



Opioids And Drug Addiction In The Workplace

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by

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Opioid Crisis

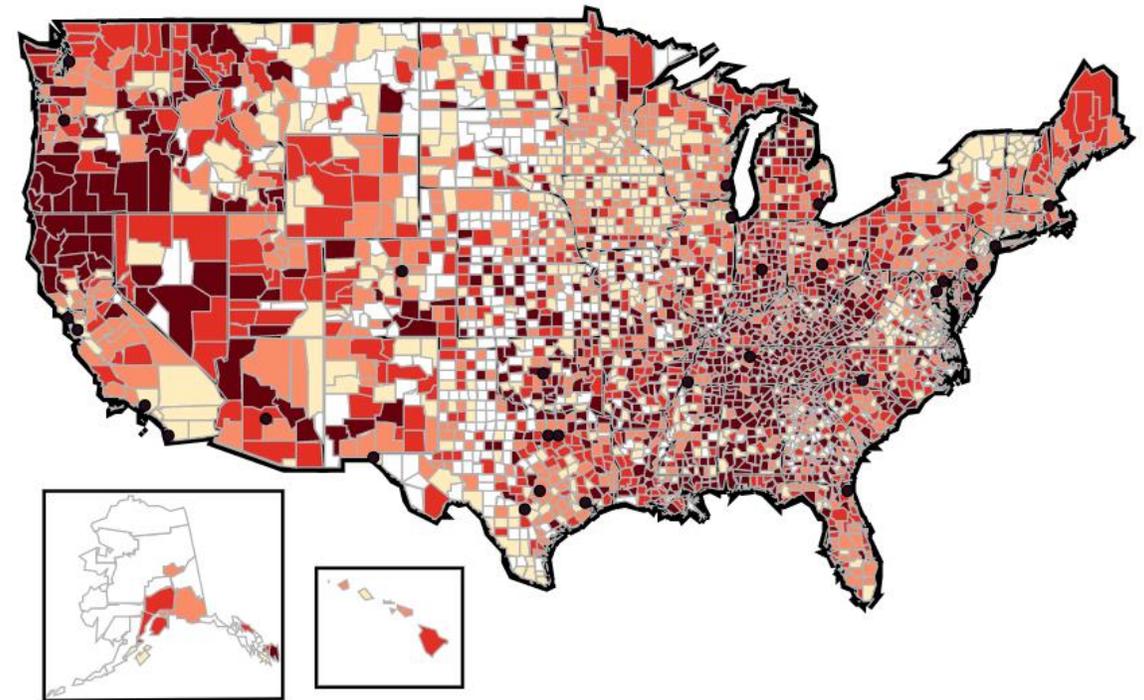
According to the CDC, at the height of the opioid crisis in the United States, the greatest number of prescriptions was recorded in 2012.

In 2012 the recorded total number of opioid prescriptions dispensed was 255,207,954

- 81.3 per 100 people
- 15.3B doses

The states with the highest rates were Alabama, Arkansas, Indiana, Kentucky, Louisiana.

The state with the highest rate was Alabama, with a rate of 143.8 per 100, with West Virginia coming second at a rate of 136.9.



Opioid Prevalence

- CDC data reported more than 191M opioid prescriptions were dispensed across the United States in 2017
 - Average #60 doses per occurrence x 191M = 11.5B individual doses
- Heavy geographic variation in patterns and trends
 - Alabama >> other states > Hawaii
- The most prescribed opioids driving overdose deaths were oxycodone >>> hydrocodone >> methadone.



Main Drug Categories of Addiction

Opioids

Fentanyl*
Demerol
Vicodin
Methadone

Oxycodone
Percocet
Lortab



Benzodiazepines (Benzos)

