

Opioids and Naloxone

SKC In-Service 4/2019

THE OPIOID EPIDEMIC BY THE NUMBERS

2016 and 2017 Data



130+

People died every day from
opioid-related drug overdoses³
(estimated)



11.4 m

People misused
prescription opioids¹



42,249

People died from
overdosing on opioids²



2.1 million

People had an opioid use
disorder¹



886,000

People used heroin¹



81,000

People used heroin
for the first time¹



2 million

People misused prescription
opioids for the first time¹



17,087

Deaths attributed to
overdosing on commonly
prescribed opioids²



15,469

Deaths attributed to
overdosing on heroin²



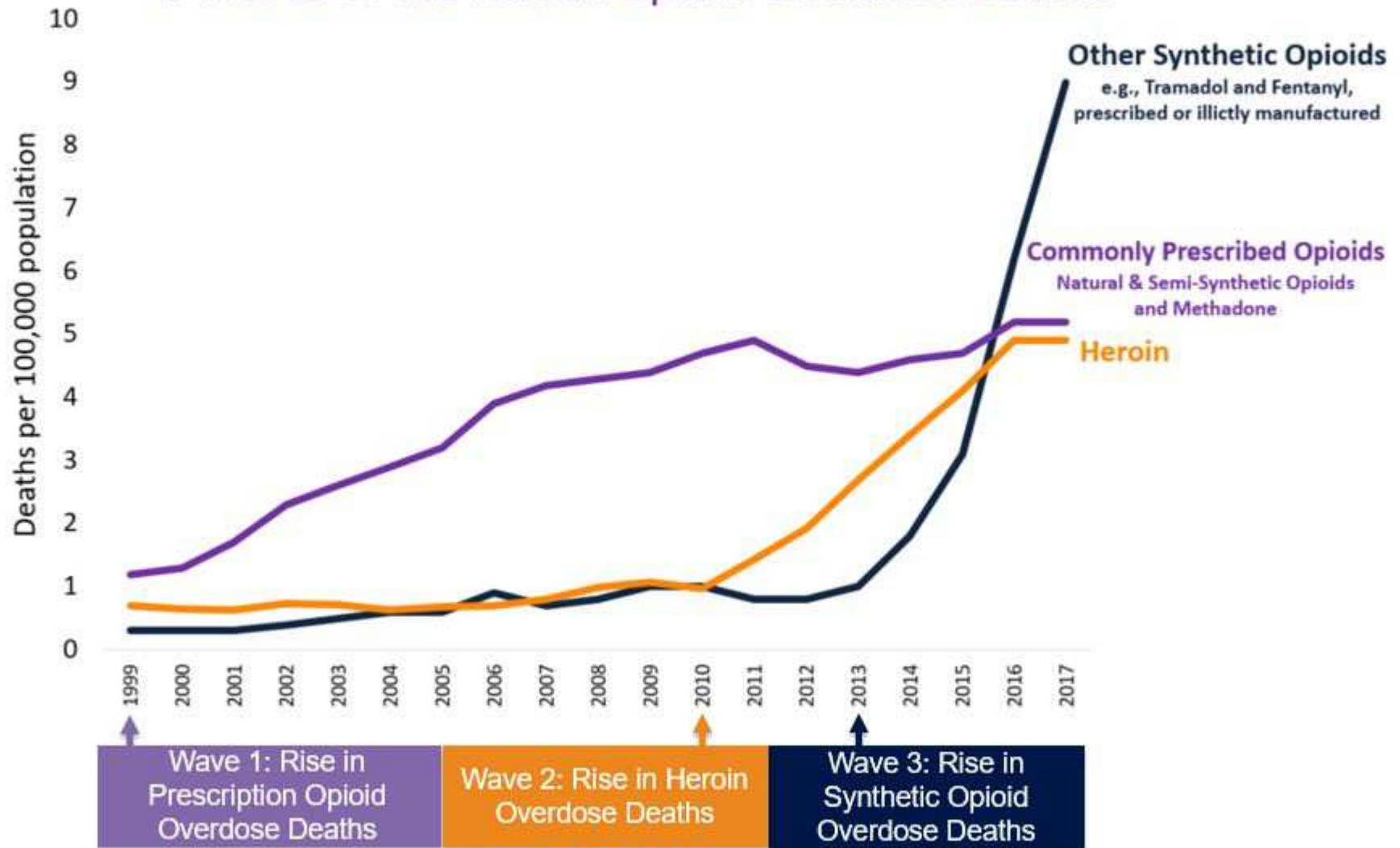
19,413

Deaths attributed to
overdosing on synthetic
opioids other than
methadone²

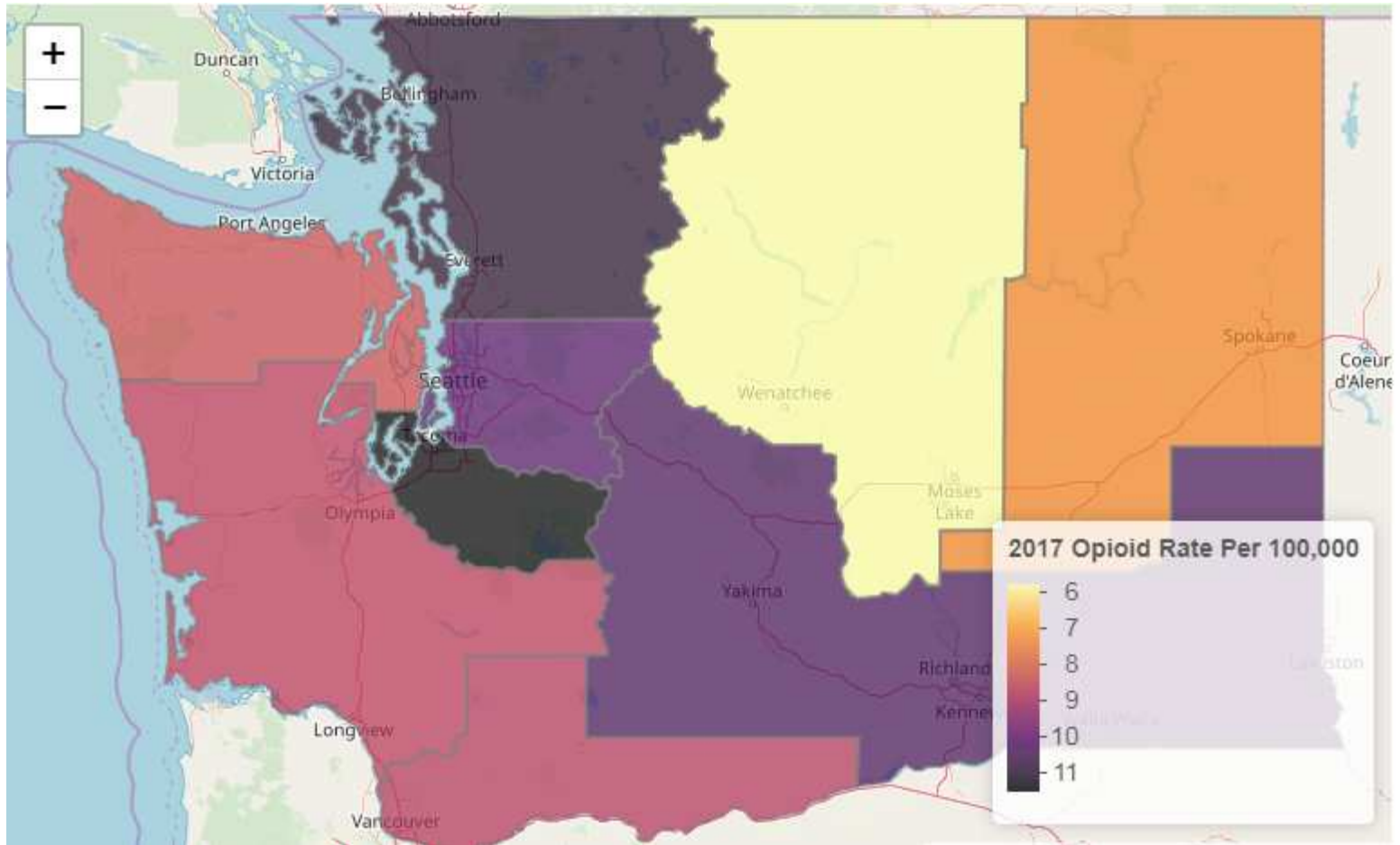
SOURCES

1. 2017 National Survey on Drug Use and Health, Mortality in the United States, 2016
2. NCHS Data Brief No. 293, December 2017
3. NCHS, National Vital Statistics System. Estimates for 2017 and 2018 are based on provisional data.

