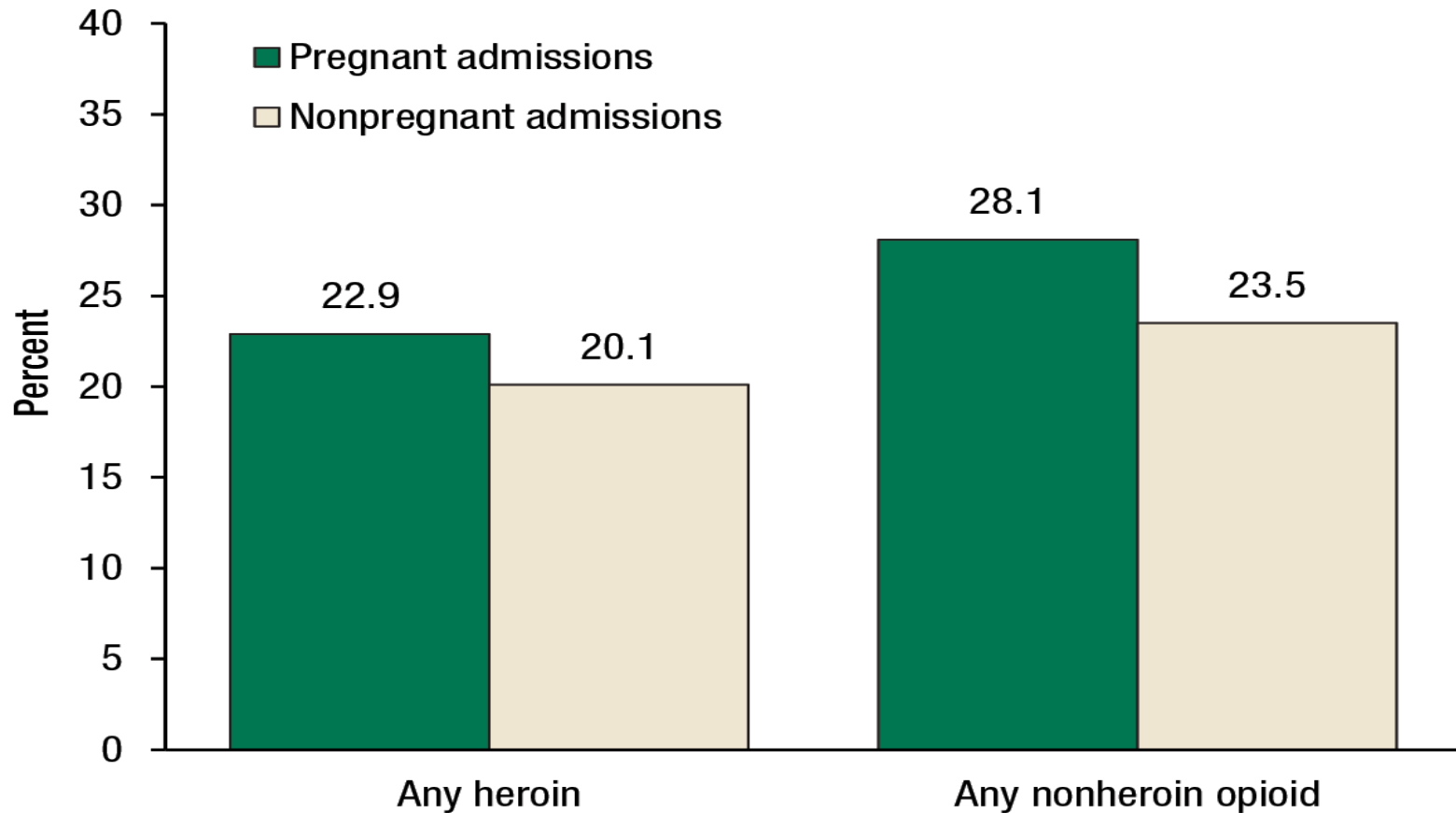


\* Difference between the estimates for pregnant and nonpregnant women is statistically significant at the .05 level.

\*\* Difference between the estimates for women living below the federal poverty level and women living at or above the federal poverty level is statistically significant at the .05 level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Surveys on Drug Use and Health (NSDUHs), 2007 to 2012.

## Reported opioid misuse among female admissions aged 15 to 44, by pregnancy status: 2012



Source: SAMHSA, Center for Behavioral Health Statistics and Quality, Treatment Episode Data Set (TEDS), 2012.

