SAMHSA

# Opioid Overdose Prevention TOOLKIT

Five Essential Steps for First Responders


SAMHSA
Substance Abuse and Mental Health Services Administration

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## SAMHSA Opioid Overdose Prevention Toolkit

# FIVE ESSENTIAL STEPS FOR FIRST RESPONDERS

Overdose is common among persons who use illicit opioids such as heroin and among those who misuse medications prescribed for pain such as oxycodone, hydrocodone, methadone, buprenorphine, and morphine. The incidence of opioid overdose is rising nationwide. In 2016, more than 42,000 of the drug overdose deaths in the United States involved some type of opioid, including heroin.[1]

To address the problem, emergency medical personnel, health care professionals, people who use drugs, and other community members who may witness and respond to an overdose are being trained in the use of the opioid antagonist medication naloxone, which can reverse the potentially fatal respiratory depression caused by opioid overdose. (Note that naloxone has no effect on non-opioid overdoses, such as those involving cocaine, benzodiazepines, or alcohol.[2])

The steps outlined in this section are recommended to reduce the number of deaths resulting from opioid overdoses.

## STEP 1: EVALUATE FOR SIGNS OF OPIOID OVERDOSE

Signs of **OVERDOSE**, which often results in death if not treated, include:[2]

- Unconsciousness or inability to awaken.
- Slow or shallow breathing or breathing difficulty such as choking sounds or a gurgling/snoring noise from a person who cannot be awakened.
- Fingernails or lips turning blue/purple.

If an opioid overdose is suspected, stimulate the person:

- Call the person's name.
- If this doesn't work, vigorously grind knuckles into the sternum (the breastbone in middle of chest) or rub knuckles on the person's upper lip.
- If the person responds, assess whether he or she can maintain responsiveness and breathing.
- Continue to monitor the person, including breathing and alertness, and try to keep the person awake and alert.

If the person does not respond, call 911, provide rescue breathing if the person is not breathing on their own, and administer one dose of naloxone.

## STEP 2: CALL 911 FOR HELP

**AN OPIOID OVERDOSE NEEDS IMMEDIATE MEDICAL ATTENTION.** An essential step is to get someone with medical expertise to see the person as soon as possible. If no emergency medical services (EMS) or other trained personnel is on the scene, activate the 911 emergency system immediately. All you have to say is "Someone is unresponsive and not breathing." Be sure to give a specific address and/or description of your location. After calling 911, follow the dispatcher's instructions. If appropriate, the 911 operator will instruct you to begin CPR (technique based on rescuer's level of training).

## STEP 3: ADMINISTER NALOXONE

If the person overdosing does not respond within 2 to 3 minutes after administering a dose of naloxone, administer a second dose of naloxone.

Naloxone should be administered to anyone who presents with signs of opioid overdose or when opioid overdose is suspected. Naloxone is approved by the Food and Drug Administration (FDA) and has been used for decades by EMS personnel to reverse opioid overdose and resuscitate individuals who have overdosed on opioids. Research has shown that women, older people, and those without obvious signs of opioid use disorder are undertreated with naloxone and, as a result, have a higher death rate.[3] Therefore, it is also important to consider naloxone administration in women and the elderly found unresponsive with opioid overdose.

Naloxone can be given by intranasal spray and by intramuscular (into the muscle), subcutaneous (under the skin), or intravenous injection.[4]

All naloxone products are effective in reversing opioid overdose, including fentanyl-involved opioid overdoses, although overdoses involving potent (e.g., fentanyl) or large quantities of opioids may require more doses of naloxone.

**DURATION OF EFFECT.** The duration of effect of naloxone depends on dose, route of administration, and overdose symptoms[5] and is shorter than the effects of some opioids. The goal of naloxone therapy should be to restore adequate spontaneous breathing, but not necessarily complete arousal.[5]

More than one dose of naloxone may be needed to revive someone who is overdosing. People who have taken longer acting or more potent opioids may require additional intravenous bolus doses or an infusion of naloxone.[6]

Comfort the person being treated, as withdrawal triggered by naloxone can feel unpleasant. Some people may become agitated or confused, which may improve by providing reassurance and explaining what is happening.

**SAFETY OF NALOXONE.** The safety profile of naloxone is remarkably high, especially when used in low doses and titrated to effect.[2] When given to individuals who are not opioid intoxicated or opioid dependent, naloxone produces no clinical effects, even at high doses. Moreover, although rapid opioid withdrawal in opioid-tolerant individuals may be unpleasant, it is not life threatening.

Naloxone can be used in life-threatening opioid overdose circumstances in pregnant women.[7]

The FDA has approved an injectable naloxone, an intranasal naloxone, and a naloxone auto-injector as emergency treatments for opioid overdose. People receiving naloxone kits that include a syringe and naloxone ampules or vials should receive brief training on how to assemble and administer the naloxone to the victim. The nasal spray is a prefilled, needle-free device that requires no assembly and that can deliver a single dose into one nostril. The auto-injector is injected into the outer thigh to deliver naloxone to the muscle (intramuscular) or under the skin (subcutaneous). Once turned on, the currently available device provides verbal instruction to the user describing how to deliver the medication, similar to automated defibrillators. Both the nasal spray and naloxone auto-injector are packaged in a carton containing two doses to allow for repeat dosing if needed.

