

# Naloxone For Opioid Overdose

Kirk Evoy, PharmD, BCACP, BC-ADM, CTTS

The University of Texas at Austin College of Pharmacy

University Health System



Discuss opioid overdose trends in the U.S. since 1999

Describe the role of naloxone in opioid overdose prevention

Identify common risk factors for opioid overdose

Recognize signs and symptoms of acute opioid overdose

Educate the public about opioid overdose prevention





### Disclosure

Kaléo (Evzio Autoinjector) and Adapt (NARCAN Nasal Spray) provided training devices and free naloxone to support Operation Naloxone.



# What is an opioid?



# **Opioid History**

Morphine

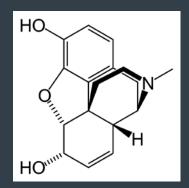
Codeine

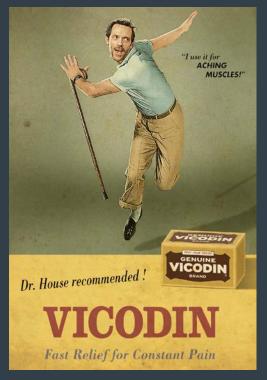
Hydrocodone

Oxycodone







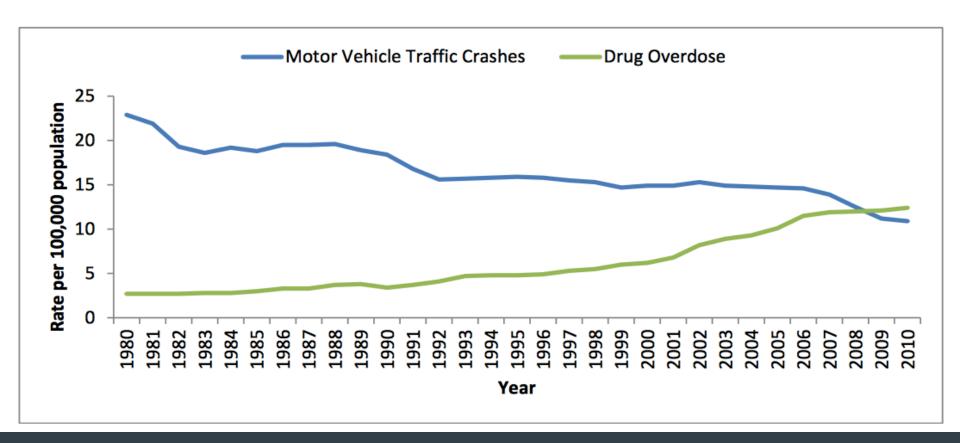


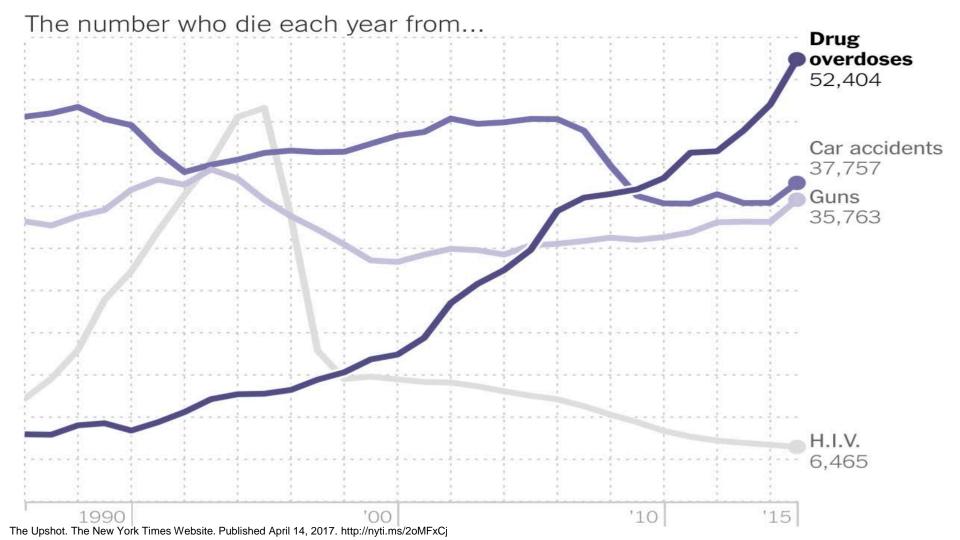




# Who in this room has been affected by an opioid overdose?

Figure 1. Rates of motor vehicle traffic and drug overdose deaths, United States, 1980-2010.







From 1999 – 2008...





From 1999 – 2008...

