

Abusive use of opioids, which kill an average of 91 people a day, according to the Centers for Disease Control and Prevention.

Learning Objectives

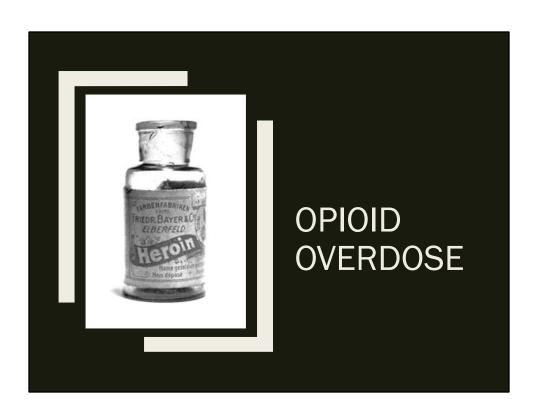


- Recognize the national and local opioid overdose epidemic
- 2) Know how opioids work
- 3) Recognize an opioid overdose
- 4) Respond to opioid overdose
 - Getting help
 - Rescue Breathing
 - Administering naloxone
 - Documentation.

Terms

- Narcotic term associated with opiates and opioids, as well as derivatives
- Naloxone (sold under the brandname Narcan) is a medication used to block the effects of opioids, especially in overdose
- Rescue Breathing a form of artificial ventilation, is the act of assisting or stimulating respiration
- IN intranasal is a route of administration in which drugs are insufflated through the nose
- Miosis is excessive constriction of the pupil.





Overdoses

- Overdoses can occur with almost any drug
- Most overdoses in the US are due to opioid toxicity from drugs like heroin or prescription pain relievers, either alone or in combination with other substances
- Poly-drug use (combining an opioid with other substances) can increase the risk of a fatal overdose
- Can be intentional or accidental
- 112,000 fatal overdoses in 2023.



Opioids & Opiates

- 1. Valuable medications that relieve pain
- 2. Past history in medicine of under-prescribing as a treatment plan
- 3. Now, concern with over-prescribing and diversion of unused medications
- 4. Side effect of narcotics; depressed respirations, cessation of breathing
 - Leading ultimately to death
- 5. Seen with illegal drugs such as heroin.



Synthetic Opioids: Fentanyl

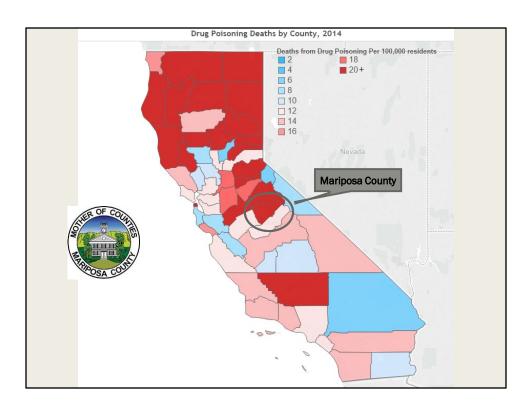
- Largely because of their potency, synthetic opioids have become the fastest-growing cause of the overdose epidemic, overtaking heroin in some areas
- Just a few flakes of fentanyl can be fatal 50-100 times more potent than morphine
- Their deadly efficiency also makes them ideal for sale online:
 - Unlike heroin and prescription painkillers, which are relatively bulky, enough fentanyl to get nearly 50,000 people high can fit in a standard first-class envelope.

In late February 2021, a man in South Carolina was accused of receiving more than three kilograms of fentanyl ordered on the dark net — or enough to kill 1.5 million adults, given that just two milligrams is a lethal dose.

And many cases — including the death of the musician Prince, children in daycare and many others from a fentanyl overdose — are still being investigated because of the relatively recent advent of the phenomenon.



As of 2002, Mariposa County was in the 12 deaths per 100,000 residents. As we only have 17-18,000 in the whole county, that makes it 2.16 deaths in the county for the year 2002.



