

# The Opioid Crisis and the Regional Poison Control Center

The Opioid Clinical Conference 2018

8/10/2018

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Children's  
of Alabama®



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REGIONAL  
Poison  
CONTROL CENTER

# Goals

- Overview of the Regional Poison Control Center (RPCC)
- Identify the opioid crisis
- Define and identify opioids
- Recognize signs of an opioid overdose
- Understand how naloxone works
- Learn how to administer naloxone
- Describe RPCC, Children's of Alabama's efforts

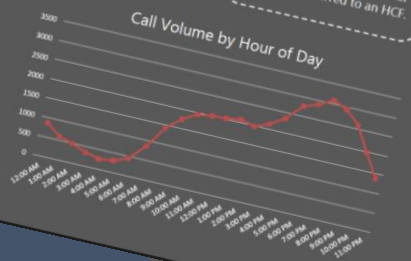




In 2017 the RPCC handled  
**39,465** calls & made  
**56,770** follow-up calls.

Of those 39,465 calls, 33,414 were poison exposure calls. The other 6,051 calls were information and other calls.

The RPCC monitors 82% of poison exposure calls from home on site. In children <6 are monitored at approximately 90% than being referred to an HCF.



71% of the calls made to the RPCC came from patients at home. The remaining 29% of calls came from doctors, nurses, pharmacists, paramedics, and other health care providers.

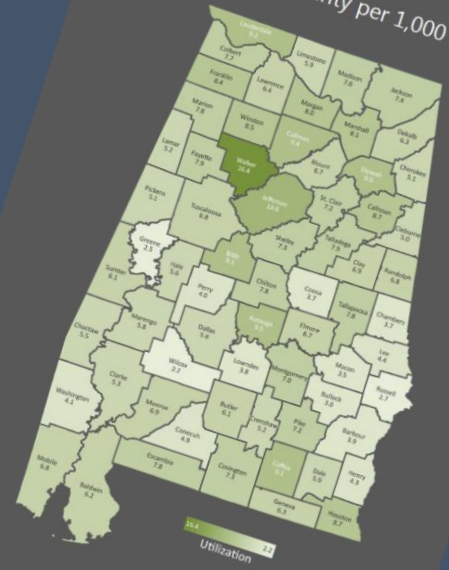


The RPCC is available to patients of all ages. In 2017 we handled calls on patients that ranged from 3 days to 100 years old!



Call Volume by Patient Age	Count
<6 years	17,098
6-12 years	2,089
13-19 years	2,294
>20 years	11,621
Unknown	65

2017 Calls per County per 1,000 Residents\*



\*calls per county divided by population, multiplied by 1,000

...at the ... of Clinical ... BC, Canada. ... age in individuals ... older observed by a ... der Adult Medication ... The dangerous internet ... unsummon presentation of ... amide toxicity with platinom ... hemiplegia, and chemical ... onents. Delayed presentation of an ... arthralgia/dexroamphetamine treated ... with conservative management and Mild ... tachycardia and hypertension only after ... sunstigation in a young woman. Four ... conference, local discussion panels, and ... pharmacists, and physicians in the RPCC ... nationally.



In 2017 the RPCC staff attended 130 hours of community education events with speakers from Alabama and other states. The RPCC partners with the Alabama Poison Prevention programs to present another 2000 Alabama Poison Prevention educational events geared towards the pediatric population.



Top 10 Pediatric Exposures

1. Cleaning substances
2. Cosmetics
3. Topical preparations
4. Other non-medication, toys
5. Antihistamines
6. NSAIDs
7. Hormones, BCP, Thyroid
8. Vitamins
9. Cough/Cold medications
10. Insecticides/DEET



**(800) 222-1222**



www.ChildrensAL.org/RPCC



**POISON Help**  
**1-800-222-1222**

...center ... Since its inception, the RPCC has provided 24/7/365, toll-free access to lifesaving information since 1979. The RPCC is a fully accredited poison center by the American Association of Poison Control Centers. Throughout the years of dedicating substantial resources to developing a quality professional staff, quality assurance programs, data surveillance and research, 800 number access and the RPCC serves the entire state of Alabama as the only accredited statewide center by the Alabama Department of Public Health.

Children's of Alabama, Blue Cross Blue Shield of Alabama Girga Foundation, the Alabama Department of Education, and the U.S. Department of Health and Human Services/Health Resources and Services Administration provide operational and educational support for the Regional Poison Control Center.



...Pharm. D. candidates ... Pharmacy and Auburn University ... school of Pharmacy at Auburn University ... students learn about toxic ... drug information, and take poison ... the Poison Center.

