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Fusing Administrative Data to Combat the Opioid Crisis

Kevin P. Conway
RTI International

Camille Gourdet
RTI International

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Fusing Administrative Data to Combat the Opioid Crisis

Abstract

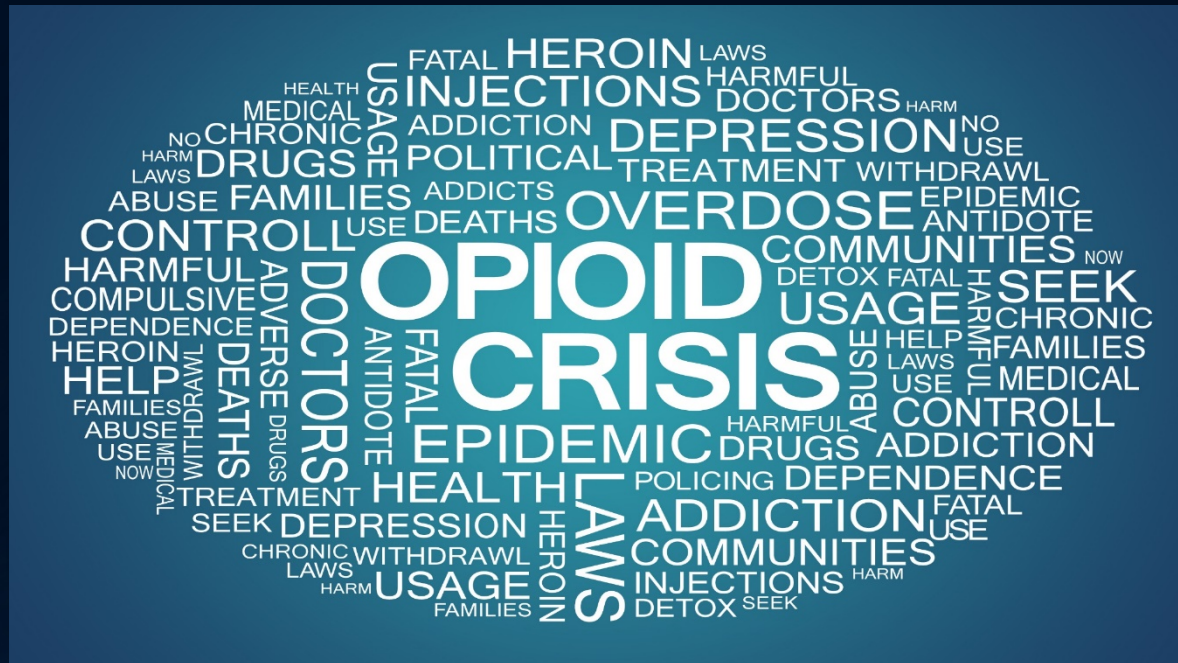
Opioid-related overdose deaths remain the leading cause of unintentional injury fatalities in the United States. State lawmakers have responded to this crisis by establishing a regulatory environment that extends various legal protections to persons who may help save the life of someone experiencing an opioid-related overdose. Most states now protect specific parties (e.g., doctors, pharmacists, first responders, laypersons) from civil or criminal liability who prescribe, dispense, possess or administer an opioid antagonist in accordance with the provisions of the state's law. In addition to standing orders that facilitate access to opioid antagonists, many states offer legal protection to "Good Samaritans" seeking medical and emergency assistance for a person experiencing an overdose. Some states additionally mandate that addiction-treatment services be offered in conjunction with the dispensing of an opioid antagonist, whereas others designate revenue to purchase opiate antagonists or to fund treatment programs.

Little is known about the potential impact of such regulatory actions on the opioid crisis. RTI's Data Fusion Center seeks to meet this need by combining administrative data across sources and systems to inform research and policy. The current paper describes the Data Fusion Center and presents preliminary results from a study that predicts opioid-related overdose deaths based on the existence and strength of opioid-related state laws among 50 states from 2006 to 2016. Policy data were webscraped from state agencies, systematically coded, and associated with target outcomes sourced from CDC. Study findings may help inform lawmakers and stakeholders in prioritizing data-driven policy responses to the opioid crisis.

Comments

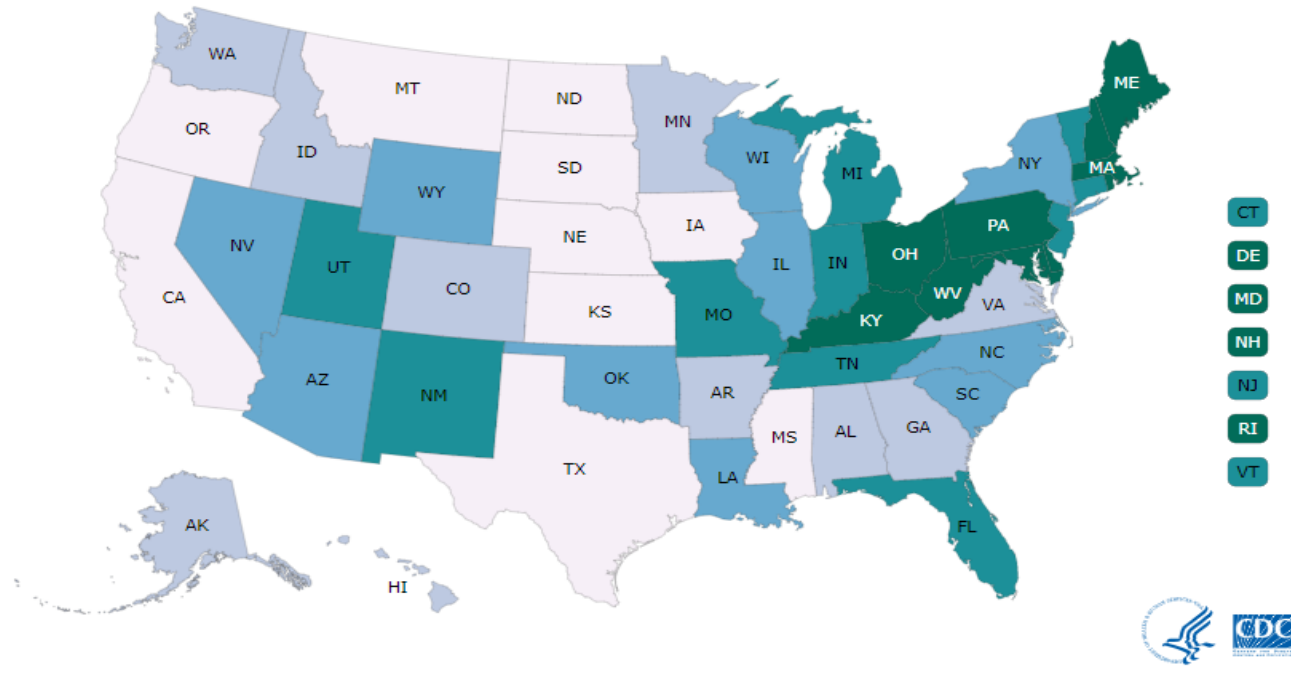
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MEASURING STATE-LEVEL POLICIES TO REDUCE OPIOID-RELATED OVERDOSE DEATHS : AN EXPLORATORY STUDY



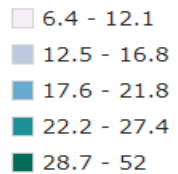
Opioid Overdose Deaths by State, 2016

Drug Overdose Mortality by State: 2016



Age-Adjusted Death Rates¹

United States 19.8



Top 10 States with Opioid-Related Overdose Deaths, 2016

| RANK | STATE | RATE / 100,000 | Number of deaths |
|------|-------|----------------|------------------|
| 1 | WV | 52.0 | 884 |
| 2 | OH | 39.1 | 4,329 |
| 3 | NH | 39.0 | 481 |
| 4 | PA | 37.9 | 4,627 |
| 5 | KY | 33.5 | 1,419 |
| 6 | MD | 33.2 | 2,044 |
| 7 | MA | 33.0 | 2,227 |
| 8 | DE | 30.8 | 282 |
| 9 | RI | 30.8 | 326 |
| 10 | ME | 28.7 | 353 |



Do state laws reduce opioid-related overdose deaths?

