



# Overdose Crisis in Transition: Changing Trends in a Widening Drug Death Epidemic

November 10, 2020 – 1:00 PM CDT

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Robert Wood Johnson Foundation

# Technical Items

**Participant audio has been automatically muted and video has been turned off**

**Submit questions using the Q&A feature at any time during the webinar**

## **Problems:**

- Ask for help using the chat feature
- Send a support request to Zoom at: <https://support.zoom.us/hc/en-us/requests/new>

**Download the slides at:** <https://www.shadac.org/news/shadac-webinar-november-10th-changing-trends-widening-drug-overdose-crisis>

**Webinar recording will be posted on SHADAC's website**

- E-mail notice will be sent to participants

# Presenters



**Robert Hest, MPP**  
SHADAC Research Fellow



**Colin Planalp, MPA**  
SHADAC Senior Research Fellow

# Changing Trends in a Widening Drug Death Epidemic

Colin Planalp, MPA  
SHADAC Senior Research Fellow

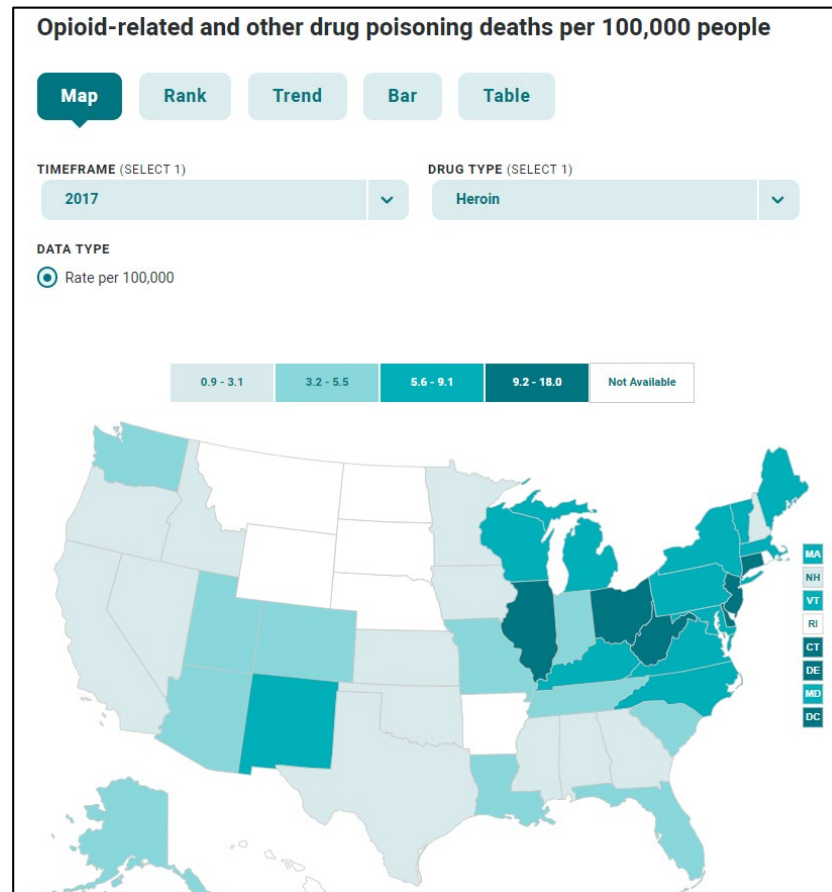
# State Health Compare:

## *Drug overdose death rates data*

### Source

U.S. Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System (via WONDER tool)

- States collect and report data to the CDC



# State Health Compare:

## *Drug overdose death rates data*

### **Aggregate categories of drug overdoses**

- Drug overdoses (total)
- Opioid overdoses (types listed below, plus opium, methadone, non-specified)

### **Categories of opioid overdoses**

- Natural and semi-synthetic opioids (i.e., prescription opioid painkillers, such as oxycodone and hydrocodone)
- Synthetic opioids (e.g., fentanyl)
- Heroin

### **Categories of non-opioid overdoses**

- Cocaine
- Psychostimulants (e.g., methamphetamine, Ritalin, Adderall)

# State Health Compare:

## *Drug overdose death rates data*

### **Limitations/considerations**

- Under-recording/-reporting of opioid deaths (e.g., Indiana)
- Suppression of small numbers (i.e., 20 or fewer deaths)

# Background

## What are opioids?

- A family of addictive drugs that act on the opioid receptors in pleasure centers of the brain

## What are their effects?

- Can relieve pain and cause euphoria

## Types of opioids:

- Natural opioids, derived from opium poppy (e.g., morphine)
- Semi-synthetic opioids, synthesized from natural opioids (e.g., oxycodone, heroin)
- Synthetic opioids, synthesized from non-opioid compounds to mimic opioid effects (e.g., fentanyl)





# The Opioid Epidemic as an Evolving Crisis

## Circa 2000

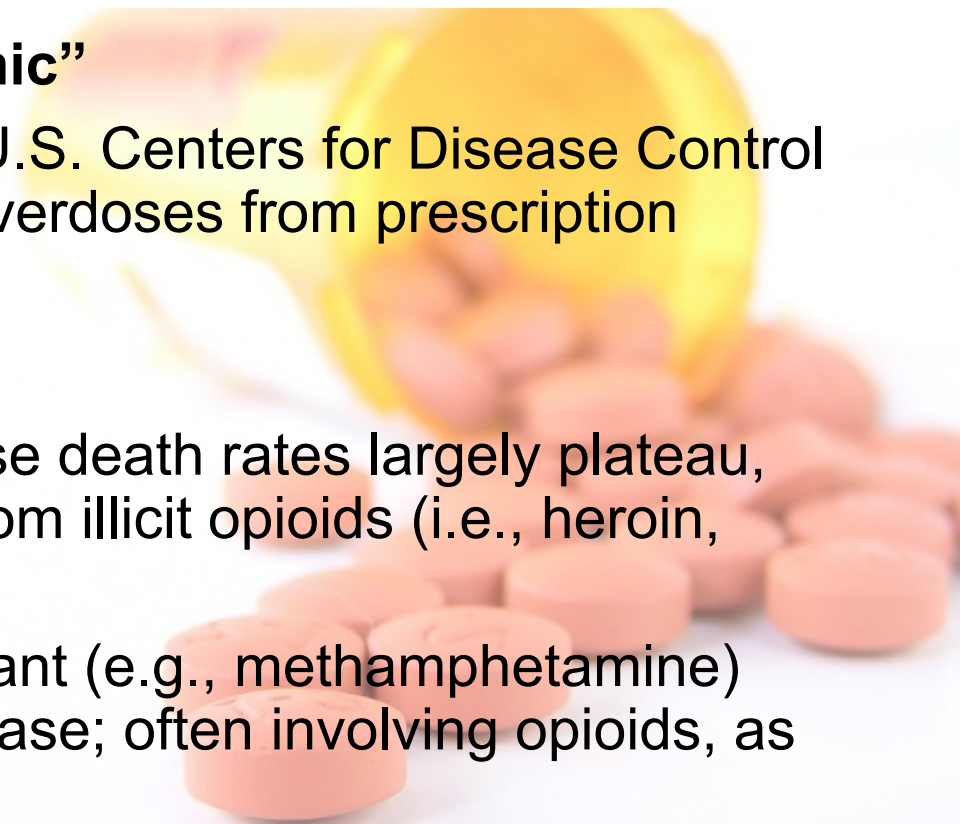
- Gradual increases in overdose deaths from prescription opioid painkillers

## 2011 declaration of “epidemic”

- Increased attention since U.S. Centers for Disease Control and Prevention declared overdoses from prescription painkillers an “epidemic”

## Since 2011

- Prescription opioid overdose death rates largely plateau, but death rates increase from illicit opioids (i.e., heroin, trafficked synthetics)
- Cocaine and psychostimulant (e.g., methamphetamine) overdose death rates increase; often involving opioids, as well

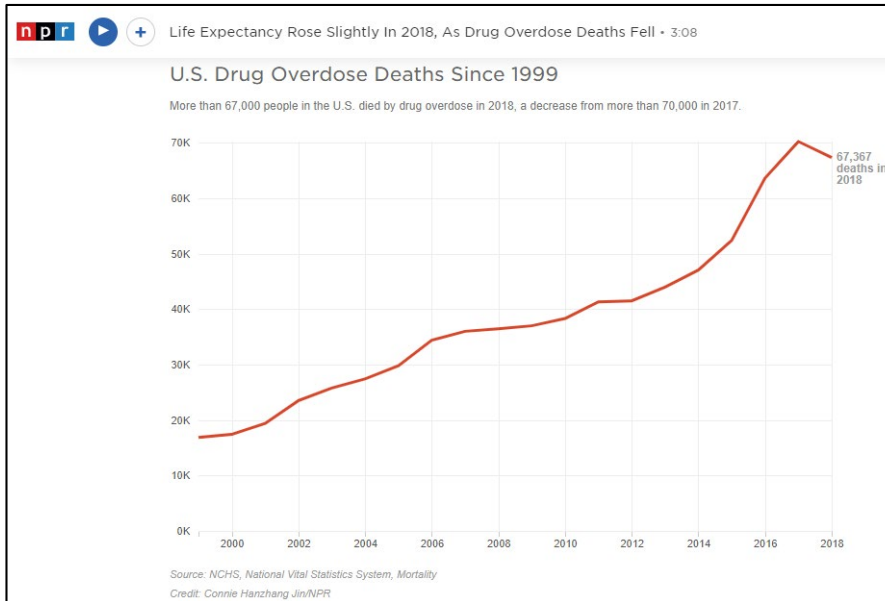


# 2018: An inflection point in the crisis

**The Washington Post**

*Democracy Dies in Darkness*

**U.S. life expectancy ticks up as drug fatalities and cancer deaths drop**



**The New York Times**

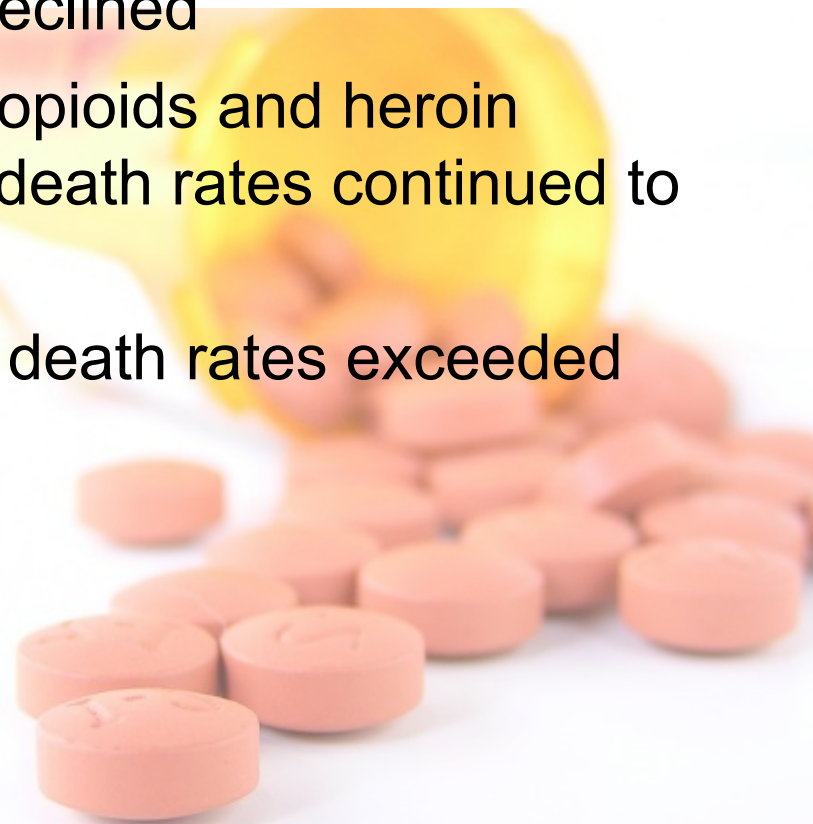
**TheUpshot**

**Drug Overdose Deaths Drop in U.S. for First Time Since 1990**

# 2018: An inflection point in the crisis

## Noteworthy developments in 2018

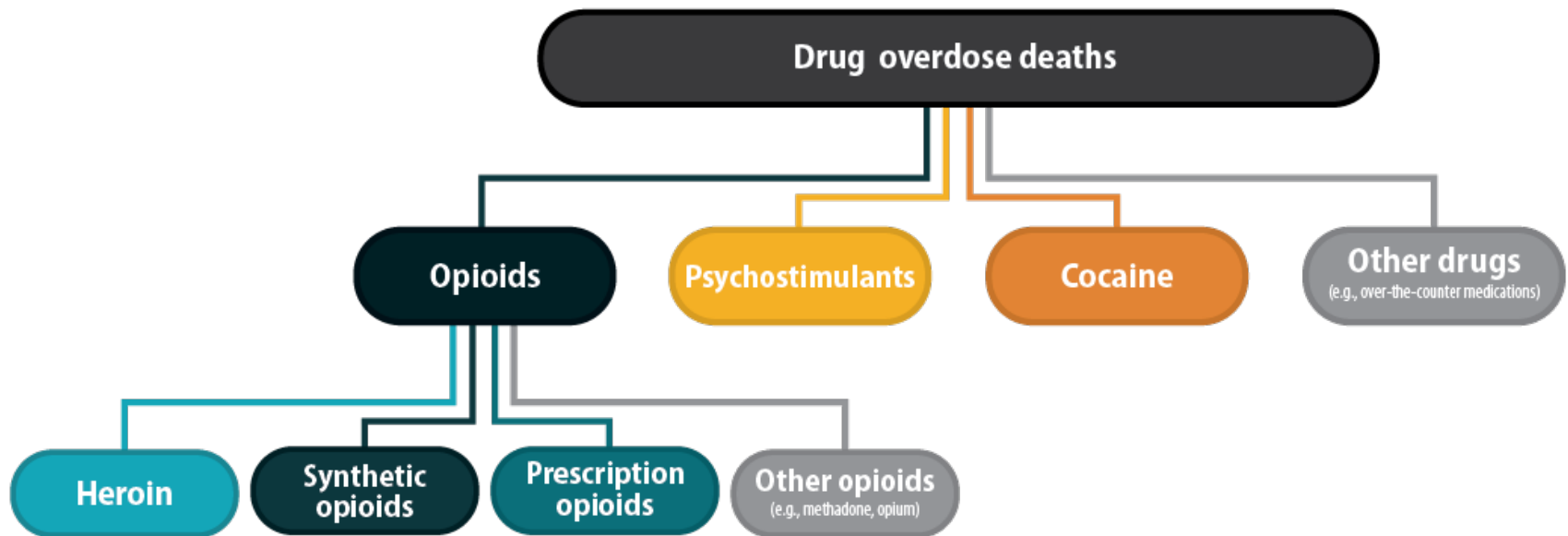
- CDC announced that aggregate drug overdose and opioid overdose death rates declined
- Death rates from prescription opioids and heroin declined, but synthetic opioid death rates continued to grow
- Cocaine and psychostimulant death rates exceeded prescription opioid deaths