Prescribe: 1 x4

Death:  $\uparrow$  x4

Rehab: ↑ x6

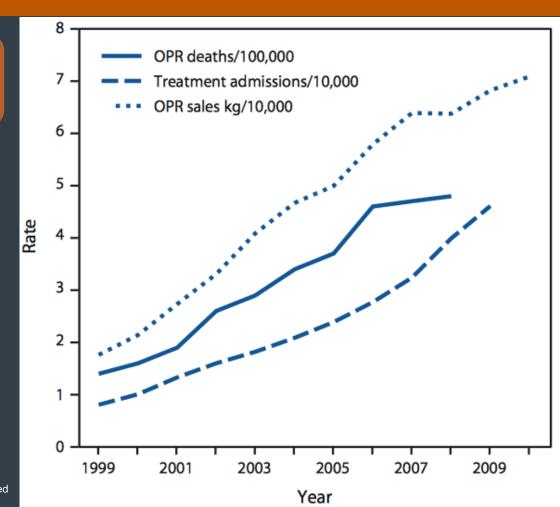




Figure 1. Age-adjusted rates for drug-poisoning deaths, by type of drug: United States, 2000–2013

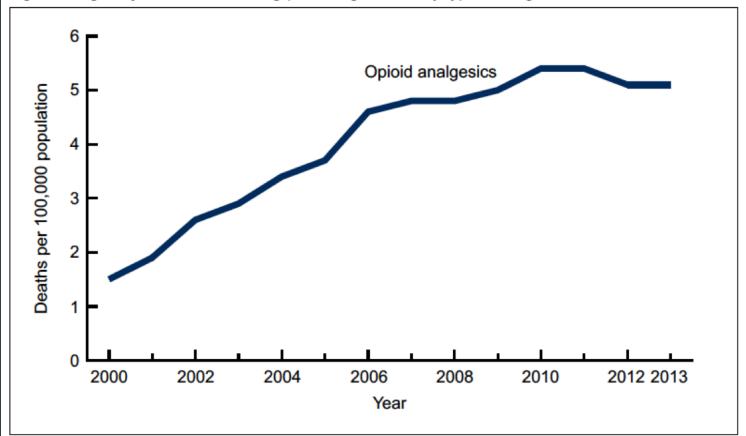
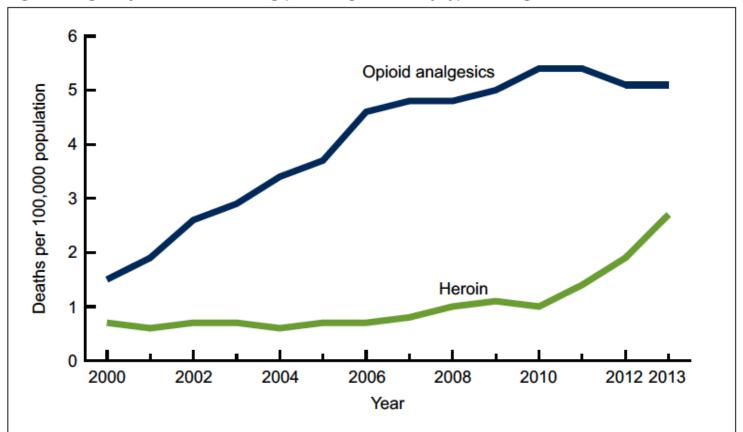




Figure 1. Age-adjusted rates for drug-poisoning deaths, by type of drug: United States, 2000–2013

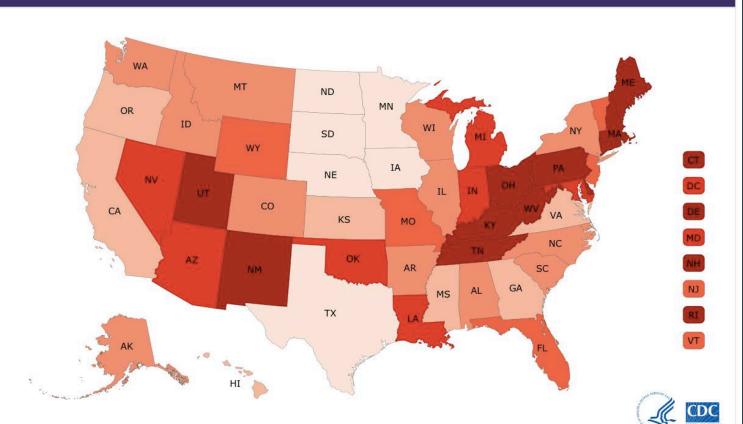








### Number and age-adjusted rates of drug overdose deaths by state, US 2015



### 2015 Age-adjusted rate

- 2.8 to 11.0
- 11.1 to 13.5
- 13.6 to 16.0
- 16.1 to 18.5
- 18.6 to 21.0
- 21.0 to 41.5



# Maternal Mortality

Death of mother during pregnancy, childbirth, or in year post-delivery

Texas = highest rate in U.S.

