

Community Conditions, State Policies, and Neonatal Opioid Withdrawal Syndrome: What is the Current State of Knowledge?

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Disclosures

- ▶ I have no relevant financial relationships with the manufacturer(s) of any commercial services discussed in this CME activity.
- ▶ I do (or) do not intend to discuss an unapproved/investigative use of a commercial product/device in my presentation.

Learning Objectives

- ▶ To better appreciate the range of state policies targeting opioid using pregnant women
- ▶ To better appreciate how a shortage of healthcare providers may influence rates of neonatal opioid withdrawal syndrome
- ▶ To better understand how current and past economic conditions may influence rates of neonatal opioid withdrawal syndrome

Acknowledgements

Collaborators

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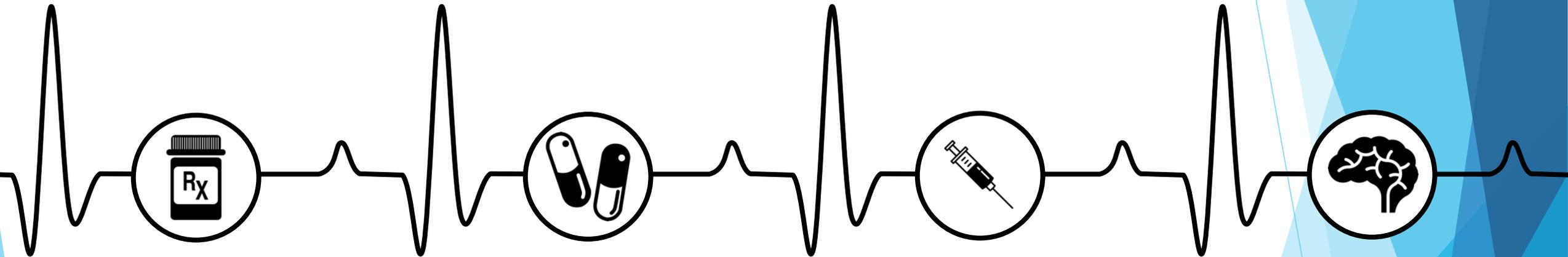
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Opioid abuse is a national crisis



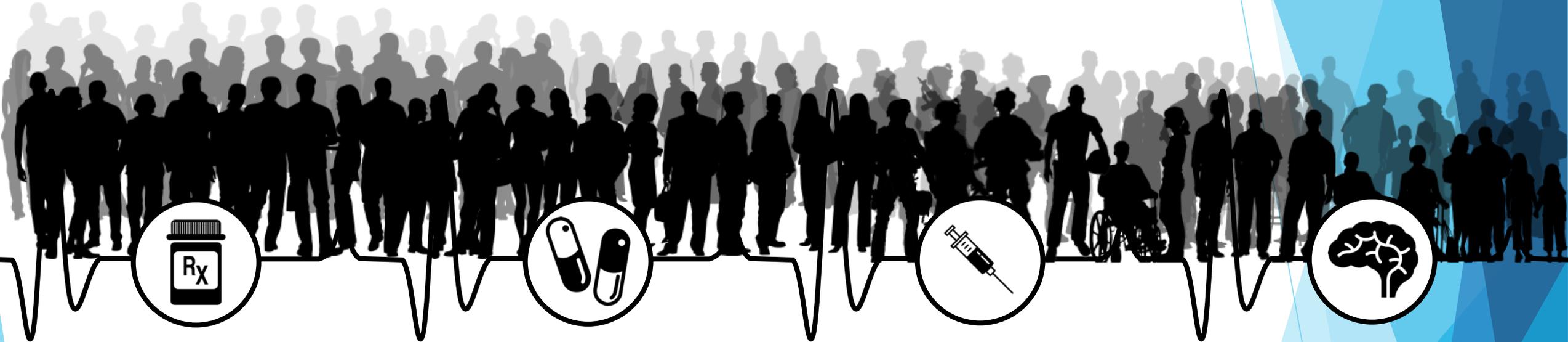
214 MILLION
PRESCRIPTIONS
for opioids are
written every year