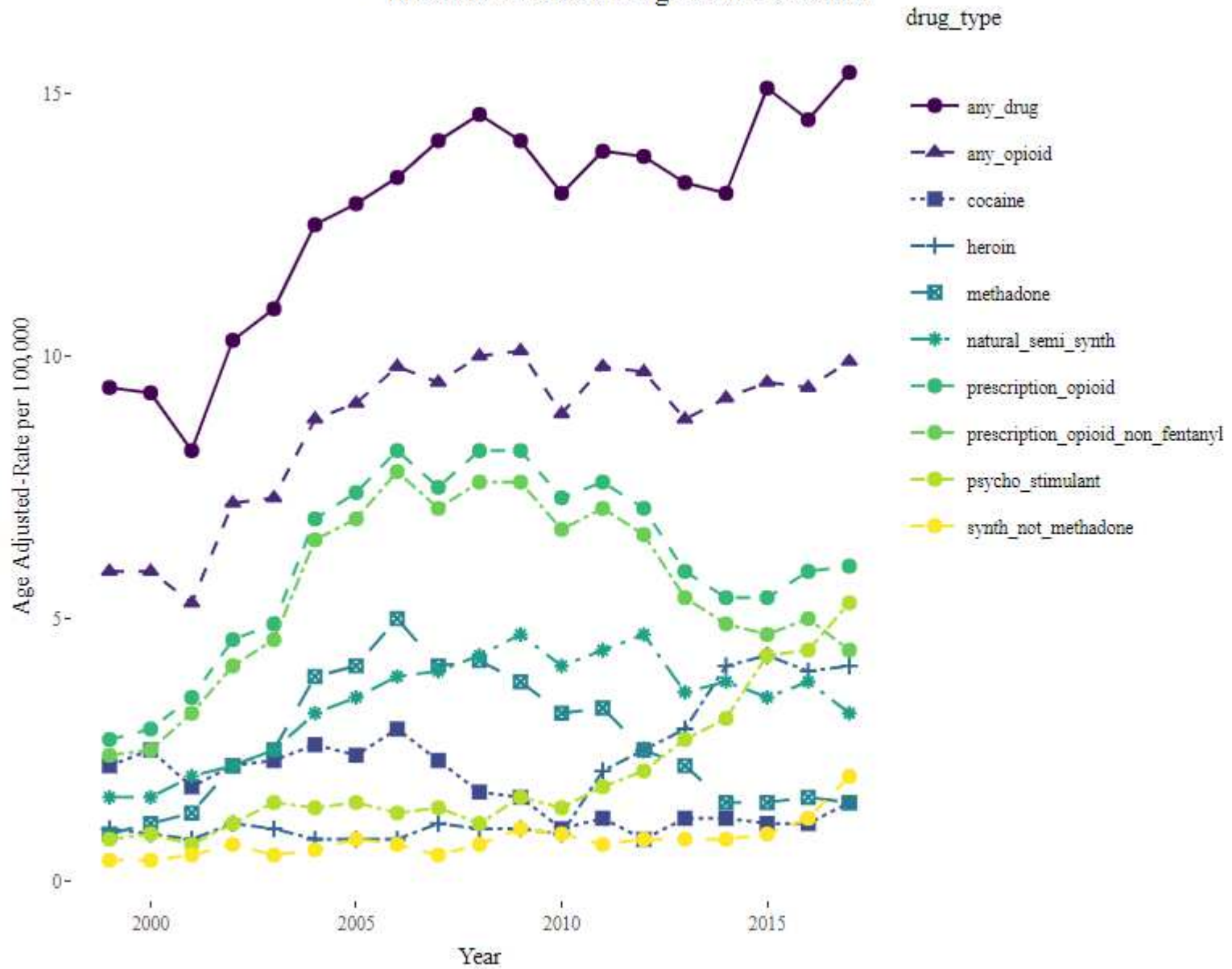
3 Waves of the Rise in Opioid Overdose Deaths



SOURCE: National Vital Statistics System Mortality File.



