

STATEWIDE OPIOID
ANTAGONIST COMMUNITY
ACCESS PROGRAM
INTRANASAL NALOXONE
ADMINISTRATION TRAINING
MODULE



Vermont Statewide Opioid Antagonist Program

Welcome!

Objectives

- By the end of this course the participants will learn about intranasal naloxone and will be able to:
 - Recognize the signs and symptoms of an overdose
 - Identify how to use intranasal Naloxone
 - Identify the possible responses to intranasal Naloxone
 - Be able to prepare and administer intranasal Naloxone
 - Describe how continued support should be provided to the overdose victim

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This presentation is going to discuss the BLS use of Intranasal naloxone. Naloxone is the generic name while Narcan is the trade name.

When is intranasal Naloxone used?

- Bystanders should have contacted EMS (Dial 911) or sent for help
- Bystanders may have provided respiratory support (rescue breathing) to the limit of their skills, but reversal of the cause of failed breathing is the real treatment.
- Use of intranasal Naloxone is for when the person is not responsive.
- Intranasal Naloxone removes opiate effects and can reduce the duration of low oxygen in the blood, preventing injury or death.
- Prolonged reduced breathing can result in injury to the brain.
- While the person is not responsive, lung injury related to having stomach contents get into the lungs can occur and this can also cause death.
- Reversing the overdose quickly is very helpful.

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Definitive treatment for an opioid or opiate overdose is the reversal of hypoventilation. In the past, EMTs have only provided respiratory support, but now we are adding the use of intranasal naloxone as a possible treatment option within the Vermont Statewide EMS Protocols.

Opiates and Opioids

- Chemicals that act in the brain to:
 - ▣ Decrease feeling of pain
 - ▣ Decrease the reaction to pain
 - ▣ Provide comfort
- May be used for pain from injury or after having procedures done (surgery) or as part of long term care for cancer or other diseases that are painful and are expected to not go away
- Both opiates and opioids are often misused resulting in danger

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So, what is an opioid? An opioid is a synthetic or semi-synthetic alkaloid that acts on the central nervous system to decrease perception of and reaction to pain. They are also used to increase pain tolerance. They are prescribed for acute, debilitating, chronic pain, or palliative care.

Opioids versus Opiates

- ❑ **Opiates** are concentrated from the opium poppy plant and are not made, but purified from the plant fluids, like maple sugar.
- ❑ **Opioids** are manufactured and do not come from plants.
- ❑ Opiates and Opioids act the same in the brain
- ❑ Examples of opiates Morphine, Codeine and Heroin



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Opiates are morphine, codeine, and heroin and all are derived from opium poppies.

Opioids & Opiates

- After prolonged use of these substances increasing amounts are needed for the same effects.
- Common side effects include:
 - ▣ Nausea and vomiting
 - ▣ Drowsiness
 - ▣ Itching
 - ▣ Dry mouth
 - ▣ Small pupils
 - ▣ Constipation, or difficulty having bowel movements



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Long term usage of opioids and opiates is known for creating tolerance and/or addiction that requires increasing doses to maintain the same effect. There are many common side effects, but miosis is one that you should be using during your differential diagnosis.

Opioids & Opiates May Include:

- Heroin
- Buprenorphine (Suboxone)
- Butorphanol (Stadol)
- Codeine
- Fentanyl (duragesic patch)
- Hydrocodone (Vicodin*)
- Hydromorphone (Dilaudid)
- Meperidine (Demerol)
- Morphine
- Nalbuphine (Nubain)
- Oxycodone (Percocet*/Percodan†)
- Oxymorphone
- Pentazocine (Talwin)
- Paregoric
- Propoxyphene (Darvon)

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As you can see, there are many brand and generic names for opioids and opiates.

Heroin

Heroin is an opiate which may be injected, snorted (inhaled), or smoked. It has many street names.



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Heroin is an illegal opiate. Street names for heroin include: Big H, Boy, Capital H, China White, Diesel, Dope, Horse, Junk, Smack and White Junk. There new and evolving names, and this is just a sampling.

Naloxone is only used for opiate overdose

Remember, the following common street drugs are not opioids/opiates and therefore not addressed by this portion of the protocol: cocaine, LSD, ecstasy(Molly), sedatives/tranquilizers, and marijuana.



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Remember, Narcan is specific to opioid and opiate overdoses!