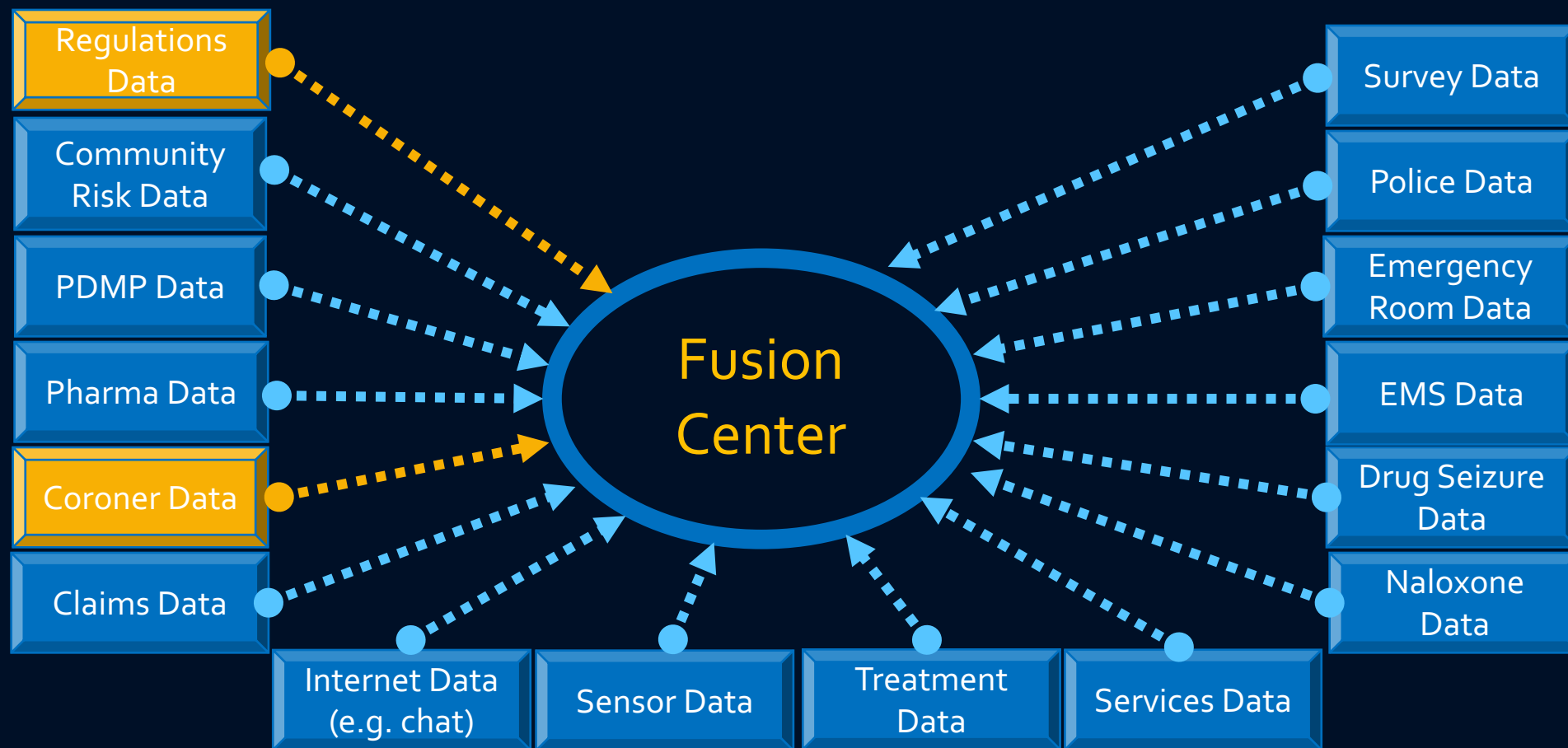
Exploratory study aims:

1. Identify and quantify opioid-related laws in the United States
2. Fuse policy data with state-level overdose data
3. Inform a comprehensive study with testable hypotheses





Data Fusion Center: Integrating Opioid Data





Methods and Approach



- Compile policy categories in effect, from 2000-18, in 50 states + D.C.
- Use Boolean terms & connectors searches to identify relevant state laws in LexisNexis
- Identify laws in 3 categories that may be correlated with a reduction in opioid-related mortality
 - Naloxone Immunity
 - Good Samaritan
 - Earmarked funding
- Coding Scheme: “zero” = if no law; “1” if law exists
- Variables: number of laws per category, state, year, and state ranking for overdose mortality



Naloxone Immunity Laws : Overview

Civil, criminal, or disciplinary legal protection

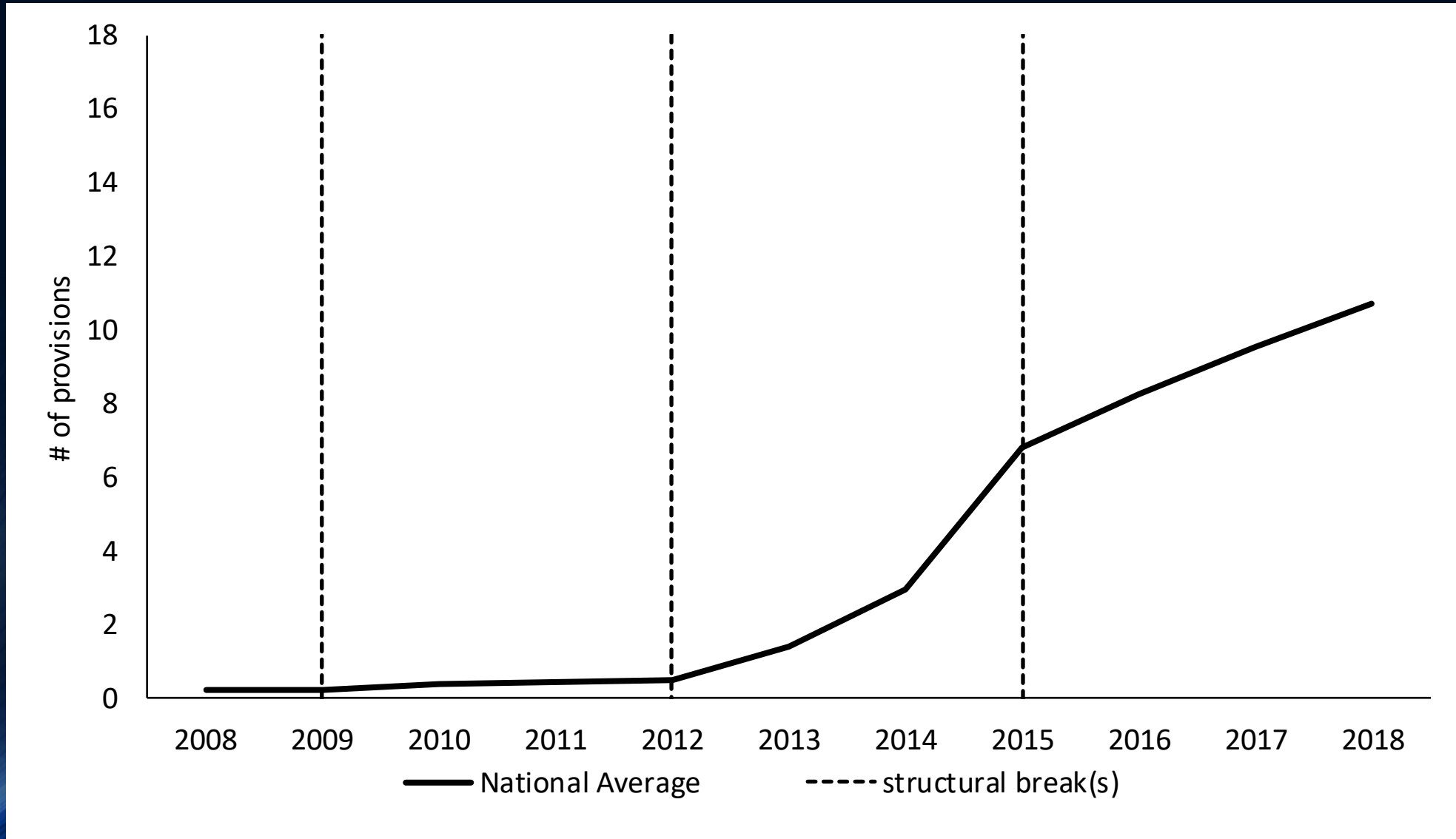
1. Physicians prescribing naloxone (including 3rd party Rx)
2. Pharmacists dispensing naloxone
3. First Responders administering naloxone
4. School Staff administering naloxone
5. Laypersons possessing naloxone
6. Laypersons administering naloxone

