

# **Preventing Overdose Deaths: A Guide to Co-Prescribing Naloxone**

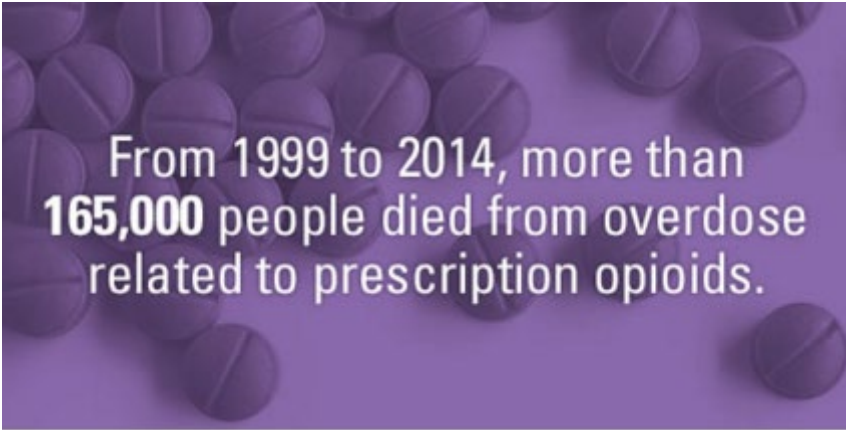
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# Conflict of Interest

- I have no financial relationships or conflicts of interest to disclose





From 1999 to 2014, more than  
**165,000** people died from overdose  
related to prescription opioids.

Source: CDC, 2016



**In 2015, opioid overdose  
killed more than 33,000  
people in the U.S.**

Source: CDC, 2016



**In 2016, opioid overdose  
killed more than 63,000  
people in the U.S.**

Source: CDC, 2017



**In 2017, the average life expectancy in the U.S. dropped by 2 years**

Source: CDC, 2017



**The last time U.S. life  
expectancy dropped  
similarly was in 1918**

Source: CDC, 2017



# During the influenza pandemic

Source: CDC, 2017





# Learning Objectives

- Describe the scope and evolution of the opioid overdose epidemic in the United States
- Identify situations which present a risk for accidental opioid overdose
- Describe emergency medical services (EMS) limitations in rapidly responding to opioid overdose in Oklahoma
- Prescribe naloxone for appropriate patients
- Discuss use of naloxone with patients, caregivers/families and the community



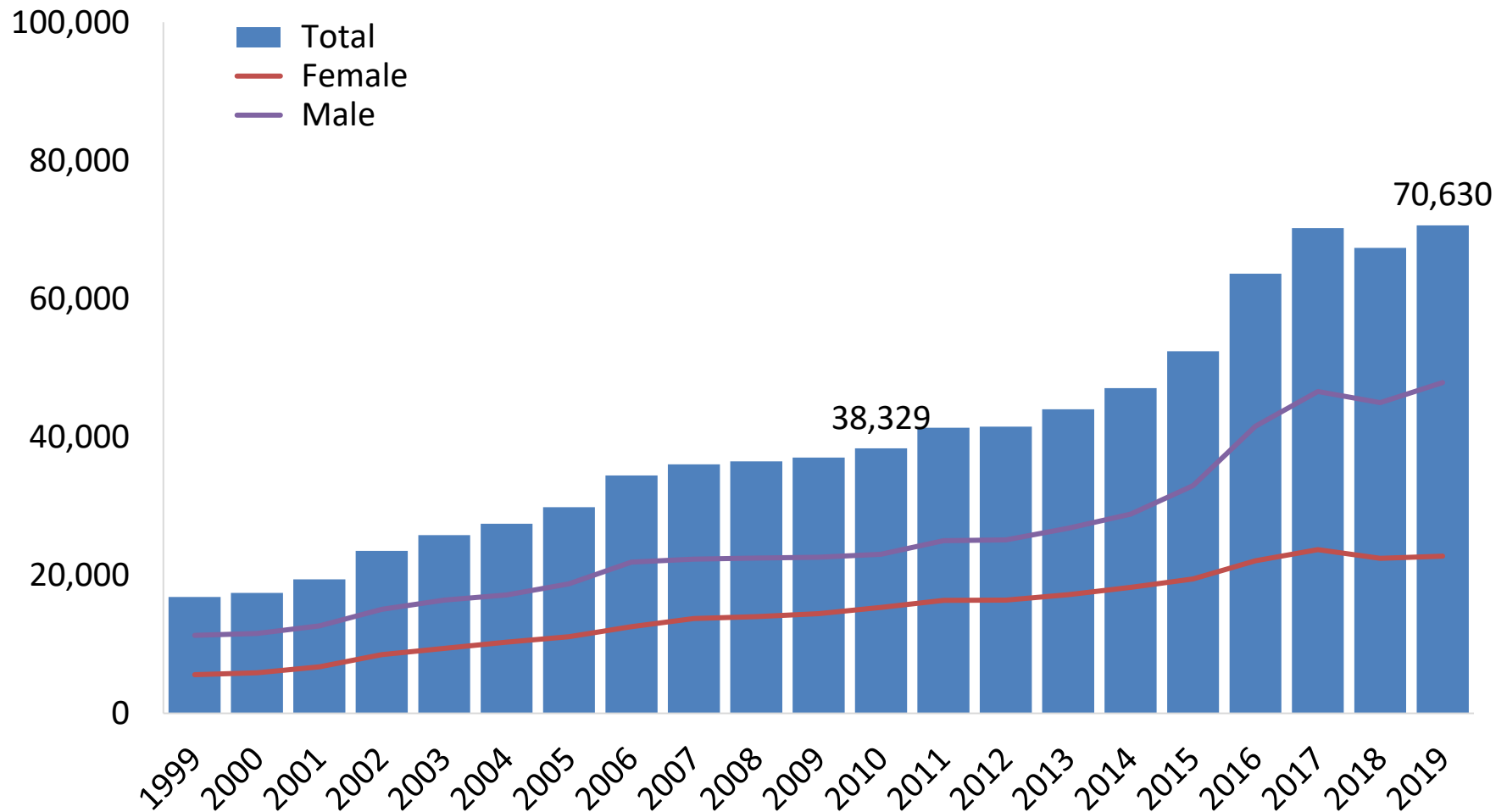
# Overdose: Leading Cause of Premature Death

- From 1999 to 2016 the age-adjusted rate of drug overdose deaths in the U.S. **tripled**
  - 1999: 6.1/100,000
  - 2016: 19.8/100,000
- Rate has increased roughly 10% per year from 1999-2016

Source: Hedegaard H, Warner M, Miniño AM. Drug overdose deaths in the United States, 1999–2016. NCHS Data Brief, no 294. Hyattsville, MD: National Center for Health Statistics. 2017.