Valium
Versed
Klonopin

Xanax
Ativan
Librium

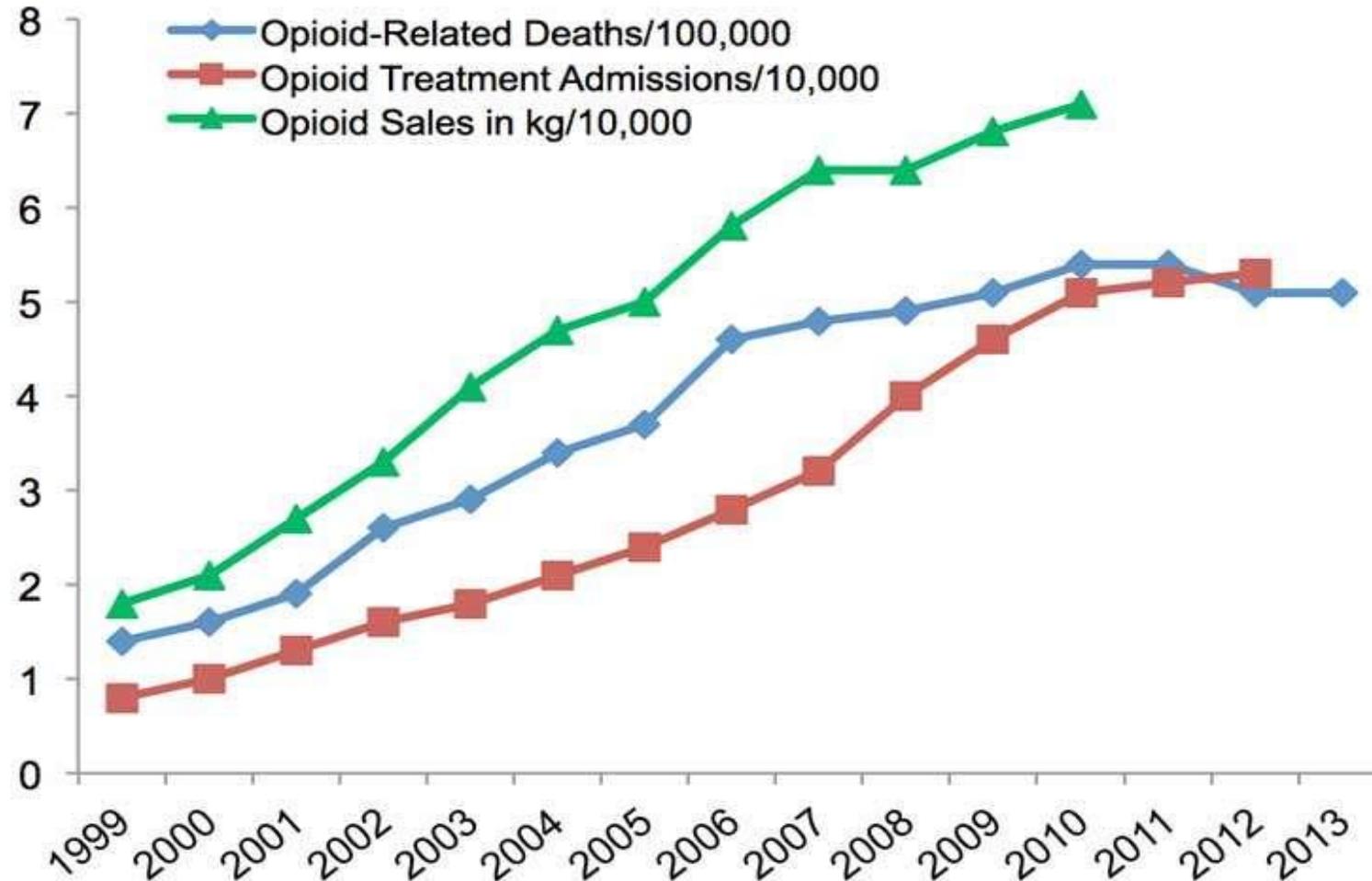


Stimulants

Adderall
Dexedrine

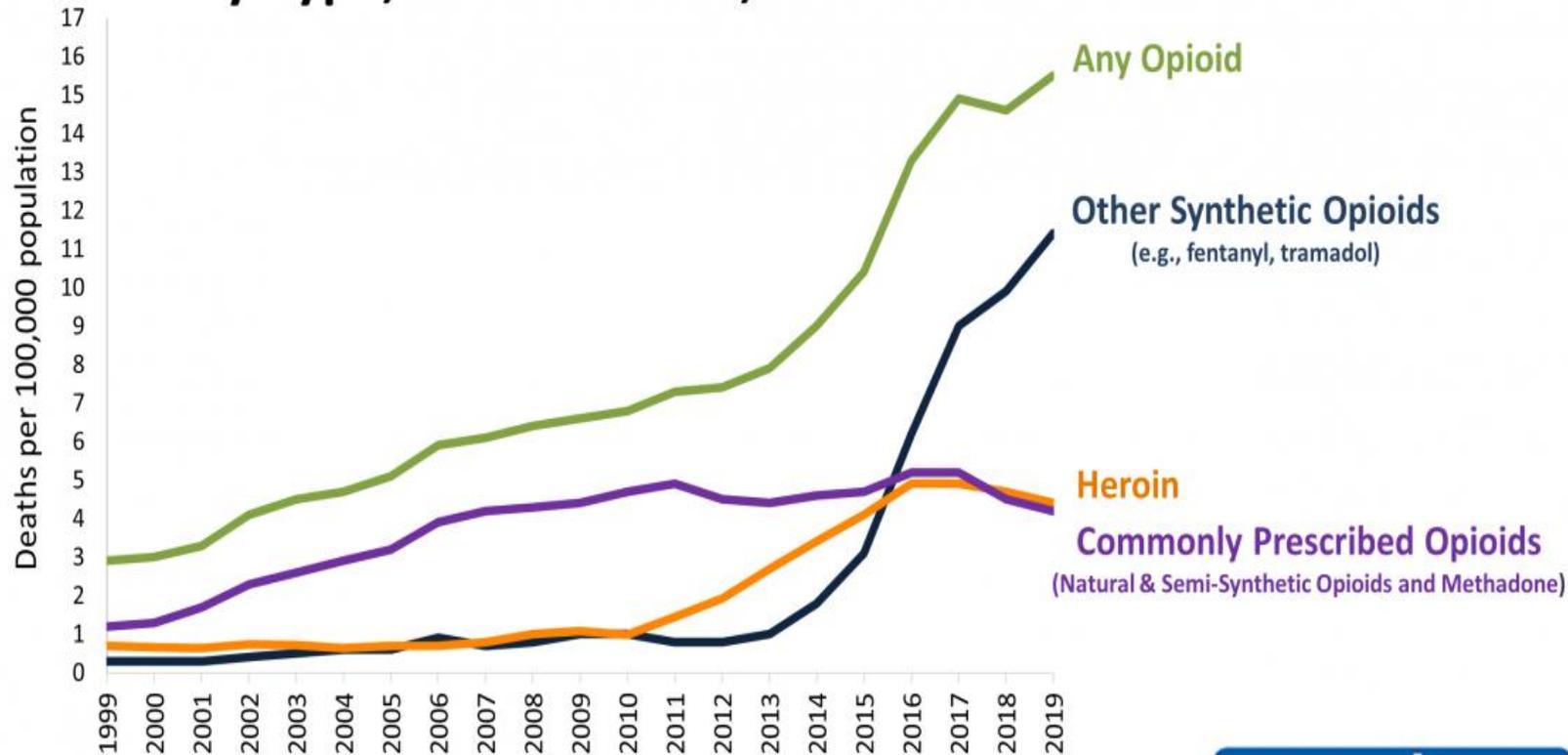
Ritalin
Vyvanse

Trend of Opioid Sales to Deaths/Treatment



Death Rates of Opioids Involved in Overdose

Overdose Death Rates Involving Opioids, by Type, United States, 1999-2019



SOURCE: CDC/NCHS, National Vital Statistics System, Mortality. CDC WONDER, Atlanta, GA: US Department of Health and Human Services, CDC; 2020. <https://wonder.cdc.gov/>.

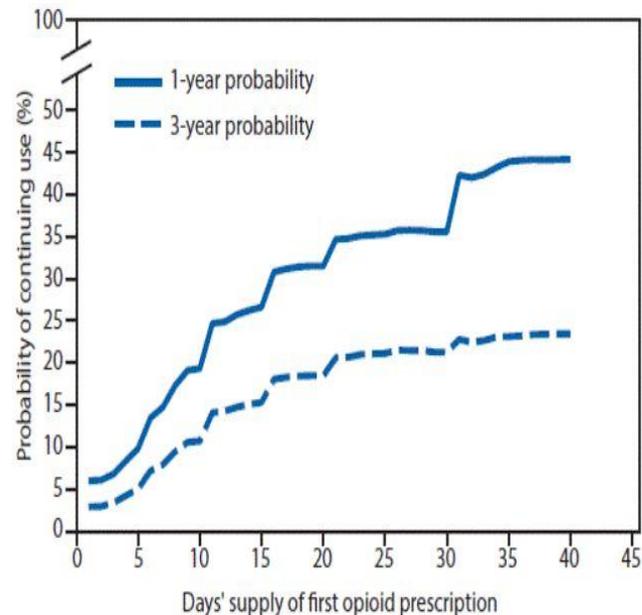


Mortality Per 100k Lives By Year

YEAR	Natural Opioids	Heroin	Synthetic Opioids
1999	1.2	0.7	0.3
2000	1.3	0.7	0.3
2010	4.7	1	1
2012	4.5	1.9	0.8
2015	4.7	4.1	3.1
2019	4.2	4.4	11.4

Risk of Long-Term Use Day Supply

FIGURE 1. One- and 3-year probabilities of continued opioid use among opioid-naïve patients, by number of days' supply* of the first opioid prescription — United States, 2006–2015



* Days' supply of the first prescription is expressed in days (1–40) in 1-day increments. If a patient had multiple prescriptions on the first day, the prescription with the longest days' supply was considered the first prescription.

- **Addiction probability increased sharply in the first 5 days to first month of therapy.**
- **8 days = 13.5% chance of long-term use.**
- **31 days = 29.9%**

Overdose Waves

More than 500,000 Americans died from opiate overdose between 1999 and 2019.

- 25,000 per year average

These deaths have been broken up into waves by the CDC and are as follows:

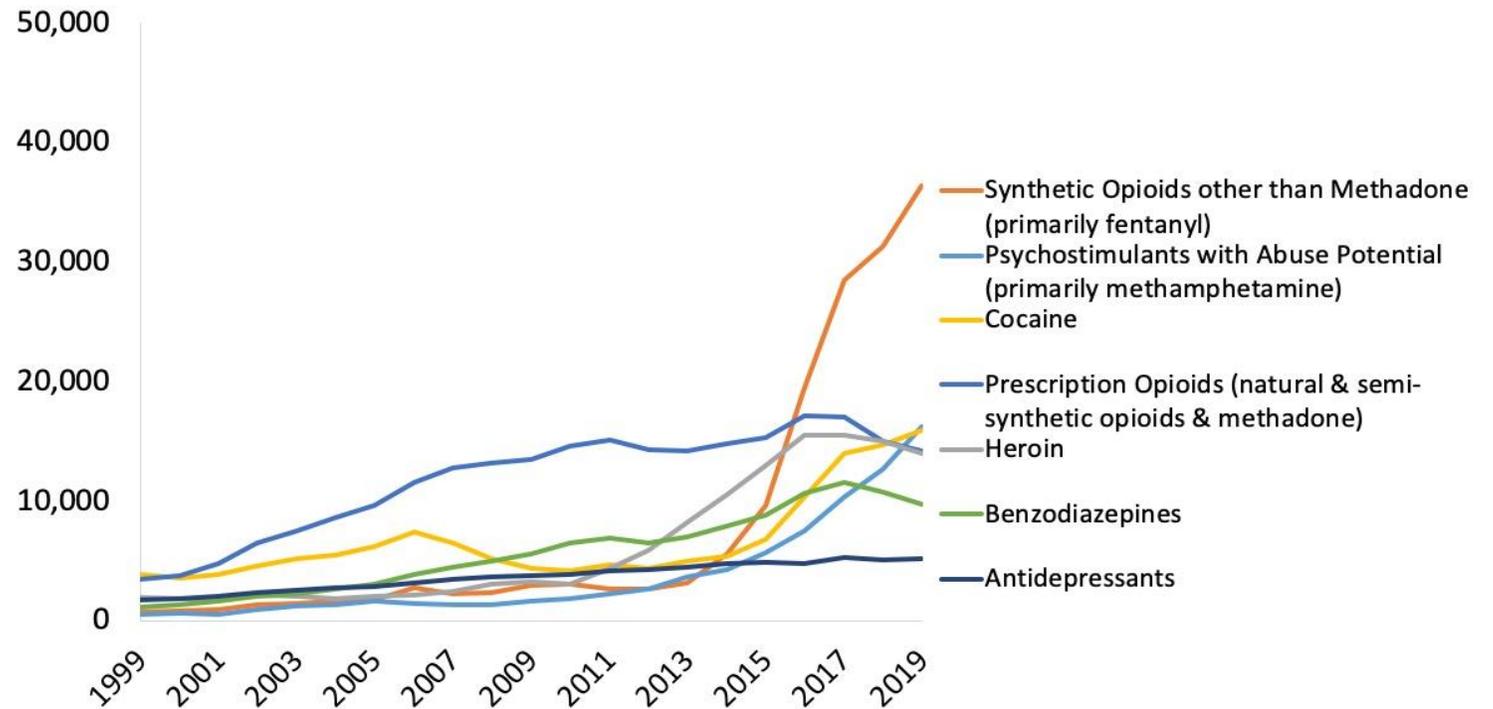
1. Increased prescribing of natural and semi-synthetic opioids and **methadone** starting in the 1990s and increasing until at least **1999**.
2. **2010** marked the beginning of the second wave with increases in overdose deaths related to **heroin**.
3. **2013** was the start of the third wave with overdose deaths involving synthetic opioids, especially illicitly manufactured **fentanyl**.