Standing Orders



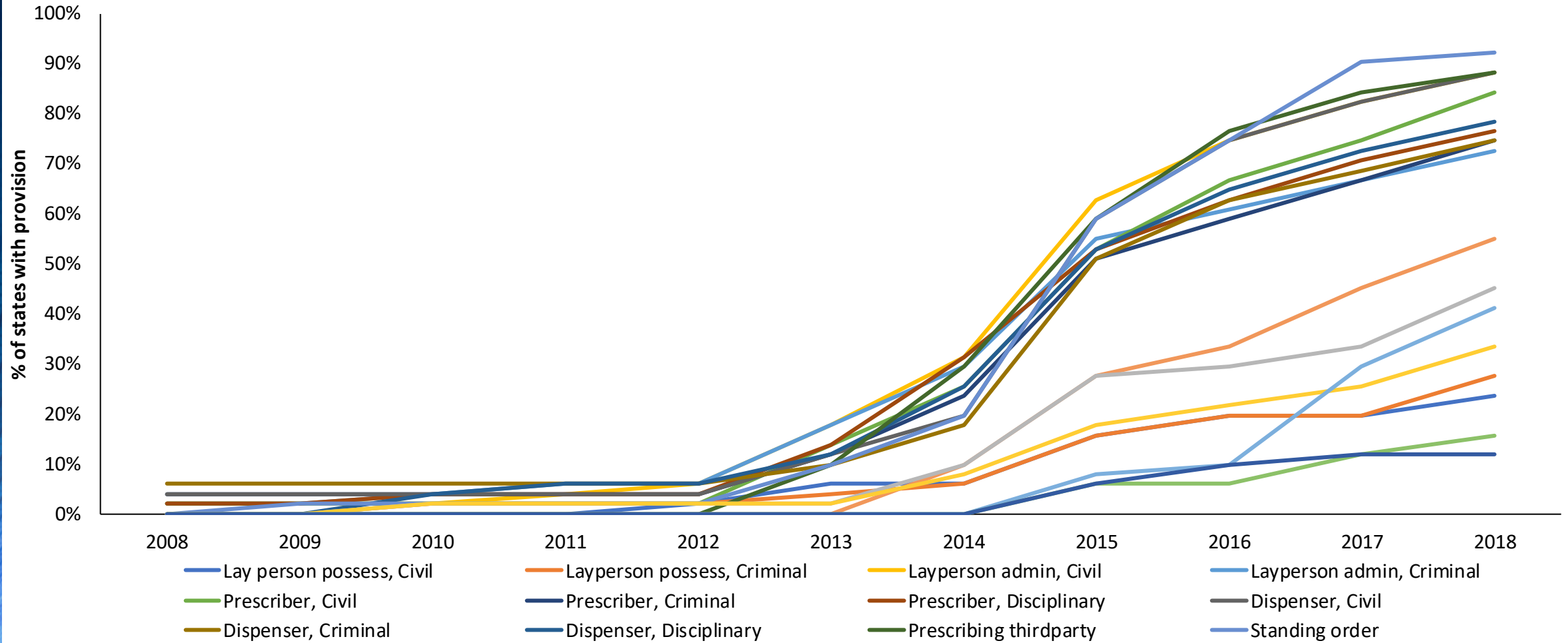


Number of Naloxone Immunity Laws, National (per-state) Average by Year





Proportion of States with Naloxone Immunity Laws, by Year

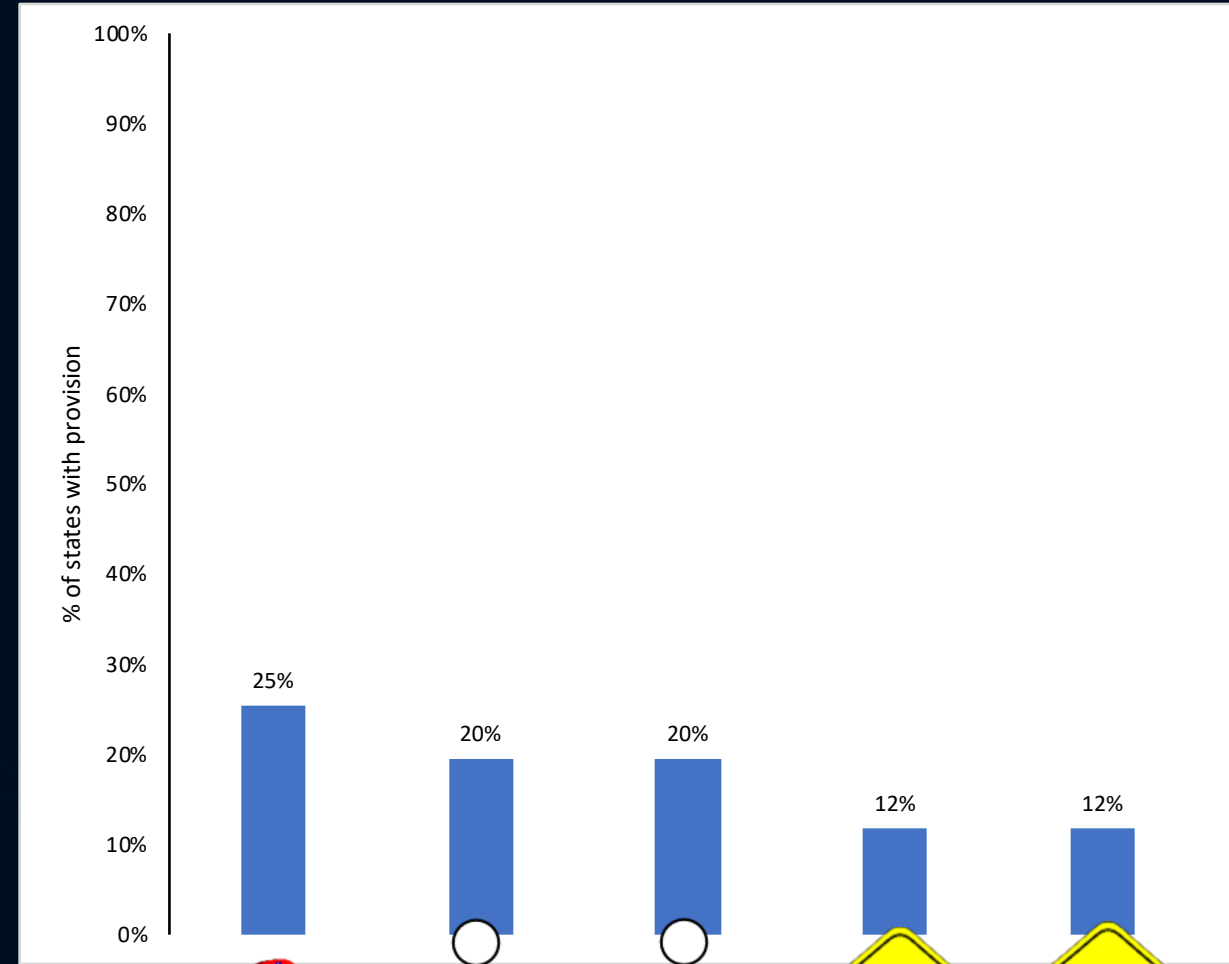
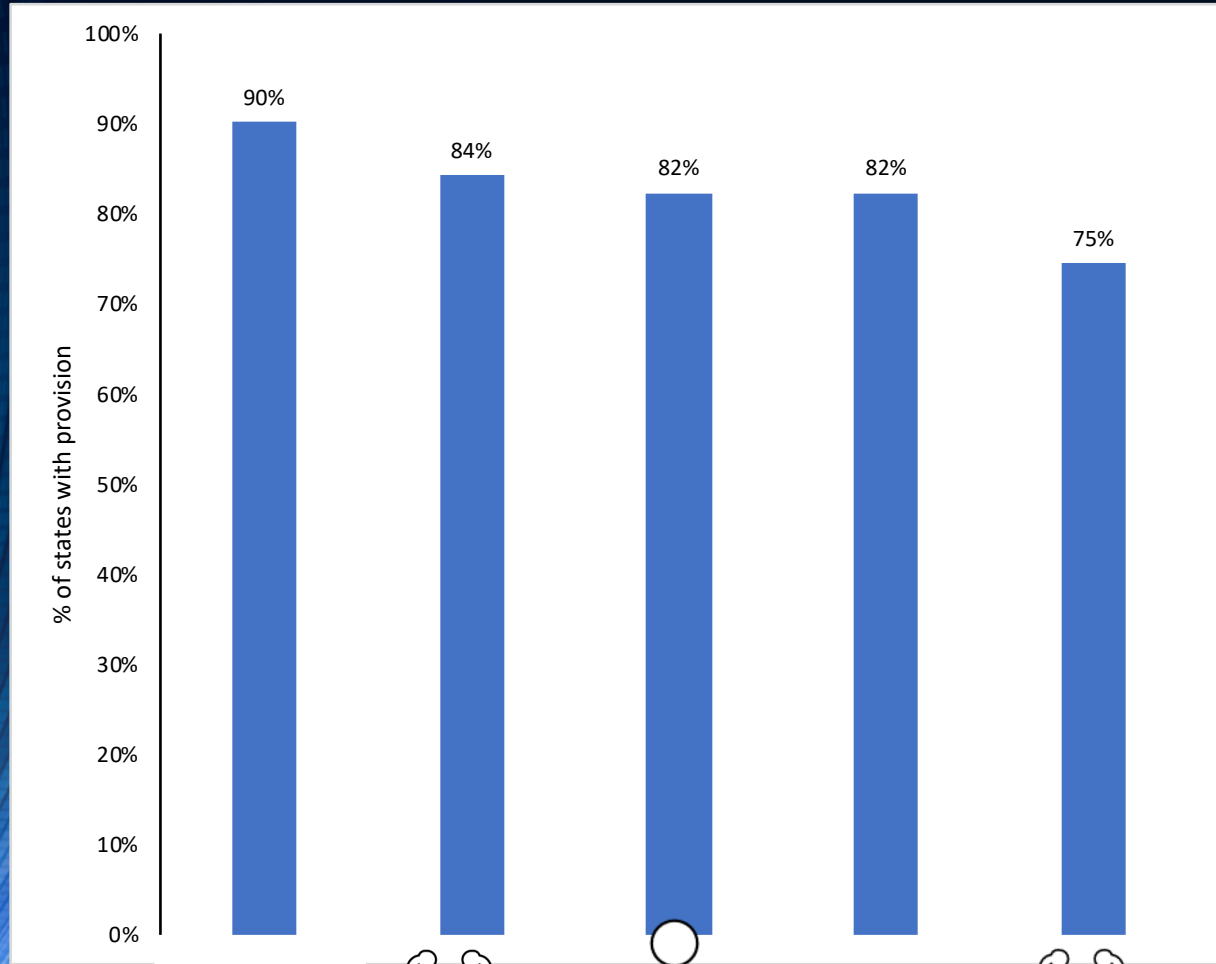




