Minnesota's Growing and Evolving Opioid Crisis

Colin Planalp, MPA
Senior Research Fellow, SHADAC

Minnesota Opioid Policy Forum • October 24, 2019

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)

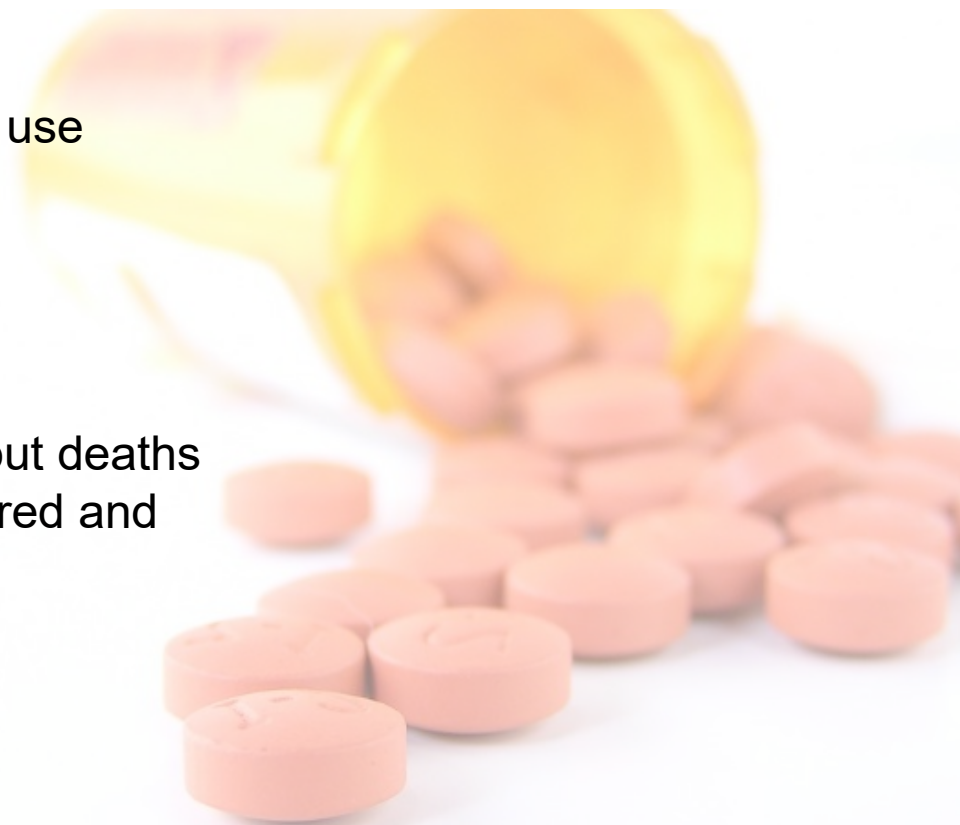# Opioid overdose death records

Natural and semi-synthetic opioids

- i.e., prescription opioid painkillers

Heroin

- Illicit opioid with no legal medical use

Synthetic opioids

- e.g., fentanyl
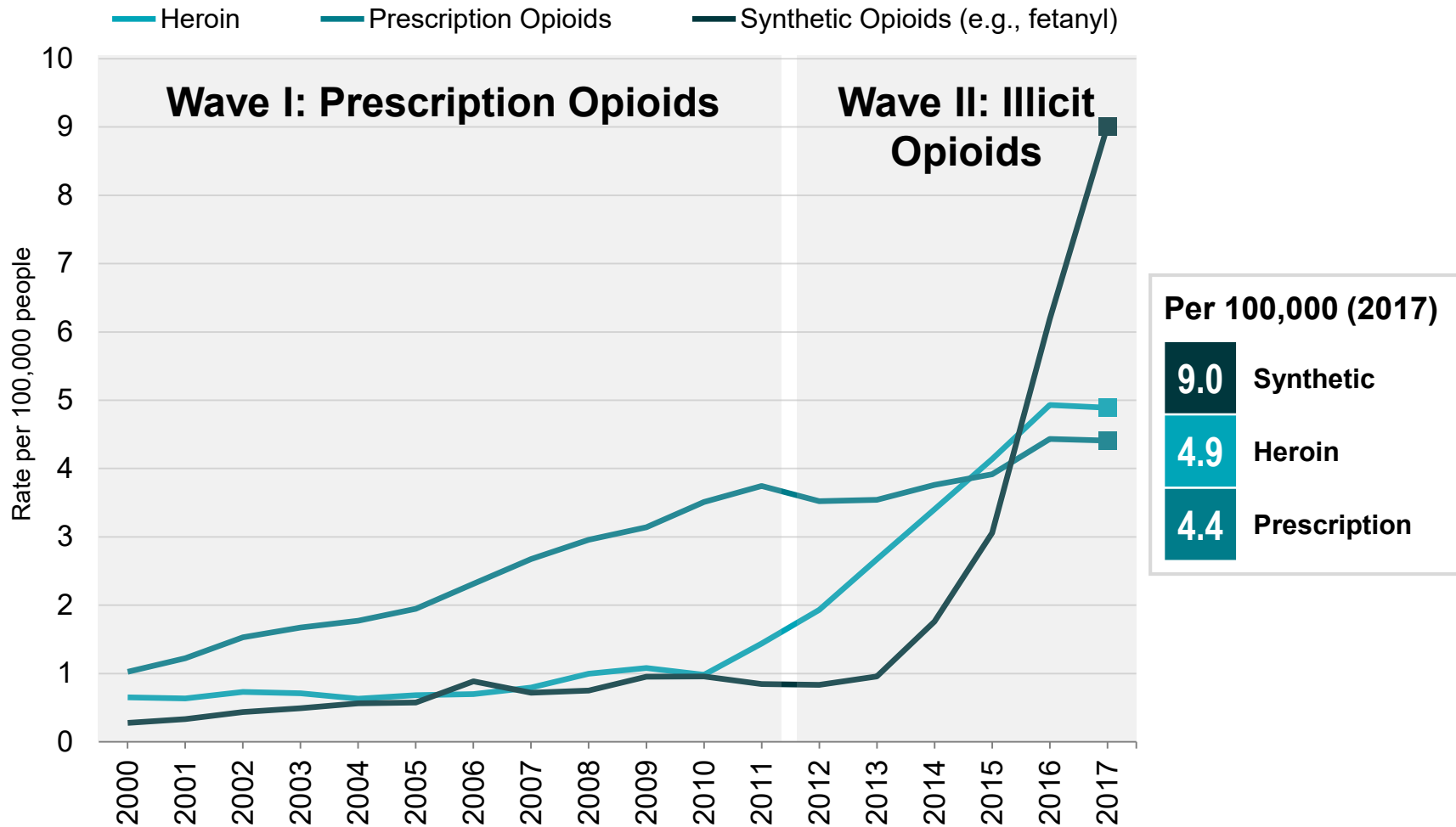- Some have legal medical uses, but deaths dominated by illegally manufactured and trafficked fentanyl

U.S. Trends

Prescription Opioid, Synthetic Opioid, and Heroin Overdose Deaths

U.S. Opioid Deaths
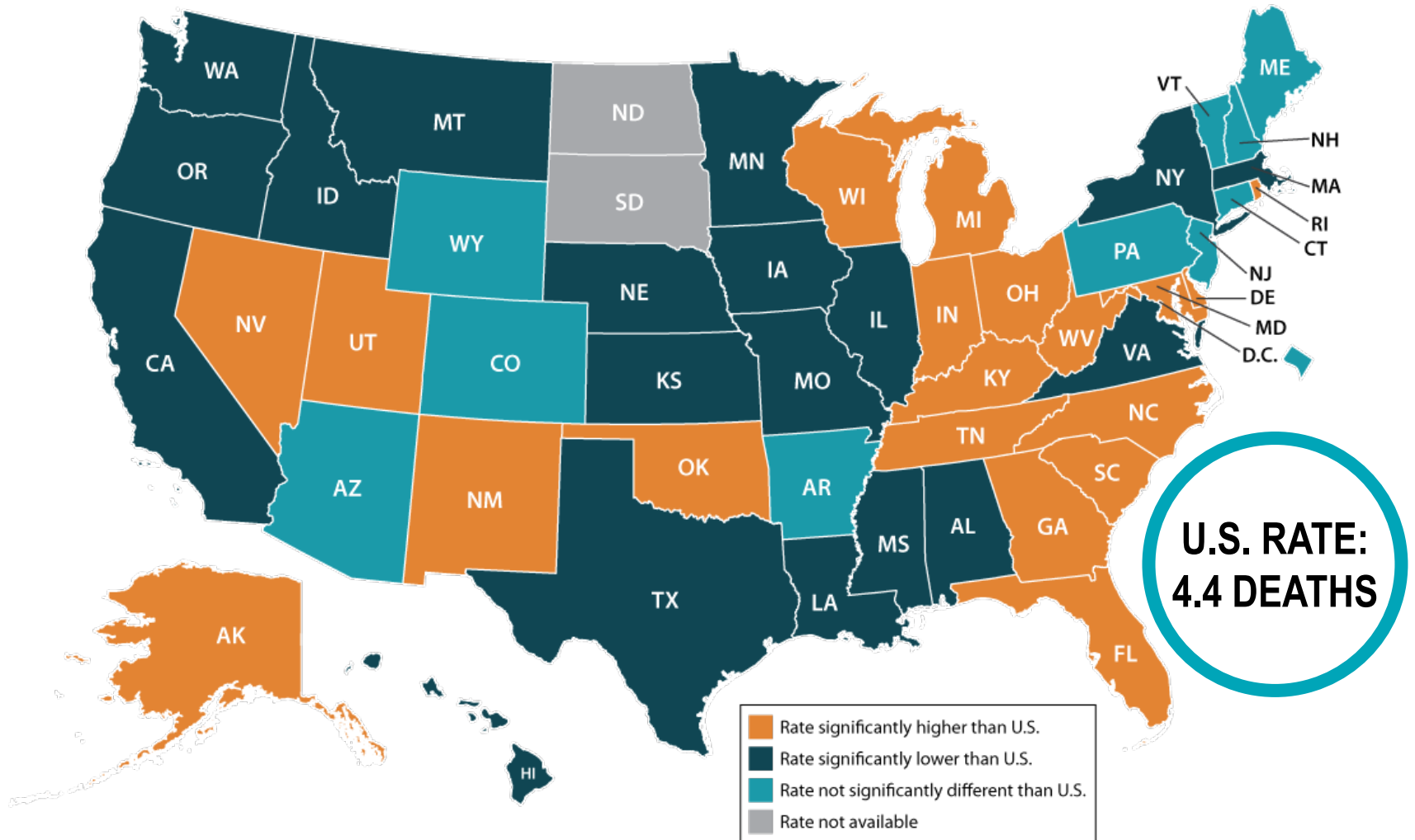## *Rates per 100,000 People, by Opioid Type*

