Partnership for a Drug-Free New Jersey
in Cooperation with the Governor's Council on Alcoholism and Drug Abuse and the NJ Dept. of Human Services

NJCARES.gov
New Jersey Coordinator for Addiction Responses and Enforcement Strategies

Dr. Andrew Kolodny - One Year Later: The Opioid Epidemic During COVID-19 April 22, 2021

The Partnership For A Drug-Free New Jersey
In Cooperation with the Governor's Council on Alcoholism & Drug Abuse and the NJ Dept. of Human Services

Understanding & Responding to the Opioid Crisis

Andrew Kolodny, MD
Co-Director, Opioid Policy Research Collaborative
Heller School for Social Policy and Management
Brandeis University

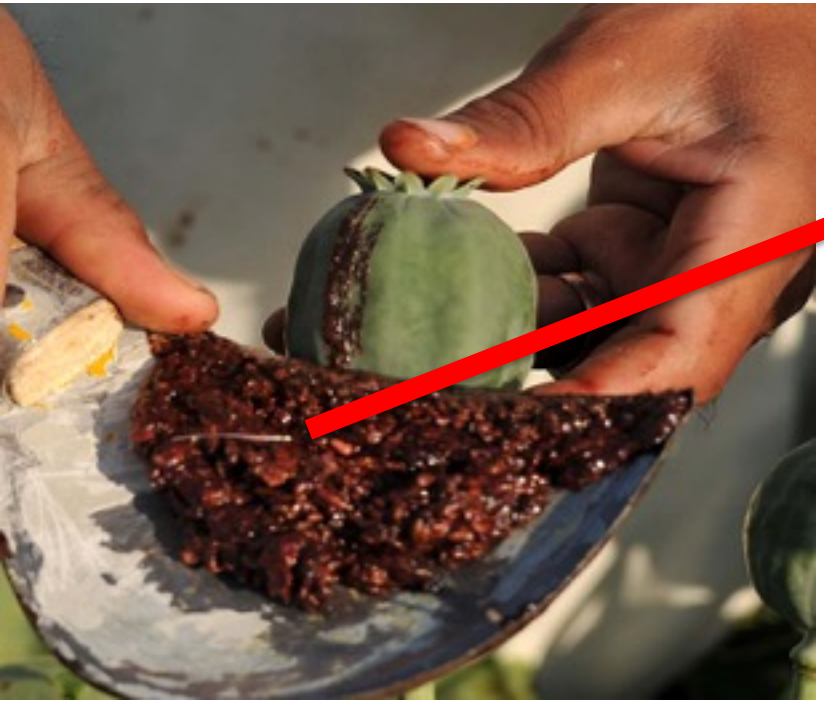
Executive Director,
Physicians for Responsible Opioid Prescribing

OPRC
Opioid Policy Research Collaborative

PROP

Opium

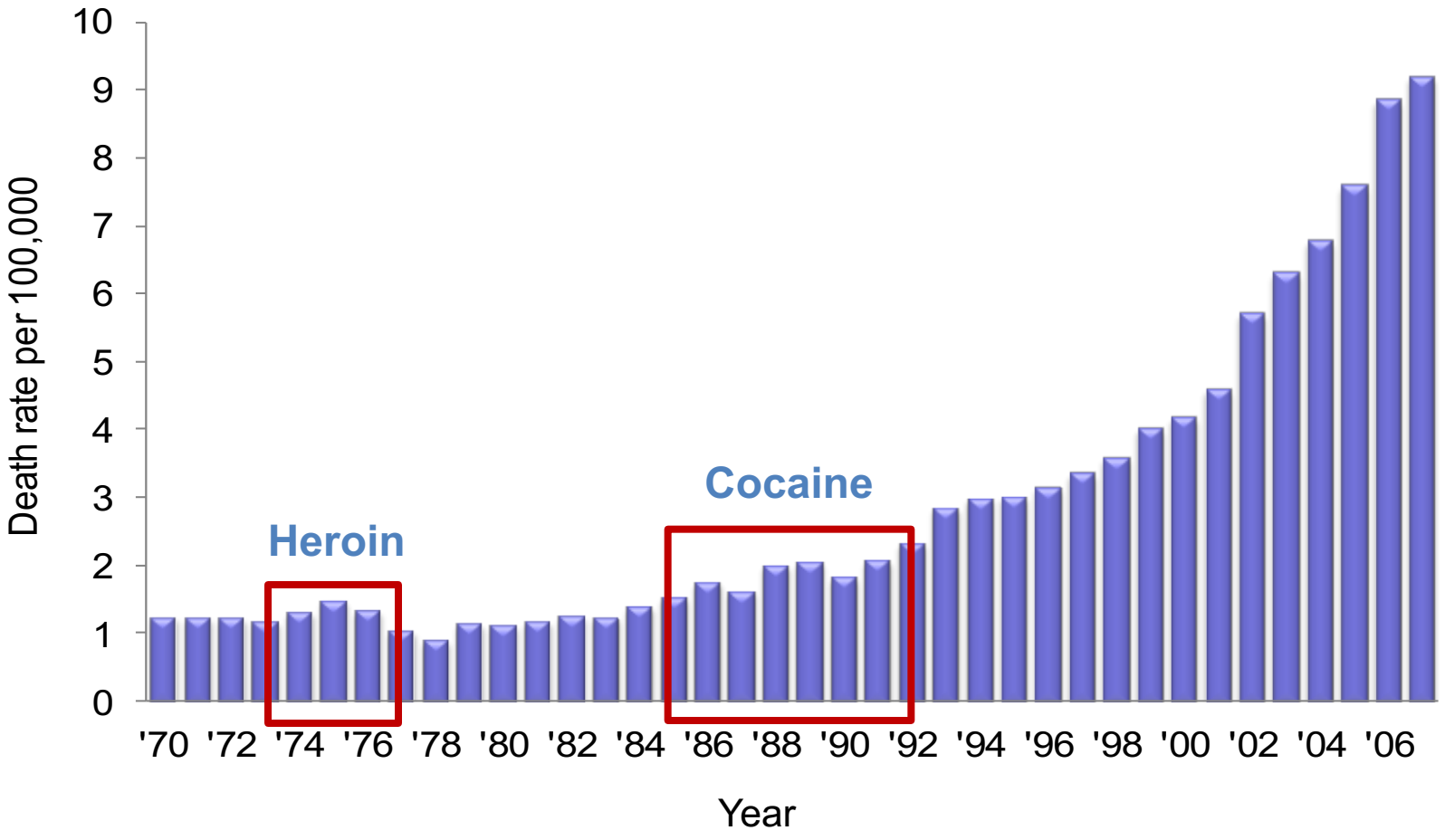
Opium



Codeine
Morphine
Thebaine

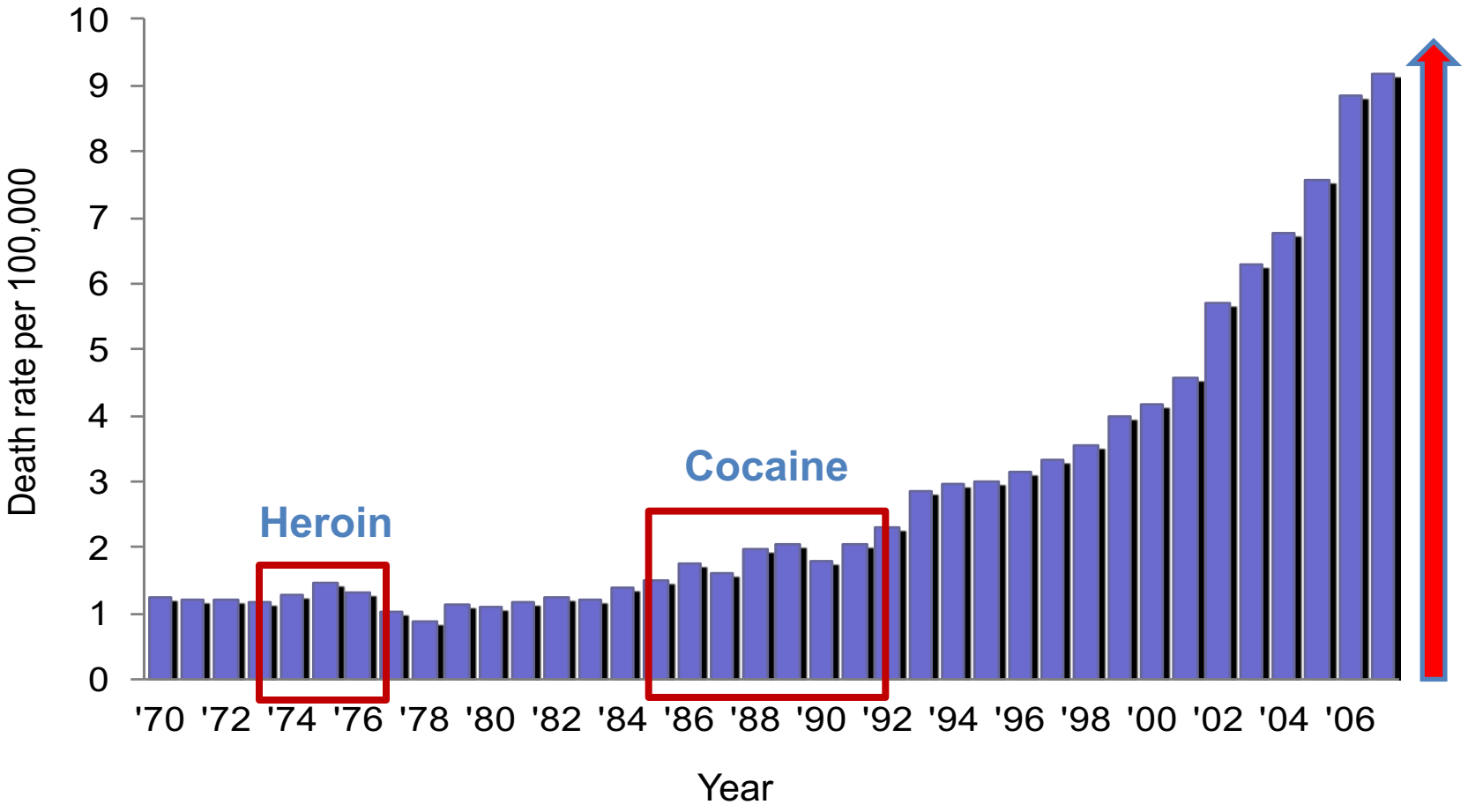
Heroin
Oxycodone
Hydrocodone
Hydromorphone
Oxymorphone

Unintentional Drug Overdose Deaths
United States, 1970–2007



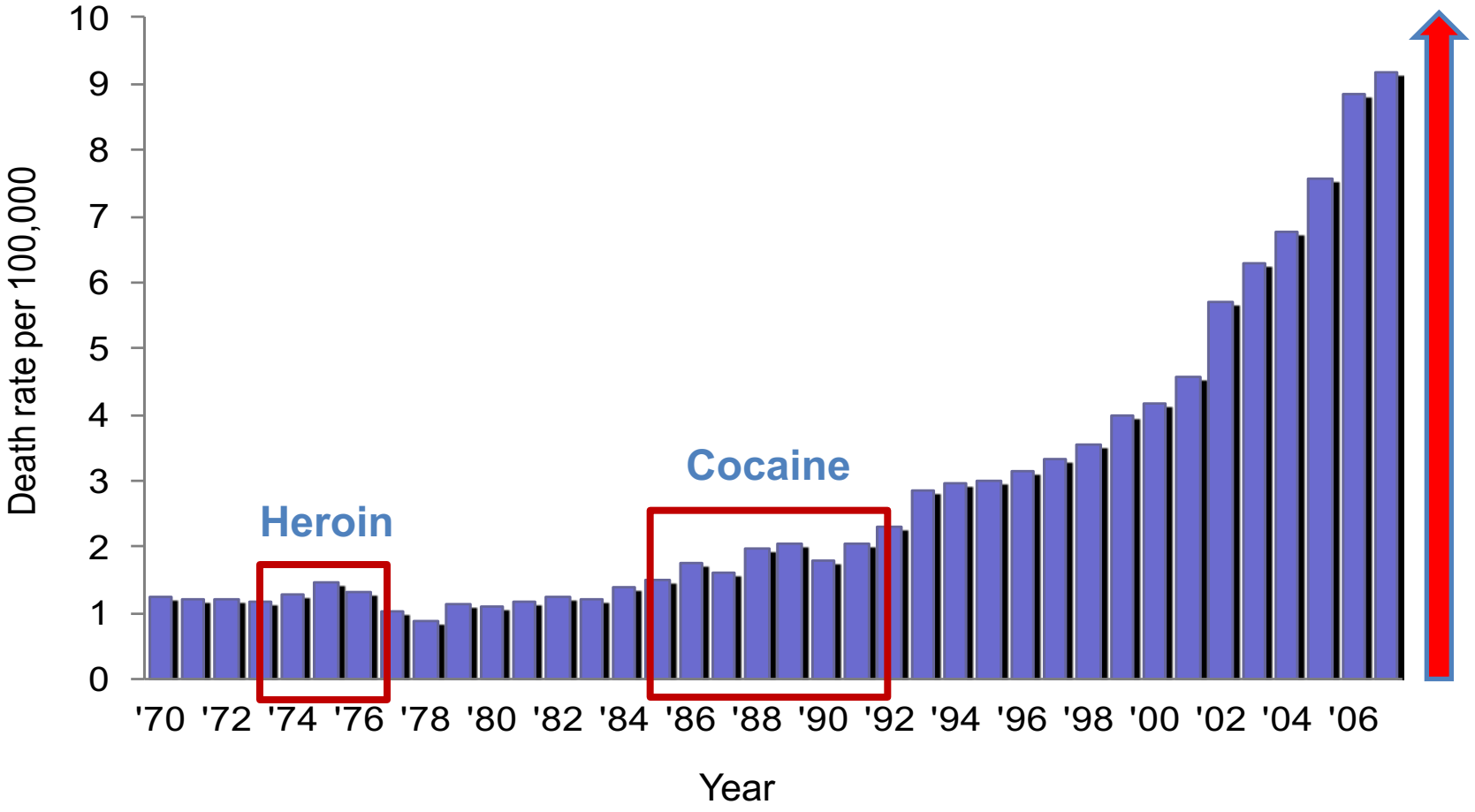
National Vital Statistics System, http://wonder.cdc.gov