The 3rd Wave is the Worst

- While there is a slight downtrend in the number of deaths related to prescribed opioids, there has still been an increase overall in the death rate.
- Between 2018 and 2019, the overall number of overdose rates rose to 70,630.

=Fentanyl

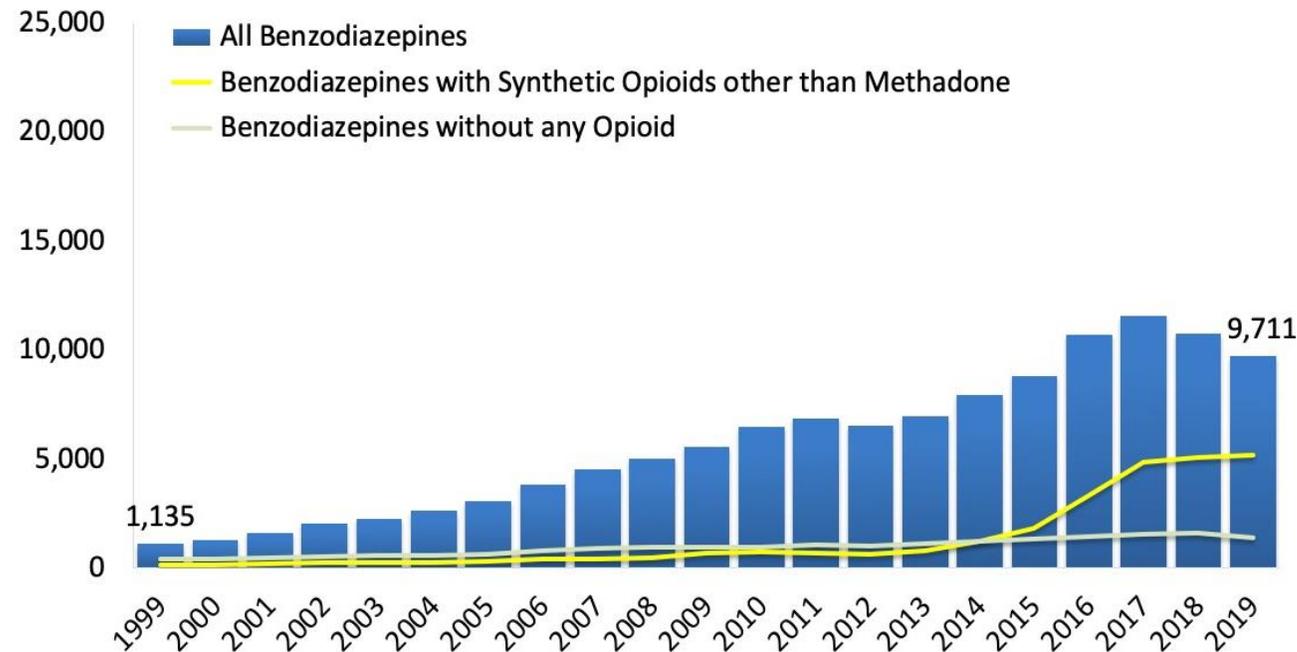
Figure 2. National Drug-Involved Overdose Deaths*, Number Among All Ages, 1999-2019



*Includes deaths with underlying causes of unintentional drug poisoning (X40–X44), suicide drug poisoning (X60–X64), homicide drug poisoning (X85), or drug poisoning of undetermined intent (Y10–Y14), as coded in the International Classification of Diseases, 10th Revision. Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2019 on CDC WONDER Online Database, released 12/2020.

Involvement of Benzodiazepines

Figure 8. National Drug Overdose Deaths Involving Benzodiazepines*, by Opioid Involvement, Number Among All Ages, 1999-2019



*Among deaths with drug overdose as the underlying cause, the benzodiazepine category was determined by the T402.2 ICD-10 multiple cause-of-death code. Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2019 on CDC WONDER Online Database, released 12/2020.

- Between 1999 and 2017, the annual rate of drug overdose deaths involving benzos rose from 1,135 to 11,537.
- Why are Benzos dangerous?
 - EtOH

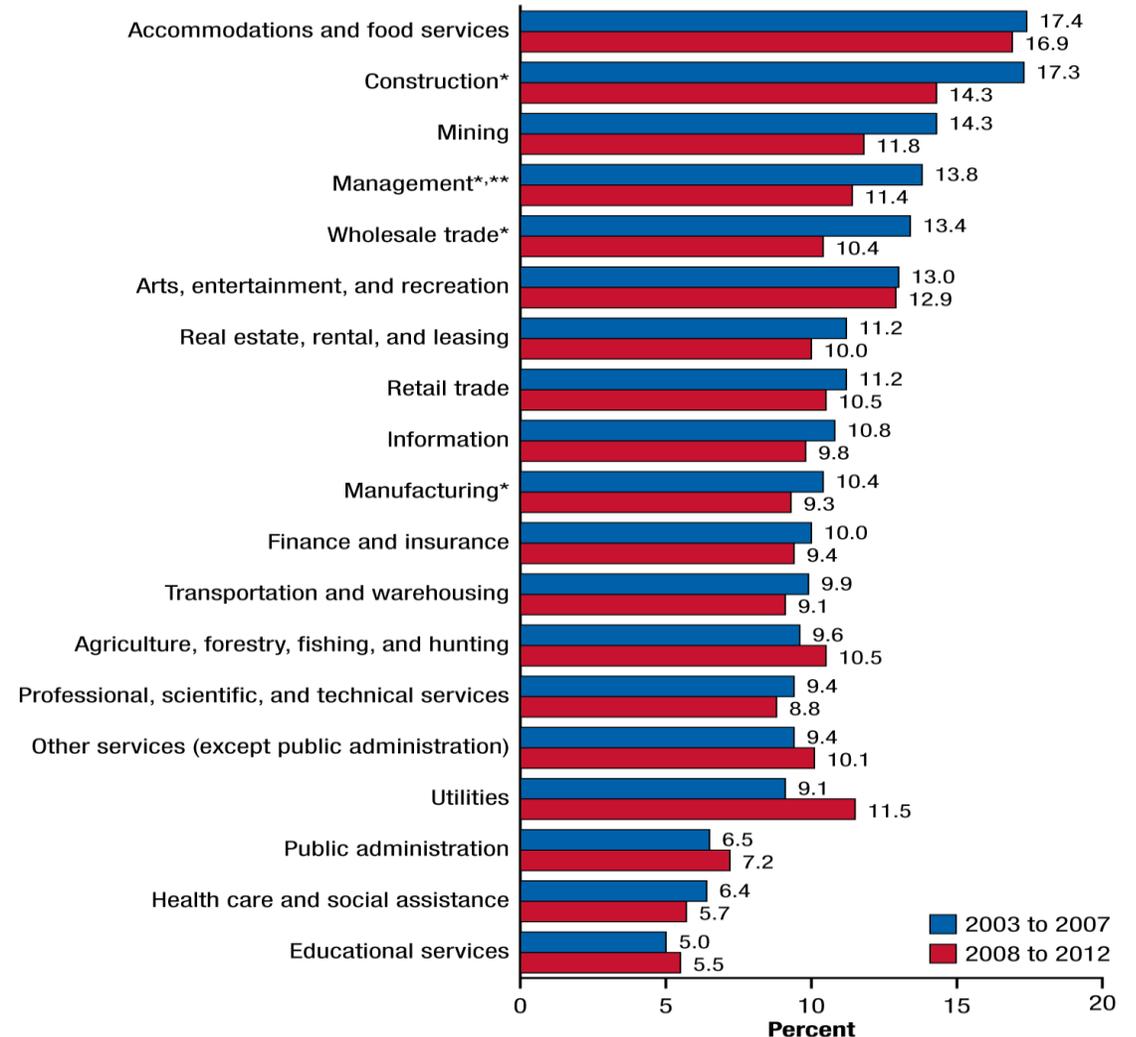
Which Fields are Most Impacted by Substance Abuse?