# Overdose: Gender Disparity

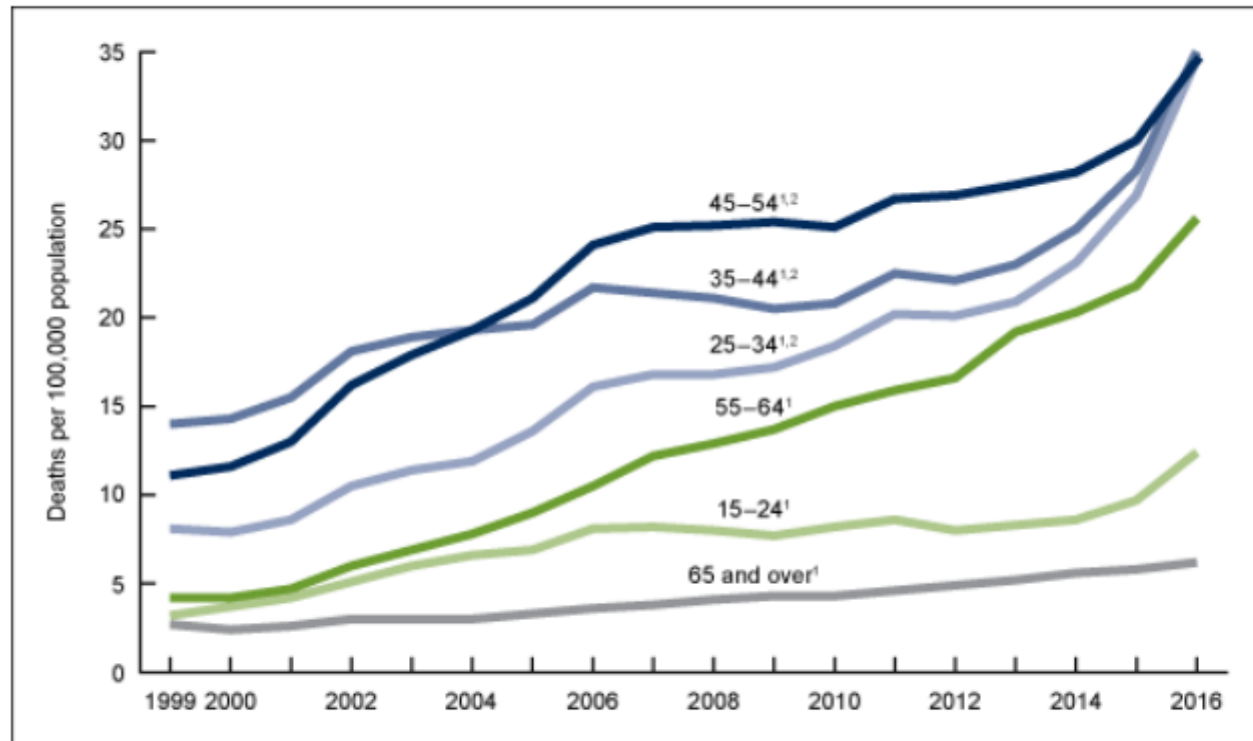


\*Includes deaths with underlying causes of unintentional drug poisoning (X40–X44), suicide drug poisoning (X60–X64), homicide drug poisoning (X85), or drug poisoning of undetermined intent (Y10–Y14), as coded in the International Classification of Diseases, 10th Revision.  
Source: Centers for Disease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



# Overdose: Age Disparity

Figure 2. Drug overdose death rates, by selected age group: United States, 1999–2016



<sup>1</sup>Significant increasing trend from 1999 to 2016 with different rates of change over time,  $p < 0.05$ .

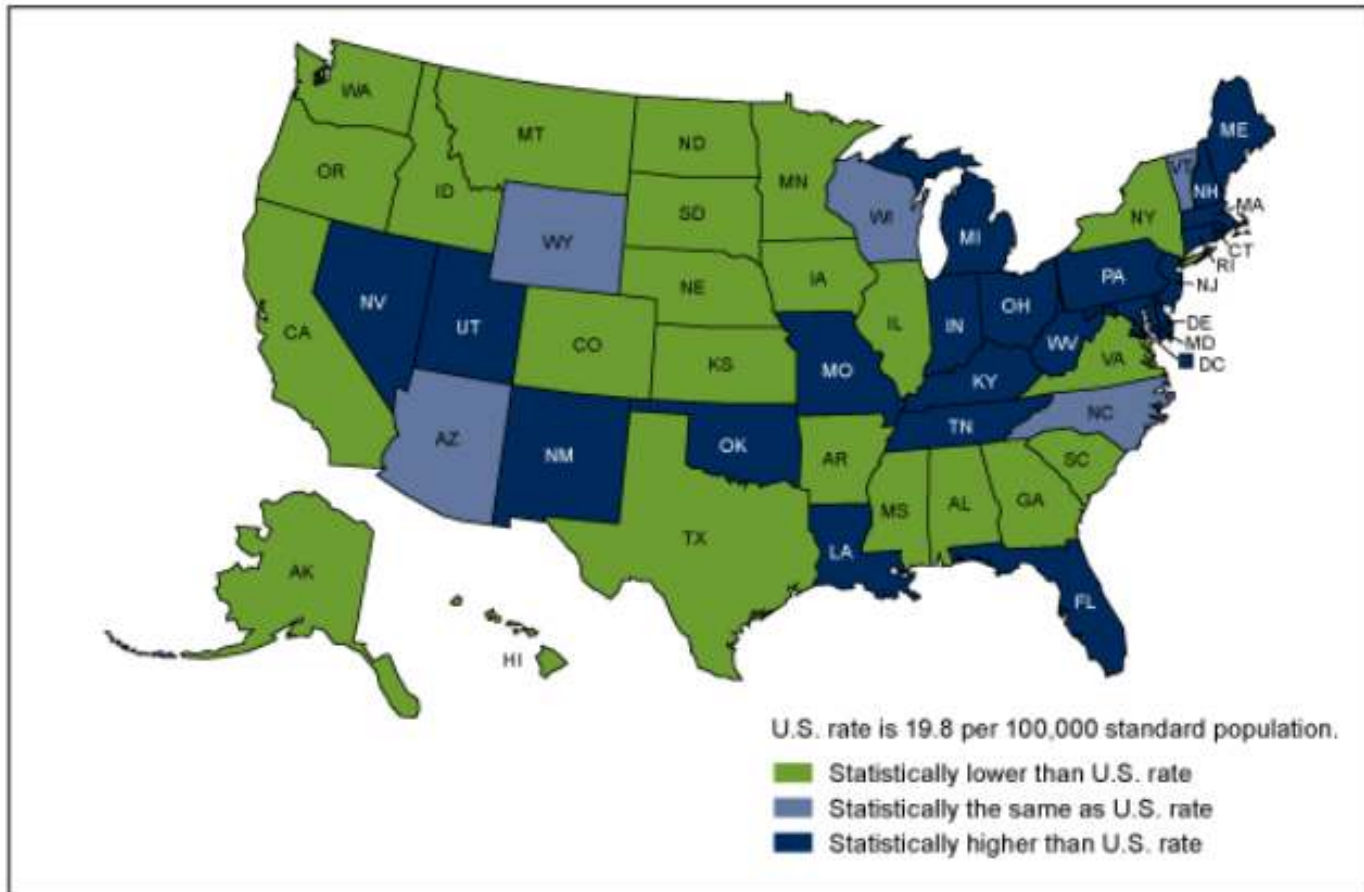
<sup>2</sup>2016 rate was significantly higher than for the rate for age groups 15-24, 55-64, and 65 and over,  $p < 0.05$ .