WA State Overdose Drug Death 1999-2017



Updated Mortality Trend by Drug type

HOW YOUR BODY PROCESSES PAIN

1. OUCH!

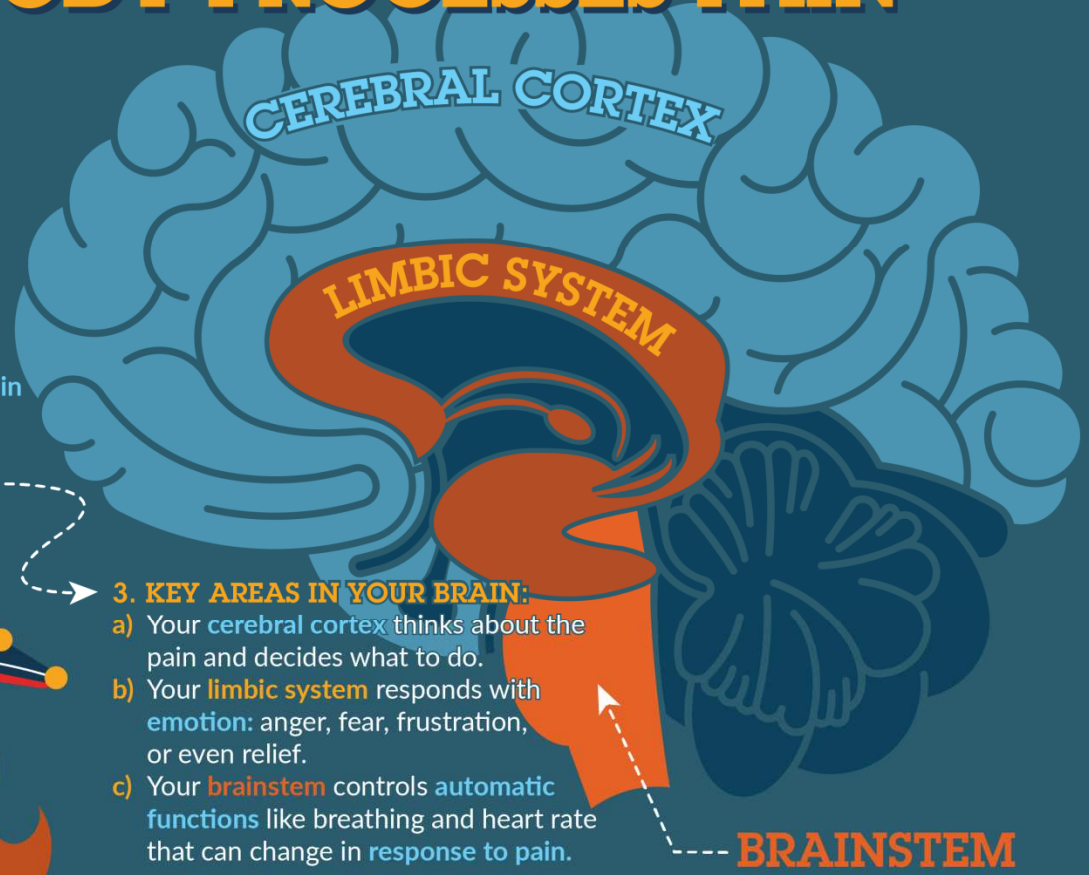
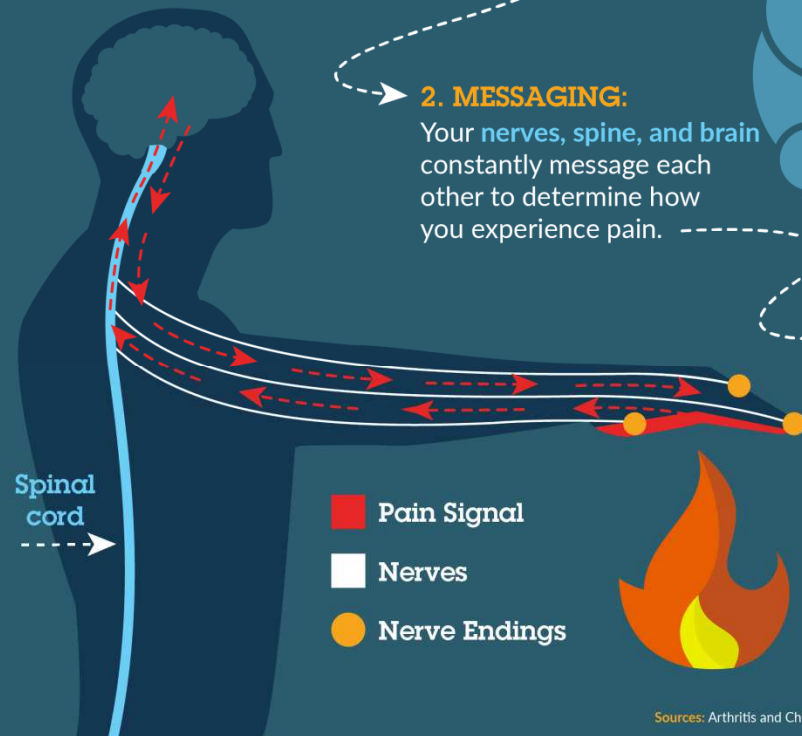
Special nerve endings can tell pain from other sensations. They send signals to the **spinal cord**. It's why you might yank your hand from the fire before you even think, "That's hot!"

2. MESSAGING:

Your **nerves, spine, and brain** constantly message each other to determine how you experience pain.

3. KEY AREAS IN YOUR BRAIN:

- a) Your **cerebral cortex** thinks about the pain and decides what to do.
- b) Your **limbic system** responds with **emotion**: anger, fear, frustration, or even relief.
- c) Your **brainstem** controls **automatic functions** like breathing and heart rate that can change in **response to pain**.



HOW OPIOIDS BLOCK PAIN

PRESCRIPTION OPIOIDS



They influence the release of chemicals from the “**brain’s internal reward system**” that can calm your emotions and give you a **sense of pleasure**.



They slow down **automatic functions**, including **breathing** and **heart rate**, which can lower your pain.



They **slow or reduce** pain signals before they get to the **brain**, where you **feel them**.

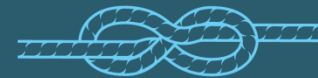
THEY CAN ALSO MAKE YOU:



- Nauseated.



- Tired & Sleepy.



- Constipated.

TAKEN OVER TIME:



- **Tolerance:** Your body can get used to them, and you need more.



