

# SAMHSA

# Opioid Overdose Prevention

# TOOLKIT

Opioid Use Disorder Facts



**SAMHSA**  
Substance Abuse and Mental Health  
Services Administration



# TABLE OF CONTENTS

## SAMHSA Opioid Overdose Prevention Toolkit

<b>Opioid Use Disorder Facts .....</b>	<b>1</b>
Scope of the Problem.....	1
Strategies to Prevent Overdose Deaths .....	2
Resources for Communities .....	4
<b>References .....</b>	<b>5</b>
<b>Acknowledgments .....</b>	<b>6</b>

# OPIOID USE DISORDER FACTS

## SCOPE OF THE PROBLEM

Opioid overdose continues to be a major public health problem in the United States. It has contributed significantly to overdose deaths among those who use or misuse illicit and prescription opioids. In fact, all U.S. overdose deaths involving opioids (i.e., unintentional, intentional, homicide, and undetermined) increased to more than 42,000 deaths in 2016.<sup>1</sup>

**WHAT ARE OPIOIDS?** Opioids include prescription medications used to treat pain such as morphine, codeine, methadone, oxycodone, hydrocodone, fentanyl, hydromorphone, and buprenorphine, as well as illegal drugs such as heroin and illicit potent opioids such as fentanyl analogs (e.g., carfentanil).

Opioids work by binding to specific receptors in the brain, spinal cord, and gastrointestinal tract. In doing so, they diminish the body's perception of pain. However, opioids can also have an impact on other systems of the body, such as altering mood, slowing breathing, and causing constipation. Opioid receptor binding causes the signs and symptoms of overdose as well as the euphoric effects or "high" with opioid use.

**HOW DOES OVERDOSE OCCUR?** A variety of effects can occur after a person takes opioids, ranging from pleasure to nausea and vomiting, severe allergic reactions (anaphylaxis), and overdose, in which breathing and heartbeat slow or even stop.

Opioid overdose can be due to many factors. For example, overdose can occur when a patient deliberately misuses a prescription, uses an illicit opioid (such as heroin), or uses an opioid contaminated with other even more potent opioids (such as fentanyl). Overdose can also occur when a patient takes an opioid as directed but the prescriber miscalculated the opioid dose, when an error was made by the dispensing pharmacist, or when the patient misunderstood the directions for use. It can also occur when opioids are taken with other medications—for example, prescribed medications such as benzodiazepines or other psychotropic medications that are used in the treatment of mental disorders—or with illicit drugs or alcohol that may have adverse interactions with opioids. At particular risk are

individuals who use opioids and combine them with benzodiazepines, other sedative hypnotic agents, or alcohol, all of which cause respiratory depression.<sup>2</sup>

**WHO IS AT RISK?** Anyone who uses opioids for long-term management of chronic pain is at risk for opioid overdose, as are individuals who use heroin or misuse prescription pain relievers.<sup>3</sup> Others at risk include those who:

- Are receiving rotating opioid medication regimens (and thus are at risk for incomplete cross-tolerance).
- Have been discharged from emergency medical care following opioid overdose.
- Need opioid pain relievers, coupled with a suspected or confirmed substance use disorder or history of non-medical use of prescription opioids or use of illicit opioids.
- Have completed opioid detoxification or are abstinent for a period of time (and presumably have reduced opioid tolerance and high risk of return to opioid use).
- Have been recently released from incarceration and have a history of opioid use disorder or opioid misuse (and presumably have reduced opioid tolerance and high risk of return to opioid use).

*Tolerance develops when someone uses an opioid drug regularly so that his or her body becomes accustomed to the drug and needs a larger or more frequent dose to continue to experience the same effect.*

*Loss of tolerance occurs when someone stops taking an opioid after long term use. When someone loses tolerance and then takes the opioid drug again, he or she can experience serious adverse effects, including overdose, even if the amount taken had not caused problems in the past.*

# OPIOID USE DISORDER FACTS

## STRATEGIES TO PREVENT OVERDOSE DEATHS

**STRATEGY 1: Encourage providers, persons at high risk, family members, and others to learn how to prevent and manage opioid overdose.** Providers should be encouraged to keep their knowledge current about evidence-based practices for the use of opioid analgesics to manage pain, as well as specific steps to prevent and manage opioid overdose.

The Substance Abuse and Mental Health Services Administration (SAMHSA) funds continuing medical education courses that are available to providers at no charge from the Providers Clinical Support System (PCSS) at <https://pcssnow.org/>.

Helpful information for laypersons on how to prevent and manage overdose is available from Prevent & Protect at <http://prevent-protect.org/>.