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

State Trends and Variation

Opioid Overdose Deaths

Prescription Opioid Deaths
Rates per 100,000 People, 2017

U.S. RATE: 4.4 DEATHS

Legend:
- Rate significantly higher than U.S.
- Rate significantly lower than U.S.
- Rate not significantly different than U.S.
- Rate not available

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

shadac
STATE HEALTH ACCESS DATA ASSISTANCE CENTER

Prescription Opioid Deaths
Rates per 100,000 People, 2017
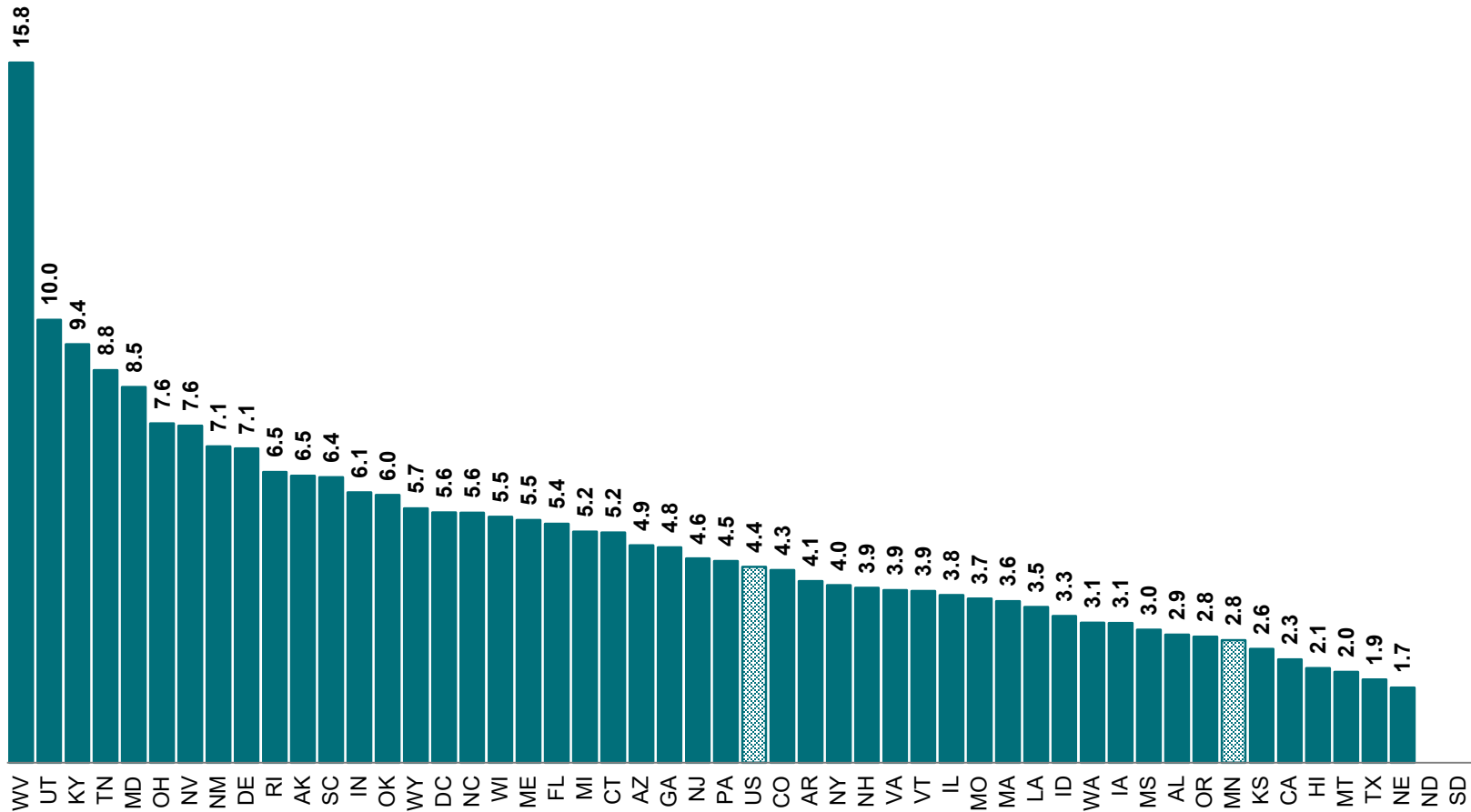
Source: SHADAC analysis of vital statistics data from the CDC WONDER system.
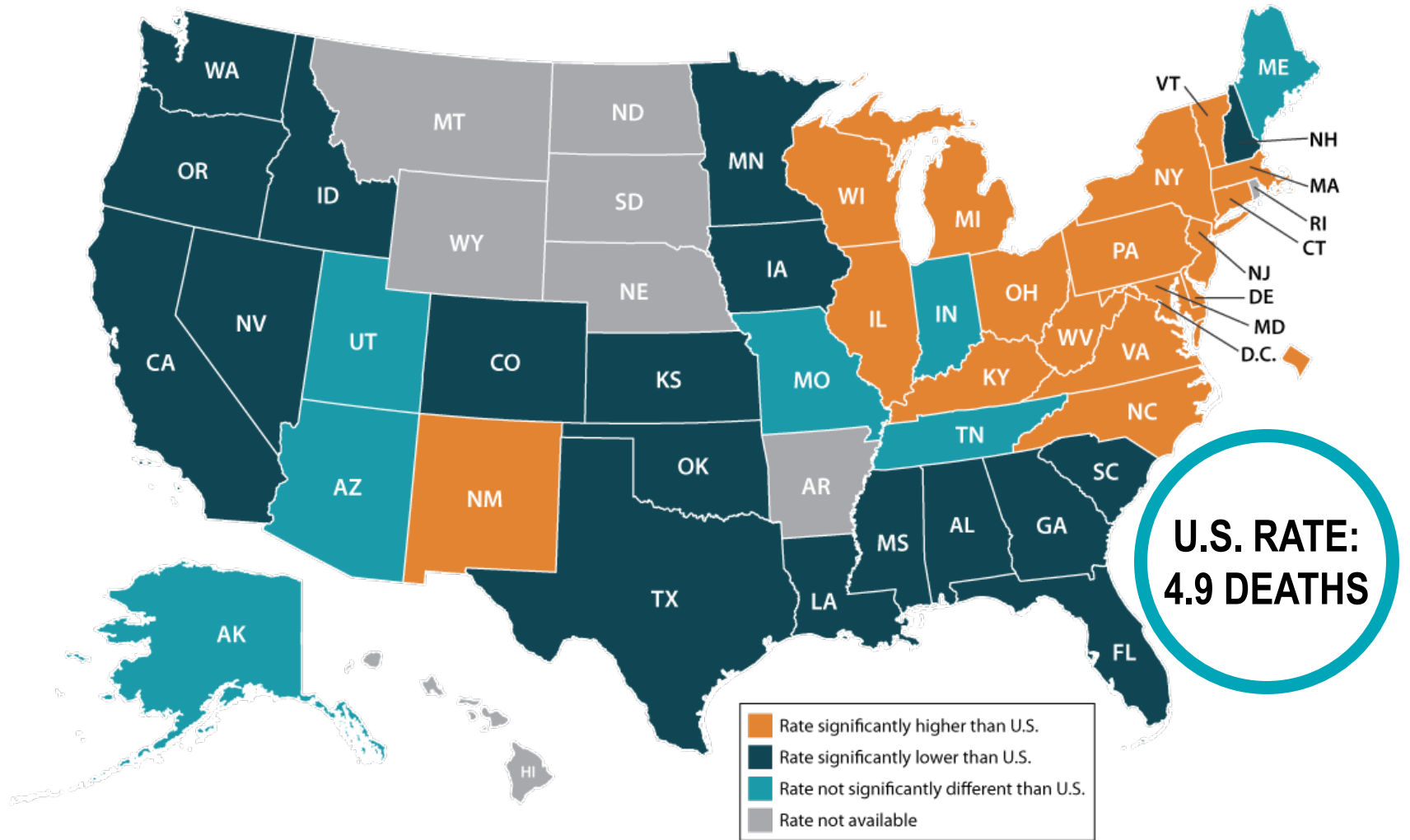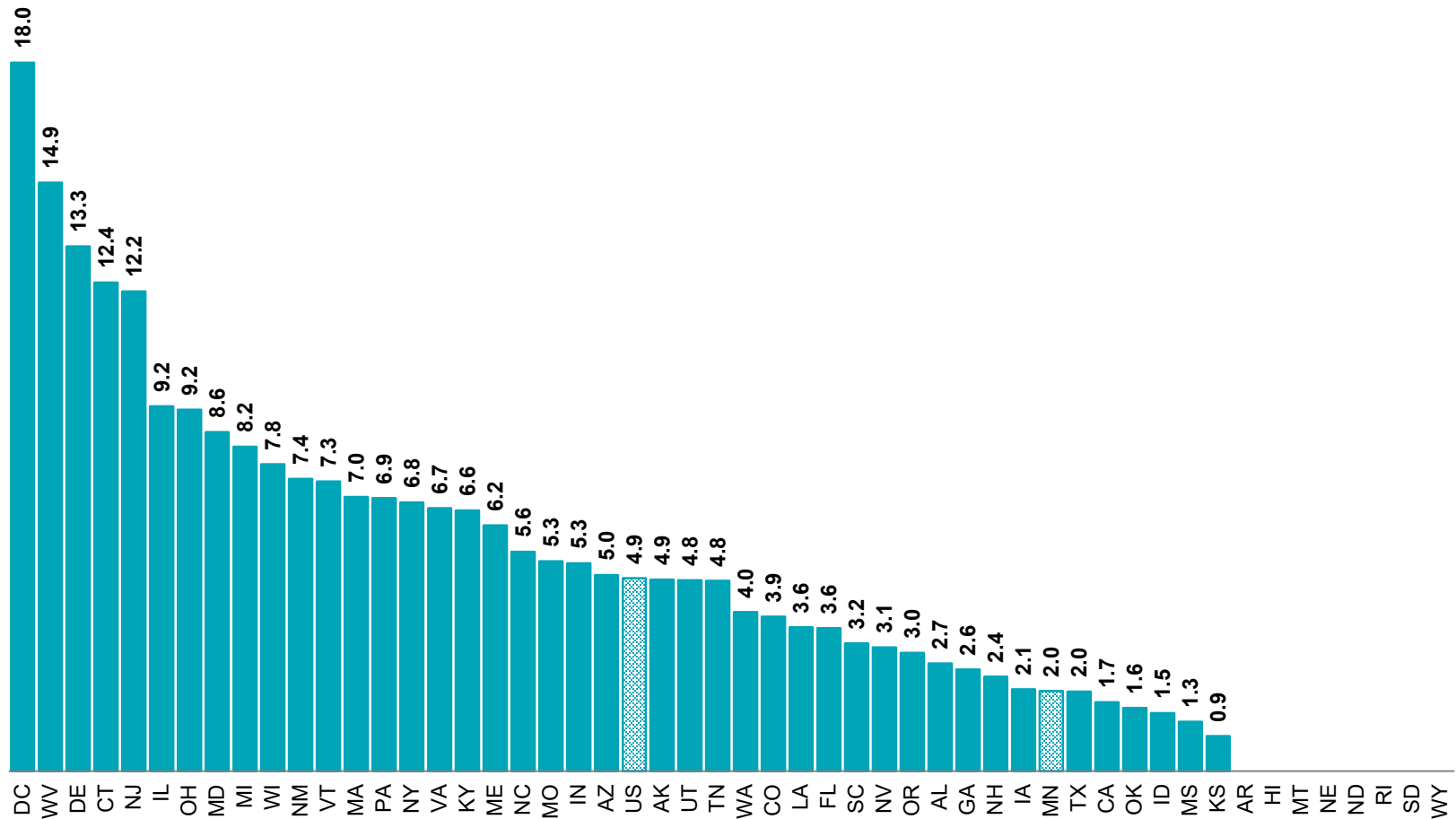
Heroin Deaths
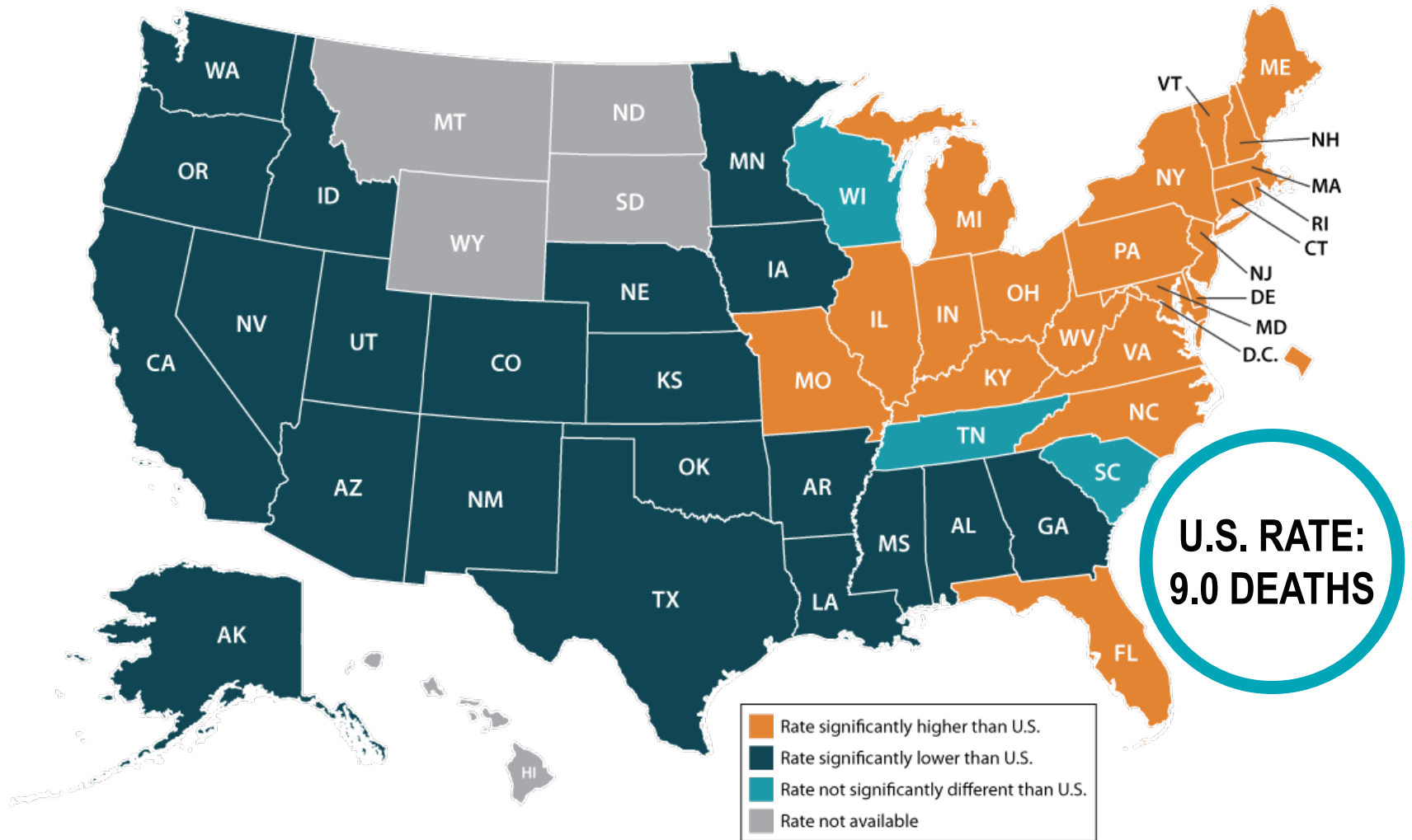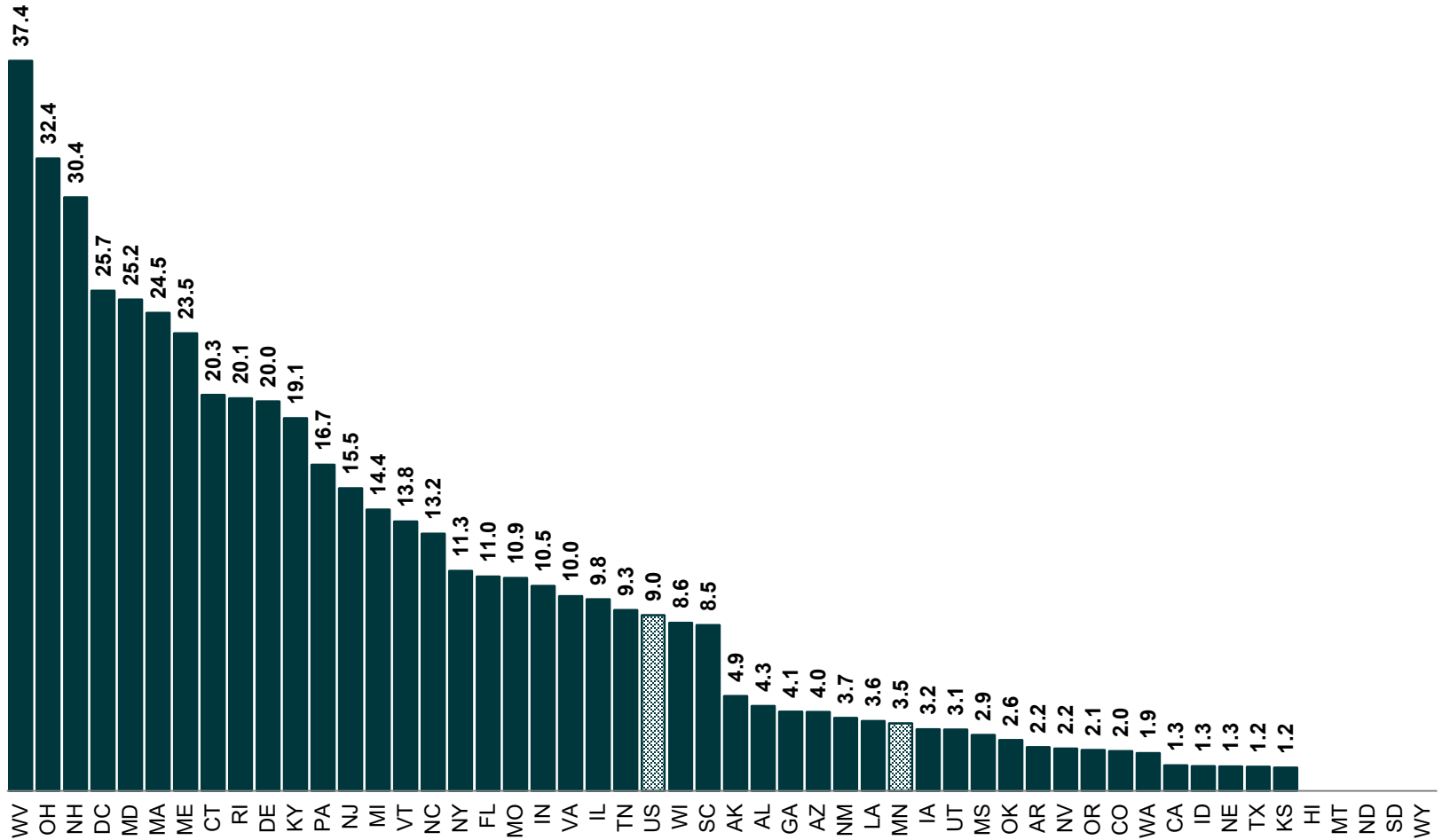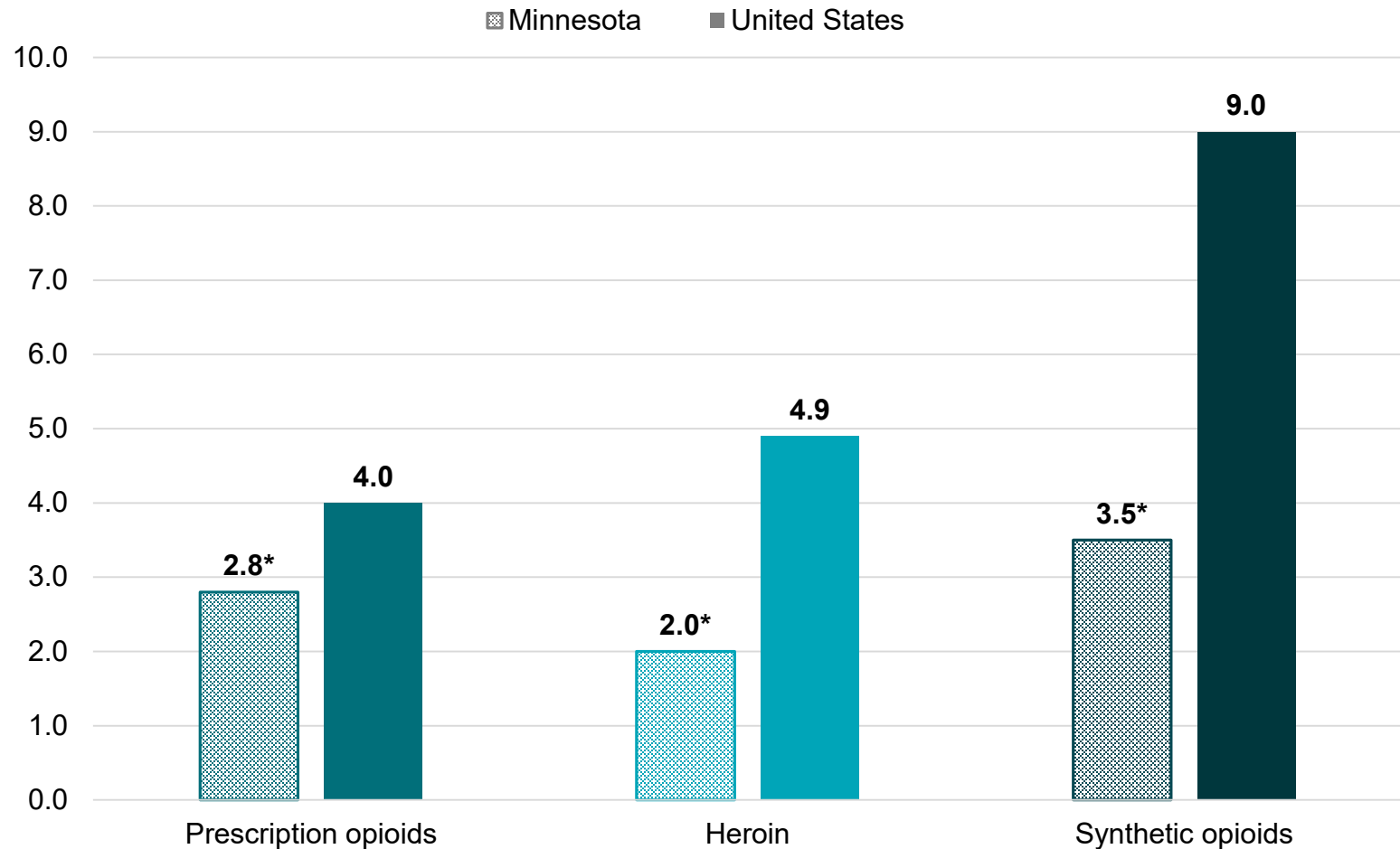## *Rates per 100,000 People, 2017*