Unintentional Drug Overdose Deaths
United States



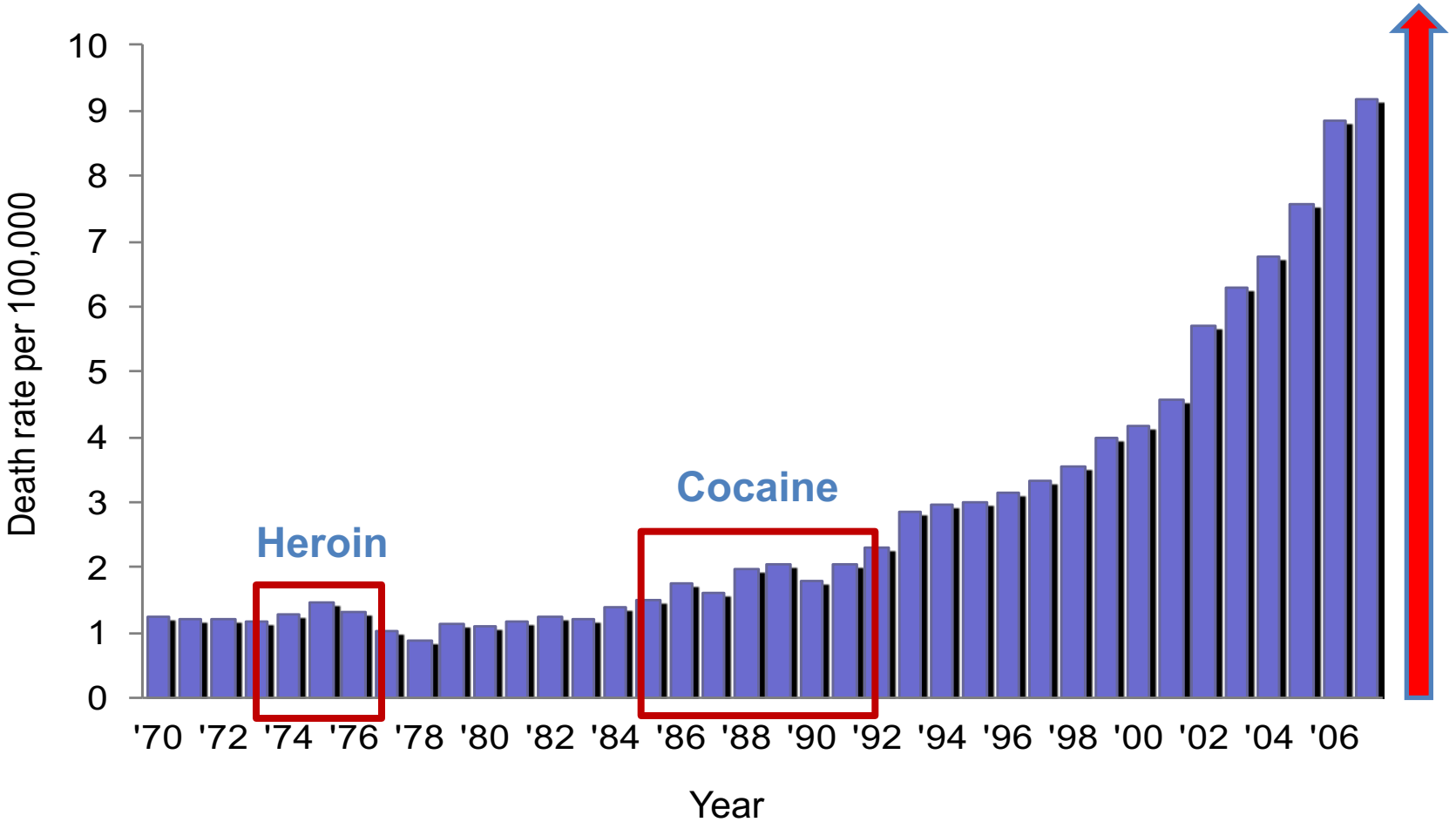
National Vital Statistics System, http://wonder.cdc.gov

Unintentional Drug Overdose Deaths
United States



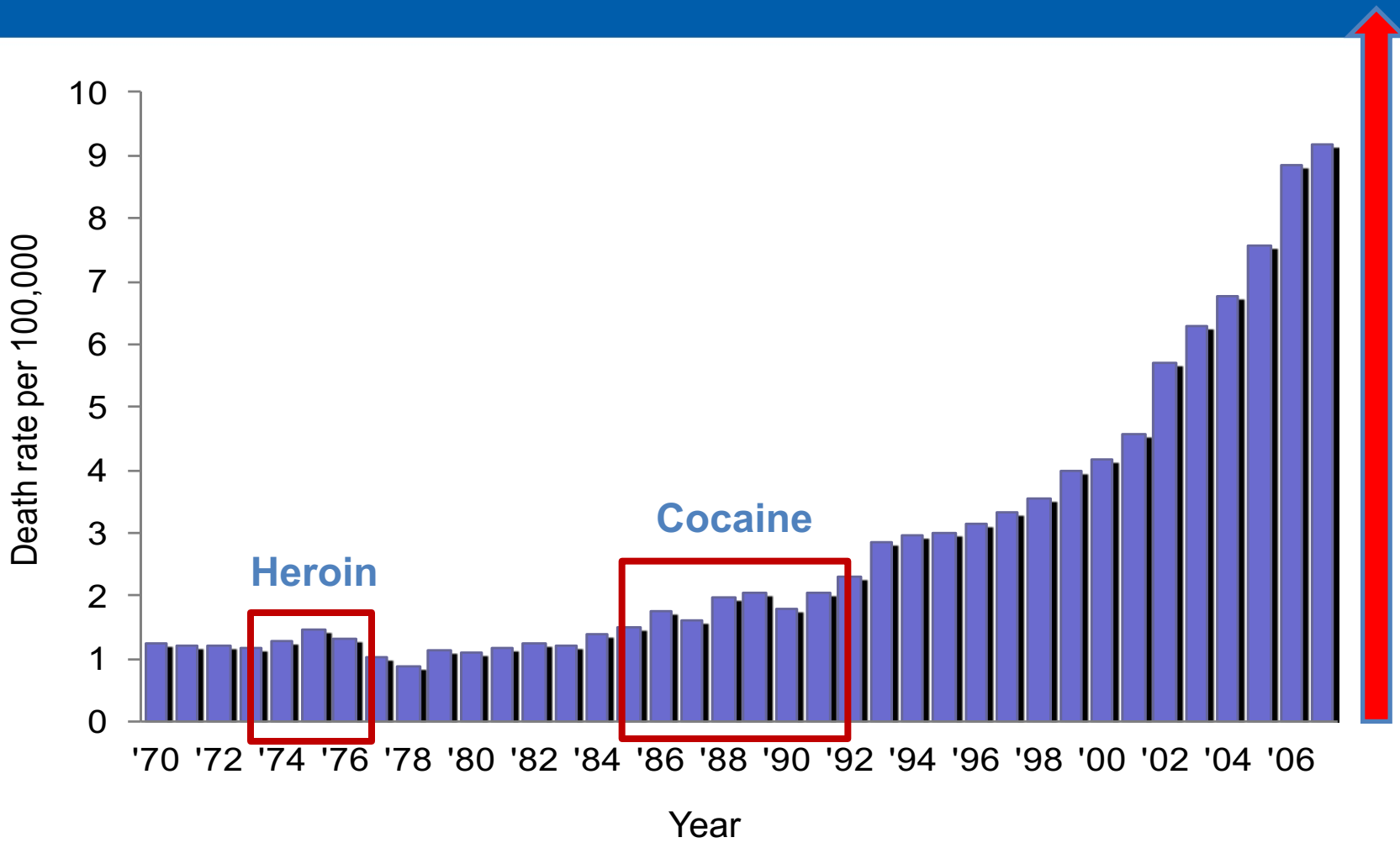
National Vital Statistics System, http://wonder.cdc.gov

Unintentional Drug Overdose Deaths
United States



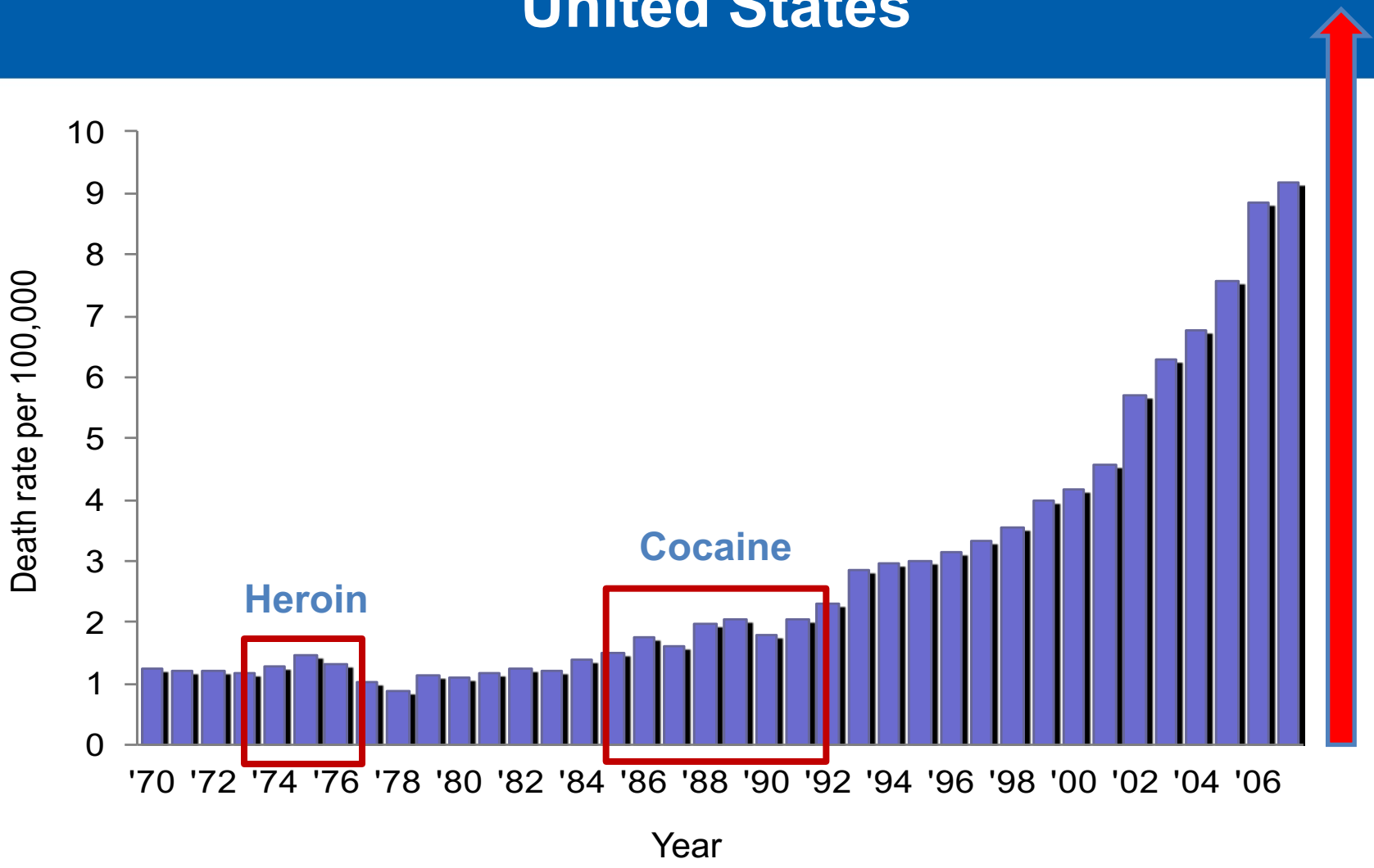
National Vital Statistics System, http://wonder.cdc.gov

Unintentional Drug Overdose Deaths
United States



National Vital Statistics System, http://wonder.cdc.gov

Unintentional Drug Overdose Deaths
United States



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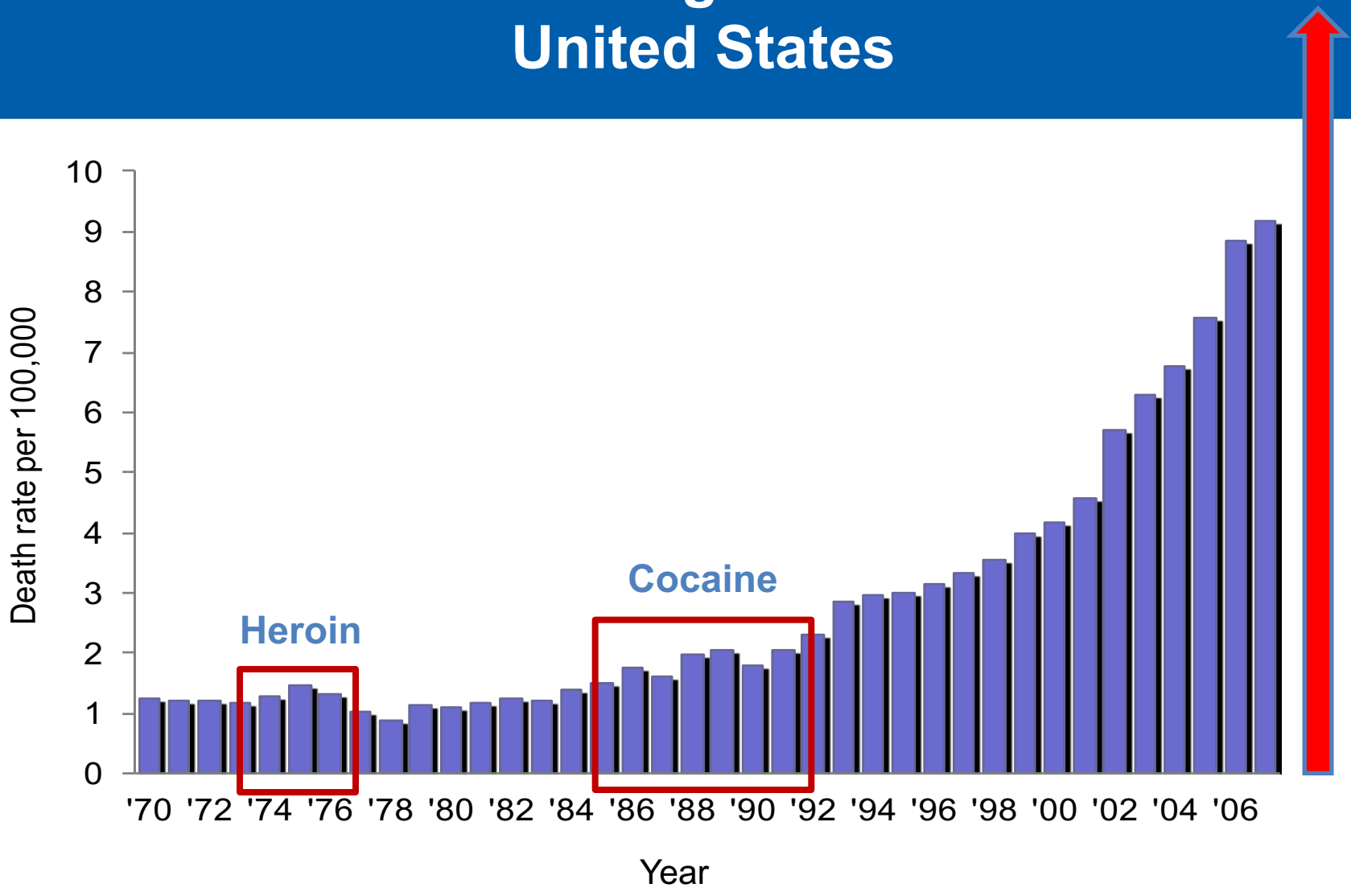
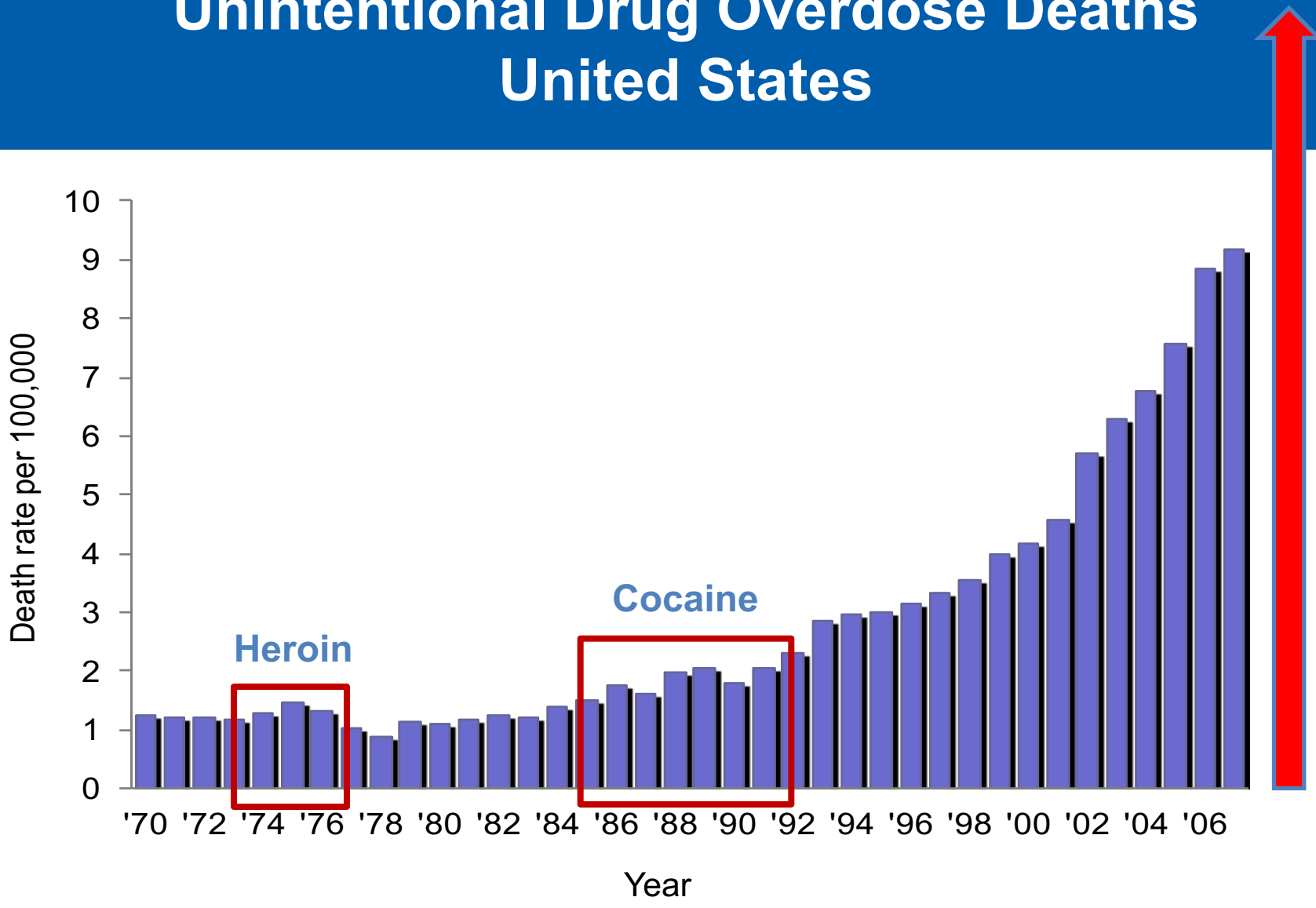
Unintentional Drug Overdose Deaths
United States