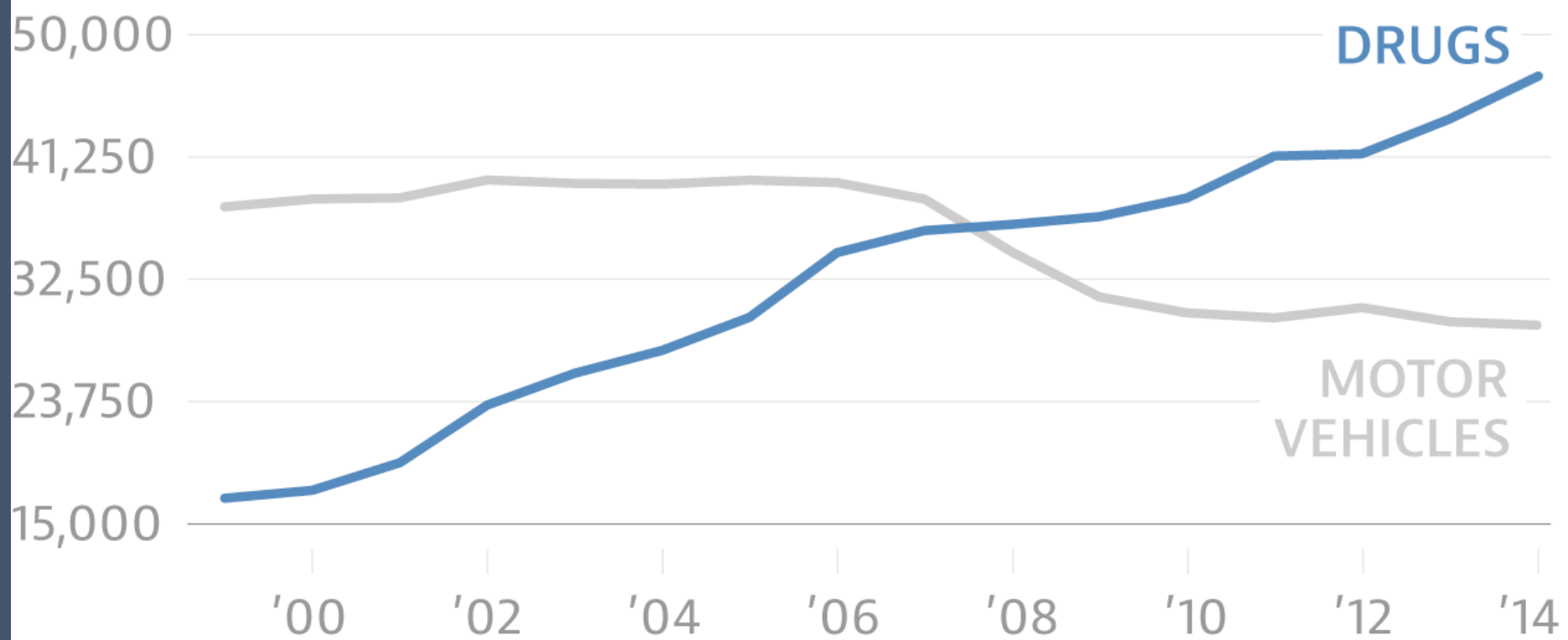
# Values of Poison Control Centers

American Association of Poison Control Centers 2016 Annual Report

- Assessment, triage and monitoring
  - 55 PCCs handled ~2.7 millions calls (a call every 10 seconds) free of charge
- Health-care cost reduction
  - \$1.8 billion per year nationally
- Toxicology- and Public Health Surveillance
  - Only 24 hour real time surveillance in U.S.
- Public and professional education
  - Poison prevention and formal training for MD, RPh & RNs
- Information and data source
  - NPDS receives ~2.2 million exposure cases a year, total >66million from 1983-2016