# U.S. Trends

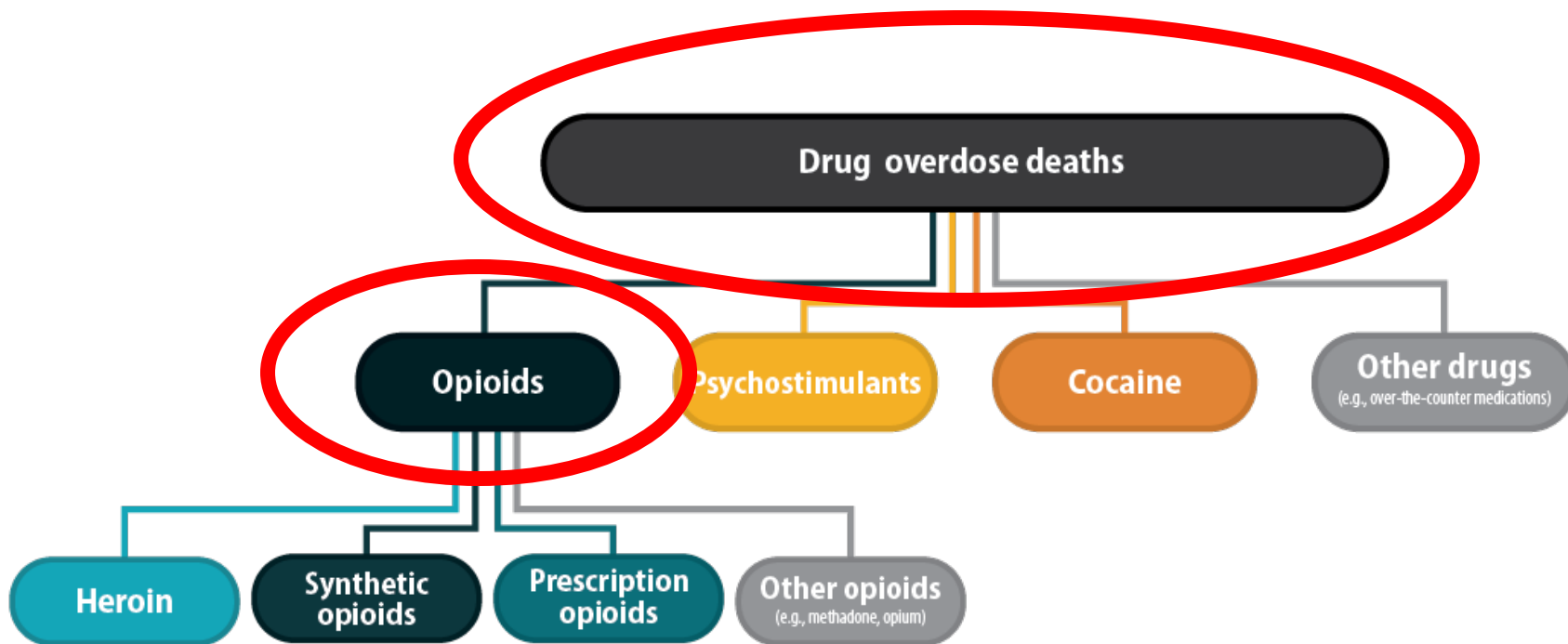
# State Health Compare:

## *Opioid overdose death rates data*

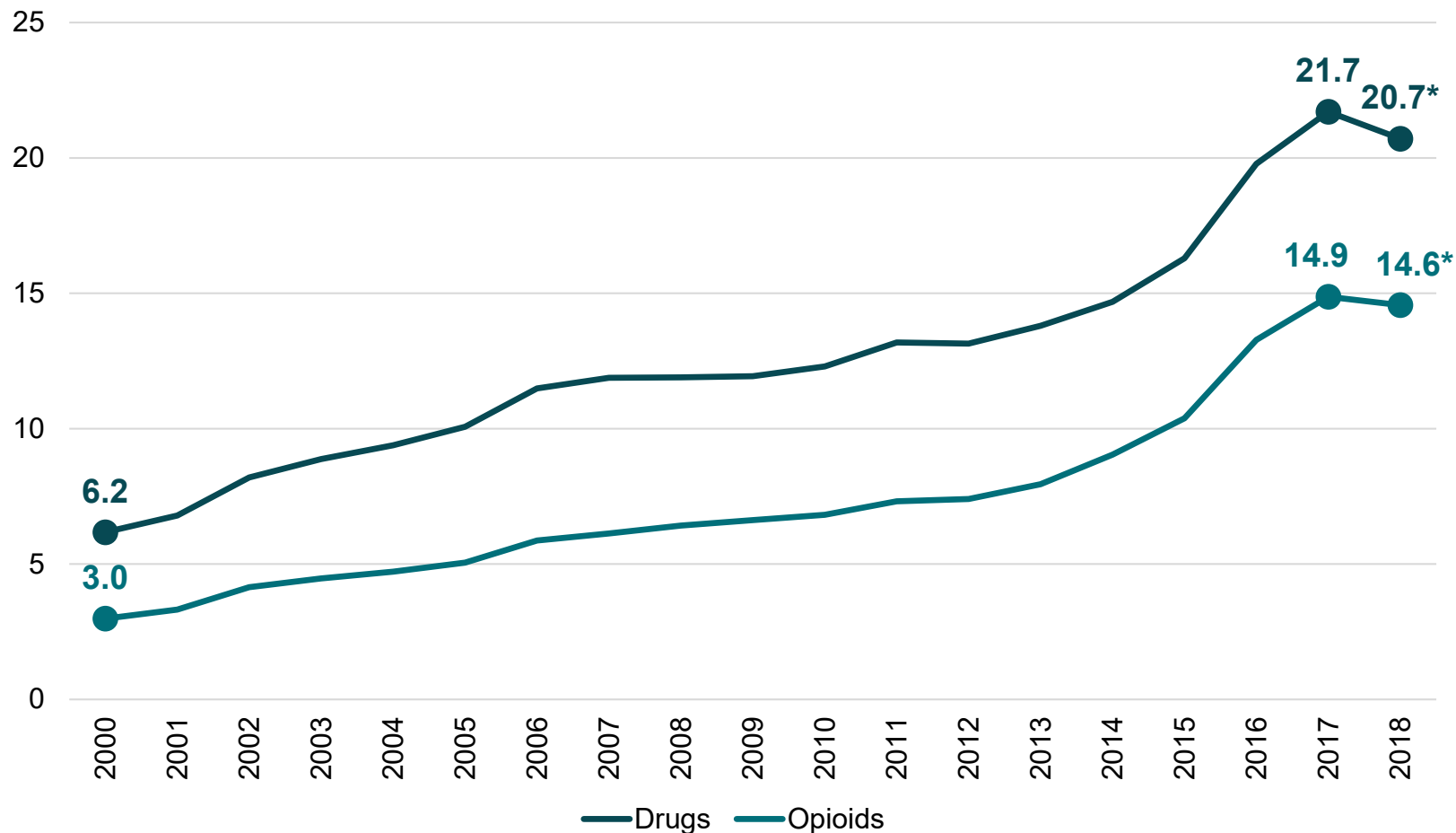


# State Health Compare:

## *Opioid overdose death rates data*



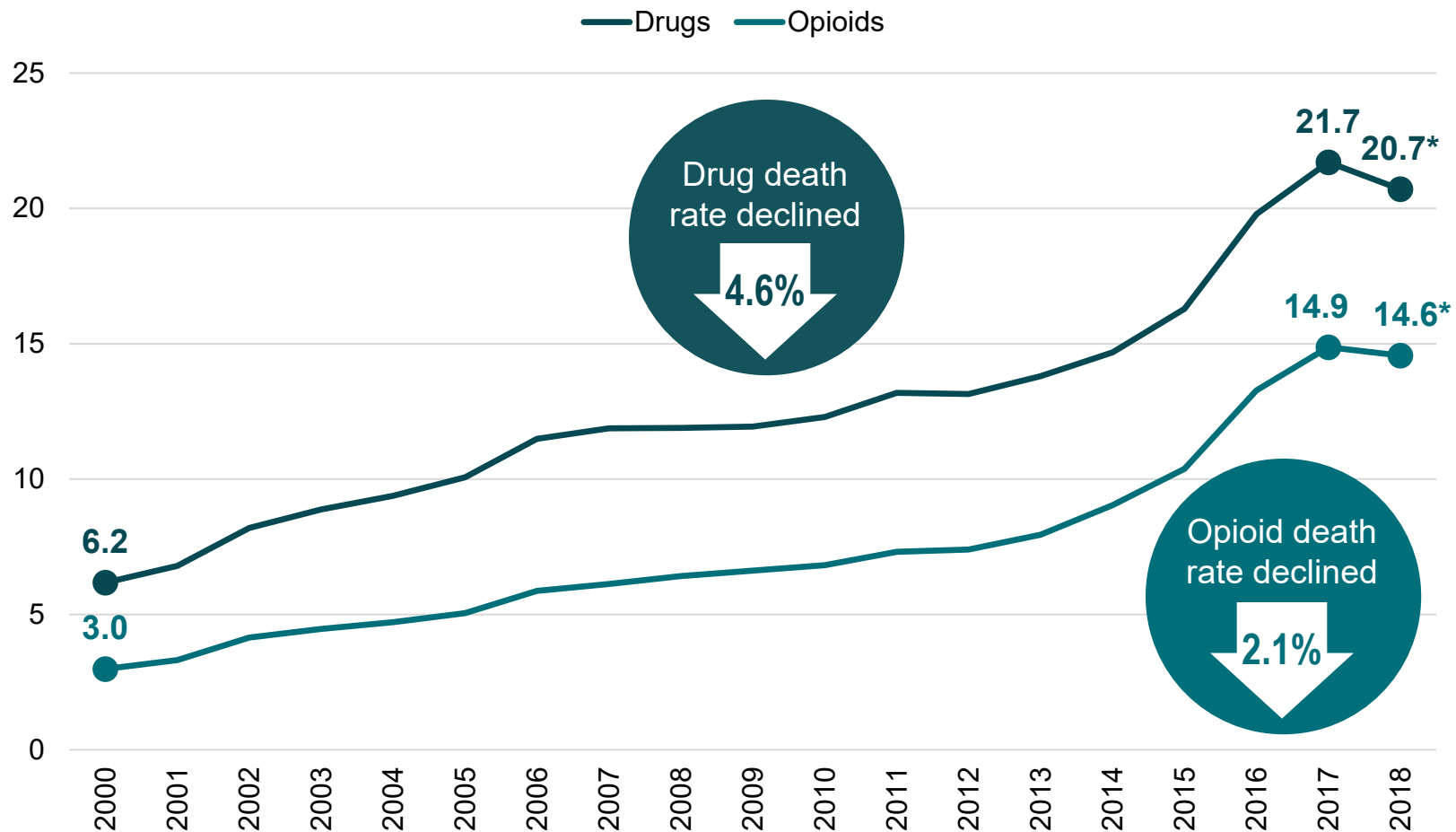
# U.S. Drug and Opioid Overdose Deaths per 100,000 People, 2000-2018



\* Statistically significant decline since 2017 at the 95% level.

Source: SHADAC analysis of age-adjusted rates of drug poisoning deaths, National Center for Health Statistics

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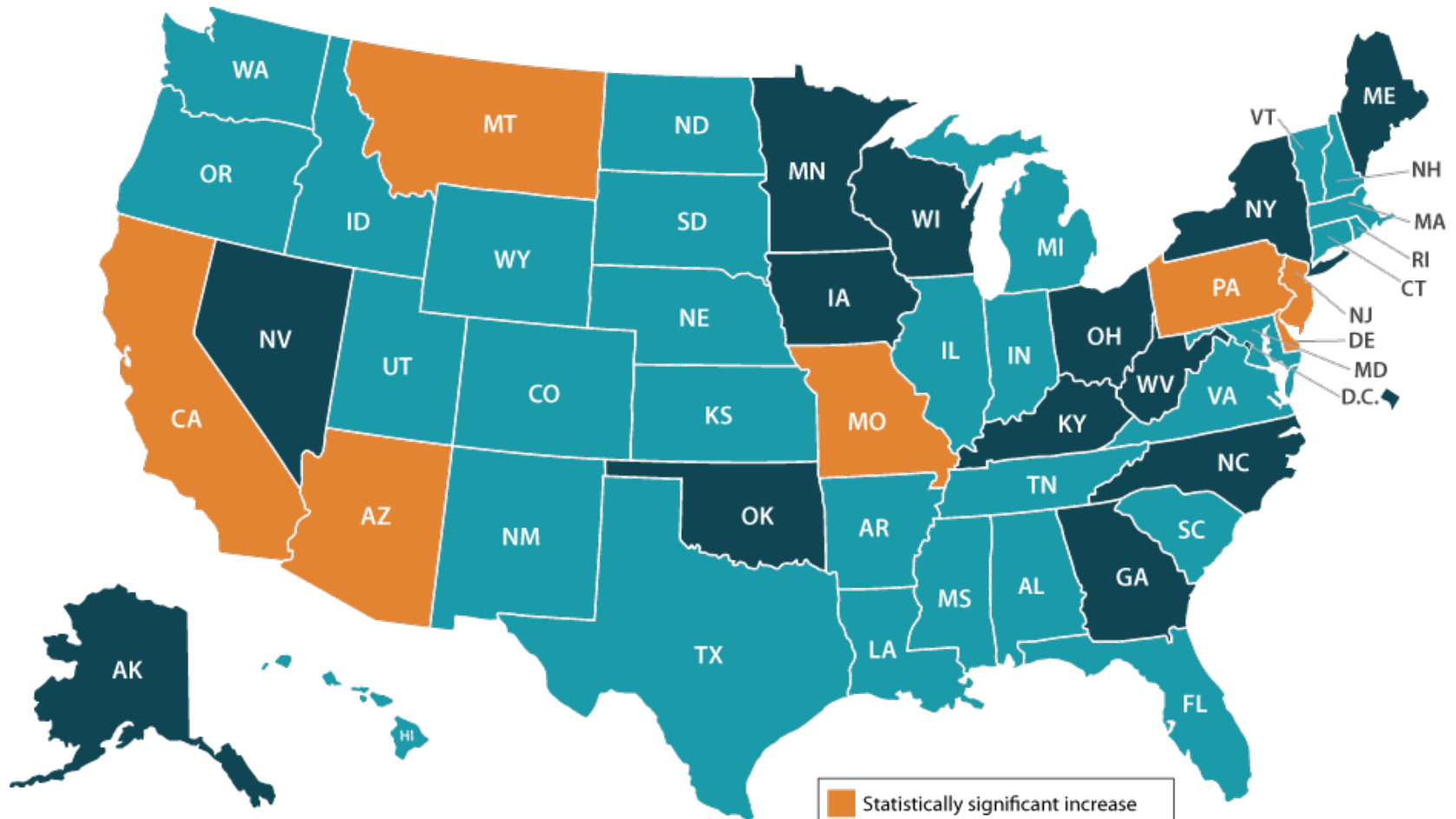
Map of the United States showing the percentage of people who have been vaccinated against COVID-19 by state, as of March 2021. The map uses a color scale from dark blue (low vaccination) to light blue (high vaccination). States with a statistically significant increase in vaccination are highlighted in orange.