15 MILLION
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948,000
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use heroin or have
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2.1 MILLION
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No communities or groups are immune



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Neonatal Opioid Withdrawal Syndrome

- Neonatal opioid withdrawal syndrome (NOWS) is a drug withdrawal syndrome experienced by some opioid-exposed infants
- From 2000 to 2014, the rate of infants diagnosed with the syndrome grew nearly 8-fold
- 1 infant was born with NOWS every 15 minutes on average nationwide
- 8 cases of NOWS per 1000 hospital births
- Like opioid-prescribing and overdose deaths, NOWS rates vary substantially across communities

Today's talk

- Subsequent talks will address
 - Underlying biology and treatment of opioid using mother
 - Care of infant with NOWS
- I will discuss NOWS as a public health crisis and describe selected issues at a societal level
 - What are some societal and contextual factors associated with greater rates of NOWS?
 - How have policymakers responded to increasing rates of NOWS?

Why do factors associated with NOWS vary across communities?

- Proximal answer is rates of opioid use by pregnant women vary
- Incredibly complicated question as opioid use, misuse, treatment, and harms all are part of an Opioid Ecosystem
 - Supply of opioids, both analgesics and illicit opioids, varies by community
 - Demand varies by community characteristics and available treatment
- NOWS and Opioid OD rates disproportionately greater in rural impoverished communities
 - Poor healthcare infrastructure
 - Greater impact of macroeconomic disruptions

What we wanted to learn

- How is NOWS affected by clinician supply?
 - Obstetricians, primary care, mental health
- How is NOWS affected by long term unemployment rate?
- Do the impact of these community characteristics differ between urban and rural communities?

Our approach

- NOWS per 1000 hospital births from State Inpatient Databases for 2009-2015
- 580 counties from 8 states (Florida, Kentucky, Massachusetts, Michigan, North Carolina, New York, Tennessee, Washington)
- County clinician supply from Area Health Resources File
 - Primary care and mental health provider shortage area
 - Obstetricians per 1000 residents
- Economic variables
 - Current and 10 year moving average unemployment
 - Proportion of manufacturing jobs