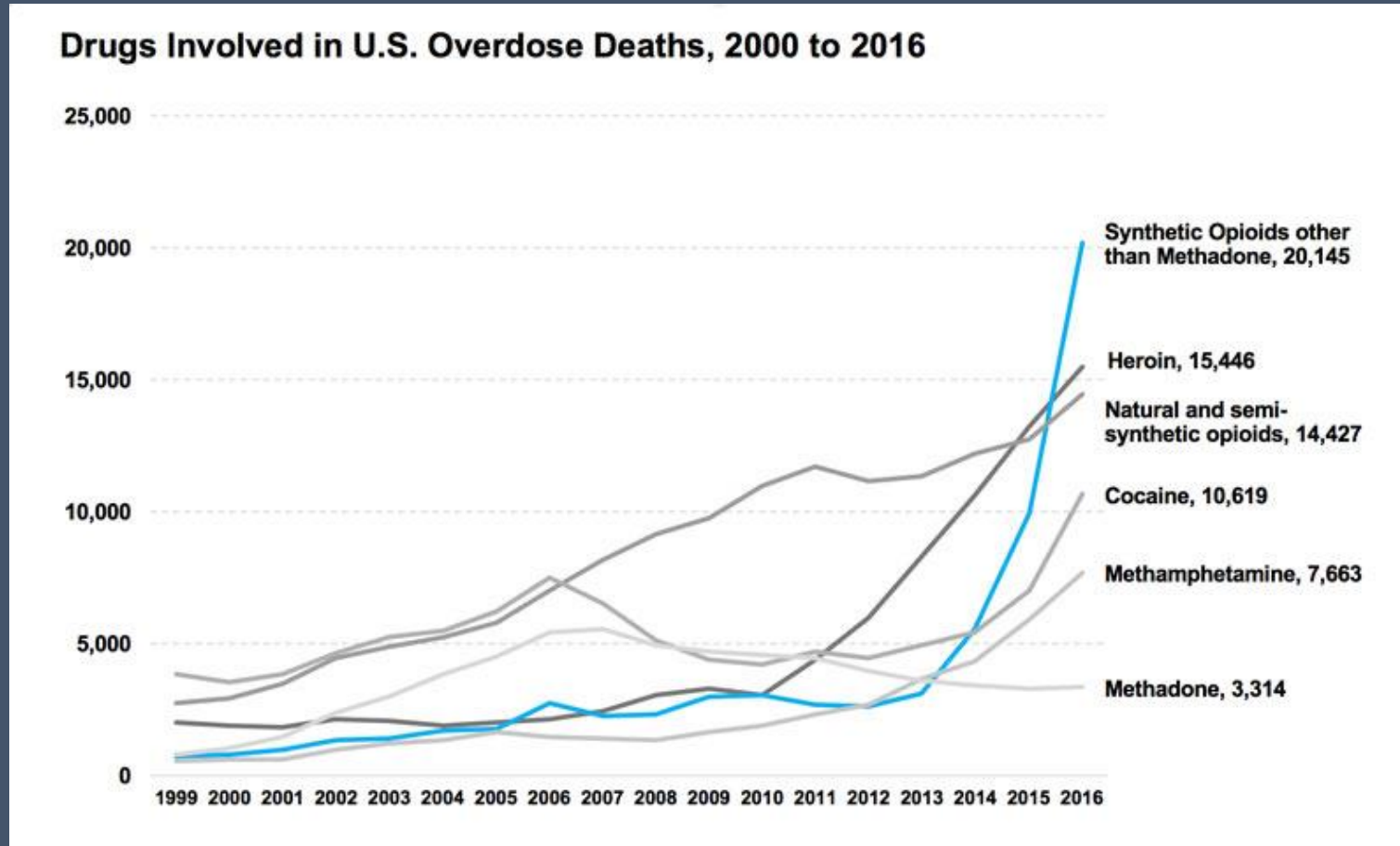
What is the problem?