Legend: Statistically significant increase

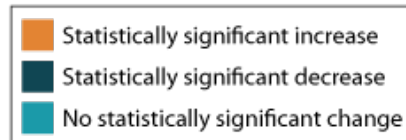
States with a statistically significant increase (orange): CA, MO, SC.

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# Changes in Opioid Overdose Death Rates, 2017-2018

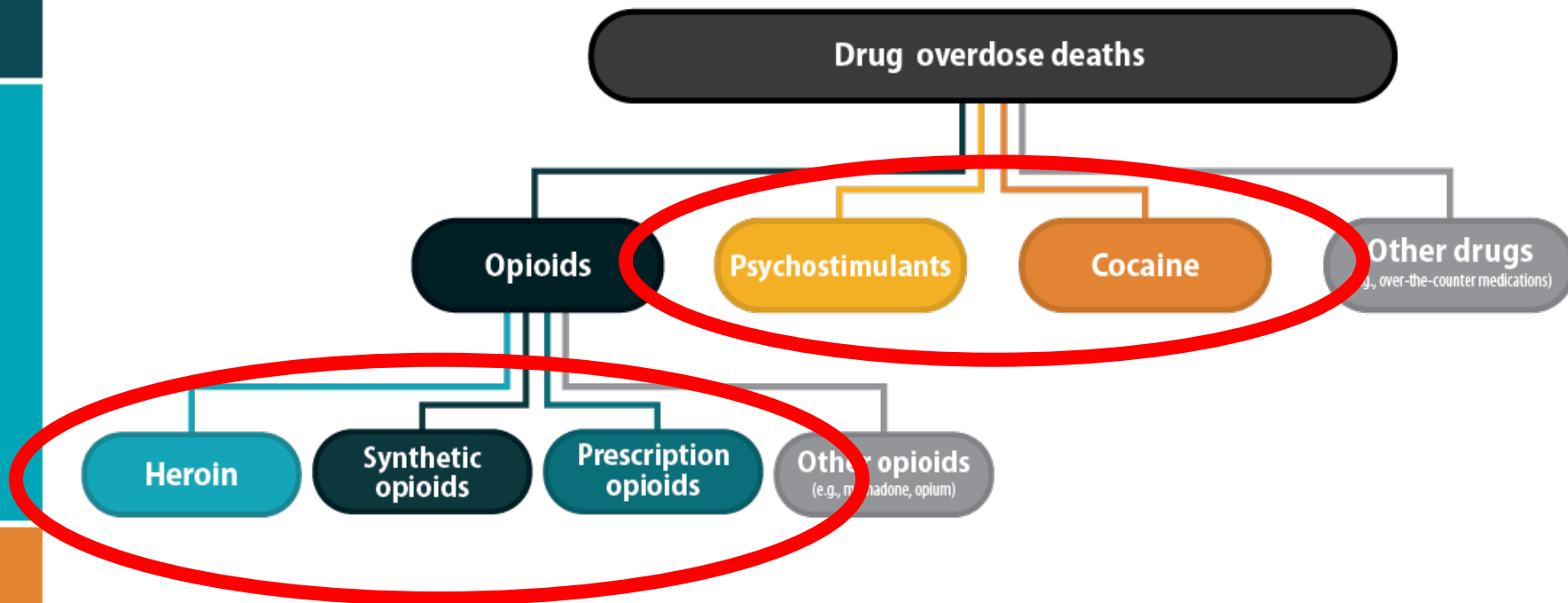


Note: Statistically significant changes since 2017 at the 95% confidence level.  
Source: SHADAC analysis of vital statistics data from the CDC WONDER system.

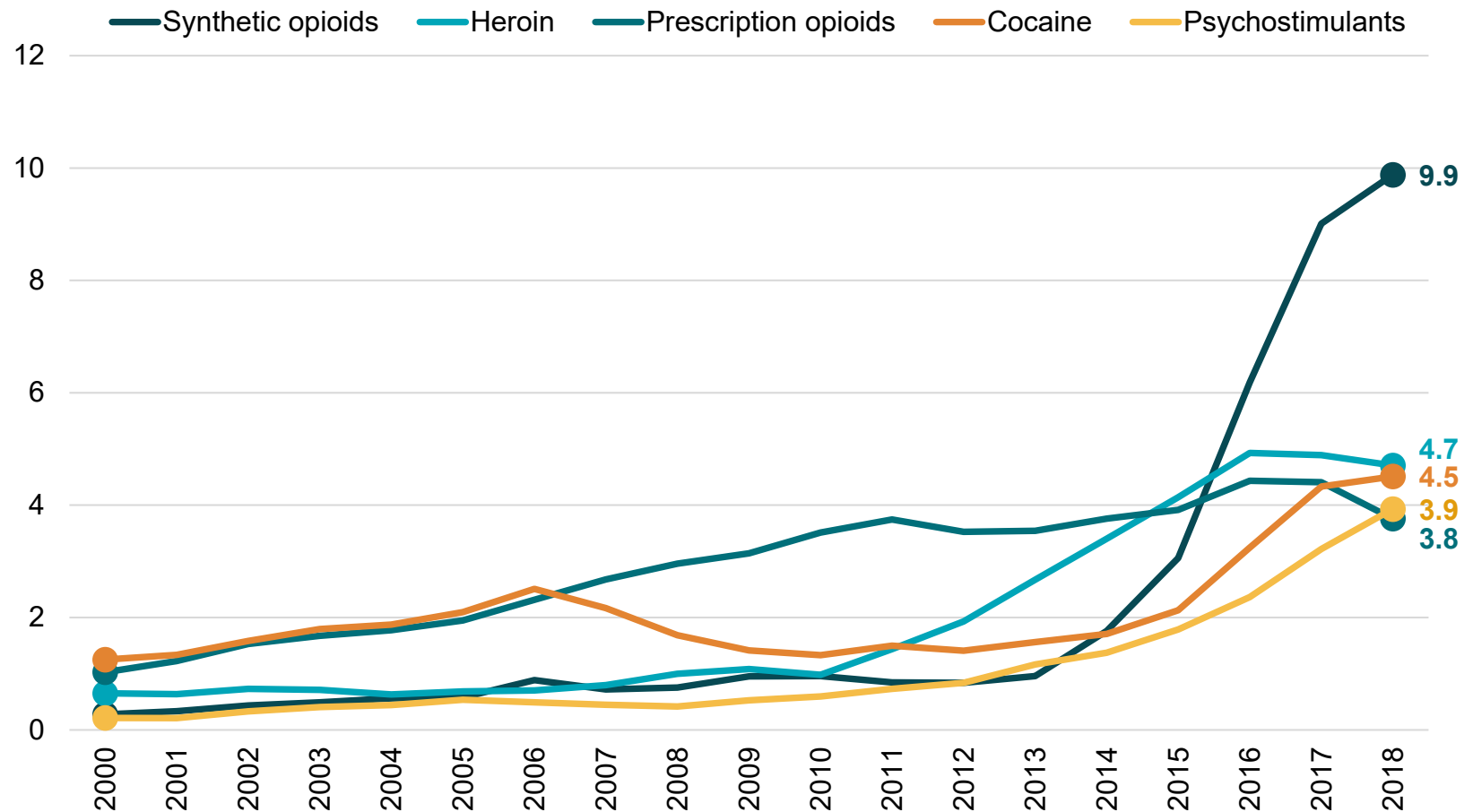


# State Health Compare:

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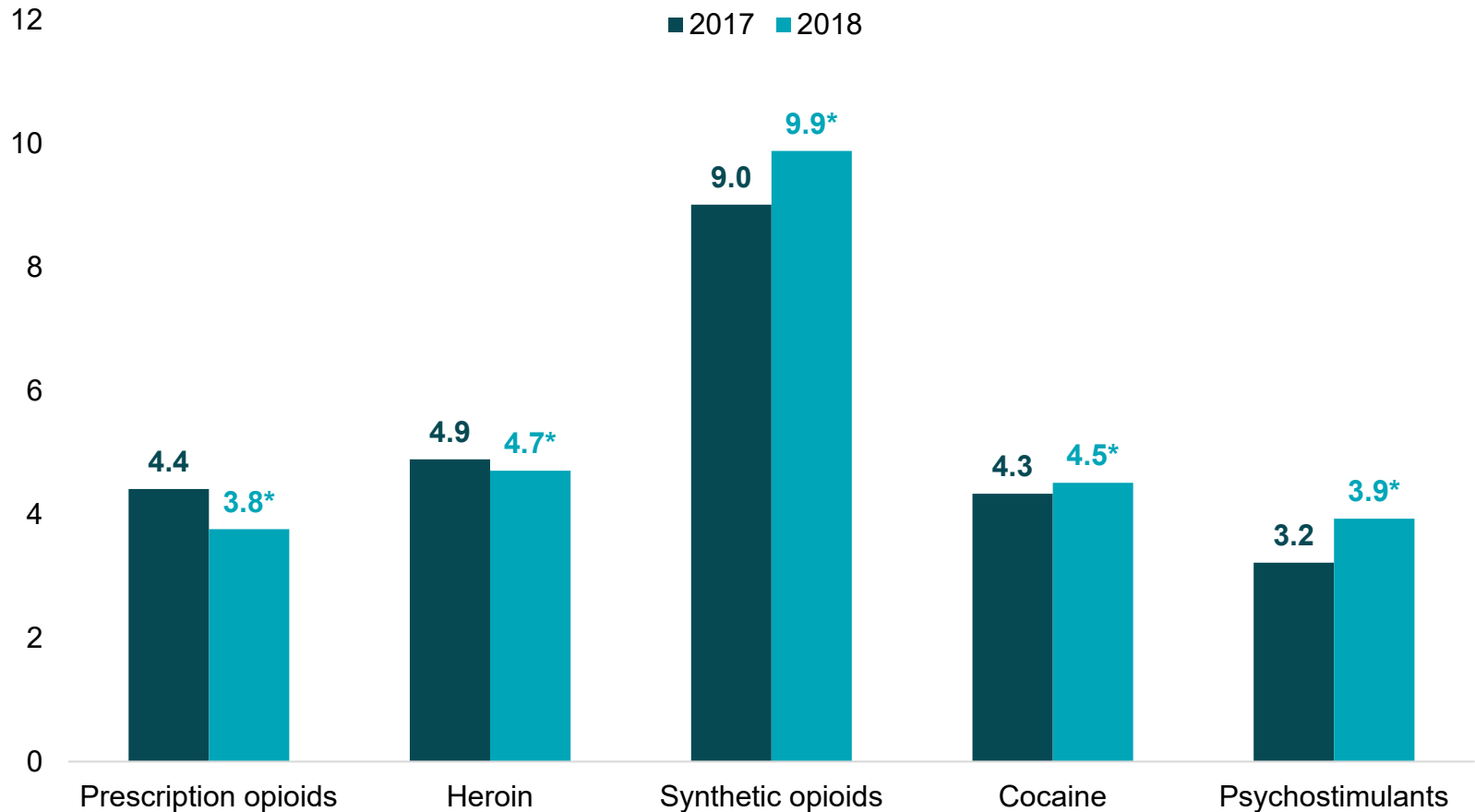
# U.S. Drug Overdose Deaths by Type per 100,000 People, 2000-2018



\* Statistically significant decline since 2017 at the 95% level.