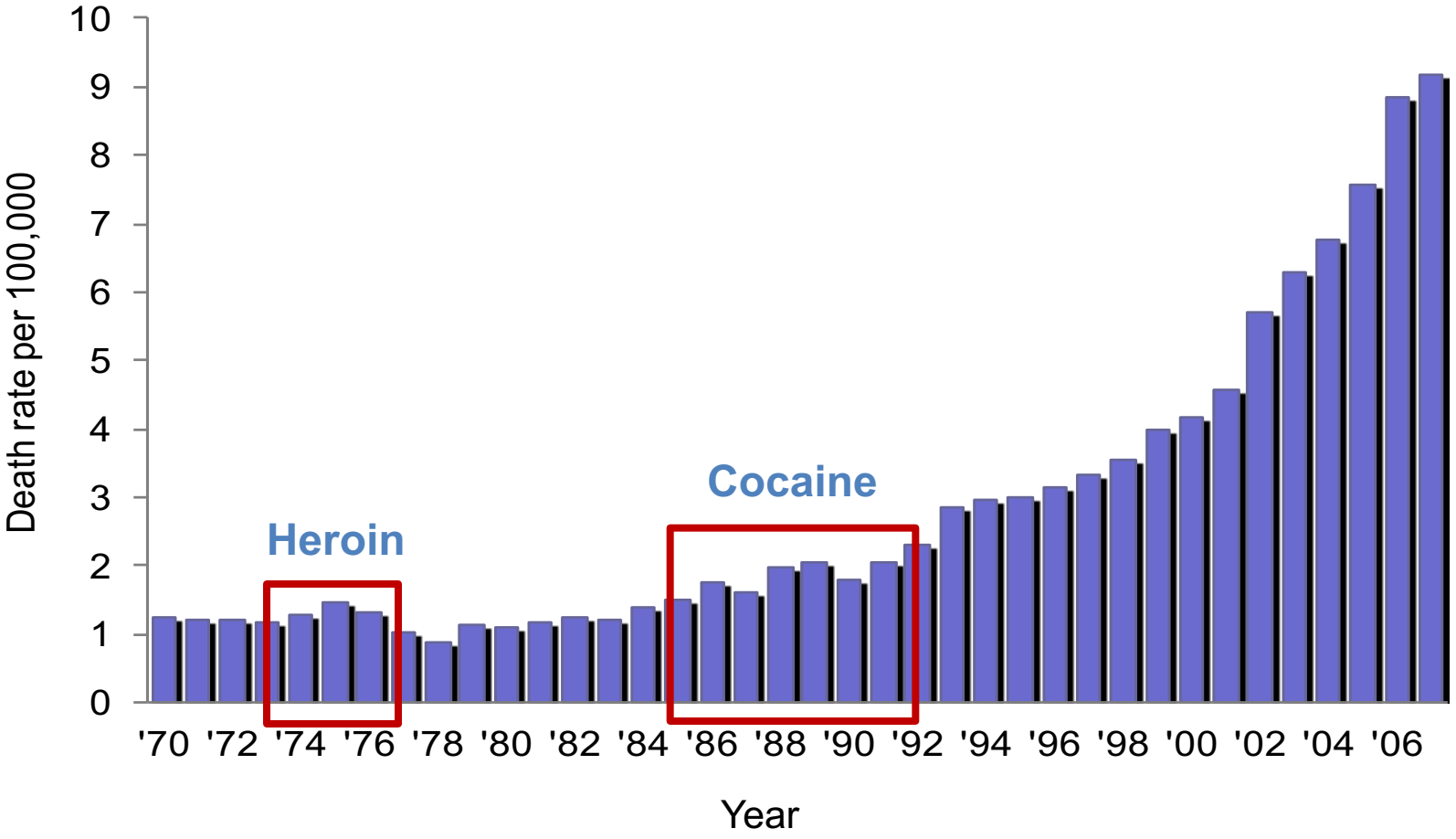
National Vital Statistics System, http://wonder.cdc.gov

Unintentional Drug Overdose Deaths
United States



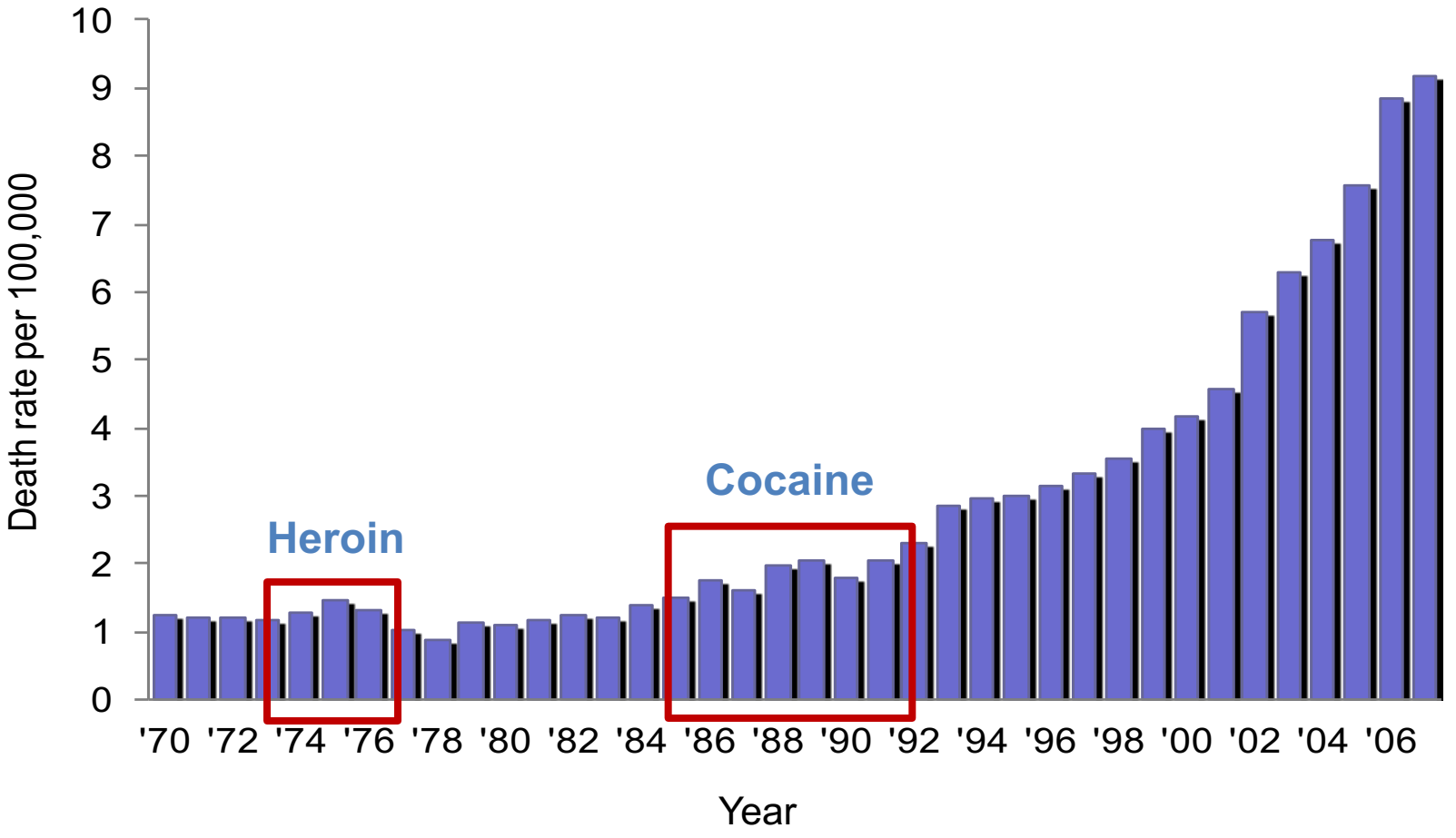
National Vital Statistics System, http://wonder.cdc.gov

Unintentional Drug Overdose Deaths
United States



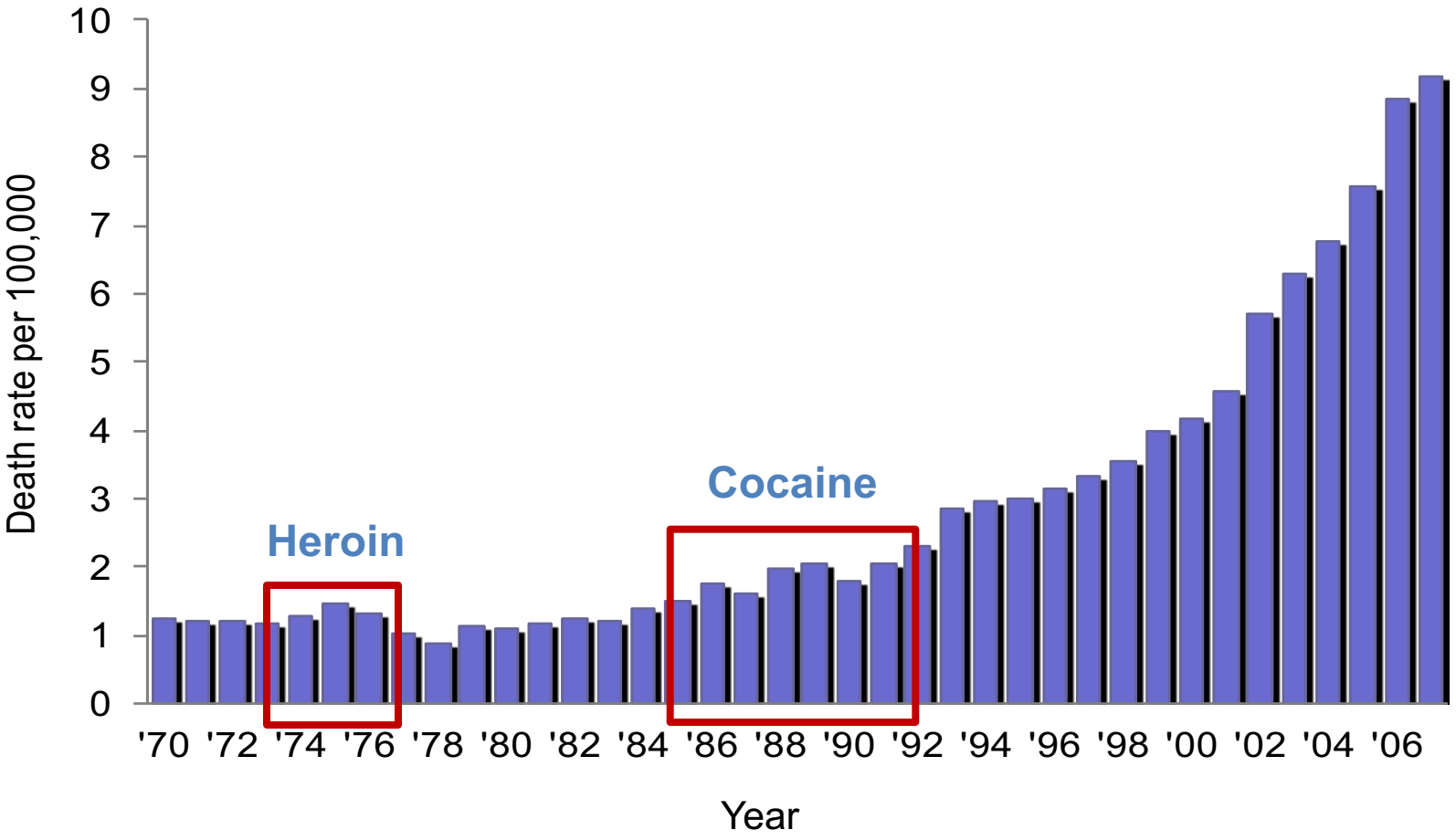
National Vital Statistics System, http://wonder.cdc.gov

Unintentional Drug Overdose Deaths
United States



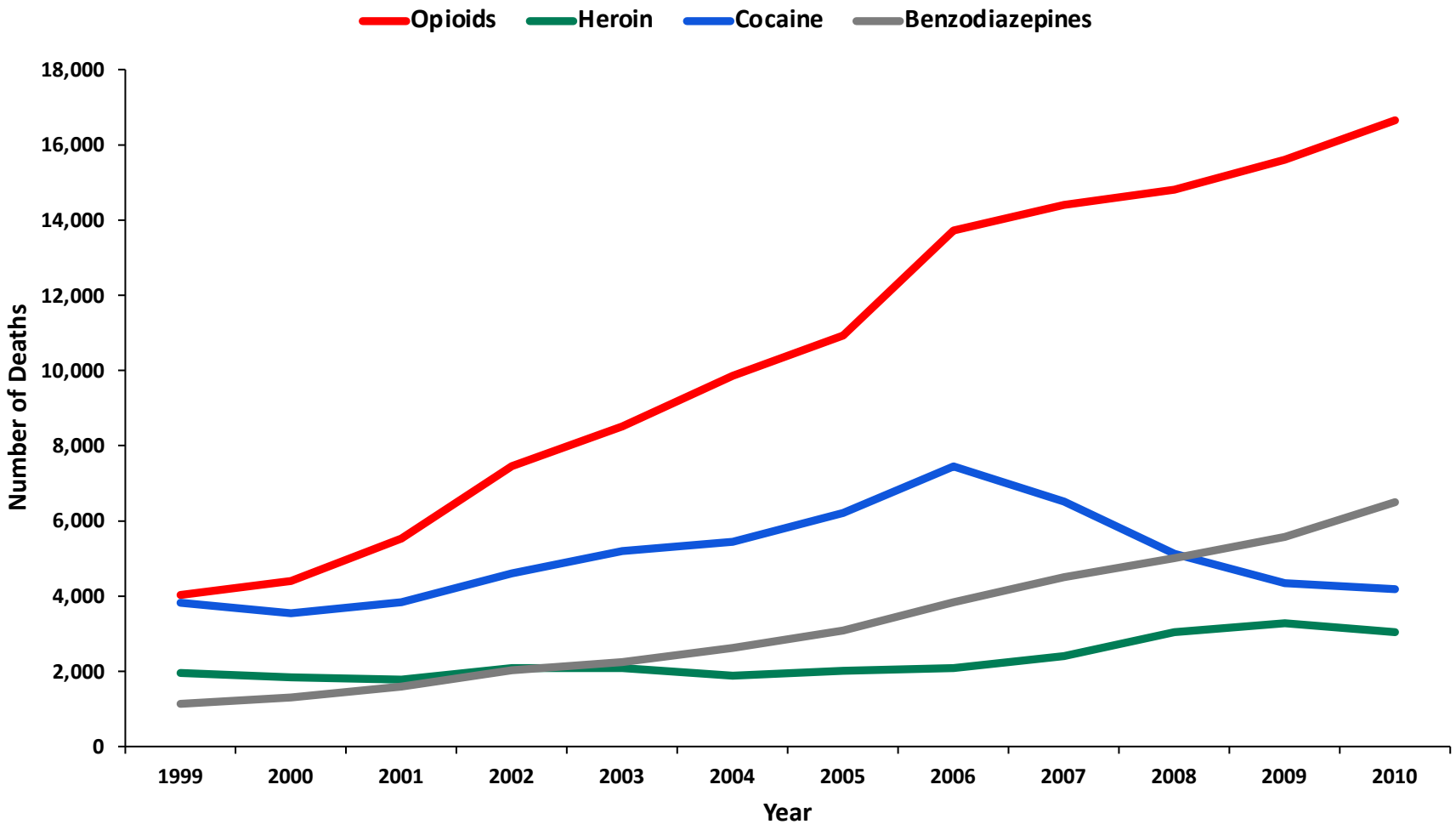
National Vital Statistics System, http://wonder.cdc.gov