# Drug Overdose & Motor Vehicle Accident Deaths



Data: CDC

# Drugs Involved in U.S. Overdose Deaths 2000 - 2016





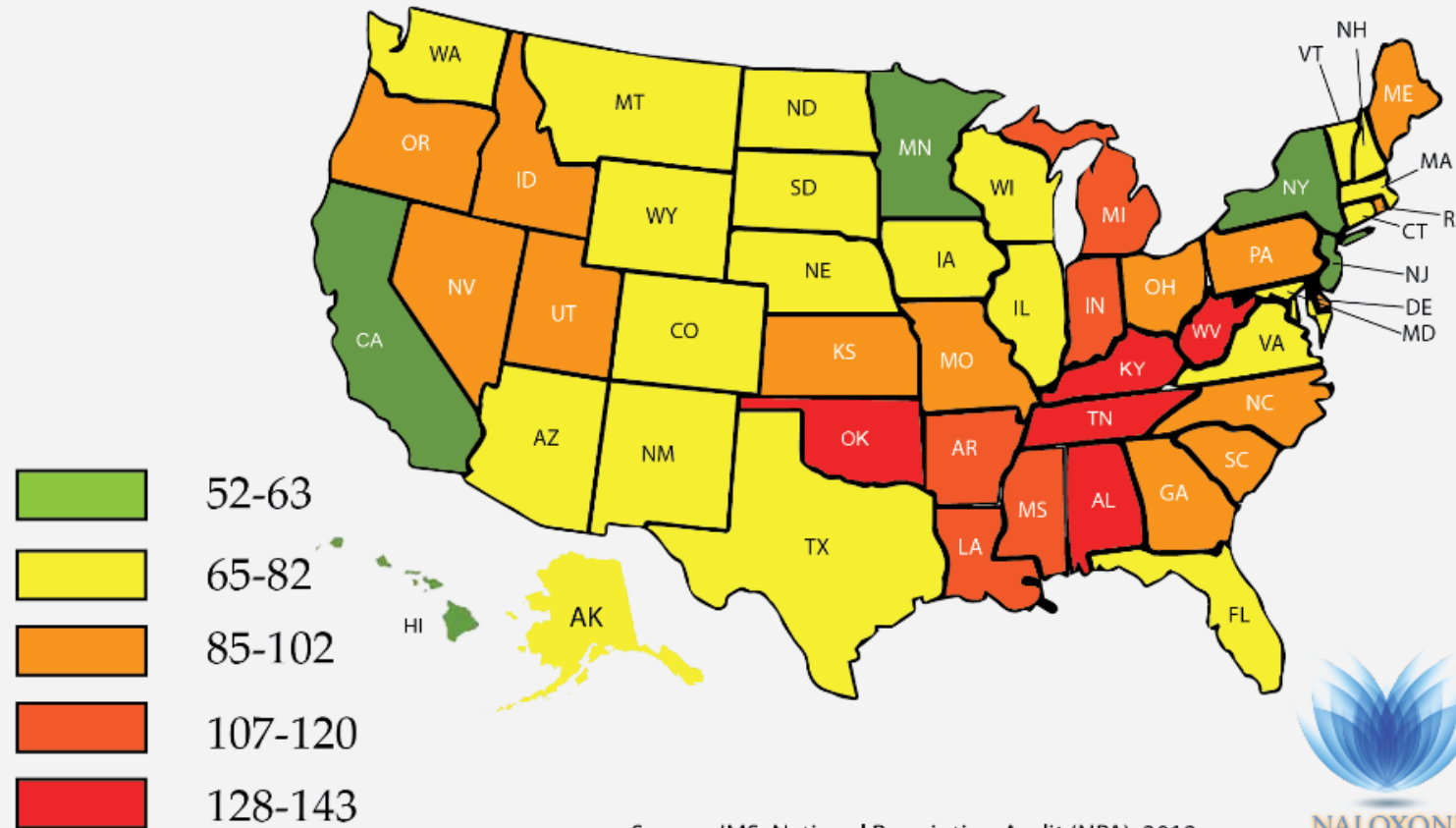
Every day 115 Americans  
die from an opioid overdose.

# Not Just Adults

- The majority of teens who abuse medicine get them from a family member or friend.
- **Medicine Cabinets are the “new drug dealer”.**
- 6 out of 10 adults who are prescribed an opioid report having leftover medication after the prescribing period.
- The presence of an opioid in the household increases the chance of serious poisoning occurring in the household by 240%.
  - Older adults and young children

What is happening in  
Alabama?