Source: SHADAC analysis of age-adjusted rates of drug poisoning deaths, National Center for Health Statistics

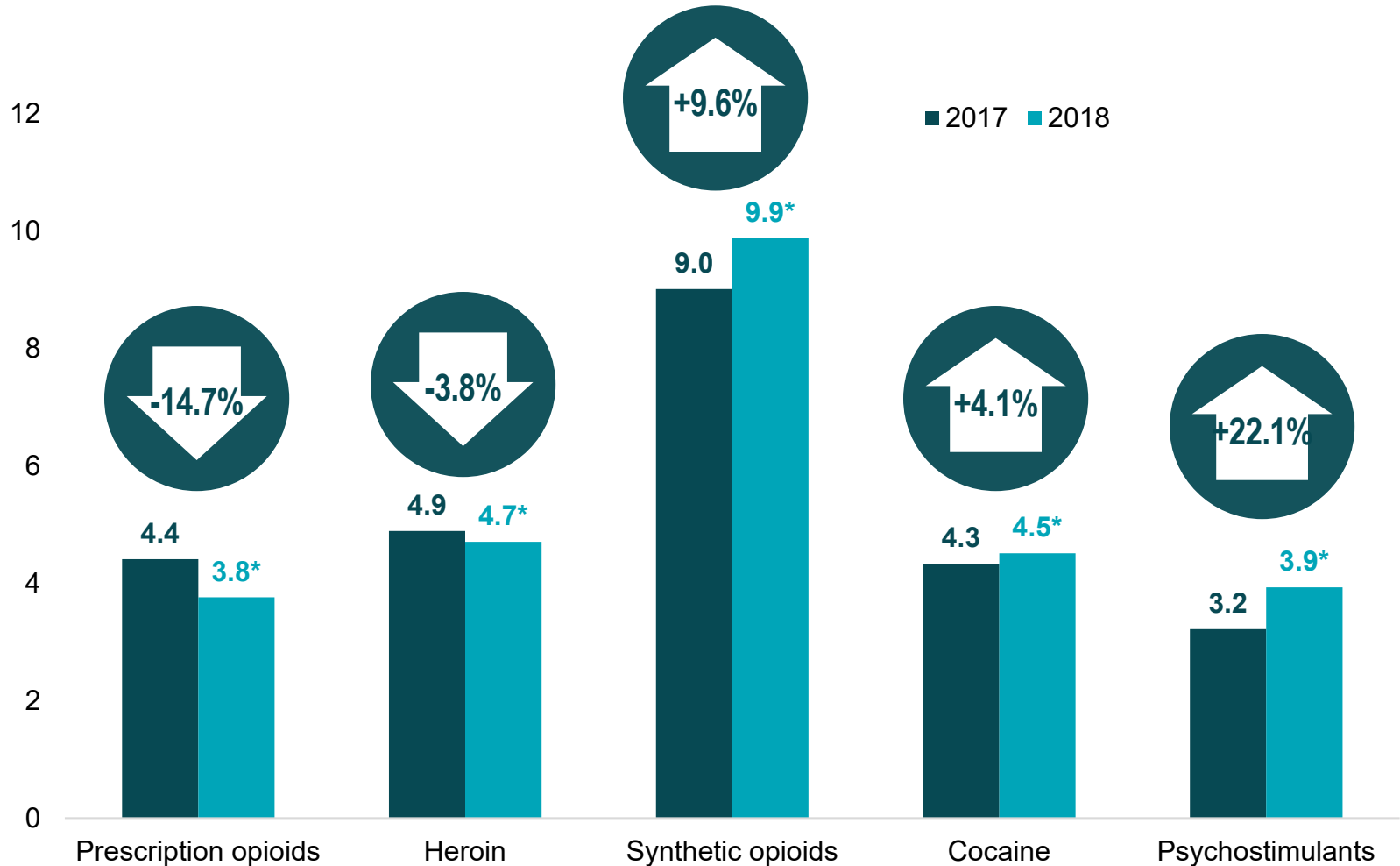
# U.S. Drug Overdose Deaths by Type per 100,000 People, 2017-2018



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Source: SHADAC analysis of age-adjusted rates of drug poisoning deaths, National Center for Health Statistics

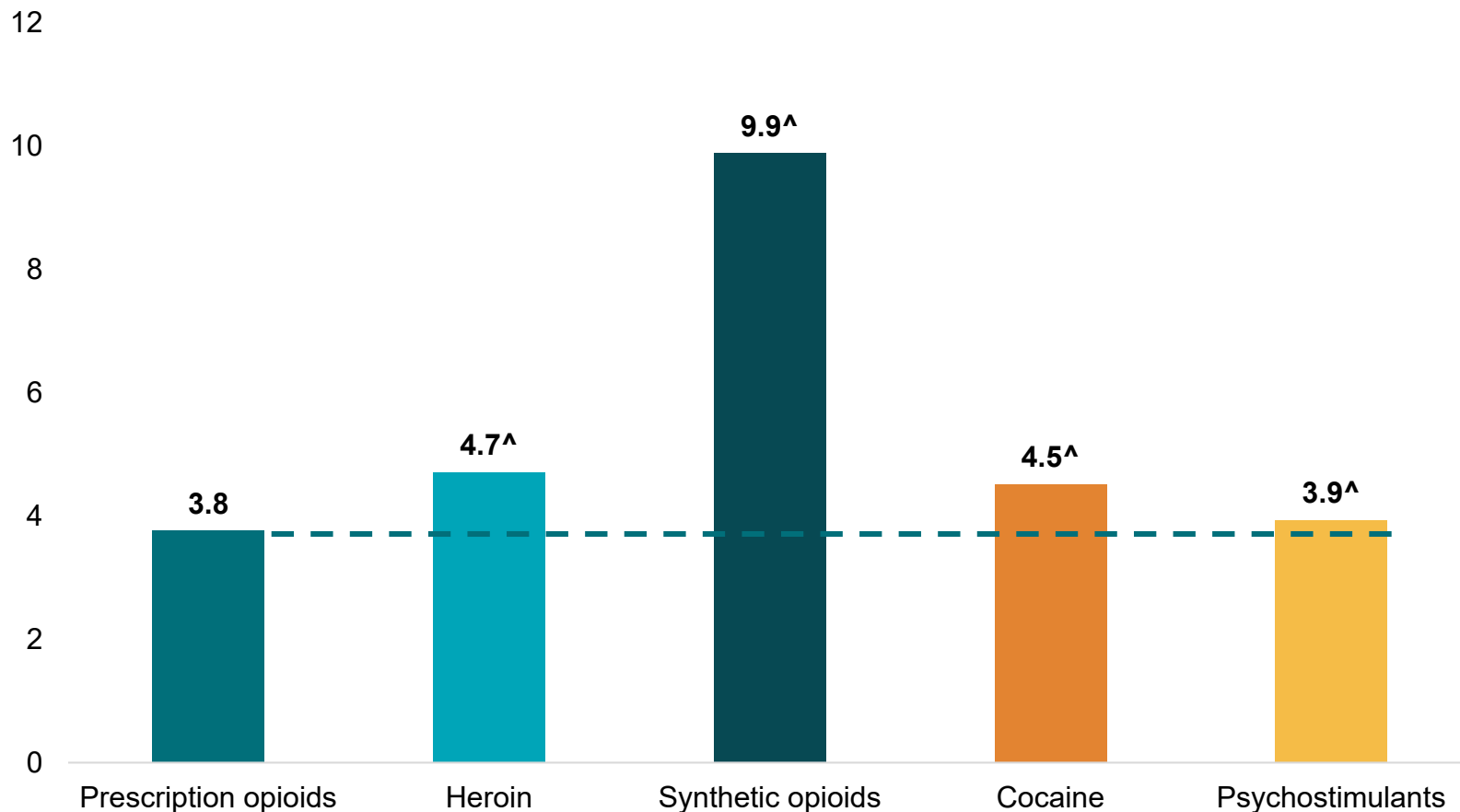
# U.S. Drug Overdose Deaths by Type per 100,000 People, 2017-2018



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Source: SHADAC analysis of age-adjusted rates of drug poisoning deaths, National Center for Health Statistics

# U.S. Drug Overdose Deaths by Type per 100,000 People, 2018



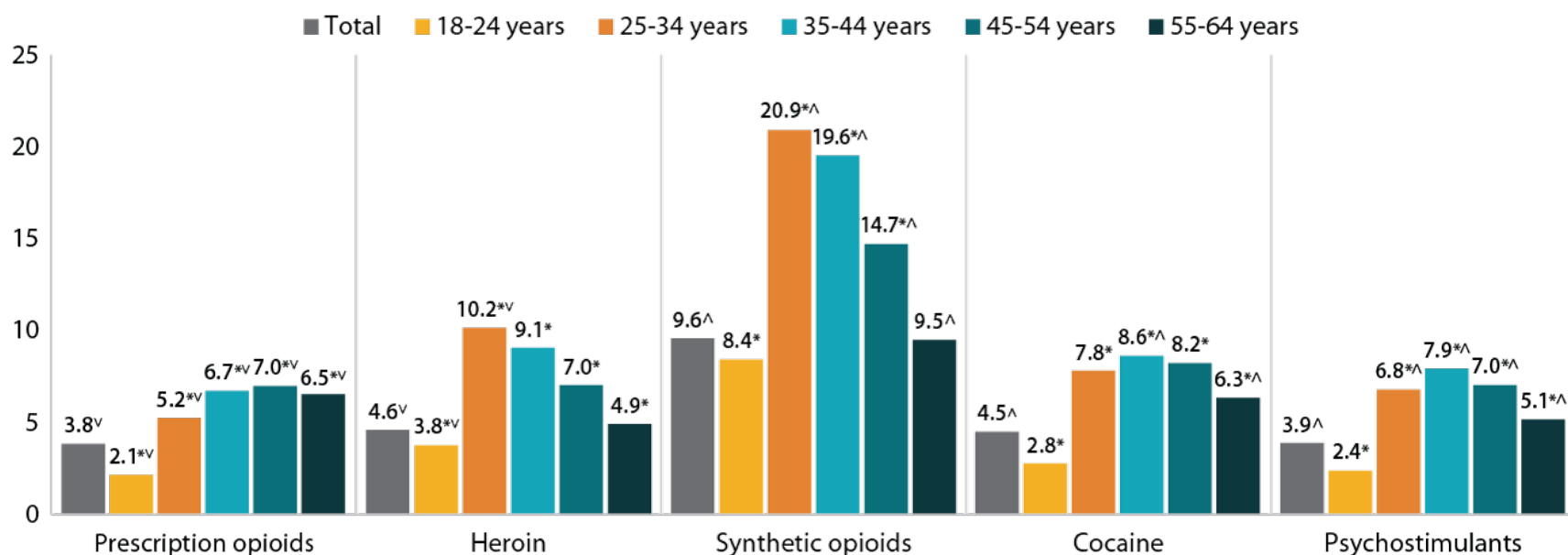
<sup>^</sup> Significantly higher than the prescription opioid rate at the 95% level.

Source: SHADAC analysis of age-adjusted rates of drug poisoning deaths, National Center for Health Statistics

# U.S. Sub-population Patterns



# U.S. Overdose Deaths by Age per 100,000 People, 2018



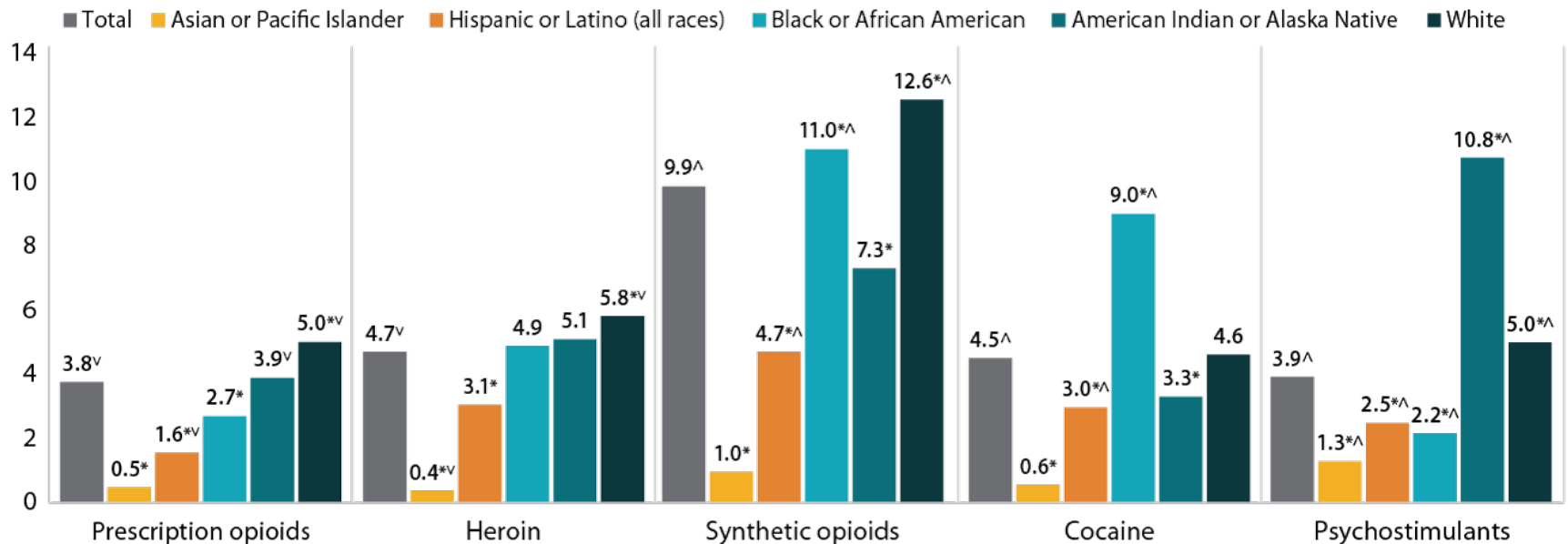
<sup>^</sup> Significantly significant increase from 2017 rate at 95% level.

<sup>v</sup> Significantly significant decrease from 2017 rate at 95% level.

<sup>\*</sup> Statistically significant difference from total rate at 95% level.

Source: SHADAC analysis of vital statistics data from the CDC WONDER system.

# U.S. Overdose Deaths by Race/ethnicity per 100,000 People, 2018



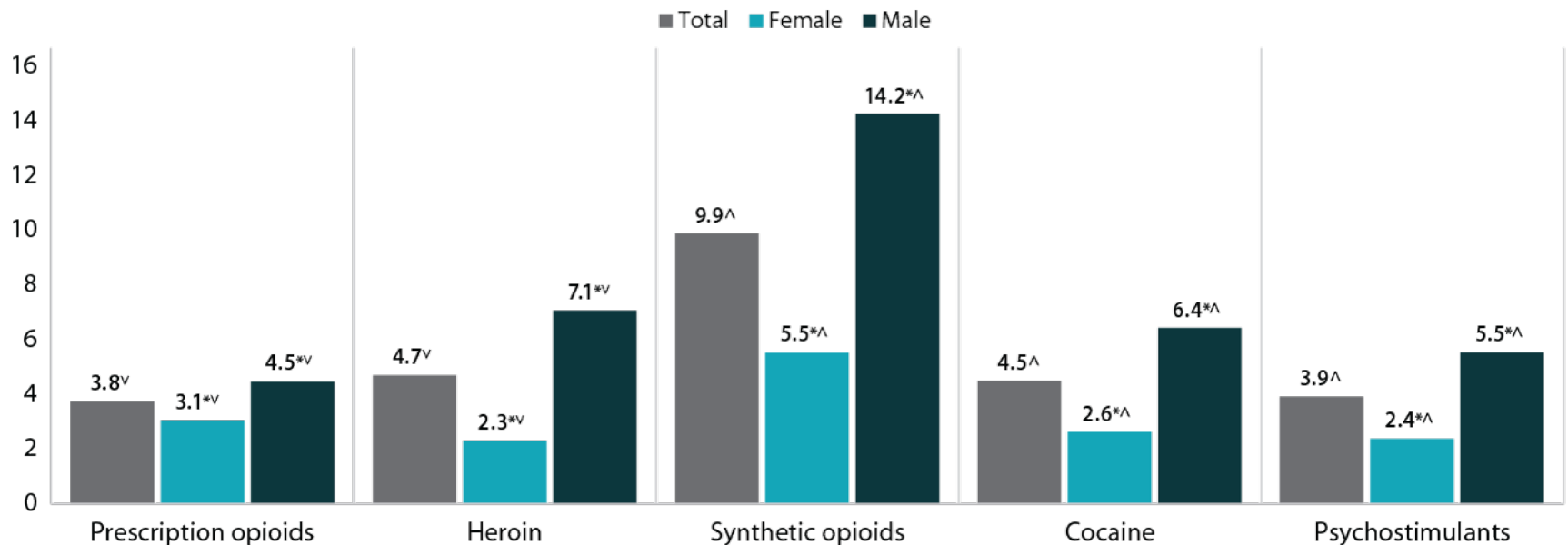
<sup>^</sup> Significantly significant increase from 2017 rate at 95% level.