Opioid & Opiate Addiction and Treatment Drugs

- Methadone is an opioid which may be used as a pain reliever, but is also commonly prescribed in addiction treatment.
- Suboxone and Subutex are brand names for the opioid buprenorphine, which may be used as a pain reliever, but is also commonly prescribed in addiction treatment.
- These drugs last a long time and can help reduce the craving for opiate and opioids for whole days.
- Methadone and buprenorphine are never used alone as the sole plan for treatment of addiction, but are used in combination with counseling and skill learning efforts.

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There are two opioid/opiate addiction treatment drugs: methadone and suboxone.

Who's at High Risk for Overdose?

- ❑ Individuals using medical visits and care from multiple doctors who are not following instructions about prescription use
- ❑ Users of prescriptions that should belong to others
- ❑ Users who inject drugs for greater effects
- ❑ Former users who are recently released from prison or who entering and exiting from drug treatment programs

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Who is at a high risk for an opioid or opiate overdose? As you can see by the list, there are many risk groups.

Who else is at risk?

- ❑ Elderly patients using opiates or opioids for pain
- ❑ Patients using pain relieving patches incorrectly
- ❑ Children who accidentally take pain-killers in their homes or the homes of others

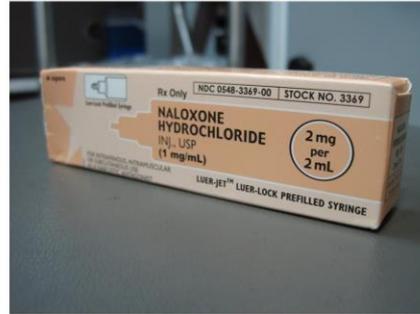


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In addition the elderly, children, and people using pain relieving patches are also at risk for an opioid or opiate overdose.

Intranasal Naloxone

- Naloxone (Narcan) is an antidote that can reverse overdose of opioids/opiates.
- Naloxone is **NOT** effective against respiratory depression due to non-opioid drugs (or other causes).



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Naloxone can reverse central nervous system and respiratory depression due to an overdose of opioids opiates. It is not effective against respiratory depression due to non-opioid drugs. Thus, it is important to recognize the signs and symptoms of an opioid or opiate overdose and use naloxone appropriately.

Why Intranasal Naloxone?

- ❑ Very low risk of exposure to blood (no needle)
- ❑ Can be administered quickly and with little training
- ❑ Onset of action is quick
- ❑ Very effective when used

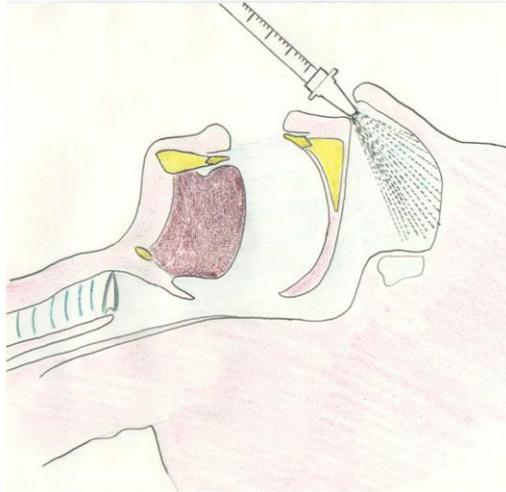


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There are many positive reasons for bystanders to administer intranasal naloxone. It minimizes the risk for blood borne pathogen exposure. It can be rapidly administered and naloxone has a 3-5 minute onset with peak effect in 12-20 minutes.

Why Intranasal Naloxone?

Works quickly since the nose has a large area for absorbing drugs directly into the blood stream.



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Intranasal administration allows bystanders to administer naloxone almost as quickly as the intravenous route. The nasal mucosa is highly vascularized and absorbs drugs directly into the blood stream.

Why an is it used with an Atomizer?

Squirting the liquid drug as a fine mist covering more of the surface, like spray paint or hair spray increases entry into the bloodstream.



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Briskly compressing the syringe converts the liquid naloxone into a fine atomized mist. This results in broader mucosal coverage and better chance of absorption into the blood stream than drops that can run straight back into the throat.

What does Opioid/Opiate overdose look like?