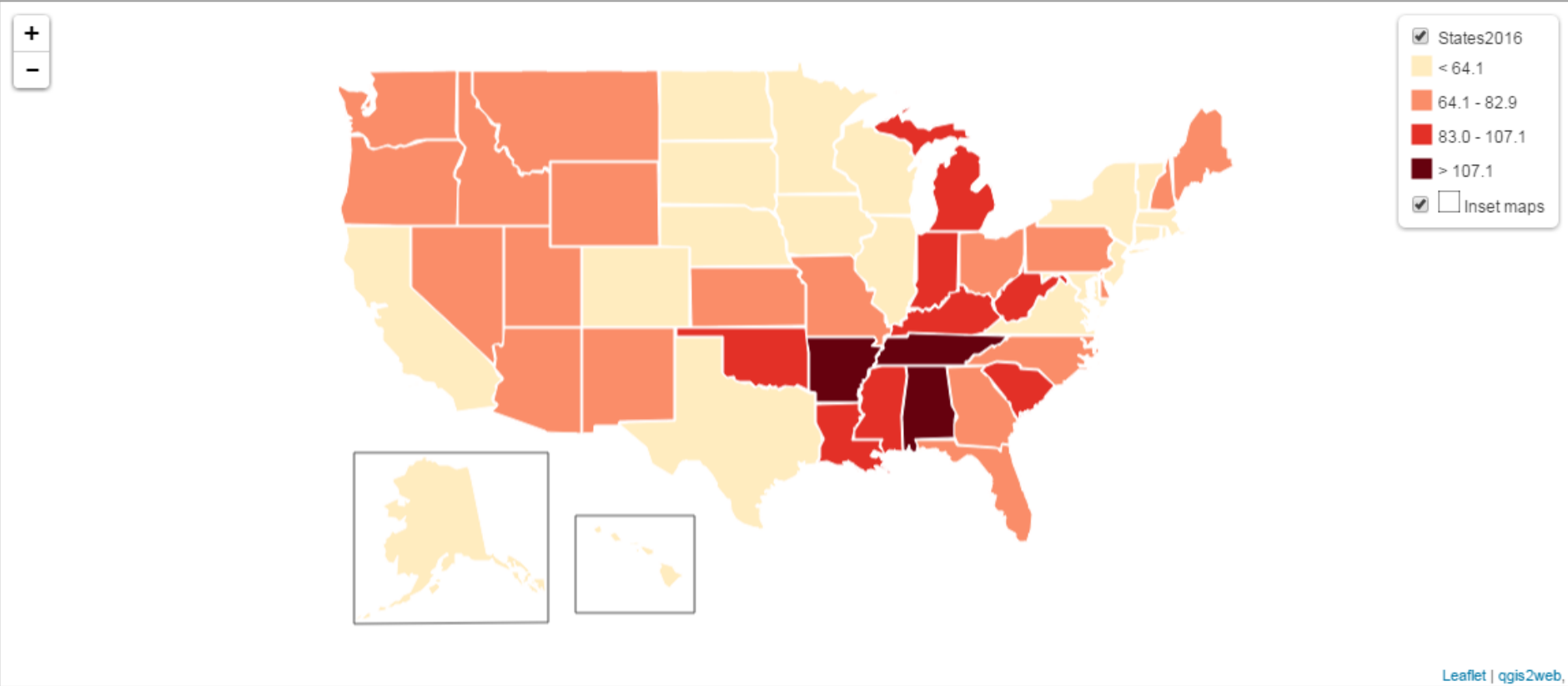
# Opioid Prescriptions Per 100 People



Source: IMS, National Prescription Audit (NPA), 2012



# U.S. State Prescribing Rates 2016



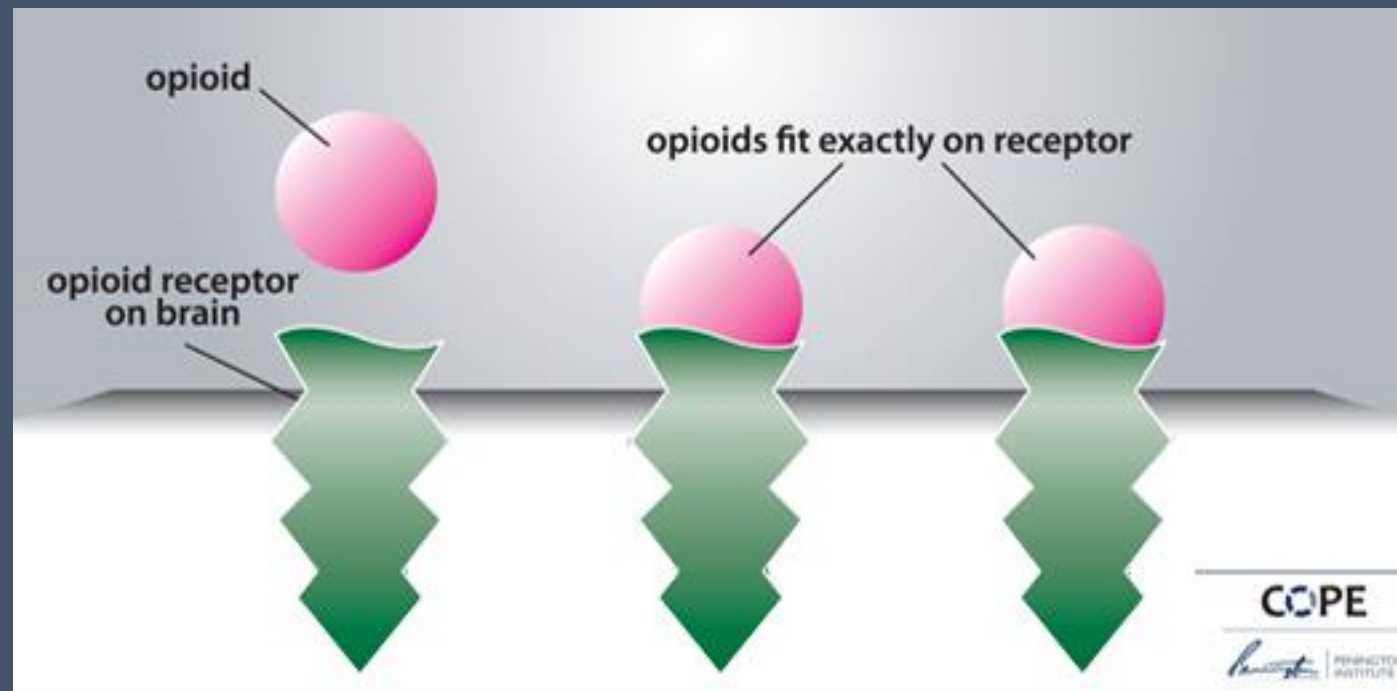


# Opioid Exposure in < 6yo Reported to RPCC 2017

Substance	Number
Heroin	0
Buprenorphine	23
Fentanyl	0
Hydrocodone	42
Hydromorphone	1
Methadone	9
Morphine	3
Oxycodone	40
Oxymorphone	0
Tramadol	12

# What is an Opioid?

- Opioids are substances that bind to specific receptors in the brain and decrease the body's perception of pain



