

SHIFTS IN OVERDOSE RESPONSE

ADAPTING TO SEDATIVES IN THE
DRUG SUPPLY

PHILADELPHIA
DEPARTMENT
OF PUBLIC
HEALTH

WHAT IS DOPE?

SYNTHETIC OPIOID

fentanyl
nitazines
carfentanil

Does respond to
naloxone

+

SEDATIVE

xylazine
medetomidine
benzodiazepines

Does **NOT** respond to
naloxone

+

ADULTERANT

benzocaine
caffeine
lidocaine
BTMPS

Does **NOT** respond to
naloxone

XYLAZINE AND MEDETOMIDINE

THE SAME...

- Veterinary medication
- Alpha-2-agonist
- Not responsive to naloxone
- Rapid onset
- Causes prolonged sedation
- Almost always found with fentanyl
- Involved in fatal overdose
- Causes withdrawal
- Not federally scheduled

BUT DIFFERENT

- **XYLAZINE**
 - Clear association with wounds
 - Now scheduled in 10+ states including PA and OH
- **MEDETOMIDINE**
 - 100-200x as potent than xylazine
 - Longer sedation
 - More pronounced lower heart rate
 - Anecdotal reports of association with hallucinations
 - Worse withdrawal symptoms (ICU, death)



ADAPTING OVERDOSE RESPONSE

REMINDER: BASICS OF RESPONDING TO AN OVERDOSE

1. Call out for help.
2. Administer naloxone.
3. Call 911.
4. Start rescue breathing.
5. After three to five minutes if not breathing, give 2nd dose of naloxone.
6. Continue rescue breathing until breathing is restored.
7. Stay with them until help arrives.
8. Provide compassionate aftercare.

SEDATIVE-INVOLVED OVERDOSE RECOGNITION

FOCUS ON RESPONSE

SYNTHETIC OPIOID OVERDOSE

- 1. Check for responsiveness
- 2. Check for breathing
- 3. Administer naloxone
- 4. Call 911
- 5. Administer rescue breathing

FOCUS ON BREATHING

SYNTHETIC OPIOID OVERDOSE + SEDATIVE OVERDOSE

- 1. Check for breathing
- 2. Check for responsiveness
- 3. Administer naloxone
- 4. Call 911
- 5. Administer rescue breathing

RECOGNIZING
THE
EMERGENCY

The emergency is that they are not breathing, not that they aren't answering you.

Change your approach. Focus on respiration instead of responsiveness.

GUIDELINES
FOR
RESPONDING
TO
SEDATIVE-
INVOLVED
OVERDOSES

- **Don't just ask if they're okay. Check to see if they're blue or gray.**
- **Check "lips & tips" for blue or gray.**
- Look for color changes and respiration
- **Confirm that at least 1 breath is taken every 5 seconds.**

METHODS TO ASSESS BREATHING

LOOK. Watch for breathing. Look for chest movement OR watch shoulders (rise & fall). Count to make sure it's at least 1 breath every 5 seconds.

LISTEN. Can you hear them breathing? Does it sound strained or choked?

CHECK. Hold a piece of glass (like a phone screen), or metal object (like a key), or piece of plastic (rescue breathing mask) - or any other item that collects condensation - in front of their mouth.

GAPS IN CURRENT STANDARD OVERDOSE RESPONSE TRAINING

- The priority must shift from eliciting a response to assessing, and supporting, breathing/oxygenation.
- Assessing for responsiveness with painful stimuli can cause unnecessary harm.
- Responsiveness is no longer the goal of overdose response.
- There IS such a thing as too much naloxone.



Photo credit: Jen Shinefeld

MYTH BUSTING - NALOXONE WORKS!

MYTH

- Naloxone doesn't work on sedative-involved overdoses.

TRUTH

- Naloxone is working to restore breathing from the opioid overdose **AND** the person may still be sedated on xylazine or another sedative.
- Naloxone will not resolve sedation, but it will help people breathe during overdose situations.