<sup>v</sup> Significantly significant decrease from 2017 rate at 95% level.

\* Statistically significant difference from total rate at 95% level.

Source: SHADAC analysis of vital statistics data from the CDC WONDER system.

# U.S. Overdose Deaths by Sex per 100,000 People, 2018



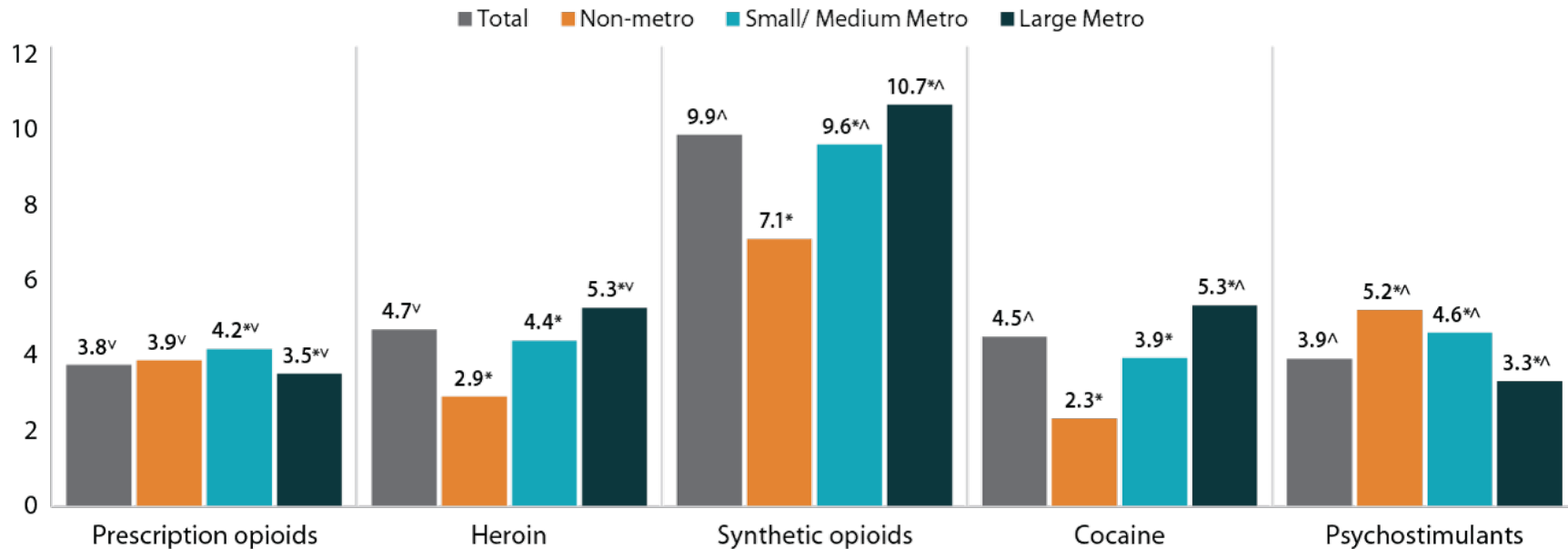
<sup>^</sup> Significantly significant increase from 2017 rate at 95% level.

<sup>v</sup> Significantly significant decrease from 2017 rate at 95% level.

<sup>\*</sup> Statistically significant difference from total rate at 95% level.

Source: SHADAC analysis of vital statistics data from the CDC WONDER system.

# U.S. Overdose Deaths by Urbanization per 100,000 People, 2018



<sup>^</sup> Significantly significant increase from 2017 rate at 95% level.

<sup>v</sup> Significantly significant decrease from 2017 rate at 95% level.

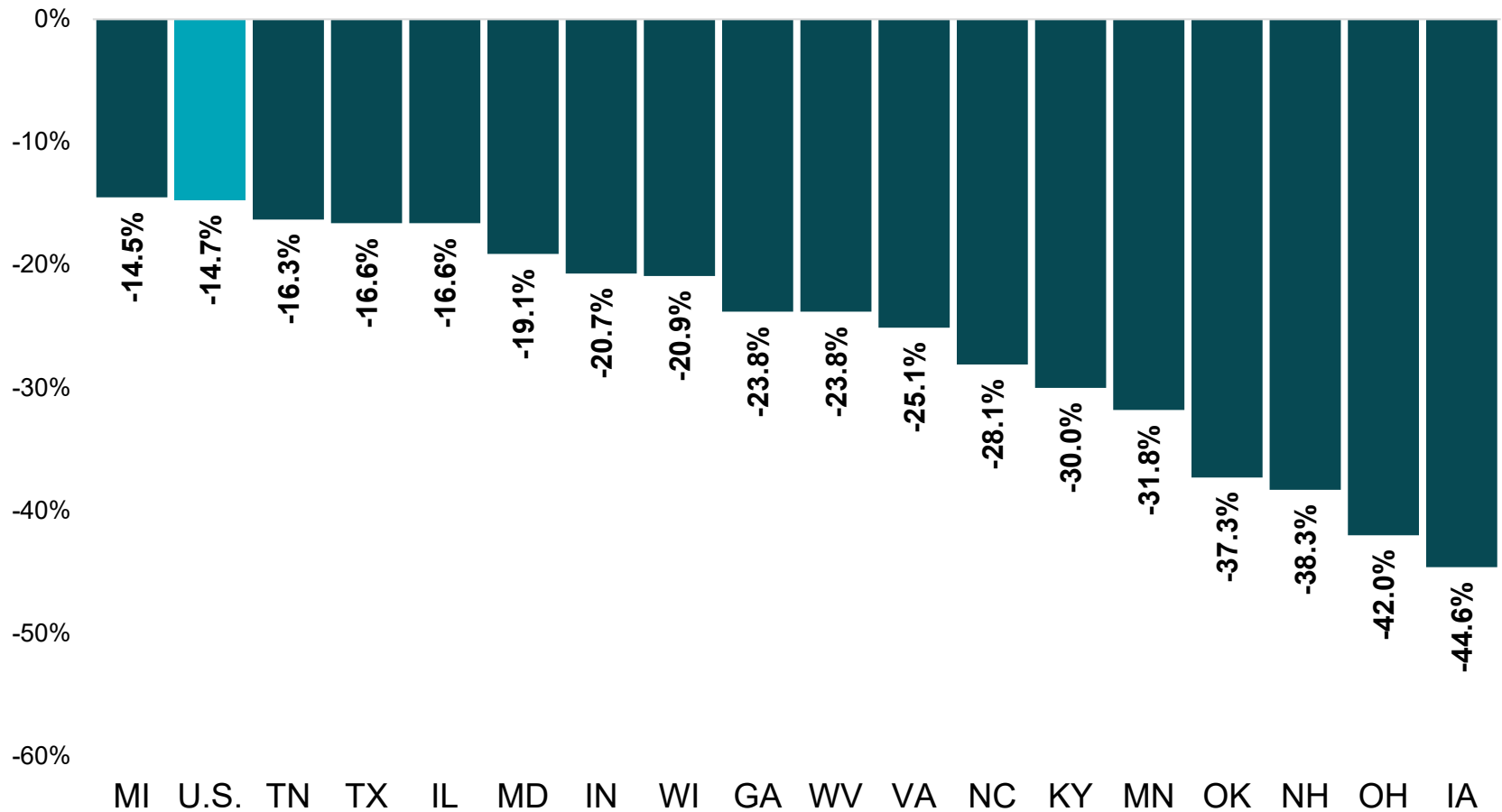
<sup>\*</sup> Statistically significant difference from total rate at 95% level.

Source: SHADAC analysis of vital statistics data from the CDC WONDER system.

# State-level Patterns

## *Prescription Opioids*

# Significant Changes in Prescription Opioid Overdose Death Rates, 2017-2018

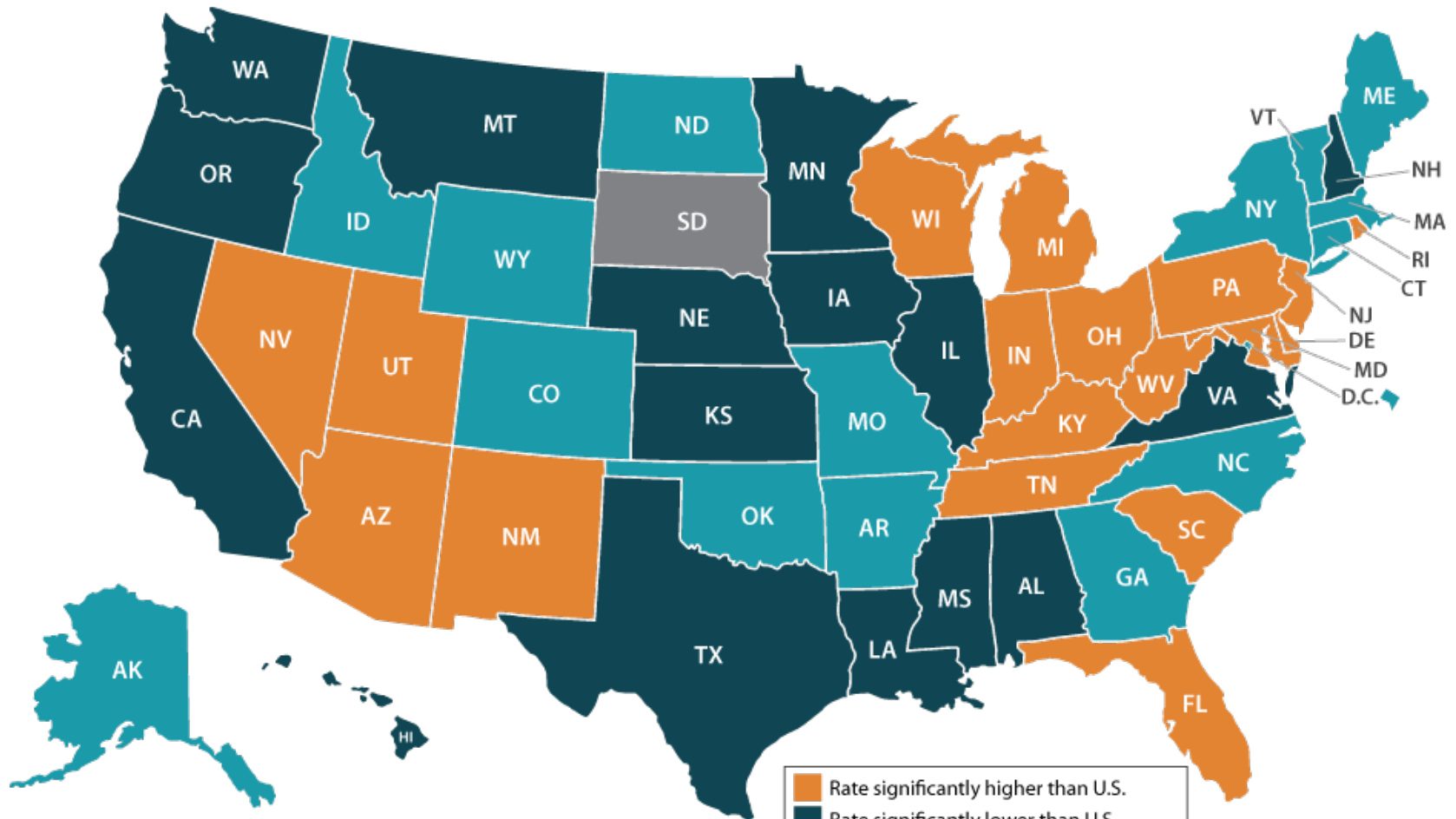


Note: Only states that saw statistically significant changes in their overdose death rates from 2017 to 2018 are shown.  
Source: SHADAC analysis of vital statistics data from the CDC WONDER system.