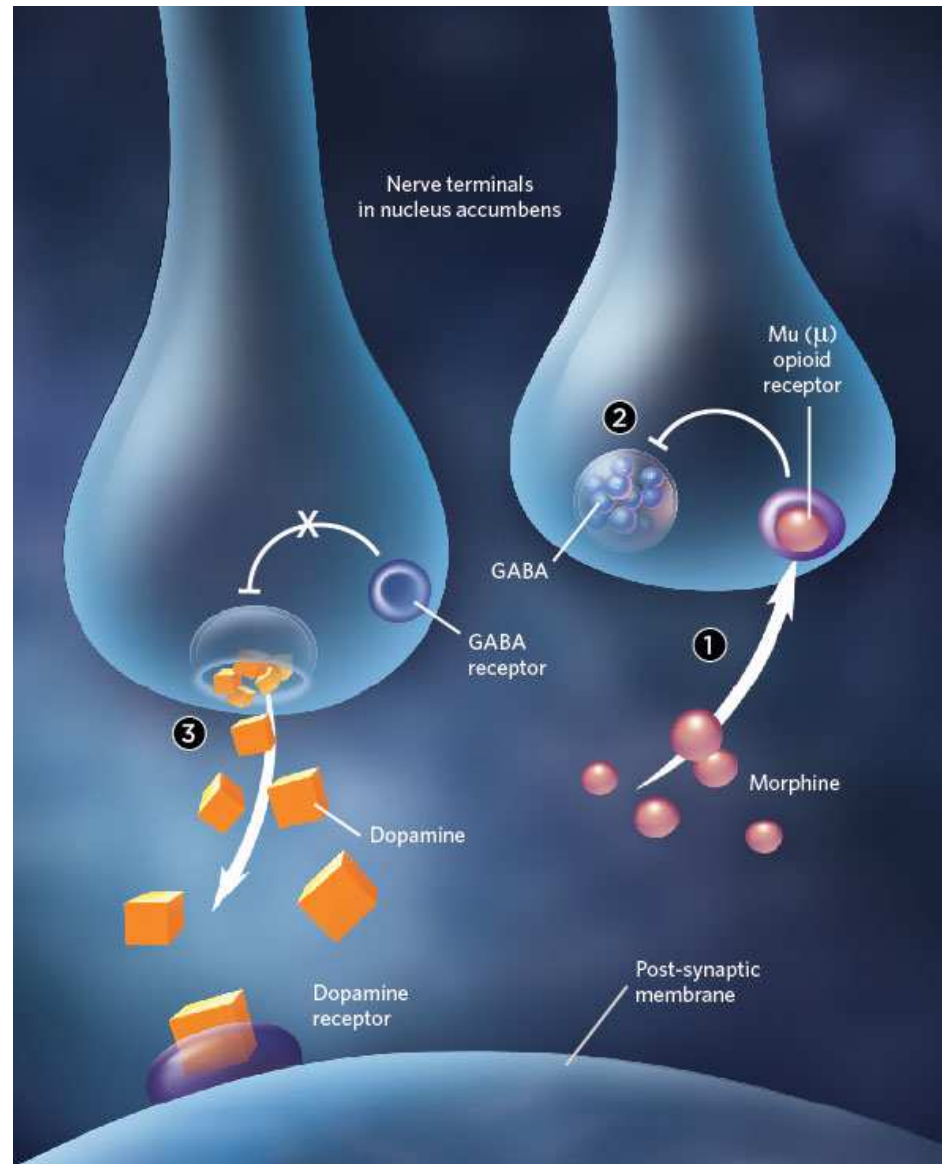
- **Withdrawal:** You can get very sick if you suddenly stop taking them.



- **Misuse:** You might take them in a way not prescribed by your doctor.



- **Addiction:** You might become dependent.