Source: Source: Hedegaard H, Warner M, Miniño AM. Drug overdose deaths in the United States, 1999–2016. NCHS Data Brief, no 294. Hyattsville, MD: National Center for Health Statistics. 2017.



# Overdose: Geographic Distribution

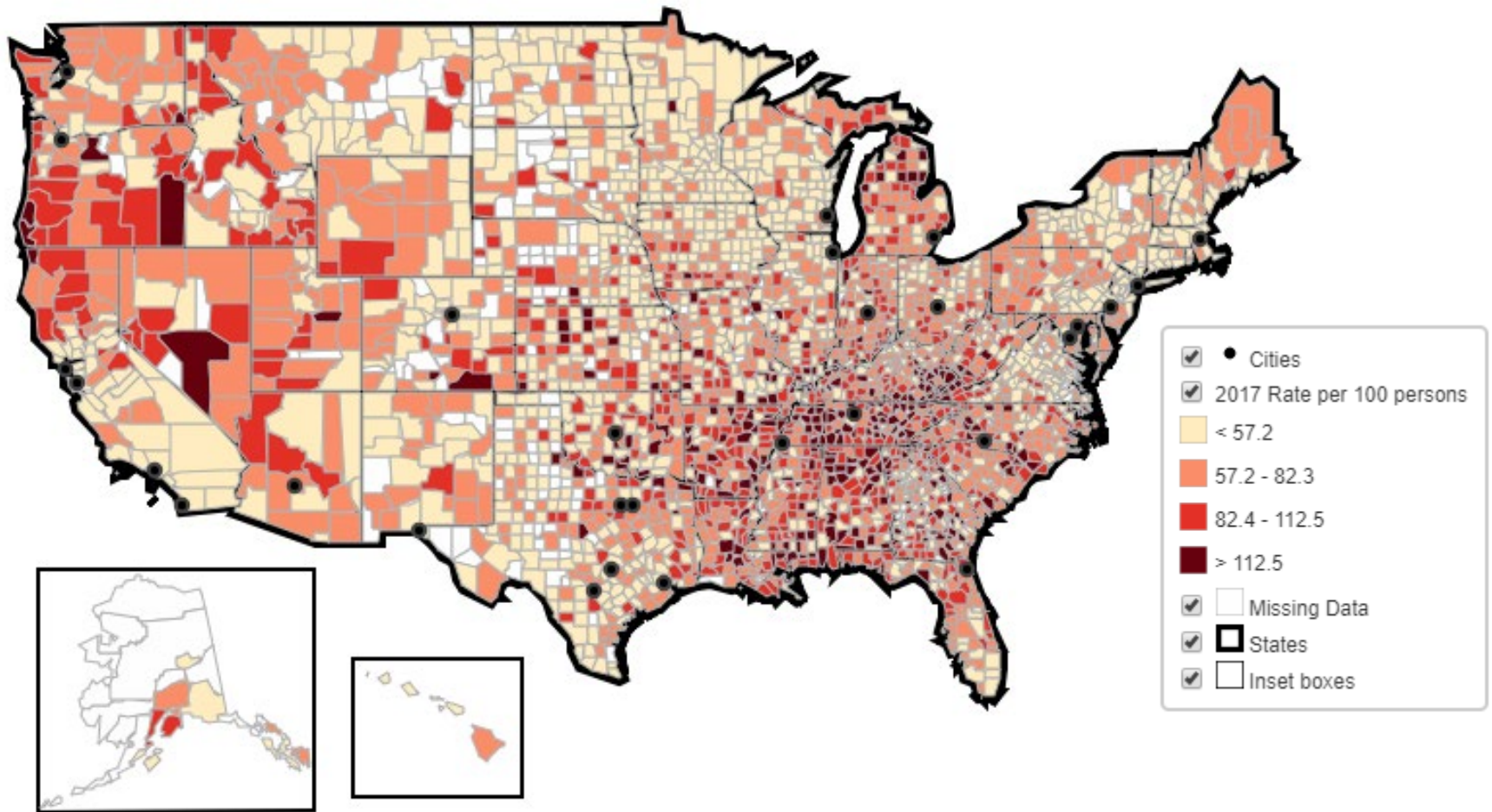
Figure 3. Age-adjusted drug overdose death rates, by state: United States, 2016



Source: Source: Hedegaard H, Warner M, Miniño AM. Drug overdose deaths in the United States, 1999–2016. NCHS Data Brief, no 294. Hyattsville, MD: National Center for Health Statistics. 2017.