U.S. RATE: 4.9 DEATHS

Legend:
- Rate significantly higher than U.S.
- Rate significantly lower than U.S.
- Rate not significantly different than U.S.
- Rate not available

Source: SHADAC analysis of vital statistics data from the CDC WONDER system.
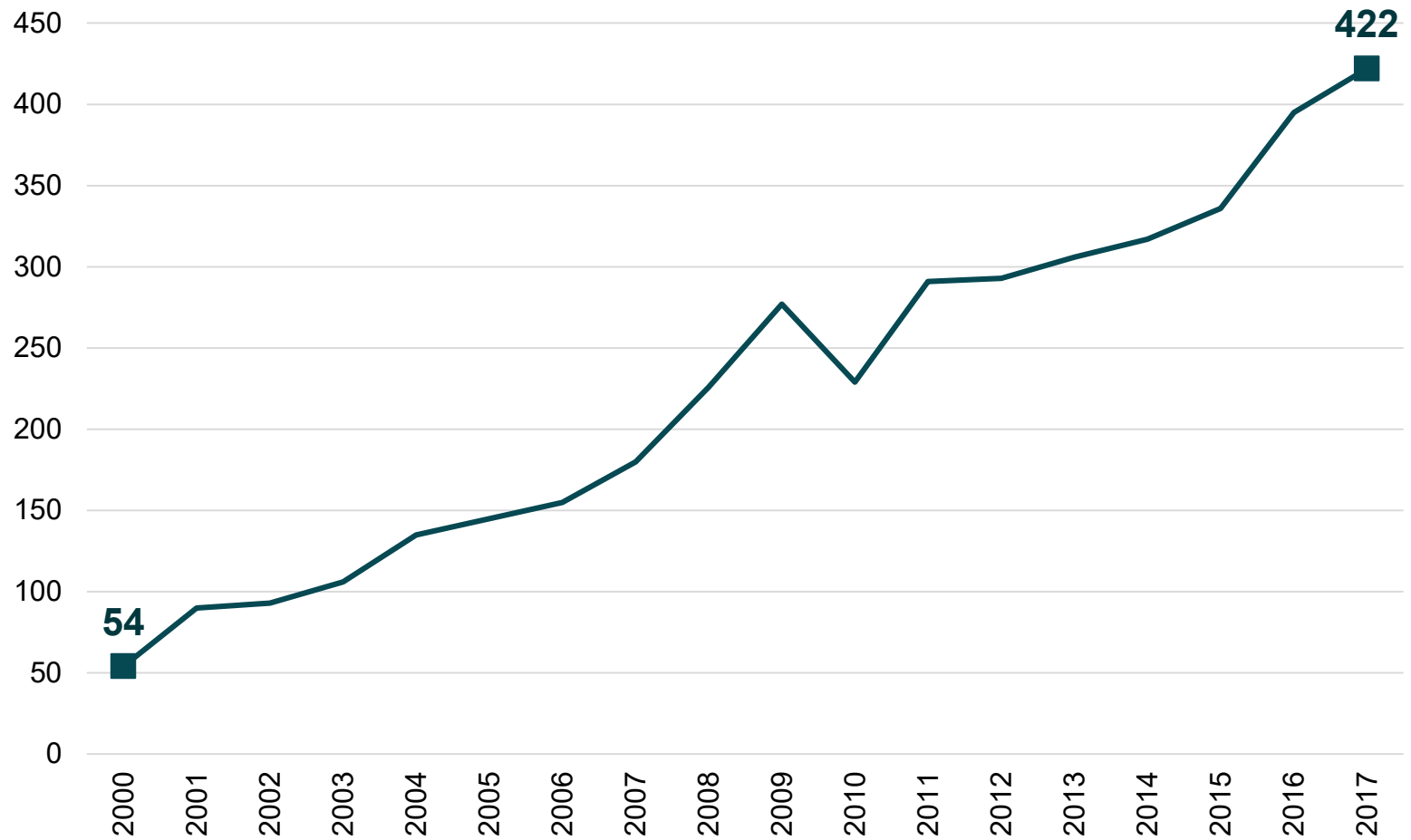
9

Heroin Deaths
Rates per 100,000 People, 2017

State	Rate
DC	18.0
WV	14.9
DE	13.3
CT	12.4
NJ	12.2
IL	9.2
OH	9.2
MD	8.6
MI	8.2
WI	7.8
NM	7.4
VT	7.3
MA	7.0
PA	6.9
NY	6.8
VA	6.7
KY	6.6
ME	6.2
NC	5.6
MO	5.3
IN	5.3
AZ	5.0
US	4.9
AK	4.9
UT	4.8
TN	4.8
WA	4.0
CO	3.9
LA	3.6
FL	3.6
SC	3.2
NV	3.1
OR	3.0
AL	2.7
GA	2.6
NH	2.4
IA	2.1
MN	2.0
TX	2.0
CA	1.7
OK	1.6
ID	1.5
MS	1.3
KS	0.9
AR	
HI	
MT	
NE	
ND	
RI	
SD	
WY	

10

Synthetic Opioid Deaths
Rates per 100,000 People, 2017

U.S. RATE:
9.0 DEATHS

Rate significantly higher than U.S.
Rate significantly lower than U.S.
Rate not significantly different than U.S.
Rate not available

Synthetic Opioid Deaths
Rates per 100,000 People, 2017

State	Rate
WV	37.4
OH	32.4
NH	30.4
DC	25.7
MD	25.2
MA	24.5
ME	23.5
CT	20.3
RI	20.1
DE	20.0
KY	19.1
PA	16.7
NJ	15.5
MI	14.4
VT	13.8
NC	13.2
NY	11.3
FL	11.0
MO	10.9
IN	10.5
VA	10.0
IL	9.8
TN	9.3
US	9.0
WI	8.6
SC	8.5
AK	4.9
AL	4.3
GA	4.1
AZ	4.0
NM	3.7
LA	3.6
MN	3.5
IA	3.2
UT	3.1
MS	2.9
OK	2.6
AR	2.2
NV	2.2
OR	2.1
CO	2.0
WA	1.9
CA	1.3
ID	1.3
NE	1.3
TX	1.2
KS	1.2
HI	
MT	
ND	
SD	
WY	

Minnesota and U.S. Opioid Deaths
Rates per 100,000 People by Type, 2017

Legend: ▨ Minnesota ◼ United States

Type	Minnesota	United States
Prescription opioids	2.8*	4.0
Heroin	2.0*	4.9
Synthetic opioids	3.5*	9.0

shadac
STATE HEALTH ACCESS DATA ASSISTANCE CENTER

Minnesota Trends

Opioid Overdose Deaths

shadac
STATE HEALTH ACCESS DATA ASSISTANCE CENTER

Number of Opioid Deaths in Minnesota, *2000-2017*

Source: Minnesota Department of Health

Number of Opioid Deaths in Minnesota, *2000-2017*

Source: Minnesota Department of Health

Number of Opioid Overdose Deaths
by Minnesota Counties, 2016

Top 5 Counties in Minnesota with the Highest Number of Opioid Overdose Deaths

County	# of opioid deaths	Rate per 100,000
Hennepin (Minneapolis)	146	11.2
Ramsey (St. Paul)	34	6.3
Anoka (Blaine)	26	7.5
Dakota (Eagan)	26	6.2
St. Louis (Duluth)	23	11.5

shadac
STATE HEALTH ACCESS DATA ASSISTANCE CENTER

Opioid Overdose Deaths by Minnesota Counties
Rates per 100,000 people, 2000-2002 and 2014-2016