Common Types of Naloxone Immunity Laws in the United States (2017)

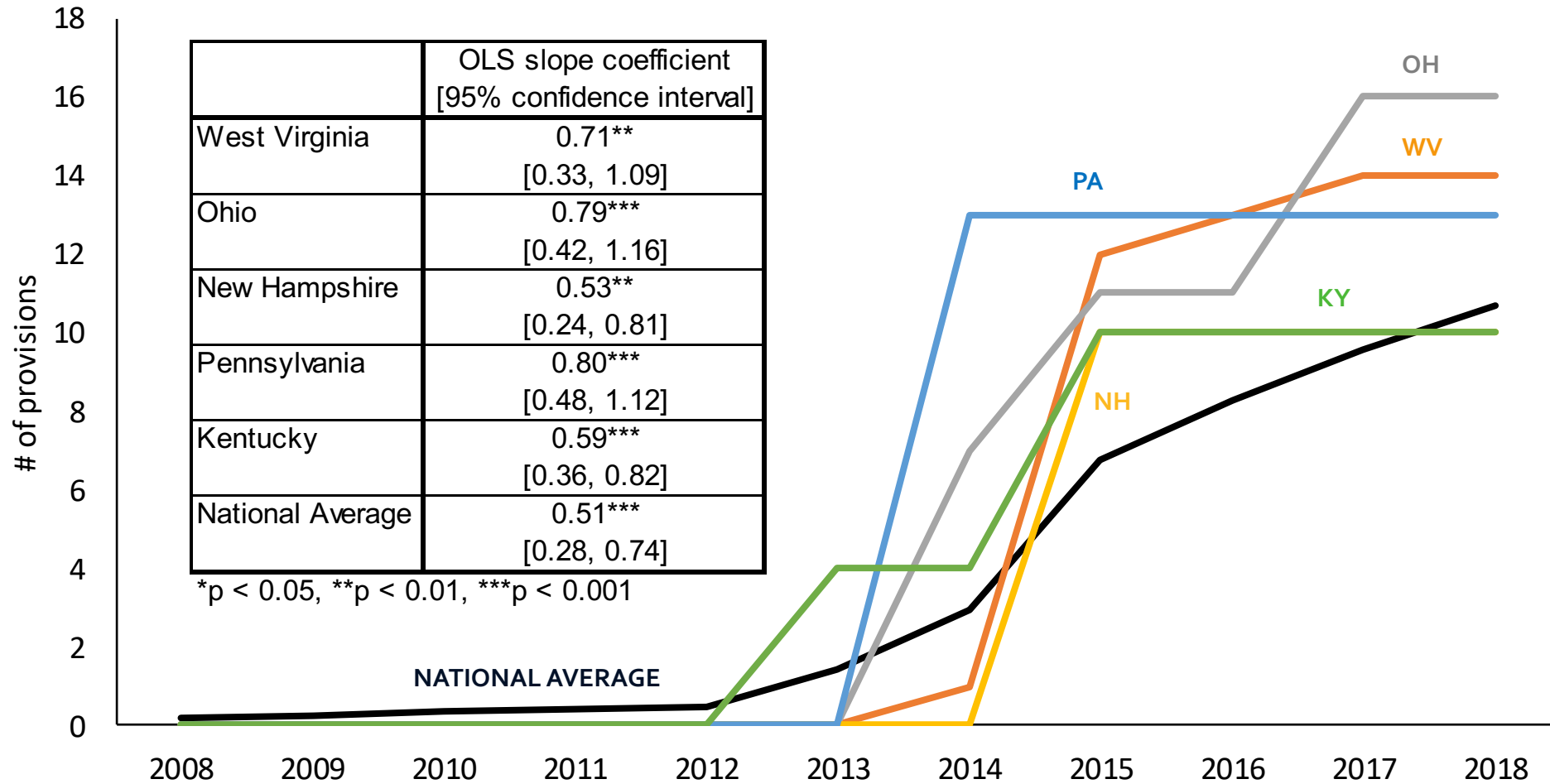
5 MOST COMMON

5 LEAST COMMON





Number of Naloxone Immunity Laws in "Top 5" States, by Year





Naloxone Immunity Laws: Summary

1. Heterogeneity across states; no 2 states are the same
2. More states offer protection from civil than criminal lawsuits or disciplinary/professional sanction
3. Many states offer at least one form of legal protection, for many of the same parties
4. “Top 5” states tend to have more laws than the national average