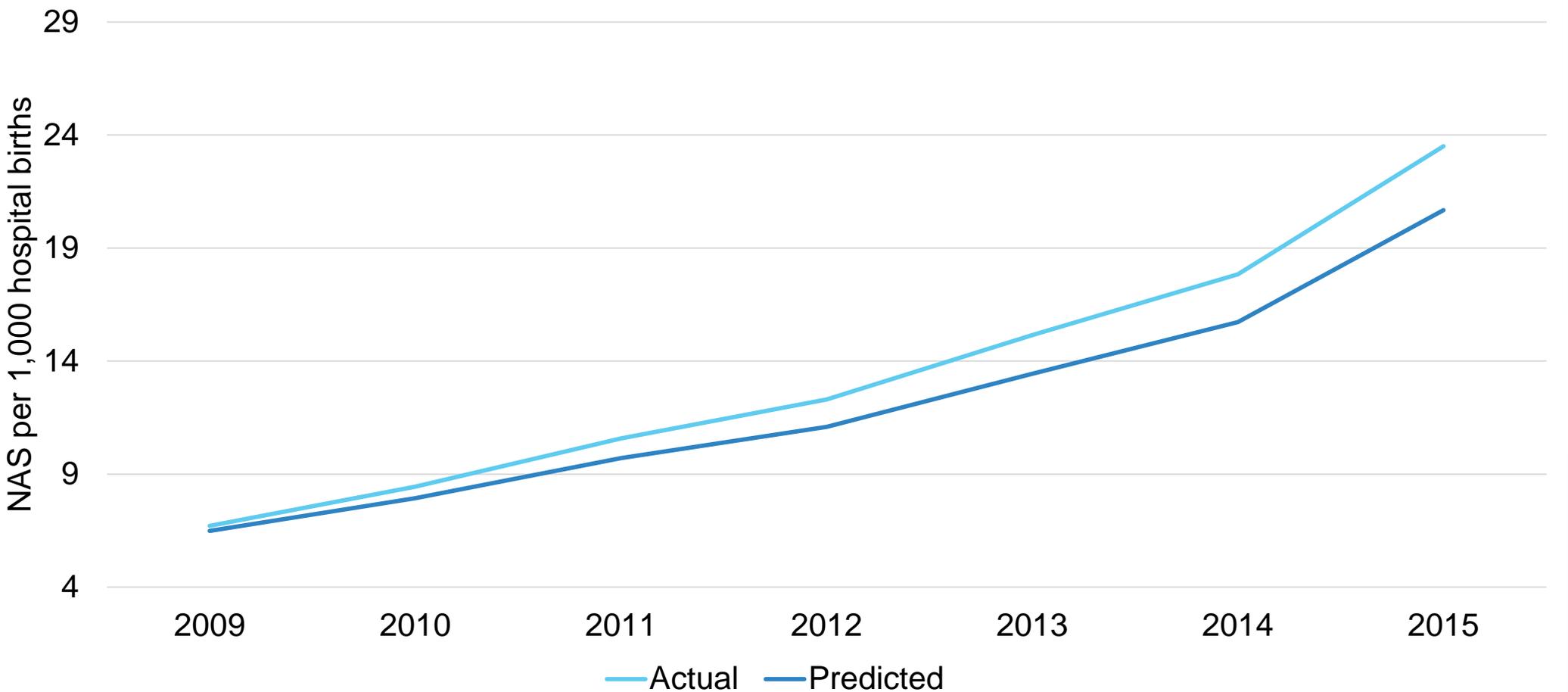
Our analytic approach

- Negative binomial models were estimated using year and county-level fixed effects
- Predicted rates of unemployment calculated without the 2008 recession, models applied, and excess NOWS was calculated

Long-Term Unemployment, Mental Health Shortage Areas Associated with Higher Rates of NOWS

- Mental health shortage areas associated with higher rates of NOWS
 - Impact is primarily in urban communities
- Higher persistent unemployment was associated with higher rates of NOWS
 - Impact is primarily in rural communities

Predicted Rates of NOWS Without the 2008 Recession vs Actual Rates



Conclusions

- Long-term economic hardship at the county level was associated with higher rates of NOWS
- Extrapolating our results to national NOWS incidence we estimate over 10,000 excess cases of NOWS due to the 2008 recession
- Mental health care shortage areas associated with higher rates of NOWS
 - Perhaps due to lack of access for comorbid mental health conditions

Policymaking considerations

- Expanding the supply of mental health professionals
- Targeting economic investments in counties with high rates of unemployment in order to yield future benefits for opioid-related complications in infants

Policymakers response

- Rate of women diagnosed with opioid use disorder diagnosed at labor and delivery quadrupled from 1999 to 2014
- How are policymakers responding to the increase in substance use among pregnant women?

Policy Responses to Substance Use Among Pregnant Women

Policymakers have been active over the last 2 decades in enacting policies intended to decrease substance use in pregnant women

Policies intended to support women in getting treatment

- Policies that create or fund SUD treatment programs specifically for pregnant women
- Policies that provide pregnant women with priority access to state-funded drug treatment programs
- Policies that prohibit discrimination against pregnant women in publicly funded SUD treatment programs