# Highest and Lowest Rates of Prescription Opioid Deaths per 100,000 People, 2018

Five Highest Rates		Five Lowest Rates	
West Virginia	12.0	Texas	1.6
Utah	9.6	Iowa	1.7
Tennessee	7.4	Hawaii	1.8
Maryland	6.8	Minnesota & Nebraska	1.9
Delaware	6.7	Montana	2.0

# State Prescription Opioid Death Rates vs. U.S., 2018



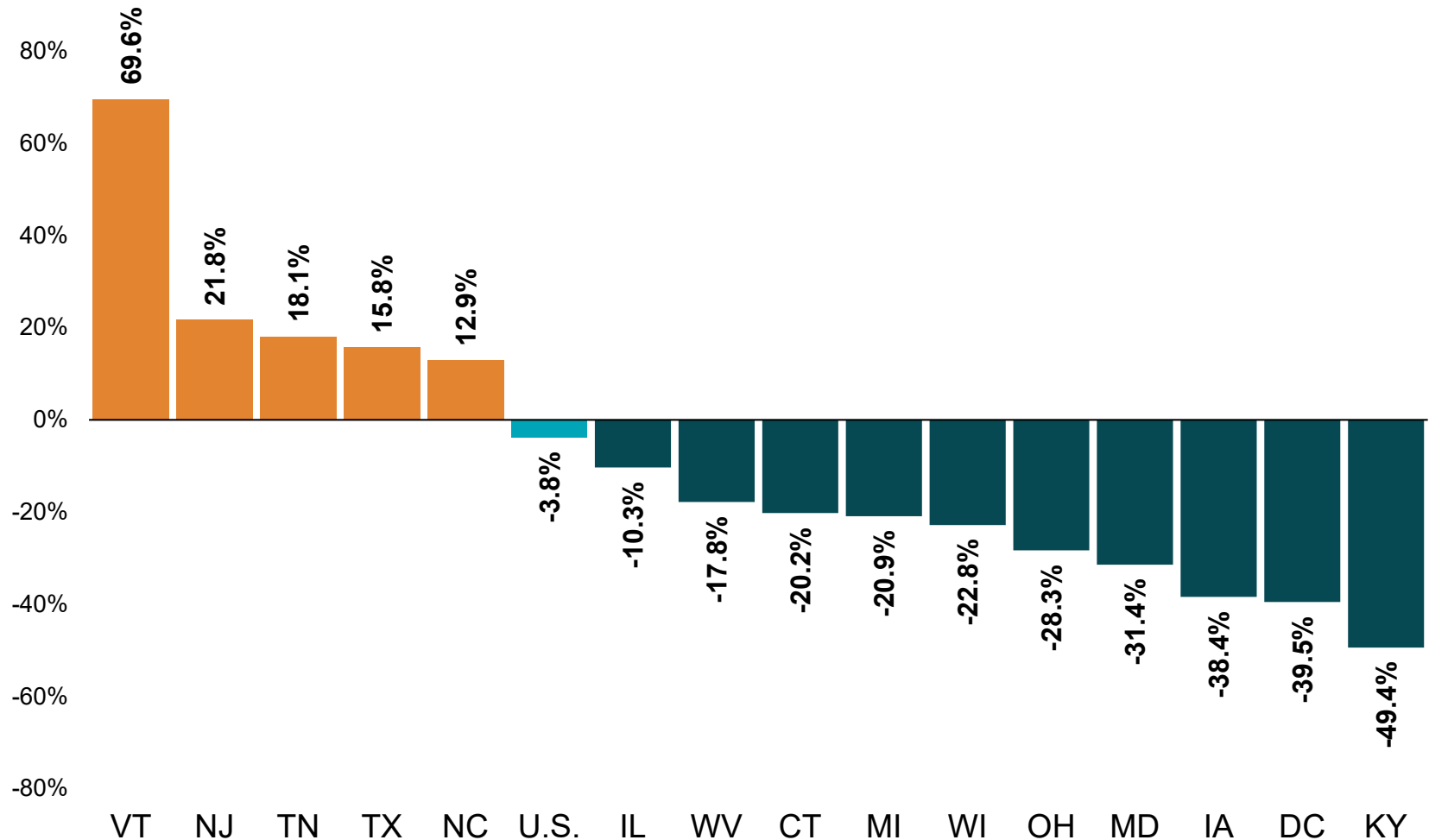
Note: Statistically significant difference from U.S. at the 95% confidence level.  
Source: SHADAC analysis of vital statistics data from the CDC WONDER system.



# State-level Patterns

## *Heroin*

# Significant Changes in Heroin Overdose Death Rates, 2017-2018

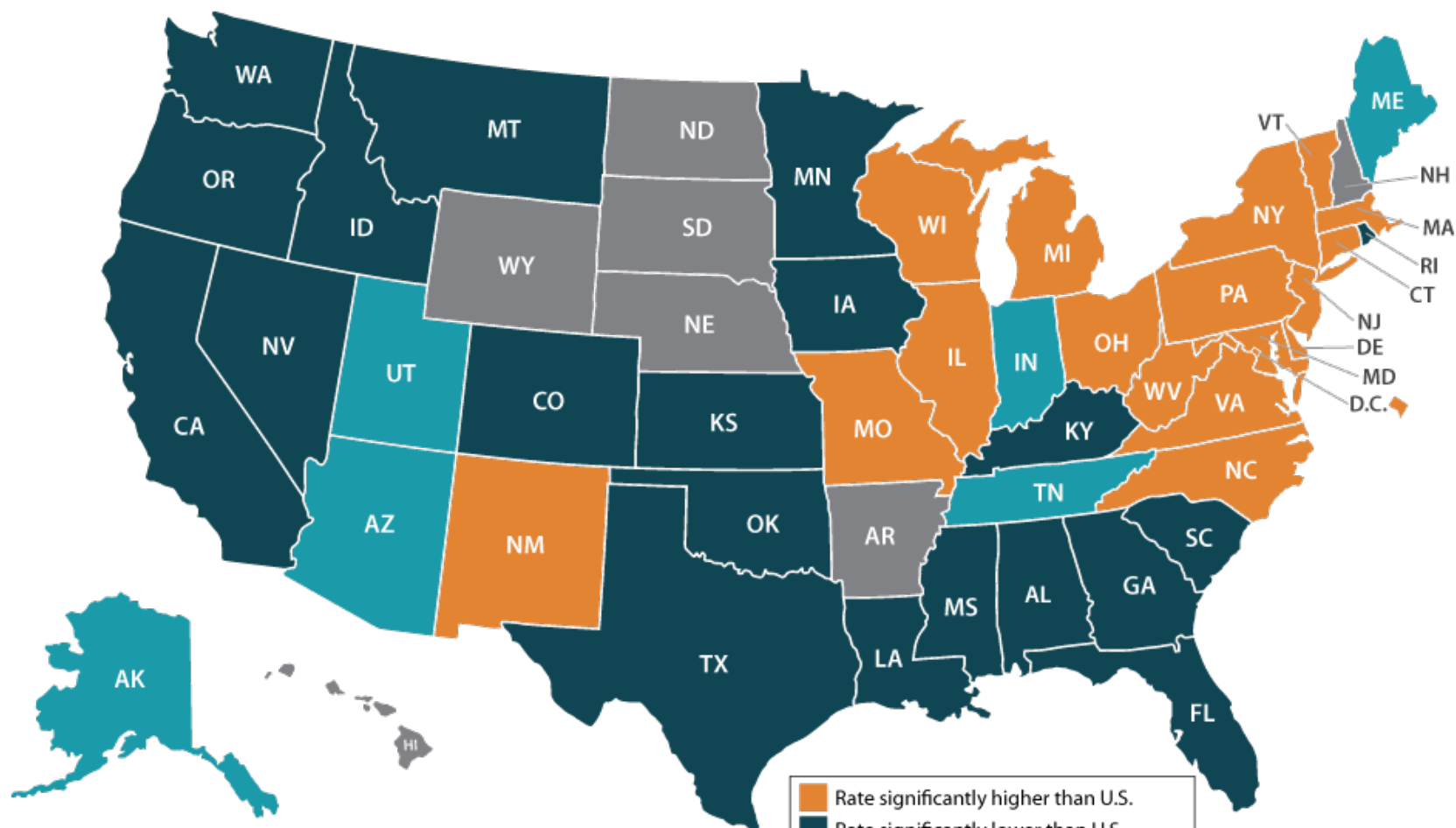


Note: Only states that saw statistically significant changes in their overdose death rates from 2017 to 2018 are shown.  
Source: SHADAC analysis of vital statistics data from the CDC WONDER system.

# Highest and Lowest Rates of Heroin Deaths per 100,000 People, 2018

Five Highest Rates		Five Lowest Rates	
Delaware	15.9	Iowa & Kansas	1.3
New Jersey	14.8	Mississippi	1.4
Vermont	12.5	Minnesota	1.7
West Virginia	12.3	Idaho	1.8
District of Columbia	10.9	California	1.9

# State Heroin Death Rates vs. U.S., 2018

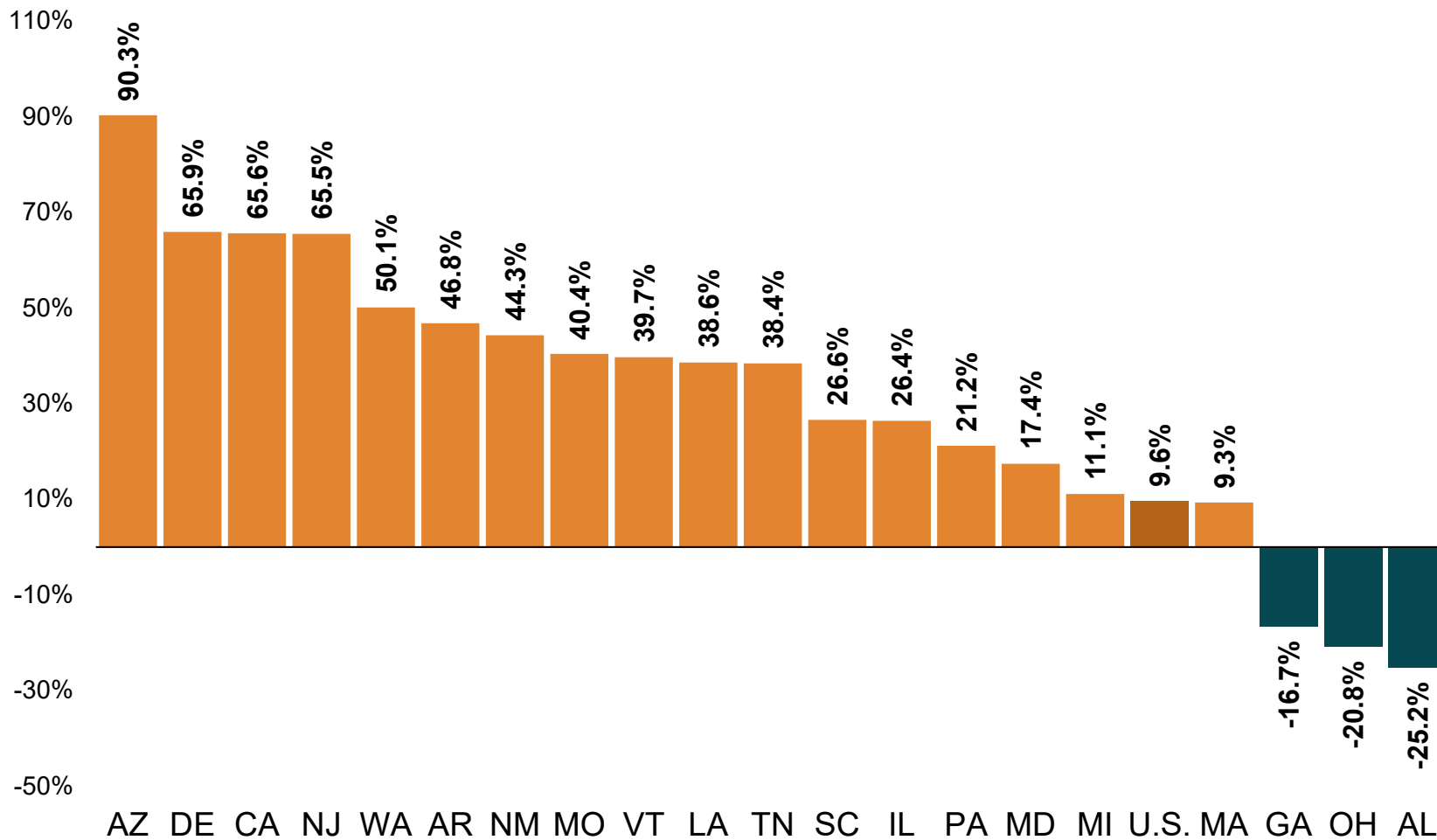


Note: Statistically significant difference from U.S. at the 95% confidence level.  
Source: SHADAC analysis of vital statistics data from the CDC WONDER system.

# State-level Patterns

*Synthetic opioids*

# Significant Changes in Synthetic Opioid Overdose Death Rates, 2017-2018

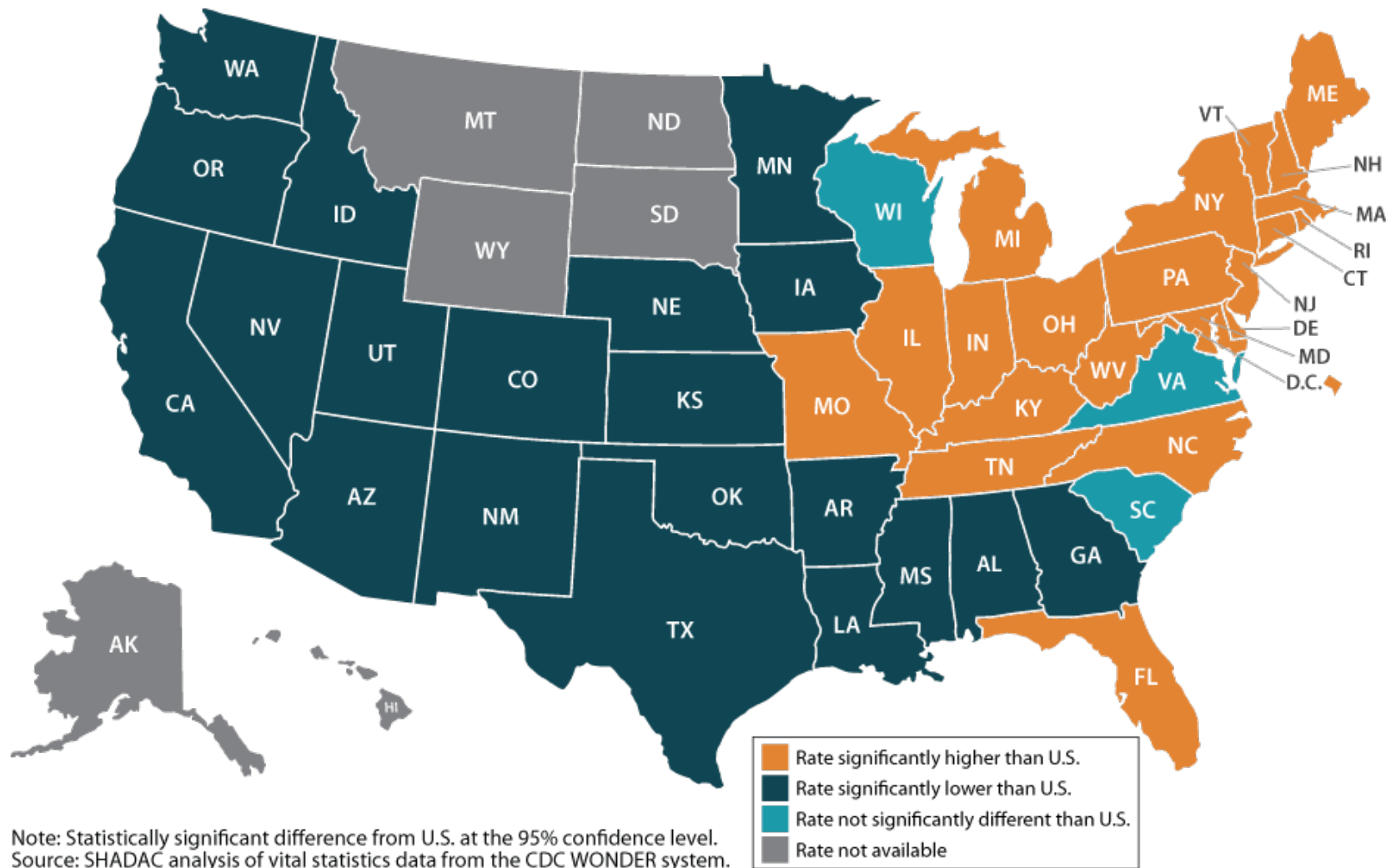


Note: Only states that saw statistically significant changes in their overdose death rates from 2017 to 2018 are shown.  
 Source: SHADAC analysis of vital statistics data from the CDC WONDER system.