**STRATEGY 2: Ensure access to treatment for individuals who are misusing opioids or who have a substance use disorder.** Effective treatment of substance use disorders can reduce the risk of overdose and help overdose survivors attain a healthier life. Medications for opioid use disorder, as well as counseling and other supportive services, can be obtained at SAMHSA-certified and Drug Enforcement Administration-registered opioid treatment programs and in specialty substance use disorder treatment programs, as well as from physicians and other practitioners including nurse practitioners and physician assistants who are trained to provide care in office-based settings with buprenorphine and naltrexone.

Information on treatment services available in or near your community can be obtained from your state health department, your state alcohol and drug agency, or the SAMHSA Behavioral Health Treatment Services Locator at <https://www.findtreatment.samhsa.gov>.

**STRATEGY 3: Ensure ready access to naloxone.** Opioid overdose-related deaths can be prevented when naloxone is administered in a timely manner. (For instructions on how to use naloxone, go to <http://prescribetoprevent.org>). Naloxone displaces opioids from receptor sites in the brain and reverses respiratory depression that usually is the cause of overdose deaths. Naloxone is an appropriate response for all opioid overdose events, including fentanyl-involved overdoses. Multiple doses of naloxone may be required when the overdose results from ingestion of large amounts of opioids or potent opioids such as fentanyl, carfentanil, or other opioid analogs.<sup>4</sup> (For more information regarding the various formulations of naloxone, see <https://www.drugabuse.gov/publications/naloxone-opioid-overdose-life-saving-science/naloxone-opioid-overdose-life-saving-science>.)

On the other hand, naloxone is not effective in treating overdoses of benzodiazepines, barbiturates, clonidine, GHB, or ketamine. It is also not effective against overdoses of stimulants, such as cocaine and amphetamines (including methamphetamine and MDMA). However, if opioids are taken in combination with other sedatives or stimulants, naloxone may be helpful.

Naloxone injection has been approved by the Food and Drug Administration (FDA) and used for more than 40 years by emergency medical services personnel to reverse opioid overdose and resuscitate

*Encourage providers and others to learn about preventing and managing opioid overdose.*

*Ensure access to treatment for individuals who have a substance use disorder.*

*Expand access to naloxone.*

# OPIOID USE DISORDER FACTS

individuals who otherwise might have died in the absence of treatment.<sup>5</sup> Naloxone comes in several forms, including injectable, intranasal, and auto-injector. Injectable naloxone is typically supplied as a kit with a minimum of two doses and two syringes.<sup>6</sup> Brief education on how to administer naloxone using a syringe can be obtained from the provider of the naloxone kit or from <http://prescribetoprevent.org/>. The FDA has also approved an intranasal naloxone product (a nasal spray) and a naloxone auto-injector that delivers a therapeutic dose of naloxone in an overdose situation. The intranasal spray is a prefilled, needle-free device that requires no assembly. The auto-injector can deliver a dose of naloxone through clothing, if necessary, when placed on the outer thigh.

Prior to 2012, just six states had laws that expanded access to naloxone or limited criminal liability.<sup>7</sup> By mid-2017, every state and the District of Columbia had enacted statutes that provide criminal liability protections to laypersons or first responders who administer naloxone. Forty-six states and the District of Columbia have statutes that provide civil liability protections to laypersons or first responders who administer naloxone. Thirty-seven states have statutes that offer criminal liability protections for prescribing or distributing naloxone. Forty-one states have statutes that offer civil liability protections for prescribing or distributing naloxone, and 46 states have statutes that allow naloxone distribution to third parties or first responders via direct prescription or standing order. To find relevant laws for each state, visit the Prescription Drug Abuse Policy System at <http://www.pdaps.org/>

**STRATEGY 4: Encourage the public to call 911.** An individual who is experiencing an opioid overdose needs immediate medical attention. An essential first step is to get help from someone with medical expertise as quickly as possible.<sup>8</sup> Therefore, members of the public should be encouraged to call 911. All they have to say is “Someone is unresponsive and not breathing” and give a specific address and/or description of the location. Thirty-seven states and the District of Columbia have “Good Samaritan” statutes that prevent prosecution for possession of a controlled substance or paraphernalia if emergency assistance is sought for someone who is experiencing an overdose, including an opioid-induced overdose.<sup>9</sup>

**STRATEGY 5: Encourage prescribers to use state prescription drug monitoring programs (PDMPs).** State PDMPs have emerged as a key strategy for addressing the misuse of prescription opioids and thus preventing opioid overdoses and deaths. Specifically, prescribers can check their state’s PDMP database to determine whether a patient is filling the prescriptions provided and/or obtaining prescriptions for the same or a similar drug from multiple prescribers.