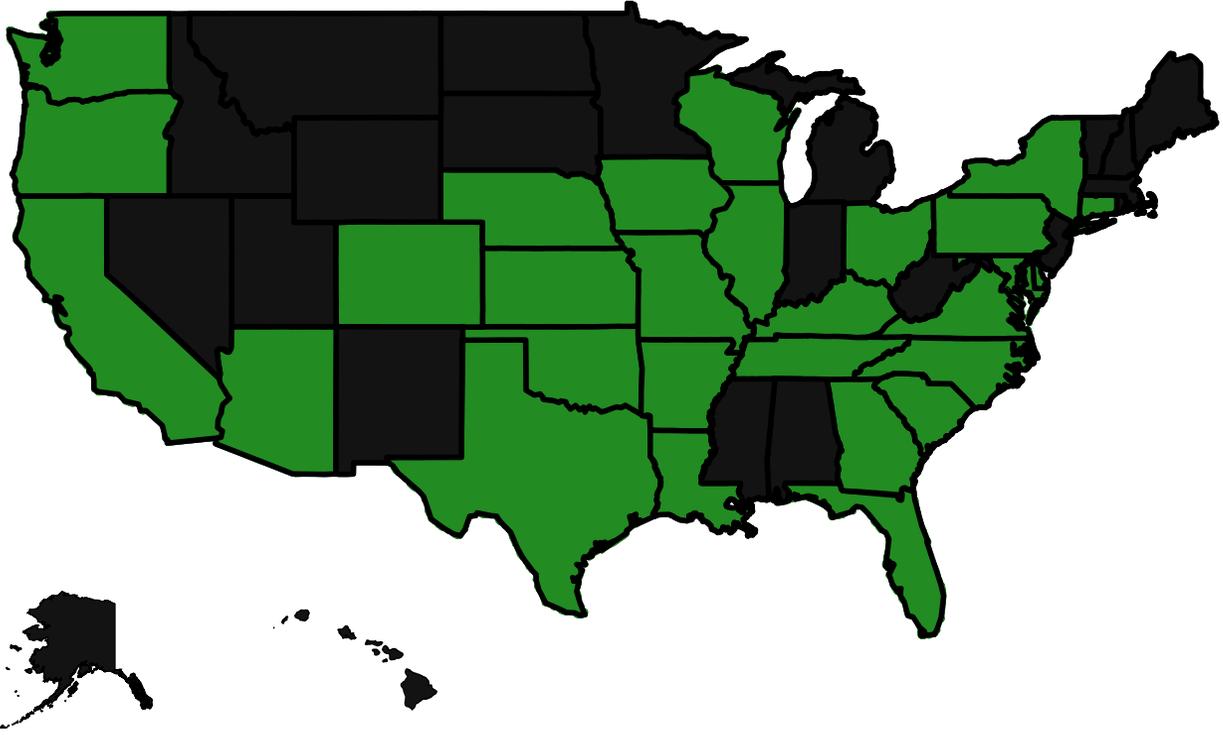
Policies intended to reduce substance use through punitive actions

- Policies that consider substance abuse in pregnancy to be child abuse under civil child welfare statutes, grounds for civil commitment, or a criminal act
- Policies that require health care professionals to report suspected prenatal substance use
- Policies that require health professionals to test for prenatal substance use if suspected