# Highest and Lowest Rates of Synthetic Opioid Deaths per 100,000 People, 2018

Five Highest Rates		Five Lowest Rates	
West Virginia	34.0	Texas	1.2
Delaware	33.1	Nebraska	1.4
New Hampshire	31.3	Idaho & Kansas	1.7
Maryland	29.6	Oklahoma	2.0
Massachusetts	26.8	California & Colorado	2.2

# State Synthetic Opioid Death Rates vs. U.S., 2018

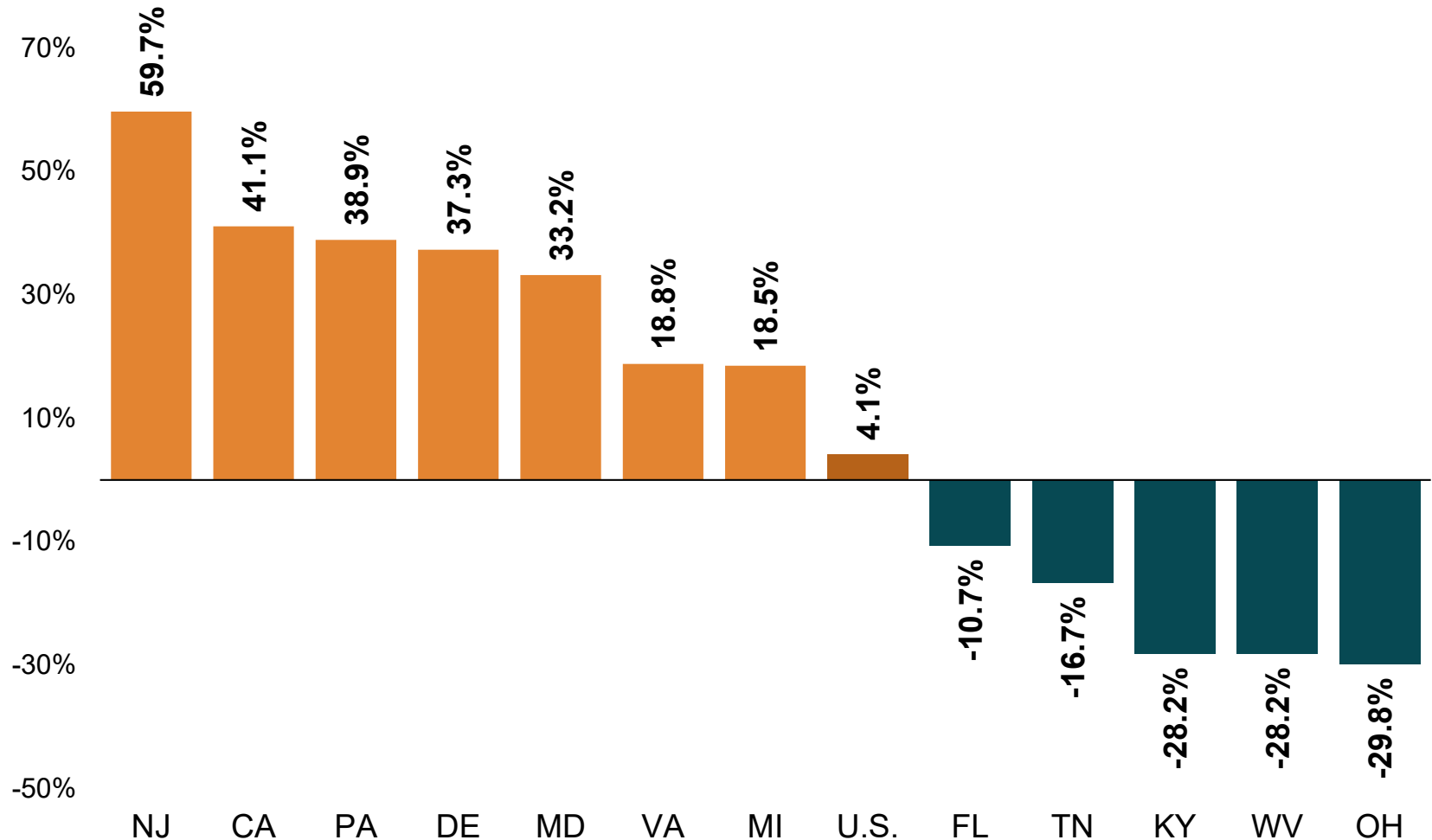




# State-level Patterns

## *Cocaine*

# Significant Changes in Cocaine Overdose Death Rates, 2017-2018

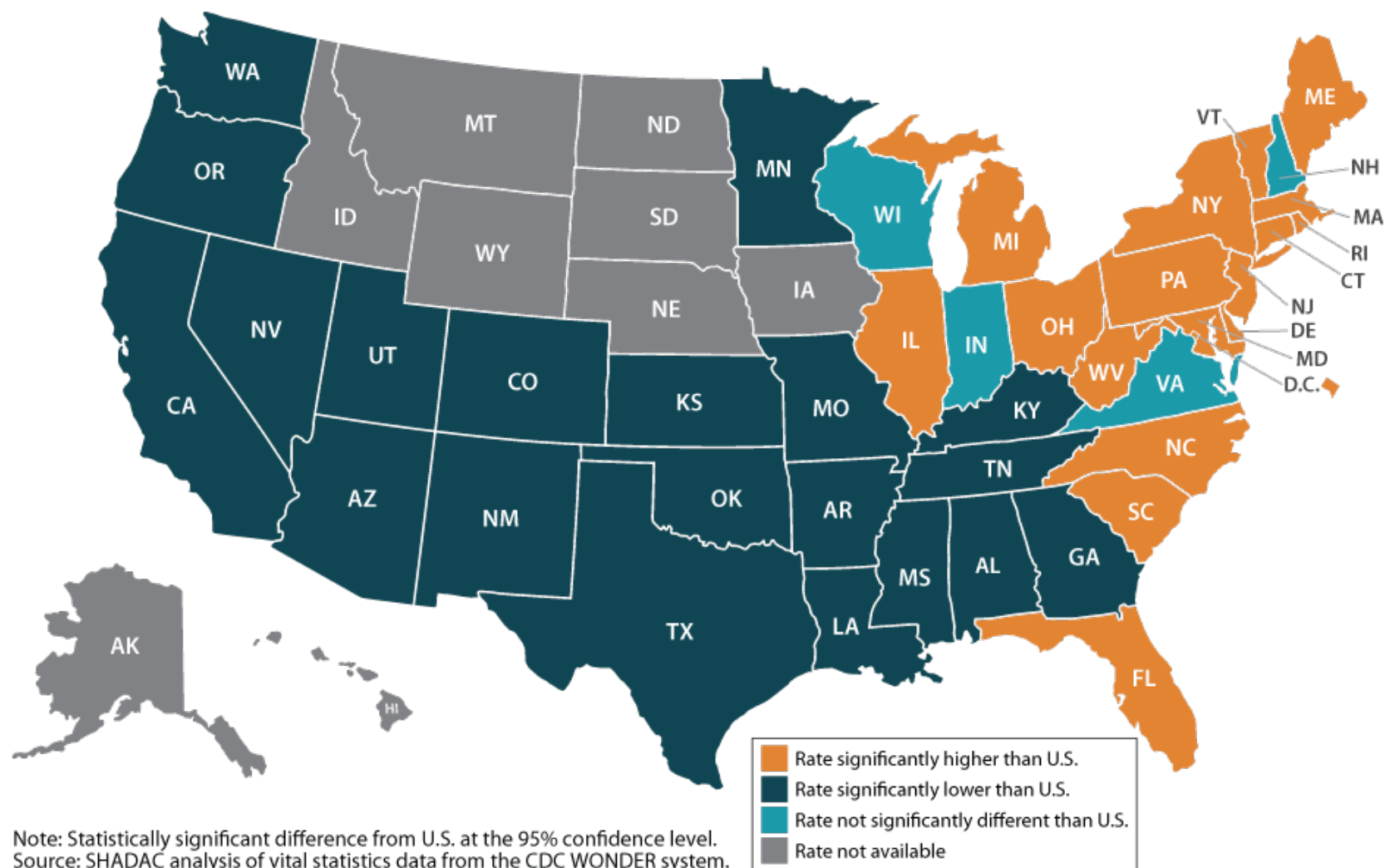


Note: Only states that saw statistically significant changes in their overdose death rates from 2017 to 2018 are shown.  
Source: SHADAC analysis of vital statistics data from the CDC WONDER system.

# Highest and Lowest Rates of Cocaine Deaths per 100,000 People, 2018

Five Highest Rates		Five Lowest Rates	
Delaware	15.9	Arkansas & Minnesota	0.9
District of Columbia	14.2	Kansas	1.0
Rhode Island	13.1	Oregon & Oklahoma	1.1
Maryland	11.4	Mississippi	1.2
Massachusetts	10.7	California	1.4

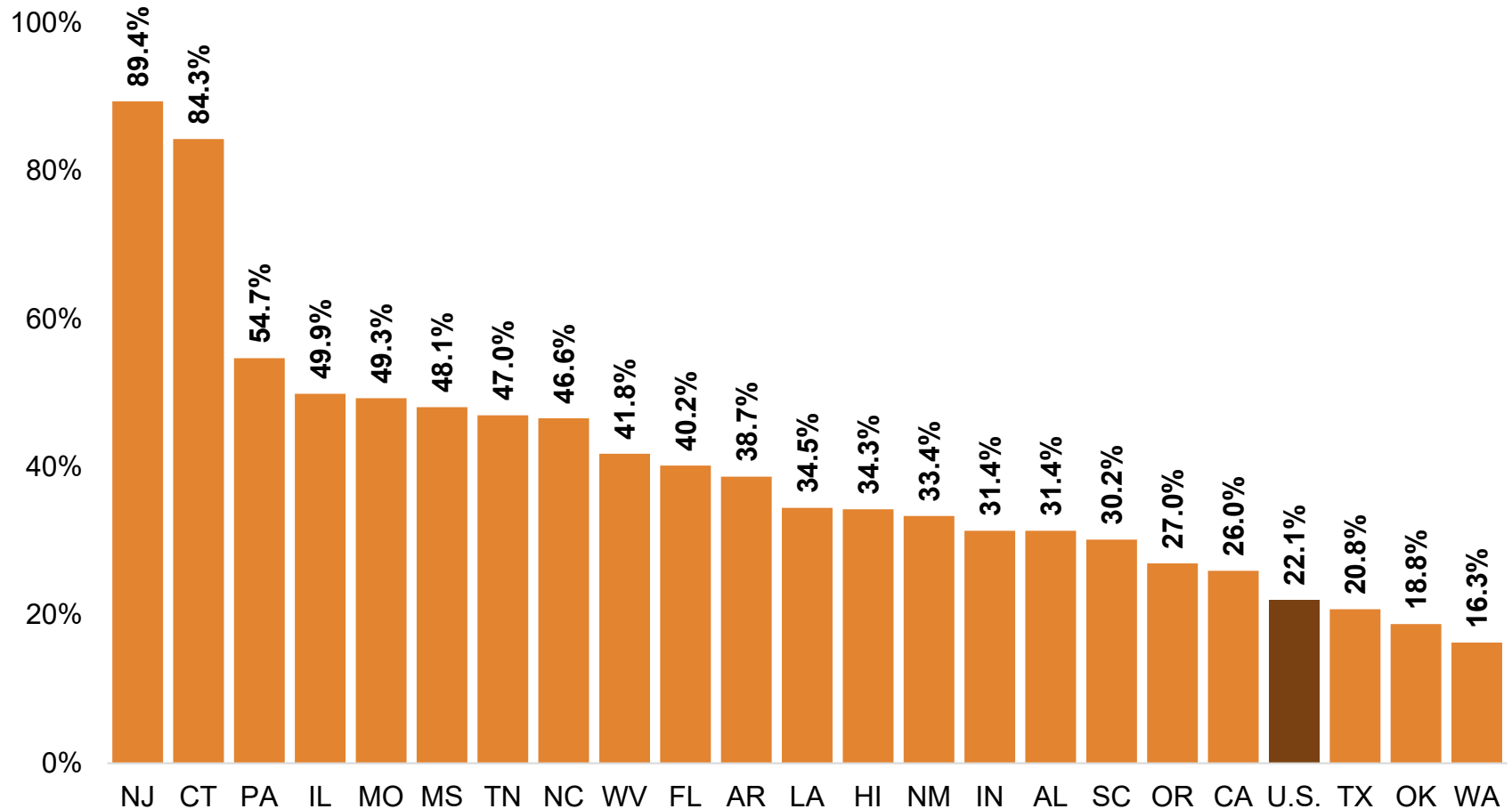
# State Cocaine Death Rates vs. U.S., 2018



# State-level Patterns

## *Psychostimulants*

# Significant Changes in Psychostimulant Overdose Death Rates, 2017-2018



# Highest and Lowest Rates of Psychostimulant Deaths per 100,000 People, 2018

Five Highest Rates		Five Lowest Rates	
West Virginia	19.3	New York	1.0
New Mexico	10.9	Maryland	1.1
Hawaii	9.9	Massachusetts	1.2
Nevada	9.6	Virginia	1.6
Kentucky	8.8	Nebraska & New Jersey	1.7

Map of the United States showing the rate of new HIV diagnoses by state for 2017. The map is color-coded based on the rate relative to the U.S. average:

- Orange:** Rate significantly higher than U.S.
- Dark Blue:** Rate significantly lower than U.S.
- Grey:** Rate not significantly different from U.S.

States with rates significantly higher than the U.S. average (Orange) include: WA, OR, CA, NV, UT, AZ, NM, CO, OK, MO, IN, OH, WV, KY, TN, SC, AK, and HI.

States with rates significantly lower than the U.S. average (Dark Blue) include: MT, ID, WY, NE, KS, TX, LA, MS, AL, GA, FL, NC, VA, MD, DE, NJ, CT, RI, MA, NH, ME, NY, PA, MI, WI, MN, IL, and IA.

