Overdose Prevention: Naloxone

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Disclosures

- I have no disclosures or conflicts of interest related to this content, other than lots of passion.

"Words are important. If you care for something you call it a flower; If you want to kill it, you call it a weed."

General risk factors for opioid overdose:

Opioid dependence, particularly following reduced tolerance

- Following detoxification without subsequent treatment
- After release from incarceration or hospitalization
- After cessation of MOUD

Use of prescription opioids (esp ≥50 MME)

Nonprescribed use of opioids or other substances, including counterfeit

BZDs, barbiturates, alcohol, other sedatives, carisoprodol

Use of opioids with other sedating and/or respiratory depressing substances

Use of opioids in patients with medical conditions

- DDIs, liver or renal disease
- Susceptibility to respiratory depression (COPD, sleep apnea)
- Increased risk of suicidal ideation (depression, bipolar disorder)

Access to opioids in the home by those other than the patient

Risk Index for Rx opioids

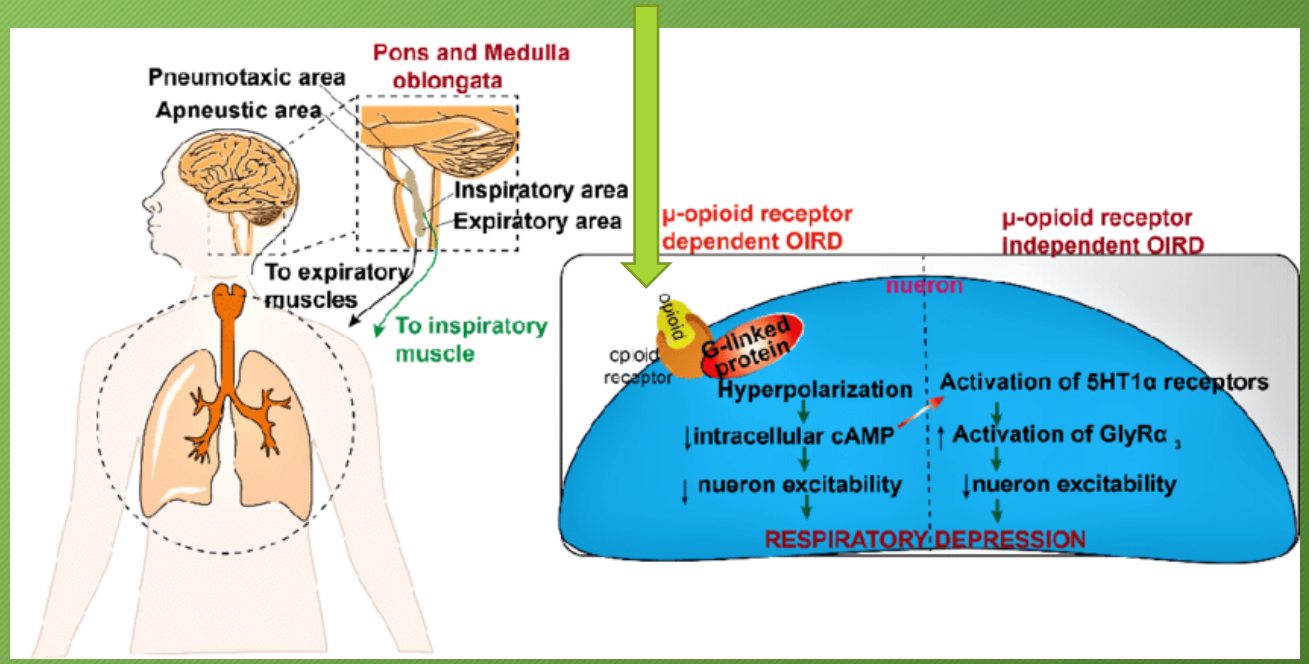
Score (Points)	Avg. Predictive Probability (%)
< 25	3
≥ 67	94