2000-2002

2014-2016

Legend:
- 0.0 to 4.0
- 4.1 to 8.0
- 8.1 to 12.0
- 12.1 to 16.0
- 16.1 to 18+

Source: SHADAC analysis of Minnesota Department of Health data

18
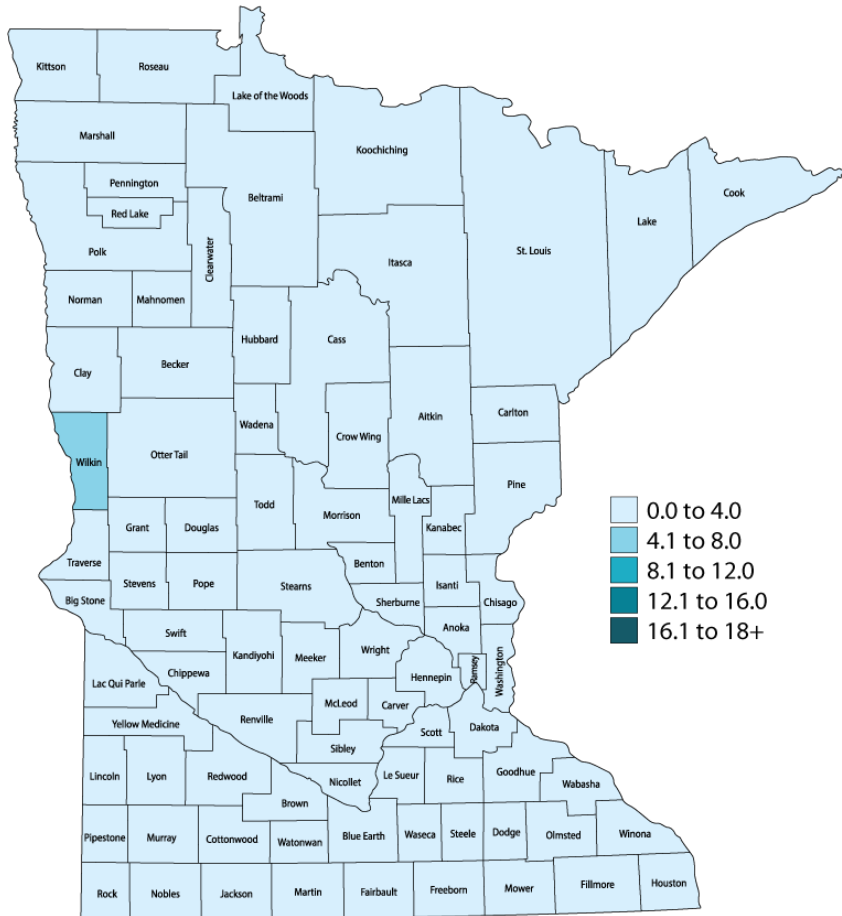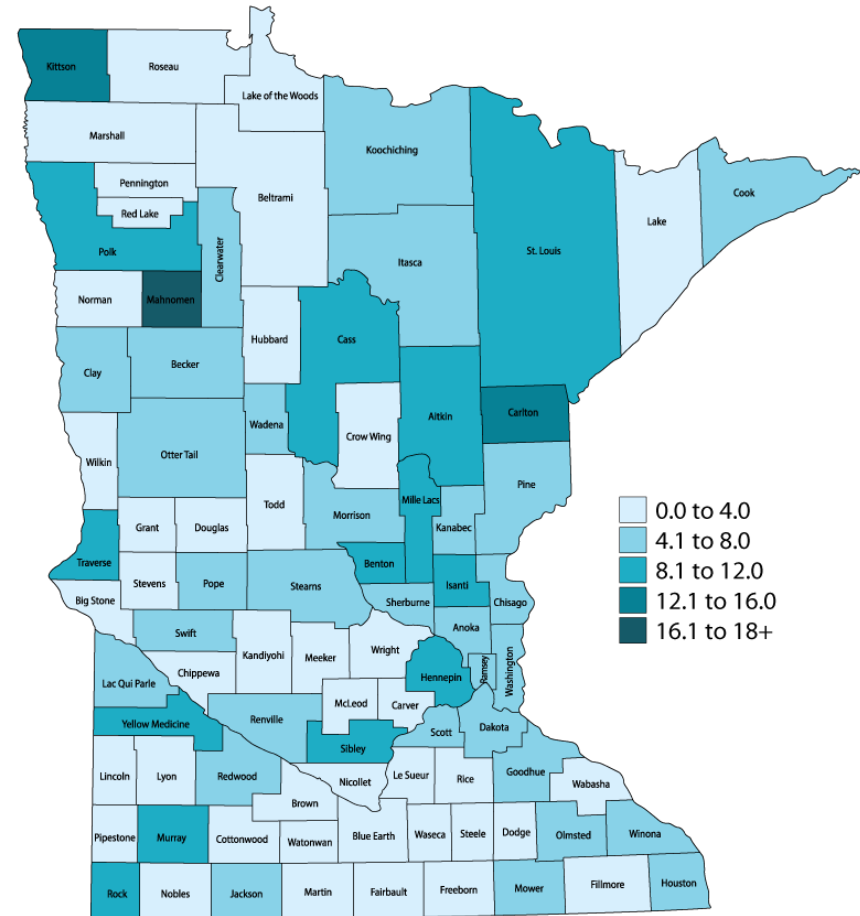
Minnesota Opioid Overdose Deaths
Rates per 100,000 People by Race, 2014-2016

Legend: ■ Natural, Semi-synthetic, Methadone ■ Heroin ■ Synthetic opioids

American Indian
- Natural, Semi-synthetic, Methadone: 9.1
- Heroin: 15.4
- Synthetic opioids: 7.9

African American
- Natural, Semi-synthetic, Methadone: 2.1
- Heroin: 4.2
- Synthetic opioids: 1.7

White
- Natural, Semi-synthetic, Methadone: 2.2
- Heroin: 1.9
- Synthetic opioids: 1.1

Source: Minnesota Department of Health

shadac
STATE HEALTH ACCESS DATA ASSISTANCE CENTER

Number of Minnesota Drug Overdose Deaths,
2000-2018 (preliminary)

Legend: Other opioids & methadone, Synthetic opioids, Heroin, Opioids (total)

Preliminary (2018)

331	Opioids (total)
195	Synthetic
134	Other opioids
85	Heroin

State Trends

Non-opioid Illicit Drug Overdose Deaths

Non-opioid illicit drugs

Cocaine

- Limited legal medical uses in U.S. (e.g., topical anesthetic) but also is trafficked illicitly

Psychostimulants with abuse potential

- Broader category of substances including prescription stimulants (e.g., Ritalin, Adderall) and illicit drugs (e.g., methamphetamine, MDMA)
  - Most common cause of psychostimulant death is methamphetamine, according to CDC research

U.S. Drug Overdose Deaths
Rates per 100,000 People, by Drug Type, 2012-2017
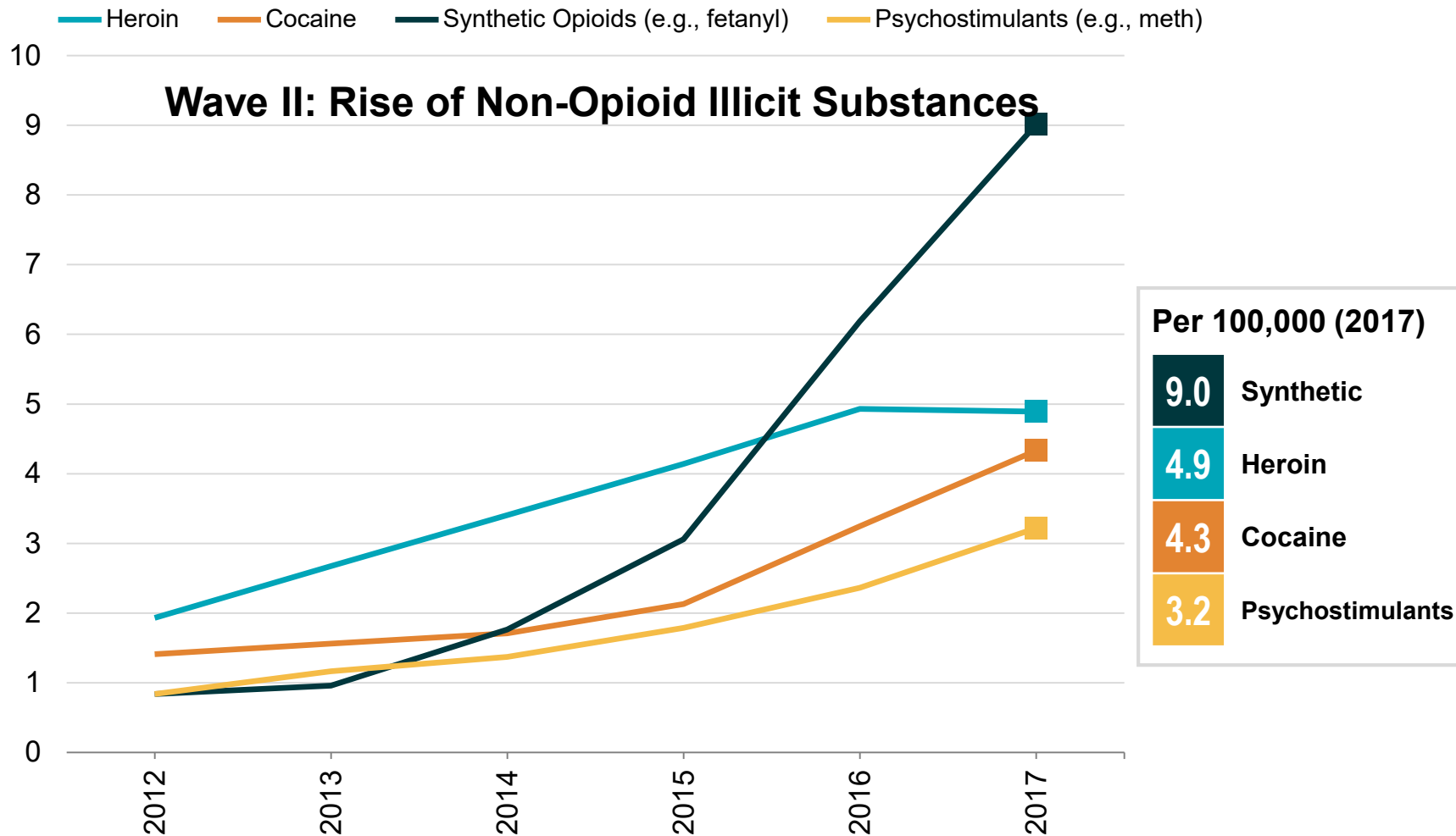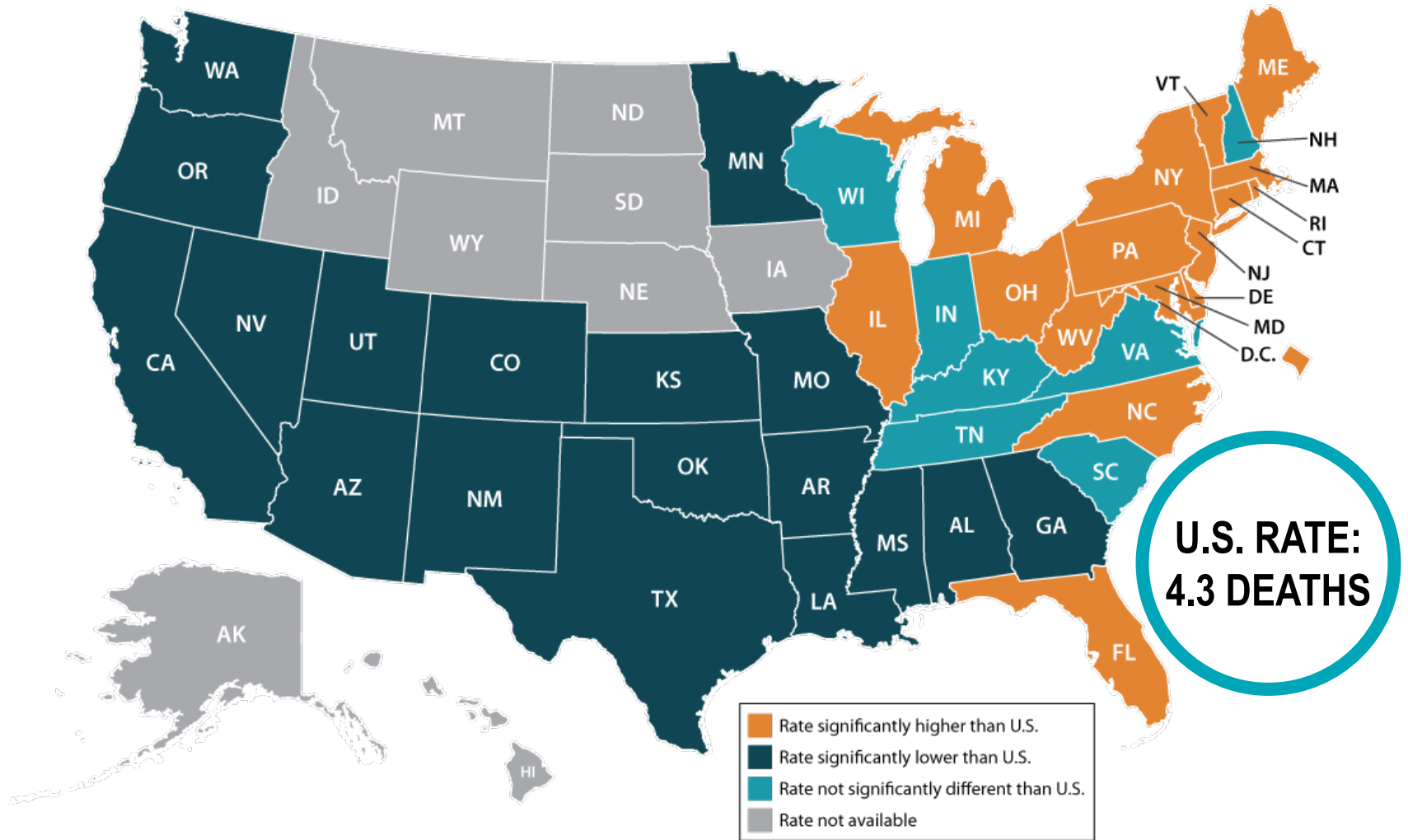
Legend: — Heroin — Cocaine — Synthetic Opioids (e.g., fetanyl) — Psychostimulants (e.g., meth)