**FENTANYL-INVOLVED OVERDOSES.** Suspected opioid overdoses, including suspected fentanyl-involved overdoses, should be treated according to standard protocols.[8] However, because of the higher potency of fentanyl and fentanyl analogs compared to that of heroin, multiple doses of naloxone may be required to reverse the opioid-induced respiratory depression from a fentanyl-involved overdose.[8,9,10]

Many anecdotes report more rapid respiratory depression with fentanyl than with heroin, although other reports do not reflect such rapid depression.[11]

Because of these effects, quicker oxygenation efforts and naloxone delivery may be warranted with fentanyl-involved overdoses compared with heroin-only overdoses. However, naloxone is an appropriate response for all opioid overdoses, including fentanyl-involved overdoses.

## STEP 4: SUPPORT THE PERSON'S BREATHING

Ventilatory support is an important intervention and may be lifesaving on its own. Rescue breathing can be very effective in supporting respiration, and chest compressions can provide ventilatory support.[12,13] Rescue breathing for adults involves the following steps:

- Be sure the person's airway is clear (check that nothing inside the person's mouth or throat is blocking the airway).
- Place one hand on the person's chin, tilt the head back, and pinch the nose closed.
- Place your mouth over the person's mouth to make a seal and give two slow breaths.
- Watch for the person's chest (but not the stomach) to rise.
- Follow up with one breath every 5 seconds.

Chest compressions for adults involve the following steps:

- Place the person on his or her back.
- Press hard and fast on the center of the chest.
- Keep your arms extended.

## STEP 5: MONITOR THE PERSON'S RESPONSE

All people should be monitored for recurrence of signs and symptoms of opioid toxicity for at least 4 hours from the last dose of naloxone or discontinuation of the naloxone infusion. People who have overdosed on long-acting opioids should have more prolonged monitoring.[2,5,6]

Most people respond by returning to spontaneous breathing. The response generally occurs within 2 to 3 minutes of naloxone administration. (Continue resuscitation while waiting for the naloxone to take effect.)[2,5]

Because naloxone has a relatively short duration of effect, overdose symptoms may return.[2,5,6] Therefore, it is essential to get the person to an emergency department or other source of medical care as quickly as possible, even if the person revives after the initial dose of naloxone and seems to feel better.

**SIGNS OF OPIOID WITHDRAWAL.** The signs and symptoms of opioid withdrawal in an individual who is physically dependent on opioids may include body aches, diarrhea, tachycardia, fever, runny nose, sneezing, piloerection (gooseflesh), sweating, yawning, nausea or vomiting, nervousness, restlessness or irritability, shivering or trembling, abdominal cramps, weakness, tearing, insomnia, opioid craving, dilated

pupils, and increased blood pressure. These symptoms are uncomfortable, but not life threatening. After an overdose, a person dependent on opioids should be medically monitored for safety and offered assistance to get into treatment for opioid use disorder.

If a person does not respond to naloxone, an alternative explanation for the clinical symptoms should be considered. The most likely explanation is that the person is not overdosing on an opioid but rather some other substance or may be experiencing a non-overdose medical emergency.

In all cases, support of ventilation, oxygenation, and blood pressure should be sufficient to prevent the complications of opioid overdose and should be given priority if the response to naloxone is not prompt.

## DO'S AND DON'TS WHEN RESPONDING TO OPIOID OVERDOSE

- DO attend to the person's breathing and cardiovascular support needs by administering oxygen or performing rescue breathing and/or chest compressions.
- DO administer naloxone and utilize a second dose, if no response to the first dose.
- DO put the person in the "recovery position" on the side, if you must leave the person unattended for any reason.
- DO stay with the person and keep the person warm.
- DON'T slap or forcefully try to stimulate the person; it will only cause further injury. If you cannot wake the person by shouting, rubbing your knuckles on the sternum (center of the chest or rib cage), or light pinching, the person may be unconscious.
- DON'T put the person into a cold bath or shower. This increases the risk of falling, drowning, or going into shock.
- DON'T inject the person with any substance (e.g., saltwater, milk, stimulants). The only safe and appropriate treatment is naloxone.
- DON'T try to make the person vomit drugs that may have been swallowed. Choking or inhaling vomit into the lungs can cause a fatal injury.

**NOTE:** All naloxone products have an expiration date, so it is important to check the expiration date and obtain replacement naloxone as needed.

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# ACKNOWLEDGMENTS

This publication was prepared for the Substance Abuse and Mental Health Services Administration (SAMHSA) under contract number 10-233-00100 with SAMHSA, U.S. Department of Health and Human Services (HHS). LCDR Brandon Johnson, M.B.A., served as the Government Project Officer.

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## Recommended Citation

Substance Abuse and Mental Health Services Administration. *SAMHSA Opioid Overdose Prevention Toolkit.* HHS Publication No. (SMA) 18-4742PT2. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2018.

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## Originating Office

Division of Pharmacologic Therapies, Center for Substance Abuse Treatment, Substance Abuse and Mental Health Services Administration, 5600 Fishers Lane, Rockville, MD 20857.

HHS Publication No. (SMA) 18-4742PT2. First printed 2013. Revised 2014, 2016, 2018.


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Services Administration

HHS Publication No. (SMA) 18 4742PT2. First printed 2013. Revised 2014, 2016, 2018