States with rates not significantly different from the U.S. average (Grey) include: ND, SD, VT, and D.C.

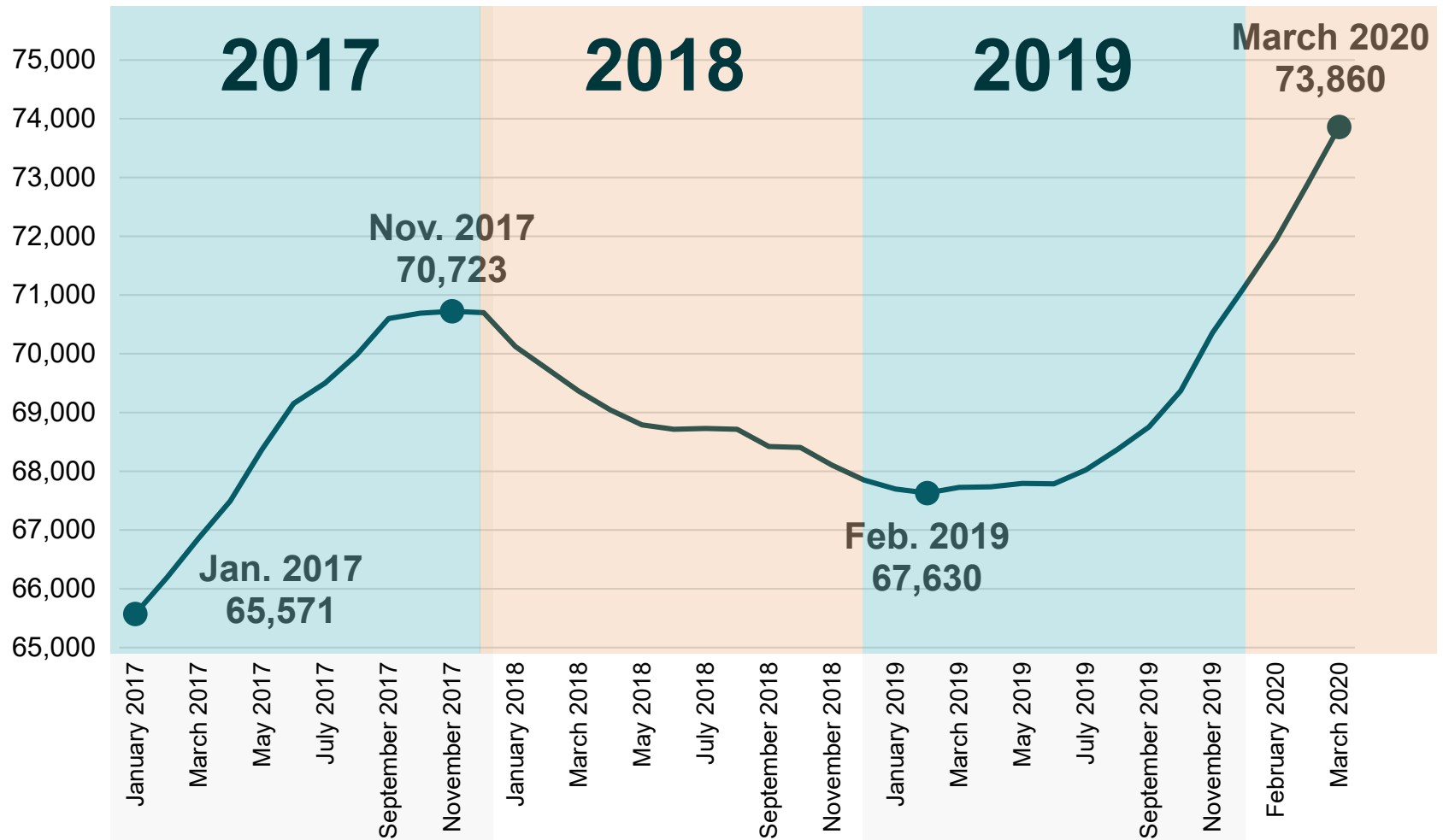
48



# Resurgence of Overdose Deaths

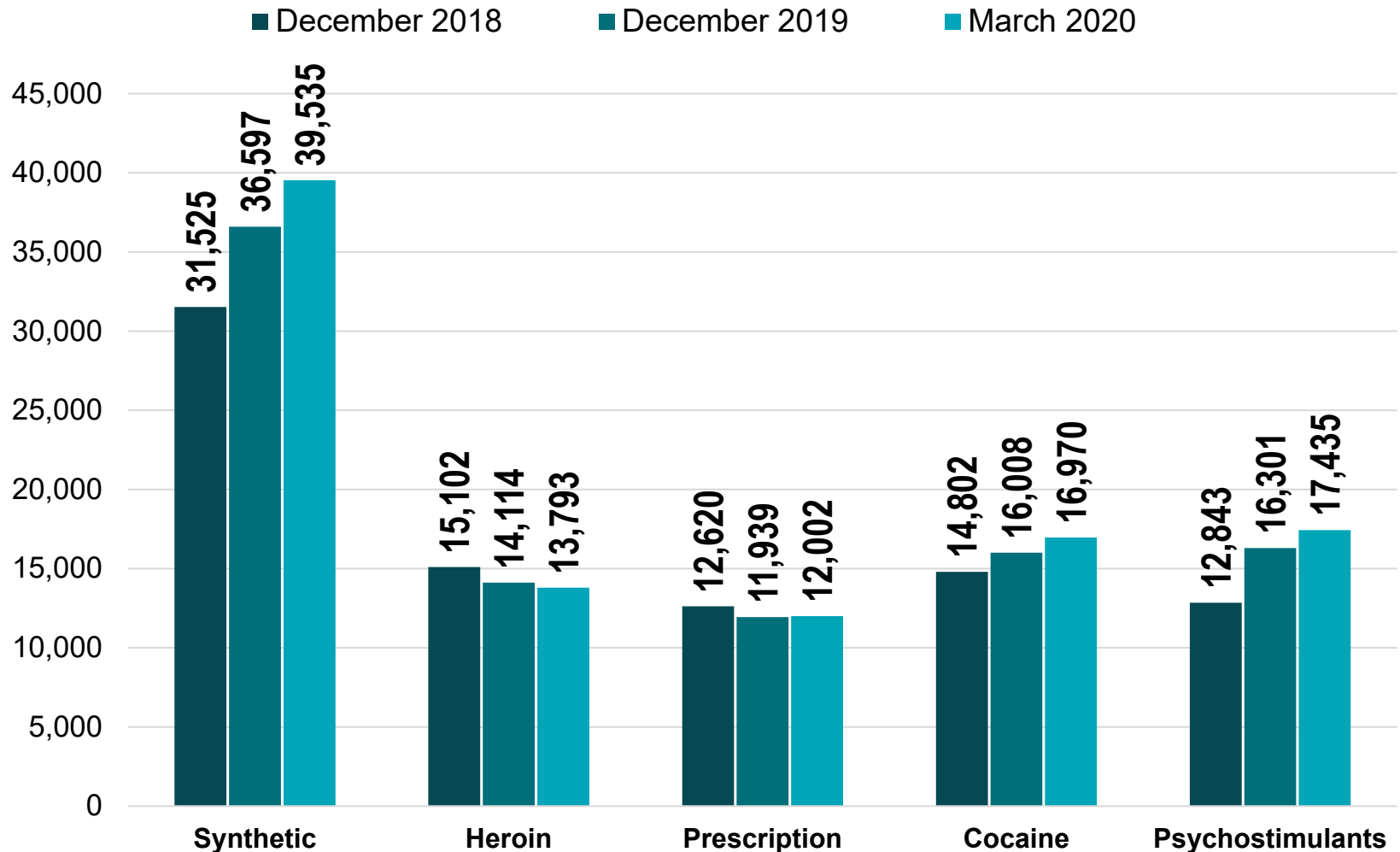
*Provisional data from 2019 and 2020*

# U.S. Provisional Drug Overdose Deaths, 12-month Rolling Counts



Source: CDC Provisional Drug Overdose Death Counts

# U.S. Provisional Overdose Deaths by Drug Type, 12-month Rolling Counts



Source: CDC Provisional Drug Overdose Death Counts

# Visit StateHealthCompare.SHADAC.org

The screenshot shows the 'STATE HEALTH COMPARE' website. At the top, it says 'DATA ANALYZED BY shadac'. Below this, there are buttons for 'Explore Data' and 'About'. A navigation bar includes links for '< Share', 'Email', and 'Download Data'. A central message states: 'Use State Health Compare to create customized reports for state-level health estimates' with an 'Explore the Data >' button. Below this, the 'Explore Data' section is visible, featuring a checkbox for 'Show available breakdowns (Age, Education, Race/Ethnicity...)' and a grid of categories including Health Insurance Coverage, Cost of Care - Dollars, Cost of Care - Behavior Changes, Health Behaviors, Outcomes, Access to Care, Utilization of Care, Quality of Care, Public Health, and Social and Economic Factors.



**ACCESS** State-level estimates related to the Culture of Health and health care



**DOWNLOAD** customized reports and select data as an excel file



**GENERATE** detailed graphics, trend lines, maps, bar charts, and data tables.



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# State Health Compare Demo

**Robert Hest, MPP**

Research Fellow, SHADAC

# SHADAC's State Health Compare

## 45+ State-level measures of:

- Health Insurance Coverage
- Cost of Care
- Health Behaviors
- Outcomes
- Access to Care
- Utilization of Care
- Quality of Care
- Public Health
- Social and Economic Factors

<b>Health Insurance Coverage</b> Coverage Type Workers in Establishments that Offer Coverage	<b>Access to Care</b> Adults with No Personal Doctor No Trouble Finding Doctor Told that Provider Accepts Insurance Had Usual Source of Medical Care
<b>Cost of Care - Dollars</b> People with High Medical Care Cost Burden Average Annual ESI Premium Average Annual ESI Deductible Employee Contributions to Premiums High-Deductible Health Plans Costs of Potentially Preventable Hospitalizations Medicaid Expenses as Percent of State Budget	<b>Utilization of Care</b> Had General Doctor or Provider Visit Had Emergency Department Visit Spent the Night in a Hospital
<b>Cost of Care - Behavior Changes</b> Adults Who Forgo Needed Medical Care Made Changes to Medical Drugs Trouble Paying Medical Bills	<b>Quality of Care</b> Adult Cancer Screenings Adult Potentially Preventable Hospitalizations Child Potentially Preventable Hospitalizations Child Vaccinations
<b>Health Behaviors</b> Adult Binge Drinking Adult Obesity Adult Smoking High School Obesity High School Smoking High School Physical Activity Sales of Opioid Painkillers Opioid-Related and Other Drug Poisoning Deaths	<b>Public Health</b> Weight Assessment in Schools School Nutrition Standards Stronger than USDA Schools Required to Provide Physical Activity Smoke Free Campuses Cigarette Tax Rates Public Health Funding
<b>Outcomes</b> Chronic Disease Prevalence Activities Limited due to Health Difficulty Cancer Incidence Health Status Premature Death Adult Unhealthy Days	<b>Social and Economic Factors</b> Children Considered to be Poor Unemployment Rate Income Inequality Unaffordable Rents

# SHADAC's State Health Compare



Access Policy-relevant breakdowns available for most measures



Generate tables, maps, bar charts, trends, and state rankings

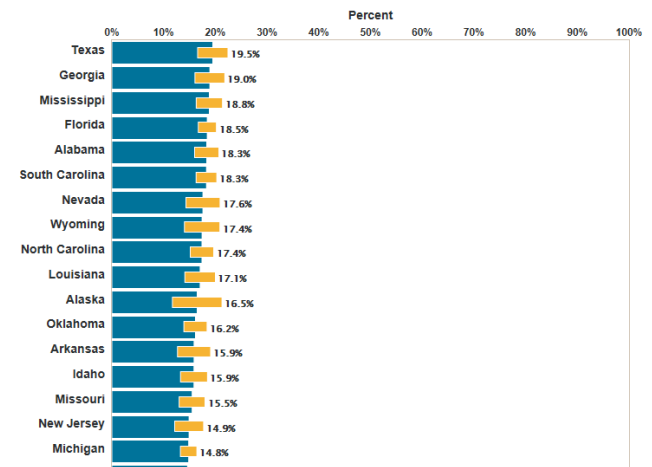
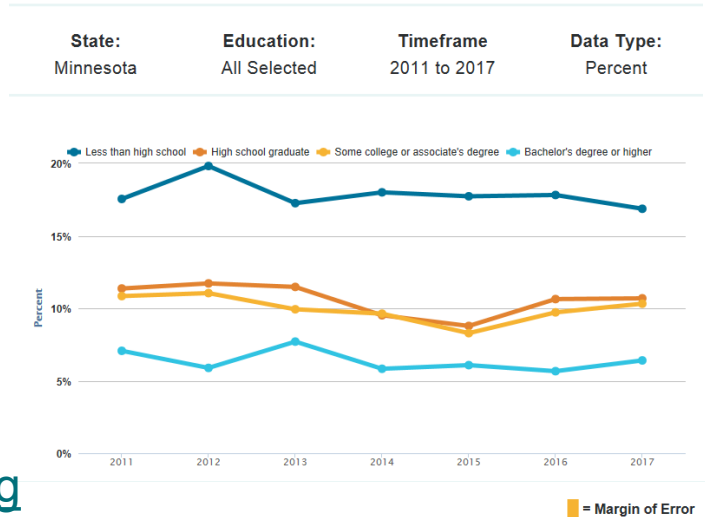


Margins of error in addition to point estimates allows for significance testing



Data can be downloaded in spreadsheet format

Percent of adults who could not get medical care when needed due to cost



# 16 Data Sources, including:

- American Community Survey (ACS)
- Current Population Survey (CPS)
- CDC WONDER Database
- U.S. Drug Enforcement Agency's Automated Reports and Consolidated Ordering System (ARCOS)
- Behavioral Risk Factor Surveillance System (BRFSS)
- National Health Interview Survey (NHIS)
- Other sources





# Virtual Tour

[statehealthcompare.shadac.org/](https://statehealthcompare.shadac.org/)

# Questions for Presenters?



**Robert Hest, MPP**  
SHADAC Research Fellow



**Colin Planalp, MPA**  
SHADAC Senior Research Fellow



**Lynn Blewett, PhD**  
SHADAC Director

# Thank you

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State Health Access Data Assistance Center (SHADAC)  
University of Minnesota, Minneapolis  
[www.SHADAC.org](http://www.SHADAC.org)