Unintentional Drug Overdose Deaths
United States



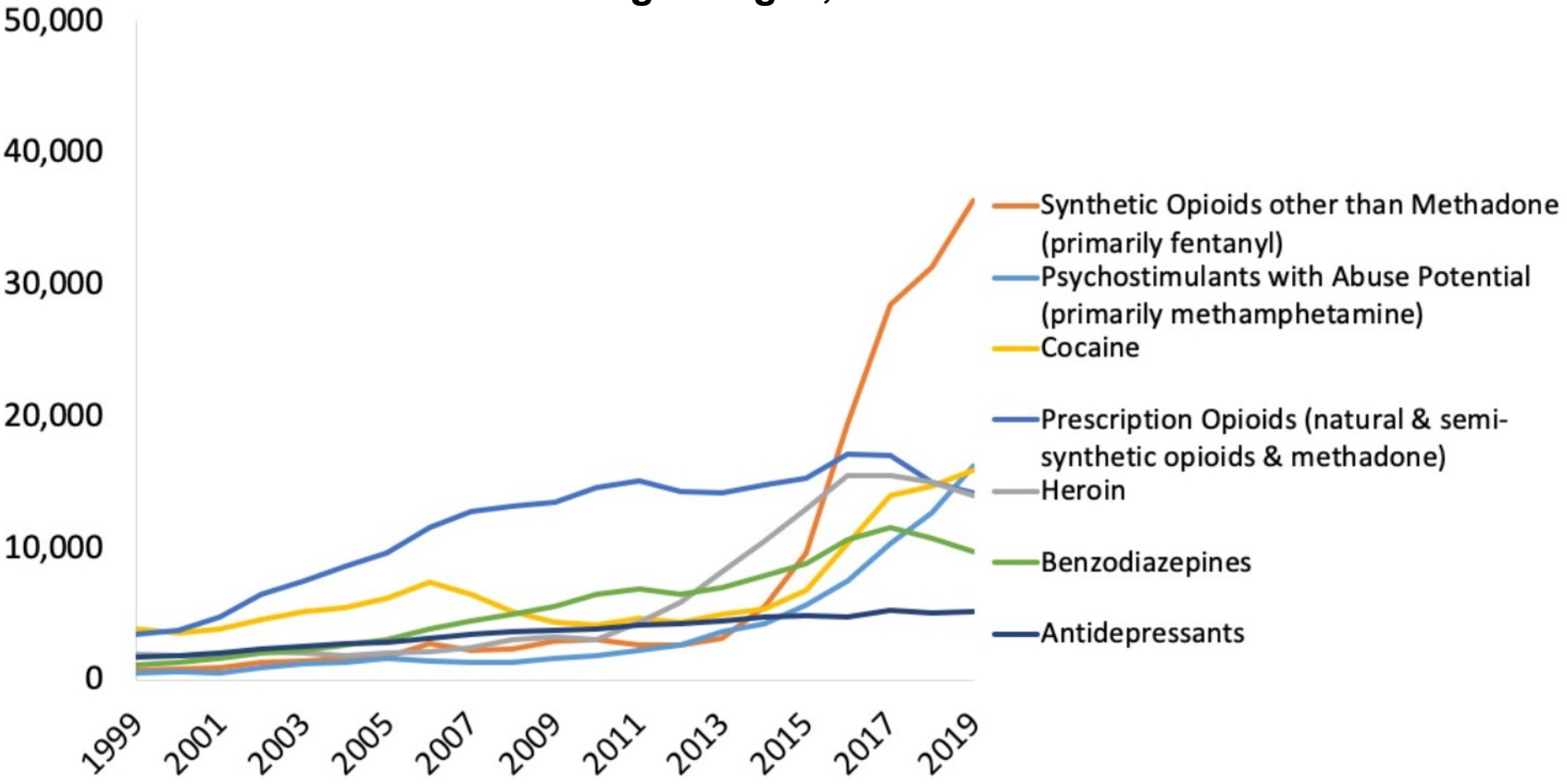
National Vital Statistics System, http://wonder.cdc.gov

Drug Overdose Deaths by Major Drug Type, United States, 1999–2010



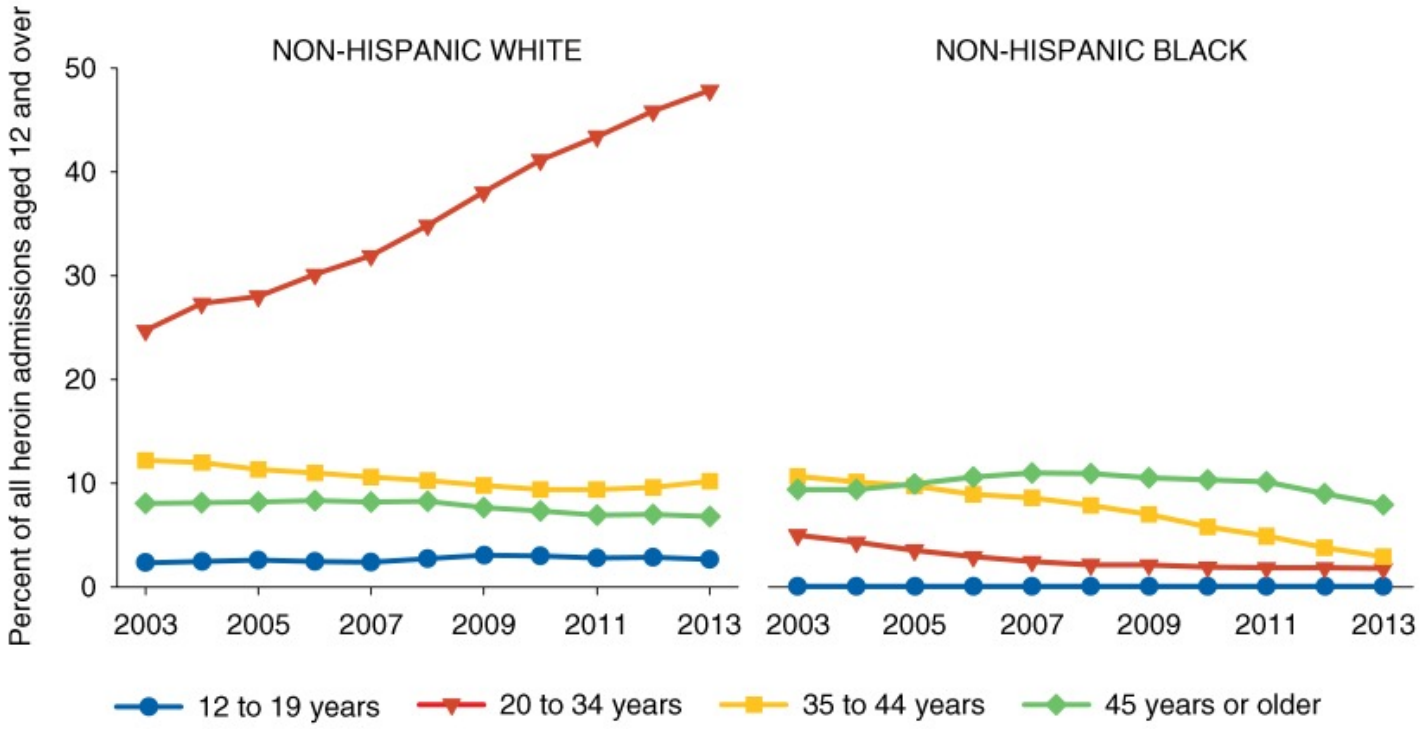
CDC, National Center for Health Statistics, National Vital Statistics System, CDC Wonder. Updated with 2010 mortality data.

National Drug-Involved Overdose Deaths by Specific Category—Number Among All Ages, 1999-2019



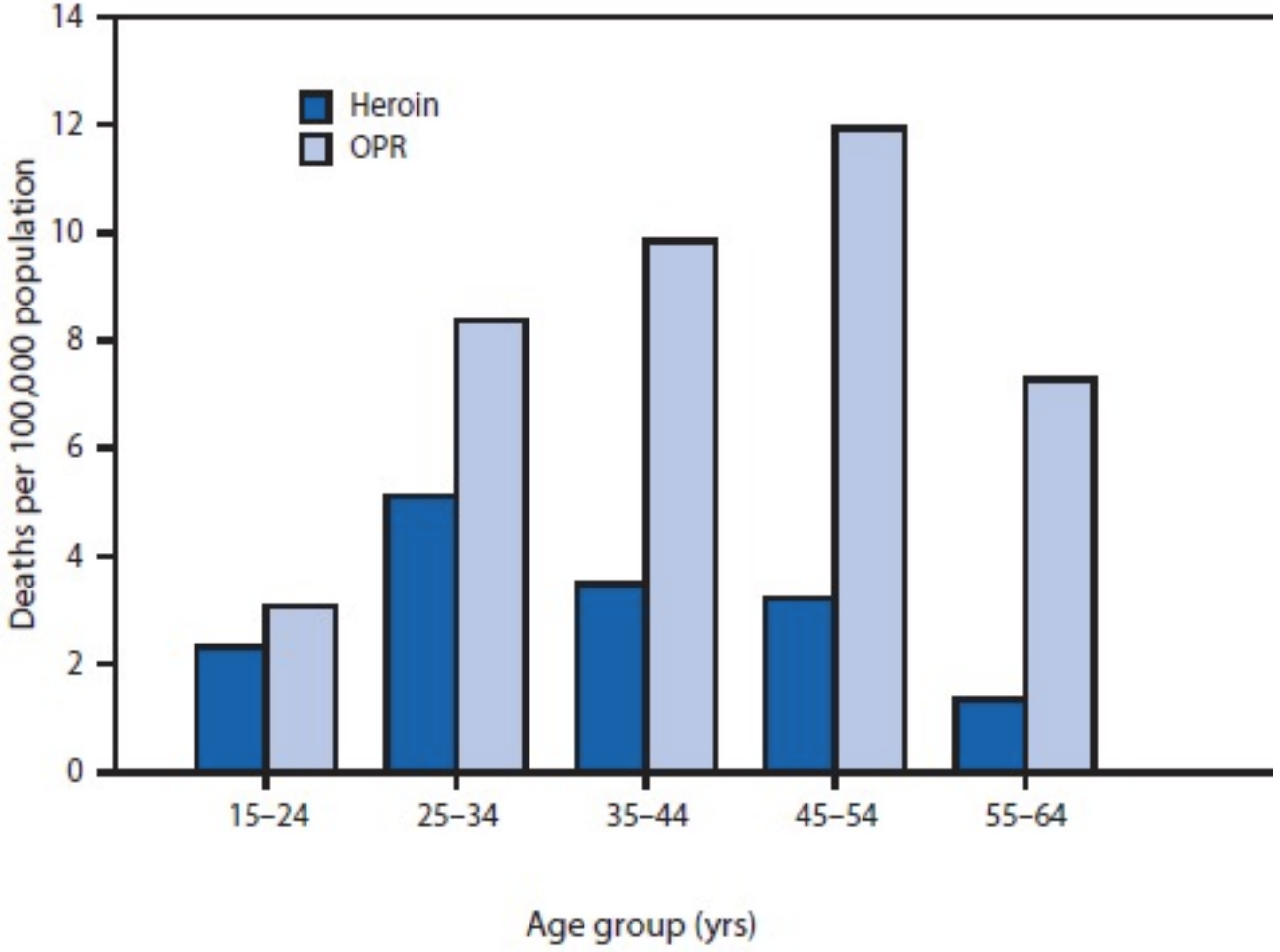
*Includes deaths with underlying causes of unintentional drug poisoning (X40–X44), suicide drug poisoning (X60–X64), homicide drug poisoning (X85), or drug poisoning of undetermined intent (Y10–Y14), as coded in the International Classification of Diseases, 10th Revision.
Source: Centers for Disease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

Heroin treatment admissions : 2003-2013



SOURCE: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). Data received through 01.23.15.