Wave II: Rise of Non-Opioid Illicit Substances

Per 100,000 (2017)

Value	Drug
9.0	Synthetic
4.9	Heroin
4.3	Cocaine
3.2	Psychostimulants

Cocaine Deaths
Rates per 100,000 People, 2017

U.S. RATE: 4.3 DEATHS

Legend:
- Rate significantly higher than U.S.
- Rate significantly lower than U.S.
- Rate not significantly different than U.S.
- Rate not available

shadac
STATE HEALTH ACCESS DATA ASSISTANCE CENTER

Cocaine Deaths
Rates per 100,000 People, 2017

State	Rate
DC	17.6
OH	14.0
WV	11.6
DE	11.6
RI	11.2
MA	10.1
MD	8.6
CT	8.4
ME	7.7
NC	7.2
VT	6.9
MI	6.7
FL	6.7
NY	6.5
NJ	6.2
PA	6.1
IL	5.7
WI	4.8
SC	4.7
TN	4.6
US	4.3
KY	4.3
VA	4.1
IN	4.0
NH	3.9
LA	2.9
NM	2.9
GA	2.4
TX	2.4
MO	2.2
AL	2.2
AZ	2.0
CO	1.7
NV	1.6
UT	1.5
WA	1.4
MS	1.3
MN	1.3
OK	1.1
CA	1.0
OR	0.9
KS	0.8
AR	0.8
AK	
HI	
ID	
IA	
MT	
NE	
ND	
SD	
WY	
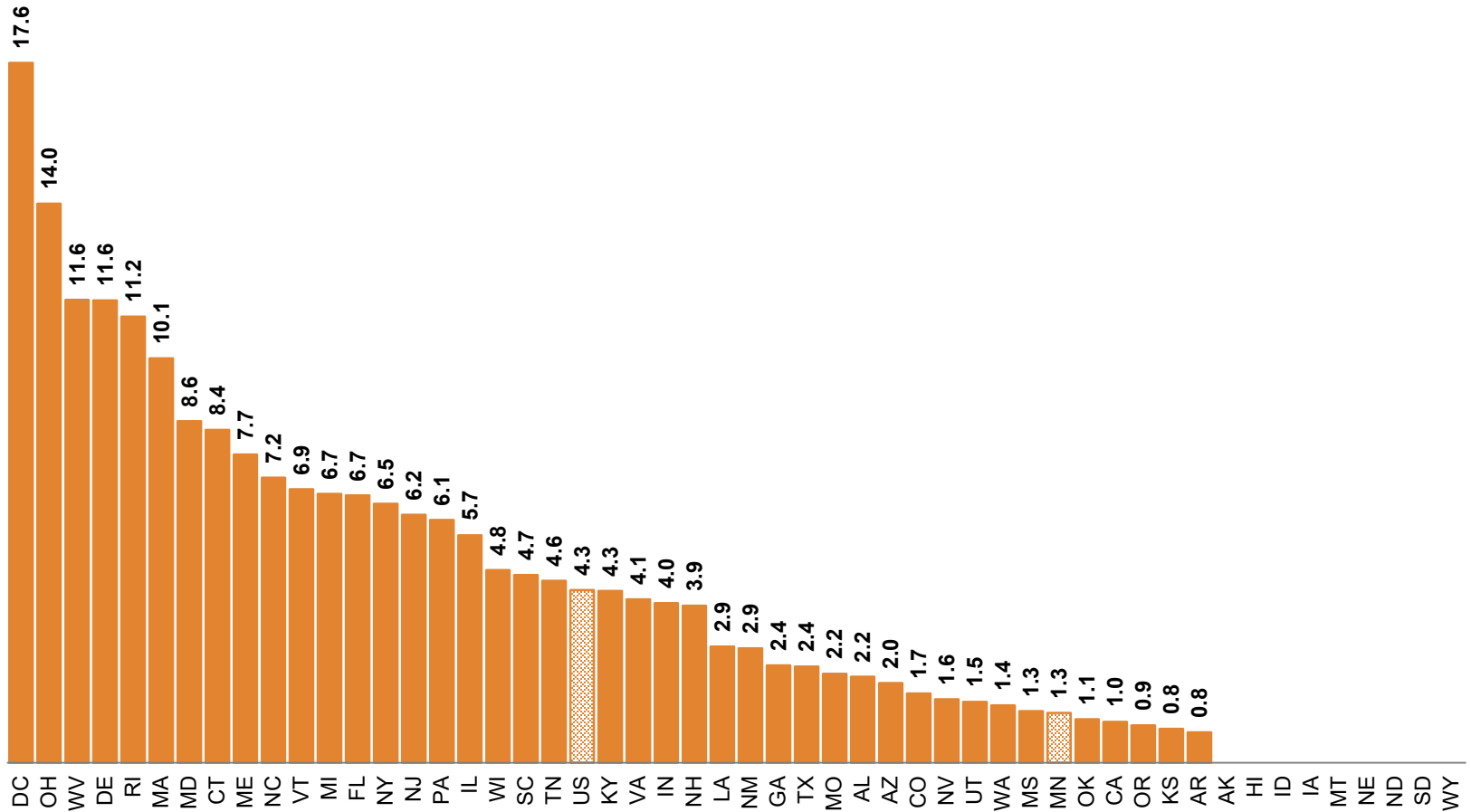
Number of Minnesota Cocaine Deaths, *2000-2017*
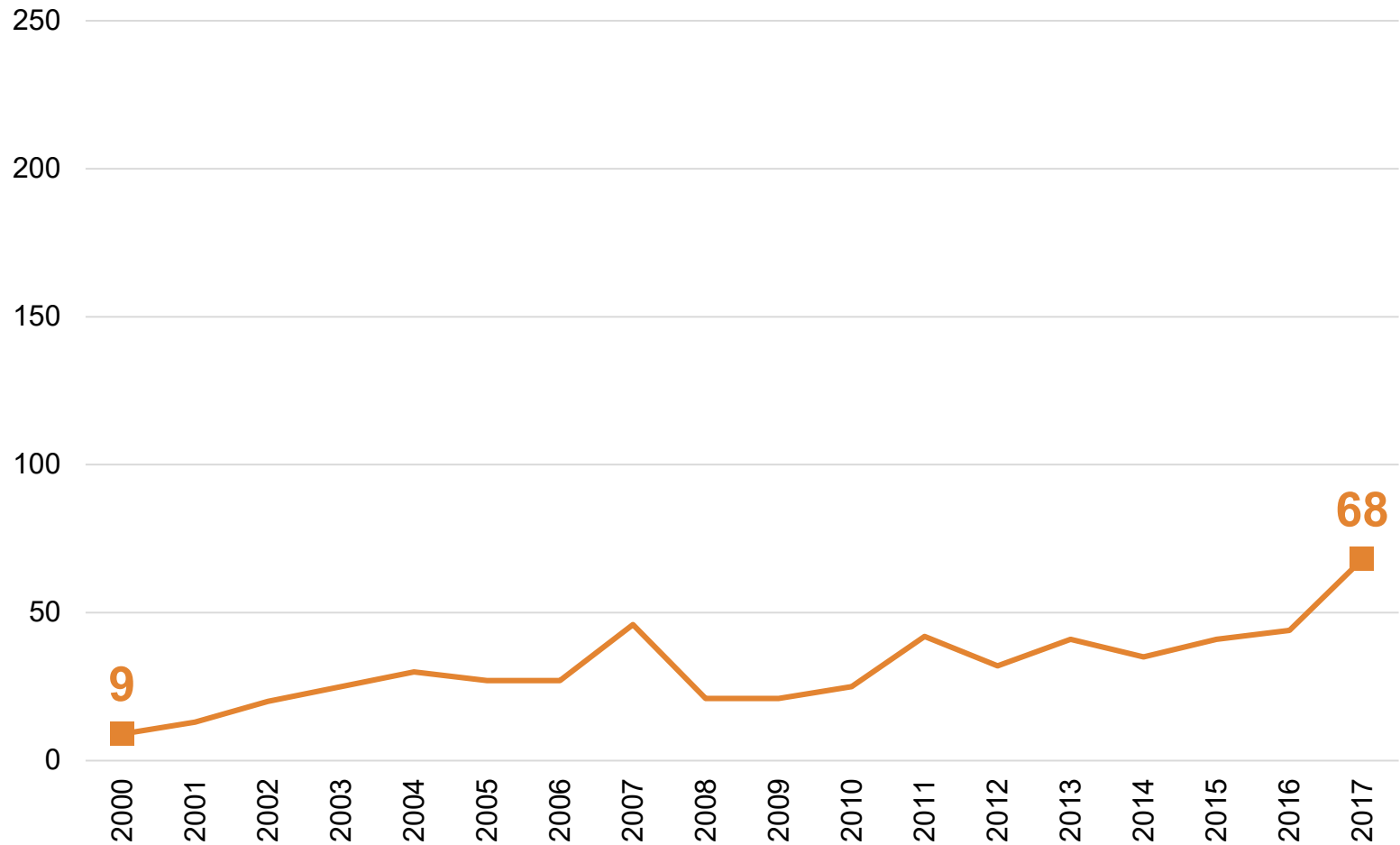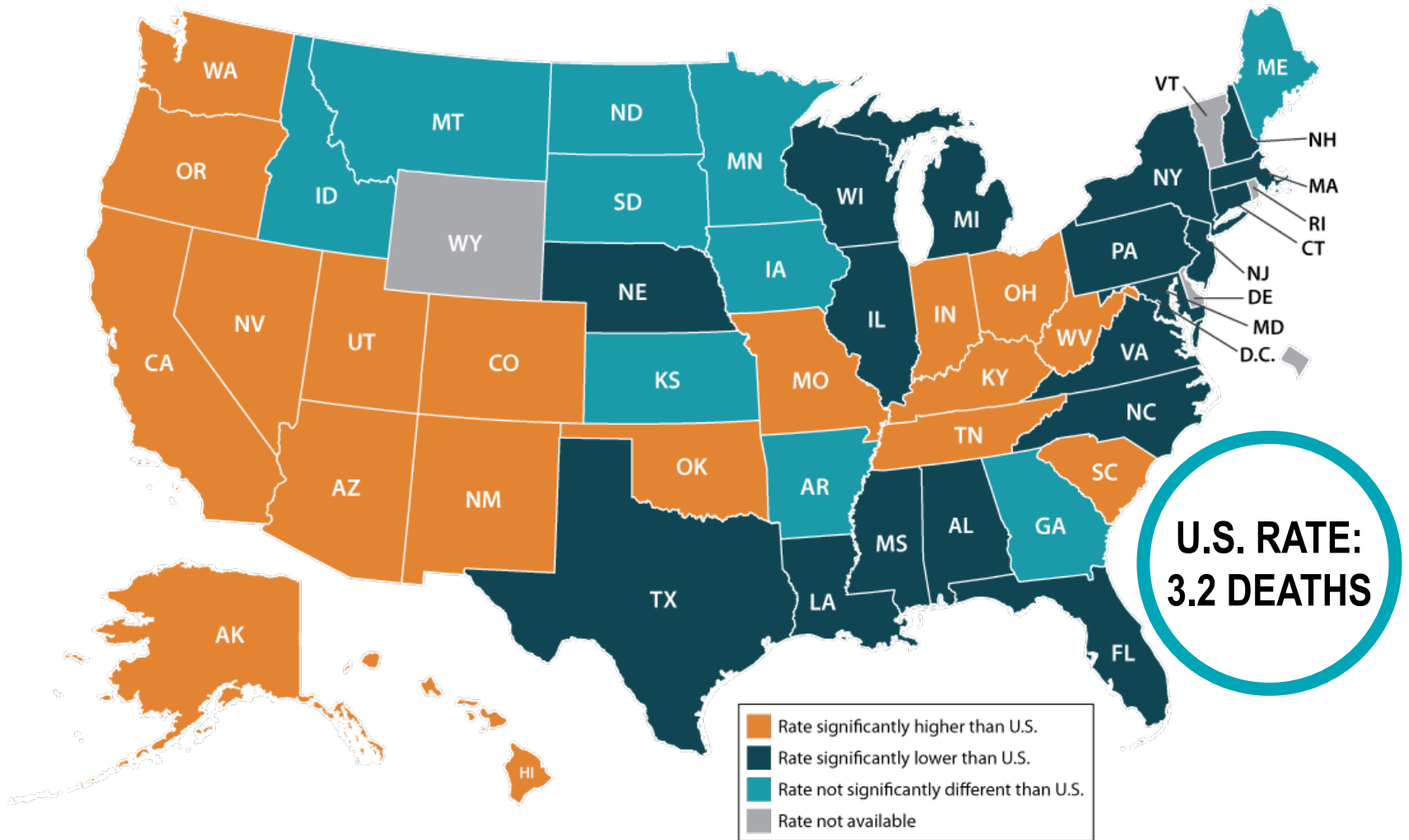
26