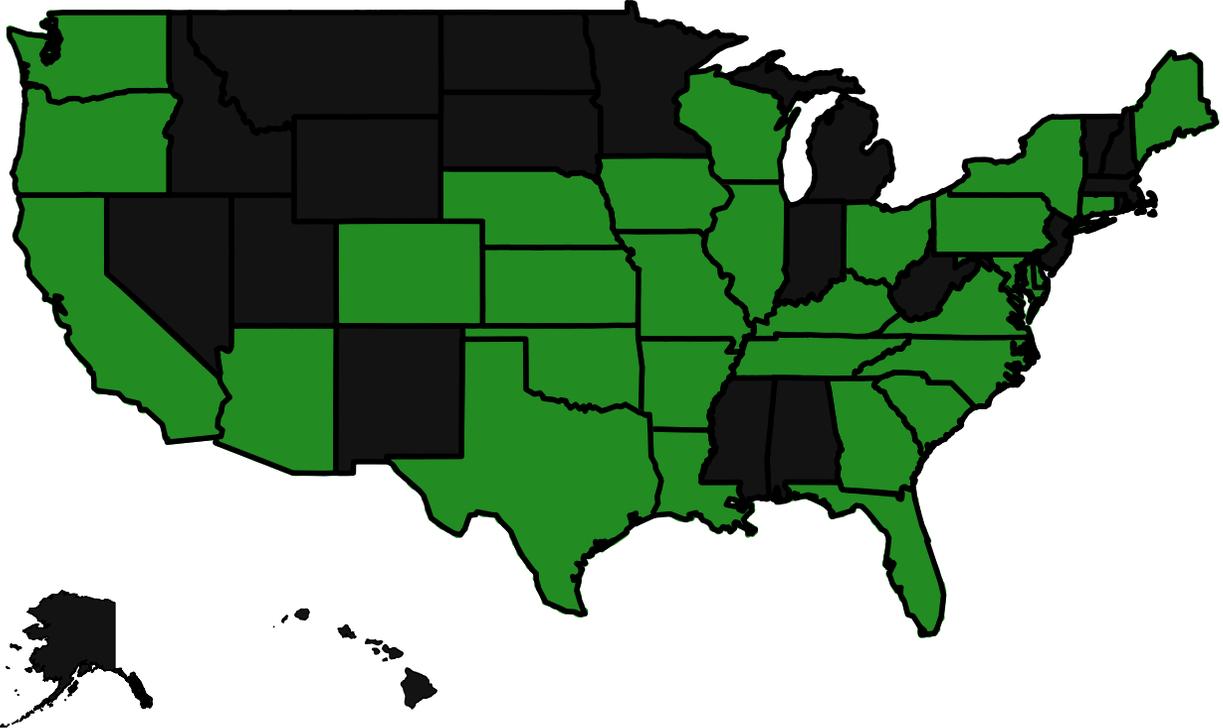
How are policymakers responding to the increase in substance use among pregnant women?

- Are treatment supportive approaches or punitive approaches more common?
- To answer these questions we looked at the evolution of policies addressing substance use in pregnant women since 2000

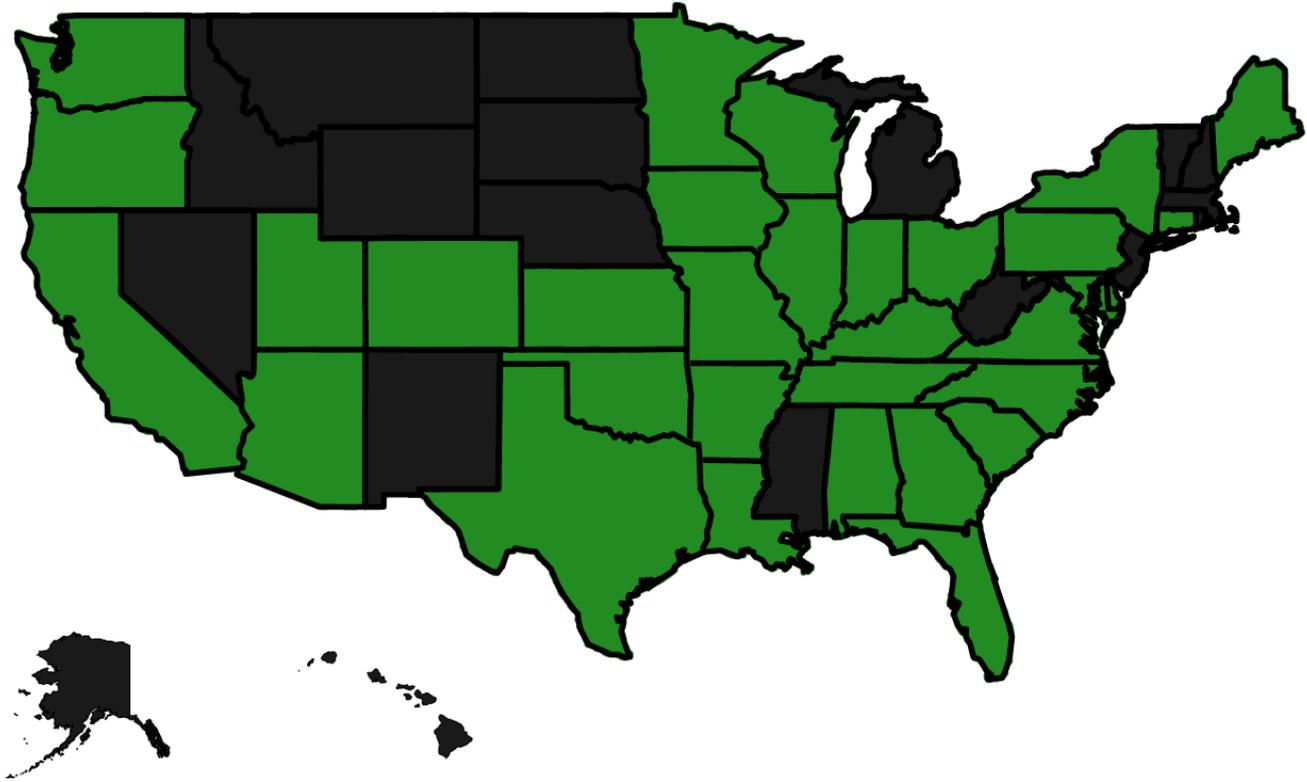
States with Treatment Supportive Policies in 2000