Question	Points for Yes Response
In the past 6 months, has the patient had a healthcare visit (outpatient, inpatient or ED) involving any of the following health conditions?[†]	
Opioid dependence?[‡]	15
Chronic hepatitis or cirrhosis?	9
Bipolar disorder or schizophrenia?	7
Chronic pulmonary disease (e.g., emphysema, chronic bronchitis, asthma, pneumoconiosis, asbestosis)?	5
Chronic kidney disease with clinically significant renal impairment?	5
An active traumatic injury, excluding burns (e.g., fracture, dislocation, contusion, laceration, wound)?	4
Sleep apnea?	3
Does the patient consume:	
An extended-release or long-acting (ER/LA) formulation of any prescription opioid?[§] (*e.g., OxyContin, Oramorph-SR, methadone, fentanyl patch*)	9
Methadone? (*Methadone is a long-acting opioid so also check "**ER/LA formulation**" [9 points]*)	9
Oxycodone? (*If it has an ER/LA formulation [e.g., OxyContin] also check "**ER/LA formulation**" [9 points]*)	3
A prescription antidepressant? (*e.g., fluoxetine, citalopram, venlafaxine, amitriptyline*)	7
A prescription benzodiazepine? (*e.g., diazepam, alprazolam*)	4
Is the patient's current maximum prescribed opioid dose[#]**:**	
≥100 mg morphine equivalents per day?	16
50–<100 mg morphine equivalents per day?	9
20–<50 mg morphine equivalents per day?	5
In the past 6 months, has the patient:	
Had one or more emergency department (ED) visits?	11
Been hospitalized for one or more days?	8
Total point score (maximum 115)	

Zedler B, Xie L, Wang L, Joyce A, Vick C, Brigham J, Kariburyo F, Baser O, Murrelle L. Development of a Risk Index for Serious Prescription Opioid-Induced Respiratory Depression or Overdose in Veterans' Health Administration Patients. Pain Med. 2015 Aug;16(8):1566-79.