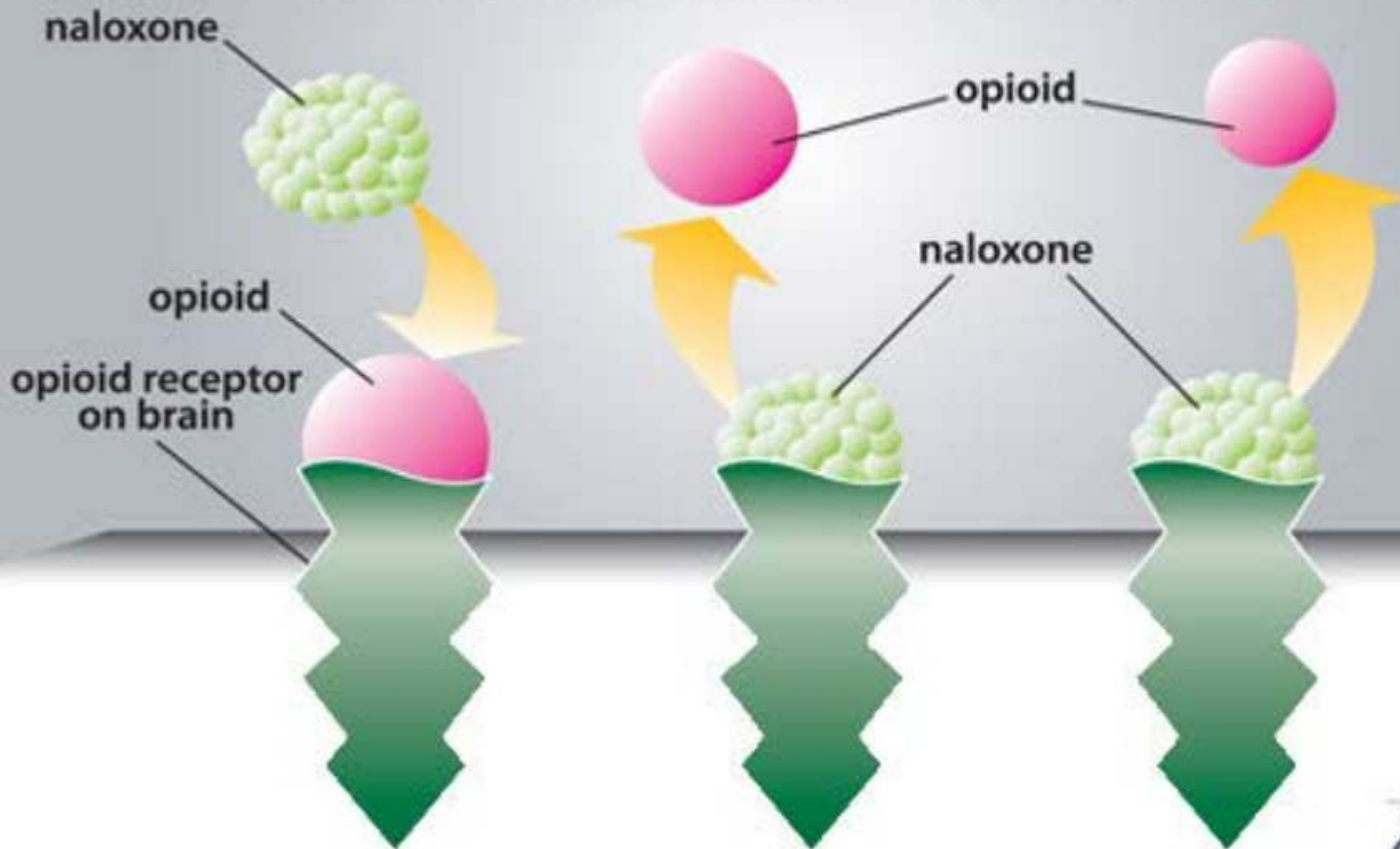


THE HIGH:

Morphine's activation of the opioid receptor in neurons of the nucleus accumbens in the brain ① reigns in the release of the neurotransmitter γ -aminobutyric acid (GABA) ②. This drop in GABA causes a neighboring cell to expel dopamine ③, which in turn elicits the euphoria associated with opioids.

Naloxone reversing an overdose

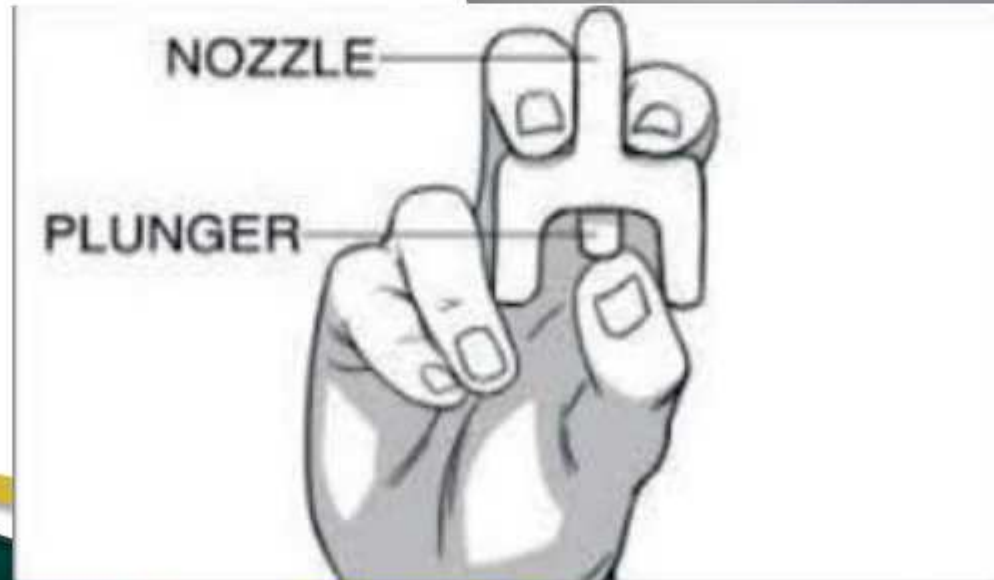
Naloxone has a stronger affinity to the opioid receptors than opioids, such as heroin or oxycodone, so it knocks the opioids off the receptors for a short time (30-90 minutes). This allows the person to breathe again and reverse the overdose.



COPE



Narcan Nasal Spray



Signs of Opioid Overdose

- Unresponsive
- Blue/pale skin, lips, nails
- Slow heartbeat
- Slow/irregular breathing, or no breathing at all
 - Choking, gargling, snoring sound, “death rattle”
- GI issues, passed out
- Pinpoint pupils

Signs of an Opioid Overdose



Blue lips or nails



Dizziness and confusion



Can't be woken up



Choking, gurgling or
snoring sounds



Slow, weak
or no breathing



Drowsiness or
difficulty staying awake

Side Effects of Naloxone

Withdrawal symptoms in opioid-dependent individuals:

- Fatigue
- Loss of bowel/bladder function
- Fever, sweating
- Upset stomach/vomiting
- Confusion, disorientation
- Increased heart rate/breathing
- Pain/aches
- Sometimes severe, but still alive