# Prescribing: Geographic Distribution, 2017

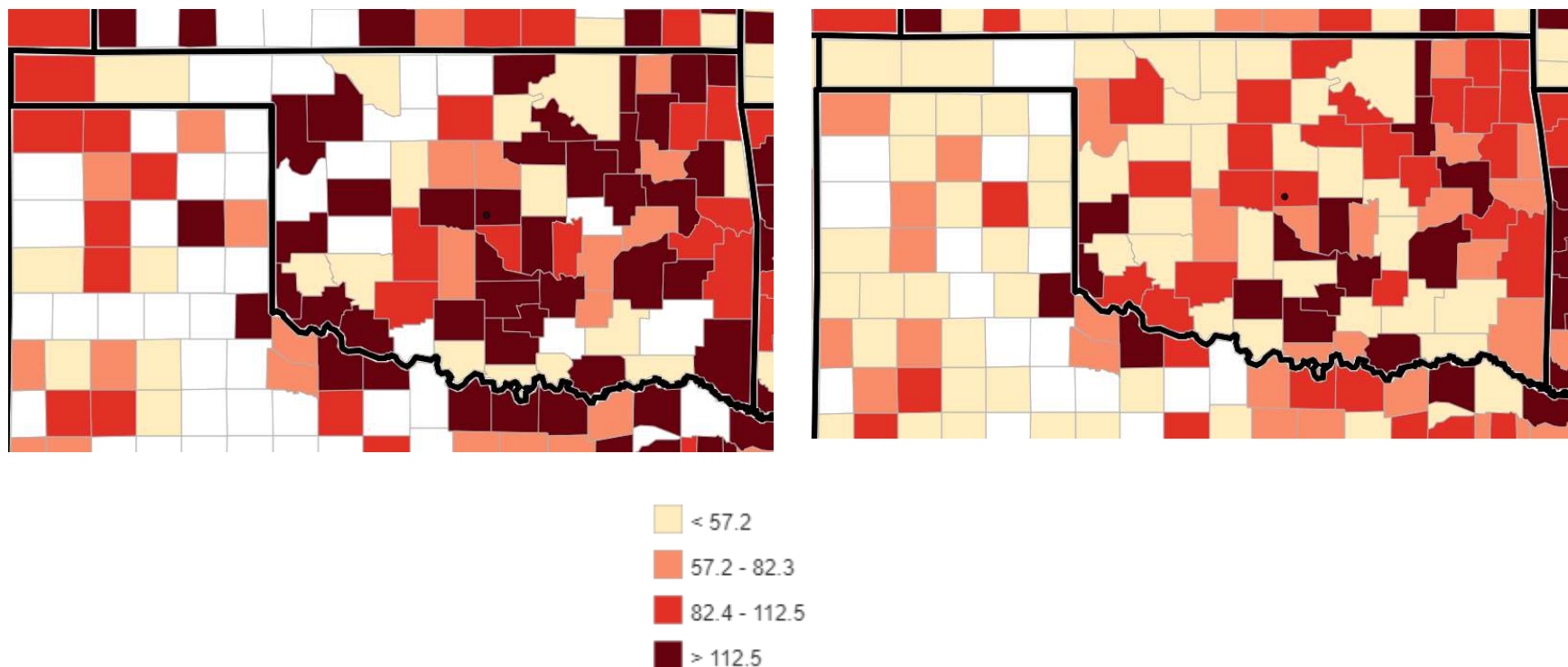


Source: CDC





# Prescribing: Oklahoma, 2012 vs. 2017



Source: CDC



# There Is Some Good News

## In 2012:

- Prescribing:
  - Nationally: 81 prescriptions per 100 people
  - Oklahoma: 128 per 100
- Oklahoma death rate #10 in nation

## In 2017:

- Prescribing:
  - Nationally: 58.7 per 100
  - Oklahoma: 88.1 per 100
    - 68% decrease in prescriptions
- Oklahoma death rate #29 in nation





# Not All Opioids Are Prescribed

## Death maps show where despair is killing Americans

Alcohol deaths are down, but drug overdoses are way up



— A heroin user prepares to shoot up on the street in a South Bronx neighborhood which has the highest rate of heroin involved overdose deaths in the city. Spencer Platt / Getty Images file

- In 3 rural Oklahoma counties (1980-2014):
  - Mortality rate  $+>5000\%$
  - Mortality due to self-harm: top 1% of U.S.
  - Life expectancy dropped 12-20 years
- Nationwide:
  - Mortality due to drug use disorder  $+>600\%$

Sources: Image, NBC News

Data: Dwyer-Lindgren L et al. Trends and Patterns of Geographic Variation in Mortality from Substance Use Disorders and Intentional Injuries Among US Counties, 1980-2014. *JAMA*. 2018; 319(10):1013-1023



# Opioid Overdose: Three Waves

## RISE IN OPIOID OVERDOSE DEATHS IN AMERICA

### A Multi-Layered Problem in Three Distinct Waves

**399,000** people died  
from an opioid overdose (1999–2017)

**1990s**

mark a rise in  
**prescription opioid**  
overdose deaths



#### Rx OPIOIDS

Include natural, semi-synthetic,  
and methadone and can be  
prescribed by doctors

**2010**

marks a rise in  
**heroin**  
overdose deaths



#### HEROIN

An illegal opioid

**2013**

marks a rise in  
**synthetic opioid**  
overdose deaths



#### SYNTHETIC OPIOIDS

Such as fentanyl and tramadol  
are very powerful and can  
be illegally made

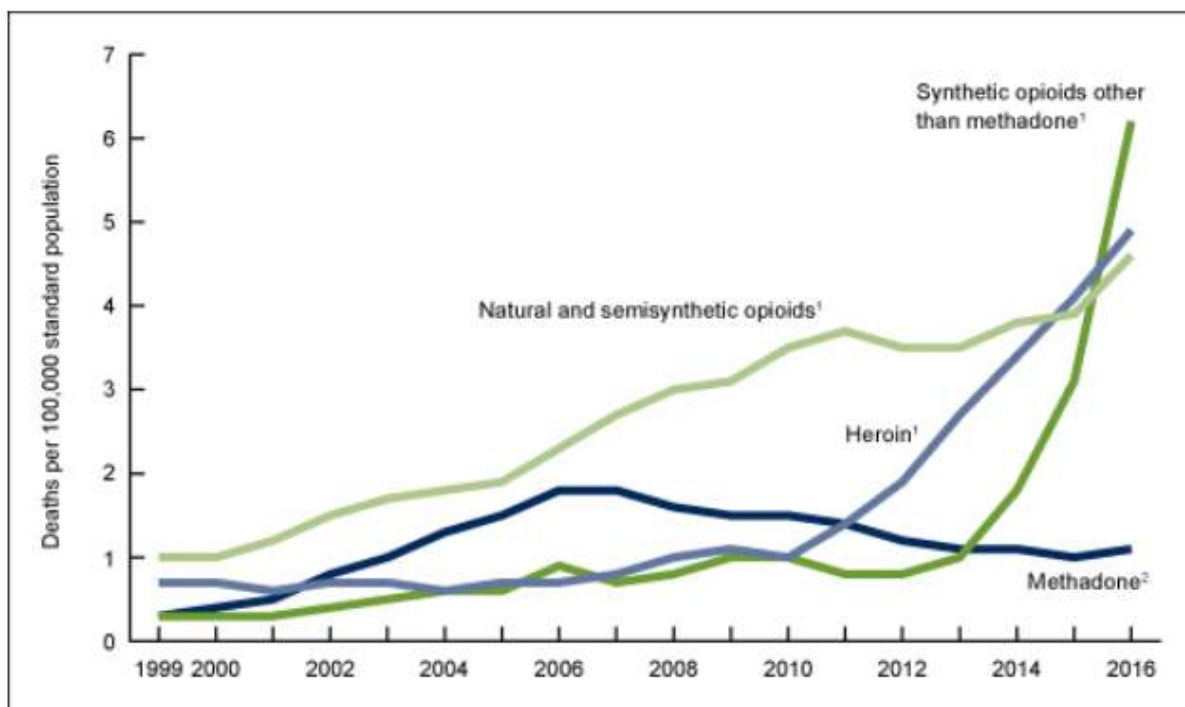


Learn more about the evolving opioid overdose crisis: [www.cdc.gov/drugoverdose](http://www.cdc.gov/drugoverdose)