Death rates from overdoses of heroin or prescription opioid pain relievers (OPRs), by age group



SOURCE: CDC. *Increases in Heroin Overdose Deaths — 28 States, 2010 to 2012* MMWR. 2014, 63:849-854

Three Opioid-Addicted Cohorts

1. 20-40 y/o, disproportionately white, significant heroin use, opioid addiction began with Rx use (addicted after 1995)

2. 40 y/o & up, disproportionately white, mostly Rx opioids, opioid addiction began with Rx use (addicted after 1995)

3. 50 y/o & up, disproportionately non-white, mostly heroin users, opioid addiction began in teen years with heroin use (addicted before 1995)

Non-Hispanic Whites

Non-Hispanic Blacks

Figure 2. Heroin Treatment Admission Rates by Age Category Among Non-Hispanic White Individuals, US, 2000-2017

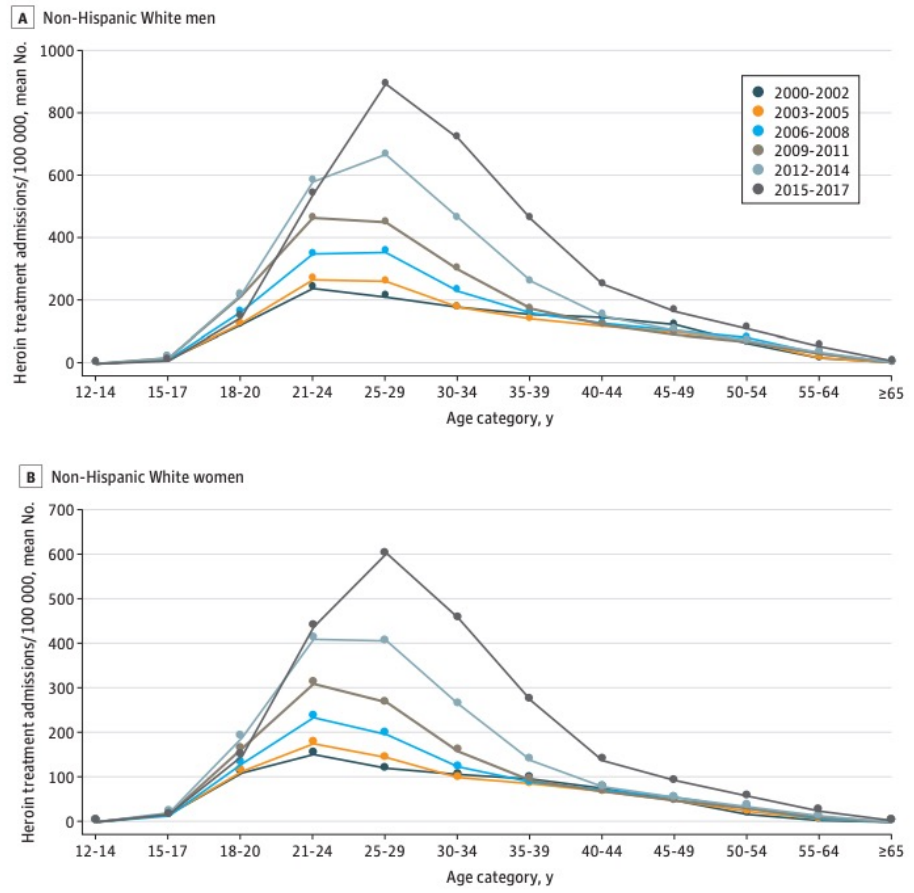
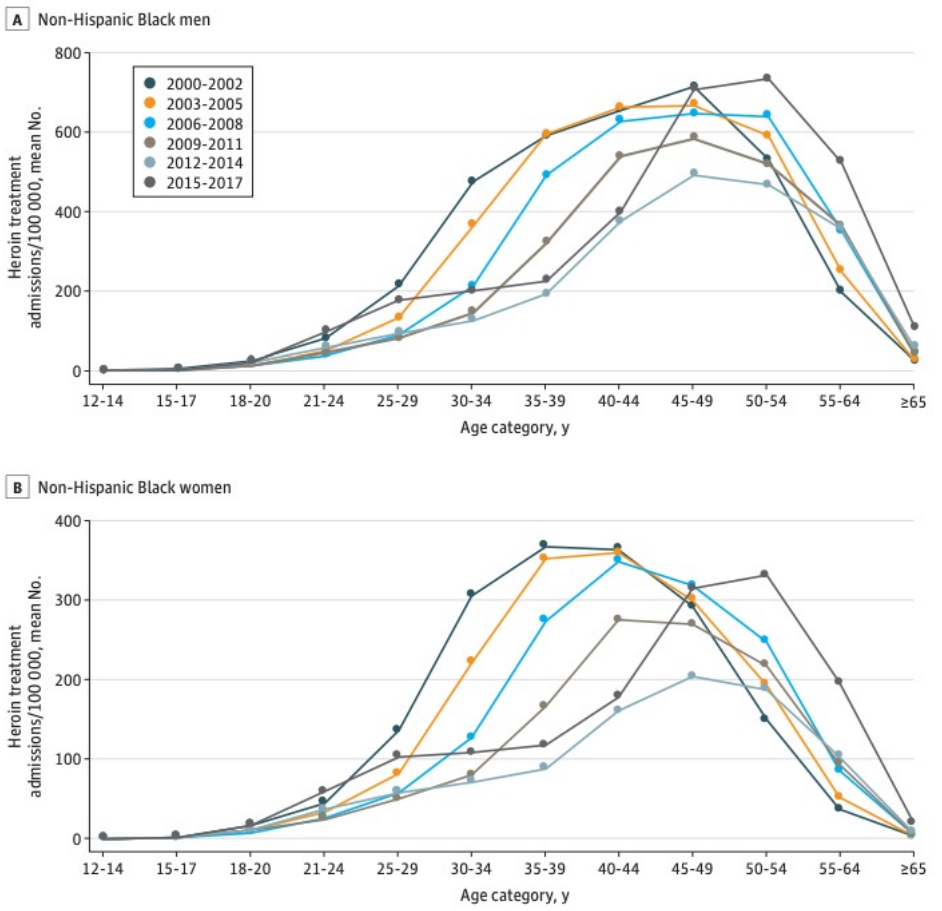
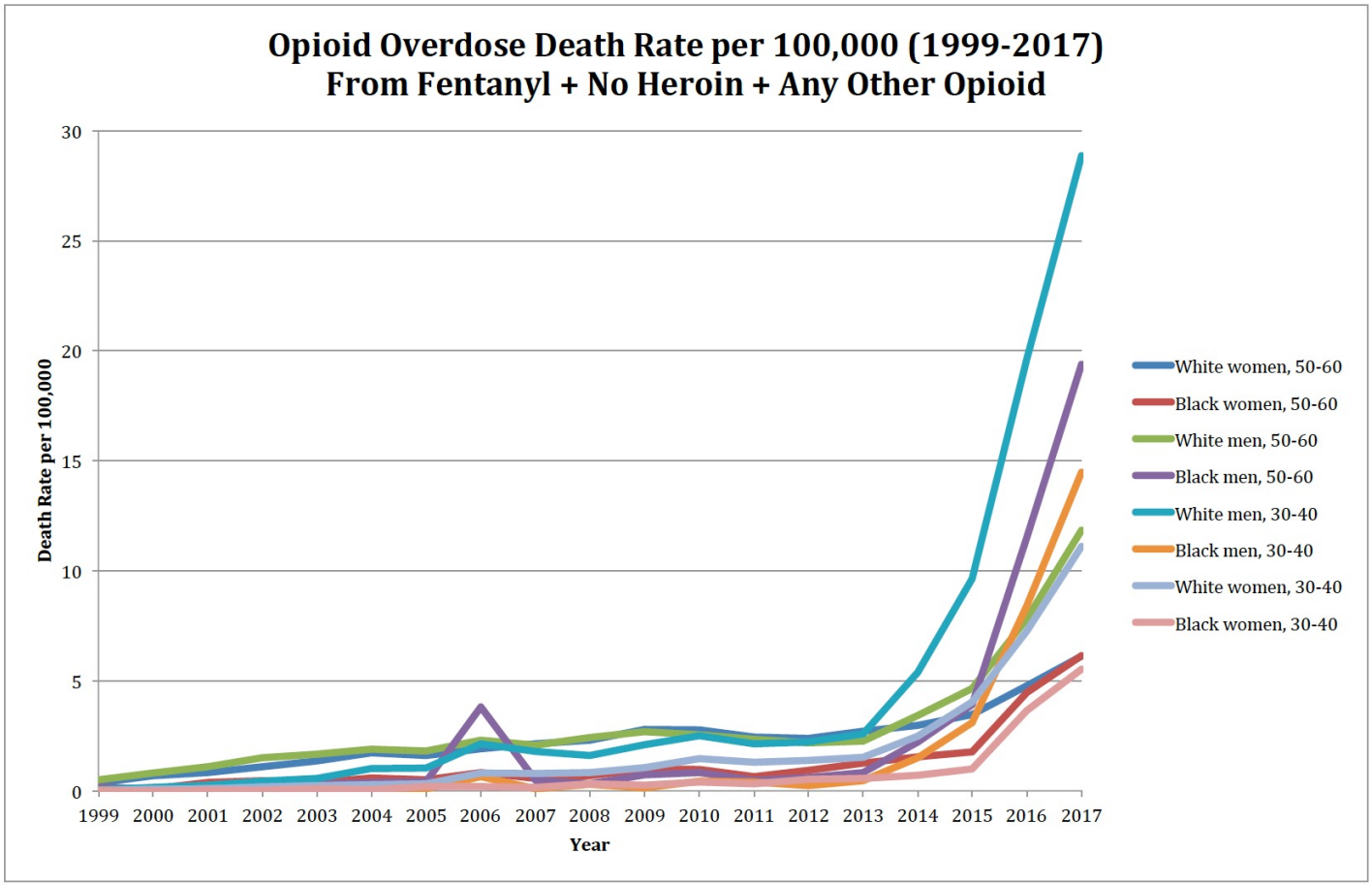


Figure 1. Heroin Treatment Admission Rates by Age Category Among Non-Hispanic Black Individuals, US, 2000-2017

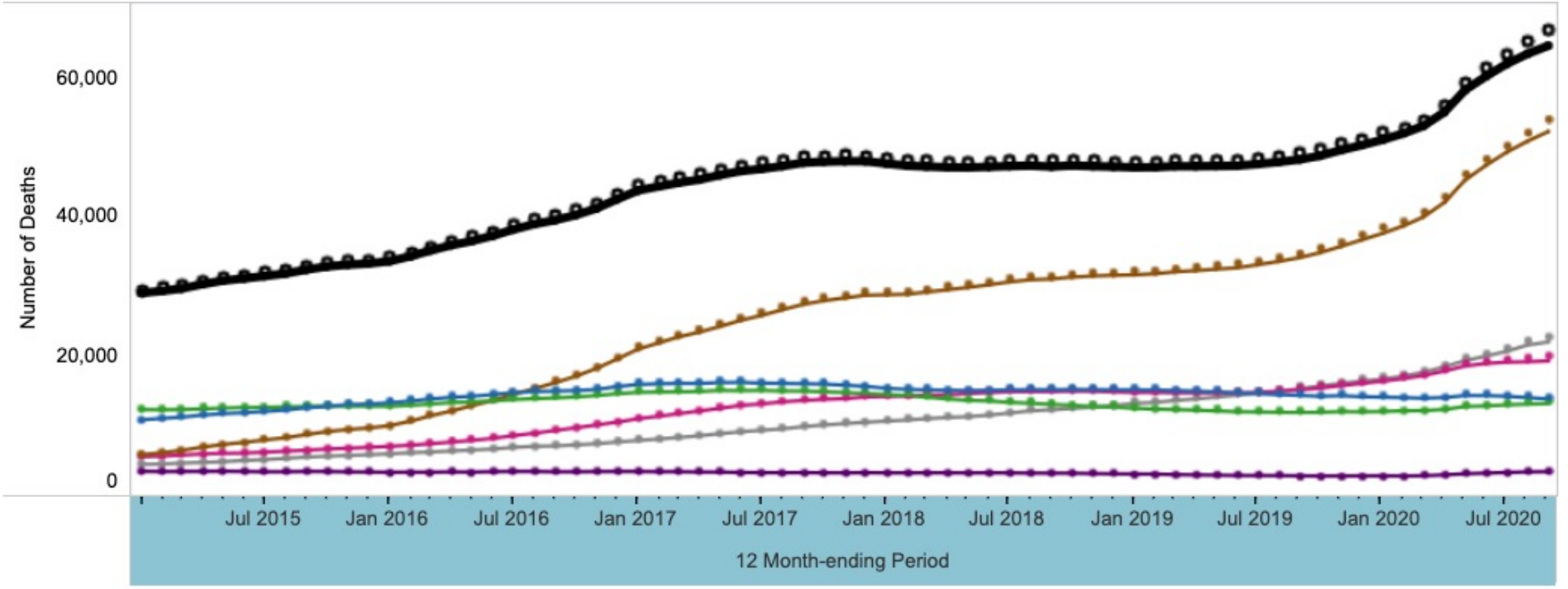


Source: Warren EC, Kolodny A. Trends in Heroin Treatment Admissions in the United States by Race, Sex, and Age. JAMA Netw Open. 2021 Feb 1;4(2):e2036640. doi: 10.1001/jamanetworkopen.2020.36640.



SOURCE: CDC WONDER

12 Month-ending Provisional Number of Drug Overdose Deaths by Drug Class



Legend for Drug or Drug Class

- Opioids (T40.0-T40.4,T40.6)
- Heroin (T40.1)
- Natural & semi-synthetic opioids (T40.2)
- Methadone (T40.3)
- Synthetic opioids, excl. methadone (T40.4)
- Cocaine (T40.5)
- Psychostimulants with abuse potential (T43.6)