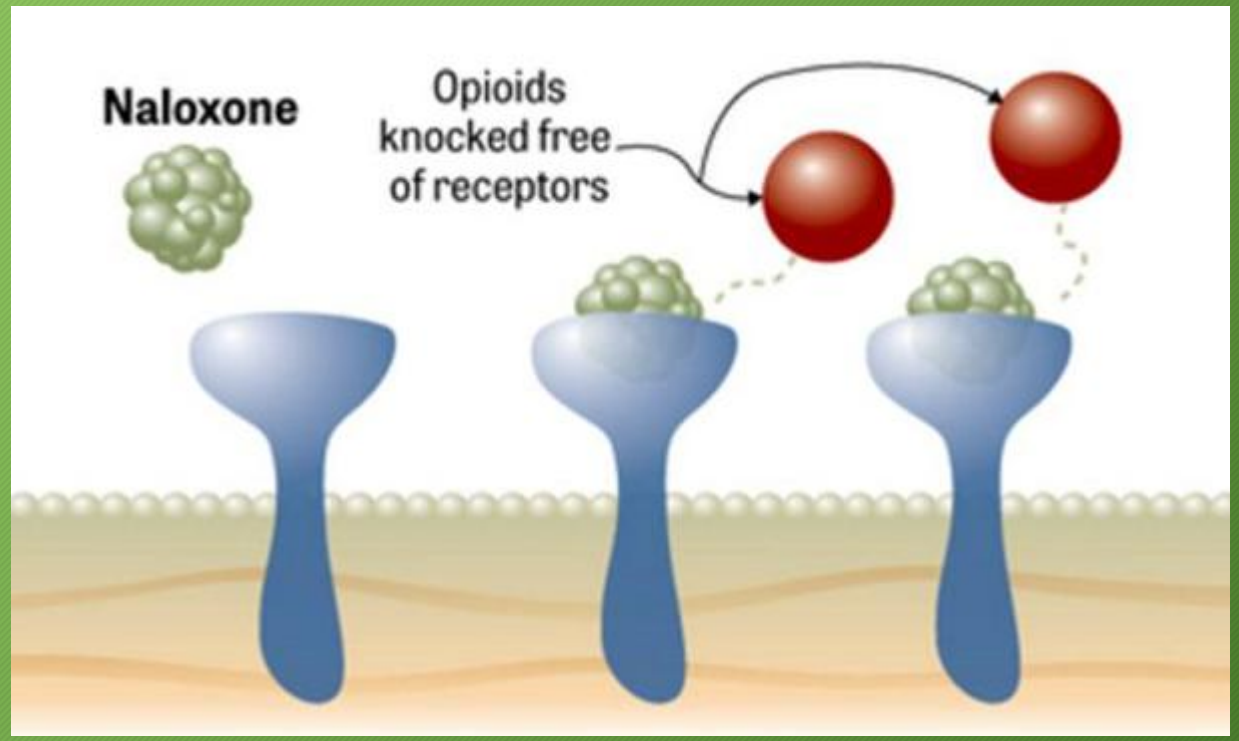
Toxicology and pathophysiology

- Opioids are mu agonists and cause central respiratory suppression in overdose
- Opioid receptor blockade of CO2 chemoreceptors in the medulla
- Tell patients they cause the brain to stop trying to breath – starting by slowing down each urge for a breath
  - Educate that people do not often gasp for air or even appear to be in discomfort. This is a central process in the brain.



Narcan (naloxone)

- Highly specific, high-affinity opioid antagonist
  - Stronger affinity than other opioids, knocking them off, reversing the overdose
- Naloxone ONLY works if there are opioids involved
  - It does NOT work on other non-opioid based drugs
  - Does NOT harm someone if given when patient has no opioids in system



https://www.mainemed.com/sites/default/files/content/MICIS_Naloxone_Provider_110316%2002.pdf

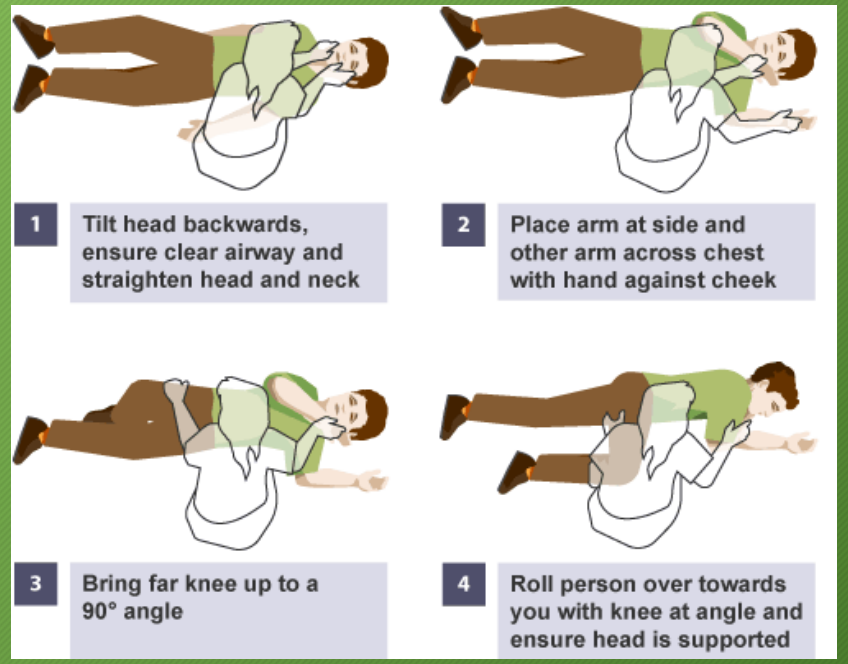
Opioid Overdose Mnemonic: B.L.U.E.

BREATHING	Breathing is slow, shallow, gurgling, erratic, or absent.
LIPS	Lips and fingertips are blue/gray due to reduced oxygenation.
UNRESPONSIVE	The person will not respond to verbal or physical stimulation.
EYES	Pinpoint pupils.

