

## Naloxone Treatment of Opioid Overdose

**Cindy Gaston, PharmD, BCPS**

Inpatient Pain Consultant, UW Health  
Medication Use Policy Analyst, UW Health  
Clinical Assistant Professor, UW School of Pharmacy  
cgaston@uwhealth.org

## Opioid Stewardship

- Validate indication and prescriber
- Use evidence-based guidelines for pain management
  - Include non-opioid treatments for pain therapy
  - Avoid use of intravenous opioids when possible
- Maintain strict policies for ordering, storing, distributing and administering opioids
- Limit the number of personnel responsible for inventory control

Chou R et al. *J Pain* 2009;10:113-30. Cobaugh DJ et al. *Am J Health-Syst Pharm* 2014;71:1539-54.

## Opioid Stewardship

- Stock in tamper proof packaging
- Require second witness for disposal
- Document administration, disposal, and responsible employee
- Conduct random audits
- Limit prescription quantities
- Deliver prescription from provider directly to pharmacy
- Utilize a "controlled substance diversion team" to investigate all aberrancies

Chou R et al. *J Pain* 2009;10:113-30. Cobaugh DJ et al. *Am J Health-Syst Pharm* 2014;71:1539-54

## Policy for Chronic Opioid Treatment

- Standardize procedures for opioid use in the treatment of chronic non-cancer pain
- Assess risk for abuse
  - Screen with evidence-based tool
  - Evaluate potential psychosocial factors
  - Utilize PDMP
- Require routine follow up visits
- Limit opioid treatment in the emergency department (outside of medical emergencies)
- Develop an individualized pain medication agreement plan for each patient

## Pain Medication Agreement Plan

- Determine therapeutic functional goal for pain management
- Warn patient of opioid risks
- Patient must agree to use drugs only prescribed by provider (i.e., refrain from alcohol, illegal substances, and recreational use)
- Urine drug screening
- Plan for prescription coverage if provider is unavailable
- Single prescriber, single pharmacy

## Drug Abuse and Addiction

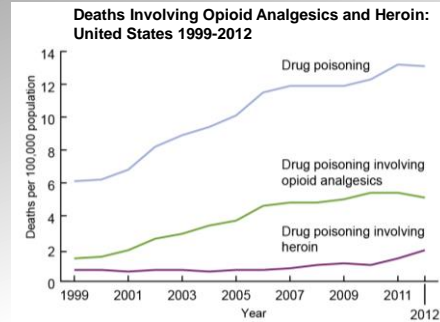
- After opioid trial, it is unknown who will develop addiction
- Addiction is a primary, chronic, neurobiological disease
  - Genetic factors can cause neurobiological predisposition to addiction
  - Psychosocial factors
  - Environmental
- Drug abuse at an early age increases risk of addiction

American Academy of Pain Medicine, American Pain Society, and American Society of Addiction Medicine; Savage et al. *J Pain Symptom Manage* 2003;26:655-667.  
National Institute of Drug Abuse. Drugs, Brains and Behavior: The Science of Addiction. <http://www.drugabuse.gov/publications/science-addiction/drug-abuse-addiction>.

## Risks for Opioid Overdose

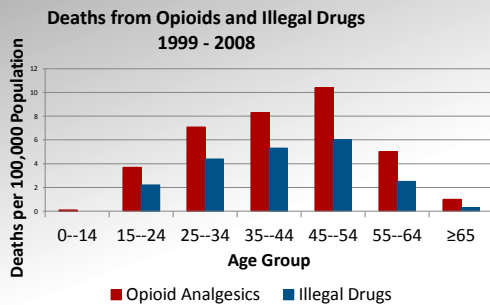
- High doses
- No previous use
- Concurrent use of other sedating substances (alcohol, Xanax®, Valium®, lorazepam)
- Intravenous administration
- Opioid users with additional medical conditions (lung disease such as sleep apnea, COPD)
- Patient tolerant to opioids after abstaining and then returning to illicit use of opioid
- Previous overdose

## Poisonings from Opioids



Trends in Drug-poisoning Deaths Involving Opioid Analgesics and Heroin: United States, 1999-2012. Center for Disease Control. [www.cdc.gov/nchs/data/hestat/drug\\_poisoning/drug\\_poisoning.htm#trends](http://www.cdc.gov/nchs/data/hestat/drug_poisoning/drug_poisoning.htm#trends).

## Deaths from Opioids Higher than Illegal Drugs



## Naloxone Safety & Efficacy

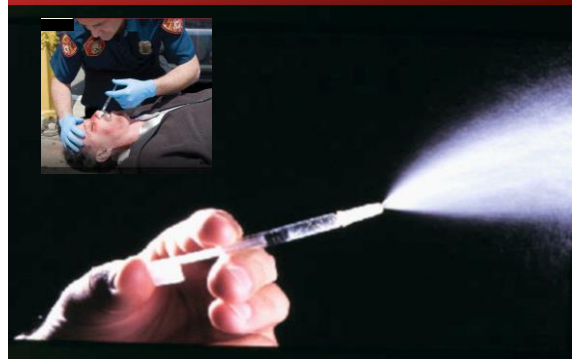
- Prescription medication
- Rapidly reverses the effects of opioid medications
- No opioid activity, no potential for abuse
- No effect on individuals not taking opioids
- May require repeat doses
  - Duration of naloxone is shorter than the duration of opioids
- Naloxone does not increase misuse/abuse
- Abusers are more likely to seek treatment for addiction after naloxone administration

## Naloxone – Subcutaneous, Intramuscular

- Evzio® - naloxone 0.4 mg/0.4 mL
  - If symptoms reappear repeat every 2 – 3 minutes
- Kit
  - Naloxone syringe 0.4 mg/mL
  - Needles
  - Alcohol wipes
  - Gloves
  - Directions for use



## Intranasal Naloxone



## Naloxone Kit - Intranasal

- Kit
  - Naloxone 2mg/2mL x 2
  - Atomizer (MAD-Nasal)
  - Gloves
  - ± Breathing mask
  - Directions for use
- Commercial products pending FDA approval



## Naloxone Distribution

- Who should receive naloxone prescriptions?
  - Suspected history of illicit substance or prescription opioid abuse
  - Initiation of treatment for addiction
  - Patients recently released from emergency facility after overdose treatment
  - With release from incarceration
  - High doses of prescription opioids
  - Individuals likely to witness an overdose
  - Rural areas

## Naloxone Dispensing

- Syringe access programs, drug treatment centers, correctional facilities
- First responders – EMS, firefighters, police officers
- Prescribers – emergency department
- World Health Organization recommends wider distribution of naloxone

WHO Community management of opioid overdose. 2014  
<http://intranasal.net/Peer%20Reviewed%20Literature/WHO-Community%20Management%20of%20Opioid%20Overdose%202014.pdf>

## Next Steps for Overdose Prevention

- Collaborative Practice Agreement for pharmacists
- Screening – identify at risk patients
- Training
  - Identify signs of overdose
  - Call for help
  - Rescue breathing
  - Naloxone administration and adverse effects
- Coordinate standardization of naloxone kits

## Health Care Prevention of Overdose

- Prevent Diversion
- Standardize best practices for pain management
- Ensure appropriate prescribing
- Recognize and treat substance use disorders
- Facilitate immediate and appropriate treatment of overdoses