- The person is:
 - ▣ Not responsive when shaken
 - ▣ Possibly not breathing well, or not breathing at all
 - ▣ Possibly breathing less than 6 breaths per minute
 - ▣ Possibly having a bluish color of the skin, nails or lips
 - ▣ Small pupils

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A toxidrome is a group of signs and symptoms constituting the basis for a diagnosis of a poisoning. Remember, there are many signs and symptoms of an opioid or opiate overdose, but intranasal naloxone is indicated for a patient with respiratory arrest or hypoventilation.

When to use intranasal Naloxone?

- If a person is not responding to you.
- If bystanders report drug use and the person is not responding to you.
- If there are drug bottles, or signs of injection of drugs on the skin (“track marks”) and the person is not responding to you.



- **Call 911 to activate Emergency Services**
- **Even if illegal activity was going on, the call protects from criminal charges**

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What are the indications of an opioid or opiate overdose? 1. Respiratory arrest or hypoventilation with evidence of use by bystander report, drug paraphernalia, prescription bottles, or track marks – and/or 2. recognition of the opiate/opioid toxidrome.

From Act 75: A person who has received an opioid antagonist is free from civil or criminal liability for administering it to a person who he or she believes is experiencing an opioid-related overdose so long as the person does not act acting recklessly, with gross negligence or intentional misconduct. If medical assistance has not yet been sought, a person shall call emergency services after* administering an opioid antagonist. *(or before)

The law protects whoever calls for emergency help...

but, only if they call for help. **GET HELP DIAL 911**

A person who has received an opioid antagonist is free from civil or criminal liability for administering it to a person who he or she believes is experiencing an opioid-related overdose so long as the person does not act acting recklessly, with gross negligence or intentional misconduct. If medical assistance has not yet been sought, a person shall call emergency services after administering an opioid antagonist.

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Adult Nasal Atomizer Use

- Administer Naloxone 2.0mg Nasal via atomizer (half in each side of the nose)
- If you know how, you may continue supporting the breathing of the person
- Consider contacting poison control if other poisons are suspected : (800) 222-1222



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For an adult, the dose is 2mg of naloxone. For intranasal administration, this is 1mg of Naloxone per nostril. Remember, the onset for naloxone is 3-5 minutes, so you may need to continue ventilating the patient. Also, consider contacting poison control or local medical control if poly-substance use is suspected.

Nasal Atomizer Use



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The effects of naloxone may not last as long as the effects of the opioid or opiate; be prepared for a return of overdose signs and symptoms! If respiratory depression and altered mental status reoccur, you may need to repeat the dose of naloxone, so be in contact with your **Medical Control**.

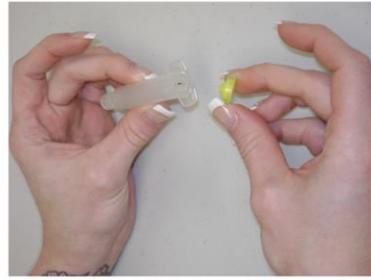
Preparation: Step 1



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For equipment, you will need one luer-jet needle free syringe, one vial of naloxone, and one atomizer.

Preparation: Step 2



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Remove the caps from both ends of the luer-jet needle free syringe.

Preparation: Step 3



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Remove the red cap from the naloxone vial. Screw the now open end of the vial into the syringe. It will become difficult to turn when it is threaded enough.

Preparation: Step 4



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Attach the nasal atomizer to the opposite end.

One Luer Attached Atomizer



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This is what your final product should look like!

Administration

- ❑ Do rescue breathing if you know how
- ❑ Look to see if the nose cavity is free of blood or mucous
- ❑ Assemble kit
- ❑ Gently, but firmly, place the atomizer in one side of the nose and spray half the medication
- ❑ Repeat on the other side
- ❑ If only one side of the nose is available, put all of the medication on that side

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The administration will take some choreographing of your team members. Continue to ventilate your patient, assess the nares and suction as needed. Control your patient's head and place the atomizer in one nare while carefully occluding the opposite nostril.

Administration



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Aim slightly upwards and toward the ear on the same side of the nostril. Briskly compress the syringe to administer up to 1mg of atomized spray. Repeat in the other nostril. Remember that using both nostrils doubles the surface area available for absorption. Continue ventilating your patient with a bag valve mask.

Adverse Reactions

- When used, intranasal Naloxone can cause:
 - ▣ Runny nose
 - ▣ Sweating
 - ▣ Fast heart rate
 - ▣ Shakes
 - ▣ High blood pressure, or
 - ▣ Low blood pressure
 - ▣ Fear of causing withdrawal should not prevent use when the person is unresponsive



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Rapid opioid or opiate withdrawal may also cause the above signs and symptoms. This is more common in the chronic opioid or opiate user who has been administered naloxone. Nevertheless, if a patient is in respiratory arrest secondary to an opioid or opiate overdose, the administration of naloxone is a life-saving time-critical action.