Naloxone Myth vs. Fact

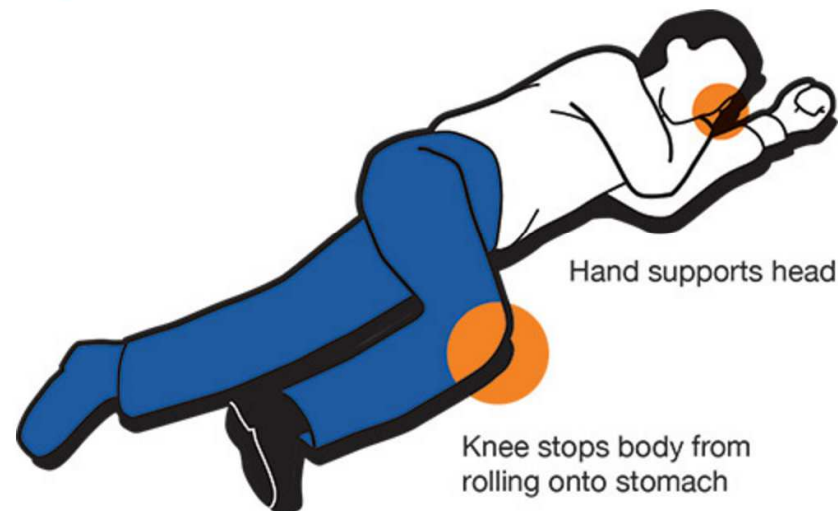
Access to naloxone does not:

- Send the wrong message
- Encourage/increase drug use
- Cause violence
- Prevent people from going to treatment

After Administering Naloxone

The Recovery Position

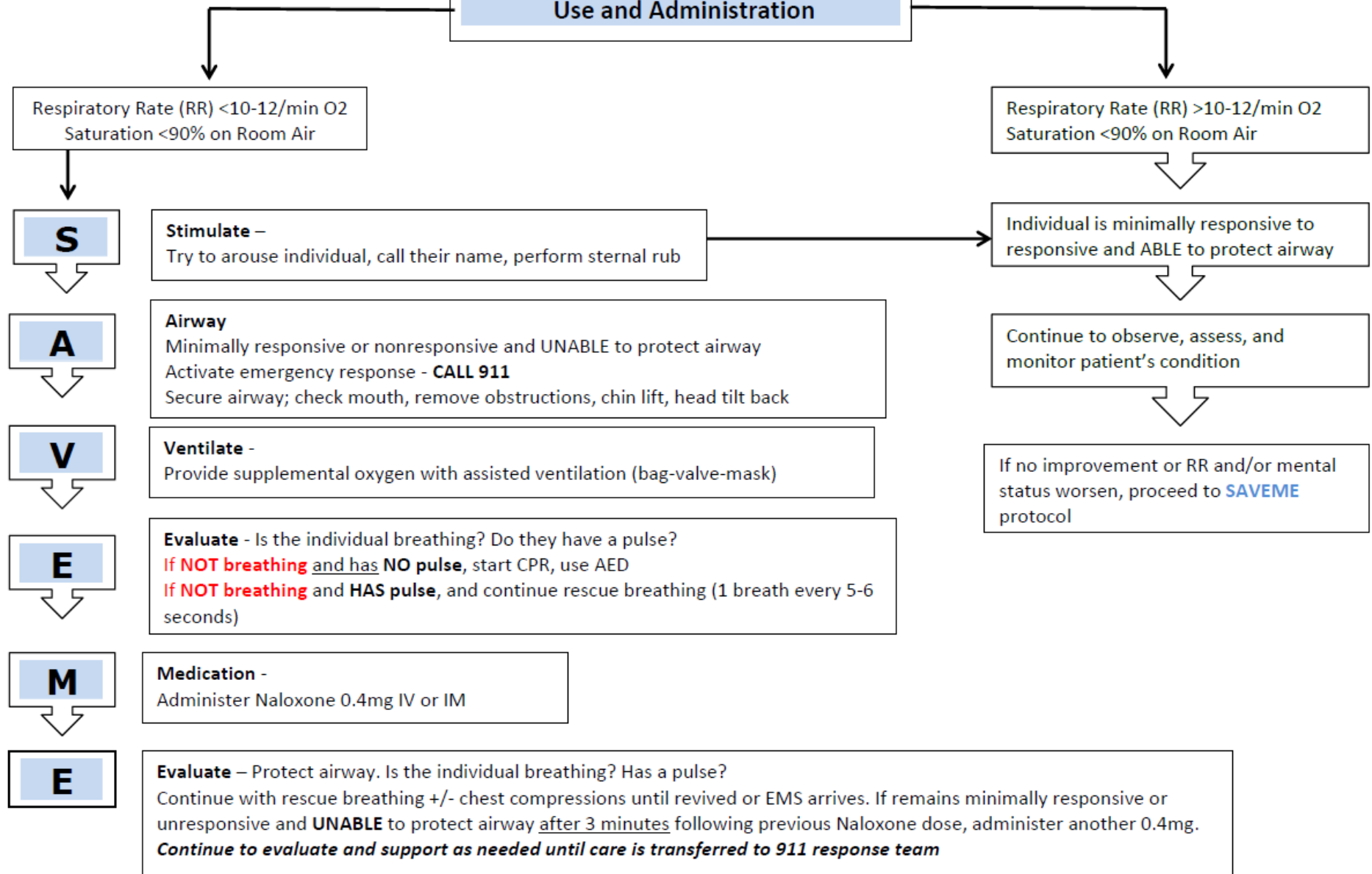
Keep the Airway Clear



Stay with person. If you must leave them alone at any point, or if they are unconscious, put them in this position to keep airway clear and prevent choking.

- Depending upon the dose and exposure Naloxone can wear off and patient can develop symptoms again
- Patient needs to be transferred to emergency room for observation.