Recognizing Overdose & What to Do (rchsd.org)

Response Steps in an Overdose

- Try to arouse the person
- Identify if the person is breathing and has a pulse
- Call 911 or ask a specific person to call 911
- If an opioid overdose is suspected, administer naloxone
  - Note the time administered
  - Repeat in 2-5 minutes if no response
- If indicated and available, perform rescue breathing or CPR
- Turn the person to the recovery position
- Stay until EMS arrives



Responding to an Opioid Overdose

Suspected opioid poisoning

- Check for response
- Shout for help
- Call 911
- Open airway

GIVE NALOXONE

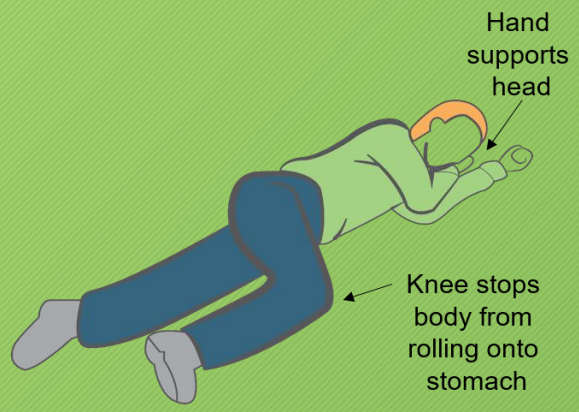
Is a pulse present?

Yes

- Rescue position while waiting for naloxone response
- Can provide rescue breathing (NOT compressions) while waiting
- Repeat naloxone every 2-5m until breathing response
- Observe until EMS arrives/transport to hospital

No

- Start CPR if trained while awaiting EMS
- Pause CPR to administer naloxone every 2-5 minutes until response or EMS arrives



Recovery position with text - Generation Rx

Adapted from: Opioid-associated out-of-hospital cardiac arrest: distinctive clinical features and implications for health care and public responses: a scientific statement from the American Heart Association. *Circulation.* 2021;143:e836-e870. doi: 10.1161/CIR.0000000000000958

Xylazine

- Xylazine and fentanyl combo in 6 – 11% of fatal overdoses in Maine in 2022 and Jan-Feb 2023
- Xylazine is cut into “heroin” and is an alpha2 agonist that causes profound sedation and wounds
- Xylazine won’t respond to naloxone; patients may continue to be passed out from xylazine after naloxone administration
  - If the person has resumed breathing, the opioid receptors are no longer saturated (watch out for longer ½ life opioids outlasting naloxone) so more naloxone is not needed
  - The most important acute end point for naloxone is resumption of breathing, even if the person is still passed out. EMS is already on the way since you already called 911 and can support the patient while waiting.

Prevention via safe medication storage

- Medications, especially opioids, should be locked and stored in a place away from children, pets, and others
- Unused opioids should be disposed of when they are no longer indicated (after surgery or acute illness)
  - Police station
  - Pharmacies
  - Take-back days
  - Toilet disposal for opioids is acceptable if other methods are not available

Multiple formulations of take-home naloxone

- Naloxone intranasal kit using injectable naloxone and a nasal adapter (Narcan)
- Naloxone FDA approved nasal spray (Narcan NS and more)
  - 2mg, 4mg, 8mg
- Naloxone intramuscular talking autoinjector (Evzio) – mfg discontinued
- Naloxone vial/carpuject with syringe and needles (Narcan)

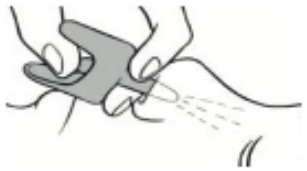
- Prescribing instructions for each formulation available here: https://prescribetoprevent.org/wp2015/wp-content/uploads/Naloxone-product-chart.17_04_14.pdf

NARCAN® Nasal Spray

1. Peel back the package to remove the device.

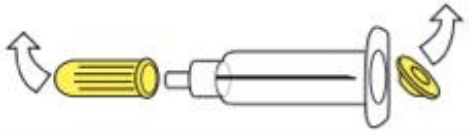
2. Place the tip of the nozzle in either nostril until your fingers touch the bottom of the patient's nose.

3. Press the plunger firmly to release the dose into the patient's nose.

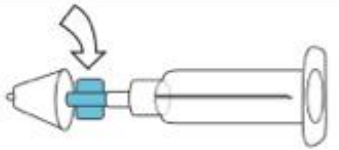


Nasal spray naloxone

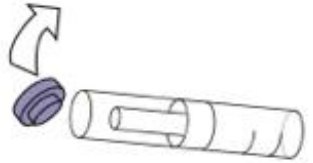
1. Take off yellow caps.