SAMHSA analytics

- Substance Abuse and Mental Health Services
- SAMHSA prescriber numbers

The most heavily impacted industries are hospitality services, construction, entertainment and recreation.

Data showed a decrease in substance abuse for most fields except for utilities, public administration, and educational services between 2008 to 2012.



Opiate Impact On The Job

- Tardiness/sleeping on the job
- Decreased performance
 - Poor decision making
 - Loss of efficiency
- Theft
- 5x increase in worker's comp
- Increased likelihood of having trouble with co-workers, supervisors and tasks
- Preoccupation with using while at work
- Illegal activities at work, including selling to coworkers
- Increased turnover
- Disciplinary procedures
- Training new employees
- Lower morale of co-workers

Attendance & Substance Abuse

- Workers with substance use disorders miss **two more weeks** annually than their peers, averaging nearly five weeks (24.6 days) a year.
- Most of these extra days of missed work are associated with illness and injury.
- Workers in recovery miss the fewest days of any group – even the general workforce – at 10.9 days.
- A study of the economic impact of substance abuse treatment in Ohio found significant improvements in job-related performance:
 - 91% decrease in absenteeism
 - 88% decrease in problems with supervisors
 - 93% decrease in mistakes at work
 - 97% decrease in on-the-job injuries

Economic Burden

- In 2014, it was reported that opioid overdoses were responsible for 147,654 emergency department visits.
- These visits accounted for \$152.8M in direct medical costs, with \$83.7M being covered by the public.
- Florence et al estimated that the total burden placed on the economy would be about \$78.5B in 2013.
- In 2018, it was estimated that the economic cost of opioid prescription overdose, abuse, and dependence would be \$304B.
- Fatality costs also account for the large financial impact, as they are estimated to comprise 85% of total costs.

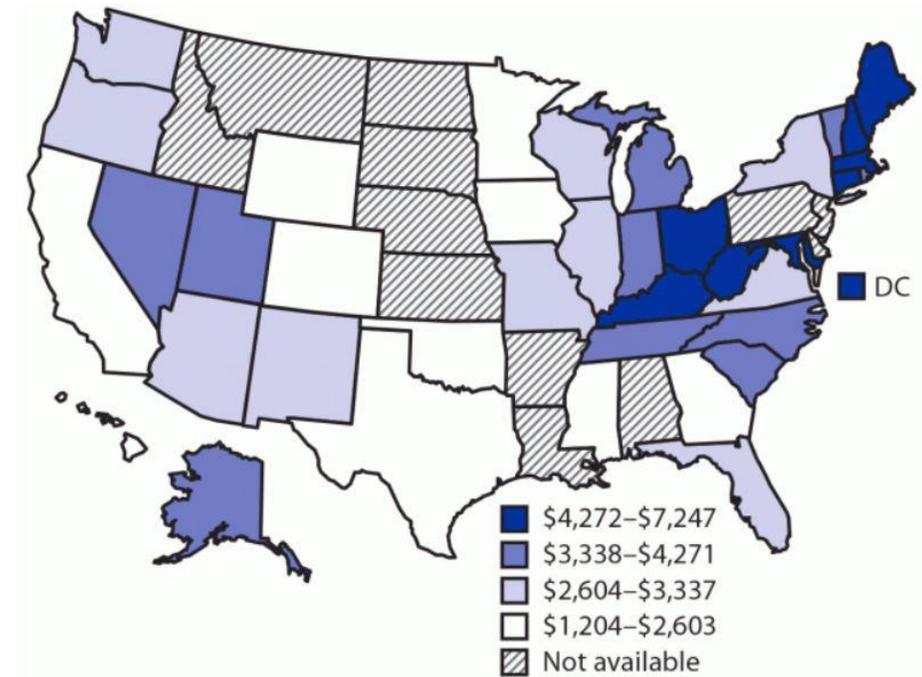
Economic Burden Continued...

- In 2019, it was reported that **50,000** people died from opioid-related overdoses, mostly due to illicit Fentanyl and prescription Oxycodone.
- It is estimated that Rx opioid misuse alone costs **\$78.5B** annually due to increased healthcare costs, lost productivity, addiction treatment, and criminal justice involvement.
- According to the DHHS, nearly **27** million people in the United States are reported to use illicit or prescription opiate medications.
- By 2019 alcohol misuse accounted for **\$249B** while illicit drug use accounted for **\$193B**.

Costs of Opioid Use Disorder and Fatal Overdose 2017 per Capita

- In 2017, the estimated economic cost was about \$1.02T.
- The economic cost of opioid use disorder was estimated at \$471B.
- The cost of fatal opioid overdose was estimated to be \$550B.
- The highest per-capita states were West Virginia, Ohio, and Kentucky, with costs of \$7,247, \$6,226, \$5,491 respectively.
- States with the lowest per capita costs were Minnesota (\$635), Hawaii (\$1,204), California (\$1,566), Wyoming (\$1,701) and Texas (\$1,736).

FIGURE. Per capita combined costs* of opioid use disorder and fatal opioid overdose — United States, 2017



Abbreviation: DC= District of Columbia.

* Per capita combined costs are combined costs of opioid use disorder and fatal opioid overdose divided by state population and are expressed in 2017 U.S. dollars.