Assessment for Naloxone (Narcan) Use and Administration



NKC Procedure

Procedure	Key Points
Determine Need for Narcan	
1. Refer to "Assessment for Naloxone Use & Administration"	
2. Assess patient's condition: <ul style="list-style-type: none"> * Check Vital Signs * Check O2 saturation * Neuro check 	<p style="text-align: center;"><u>Vital Signs</u></p> <ul style="list-style-type: none"> • Absence of respirations (apnea) or decreased respiratory rate (RR) <i>(a RR of <10-12/min is the best clinical predictor of opioid intoxication)</i> • Oxygen saturation of <90% on room air • Slow, erratic or absent heart rate <p style="text-align: center;"><u>Mental status</u></p> <ul style="list-style-type: none"> • Patient unresponsive and pupils unreactive (often pinpoint)
3. Activate Emergency Response if needed & Call 911	<ul style="list-style-type: none"> • Ambu Bag, AED, Back board
4. Check for Order	<ul style="list-style-type: none"> • NKC Standing Order
5. Check for allergies	<ul style="list-style-type: none"> • Naloxone is used to prevent or reverse the effects of opioids including respiratory depression, sedation and hypotension
6. Notify MD	<ul style="list-style-type: none"> • Delegate to another nurse

Procedure	Key Points
7. Notify AOC	<ul style="list-style-type: none"> Delegate to another nurse
Administer Naloxone (Narcan)	
8. Perform hand hygiene	
9. Remove cap from vial and clean rubber top with alcohol wipe	
10. Draw medication from vial	<ul style="list-style-type: none"> Naloxone is supplied in single dose vial 0.4mg/mL
	<ul style="list-style-type: none"> Use 3mL syringe and 20-gauge needle to draw medication
NOTE: For IM administration, remove the 20-gauge needle after drawing the medication and attach a new 23-gauge, 1-inch needle.	
Steps for IV Administration of Naloxone HCL during treatment	
Procedure	Key Points
1. Perform hand hygiene and don PPE	
2. Clamp medication line on venous drip bulb	
3. Attach 3mL syringe containing Naloxone 0.4mg/mL to the medication port	<ul style="list-style-type: none"> Remove needle (NKC dialysis lines are needleless)
4. Administer entire amount then CLAMP line	<ul style="list-style-type: none"> Make sure entire dose is administered
5. Attach NS syringe, unclamp, and Flush med-line and re-clamp	<ul style="list-style-type: none"> Pushes Narcan into blood stream Flush with 6-8 mLs
6. Monitor patient's response Check VS	<ul style="list-style-type: none"> Onset of Narcan administered IV = 2 minutes
7. Determine need for additional dose	<ul style="list-style-type: none"> If desired effect is not observed after 3 min, dose can be repeated once (per S.O.)
8. Transfer care to 911 Response Team	
9. Document in EMR.	<ul style="list-style-type: none"> Documentation includes the dose, route, lot number, expiration date, manufacturer, assessment, pt.'s response to medication, and nurse administering the dose.
10. Document in SAS.	<ul style="list-style-type: none"> ALL out of ordinary events must be entered in SAS
Steps for IM Administration of Naloxone HCL (use 23 gauge, 1 inch needle) – No blood line access readily available (e.g. PD or off machine)	
Instead of administering the medication in the venous medline (IV) it will be administered in the patient's arm (IM)	

Procedure	Key Points
11. Clean the deltoid muscle site.	
12. Inject the medication.	<ul style="list-style-type: none"> • IM injection requires 23-gauge, 1 inch needle. • 1½" needle may be used for obese patients.
13. Observe for response.	<ul style="list-style-type: none"> • The onset of action for IM administered Naloxone is slightly less rapid than IV. • IM injection of Naloxone HCL produces more prolonged effect than IV administered. • <i>If desired effect is not observed after 3 min., dose can be repeated once (per S.O.)</i>
14. <u>In the event of an allergic reaction</u> , follow the NKC Standing Orders for drug reactions. Notify the patient's physician. Complete a progress note in the EMR and the online SAS as soon as possible.	

POINTS TO EMPHASIZE

1. Naloxone Hydrochloride injection is indicated for the complete or partial reversal of opioid depression, including respiratory depression, induced by natural and synthetic opioids including propoxyphene, methadone, and certain mixed agonist-antagonist analgesics: nalbuphine, pentazocine, butorphanol, and cyclazocine. It is also indicated for the diagnosis of suspected or known acute opioid overdose.
2. When Narcan is administered intravenously (IV), the onset of action is generally apparent in two minutes; the onset of action is slightly less rapid when it is administered intramuscularly (IM).
3. The duration of action is dependent upon the dose and route of administration. IM administration produces more prolonged effect than IV.
4. Repeat dose of Narcan is dependent on the amount, type, and route of administration of the opioid being antagonized. Typically, an initial dose of 0.4mg to 2mg is administered. If desired effect is not observed, dose can be repeated every 2 to 3 minutes to reverse opioid effect up to a maximum dose of 10mg.
5. Rescue breathing and CPR are extremely important and can be the key in saving a person's life.