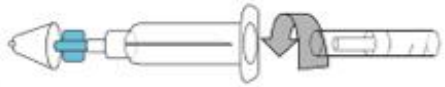
2. Screw on white cone.



3. Take purple cap off capsule of naloxone.



4. Gently screw capsule of naloxone into barrel of syringe.



5. Insert white cone into nostril; **give a short, strong push** on end of capsule to spray naloxone into nose: **ONE HALF OF THE CAPSULE INTO EACH NOSTRIL.**

6. If no reaction in 3 minutes, give second dose.

https://www.mainemed.com/sites/default/files/content/MICIS_Naloxone_PatientFlyer_041416.pdf

Universal Naloxone

- Stigma is still a major barrier and in some cases it is more important than cost
- Universally offering naloxone to all high risk patients is a great first step
- The following patients can be considered high risk of opioid overdose:
  - Patients prescribed opioids on doses of at least 50 MME
  - Patients prescribed opioids with benzodiazepines, barbiturates, or carisoprodol
  - Patients with an opioid use disorder
  - Patients with a history of opioid overdose
  - Patients who use opioids and have major depressive disorder or bipolar disorder
- Removes stigma and perceived stigma associated with thoughts such as “why was this offered to me?” and “what does my provider think I am or do?”

Discuss why naloxone is indicated in patients who don't think they need it

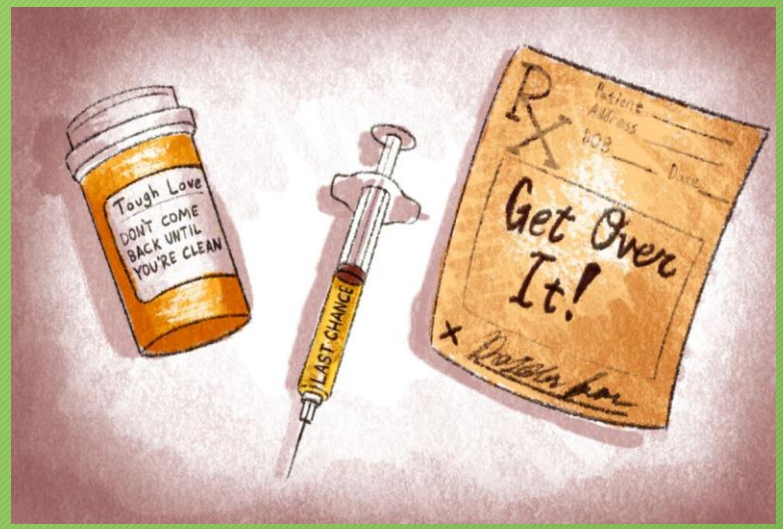
- Discuss why it is needed
  - High risk due to opioid overdose risk factors (eg. dose ≥50 MME or concomitant GABA agonists)
- Use analogies such as fire extinguishers, seat belts, +/- epinephrine
- Compare to other medication adverse effects requiring treatment (eg. constipation)
- Useful for others around you including children, pets, and others around you

Talk about naloxone and normalize the conversation

- Place posters around the office that discuss the overdose risk factors, overdose signs, availability of an antidote
- Consider creating cards in the waiting room that a patient can hand over if they would like to begin a conversation about naloxone
- Educate everyone in the office, especially the front line staff, about stigmatizing language, harm of stigma, and how to avoid being stigmatizing

Advocate!

- Naloxone distribution to EMS, police, pharmacists, and others
- Increased naloxone access in the public, by professionals and others, on public transportation, and in schools
- Samaritan protection
- Pharmacist naloxone prescribing
- Needle exchange
- Public health funding
- Overdose prevention centers



The opposite of addiction is connection.

Tough love doesn't work; time, affirmation, care, and supportive love work.

And, we need to keep people alive through this nonlinear process into recovery.

I WANT YOU

To Prescribe Naloxone

Thank you!

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