# Overdose: Drug Categories

Figure 4. Age-adjusted drug overdose death rates, by opioid category: United States, 1999–2016



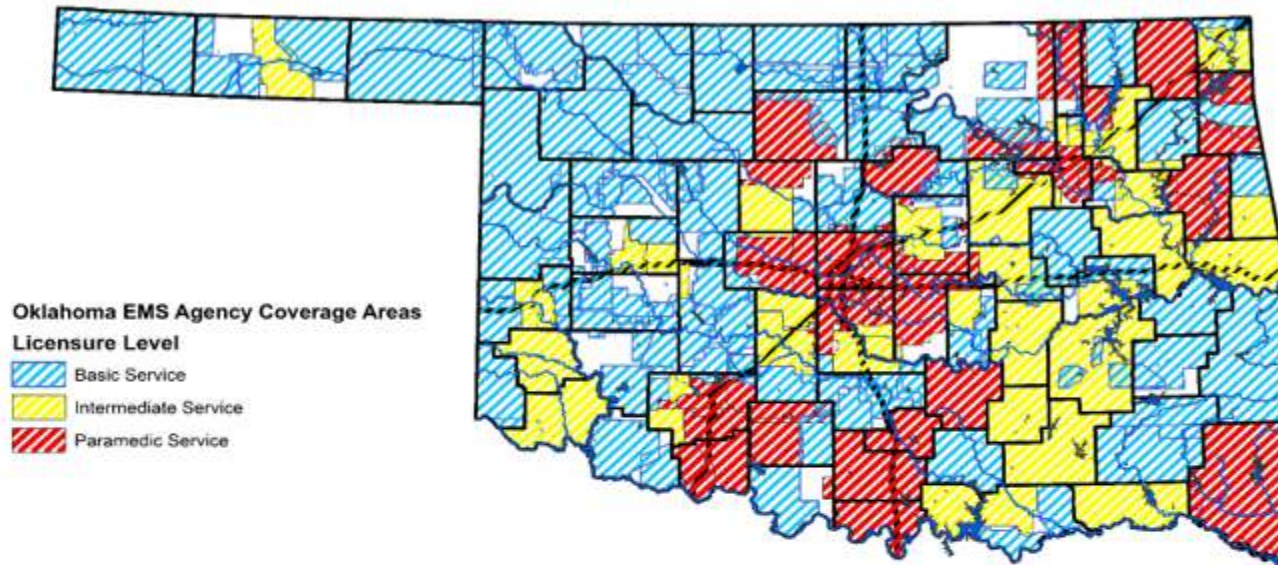
<sup>1</sup>Significant increasing trend from 1999 to 2016 with different rates of change over time,  $p < 0.05$ .

<sup>2</sup>Significant increasing trend from 1999 to 2006, then decreasing trend from 2006 to 2016,  $p < 0.05$ .

Source: Hedegaard H, Warner M, Miniño AM. Drug overdose deaths in the United States, 1999–2016. NCHS Data Brief, no 294. Hyattsville, MD: National Center for Health Statistics. 2017.



# Overdose: Not All EMS Is Equal



Oklahoma EMS Agency Coverage Areas, by Agency Licensure Level, 2016

**Notes:** Map reflects current OSDH EMS Agency Licensure data as of 01/01/2016

**Data Source:** OSDH Emergency Systems EMS Agency Licensure data

**Created:** 06.21.2016

**Created by:** Johnnie L. Gilpen Jr, MS NRP GISP (johnnieg@health.ok.gov)

**Projection/Coordinate System:** NAD 1983 State Plane Oklahoma North FIPS 3501



Disclaimer: This map is a compilation of records, information and data from various city, county and state offices and other sources, affecting the area shown, and is the best representation of the data available at the time. The map and data are to be used for reference purposes only. The user acknowledges and accepts all inherent limitations of the map, including the fact that the data are dynamic and in a constant state of maintenance.

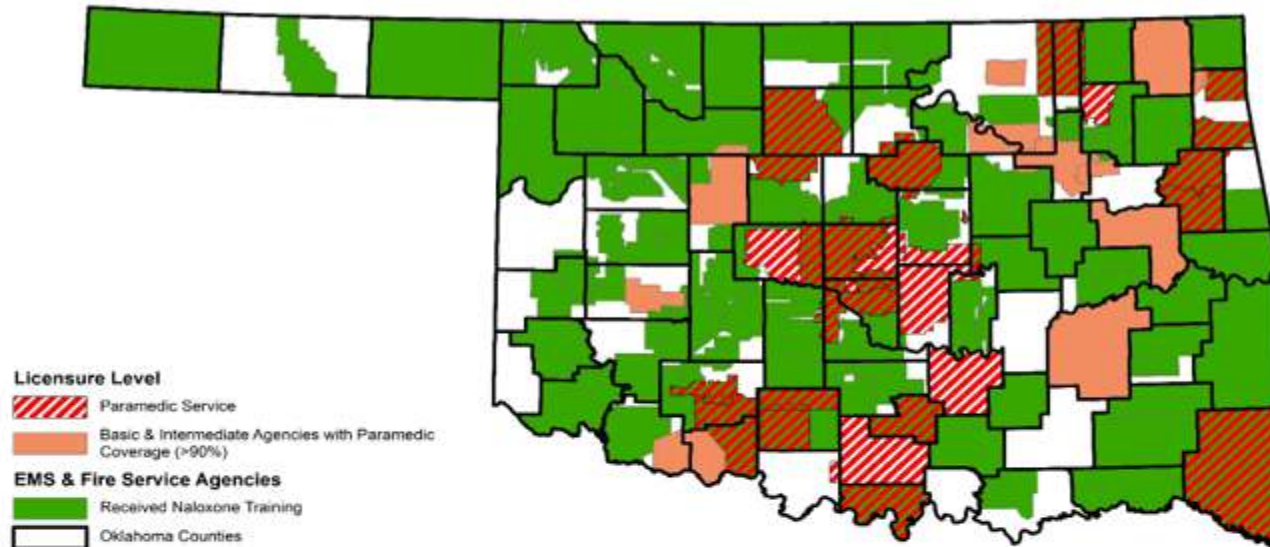


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Protective Health Services  
Oklahoma State Department of Health