State Legislation Enacted In 2016

- Legislation limiting opioid prescriptions began to pass in 2016, with the state of Massachusetts being the first to pass laws in the nation.
- In this legislation, the state set a 7-day supply limit for treatment of naïve patients.
- By the end of 2016, 7 states had passed legislation limiting day supply prescriptions.
- By 2018, 33 states had enacted legislation limiting the day supply of opioid prescriptions.
- California does not currently limit the prescribing process but rather holds the pharmacies accountable for not being restrictively diligent in filling these prescriptions as well as strict CURES monitoring.
 - California also imposed new standards on prescribers at the same time

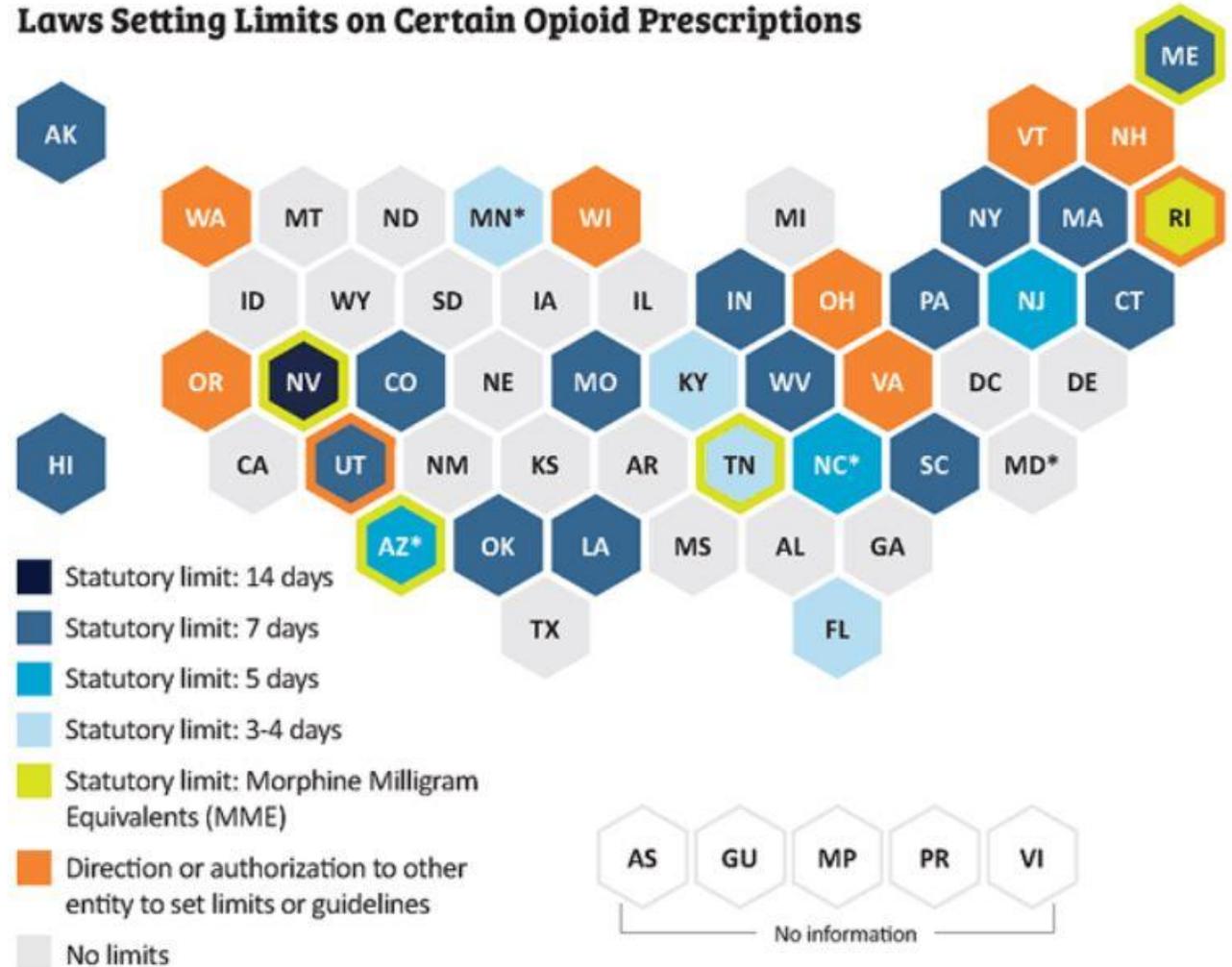
California CURES Mandate 2016

- CURES = Controlled Substance Utilization Review and Evaluation System
- Pharmacists and direct dispensers are required to report information on all controlled substance dispensed and must upload information into CURES within seven days of dispensing.
- CURES database is heavily mined and monitored by an expert team in Sacramento.
- Along with CURES enforcement, California required all prescribers to conform to new prescription pad forms designed to curtail fraudulent use.
- This combined enforcement made a major impact in the fraudulent and overprescribing of opiate drugs.

Day Supply Limits by State

- The limits also generally apply to treating acute pain.
- Exceptions are typically made for those with chronic pain treatment.
- There are also exceptions for cancer and palliative care as well as medication-assisted treatment.

Laws Setting Limits on Certain Opioid Prescriptions

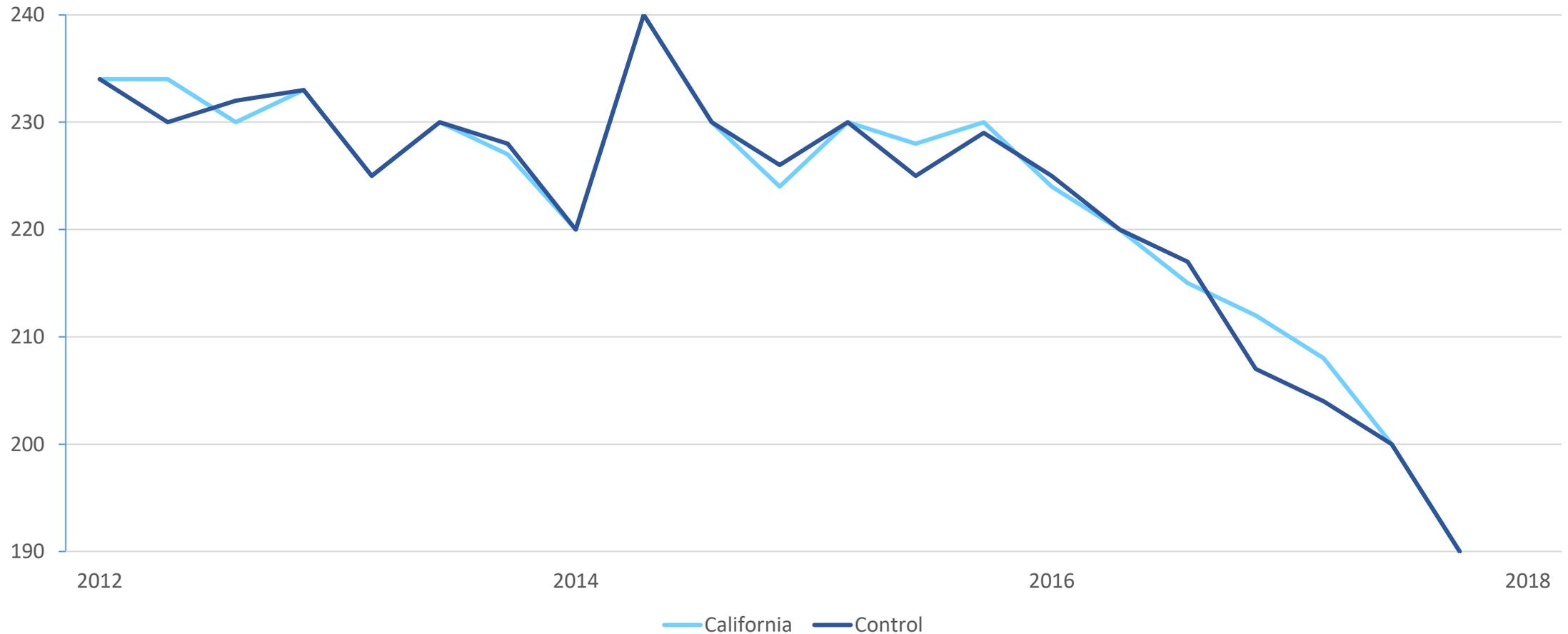


* Note: The map displays the state's primary opioid prescription limit and does not include additional limits on certain providers or in certain settings. Arizona allows prescriptions up to 14 days following surgical procedures and North Carolina allows up to seven days for post-operative relief. Maryland requires the "lowest effective dose." Minnesota's limit is for acute dental or ophthalmic pain. The map also does not reflect limits for minors that exist in at least eight states.