# Opioids

## Generic and Brand names

- Buprenorphine - Suboxone<sup>®</sup>
- Codeine - Tylenol #3<sup>®</sup>
- Fentanyl - Actiq<sup>®</sup>, Duragesic<sup>®</sup>, Sublimaze<sup>®</sup>
- Heroin – 1898-1910
- Hydrocodone - Lorcet<sup>®</sup>, Lortab<sup>®</sup>, Norco<sup>®</sup>, Vicodin<sup>®</sup>
- Hydromorphone - Dilaudid<sup>®</sup>
- Levorphanol - Levo-Dromoran<sup>®</sup>
- Meperidine - Demerol<sup>®</sup>
- Methadone - Dolophine<sup>®</sup>
- Morphine - Roxanol<sup>®</sup>, Duramorph<sup>®</sup>
- Opium - Paragoric<sup>®</sup>
- Oxycodone – Percocet<sup>®</sup>, Percodan,<sup>®</sup> Tylox,<sup>®</sup> Oxycontin<sup>®</sup>
- Oxymorphone – Opana<sup>®</sup>, Numporphan<sup>®</sup>, Numorphone<sup>®</sup>
- Tramadol – Ultram<sup>®</sup>, Ultracet<sup>®</sup>

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PHARMACEUTICAL  
PRODUCTS

Send for samples  
and Literature to



**FARBENFABRIKEN OF  
ELBERFELD CO.**

**40 STONE STREET.  
NEW YORK.**

Bayer advertisement for heroin, 1900

# What is not an opioid?

- Other Pain Medications
  - Acetaminophen – Tylenol<sup>®</sup>
  - Ibuprofen – Motrin<sup>®</sup>
  - Naproxen - Aleve<sup>®</sup>
- Benzodiazepines
  - Lorazepam – Ativan<sup>®</sup>
  - Diazepam – Valium<sup>®</sup>
  - Alprazolam – Xanax<sup>®</sup>
- Muscle Relaxants
  - Cyclobenzaprine – Flexaril<sup>®</sup>
  - Methocarbamol - Robaxin<sup>®</sup>
- Cocaine
- Methamphetamine
- PCP
- LSD
- Molly / MDMA
- Marijuana



# Signs of an Opioid Overdose

- “High” versus Overdose



# “High” from opioids

- Person will respond to commands
- Breathing appears normal (not labored or excessively shallow)
- Slow/slurred speech
- Pinpoint pupils (some exceptions)

# Signs of an Opioid Overdose

- **Depressed mental status**
  - Unconscious – does not respond to voice, sternal rub, limp body
- **Depressed or absent breathing**
  - Suppressed breathing <8 breaths/minute, shallow
  - Cyanosis – blue or gray lips or fingernails
  - Pale, clammy skin
  - Slow or irregular pulse
  - Snoring, gurgling, or choking sounds (a.k.a. death rattle)
- **Pinpoint pupils**