While nearly all states now have operational PDMPs, the programs differ from state to state in terms of the exact information collected, how soon that information is available to prescribers, and who may access the data. Therefore, information about the program in a particular state is best obtained directly from the Prescription Drug Abuse Policy System at <http://www.pdaps.org/>, the specific state PDMP, or the state’s board of medicine or pharmacy.

*Encourage  
the public to  
call 911.*

*Encourage  
prescribers  
to use state  
prescription  
drug  
monitoring  
programs.*

# OPIOID USE DISORDER FACTS

## RESOURCES FOR COMMUNITIES

Resources that may be useful to local communities and organizations include:

### SAMHSA

- National Helpline: 1-800-662-HELP (4357) or 1-800-487-4889 (TDD, for hearing impaired)
- Behavioral Health Treatment Services Locator (search by address, city, or ZIP Code): <https://findtreatment.samhsa.gov/>
- Buprenorphine Treatment Practitioner Locator (search by address, city, or ZIP Code):  
<https://www.samhsa.gov/medication-assisted-treatment/physician-program-data/treatment-physician-locator>
- Single State Agencies for Substance Abuse Services:  
<https://www.samhsa.gov/sites/default/files/ssa-directory.pdf>
- State Opioid Treatment Authorities:  
<https://dpt2.samhsa.gov/regulations/smalist.aspx>
- SAMHSA Publications Ordering (all SAMHSA Store products are available at no charge): <https://store.samhsa.gov>; 1-877-SAMHSA-7 (1-877-726-4727)

### Centers for Disease Control and Prevention

- Understanding the Epidemic:  
<https://www.cdc.gov/drugoverdose/epidemic>
- Poisoning: <https://www.cdc.gov/homeandrecreationsafety/poisoning>

### Association of State and Territorial Health Officials

- Preventing Opioid Misuse in the States and Territories:  
<http://my.astho.org/opioids/home>

### National Association of State Alcohol and Drug Abuse Directors

- Opioids Fact Sheet (February 5, 2016): <http://nasadad.org/2016/02/opioids-fact-sheet-2016/>

### Prevent & Protect

- Tools for conducting overdose prevention and naloxone advocacy, outreach, and communication campaigns: <http://prevent-protect.org/community-resources-1/>

*Resources  
that may  
be useful  
to local  
communities  
and  
organizations*

# REFERENCES

- <sup>1</sup> Centers for Disease Control and Prevention. Opioid overdose. <https://www.cdc.gov/drugoverdose/index.html>. Accessed Feb 28, 2018.
- <sup>2</sup> Boyer EW. Management of opioid analgesic overdose. *N Engl J Med*. 2012;367(2):146-155.
- <sup>3</sup> Webster LR, Cochella S, Dasgupta N, Fakata KL, Fine PG, Fishman SM, Grey T, Johnson EM, Lee LK, Passik SD, Peppin J. An analysis of the root causes for opioid-related overdose deaths in the United States. *Pain Medicine*. 2011 Jun 1;12(suppl\_2):S26-35.
- <sup>4</sup> Somerville NJ, O'Donnell J, Gladden RM, Zibbell JE, Green TC, Younkin M, Ruiz S, Babakhanlou-Chase H, Chan M, Callis BP, Kuramoto-Crawford J. Characteristics of fentanyl overdose-Massachusetts, 2014-2016. *MMWR Morb Mortal Wkly Rep*. 2017 Apr;66(14):382-386.
- <sup>5</sup> Green TC, Doe-Simkins M. Opioid overdose and naloxone: the antidote to an epidemic. *Drug Alcohol Depend*. 2016;163:265-271.
- <sup>6</sup> Enteen L, Bauer J, McLean R, Wheeler E, Huriaux E, Kral AH, Bamberger JD. Overdose prevention and naloxone prescription for opioid users in San Francisco. *J Urban Health*. 2010;87(6):931-941.
- <sup>7</sup> Davis C, Carr D. State legal innovations to encourage naloxone dispensing. *Journal of the American Pharmacists Association*. 2017 Mar 1;57(2):S180-184.
- <sup>8</sup> Green TC, Heimer R, Grau LE. Distinguishing signs of opioid overdose and indication for naloxone: an evaluation of six overdose training and naloxone distribution programs in the United States. *Addiction*. 2008;103(6):979-998
- <sup>9</sup> Legal Science. Good Samaritan prevention laws. <http://www.pdaps.org/datasets/good-samaritan-overdose-laws-1501695153>. Accessed Feb 28, 2018.

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