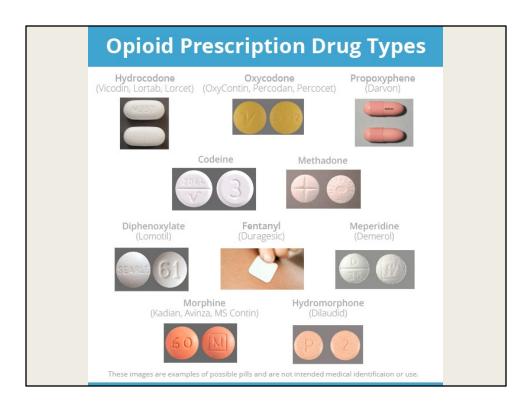
Unfortunately, by 2014 the deaths went to 20+ for the county – but that still amounts to about 3.6 deaths that year for our true population. 3-4 deaths that might have been prevented.

Kern County is the big one south of us: 875,000 population (which means over 175 deaths in 2014). Deaths from overdoses of narcotic prescription painkillers more than tripled in the U.S. from 2000 to 2014. These drugs now kill more people than heroin and <u>cocaine</u> combined.

Heroin use is also growing in the U.S. The 2012 National Survey on Drug Use and Health reported that 669,000 Americans use the illegal substance -- nearly twice as many as in 2007. Deaths from heroin overdoses quadrupled between 2002 and 2013.



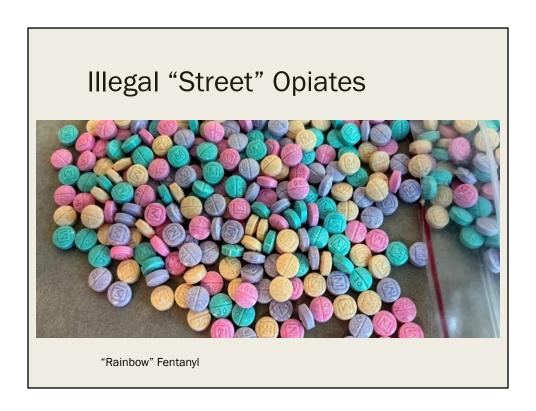
Five years later – we are still in that high death category



These are the "legal" drugs in the class of opioids.



These are the "illegal" drugs in the class of opioids. Fentanyl-laced drugs are extremely dangerous. It is nearly impossible to tell if drugs have been laced with fentanyl without the use of <u>fentanyl test strips</u> because fentanyl cannot be seen, smelled, or tasted. Test strips are inexpensive, typically give results within 5 minutes, and can be the difference between life or death. Even if the test is negative, caution should be taken as test strips might not detect other fentanyl-like drugs, like carfentanil



They can look like something totally benign – and still will kill.

Opioid Overdose

- In 2021 in California, fentanyl overdose killed 5,961 people
- California deaths from all opioid overdoses in 2021 were 7,175;
 - 21,016 ED visits related to opioids
 - 14,777,578 prescriptions for opioids.



The heroin epidemic sweeping the nation -- which has <u>quadrupled heroin overdose</u> <u>deaths</u> among people aged 25 to 34 and contributed to an <u>increase in the overall</u> <u>mortality rate of young, white Americans</u> -- serves as a case-in-point. Heroin is often mixed with <u>fentanyl</u>, a chemical that is 50 times more potent than morphine.

Merely <u>3 mg</u>, the mass of several grains of salt, is lethal. (See upper left image.)

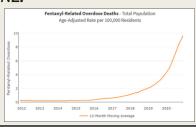
Opioids killed more than 33,000 Americans in 2015, according to the CDC. Since 1991, the number of opioid overdose deaths has quadrupled. In 2014, according to the Agency for Healthcare Research and Quality, 1.3 million Americans were hospitalized for opioid-related issues.