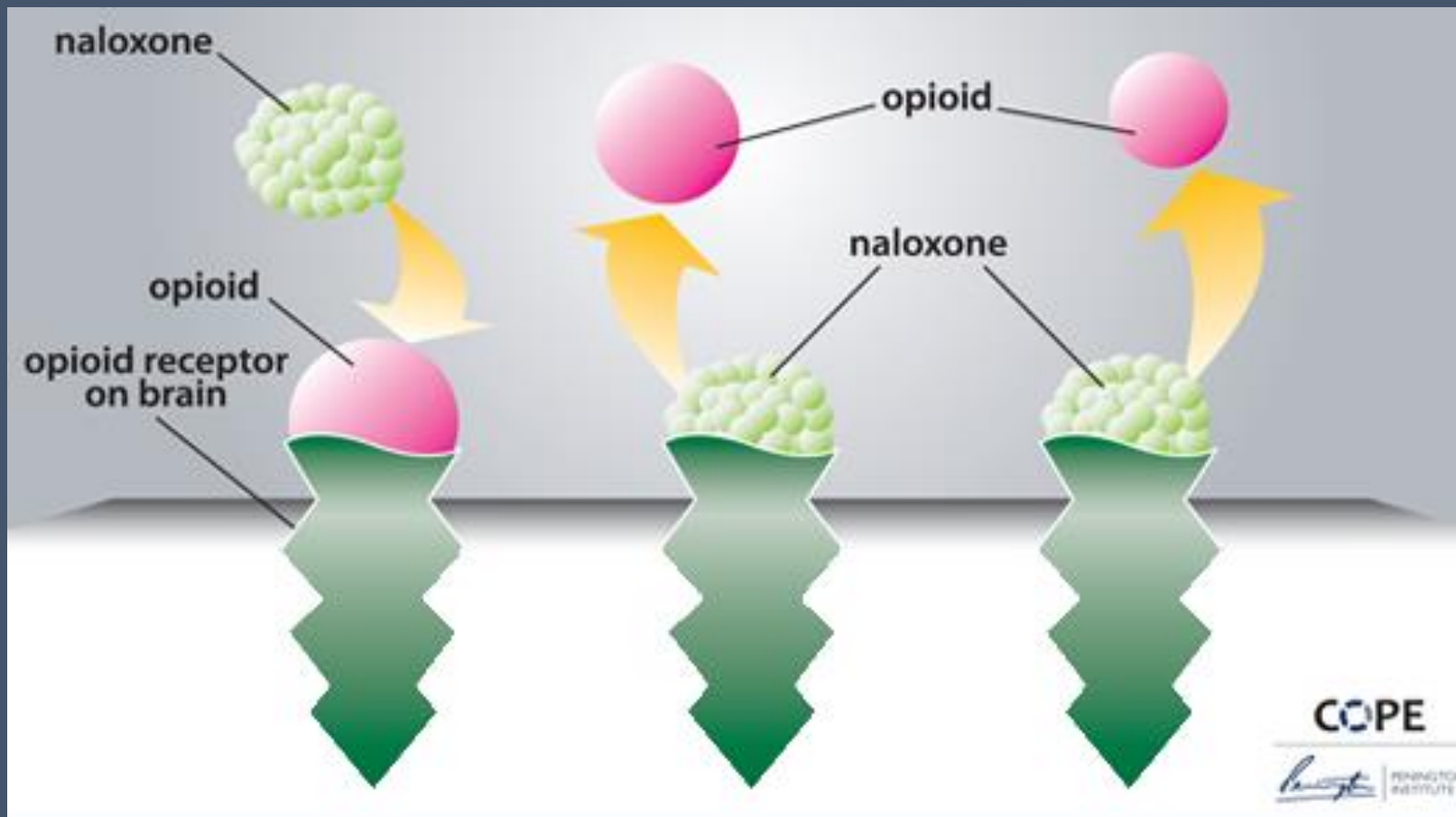
Treatment

# What is naloxone?

- Generic name for Narcan<sup>®</sup>
- Rapid opioid reversal agent
- Blocks the effects on the respiratory control center and restores respirations
- Blocks the effects on CNS depression and can restore alertness



# What is naloxone?



# Naloxone - routes of administration

- Parental – SubQ, IM, IV
- Intranasal and via a nebulizer
- Endotracheal tube

# Naloxone is only useful for opioid overdoses

Naloxone will NOT work to reverse the effect of any drug or medication that is not an opioid!

CPR should be used instead of naloxone if the individual does not have have a pulse!

# Responding to a suspected opioid overdose emergency

- Use universal precautions (minimal level is medical gloves)
- Check for responsiveness and administer initial rescue breaths if the person is not breathing
- Request assistance (911)
- Administer naloxone
- Resume rescue breathing if the person is not breathing on their own yet
- Reassess for response and administer a second dose of naloxone if no response after 3 minutes