---- Reported Value

O Predicted Value

Source: National Center for Health Statistics

Based on data available for analysis on: **4/4/2021**

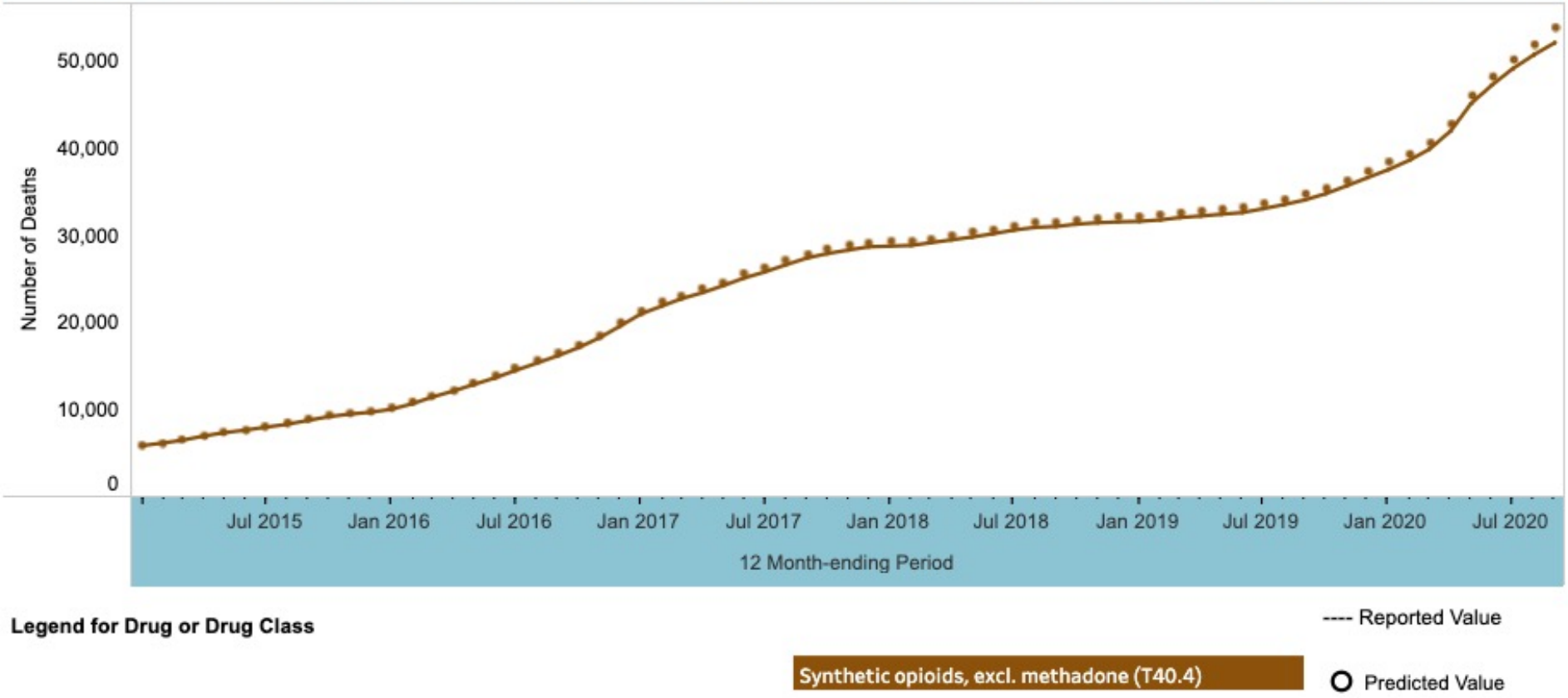
Select Jurisdiction

United States

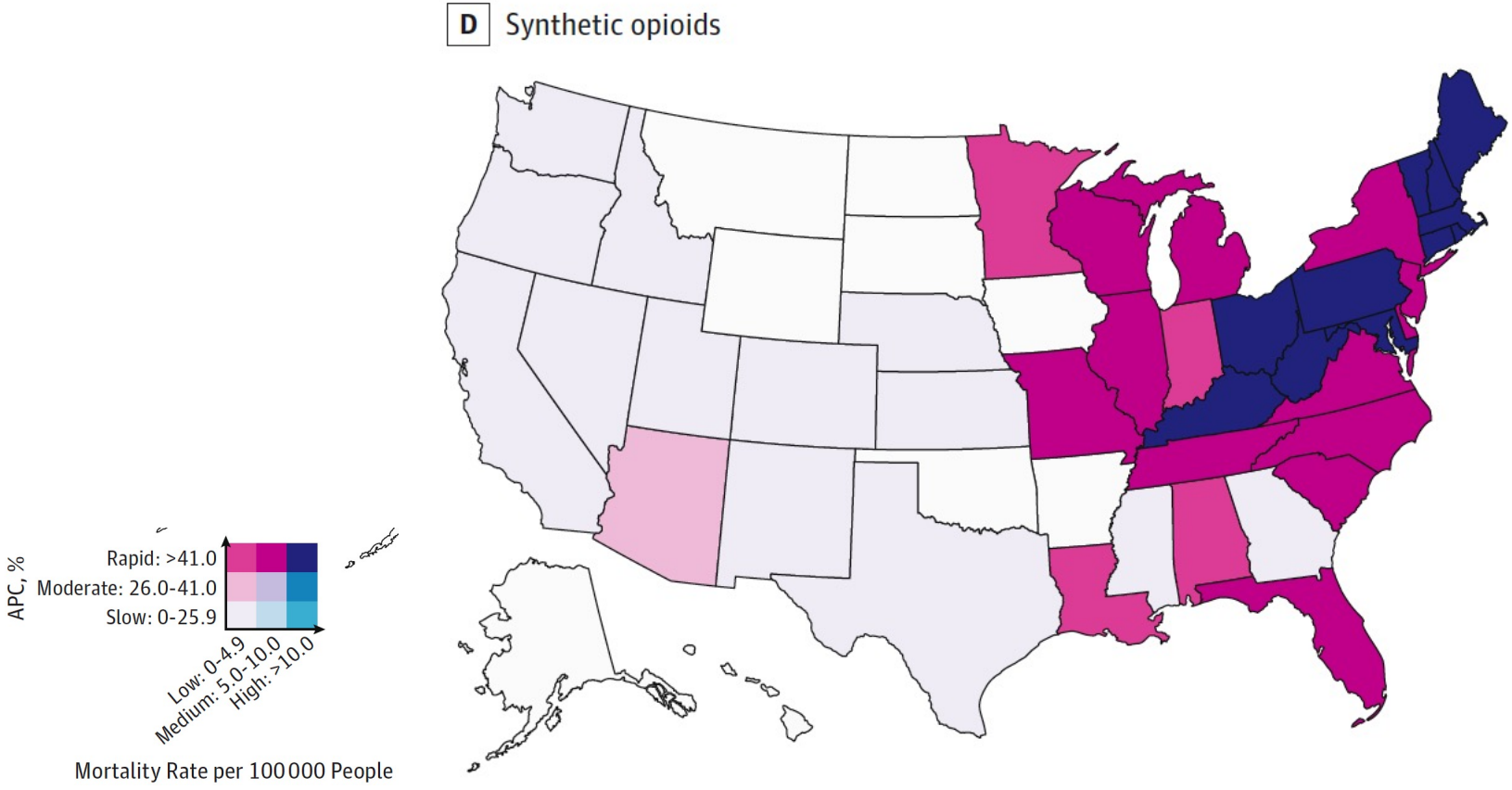
Select specific drugs or drug classes

Synthetic opioids, excl. methadone (T40.4)

Figure 2. 12 Month-ending Provisional Number of Drug Overdose Deaths by Drug or Drug Class: United States

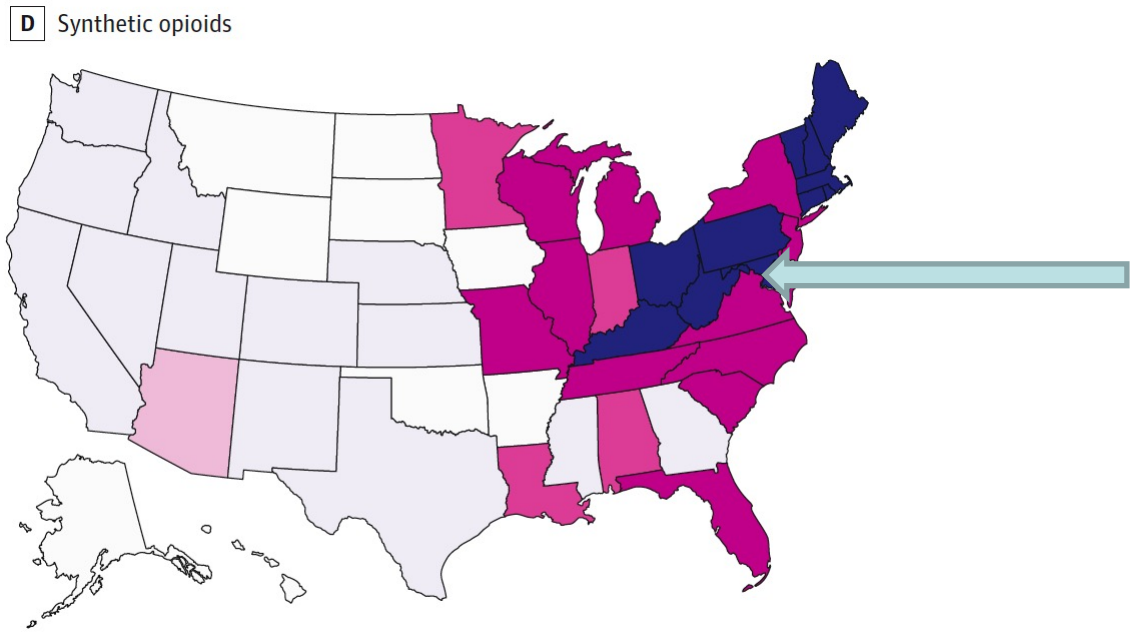


Growth and Level of the Synthetic Opioid OD Deaths, 2016



Source: JAMA Network Open. 2019;2(2):e190040. doi:10.1001/jamanetworkopen.2019.0040

Growth and Level of the Synthetic Opioid OD Deaths, 2016



The District of Columbia had the fastest rate of increase in mortality from opioids in the country, more than tripling every year since 2013

Source: JAMA Network Open. 2019;2(2):e190040. doi:10.1001/jamanetworkopen.2019.0040

Based on data available for analysis on: **4/4/2021**

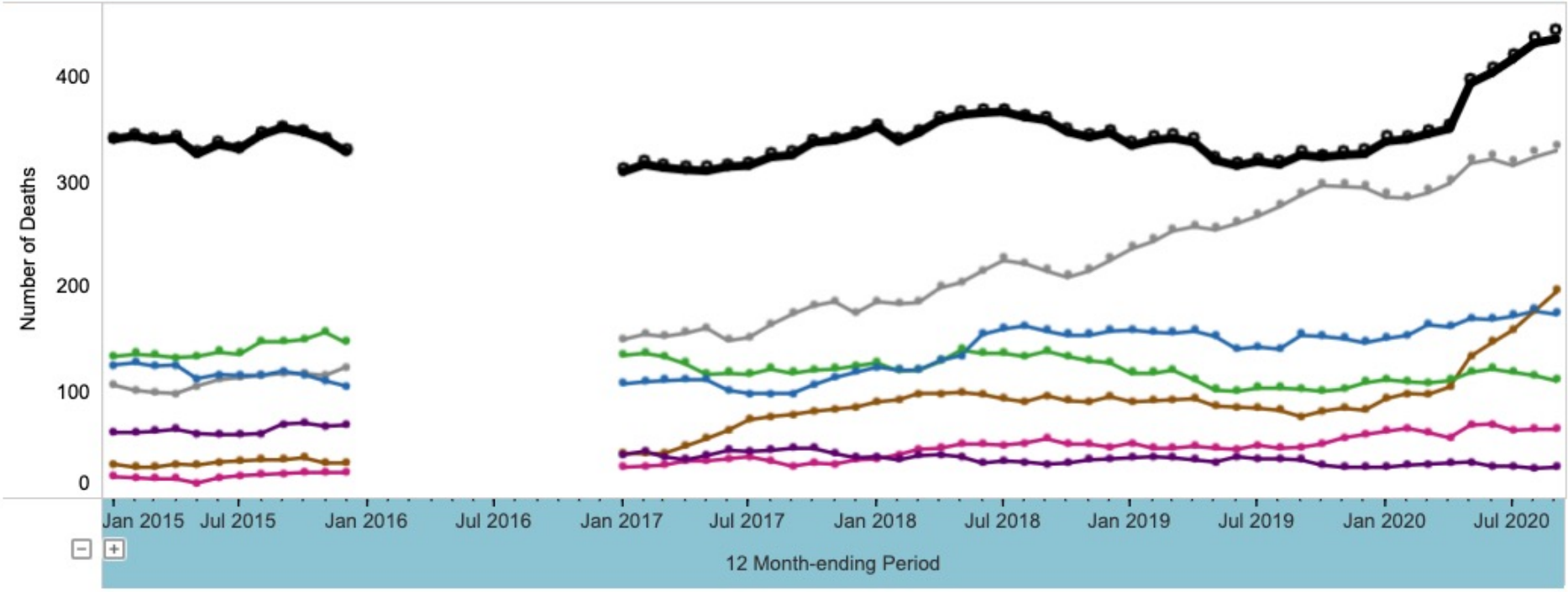
Select Jurisdiction

Oregon

Select specific drugs or drug classes

(Multiple values)

Figure 2. 12 Month-ending Provisional Number of Drug Overdose Deaths by Drug or Drug Class: Oregon



Legend for Drug or Drug Class

- Opioids (T40.0-T40.4,T40.6)
- Heroin (T40.1)
- Natural & semi-synthetic opioids (T40.2)
- Methadone (T40.3)
- Synthetic opioids, excl. methadone (T40.4)
- Cocaine (T40.5)
- Psychostimulants with abuse potential (T43.6)

---- Reported Value

○ Predicted Value

What Is the Opioid Crisis?

In one year, drug overdoses killed more Americans than the entire Vietnam War did

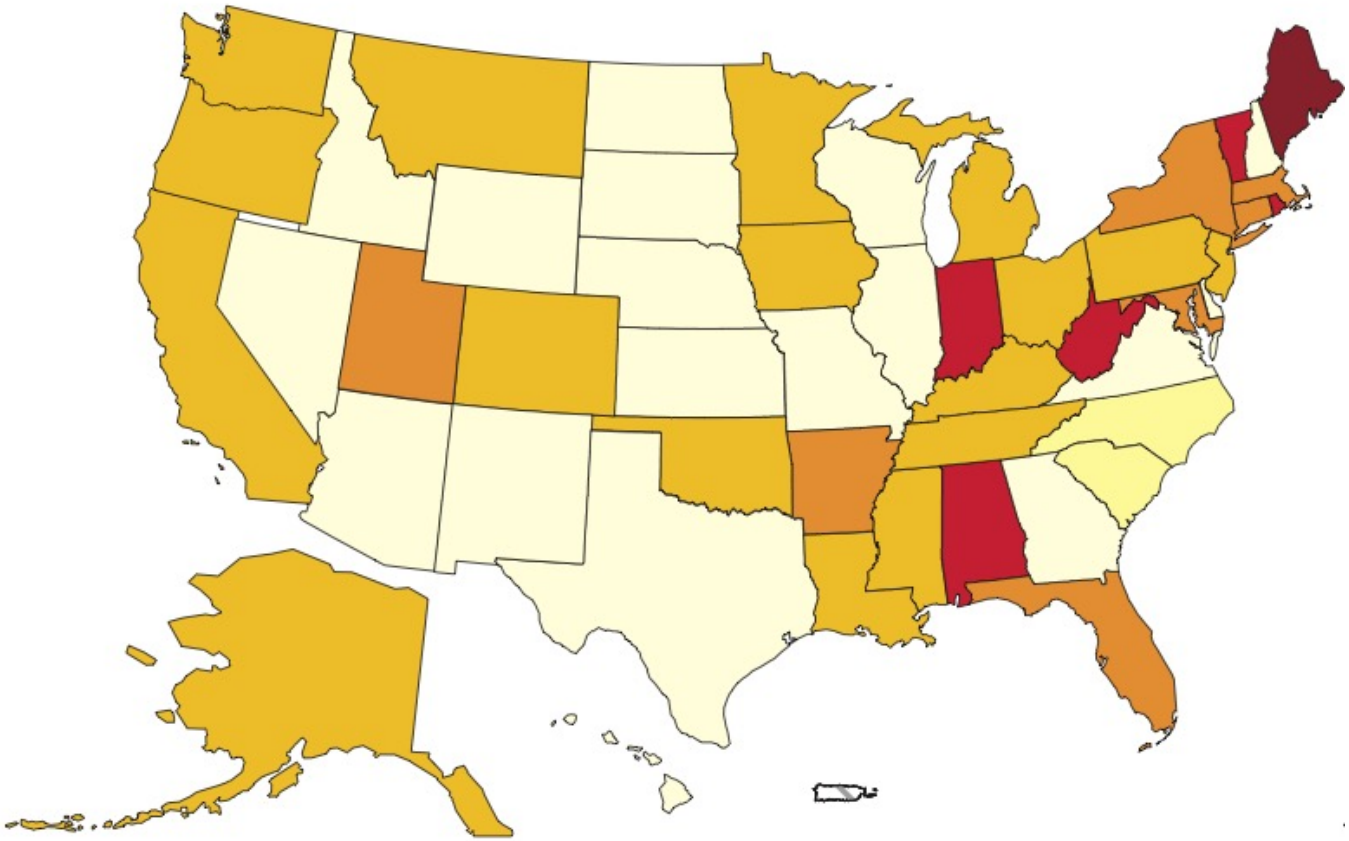
Dramatic Increases in Maternal Opioid Use and Neonatal Abstinence Syndrome

Children of the Opioid Epidemic Are Flooding Foster Homes. America Is Turning a Blind Eye.