Subsequent investigations revealed that what had been sold as cocaine was mostly fentanyl with a trace amount of cocaine. The patients who were dead on arrival had gone into cardiac arrest due to blood concentrations of fentanyl that were much higher than what is administered therapeutically. (Fentanyl is used in hospitals as a painkiller at a blood concentration of 0.6 to 3.0 ng/mL or ppb). Patient E had a blood concentration of 11 ng/mL,

Among the more than 64,000 drug overdose deaths estimated in 2016, the sharpest increase occurred among deaths related to fentanyl and fentanyl analogs (synthetic opioids) with over 20,000 overdose deaths

Opioid Overdose

- Even a relatively small amount of an opioid can lead to an overdose emergency when tolerance is low
- Naloxone only works with opioids
- If the overdose is caused by a combination of drugs, it may take longer to reverse, and rescue breathing is more likely to be needed
- If the overdose was caused by non-opioids (like cocaine) naloxone won't help, but it won't hurt either
 - IF IN DOUBT USE NALOXONE.



What is Naloxone

- 1. Trade name Narcan, generic name naloxone-HCI
- 2. Reverses the effects of an opioid overdose by ejecting opioid molecules from receptors in the brain
- 3. Reverses the effects of <u>opioids only</u>, has no effect on any other drugs
- 4. Few side effects of use
- 5. New laws allows distribution to use and use by people around drug user, EMS/Fire & law enforcement.



Abrupt reversal of opioid effects in persons who are physically dependent on opioids may precipitate an <u>acute</u> withdrawal syndrome which may include, but is not limited to, the following signs and symptoms: body aches, <u>fever</u>, sweating, <u>runny nose</u>, sneezing, <u>piloerection</u>, <u>yawning</u>, weakness, shivering or trembling, nervousness, restlessness or irritability, <u>diarrhea</u>, nausea or vomiting, abdominal cramps, increased blood pressure, tachycardia.

The injectable version of the medication is much cheaper — California pays \$3 per vial versus \$47.50 for a two-dose kit of Narcan, according to the healthcare services department — and has been around longer than the nasal spray



Where can you get naloxone?

Anyone: pharmacies and local organizations

Anyone can get naloxone (Narcan) from a pharmacy or from a local organization that has a naloxone distribution program, such as a local opioid or overdose safety coalition or a syringe services program.

Qualified organizations: Naloxone Distribution Project
The California Department of Health Care Services (DHCS) provides naloxone to
qualified organizations to distribute naloxone within communities. Learn more by
visiting the Naloxone Distribution Project.

American Medical Association

■ February 16, 2023 - Two advisory committees voted on Wednesday to recommend to the FDA that naloxone, the overdose-reversing drug, be available over the counter.



Making naloxone over the counter is a safe and vital step to ending the nation's overdose epidemic. This will help community-based organizations purchase and distribute naloxone to those who need it most. Rather than sitting behind a pharmacy counter, naloxone needs to be readily available to save lives.

AB 635

- 1. Allows distribution of naloxone to friends, family of those at risk
- Also, other persons who can assist, including law enforcement
- 3. Requires training
- 4. Legal protection for good-faith actions, from:
 - Professional review
 - Civil action
 - Criminal prosecution.



INFORMATION ON THE CALIFORNIA OVERDOSE TREATMENT ACT

As of January 1, 2014, the provisions of <u>AB 635</u>, The Overdose Treatment Act, will become law. This law is designed to encourage California health care providers and community programs to widely distribute naloxone to treat opioid overdose incidents.

Provides protection to licensed health care professionals statewide from civil and criminal liability when, if acting with reasonable care, they prescribe, dispense, or oversee the distribution via a standing order of naloxone via an overdose prevention program or standard medical practice.

Permits individuals to possess and administer naloxone in an emergency and protect these individuals from civil or criminal prosecution for practicing medicine without a license.

Clarifies that licensed prescribers are encouraged to prescribe naloxone to individual patients on chronic opioid pain medications in order to address the prescription drug overdose epidemic.