Good Samaritan Laws : Overview

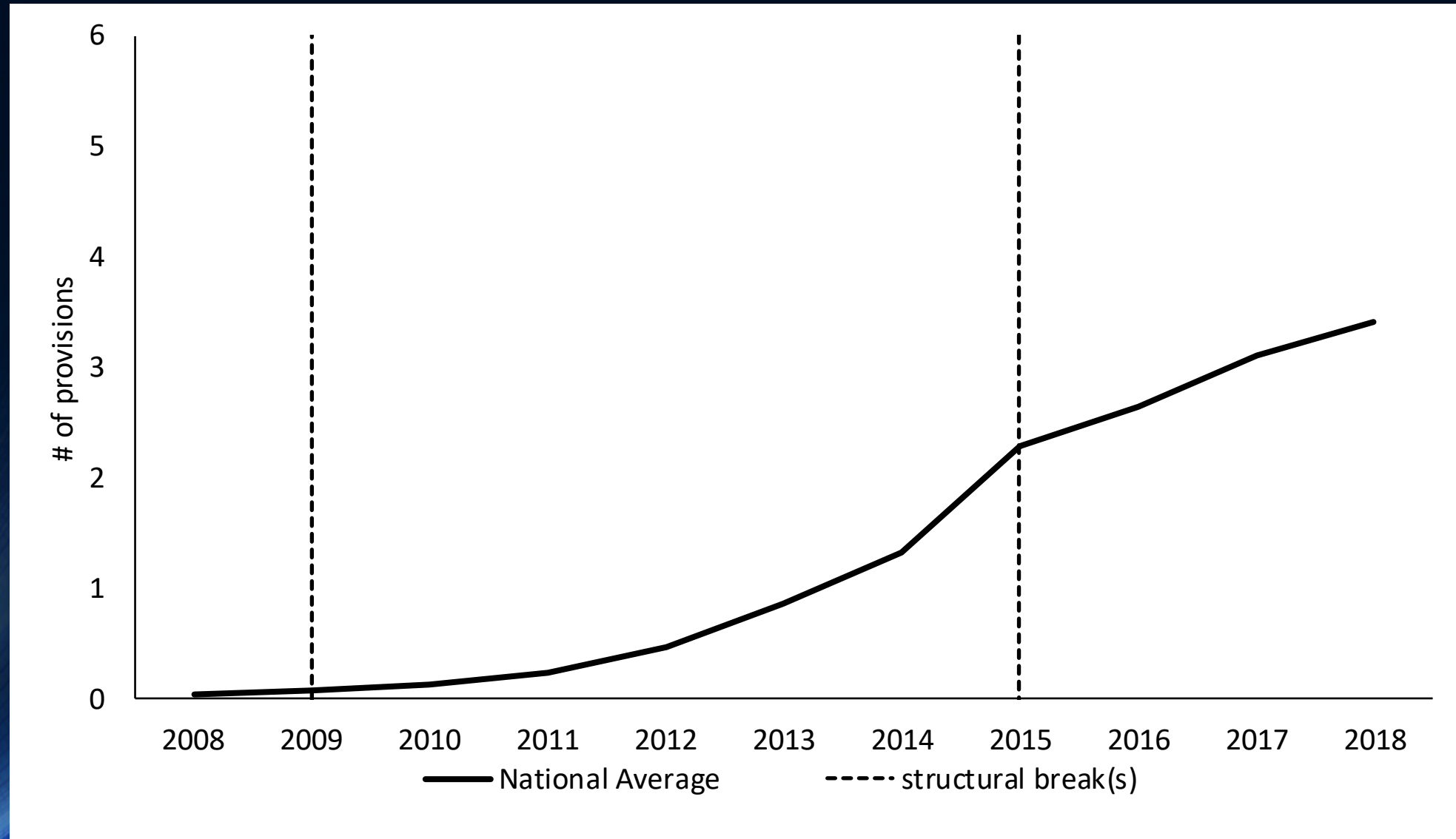
Protection from arrest, criminal charges or prosecution for Good Samaritans who seek help:

1. Controlled substance (CS) possession
2. CS paraphernalia possession
3. Individuals on probation or parole



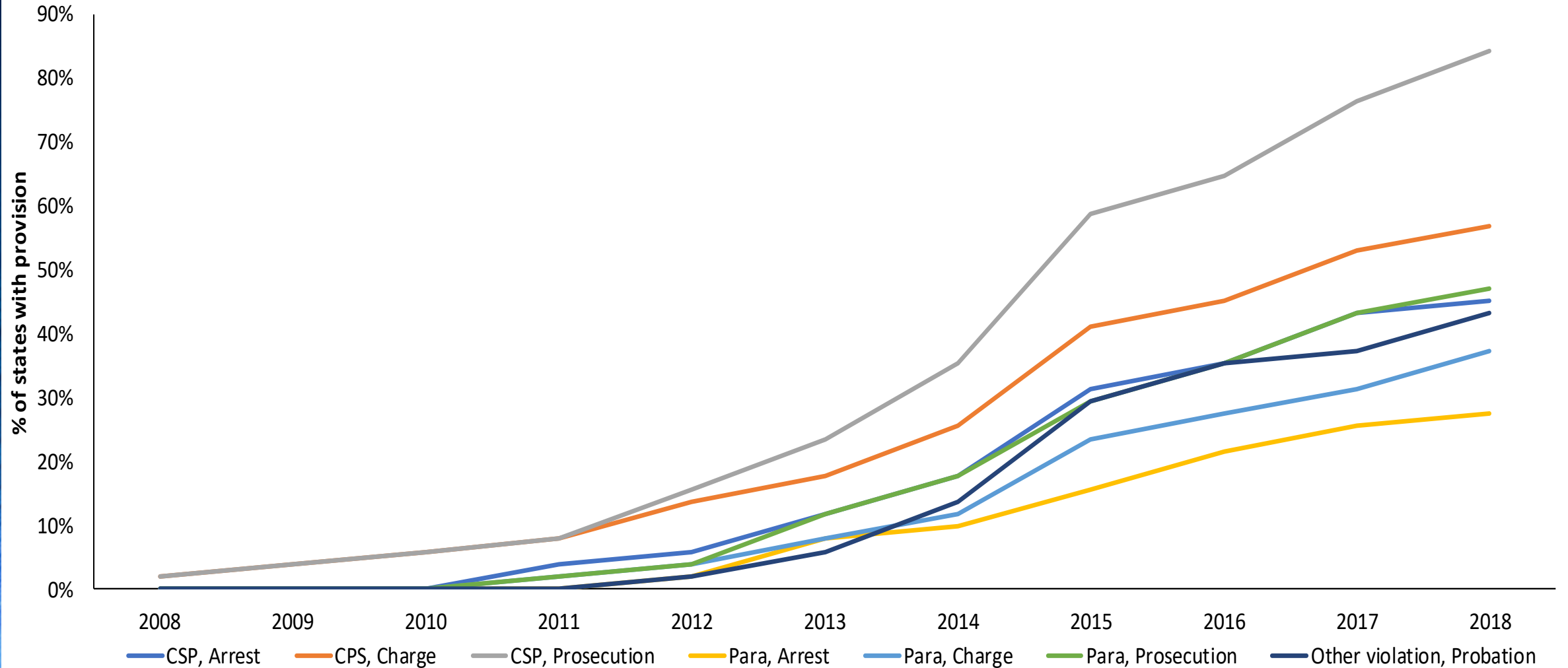


Number of Good Samaritan Laws, National (per state) Average by Year





Proportion of States with Good Samaritan Laws, by Year

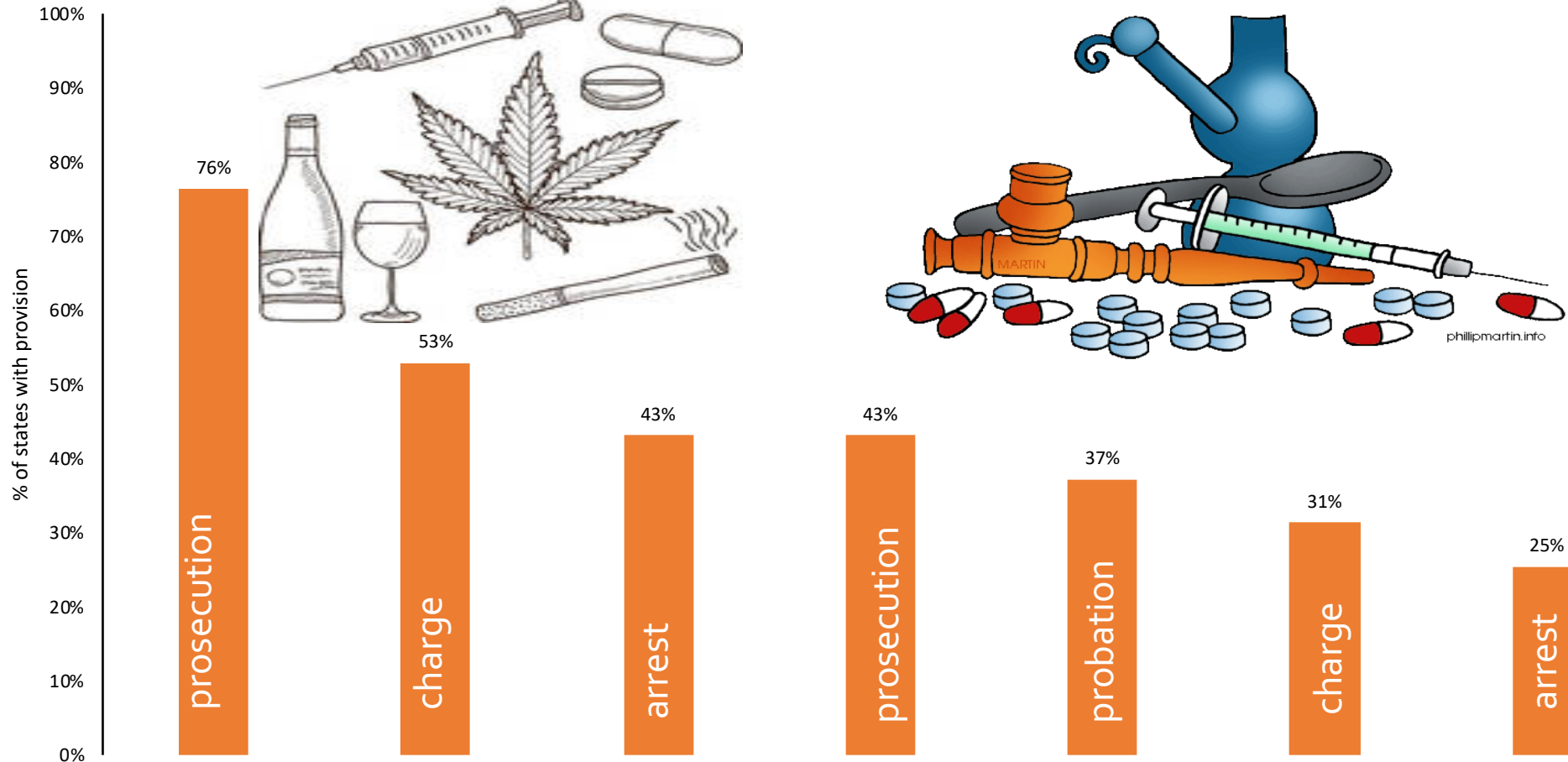




Common Types of Good Samaritan Laws in the United States (2017)

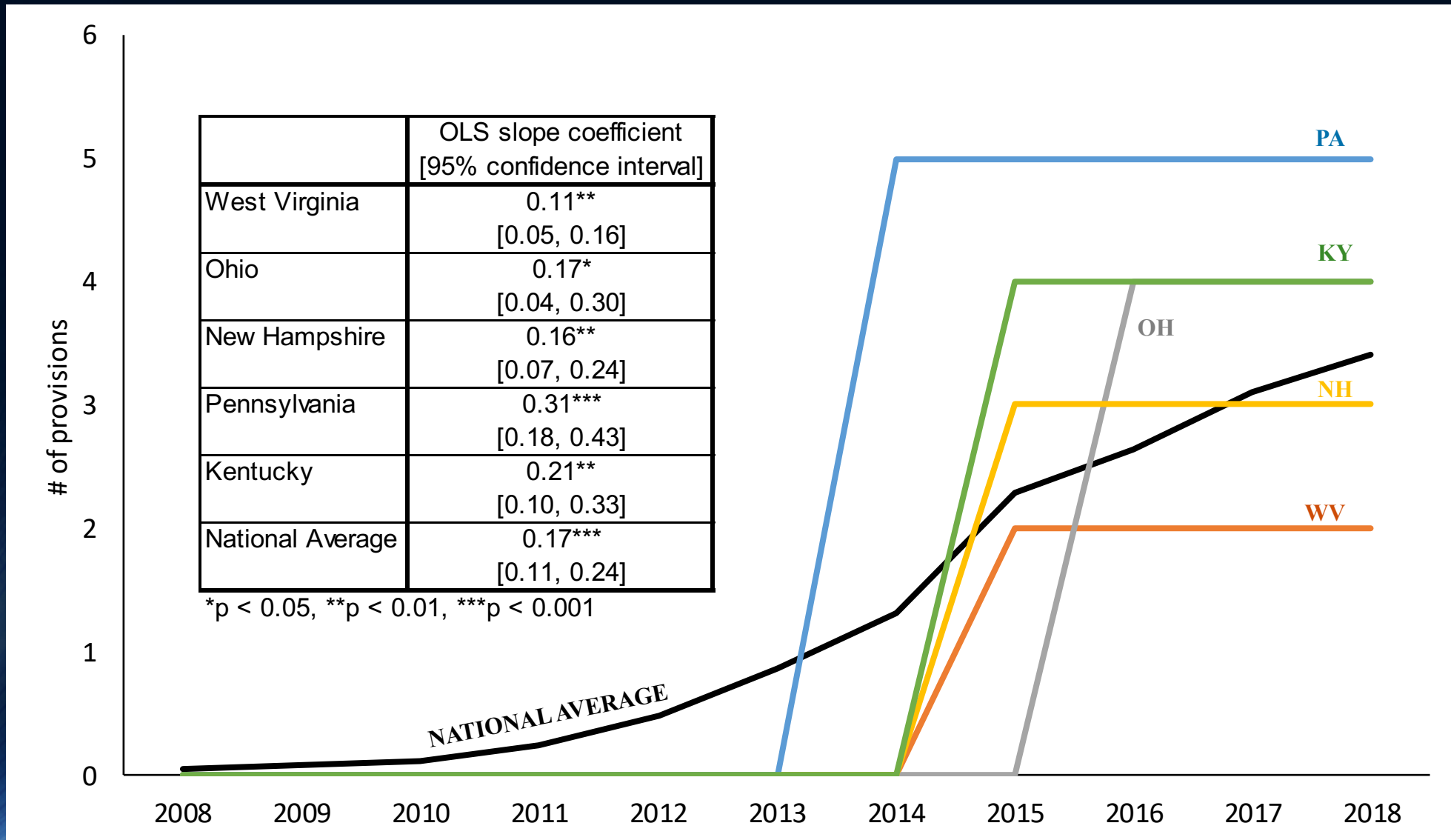
MORE COMMON (CONTROLLED SUBSTANCES)

LESS COMMON (PARAPHERNALIA & PROBATION)