Drug overdose deaths jump in 2019 to nearly 71,000, a record high, CDC says

How the opioid crisis decimated the American workforce

Primary non-heroin opiates/synthetics admission rates, by State (per 100,000 population aged 12 and over)



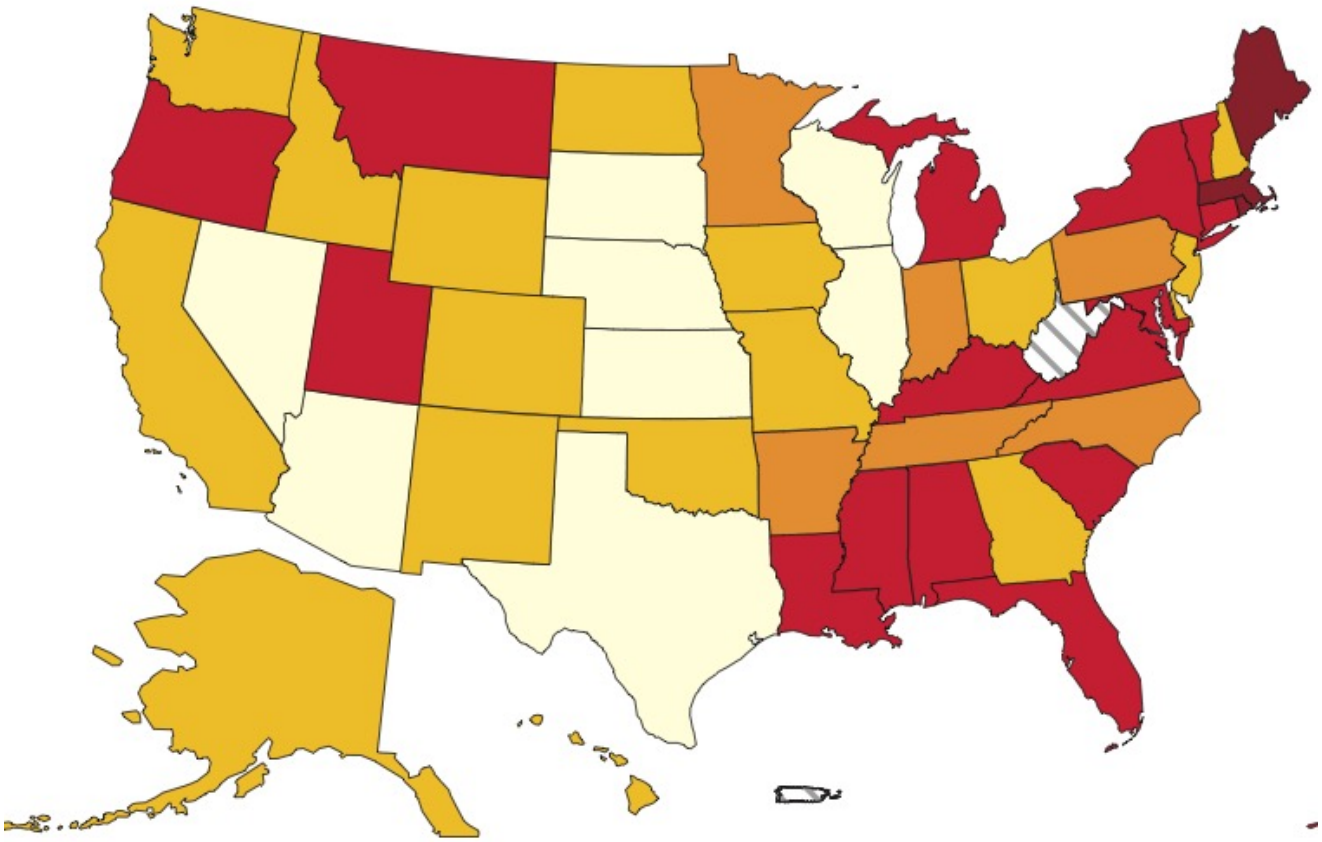
1999

(range 1 - 50)

< 8	15 - 18	45 or more
8 - 14	19 - 44	Incomplete data

SOURCE: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). Data received through 11.03.10.

Primary non-heroin opiates/synthetics admission rates, by State (per 100,000 population aged 12 and over)



2001

(range 1 – 71)

< 8	15 - 18	45 or more
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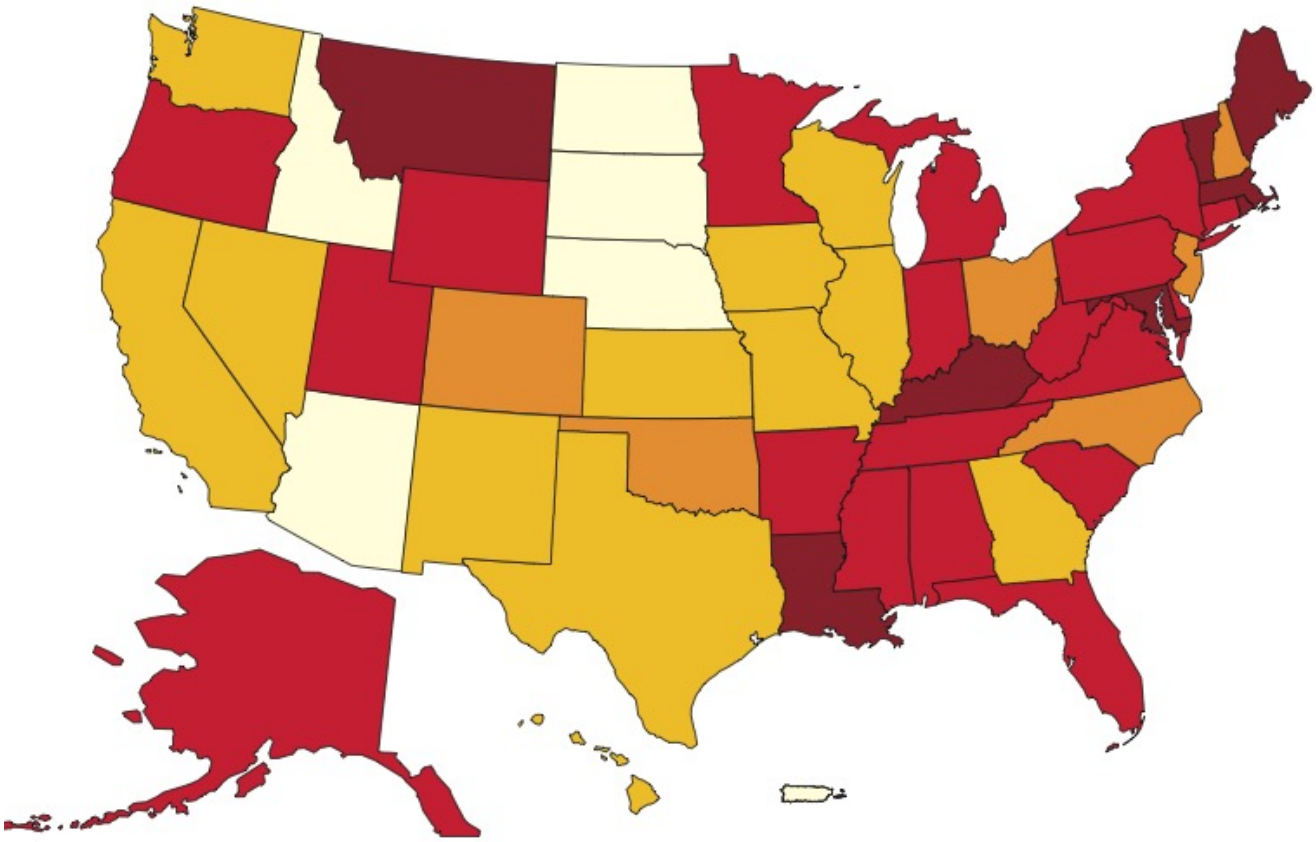
SOURCE: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). Data received through 11.03.10.

Primary non-heroin opiates/synthetics admission rates, by State (per 100,000 population aged 12 and over)



2003

(range 2 – 139)

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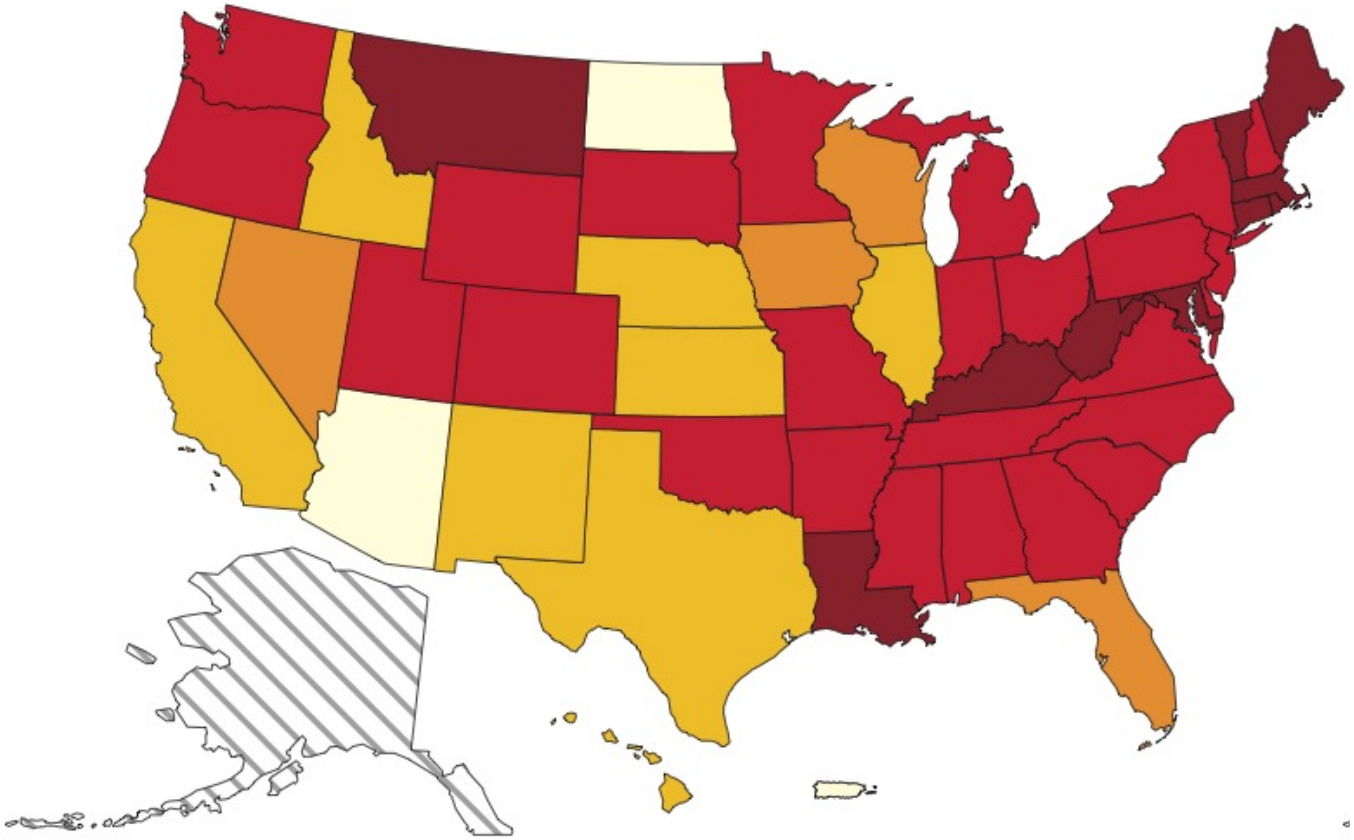
SOURCE: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). Data received through 11.03.10.

Primary non-heroin opiates/synthetics admission rates, by State (per 100,000 population aged 12 and over)



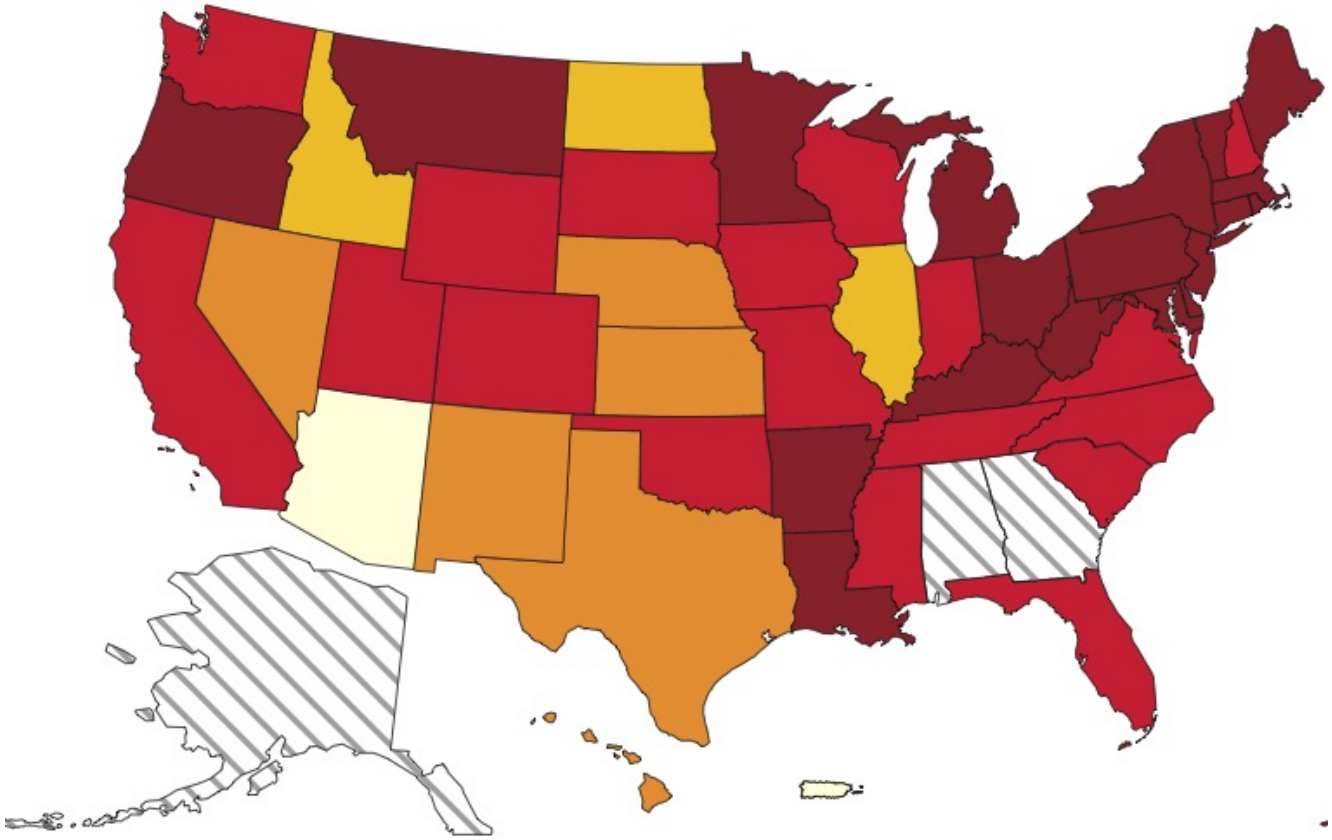
2005

(range 0 – 214)

< 8	15 - 18	45 or more
8 - 14	19 - 44	Incomplete data

SOURCE: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). Data received through 11.03.10.

Primary non-heroin opiates/synthetics admission rates, by State (per 100,000 population aged 12 and over)



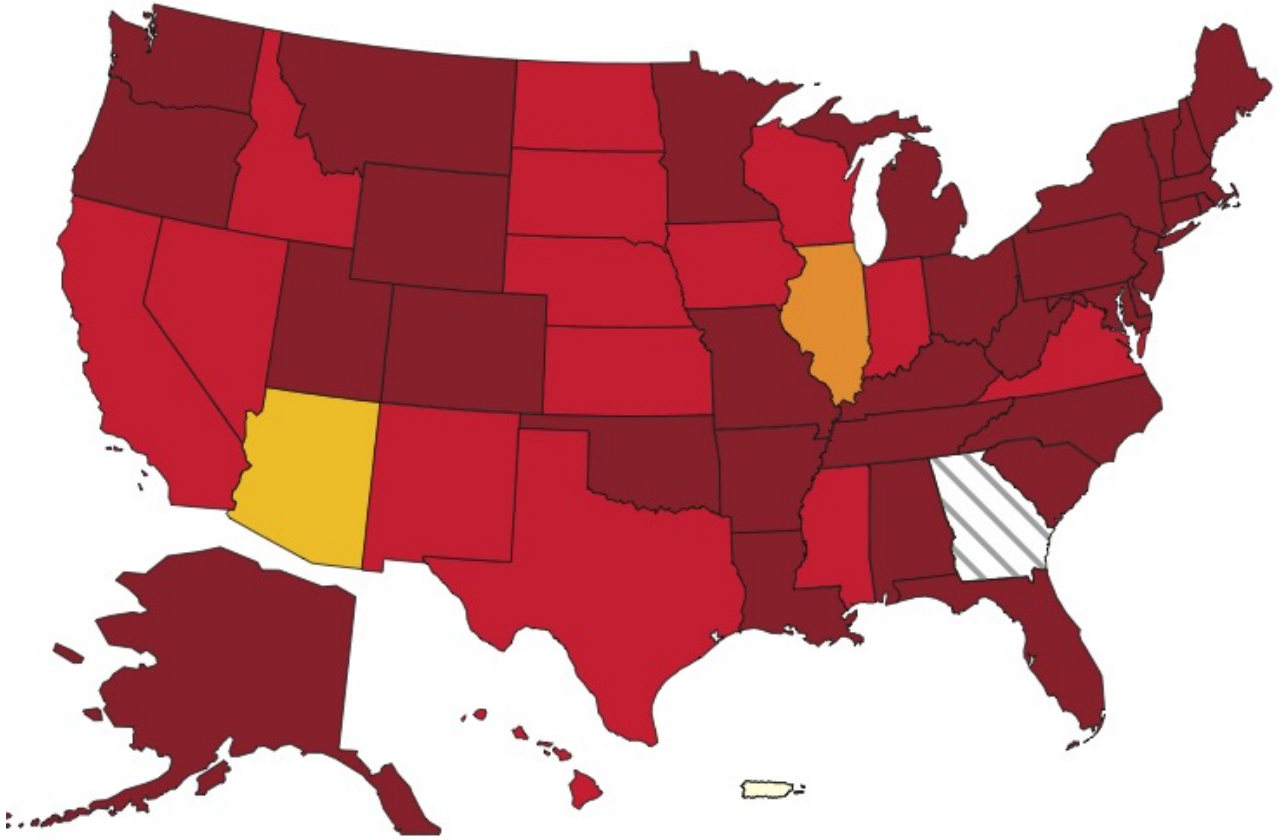
2007

(range 1 – 340)

< 8	15 - 18	45 or more
8 - 14	19 - 44	Incomplete data

SOURCE: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). Data received through 11.03.10.