Notwithstanding any other law, a person who possesses or distributes an opioid antagonist pursuant to a prescription or standing order shall not be subject to professional review, be liable in a civil action, or be subject to criminal prosecution for this possession or distribution. Notwithstanding any other law, a person not otherwise licensed to administer an opioid antagonist, but trained as required under paragraph (1) of subdivision (d), who acts with reasonable care in administering an opioid antagonist, in good faith and not for compensation, to a person who is experiencing

or is suspected of experiencing an overdose shall not be subject to professional review, be liable in a civil action, or be subject to criminal prosecution for this administration.

CA Civil Code

- <u>California Civil Code Section 1714.22 (Statutes of 2013, Chapter 707, Sec.1)</u>
- Eliminates civil and criminal liability for:
 - 1) licensed health care providers that prescribe naloxone and issue standing orders for the distribution of naloxone, and
 - 2) individuals that administer naloxone to someone suspected of experiencing an overdose after receiving it along with required training
 - This law took effect on January 1, 2014.

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CA Good Sam Law

- California's 911 Good Samaritan Law protects you from arrest, charge and prosecution when you call 911 at the scene of a suspected drug overdose
- Nobody at the scene should be charged for personal amounts of drugs or paraphernalia
- This law does not protect you if,
 - You are on parole/probation; it is likely still a violation
 - You have more drugs than "possession for personal use"; it is still illegal to have any amount that would suggest trafficking or sales
 - You "obstruct medical or law enforcement personnel"; it is still important to not intervene with the activities of police or emergency personnel.

Similarly, "[n]otwithstanding any other law, a person not otherwise licensed to administer an opioid antagonist"

is immune from criminal, civil, and professional liability so long as they act in good faith and with reasonable care

Overview of Program Directives

- All participating responders/officers are required to be trained in the use of Naloxone
- · Responders should:
 - Maintain universal precautions
 - Perform initial patient assessment ABC's
 - Determine unresponsiveness, absence of breathing or pulse
 - · Update dispatch of potential overdose
 - Follow protocol as outlined for administering the medication
 - Immediately inform responding EMS/Paramedics that naloxone has been administered and number of doses administered.



- **DRABC:** (Danger, Response, Airway, Breathing, Circulation)
 - <u>Danger</u>: is the scene secure?
 - Response: If patient unresponsive, call EMS for backup (if not already coming)
 - Simultaneously check pupils for miosis and skin signs for cyanosis (blue).



We add D for Danger and R for Response here – to protect ourselves

- Airway: check and clear if needed
 - · Head-tilt-chin-lift
- Breathing: if the victim is breathing no CPR is needed
 - If the respirations are below 8 per minute provide rescue breaths (BVM with oxygen preferred)
- <u>Circulation</u>: if unresponsive and not breathing, begin
 CPR starting with chest compressions
 - 30:2 100-120 compressions per minute.

ALWAYS focus on the ABC's – narcotics depress the respiratory center in the brain. Start CPE compressions/breaths if no pulse

Main S&S in an opioid associated overdose:

- 1. Breathing is suppressed (slow or no breathing)
 - Hypoxia can cause damage to the brain and heart, and leads to death
- 2. Unconsciousness
- 3. Cyanosis of lips and nail beds
- 4. Pale or clammy skin
- 5. Gurgling or snoring sounds ("death rattle").



Other Signs & Symptoms of a Narcotic Overdose

- Symptoms of an opioid overdose include:
 - Confusion, delirium, or acting "drunk"
 - Mood swings
 - Nausea or vomiting
 - Pinpoint pupils
 - Extreme sleepiness, or the inability to wake up
 - Breathing problems, including slowed or irregular breathing
 - Stopped breathing
 - Slow heartrate or cardiac arrest
 - Cold, clammy skin, or bluish skin around the lips or under the fingernails
 - Paraphernalia known as a drug user.