shadac
STATE HEALTH ACCESS DATA ASSISTANCE CENTER

Psychostimulant Deaths
Rates per 100,000 People, 2017

U.S. RATE: 3.2 DEATHS

Legend:
- Rate significantly higher than U.S.
- Rate significantly lower than U.S.
- Rate not significantly different than U.S.
- Rate not available

Psychostimulant Deaths
Rates per 100,000 People, 2017

State	Rate
WV	13.6
AK	9.1
AZ	8.5
NV	8.3
NM	8.2
KY	8.0
HI	7.4
OK	7.2
UT	6.8
OH	5.3
CO	5.2
WA	5.2
TN	5.0
IN	4.7
CA	4.6
MO	4.3
SC	4.0
OR	4.0
ME	3.8
GA	3.6
IA	3.3
US	3.2
SD	3.1
AR	3.1
ND	3.0
MN	2.9
KS	2.9
ID	2.7
AL	2.6
MT	2.5
TX	2.3
WI	2.3
MS	2.3
LA	2.3
NH	2.3
FL	2.2
NE	2.1
NC	1.8
MI	1.6
PA	1.6
IL	1.4
VA	1.4
CT	1.2
MD	1.2
MA	1.0
NY	1.0
NJ	0.9
DE	
DC	
RI	
VT	
WY	

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

28
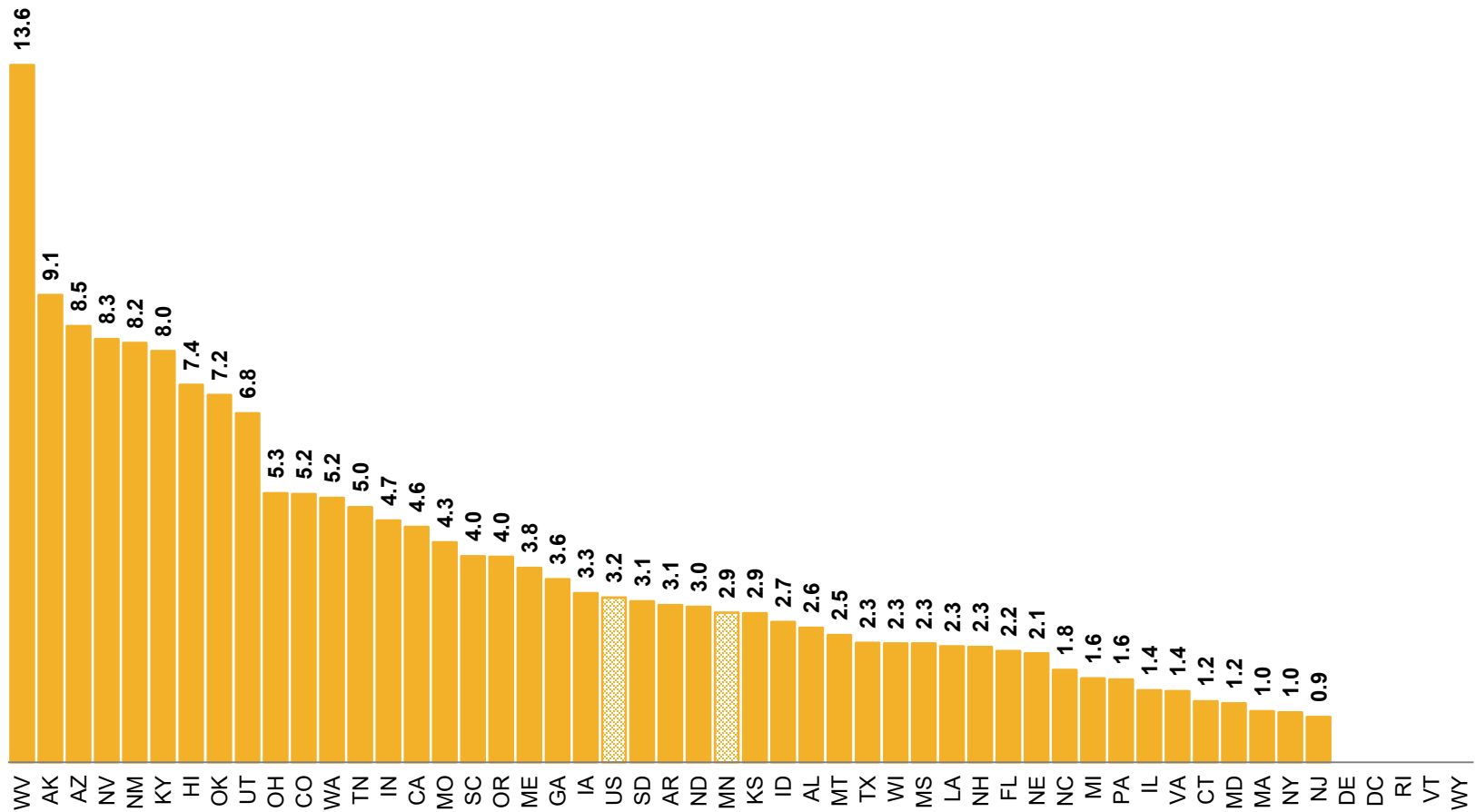
shadac
STATE HEALTH ACCESS DATA ASSISTANCE CENTER

Number of Minnesota Psychostimulant Deaths, *2000-2017*

7

161

| | | | | | | | | | | | | | | | | | |
|250|
|200|
|150|
|100|
|50|
|0|

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017

shadac
STATE HEALTH ACCESS DATA ASSISTANCE CENTER

Number of Minnesota Drug Overdose Deaths,
2000-2018 (preliminary)

Legend: Opioids · Psychostimulants (meth.) · Cocaine

Preliminary (2018)