# Overdose: Not All EMS Is Equal



## Oklahoma EMS Agencies Participating in the 2016 Naloxone Education and Distribution Program

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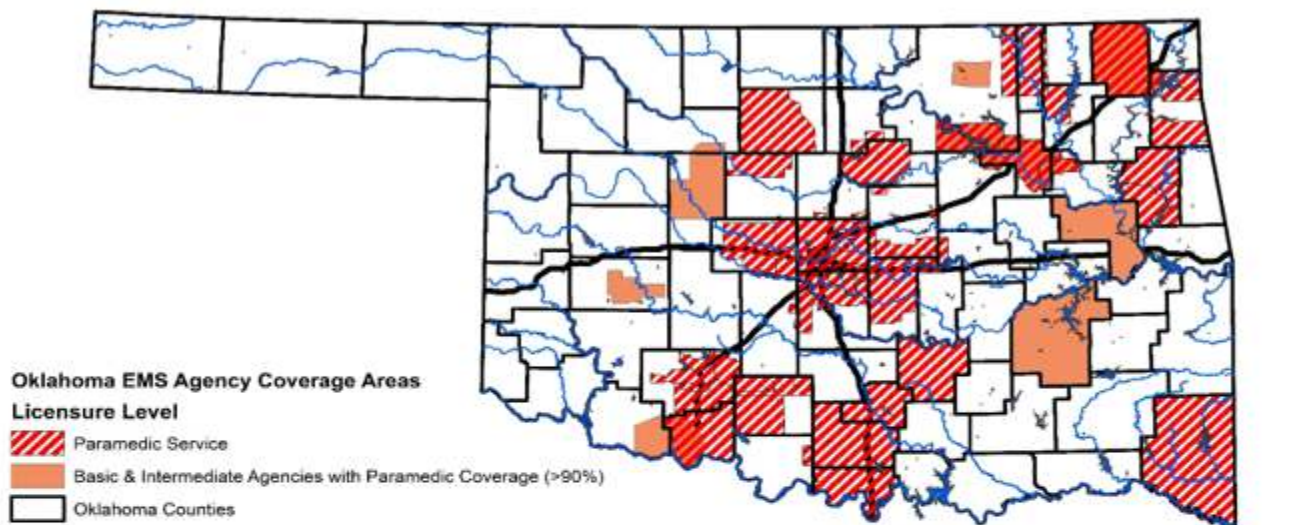
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# Overdose: Not All EMS Is Equal



Oklahoma EMS Agencies with Paramedic Level Coverage,  
90% of the time or greater, 24/7/365

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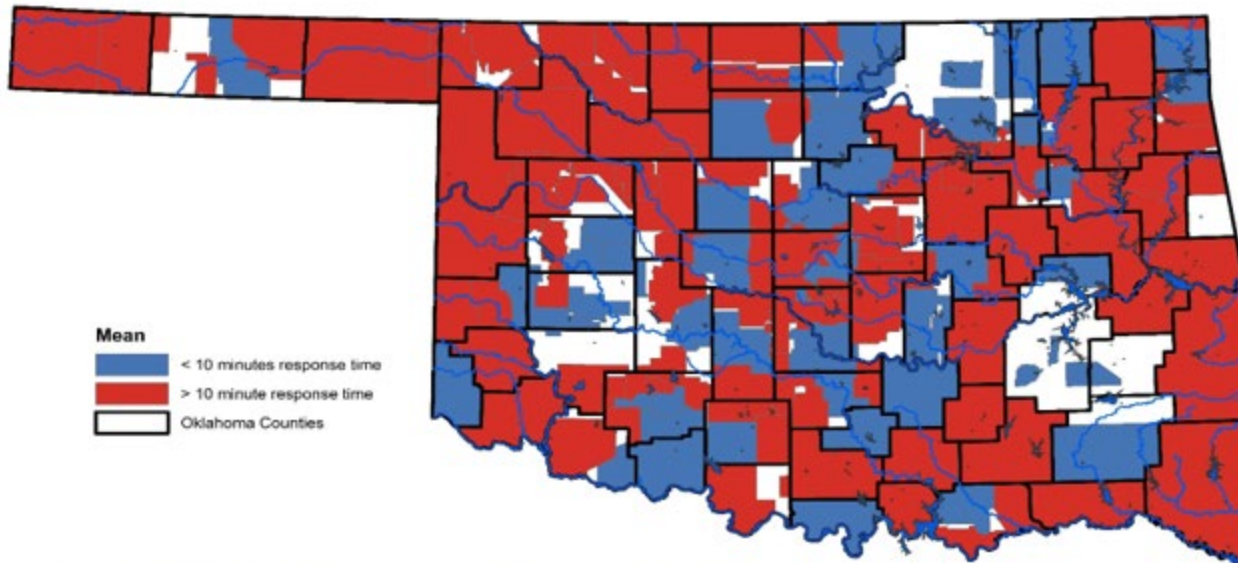
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# Overdose: Response Time Matters



## Oklahoma EMS Agencies - Mean Response Time, 2015

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# Takeaway: Prescribe Naloxone!

- To more patients than you may think
- In more situations than you may consider
- Examples





# Takeaway: Prescribe Naloxone!



- “Mayra”
- 80 years old
- Mild dementia, lives independently
- Chronic joint pain
- Home Health loads her pill box
- Opioids are low dose and secured properly

\*photos are not actual patients, stories have been altered to protect identities



# Prescribe Naloxone! Why?



- Has an 18 month old great-granddaughter
- Lost a pill one day
- Toddlers are curious beasts
- Family made it to hospital in time

\*photos are not actual patients, stories have been altered to protect identities



# Takeaway: Prescribe Naloxone!



- “Jacob”
- 55 years old
- Recent diagnosis of cancer (laws/guidelines don’t apply, right?)
- Just completed major surgery
- Starting chemo/radiation

\*photos are not actual patients, stories have been altered to protect identities



# Prescribe Naloxone! Why?



- He's putting on a brave face
- He hasn't reached out to anyone
- Has a moment of desperation, took more than prescribed to cope (pain? depression?)
- His wife finds him
- He doesn't make it
- Cause of death listed as cancer

\*photos are not actual patients, stories have been altered to protect identities



# Naloxone: Patient Profile

## Everyone

- Prescribed opioids at high dose ( $>90$ MME)
- With co-prescription for sedating medication, esp. benzodiazepines
- Substance use disorder (esp. following abstinence)
- Past history of opioid overdose

## Strongly consider if

- Prescribed opioids at any dose
- Opioid naïve patients
- Children in the home
- Cancer patients



# Naloxone: Clinical Pearl

Writing any prescription, by itself, will NOT  
save a life



# Naloxone: Ensure Success

- Educate EVERYONE (and train your staff)
  - patient
  - caregivers/friends/family
- Give handouts for posting on refrigerator, other areas
- Prescribe delivery method that is
  - affordable
  - easy to use
- Prescribe multiple doses (at least 2)
- Ensure storage in accessible area