Pinpoint pupils (miosis) is a hallmark for narcotic overdose

MAJOR INDICATORS	CNS DE- PRESSANTS	CNS STIM- ULANTS	HALLUC- INOGENS	PHENCY- CLIDINE	NARCO- TICS	INHALANTS	CANNABIS
HORIZ. GAZE NYSTAGMUS	PRESENT	NONE	NONE	PRESENT	NONE	PRESENT	NONE
VERTICAL NYSTAGMUS	PRESENT (HIGH DOSE)*	NONE	NONE	PRESENT	NONE	PRESENT (HIGH DOSE)*	NONE
LACK OF CONVERGENCE	PRESENT	NONE	NONE	PRESENT	NONE	PRESENT	PRESENT
PUPIL SIZE	NORMAL (1)	DILATED	DILATED	NORMAL	CONST- RICTED	NORMAL (4)	DILATED (6
REACTION TO LIGHT	SLOW	SLOW	NORMAL (3)	NORMAL	LITTLE OR NONE VISIBLE	SLOW	NORMAL
PULSE RATE	DOWN (2)	UP	UP	UP	DOWN	UP	UP
BLOOD PRESSURE	DOWN	UP	UP	UP	DOWN	UP/DOWN (5)	UP
BODY TEMPERATURE	NORMAL	UP	UP	UP	DOWN	UP/ DOWN/ NORMAL	NORMAL

CNS depressants include: alcohol, benzodiazepines such as valium, Ambien and Xanax, and barbiturates such as phenobarbital and pentobarbital (Nembutal). CNS stimulants include: cocaine, methamphetamine, amphetamine, caffeine, Ritalin, ephedrine and even nicotine.

Hallucinogens include: LSD, psilocybin (mushrooms), Ketamine and marijuana. Phencyclidine is also known as PCP and "angel dust".

Narcotics include: codeine, hydrocodone, oxycodone, methadone, hydromorphone, morphine, fentanyl, and carfentanil.

Inhalants include: solvents, aerosol sprays, gases and nitrites from containers of glue, marking pens, computer cleaning dust sprays, or inhaling fumes from paint thinners, cleaning fluids, gasoline, vegetable oil sprays, and room deodorizers.

Canabis: marijuana is still considered a Schedule I controlled substance by the FDA – both a depressant and an hallucinogenic substance.

- Because the depression of respiration usually occurs gradually (over minutes or even hours) there is usually time to intervene
- If no one intervenes, the overdose victim will die of oxygen deprivation

However, a fentanyl overdose may depress respiration in <u>seconds</u>.

You never know how much is too much till it is all over.

- Overdosing on non-opioids (such as cocaine):
 - Dilated pupils
 - Agitation
 - High blood pressure
 - High temperature
 - Seizures
 - Chest pain.



Non-opioids will not depress the respiratory center – HOWEVER – sometimes the cocaine was "cut" with an opioid or was sold as cocaine. If you see signs of opiate overdose – give Narcan.

Breathing:

- Assess for chest rise; Rescue breaths if respiratory rate less than 8 breaths/minute:
 - Assess for signs of opiate/heroin overdose (paraphernalia, history from family/friends, prescription drug bottles)
- If normal respiratory rate of 12 breaths/minute or greater, monitor patient till EMS arrives.

Normal respirations for an adult is 12 to 20

Breathing:

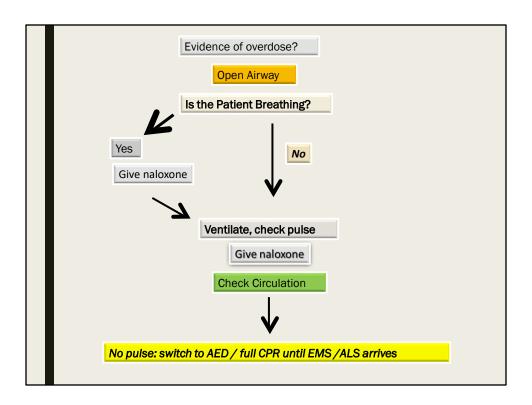
- If evidence of overdose from opiates/heroin <u>and</u> breathing less than 8-12 breaths/minute:
 - 1. Give intranasal naloxone, check response
 - 2. No response: continue ventilation, check pulse
 - 3. <u>If no breathing/pulse: start and continue CPR till</u>
 <u>EMS arrives and place AED device on patient.</u>

The victim MUST have a pulse for the Narcan to go to work. If you have time – deliver a dose of IN naloxone while continuing CPR
If you consider this to be an overdose – give another IN dose of Narcan in 5 minutes.