331	Opioids (total)
161	Psychostimulants
51	Cocaine
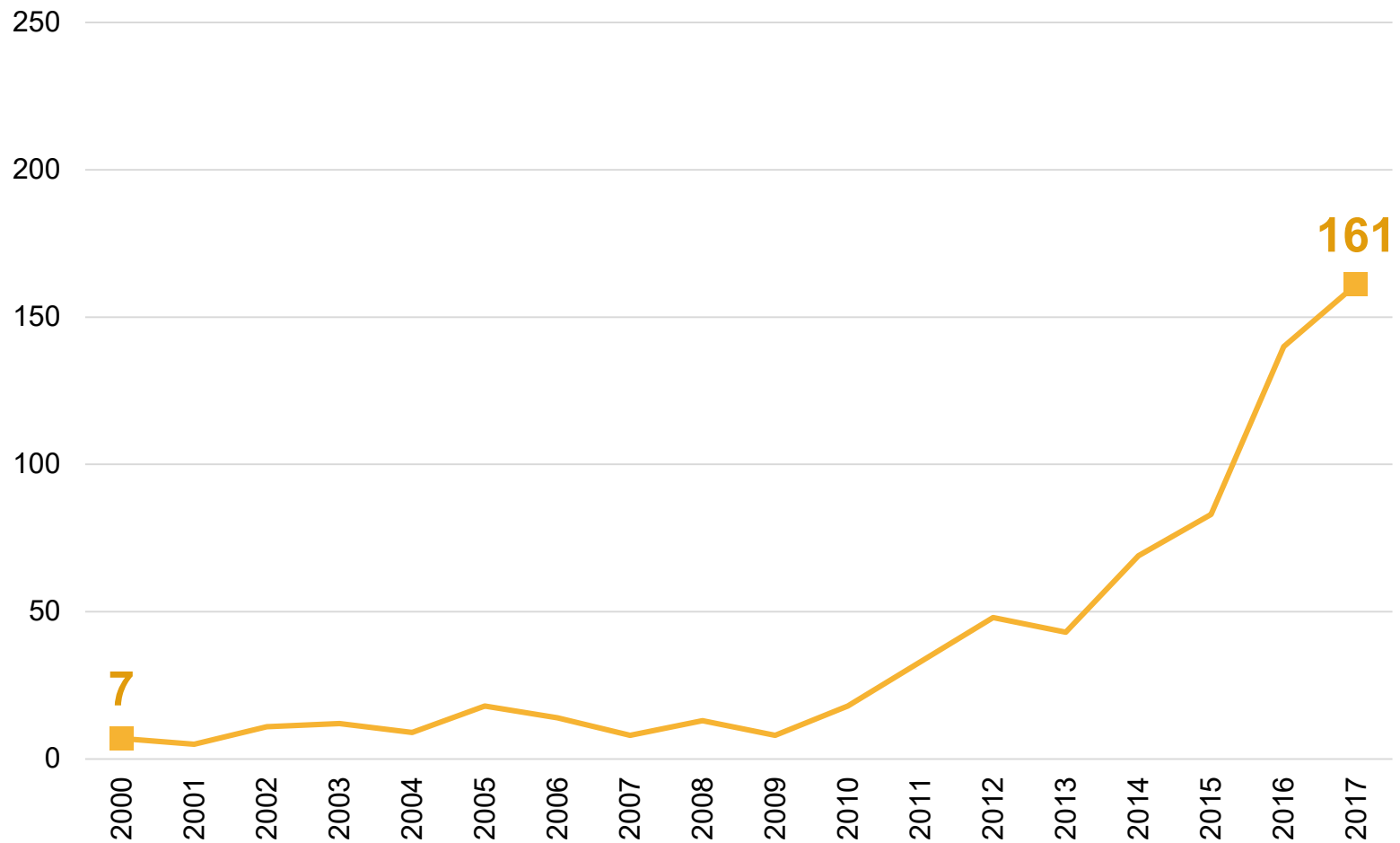
shadac
STATE HEALTH ACCESS DATA ASSISTANCE CENTER
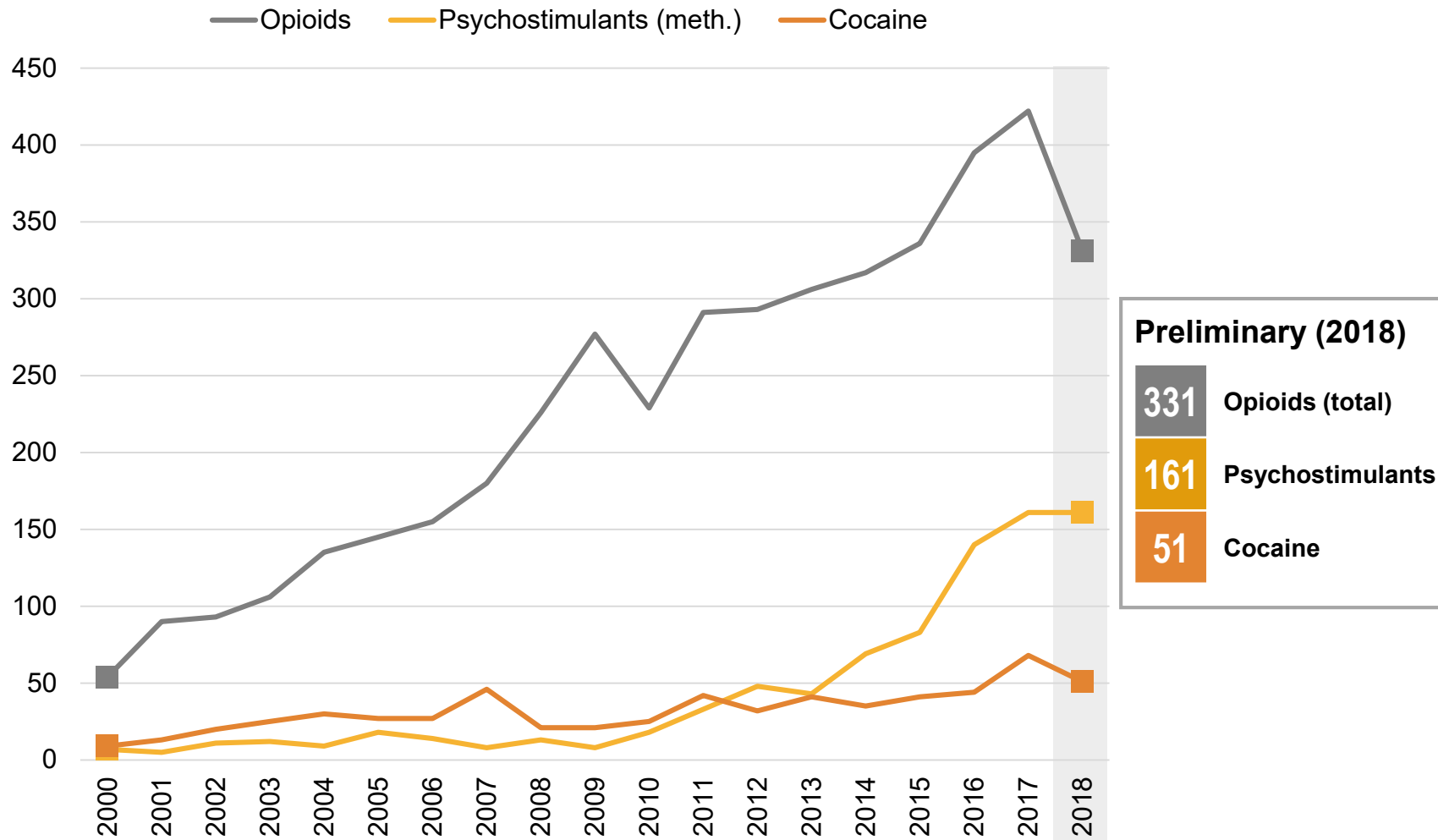
Visit StateHealthCompare.SHADAC.org
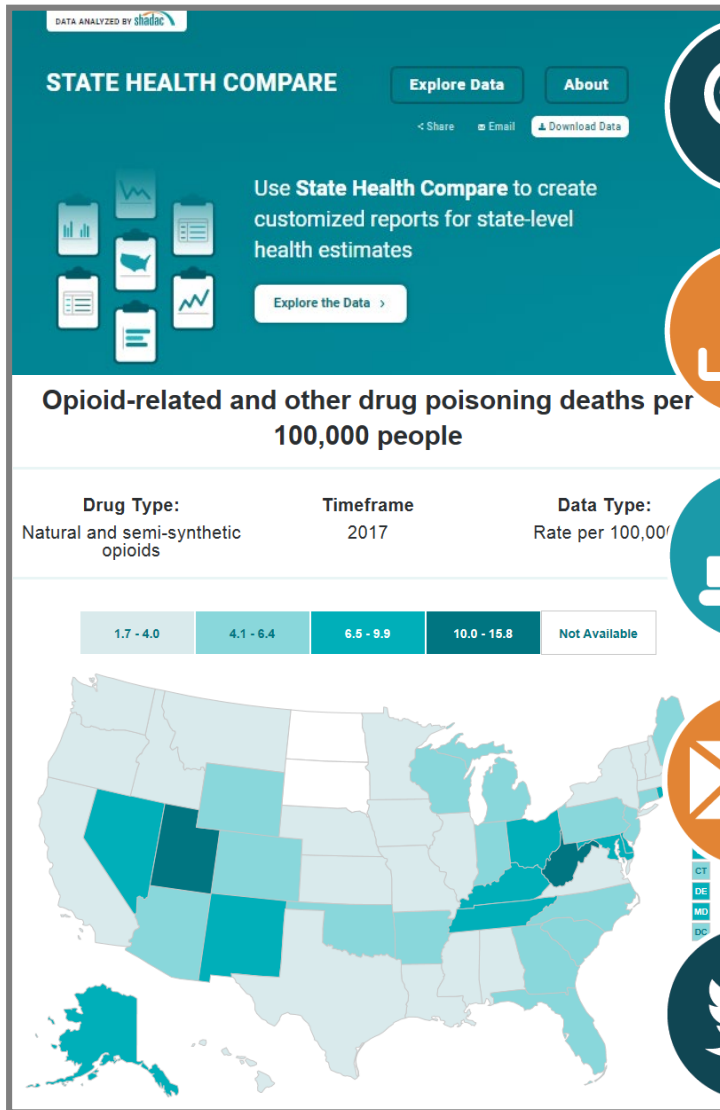
ACCESS State-level estimates related to the Culture of Health and heath care

DOWNLOAD customized reports and select data as an excel file

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

SUBSCRIBE to SHADAC's e-newsletter to stay updated on the latest resources

FOLLOW us on Twitter *@shadac*

SHADAC Opioid Resources Webpage
SHADAC.org/resource-opioids

Thank you

Colin Planalp, MPA
Senior Research Fellow
cplanalp@umn.edu

State Health Access Data Assistance Center (SHADAC)
University of Minnesota, Minneapolis
www.SHADAC.org