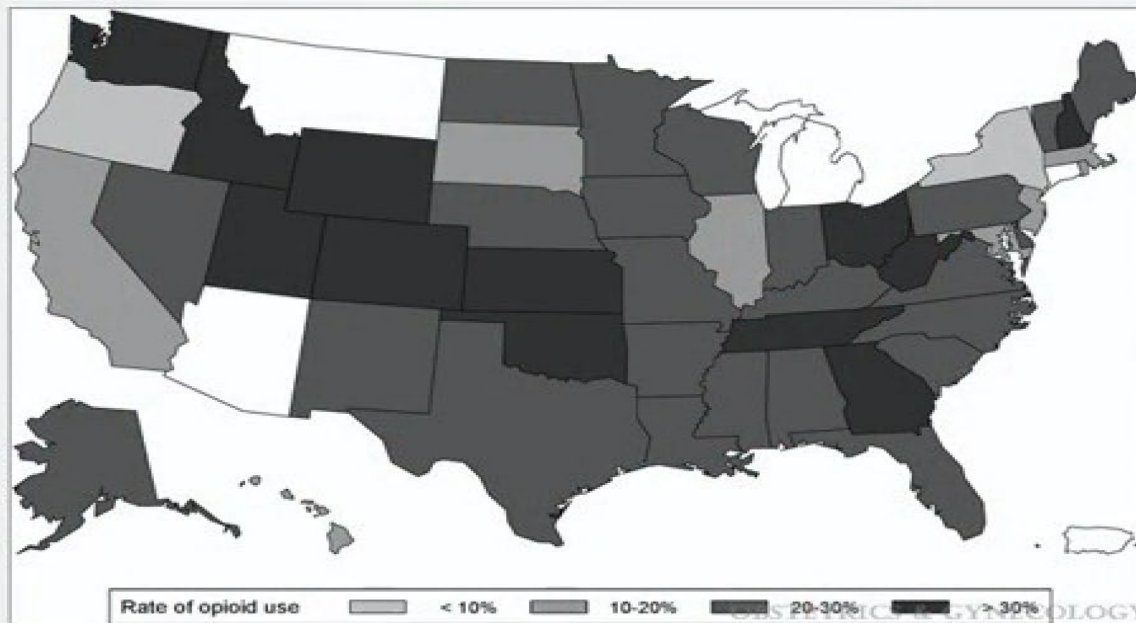
## Impact on neonates

<b>Methadone exposure (compared with no exposure)</b>	<b>Buprenorphine exposure (compared with no exposure)</b>	<b>Methadone vs. Buprenorphine</b>	<b>Non-MAT opioid exposure</b>
PTB (OR 2.5-3.5) SGA (OR 2.2) Major malformations (OR 1.9) Minor malformations (OR 2.1) NAS (40-55%)	PTB (OR 2.4) Major malformations (OR 2.0) NAS (20-45%)	Higher adherence to methadone Lower birthweight (M) Shorter gestation (M) NAS incidence (ND) Greater NAS severity (M)	Spina bifida (OR 2.0) Gastroschisis (OR 1.8) Heart defects (OR 1.4) NAS (0.3, 2.3-5.6%)

Cleary 2011; Desai 2015; Broussard 2011; Noorgaard 2015; Kellog 2011; Jones 2015; Minozzi 2013; Noormohommadi 2016

# Geographic variations

## REGIONAL VARIATION IN THE RATES OF PRESCRIPTION OPIOID DISPENSING DURING PREGNANCY, MEDICAID 2000–2007



- 1.1 million women with completed pregnancies from 46 US states and Washington DC.
- 21.6% of Medicaid recipients filled a prescription opioid in pregnancy.
- 29.0% among whites, 19.1% among blacks, and 13.4% among Hispanics.

Regional variation in the rates of prescription opioid dispensing during pregnancy, Medicaid 2000–2007. Arizona, Michigan, Montana, Connecticut, and Puerto Rico (white) are not represented in the cohort because of incomplete claims information. Fig. 1. Desai. Prescription Opioid Use Trend in Pregnancy. *Obstet Gynecol* 2014.

[Increase in Prescription Opioid Use During Pregnancy Among Medicaid-Enrolled Women](#) Desai, Rishi J.; Hernandez-Diaz, Sonia; Bateman, Brian T.; Huybrechts, Krista F. *Obstetrics & Gynecology* 123(5):997-1002, May 2014. doi: 10.1097/AOG.0000000000000208

## OUD and MAT by region and state legislation

Variable	All Women	Women With an Opioid Use Disorder Diagnosis, No. (%)	P Value	Women Receiving Medication-Assisted Treatment, No. (%)	P Value
Region					
Midwest	32 228	52 (0.05)	<.01	52 (0.05)	<.01
Northeast	23 066	98 (0.09)		87 (0.08)	
South	34 621	66 (0.06)		113 (0.10)	
West	20 370	61 (0.06)		60 (0.05)	
Legislation present					
Yes	44 683	81 (0.07)	<.01	129 (0.12)	.76
No	65 602	196 (0.18)		183 (0.17)	
All	110 285	277 (0.25)		312 (0.28)	

Gressler L, Shah S, Shaya F. Association of Criminal Statutes for Opioid Use Disorder With Prevalence and Treatment Among Pregnant Women With Commercial Insurance in the United States. *JAMA Network Open*. 2019;2(3):e190338. doi:10.1001/jamanetworkopen.2019.0338



## Some challenges

- **Common Practice:**
  - Only 10% of OB screen for OUD.
  - Standard care has been to avoid withdrawal from opioids during pregnancy due to concern for the safety of the baby.
- **Complexity:** BH/ addiction support , F2F CM, SDOH/ social needs (food, housing) needed
- **Access:** nationwide shortage of providers and programs for mothers with OUD.
- **Incentives:** Incentives are not in place to shift resources from caring for NAS babies toward preventing NAS births

\* The 2012 National Survey of Substance Abuse Treatment Services data indicate that 13 percent of outpatient-only substance use treatment facilities and 13 percent of residential treatment facilities offered special programs for pregnant/postpartum women; within hospital inpatient treatment facilities, 7 percent offered special programs for pregnant/postpartum women.

# Solution has to be in an interdisciplinary approach

ALLOWING DATA TO INFORM DECISION MAKING