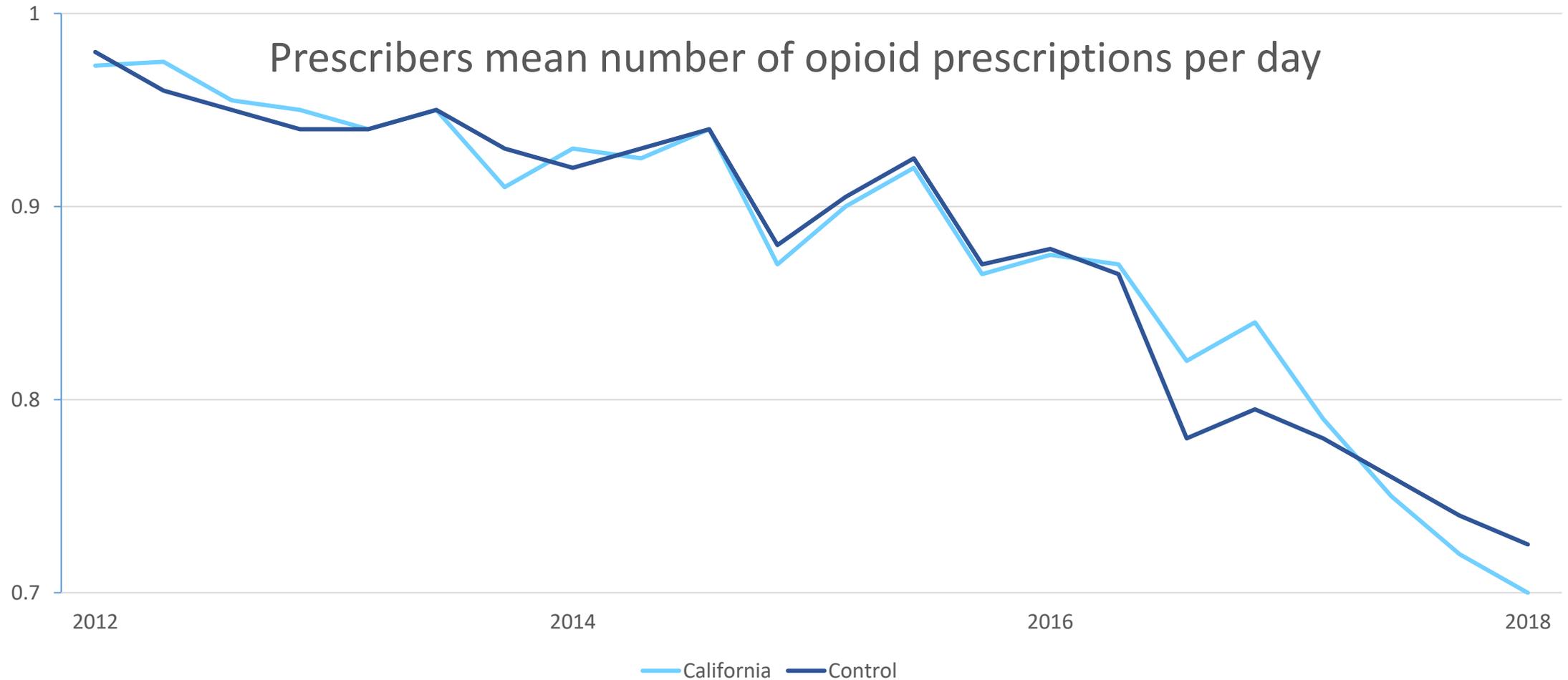
Source: NCSL, StateNet

California Enforces CURES

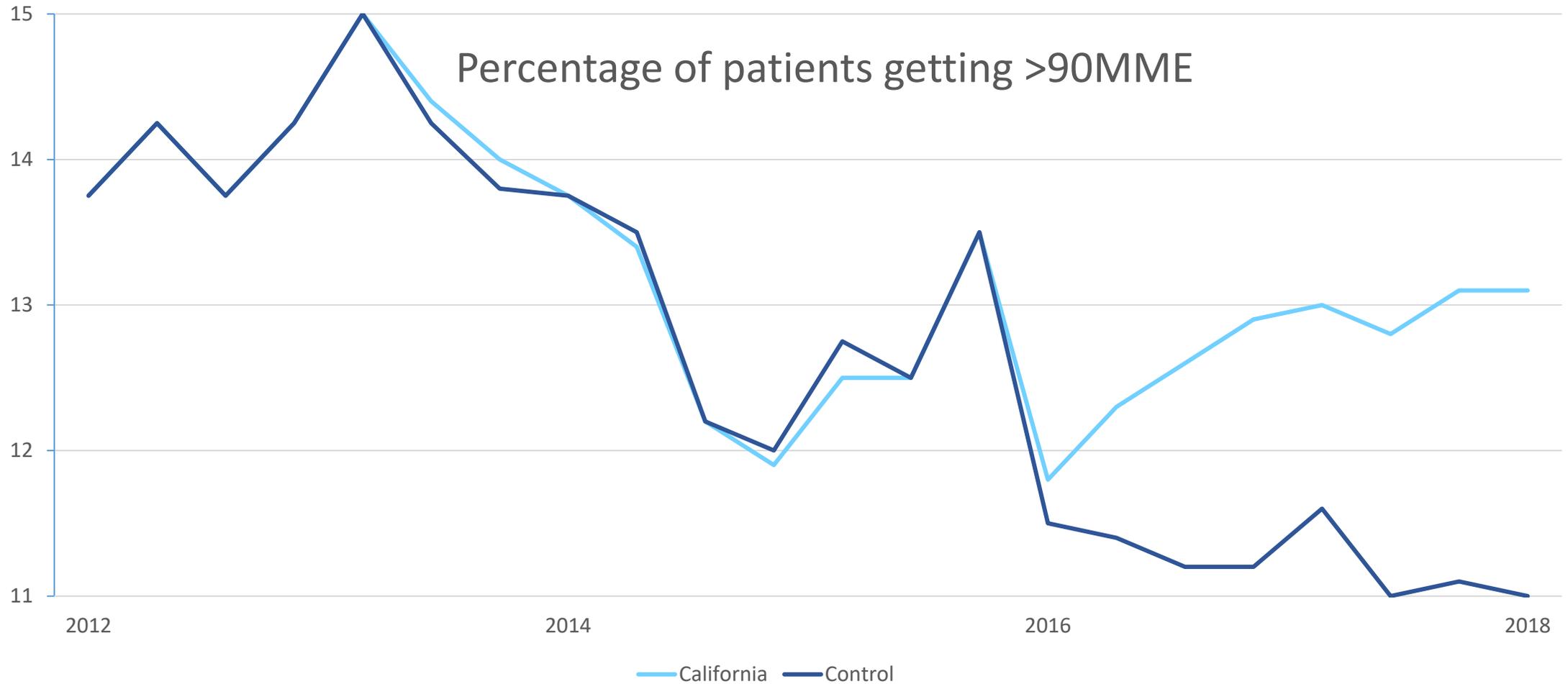
Number of opioid prescriptions per 1,000 residents