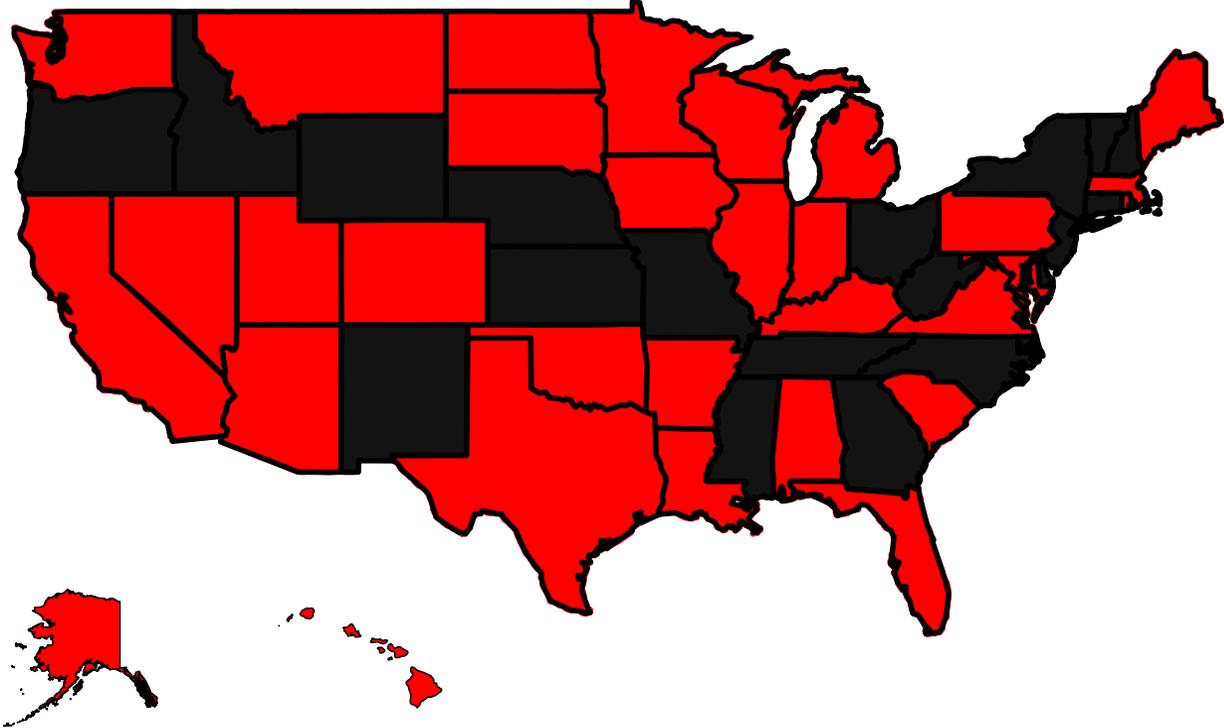
States with Treatment Supportive Policies in 2005