TOO MUCH NALOXONE CAN BE HARMFUL

- A 2023 study comparing 4 mg to 8 mg of an initial intranasal (IN) dose found that people who received the higher dose were 2.5 times as likely to experience withdrawal symptoms, with no difference in survival. (Payne et al., 2024)
- **The ideal dose of naloxone is one that restores breathing without inducing withdrawal.** (Russell et al., 2024)

Naloxone is totally safe for people who are not physically dependent on opioids, but over-administration can cause precipitated withdrawal among People who use opioids (PWUO).



EXPANDING
YOUR
TOOLBOX

LOOK AT YOUR TOOLBOX: TWO SCENARIOS

MY TOOLBOX IS BASIC. I CAN'T CHANGE TOO MUCH

- Budget limitations
- Training limitations
- Capacity limitations

WE'RE LOOKING TO EXPAND OUR OPTIONS!

- Available funding
- Training capabilities
- Invested stakeholders

LIMITED IN CHANGING YOUR STANDARD KIT?

STANDARD KIT

- Barrier/CPR mask
- Naloxone
- Gloves

WHAT TO ADD:

- Emphasis on breathing support and assessment (look, listen, check)
- Patience! Let the naloxone work
- Methods to reduce the harms of sedation

METHODS TO REDUCE THE HARMS OF SEDATION

1. If laying, utilize the recovery position.
2. If sitting, head reposition (decompress windpipe).
3. Check that limbs aren't "pinned".
4. Massage limbs during prolonged sedation.
5. Move them to a safe place (e.g., away from/out of street, away from train tracks, not in the middle of the sidewalk).
6. In summer, try to move them out of direct sunlight, or cover exposed skin to prevent bad sunburn.
7. If possible, ask someone to keep an eye on them.

ABLE TO ADAPT YOUR STANDARD KIT?

STANDARD KIT

- Barrier/CPR mask
- Naloxone
- Gloves

ADDITIONAL TOOLS:

- Pulse oximeter
- Ambu-bag
- Oropharyngeal & nasopharyngeal airways*
- Recreational oxygen cans
- Oxygen tanks*

**These tools require extensive and specialized training. Talk to a clinician about the best way to access these.*

PULSE OXIMETERS

PROS

- Provides ongoing data to refer to during overdose response
- Can help assess oxygen levels if you're unsure
- Assists with monitoring breathing when in a gray zone

CONS

- Requires training to use
- Has higher supply costs
- Unreliable
- Skin color
- Nail polish
- Injury/Callouses



AMBU-BAG

PROS

- Better respiration
- Alternative for those who won't do rescue breathing

CONS

- Training: seal and frequency
- One vs two people
- Single use
- Expensive (\$15-\$30)



OROPHARYNGEAL & NASOPHARYNGEAL AIRWAYS

PROS

- Keeps airways free of obstruction
- Facilitates ventilation (works well with masks and bags)
- Quick to insert
- Cost effective (\$1-\$10)

CONS

- Can trigger a gag reflex
- Training/expertise required
- Incorrect placement can cause trauma/obstruct airway
- Not suitable for all people



RECREATIONAL OXYGEN CANS

PROS

- Uses beyond opioid overdose response
- More accessible and affordable than oxygen tanks
- Less bulky than oxygen tanks
- Good complement to rescue breathing and airway management

CONS

- Supplemental oxygen only
- Bulky for unhoused people
- Should not be used near open flame
- Moderately expensive for widespread distribution (\$18-\$20)



SUPPLEMENTAL OXYGEN

PROS

- Best respiration
- Alternative for those who won't do rescue breathing*
- Reduces the need for additional naloxone

CONS

- Specialized training
- Potential dangers (flammable)
- Difficult to transport
- Very expensive (\$400-\$4,000)

**Only for people with depressed respiration – i.e., breathing but not enough. If someone is not breathing, this will not help.*



WHAT TO REMEMBER...

- Naloxone works!
- Breathing > responsiveness.
- Sedation is not the emergency.
- Naloxone dose matters (there is such a thing as too much).
- More tools doesn't mean better tools.

The best tool is the tool that you will actually use.

We do the best we can for the situation we are in.



THANK YOU!

QUESTIONS?

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