CPR:

- Opioid overdose is an exception to the compression-only (hands-only) CPR protocol
- Immediate ventilation is vital with this victim
 - Give rescue breaths with oxygen if you have it
- CPR does not address the overdose only naloxone can do that
 - The most effective response involves <u>both</u> rescue breathing and naloxone.

They went into respiratory arrest before cardiac arrest – so continue with the 30:2 protocol



Evidence of an overdose would be an unresponsive patient with possible cyanosis and pinpoint pupils.

Support Breathing

Ventilation

- 1. Open airway—Head tilt/Chin lift
- 2. One breath every 5-6 seconds about 12 breaths/minute
- 3. Make sure your Rescue Breaths are:
 - Over 1 second (not too fast)
 - Just until a visible chest rise (not too much).



You WILL NOT even THINK about doing mouth-to-mouth or even mouth-to-mask



Naloxone Use

Administering Naloxone

- 1. Nasal Spray rather that injection
- 2. Absorbed by the brain from nasal mucosa (thin tissue in nose)
- 3. The IN Spray is safer than intravenous or intramuscular route using needle
- 4. Provides for slower, more even awakening than IV.



Giving an injection of Narcan may result in rapid awakening and a combative patient

Storage of Naloxone

- Naloxone Kit must be stored in the passenger compartment of patrol vehicle
- Naloxone is a perishable medication:
 - Ideally it should be kept between 59° and 77° F
 - OK for short periods up to 104°F
 - Do not freeze
 - Extreme temperature changes may affect effectiveness of medication.

Naloxone is a fairly stable medication, with a shelf life between 18 months and two years. IN and IM naloxone should be stored between 59 and 77 degrees Fahrenheit, and should be kept away from direct sunlight. In most law enforcement settings, naloxone can be stored in the cab of the vehicle. Alternatively, the medication has been stored with automated external defibrillator (AED) units. Naloxone kits can be maintained by the individual officers, or alternatively issued at roll call and checked in at the end of the shift. Upon expiration, supplies of the medication should be replaced.

Remember Scene Safety

- Be aware of potential hazards:
- May be combative!
 - Maintain universal precautions; assume bodily fluids present risk of infection
 - · Needles/Hazardous materials
 - Other people and/or nearby traffic.



May wake up MAD! You just took away a magnificent high, and possibly thrown the victim into withdrawal.

Early symptoms of withdrawal include:

Agitation
Anxiety
Muscle aches
Increased tearing
Insomnia
Runny nose
Sweating
Yawning

Late symptoms of withdrawal include:

Abdominal cramping Diarrhea Dilated pupils Goose bumps Nausea Vomiting These symptoms are very uncomfortable, but are not life-threatening.

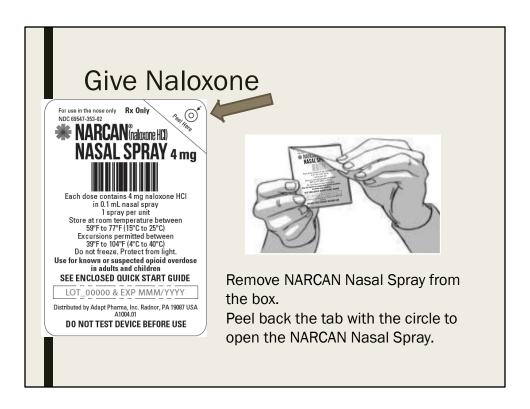
Identify Opioid Overdose & Check for Response

- Ask person if he or she is okay and shout name
- Shake shoulders and firmly rub the middle of their chest
- Check for signs of opioid overdose
- Lay the person on their back to receive a dose of NARCAN Nasal Spray.