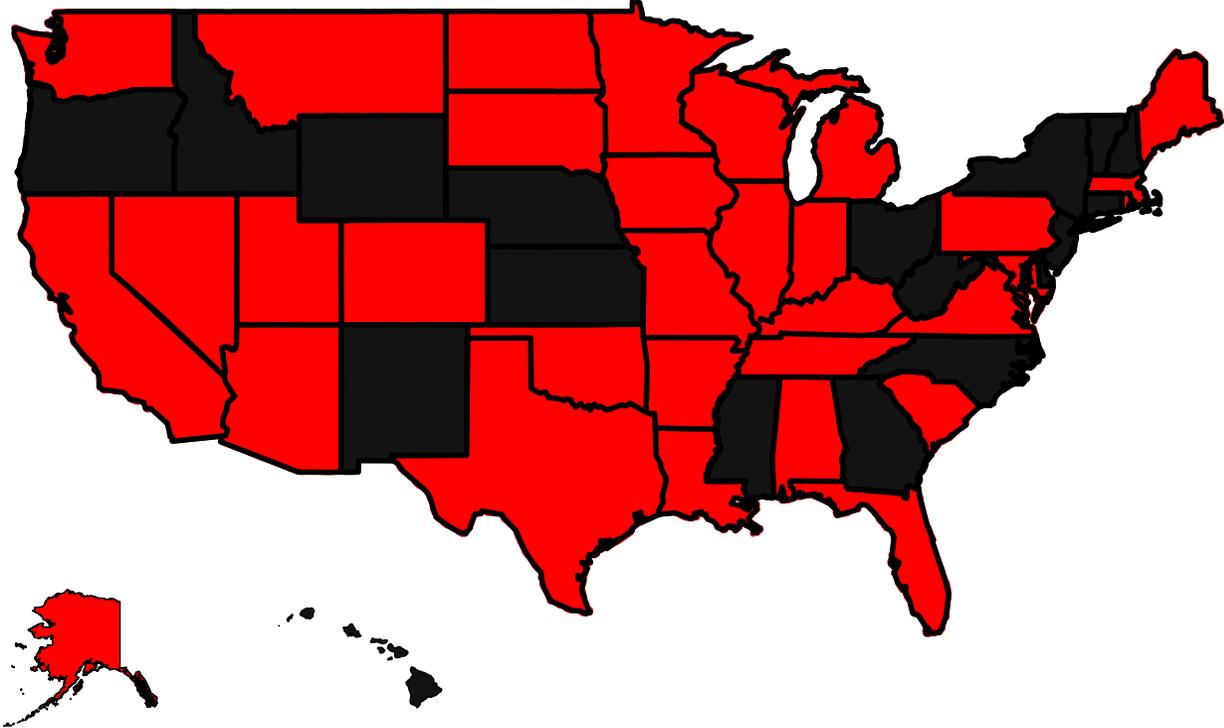
States with Treatment Supportive Policies in 2015