# End Point of Therapy

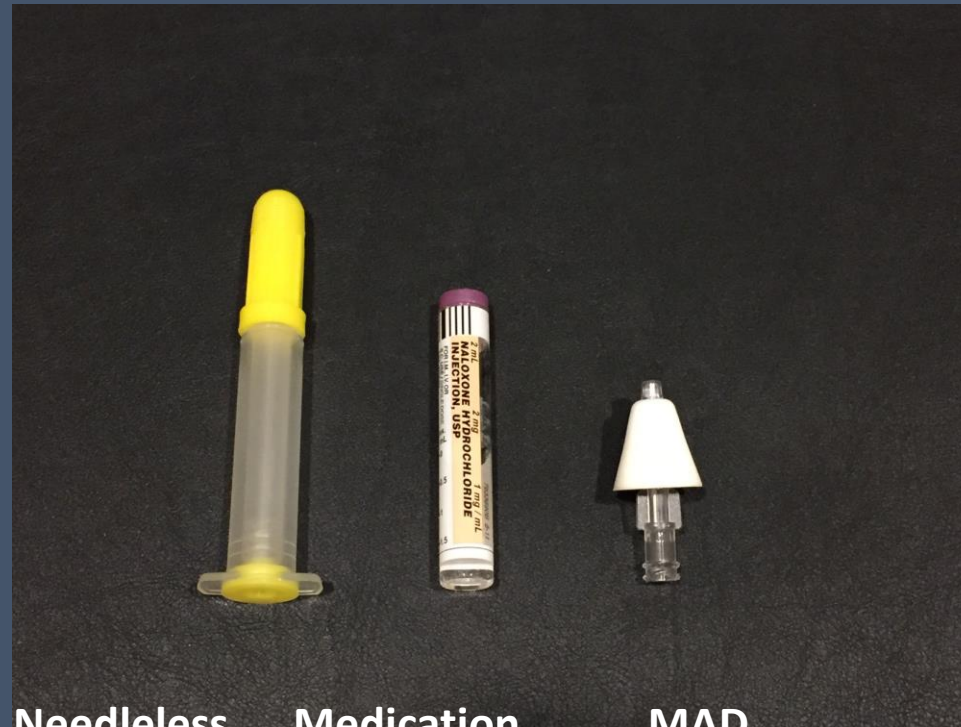
- Normal respirations



# Intranasal Naloxone



# Prepare to administer intranasal naloxone



Needleless  
Syringe

Medication  
Capsule

MAD

Administer  $\frac{1}{2}$  of the medication into each nostril





Provide rescue breathing if needed and consider need to re-dose



# Alternative formulations of Naloxone



The Providence Journal / Mary Murphy



Matthew Rakola, courtesy of Narcan® Nasal Spray.



Governor Tom Wolf via Flickr Creative Commons

# Side effects from naloxone

- Precipitated opioid withdrawal
  - Restlessness, irritability, body aches, dizziness, weakness, diarrhea, abdominal pain, nausea, vomiting, fever, sweating, piloerection (goosebumps), hypertension and tachycardia
- Allergic Reaction to the medication itself
  - Hives, trouble breathing, swelling of face, lips, tongue or throat

# Frequently asked questions

- What should I expect once naloxone has reversed the overdose?
  - Improved breathing (goal of naloxone administration) and possible withdrawal symptoms.
- Can you administer it under the tongue?
  - No, the lining of the mouth is different than the nose.

# Frequently asked questions

- Does it work with a fentanyl patch? What about the newer fentanyl analogues?
  - Yes, but be prepared to give a second dose. Fentanyl (especially a patch) victims may need multiple naloxone doses.
- How do you store naloxone?
  - It should ideally be stored at room temperature and away from light. If stored in a vehicle, store in a cool place, out of direct sunlight.



What is the Regional Poison  
Control Center, Children's of  
Alabama doing?

# RPCC Opioid Surveillance and Activities

- RADARS - April 2005 (64,387)
- DEA – January 2015 (RPCC promotes Drug Take back programs)
- ADPH Drug Task Force – November 2016
- Data-Driven Prevention Initiative (DDPI) for Opioid and Heroin Abuse and Overdose – December 2016
- Alabama Law Enforcement Naloxone Training – May 2017 (1112)
- Governor’s Alabama Opioid Overdose and Addiction Council – August 2017
- School Nurse Naloxone Training – Webinar/Children’s 3/16 & 7/16, AUM 11/3/17, Huntsville 3/9/18, Mobile 7/10/18
- PharmD rotations – develop a PowerPoint on Alabama’s naloxone standing orders
- Children’s of Alabama – Storage of Medications Study 2018

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# STATE OF ALABAMA OPIOID ACTION PLAN

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Kay Ivey, Governor

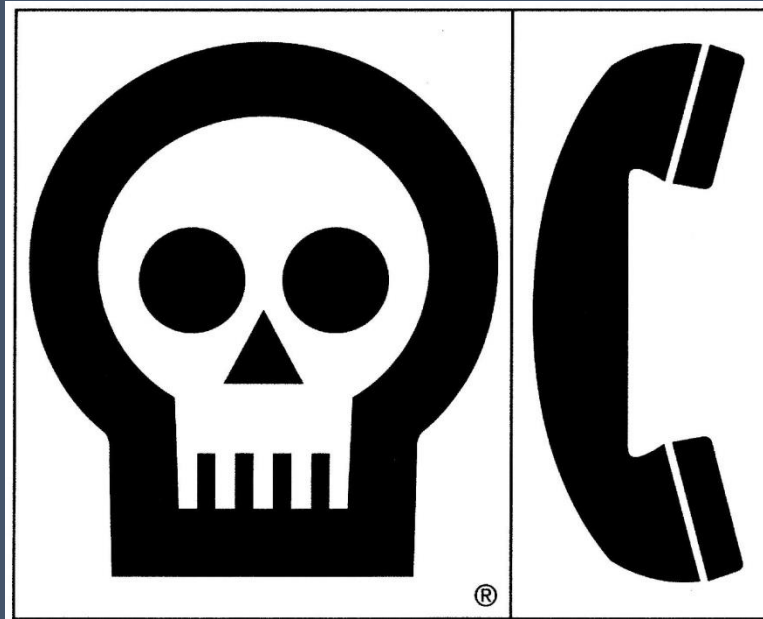


DECEMBER 31, 2017

ALABAMA OPIOID OVERDOSE AND ADDICTION COUNCIL

Data Data Data

RPCC is partnering with ADPH  
to provide Opioid and Syndromic Surveillance



Regional Poison Control Center  
1-800-222-1222