Will not wake up or respond to your voice or touch

- Breathing is very slow, irregular, or has stopped
- Center part of their eye is very small, sometimes called "pinpoint pupils"



Two doses in each box

Hold the NARCAN nasal spray with your thumb on the bottom of the device and your first and middle fingers on either side of the nozzle. NOZZLE PLUNGER

Narcan has you put your thumb on the plunger, but you might shoot the 0.1 ml by pressing it too soon.

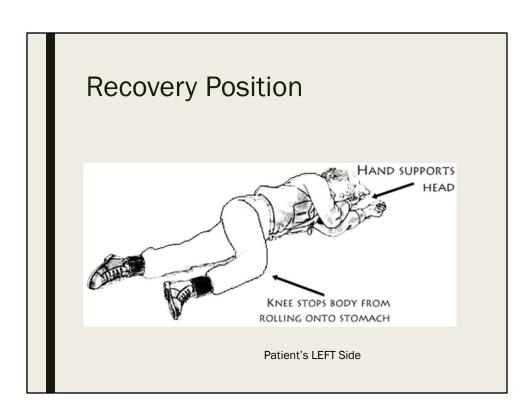
Gently insert the tip of the nozzle into either nostril.

■ Tilt the person's head back and provide support under the neck with your hand. Gently insert the tip of the nozzle into **one nostril**, until your fingers on either side of the nozzle are against the bottom of the person's nose.



Press the plunger firmly to give the dose of NARCAN Nasal Spray.

- Give the entire dose -
- Remove the NARCAN device from the nostril after giving the dose
- The dose is only 0.1 ml so be careful!.



Post Naloxone Care

- 1. If opioid, should see awakening
- 2. Occasional rapid awakening
- 3. Withdrawal symptoms possible if patient is dependent (i.e. they wake-up *mad*...)
- 4. Pain patients will lose pain relief (i.e. they're not too happy, either...)
- 5. Naloxone lasts 20 60 minutes; **opioids last hours** (they may crash again)
- 5. Patient should not leave important to be checked by EMS.

No Response to Naloxone

- May be overdose with non narcotic substance
 - Or a very large dose
- May not be overdose: cardiac, stroke, low blood sugar, foreign body, etc.
- Don't delay CPR / AED if condition appears to be a cardiac arrest
- Full CPR with barrier device.



Overdose Pamphlet

■ Each time Naloxone is administered an Overdose Prevention pamphlet should be given to the victim or family/friend on scene.



- Dogs may inhale the substance can quickly go into a critical overdose situation
- Veterinarians have approved the use of Narcan IN spray for K9
- Same assessment;
 - Unresponsive or depressed response
 - Slow to no breathing
- Same administration.



- Symptoms of opioid exposure in dogs, as with humans, include sedation, pinpoint pupils, vomiting, stumbling and a slow respiratory rate, said Dr. Martha Smith-Blackmore, a veterinarian and adjunct professor at Tufts University
- Just like people, dogs can require multiple doses of naloxone to reverse an overdose, Smith-Blackmore said.



- Normal breath rate is 10-30 per minute
- If rescue breathing is needed (less than 10 bpm):
- Use Mouth-to-Snout Resuscitation:
- Pull tongue forward through front teeth
- Hold the muzzle closed, holding the tongue forward and the airway open
- Give them 2-4 breaths from your mouth to their nose
 - You'll want to give them just enough air to the chest rise.



- Fire engines may have rescue masks for dogs/cats -
 - For administering oxygen.