# Naloxone: Educate for Success

- Recognize signs of overdose:
  - Pinpoint pupils
  - Not arousable
  - Infrequent, labored or no breathing
    - Blue lips, blue fingertips
    - Gurgling or snoring noises may be present





# Caregiver Response to Overdose

- Stimulate patient → no response
- Start rescue measures
  - If alone, call 911 before starting
  - If another person available, have them call 911
- Administer naloxone, give 2 rescue breaths, continue CPR as needed
- If patient responds, lay them in rescue position, monitor
- Keep another naloxone handy



# What Is Happening?

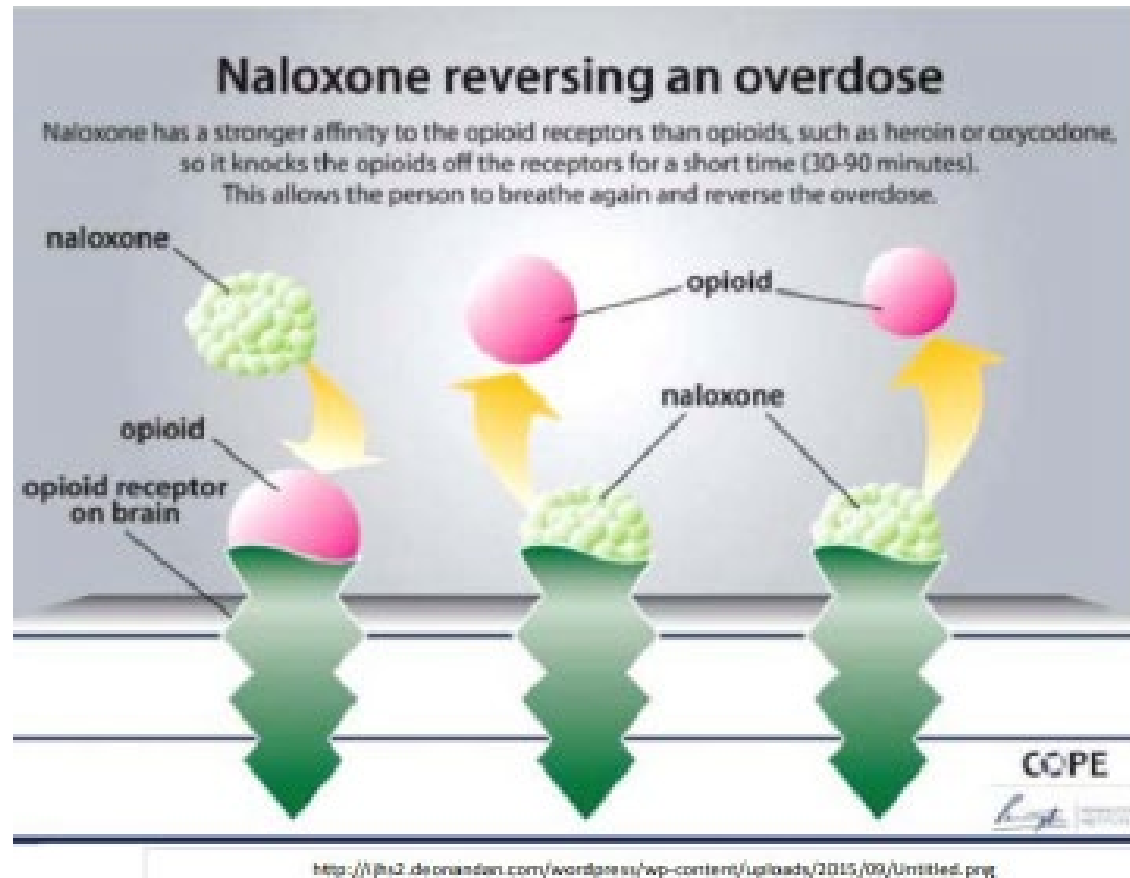


Photo credit: Image Credit: Pennington Institute's Community Overdose Prevention and Education (COPE) Project; Adapted from art work by Maya Doe-Simkins



# Prescribing Naloxone

- Multiple formulations
- Name brands
  - Narcan\* (inhaled)
  - Evzio\* (injected, voice/visual prompts)
- Generics
  - Injectable
  - Intranasal jet



\*Name brand



# Prescribing Naloxone

- Brand not better than generic
  - Might be easier to use
  - Cost affects compliance (but so does ease of use)
  - OHCA now covers Narcan\*

\*Name brand



# Prescribing Naloxone

- To prescribe generic:
  - Naloxone 2mg/2ml (some EMR have 1mg/1ml, confuses pharmacy)
  - Use as directed and call 911 immediately
  - #2, 2 refills
- To prescribe nasal inhaler:
  - Narcan\*
  - Use as directed and call 911
  - #one box (2 inhalers), 2 refills



\*Name brand



# Prescribing Naloxone

- Cash price (goodrx.com, accessed 2/5/19)
  - Generic syringe with needle (2) \$35.98-62.94
  - Narcan\* intranasal (box of 2) \$130.00
  - Evzio\* injection (box of 2) \$3,800.00
  - Nasal atomizer (as of 2/5/19)
    - Amazon.com \$12.99
    - Lassiter Drug \$10.00

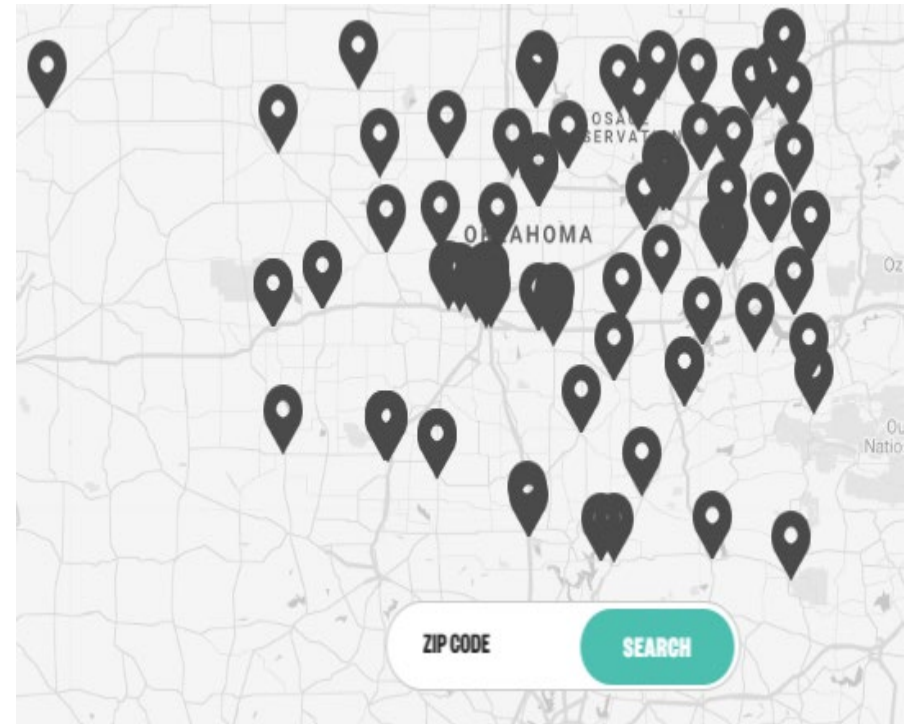


\*Name brand



# Prescribing Naloxone: Free Options

- 94 locations
- Mailed or curbside pickup options
- No prescription required
- Most are mental health facilities