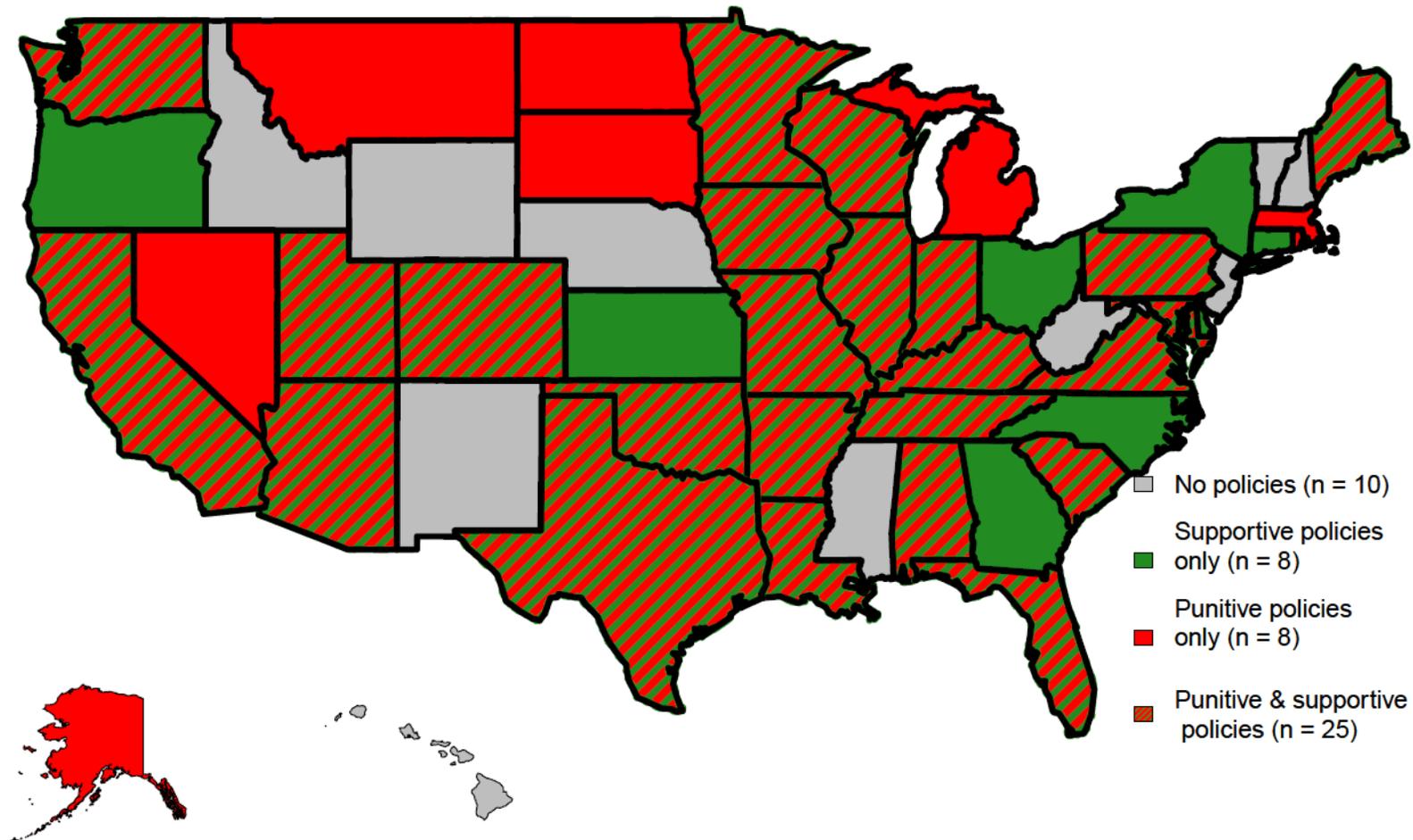
States with Punitive Policies in 2010



States with Punitive Policies in 2015



Overview of policy combinations in 2015



What we learned

- Recent studies document dramatic increase in pregnant women diagnosed with opioid use disorder and in NOWS
- Very active policy environment with states passing legislation related to substance use in pregnancy
 - 4 states added policies supporting treatment (n=28 to n=32)
 - 15 states added punitive policies (n=18 to n=33)
- In 2015, 24 states had both supportive and punitive policies

Implications

- Punitive policies consistent with view that opioid use is a choice or moral failing
- Policies that increase fear of legal penalties and discourage women from seeking health care may have range of negative consequences
- Reducing barriers to care more likely to be effective, and recommended by multiple professional organizations
- Successfully addressing NOWS and other sequelae of the opioid crisis requires a aggressive public health approach
 - Ensuring access to and use of the most effective treatments
 - Widespread use of approaches effective in preventing opioid misuse and abuse
 - Identifying and using effective approaches to harm reduction

Considerations for our approach to NOWS

- NOWS is more than a clinical issue- it exists within a broader societal context
- Public health and policymaking response required to complement clinical response to effectively address the crisis
- Important that both responses are informed by the best available evidence

Questions and comments

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Thank you!