- What if I can rouse the person and get them to breathe after doing a sternal rub do I still need to give Narcan?
 - No if the victim is breathing adequately on their own, they do not need Narcan
- Why not just to rescue breathing and let the ED give Narcan?
 - BVM ventilation done properly is an effective and acceptable way to car for someone – however there is always a risk of aspiration. It is better for the victim to breathe for him/herself whenever possible.

- What do we do after administering Narcan?
 - Stay with the victim and monitor his/her breathing and responsiveness. Be prepared to deliver a second dose and do rescue breathing
- Can you give Narcan if you don't know what drug(s) the person took?
 - Yes Narcan will not cause harm if it is given for a different type of overdose. Narcan will not help in this case, but it won't hurt either.

- Will Narcan work for someone who does not have a pulse?
 - No. Even though an opioid overdose can cause a person to go into cardiac arrest, if the heart is not beating the naloxone will not be circulated through the body and will not help reverse the effects of the over dose. No pulse - start CPR.

If you have Narcan, someone can give a dose during CPR – it won't hurt

- If the person is not breathing will Narcan work?
 - Yes naloxone is absorbed by the nasal membranes, so it is not necessary for the person to be breathing for the Narcan to work
- How much time do we have to administer the naloxone?
 - The Narcan will reverse the overdose at any point before the person goes into cardiac arrest due to hypoxia, but the sooner the better
 "time is brain".

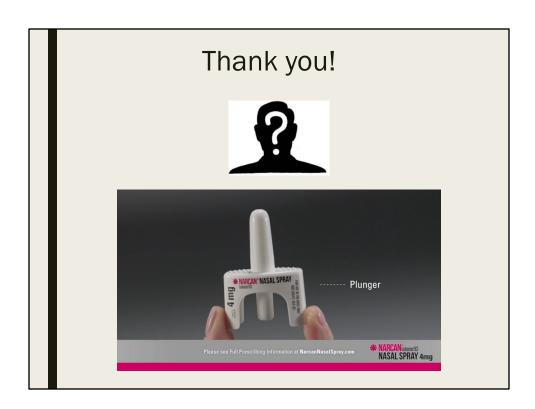
- How long should we wait before administering a second dose of Narcan?
 - If there is no response to the first dose, give another dose in 3-5 minutes
- Does Narcan work on someone with a fentanyl patch?
 - Yes if this happens be prepared to give a second dose and call for more Narcan from other units.
 Fentanyl overdose victims may need multiple doses.

- Can we use Narcan to determine what drug or medication they used?
 - No it should only be used to treat a known or suspected opioid overdose
- What if we give the Narcan to someone who does not need it?
 - If the person has not taken an opioid there will be no effect from the naloxone
- Can the Narcan be administered under the tongue?
 - No naloxone needs to be applied to the nasal membranes in order to work.

- Is Narcan temperature sensitive?
 - Yes, it should be kept above freezing between and not above 77 degrees F, and out of direct sunlight
- What can we expect when Narcan has reversed the overdose?
 - The victim may sit up quickly and gasp for air, be disoriented, confused or angry (may be experiencing withdrawal symptoms). Narcan is short-lived and may only last 30-90 minutes.

- Is naloxone harmful?
 - No. Naloxone only blocks or reverses opioid effects. It does nothing else.
- Can naloxone cause an overdose?
 - No. It is not possible to overdose on naloxone. If a large dose is given to a person with opioids in their system, they may experience symptoms of withdrawal.
- Will naloxone work on a person who has received it before?
 - Yes. People cannot develop a tolerance to naloxone, so it can be used in every opioid overdose situation, no matter how many times it has been used on a person before.

- Are there any situations where there may be difficulty in administration of Narcan?
 - Generally there are very few problems with either administration or uptake of Narcan, however there are some possible problems:
 - Drugs like cocaine may constrict the blood vessels of the nose and can prevent absorption
 additional doses may be needed
 - Bloody nose, nasal congestion, mucous discharge will decrease the effectiveness of the medication – additional doses may be needed
 - Lack of nasal mucosa from injury or cocaine abuse may also decrease effectiveness.



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