Number of Good Samaritan Laws in "Top 5" States, by Year





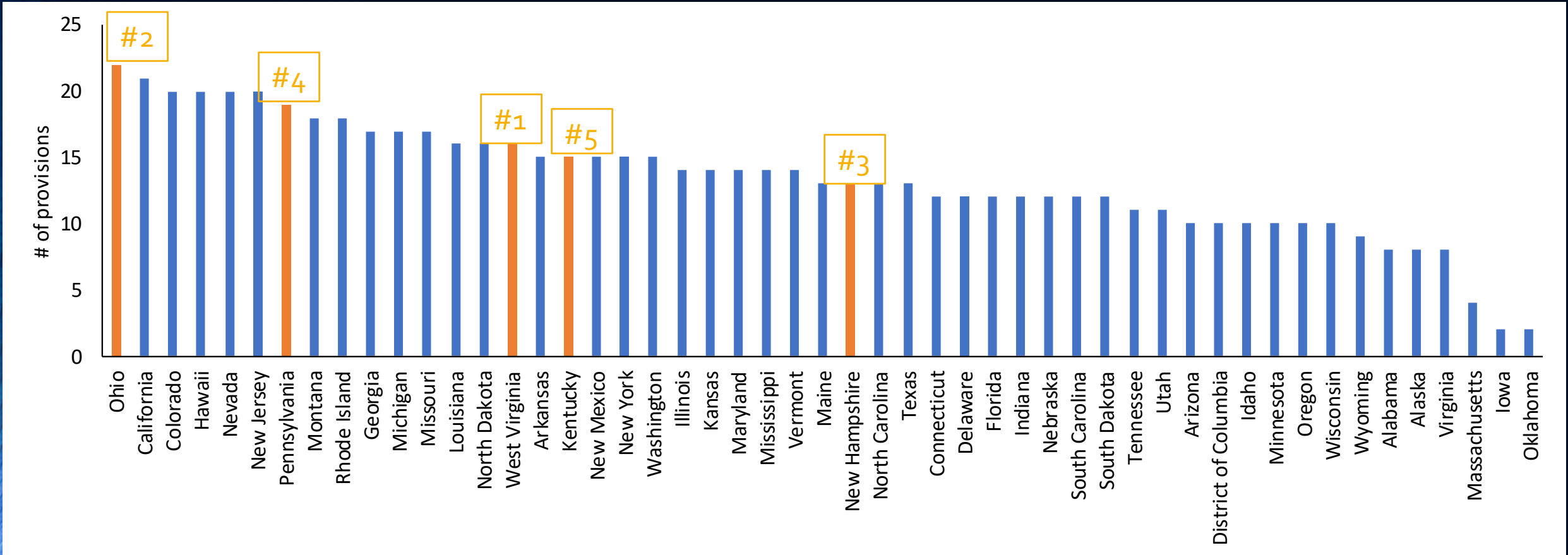
Good Samaritan Laws: Summary

1. Heterogeneity: no two states' laws are the same
2. Greater protection for drug possession than for drug paraphernalia
3. For drug possession, greater protection from prosecution than arrest
4. Protection for Good Samaritans on probation or parole is uncommon
5. PA, KY, and OH have more laws than the national average



Naloxone + Good Samaritan Laws (combined) by State (2017)

corresponds to the state's rank of opioid-related mortality in 2016 according to the CDC

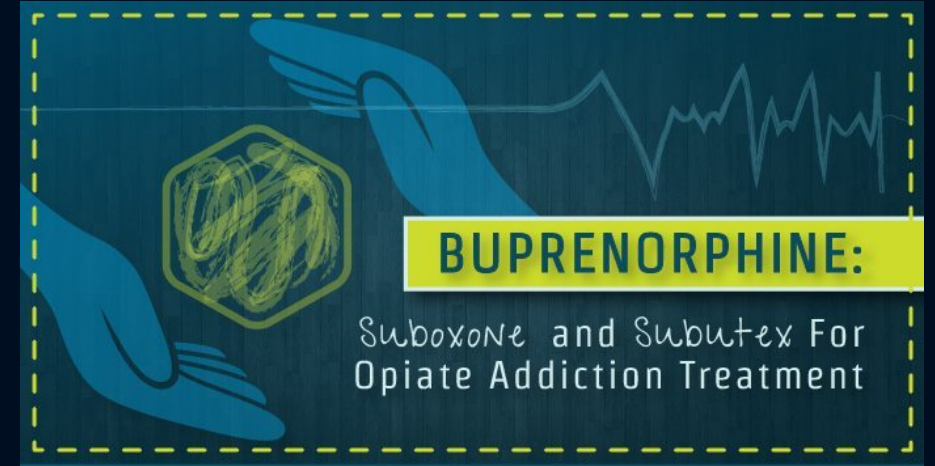




Opioid-Related Earmarked Funding

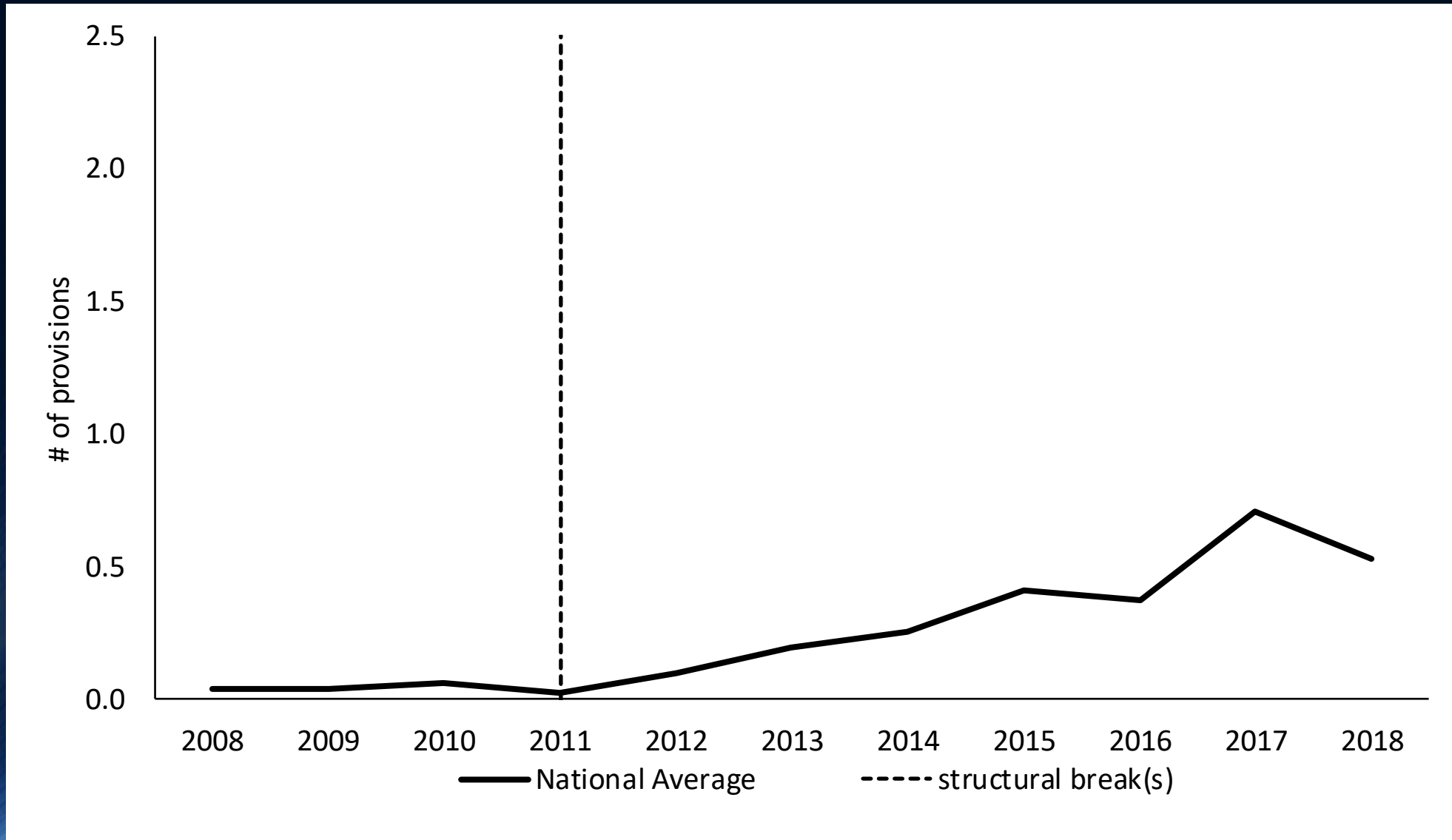
Designated state-level revenue specifically earmarked for opioid-related interventions or responses:

1. Purchase and distribution of naloxone kits
2. Addiction treatment (general population)
3. Addiction treatment (pregnant/post-partum women)
4. Addiction treatment (inmates)
5. Pilot program to address opioid crisis
6. Other opioid program that implies funding
7. Specific dollar or revenue percentage amounts