Children can also overdose:

- When an opioid overdose is suspected in a child use less of the liquid and repeat if needed:
 - ▣ Very small child: use one quarter in each side of the nose and consider using the other half in five minutes if the ambulance has not arrived and the child is still unresponsive



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Pediatric patients are less likely to be suffering from an intentional overdose, but children can still be victims of an opioid or opiate overdose, usually inadvertently from ingestion of non-secured medications. Treatment doses for pediatric patients are as follows:

- Infant: 0.5mg per nostril (total 1mg)
- Child: 1mg per nostril (total 2mg)

Children

- Remember, children have smaller noses and some of the drug may run out of the nose and down the back of the throat. This will not do any harm.



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Remember to suction the child's nose prior to the administration of naloxone.

The Vermont Community Opiate Overdose Prevention Program

Third Party Prescriptions: the general public can access and use intranasal Naloxone through community overdose prevention programs and/or through prescriptions obtained from healthcare providers.

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In 2013, the Vermont Legislature passed Act 75, which allows health care professionals acting in good faith to prescribe, dispense, and distribute an opioid antagonist to a person at risk of experiencing an opioid overdose or a family member, friend, or other person in a position to help such a person, so long as the recipient of the opioid antagonist has completed a prevention and treatment training program approved by the Department of Health. Unless acting recklessly, with gross negligence or intentional misconduct, a health professional who prescribes, dispenses, or distributes an opioid antagonist under this section shall be immune from civil or criminal liability regardless of whether the opioid antagonist was administered by or to the person for whom it was provided. See 18 V.S.A. § 4240(c) for more details.

Similarly, a person who has received an opioid antagonist is free from civil or criminal liability for administering it to a person who he or she believes is experiencing an opioid-related overdose so long as the person does not act acting recklessly, with gross negligence or intentional misconduct. If medical assistance has not yet been sought, a person shall call emergency services after administering an opioid antagonist.

Skills Practice

- **Given a scenario:**
 - ▣ **Prepare a intranasal Naloxone atomizer using the required equipment**
 - ▣ **Demonstrate administration of intranasal Naloxone on an adult intubation head**
 - ▣ **Demonstrate as well as explain how you would provide continued support**
 - ▣ **Always request Emergency Medical Services, dial 911**

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You will need to practice drawing up the correct dosage and administering intranasal naloxone. Your practice of the 6 drug rights and of intranasal narcan administration will occur at your squad.

Course Summary

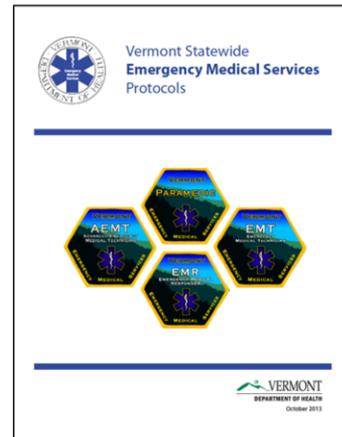
- What we learned:
 - ▣ Why intranasal Naloxone is available as an option for bystanders who witness overdose
 - ▣ What an opioid overdose looks like
 - ▣ The reasons that justify use of intranasal Naloxone
 - ▣ Legal protections if you dial 911
 - ▣ How to prepare an intranasal Atomizer
 - ▣ How and when to use the intranasal Atomizer

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This is both a new drug and drug administration route for EMTs. You should be competent in the 6 drug rights and the intranasal skill set, which will take on-going training and practice.

Credit and Acknowledgements

- VT EMS/VDH/DPS
- Central MA EMS Corp.
- Northwestern Medical Center



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Thank you to Central Massachusetts EMS Corporation and everyone else that helped develop this presentation. If you have questions, please contact Michael Leyden, Deputy Director for Vermont EMS.

References

- VT Department of Health
- VT Department of Public Safety
- Centers for Disease Control
- Drugs.com
- Federal Drug Administration
- MDPH Bureau of Substance Abuse Services
- N.O.M.A.D. (Not One More Anonymous Death Overdose Prevention Project)
- VT EMS Statewide Protocols

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