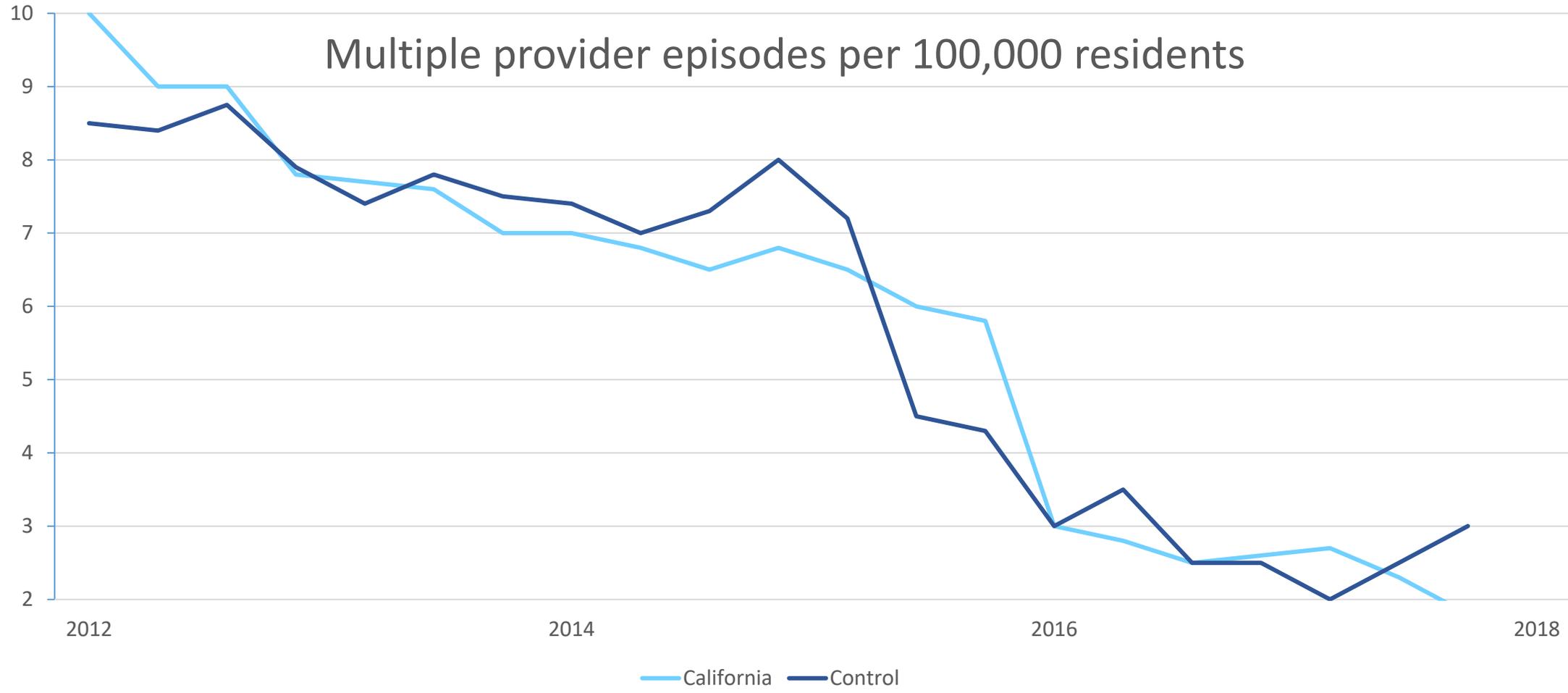
Prescriber Enforcement



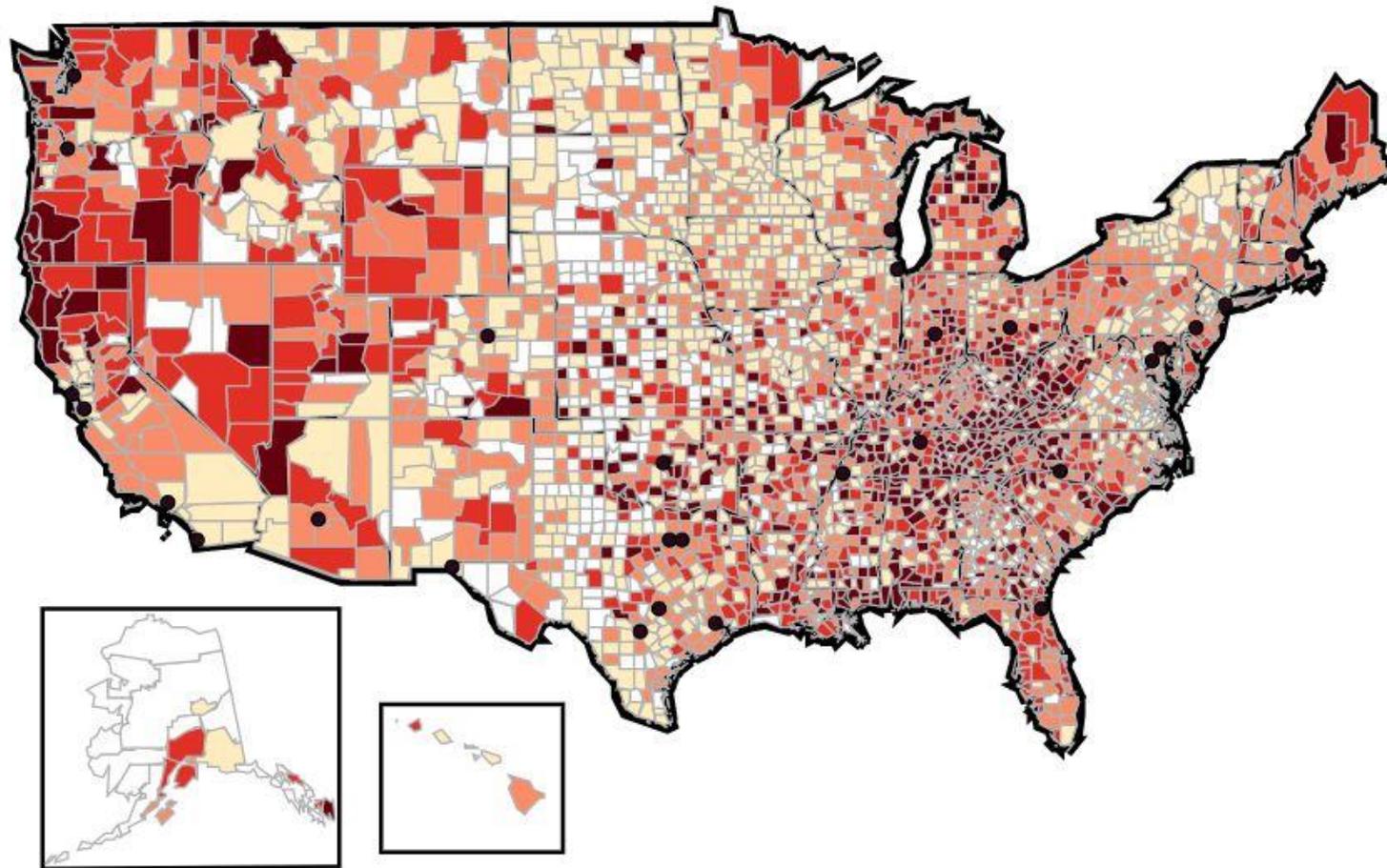
High Dose Utilizers



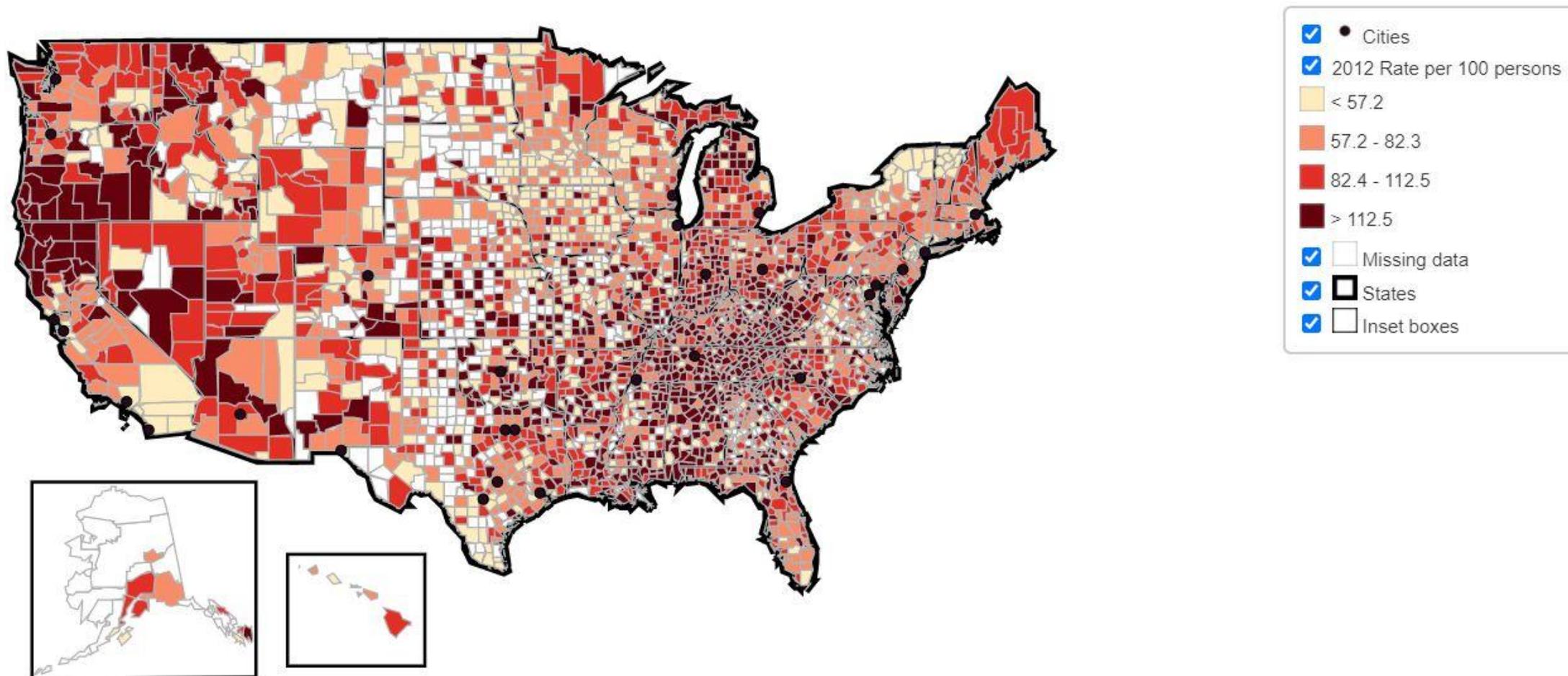
Doctor “Shopping”