- 86% increase from 2010–2014
- Drug overdose = 2<sup>nd</sup> leading cause

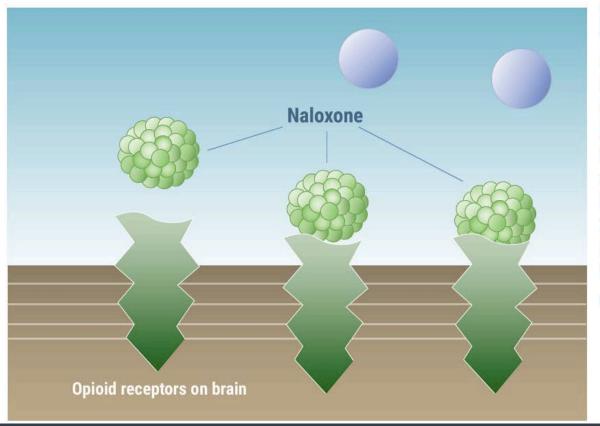




# How can we prevent overdose deaths?



FIGURE 4. NALOXONE MECHANISM OF ACTION<sup>7</sup>



Naloxone has a higher affinity to the opioid receptors than opioids like heroin or oxycodone, so it knocks other opioids off the receptors for 30-90 minutes. This reverses the overdose and allows the person to breathe.



### FIGURE 4. NALOXO



Naloxone has a higher affinity to the opioid receptors than opioids like heroin or oxycodone, so it knocks other opioids off the receptors for 30-90 minutes. This reverses the overdose and allows the person to breathe.



## "Take Home" Naloxone

American Medical Association endorses naloxone access for at-risk individuals

### Primary Care Prescriber Survey

- 33% recall receiving education
- 8% have ever prescribed it





### Naloxone Access Laws

46 U.S. states have enacted legislation

### Core Components

- Standing Orders
- Third Party Prescribing
- Liability Protection





### **Standing Orders**

Pharmacists can dispense naloxone without a prescription under physician's authority

### **Third Party Prescribing**

The person receiving naloxone does not have to be the person at risk for overdose

### **Liability Protection**

Persons who prescribe/dispense/administer naloxone are protected from liability



## Texas SB 1462

**DOES** include the core components

**DOES NOT** include medical amnesty







# Who is at risk for an opioid overdose?



<b>✓</b>	Risk Factors for Opioid Overdose
	History of opioid poisoning or overdose
	History of illicit or nonmedical opioid use
	Use of methadone or buprenorphine for opioid use disorder
	High-dose prescription opioid use (>50 milligram morphine equivalents daily)
	Long-term prescription opioid use (>90 days continuously for non-cancer pain)
	Long-acting or extended-release prescription opioid use
	Use of opioids from multiple prescribers or multiple pharmacies
	Use of interacting drugs or medications (alcohol, sedatives, antidepressants)
	Underlying disease of key organs (lung, kidney, liver, heart, HIV/AIDS)
	Recent release from drug treatment/detoxification or correctional facility



# What does an opioid overdose look like?

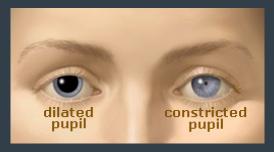






# Acute Intoxication (Being High)

- Small pupils
- "nodding out"
- Scratching skin
- Mildly responsive







# Acute Overdose (Might Die)

### Opioid Overdose Signs & Symptoms

Don't use alone

Breathing will be slow or absent



Lips and nails are blue



Skin feels cold and clammy

You can hear

or snoring

gurgling sounds



Pupils are tiny

Can't be

woken up



Person is not



Person may be choking





CALL 9-1-1 IMMEDIATELY

Adapted from resources developed by OHRDP



# What should I do if I think someone has overdosed?







# The keys to treating respiratory failure in opioid overdose are rescue breathing and naloxone





### Follow the SAVE ME steps below to respond.





Unresponsive? CALL 911



**A**irway



Ventilate 1 breath every 5 seconds



**E**valuate



Muscular Injection
1 mL of naloxone





### Intranasal

### **Prefilled Syringe**

- 1. Naloxone Prefilled Syringe (2mg/2mL), #2 boxes, PRN refills
  - Instill 1mL into each nostril as needed for suspected opioid overdose, repeat in 2 minutes if necessary
- 2. Mucosal Atomization Device with Luer-lock, #2 devices, PRN refills
  - Attach to prefilled naloxone syringe as needed for suspected opioid overdose