Primary non-heroin opiates/synthetics admission rates, by State (per 100,000 population aged 12 and over)

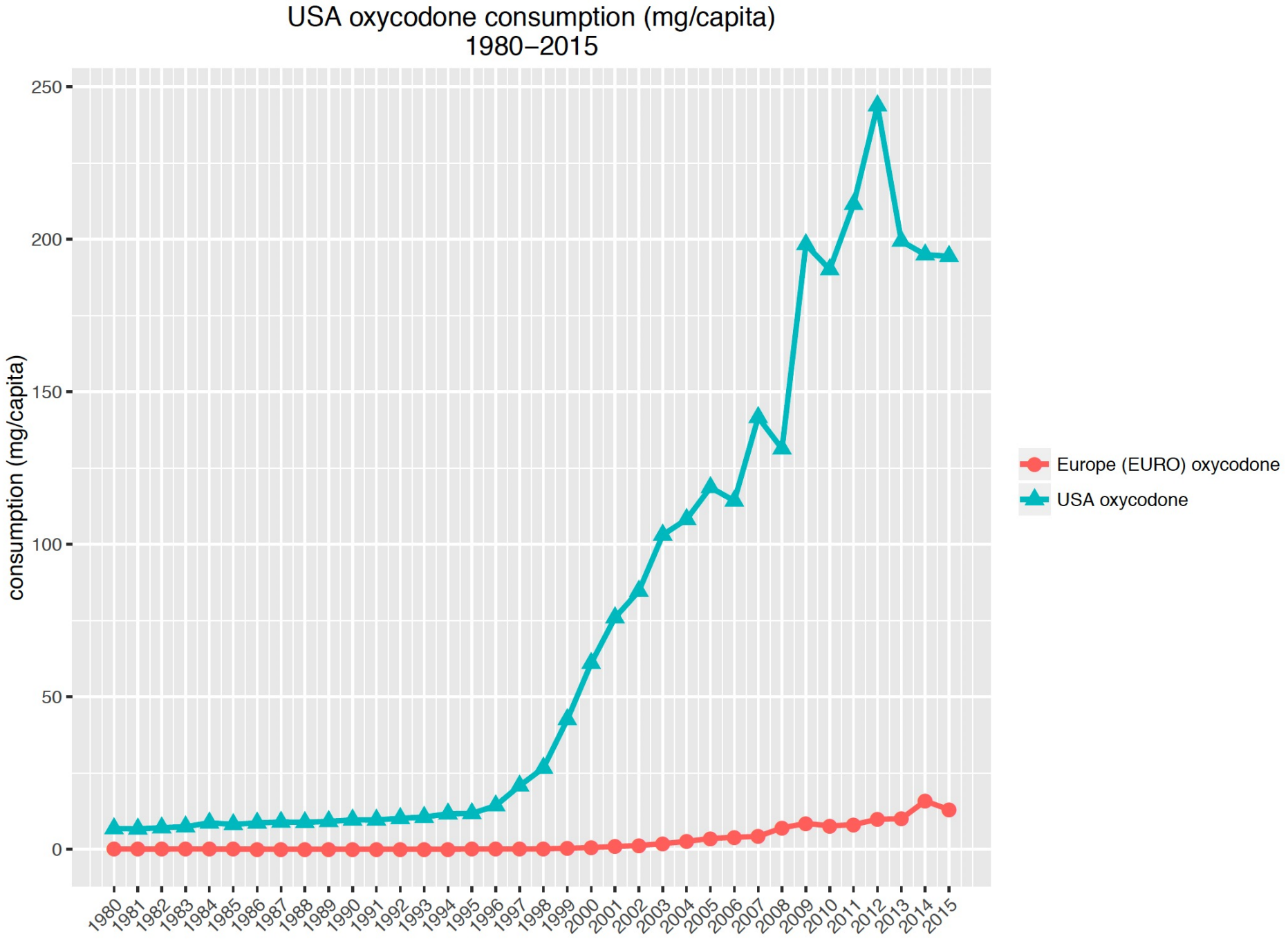


2009

(range 1 – 379)

< 8	15 - 18	45 or more
8 - 14	19 - 44	Incomplete data

SOURCE: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). Data received through 11.03.10.



Sources: International Narcotics Control Board; World Health Organization population data

Industry-funded organizations campaigned for greater use of opioids

- Pain Patient Groups
- Professional Societies
- The Joint Commission
- The Federation of State Medical Boards

"The risk of addiction is much less than 1%"

Porter J, Jick H. *Addiction rare in patients treated with narcotics*. N Engl J Med. 1980 Jan 10;302(2):123

Cited 824 times (Google Scholar)

N Engl J Med. 1980 Jan 10;302(2):123.

ADDICTION RARE IN PATIENTS TREATED WITH NARCOTICS

To the Editor: Recently, we examined our current files to determine the incidence of narcotic addiction in 39,946 hospitalized medical patients[1] who were monitored consecutively. Although there were 11,882 patients who received at least one narcotic preparation, there were only four cases of reasonably well documented addiction in patients who had no history of addiction. The addiction was considered major in only one instance. The drugs implicated were meperidine in two patients,[2] Percodan in one, and hydromorphone in one. We conclude that despite widespread use of narcotic drugs in hospitals, the development of addiction is rare in medical patients with no history of addiction.

JANE PORTER
HERSHEL JICK, M.D.
Boston Collaborative Drug
Surveillance Program
Waltham, MA 02154 Boston University Medical Center

1. Jick H, Miettinen OS, Shapiro S, Lewis GP, Siskind Y, Slone D. Comprehensive drug surveillance. JAMA. 1970; 213:1455-60.
2. Miller RR, Jick H. Clinical effects of meperidine in hospitalized medical patients. J Clin Pharmacol. 1978; 18:180-8.

Annals of Internal Medicine

The Effectiveness and Risks of Long-Term Opioid Therapy for Chronic Pain: A Systematic Review for a National Institutes of Health Pathways to Prevention Workshop

Roger Chou, MD; Judith A. Turner, PhD; Emily B. Devine, PharmD, PhD, MBA; Ryan N. Hansen, PharmD, PhD; Sean D. Sullivan, PhD; Ian Blazina, MPH; Tracy Dana, MLS; Christina Bougatsos, MPH; and Richard A. Deyo, MD, MPH

Background: Increases in prescriptions of opioid medications for chronic pain have been accompanied by increases in opioid overdoses, abuse, and other harms and uncertainty about long-term effectiveness.

Purpose: To evaluate evidence on the effectiveness and harms of long-term (>3 months) opioid therapy for chronic pain in adults.

Data Sources: MEDLINE, the Cochrane Central Register of Controlled Trials, the Cochrane Database of Systematic Reviews, PsycINFO, and CINAHL (January 2008 through August 2014); relevant studies from a prior review; reference lists; and ClinicalTrials.gov.

Study Selection: Randomized trials and observational studies that involved adults with chronic pain who were prescribed long-term opioid therapy and that evaluated opioid therapy versus placebo, no opioid, or nonopioid therapy; different opioid dosing strategies; or risk mitigation strategies.

Data Extraction: Dual extraction and quality assessment.

Data Synthesis: No study of opioid therapy versus no opioid therapy evaluated long-term (>1 year) outcomes related to pain, function, quality of life, opioid abuse, or addiction. Good- and fair-quality observational studies suggest that opioid therapy for chronic pain is associated with increased risk for overdose, opioid abuse, fractures, myocardial infarction, and markers of sexual dysfunction, although there are few studies for each of these outcomes; for some harms, higher doses are associated with increased risk. Evidence on the effectiveness and harms of different opioid dosing and risk mitigation strategies is limited.

Limitations: Non–English-language articles were excluded, meta-analysis could not be done, and publication bias could not be assessed. No placebo-controlled trials met inclusion criteria, evidence was lacking for many comparisons and outcomes, and observational studies were limited in their ability to address potential confounding.

Conclusion: Evidence is insufficient to determine the effectiveness of long-term opioid therapy for improving chronic pain and function. Evidence supports a dose-dependent risk for serious harms.

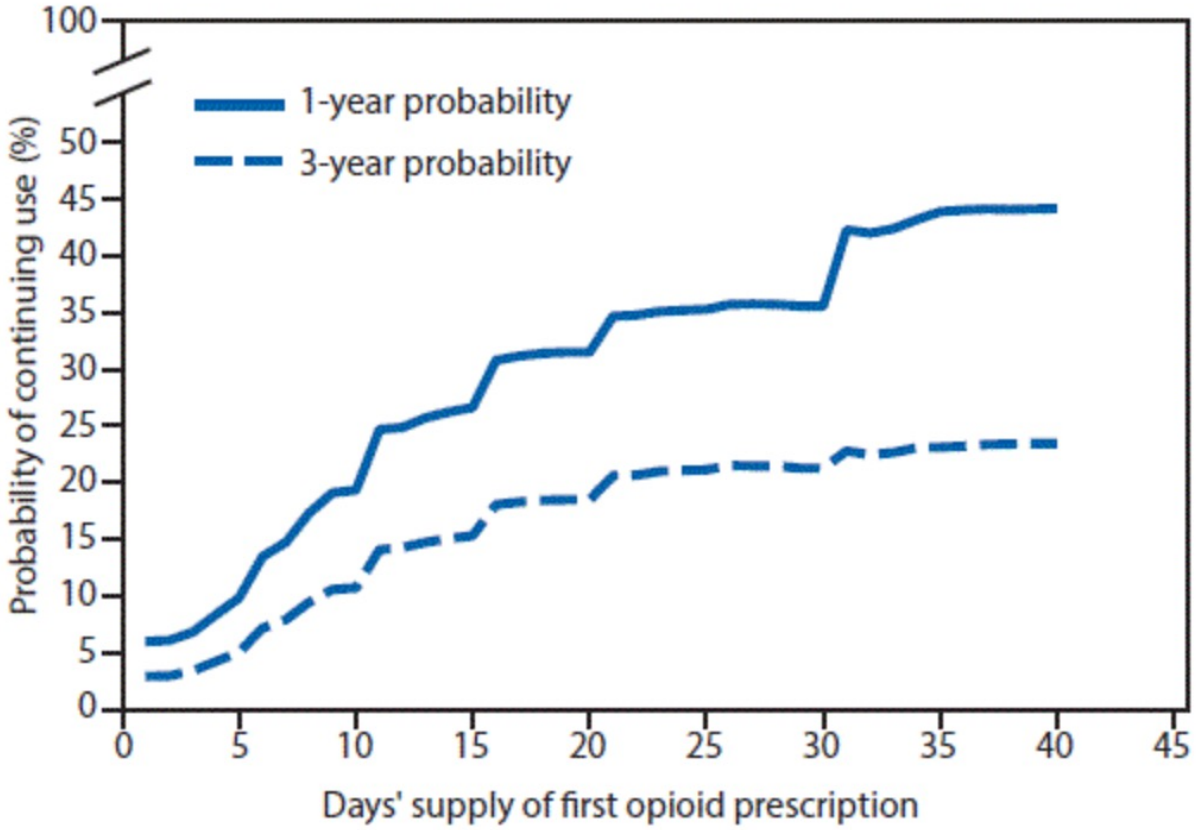
Primary Funding Source: Agency for Healthcare Research and Quality.

Ann Intern Med. 2015;162:276-286. doi:10.7326/M14-2559 **www.annals.org**

For author affiliations, see end of text.

This article was published online first at www.annals.org on 13 January 2015.

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.**

Source: Shah A, Hayes CJ, Martin BC. Characteristics of Initial Prescription Episodes and Likelihood of Long-Term Opioid Use — United States, 2006–2015. MMWR Morb Mortal Wkly Rep 2017;66:265–269.

Controlling the epidemic:
A Three-pronged Approach

- **Prevent** new cases of opioid addiction.
- **Treat** people who are already addicted.
- **Reduce supply** from pill mills and the black-market.

Impact of COVID-19 on the Opioid Crisis

- Evidence suggest increases in ODs
- Ability to provide direct services and psychosocial support impeded
- Litigation against opioid industry slowed

OUD Increases COVID Risks

- Increased susceptibility to infection
  - Opioid-induced immunosuppression
  - Psychosocial factors (homelessness, treatment settings)
- Increased risk for complications
  - Opioid-induced immunosuppression
  - Respiratory depression from opioids
  - Other medical problems

OUD Increases COVID Risks

- Addictive disorder increases risk for COVID, with opioid use disorder followed by tobacco use disorder, having highest risk.

- Addictive disorder increases risk for death from COVID, with greatest risk in Black patients with OUD.

Source: Wang, Q.Q., Kaelber, D.C., Xu, R. et al. COVID-19 risk and outcomes in patients with substance use disorders: analyses from electronic health records in the United States. Mol Psychiatry (2020).

Treatment System Changes

- Feds relax Methadone rules on take-home doses and allow home deliveries.
- Buprenorphine home inductions
- Expansion of tele-medicine treatment
- Naloxone home deliveries

Article

High-dimensional characterization of post-acute sequalae of COVID-19

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The acute clinical manifestations of COVID-19 are well characterized[1,2]; however, its post-acute sequalae have not been comprehensively described. Here, we use the national healthcare databases of the US Department of Veterans Affairs to systematically and comprehensively identify 6-month incident sequalae including diagnoses, medication use, and laboratory abnormalities in 30-day survivors of COVID-19. We show that beyond the first 30 days of illness, people with COVID-19 exhibit higher risk of death and health resource utilization. Our high dimensional approach identifies incident sequalae in the respiratory system and several others including nervous system and neurocognitive disorders, mental health disorders, metabolic disorders, cardiovascular disorders, gastrointestinal disorders, malaise, fatigue, musculoskeletal pain, and anemia. We show increased incident use of several therapeutics including pain medications (opioids and non-opioids), antidepressants, anxiolytics, antihypertensives, and oral hypoglycemics and evidence of laboratory abnormalities in multiple organ systems. Analysis of an array of pre-specified outcomes reveals a risk gradient that increased across severity of the acute COVID-19 infection (non-hospitalized, hospitalized, admitted to intensive care). The findings show that beyond the acute illness, substantial burden of health loss – spanning pulmonary and several extrapulmonary organ systems – is experienced by COVID-19 survivors. The results provide a roadmap to inform health system planning and development of multidisciplinary care strategies to reduce chronic health loss among COVID-19 survivors.

ARTICLE PREVIEW

Source: Al-Aly, Z. et al. High-dimensional characterization of post-acute sequalae of COVID-19. Nature https://doi.org/10.1038/s41586-021-03553-9 (2021).

Can We Learn From COVID-19?

Summary

- The U.S. is in the midst of a severe epidemic of opioid addiction and overdose deaths, which worsened during Covid.

- To bring the epidemic to an end:
  - We must prevent new cases of opioid addiction
  - We must improve access to treatment for people already addicted

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