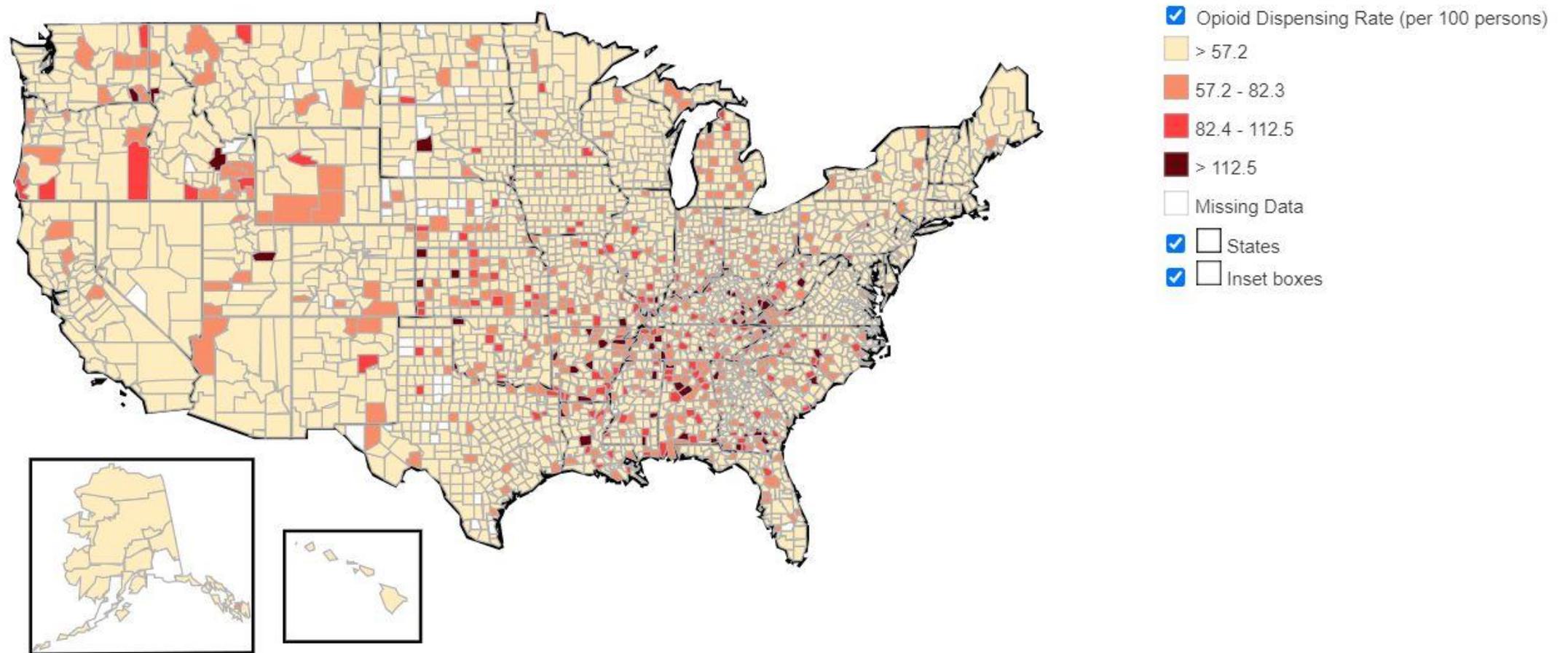
National Opiate Dispensing Rates 2006



National Opiate Dispensing Rates 2012



National Opiate Dispensing Rates 2020



Job Turnover and Re-Training 2018

- Studies place the base cost to employers of recruiting and training replacement workers at 33% of salary for that job, with additional employer costs rounding out nearly 50% of salary to replace.
- Of workers currently employed, 22% report having had more than one employer in the previous year. By comparison, workers with an SUD are 40% more likely to report having more than one employer in the previous year.
- In sectors and roles with high average salaries, such as executives, managers, and people working in administration and finance, each worker with an untreated substance use disorder costs an employer in excess of \$14,000 a year more than non-SUD workers.

Economic Impact

- The Surgeon General's 2016 report notes that the U.S. spends **\$35B** to treat substance use disorders, and another **\$85B** annually to treat the injuries, infections and illnesses associated with substance use.
- These numbers continue to grow, with mental health and substance use treatment expected to cost **\$280B** by 2022.
- The average employer pays \$2,918 in health insurance premiums or self-pay annually for workers without substance use disorders. For those with substance use disorders, those costs are approximately \$4,770 per worker.

Supporting In Recovery

- The annual average additional costs to an employer for each worker with an untreated substance use disorder (SUD) rose **35%** between 2015 and 2018.
- Employers spend an average of \$8,817 annually on each employee with an untreated SUD, according to the findings from NORC at the University of Chicago and the National Safety Council (NSC).
- Encouragingly, each employee who recovers from a SUD saves a company over \$8,500 on average, according to the analysis – and employer-initiated treatment is more successful than treatment initiated by friends or family members.
- Workers in recovery miss 13.7 fewer days each year than workers with an untreated SUD, and 3.6 less days than an average employee.

National Safety Council - Predominance

- On average, 1 in 12 workers has an untreated substance use disorder. Even industries with lower rates, such as public administration and protective services, have an average rate of 6% of employees with SUDs in their workforce. In the construction field, for instance, 19% of workers (one in five) have a substance use disorder.
- Construction, mining and service industries have the highest rates of alcohol and other drug use disorders – and jobs in these industries are often safety-sensitive positions.
- Education, healthcare, and professional and protective services jobs have the lowest.
- Workers in recovery tend to be strong employees. They take approximately 8 days off each year compared to the average 11.6 days off taken annually by workers without substance use disorders.
- The average employer pays \$2,918 in health insurance premiums or self-pay annually for workers without substance use disorders. For those with substance use disorders, those costs are approximately \$4,770 per worker, and \$3,961 per worker in recovery.

Conclusion

- Substance abuse both in the form of alcohol and prescription medications have placed a significant burden on society.
- Since 1984, more than \$1T dollars has been lost due to the collective economic burden of substance abuse, which includes alcohol.
- Steps have been taken to limit the frequency at which high-risk prescriptions are dispensed at both the State and business enterprise levels.
- Treatment options have been shown to also yield a savings compared to no treatment, further emphasizing its importance.
- While prescription opioid levels have decreased, there is still a large number of deaths attributed to illicit drugs using pharmaceutical substances like fentanyl.

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