Naloxone Use for Acute Opioid Overdose

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About the Speaker

- EMT, Paramedic and Firefighter for 29 years
- Jefferson Medical College
- Emergency Medicine
- 4 years at Albert Einstein in North Philly
- EMS Medical Director
  - 40 agencies – fire, EMS
- No financial interest in any pharmaceutical
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Objectives

- The Course Goal: To help the student understand the role and challenges of the use of naloxone in an opioid overdose.

Objectives:

- For the student to understand the role of prescription medication abuse in the role of heroin abuse
- The student will understand the mechanism of action of naloxone
- The student will recognize the challenges of pain management and its effect on narcotic use
- The student will be able to describe the ethical concerns of over the counter naloxone availability
- The student will be able to utilize naloxone for an overdose victim to improve survival until EMS arrives
Outline

• Opioid Background
• Naloxone
• PA Law
• Response to Overdose
• Summary
Opioids

- Substances that reduce pain
  - Perception of pain is reduced
  - Pain tolerance is increased
- Chemical substance that binds to receptors in the brain and central nervous system
- Natural substance – opium plant
- Numerous synthetic chemicals that do the same
- Pain Management
  - A cornerstone of modern medicine
  - Sometimes all we can offer patients
Opioids

• Other effects
  – Sedation
  – Respiratory depression
  – Constipation
  – Euphoria, especially if there is no pain
  – Small pupils
  – Cough suppression
Opioids

- Heroin
- Codeine (Tylenol #3)
- Morphine (Kadian, Avinza)
- Fentanyl (Actiq, Duragesic, Fentora)
- Hydrocodone (Vicodin, Lortab, Vicoprofen)
- Oxycodone (Percocet, Oxycontin)
- Hydromorphone (Dilaudid)
- Methadone
- Meperidine (Demerol)
- Tramadol (Ultram, Ultracet)
- Buprenorphine (Buprenex, Suboxone, Subutex)
Opioids

- Chemical activate receptors to turn chemical stimuli into neuro stimuli
Opioids

- Studies show addiction is much less likely when the patient has pain
- Tolerance and chemical dependence can occur however
- In many areas, prescription narcotics are just as likely if not more likely as the cause of overdose than heroin
  - Purer
  - ‘Safer’ to get
  - Easier to get
Opioids

• Overdose
  – Too much of the medication
  – Typical:
    • Unconscious
    • Slow or no respirations
    • Pinpoint pupils
  – Lack of oxygen (from no breathing) can take 2-4 minutes.
Naloxone (Narcan)

- Medication used to reverse the effects of opioids
- Historically carried by Paramedics
Naloxone (Narcan)

- Mechanism of Action
- Duration of Action: 30-90 minutes
Naloxone

• No effect if no opioids in the body
• Can be given IV, IM, IN
  – Intravenous
  – Intramuscular
  – Intranasal
• IN is recommended
  – Safe
  – No bloodborne exposure
• Higher doses required for long acting and higher dose medical opioids (OxyContin)
Intranasal Naloxone

- Many medications can be absorbed through the nose
  - Decongestants
  - Fentanyl
  - Glucagon
  - Benzodiazepines
  - Naloxone

- There is a number of blood vessels right below the skin
Intranasal Naloxone

- The use of an atomizer
Intranasal Narcan

Intranasal Narcan is a spray used to reverse the effects of opioid overdose. It contains naloxone HCl and is available as a two-pack of 4 mg doses. The spray is intended for use in the nose only, and it's important to check the product expiration date before use. The spray is marked as Rx Only (prescription only) and should not be tested or opened before use. It's important to use it for known or suspected opioid overdose in adults and children.
States with naloxone access and drug overdose Good Sam laws
States with drug overdose Good Sam laws only
States with naloxone access laws only
Pennsylvania Law

- Act 139 signed in 2014
  - Allowed first responders, Law enforcement, EMTs, FF to carry and administer
  - Civilians could obtain a prescription as well
  - Immunities
Standing Order

- DOH 002-2016
- Signed by state Physician General
- Pharmacies can dispense
- Training still recommended
Where Is it being done?

- Lorain County, OH (First reversal 31 Oct 2013)
- Quincy, MA (188 reversals since 2010)
- Suffolk County, NY (108 reversals in past year)
- Pending in multiple other jurisdictions
  - Boston
  - Buffalo
Naloxone Kit

- Keep out of light and extremes of temperature
  - Inside vehicle, in station when OOS
- Protect vials
- Expiration Date
Response to Overdose

• Is it an overdose or something else?
• Is it an overdose AND something else?
  – Cardiac Arrest
    • Can still give naloxone but likely will not help
    • Give in case not true cardiac arrest
  – OD on other substances that will not respond to naloxone
    • Alcohol
    • Benzodiazepines (Valium, Xanax, Ativan)
    • Other sedatives
  – Medical Condition
    • Low blood sugar
    • Infection
    • Stroke
Response to Overdose

- Gloves are recommended
- Drug abuse is a risk factor for bloodborne diseases
Response to Overdose

- Overdose on opioids typically:
  - Unconscious
  - Slow or no breathing (<10/min)
  - Small pupils
  - Pulse variable

Below 2.9mm
Response to Overdose

- Retrieve naloxone kit
- Indicated: Unconsciousness and decreased breathing
- Not Indicated: Awake, Alert
Response to Overdose

- Assembly
Response to Overdose

- Check Breathing
- Initiate Rescue Breathing
  - Mouth to Mask
Response to Overdose

- If Breathing, roll on their side (recovery position)
- Check Pulse
- If no pulse start CPR
- Get an AED
- Update EMS (Ensure ALS and BLS en route)
- Survival from drug related cardiac arrest is rare.
Response to Overdose

- What to expect
- After several minutes, victim may begin to breathe and wake up
- May be combative
  - Immediate withdrawal
- Will often vomit
Response to Overdose

• If no response after 5 minutes, and another kit is available, administer a second dose
Can they Refuse Transport

• Absolutely
• Law Enforcement can place in Protective Custody
Emergency Department

- Observation for a few hours
- Possible Rehab consult, however…
Next Steps

- Better treatment methods for addiction
- Rehab beds
- Insurance coverage

- Of the American population in need of treatment, only 1% are actually receiving it.
- Relapse Rate: 40-60% of people with addiction slide back into drug use after rehab.
Questions?
References

• McClean, G. Smith, H. Opioids for Persistent Non-Cancer Pain. Med Clin N Am 91 (2007) 177-197
• Robertson, TM. et al. Intranasal Naloxone is a Viable Alternative to Intravenous Naloxone for Prehospital Narcotic Overdose. Prehospital Emergency Care 2009; 13:512-515
Summary

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