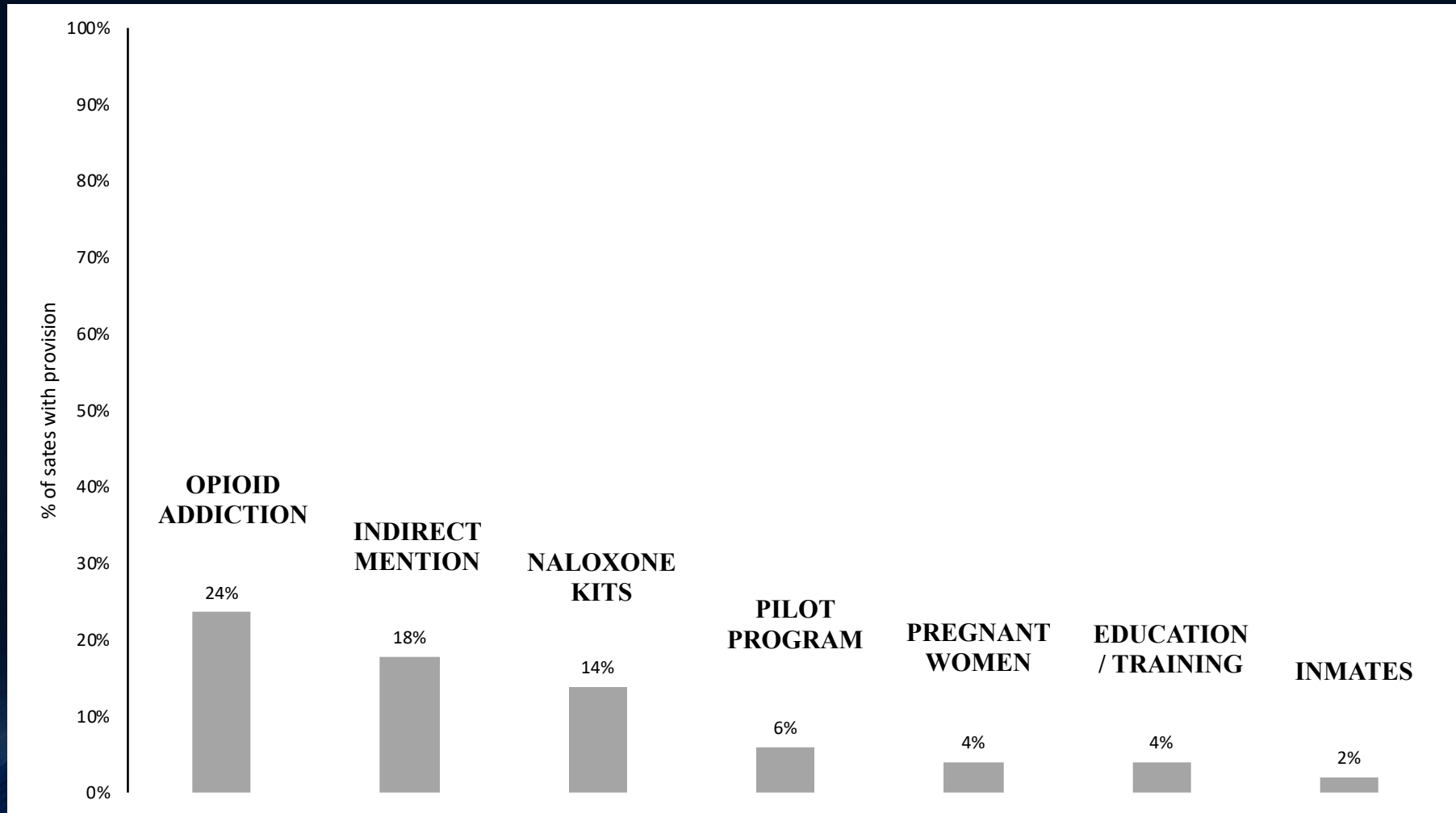


Number of Opioid-Related Earmarks, National (per state) Average by Year



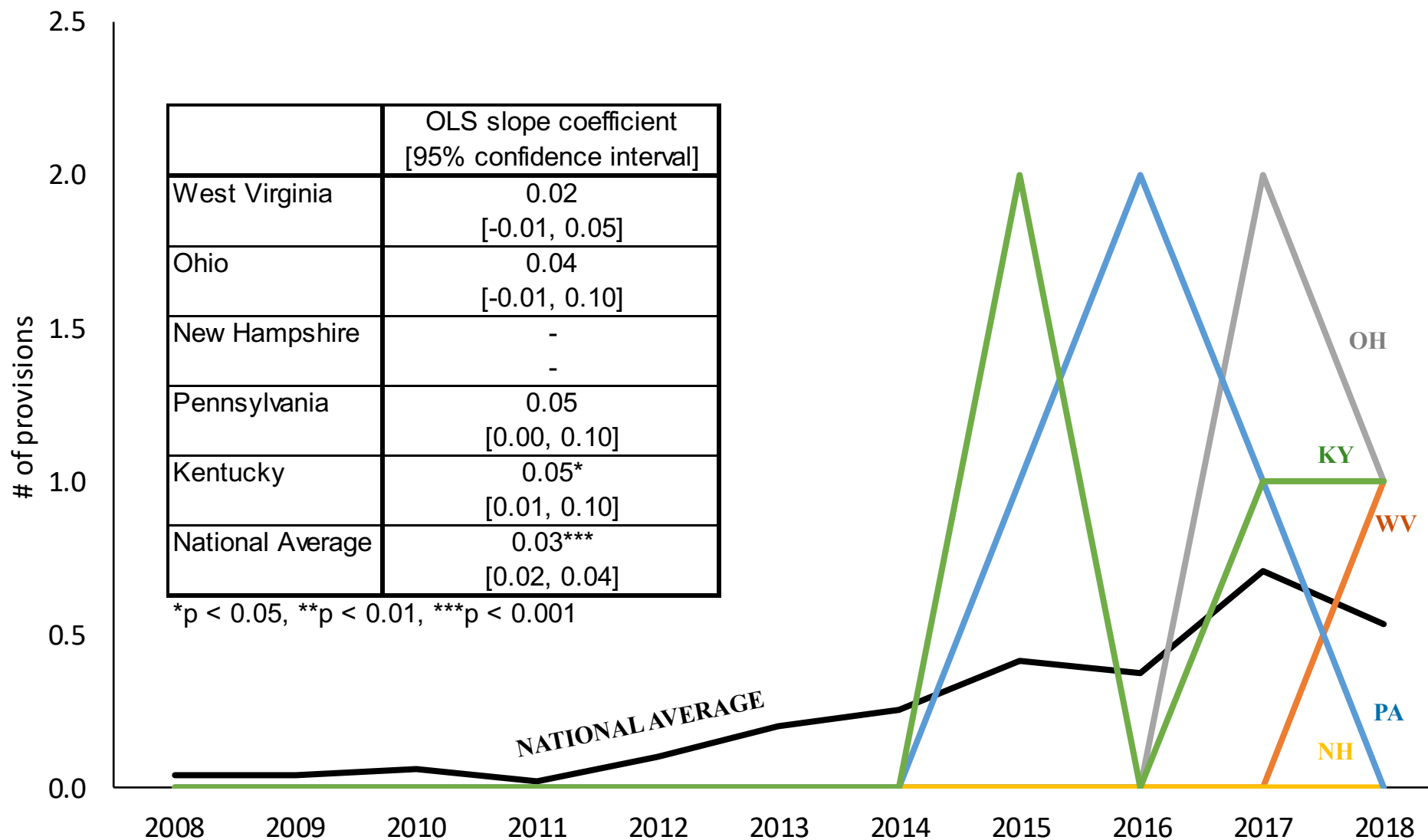


Common Types of Opioid-Related Earmarks in the United States (2017)





Number of Opioid-Related Earmarks in "Top 5" States, by Year





Opioid Earmarked Funding: Summary

1. Heterogeneity: type of funding varies across states
2. Designated opioid-related funding changes year to year
3. States appropriate funding most often to treat opioid use disorder



Opioid Data Fusion Center

RTI INTERNATIONAL

Kevin Conway, PhD

Senior Behavioral Health Scientist

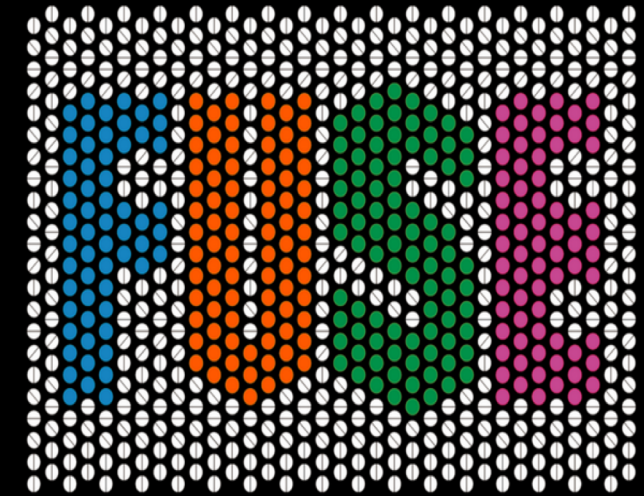
kconway@rti.org

Camille Gourdet, JD, MA

Research Public Health Analyst

cgourdet@rti.org

Let's Light a



to End the Opioid Crisis

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