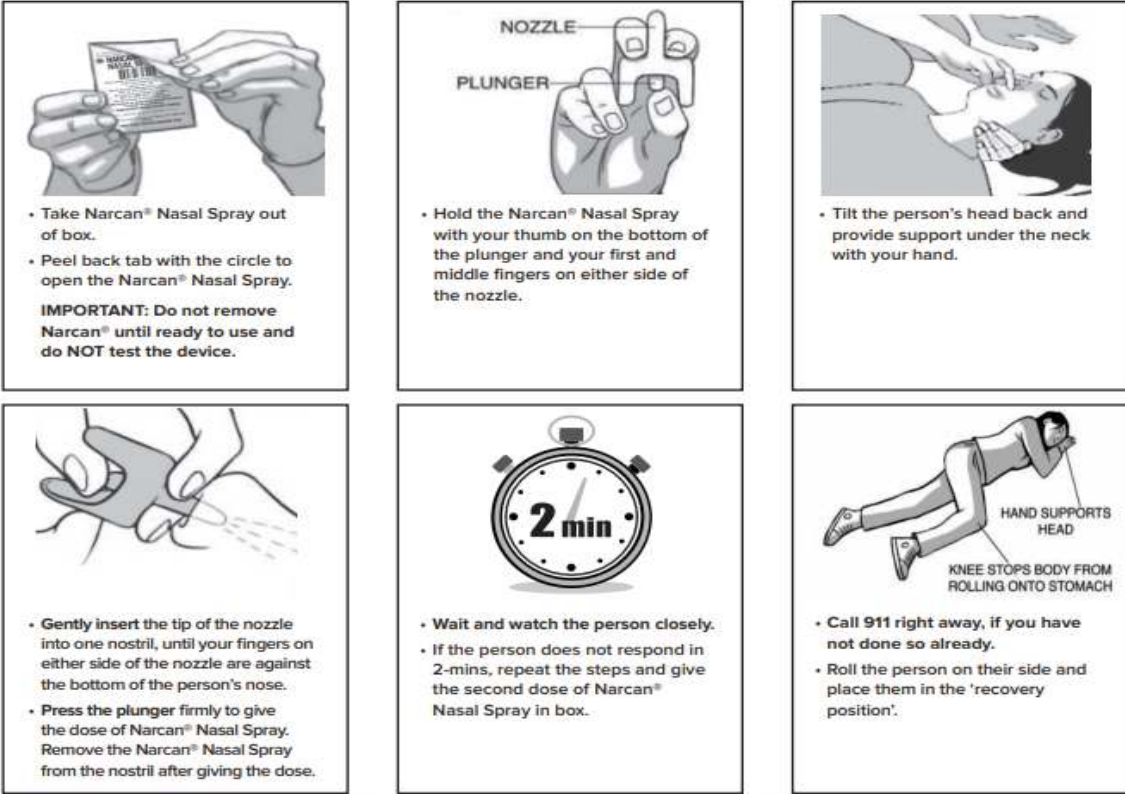
- For information:  
[www.okimready.org/overdose](http://www.okimready.org/overdose)





# Prescribing Naloxone: Educational Materials

## How to give Narcan® Nasal Spray



The infographic is divided into six panels, each with an illustration and instructions:

- Panel 1:** Illustration of hands opening the Narcan box. Instructions: Take Narcan® Nasal Spray out of box. Peel back tab with the circle to open the Narcan® Nasal Spray. **IMPORTANT:** Do not remove Narcan® until ready to use and do NOT test the device.
- Panel 2:** Illustration of the hand holding the device with labels for 'NOZZLE' and 'PLUNGER'. Instructions: Hold the Narcan® Nasal Spray with your thumb on the bottom of the plunger and your first and middle fingers on either side of the nozzle.
- Panel 3:** Illustration of a person's head being tilted back. Instructions: Tilt the person's head back and provide support under the neck with your hand.
- Panel 4:** Illustration of the nozzle being inserted into the nostril. Instructions: Gently insert the tip of the nozzle into one nostril, until your fingers on either side of the nozzle are against the bottom of the person's nose. Press the plunger firmly to give the dose of Narcan® Nasal Spray. Remove the Narcan® Nasal Spray from the nostril after giving the dose.
- Panel 5:** Illustration of a clock showing 2 minutes. Instructions: Wait and watch the person closely. If the person does not respond in 2-mins, repeat the steps and give the second dose of Narcan® Nasal Spray in box.
- Panel 6:** Illustration of a person in the recovery position with labels 'HAND SUPPORTS HEAD' and 'KNEE STOPS BODY FROM ROLLING ONTO STOMACH'. Instructions: Call 911 right away, if you have not done so already. Roll the person on their side and place them in the 'recovery position'.

**If the person is not breathing, do rescue breathing (or CPR if you know it) ➡**

Sources: <http://www.drugpolicy.org/issues/naloxone> and <https://www.pharmacists.ca/news-events/news/how-to-use-naloxone-nasal-spray-in-a-few-simple-steps-new-video-and-infographic/> and [https://www.schoolhealthny.com/cms/lib/NY01832015/Centricity/Domain/85/Opioid%20NYSDOH\\_NalAdminStepsInfographic\\_2019.pdf](https://www.schoolhealthny.com/cms/lib/NY01832015/Centricity/Domain/85/Opioid%20NYSDOH_NalAdminStepsInfographic_2019.pdf)





# Prescribing Naloxone: Educational Materials

- Video also available
  - Narcan nasal spray:

<https://www.narcan.com/patients/how-to-use-narcan/>

Sources: <http://www.drugpolicy.org/issues/naloxone> and  
[https://www.ok.gov/health2/documents/UP\\_Naloxone\\_fact\\_sheet.pdf](https://www.ok.gov/health2/documents/UP_Naloxone_fact_sheet.pdf)



Thank you