### Nasal Spray

- 1. Narcan Nasal Spray (4mg/0.1mL), #1 two-pack, PRN refills
  - Instill 4mg into nostril as needed for suspected opioid overdose, repeat in 2 minutes if necessary





#### Intramuscular

### Vial & Syringe

- 1. Naloxone Vial (0.4mg/mL), #2 vials, PRN refills
  - Inject 1mL into outer thigh as needed for suspected opioid overdose, repeat in 2 minutes if necessary
- 2. IM Needle & Syringe (3mL, 25g, 1"), #2 syringes, PRN refills
  - Use to administer naloxone as needed for suspected opioid overdose



#### **Prefilled Syringe**

- 1. Naloxone Prefilled Syringe (2mg/2mL), #1 box, PRN refills
  - Inject 1mL into outer thigh as needed for suspected opioid overdose, repeat in 2 minutes if necessary
- 2. IM Needle with Luer-lock (25g, 1"), #2 devices, PRN refills
  - Attach to prefilled naloxone syringe as needed for suspected opioid overdose



#### Auto-Injector

- 1. Evzio Auto-injector (2mg/0.4mL), #1 two-pack, PRN refills
  - Inject into outer thigh as needed for suspected opioid overdose, repeat in
     2 minutes if necessary
- 2. Evzio Auto-injector (0.4mg/0.4mL), #1 two-pack, PRN refills
  - Inject into outer thigh as needed for suspected opioid overdose, repeat in
  - 2 minutes if necessary





NDC 76329-3369-1 STOCK NO. 3369

UER-JET LUER-LOCK PREFILLED SYRINGE

CHLORIDE











For administration training video please visit:

http://sites.utexas.ed u/naloxone/administe r-naloxone/

OPERATION NALOXONE

### Naloxone Formulations

Suggested order sentences for currently available naloxone formulations are listed below. Dispensing two doses is generally recommended in case the first dose is insufficient. Prescriptions should be issued to the Recipient, even if the Recipient is not the individual at risk for opioid overdose.

### Intranasal

# Prefilled Syringe

- 1. Naloxone Prefilled Syringe (2mg/2mL), #2 boxes, PRN refills
  - Instill 1mL into each nostril as needed for suspected opioid overdose, repeat in 2 minutes if necessary
- 2. Mucosal Atomization Device with Luer-lock, #2 devices, PRN refills
  - Attach to prefilled naloxone syringe as needed for suspected opioid overdose



# **Nasal Spray**

- 1. Narcan Nasal Spray (4mg/0.1mL), #1 two-pack, PRN refills
  - Instill 4mg into nostril as needed for suspected opioid overdose, repeat in 2 minutes if necessary



## Intramuscular

## Vial & Syringe

- 1. Naloxone Vial (0.4mg/mL), #2 vials, PRN refills
  - Inject 1mL into outer thigh as needed for suspected opioid overdose, repeat in 2 minutes if necessary
- 2. IM Needle & Syringe (3mL, 25g, 1"), #2 syringes, PRN refills
  - Use to administer naloxone as needed for suspected opioid overdose



## **Prefilled Syringe**

- 1. Naloxone Prefilled Syringe (2mg/2mL), #1 box, PRN refills
  - Inject 1mL into outer thigh as needed for suspected opioid overdose, repeat in 2 minutes if necessary
- 2. IM Needle with Luer-lock (25g, 1"), #2 devices, PRN refills
  - Attach to prefilled naloxone syringe as needed for suspected opioid overdose



## Auto-Injector

- 1. Evzio Auto-injector (2mg/0.4mL), #1 two-pack, PRN refills
  - Inject into outer thigh as needed for suspected opioid overdose, repeat in
     minutes if necessary
- 2. Evzio Auto-injector (0.4mg/0.4mL), #1 two-pack, PRN refills
  - Inject into outer thigh as needed for suspected opioid overdose, repeat in 2 minutes if necessary







# **Case Scenarios**





What signs and symptoms would indicate a potential opioid overdose?



He doesn't respond to a sternal rub. What should you do before administering naloxone?



You administer naloxone. What should you do next?



What will happen when you administer naloxone if this was NOT an opioid overdose?







How should you check to see if she has overdosed? What should you NOT do to check?



You determine she has overdosed and administer naloxone. How long will naloxone be effective? Is that long enough to avoid calling 911?



Austin police arrive on the scene and see drug paraphernalia in your home. Are you at risk of prosecution?



# **Frequently Asked Questions**



# Can I administer expired naloxone?



# What if I administer too much naloxone?



# Will naloxone enable drug users to chase higher highs?



# Where can I obtain naloxone?



# Where can I learn more about naloxone?



# OPERATION NALOXONE.org

Educational materials for healthcare providers and community organizations

Continuing education for prescribers, pharmacists, and social workers