About This Guide

The opioid epidemic continues to devastate communities across the United States. Educators have expressed interest in learning more about this public health crisis and how they can best teach their students about opioids and their associated risks. Each of the three videos from the NOVA documentary *Addiction* and the video short in this collection can be used to engage students with media, encourage science practices, and prompt discussions in the classroom. Used together, they will help students better understand opioids and the disease of addiction.

Read this guide before viewing the videos. It provides information about the appropriate language to use when discussing addiction, how you as an educator can prepare yourself for the personal experiences that your students may have had, resources for further reading, and frequently asked questions.

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Before Viewing

Language and Stigma

In the last couple of decades, there has been a shift in how we as a society think about drug and alcohol addiction. For many years, having an addiction to drugs or alcohol was considered a moral failing. Those who suffered did so because they "chose" that lifestyle or habit. The language used to describe individuals with an addiction was subjective and often derogatory (such as calling someone a "junkie").

In recent decades, scientists and medical professionals have come to understand that addiction is a chronic illness and that the subjective language used to describe individuals with an addiction can have adverse impact on their care and on society's attitude toward this important public health issue. Recent medical literature has described improved language that we can use to ensure that when we discuss addiction, the terms used are medically accurate and patient-centered.

As you prepare to screen these videos with your students, you may want to consider how the language you use when you discuss this topic with students could be stigmatizing. This table contains preferred and non-preferred terms:

Say this…	**Instead of this…**
Person with a substance use disorder, person with addiction, person who uses drugs	Addict, junkie, crackhead, user, abuser, pill-popper, alcoholic
Risky or unhealthy alcohol/drug use	Misuse or abuse
Treatment, opioid agonist therapy, medication for addiction	Replacement therapy, substitution therapy
Negative or positive urine toxicology test	Clean or dirty urine
Addiction survivor, in remission, in recovery	Recovering addict, clean
Infant with Neonatal Abstinence Syndrome (NAS) or Substance Exposed Newborns (SEN)	Addicted baby

Table credit: Alicia Ventura

Considering Impact on Students

Addiction affects communities all across our country. It is possible that students in your classroom have been touched by addiction. We suggest taking the following steps before viewing the videos with your students.

1. As you introduce this topic, mention that people in the classroom may have personal experience with addiction. Remind students to speak respectfully about this topic to minimize any shame that some students may feel.
2. If students want to talk about their personal experiences, encourage them to reach out to a teacher, counselor, or medical professional they trust.

In addition, make sure that you are aware of the resources in your school for appropriate referrals should students come to you with concerns about either themselves or family members.

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Frequently Asked Questions (FAQs)

What are opioids?
Opioids are natural or synthetic chemicals that can provide effective pain relief. The most commonly used prescription opioids include hydrocodone (brand name: Vicodin), oxycodone (OxyContin), oxymorphone (Opana), hydromorphone (dilaudid), codeine, morphine, methadone, and fentanyl. Heroin is an opioid, but it is not a medication. When opioids travel through your blood and attach to chemical receptors in your brain cells, the cells release signals that suppress your perception of pain. In some cases, they may also send a "rush" of extreme pleasure through the body.

While "opiate" and "opioid" are often used interchangeably, opiates are derived from the opium poppy plant. By comparison, opioids also include substances whose effects are similar to opium but are synthetic, or made in a laboratory. Examples of opiates include morphine, codeine, and heroin; opioids include oxycodone and hydrocodone.

Why are they calling this an "opioid epidemic"?
The term *epidemic* may be used to describe any problem that has grown out of control. In public health matters, it refers to a widespread occurrence of a disease in a community at a particular time. Addiction that may result from an unhealthy use of drugs is now commonly accepted in the medical community as a disease, not a choice, and can therefore be described in terms of an epidemic.

Statistics show that opioid use is widespread and that the rise in opioid overdose deaths can be outlined in three distinct waves. According to the CDC, the first began in the 1990s, with increased prescribing rates of opioids. The second began in 2010, with a rapid rise in overdose deaths involving heroin. The third began in 2013, with significant increases in overdose deaths involving synthetic opioids, most notably illicitly manufactured fentanyl.

In 2017, about 1.7 million people in the United States suffered opioid use disorder (OUD) related to prescription pain relievers. More than 650,000 suffered from heroin use disorder. That year, 47,000 Americans died from opioid overdoses—more than from car accidents and firearms—including roughly 28,000 from overdoses involving fentanyl and other synthetic opioids besides methadone.

Estimates of the total economic burden of prescription opioid misuse surpass $78 billion a year. This includes the costs of health care, addiction treatment, lost productivity, and criminal justice involvement.

Why are opioids so addictive? Will I get addicted to opioids if I use them?
What makes opioids effective for treating pain can also make them dangerous. While everyone's body is different and responds to medications in different ways, anyone who takes prescription opioids can come to rely on them. Over time, you might develop a *tolerance* for lower doses of medication and need more to relieve your pain. This can put you at higher risk for a potentially fatal overdose. You might also develop a physical *dependence* on the medication. This can lead to painful withdrawal symptoms when the medication is stopped.

When taken at lower doses, opioids may make you feel sleepy; taken at higher doses, they can slow your breathing and heart rate, which can lead to death. However, the feelings of pleasure that result from taking an opioid can make you want to continue experiencing those feelings, despite these risks. Before you take a prescribed opioid, tell your doctor about your medical history and if you or anyone in your family has a history of substance use disorder to drugs or to alcohol. The risk of addiction is very low if opioids are taken exactly as prescribed. However, if you suspect you are losing control, you should not wait to ask your doctor for help.

What are some risk factors for addiction?
Not everyone who uses drugs (prescribed or otherwise) develops a substance use disorder. Risk factors for OUD include a wide range of genetic or environmental factors; behavioral issues; and other conditions, such as anxiety, depression, and post-traumatic stress disorder. Even though it is difficult to evaluate addiction risk across different groups in a population, teens have been identified as having higher-than-average risk of developing addiction because the neurological development of adolescents seems to correlate with decisions to engage in risky behaviors, including experimenting with illicit drugs. Evidence suggests that substance use while the brain is still maturing can cause lasting neurological changes that increase susceptibility to addiction later in life. Senior citizens are another higher-risk group. According to recent studies, more than one-third of all Medicare recipients receive prescriptions for addictive medications to help manage pain they experience from arthritis, cancer, and other medical conditions.

It is worth restating that even though there are risk factors for OUD, there is no way to predict who is likely to become addicted. *Anyone can become addicted to opioids.*

Can someone with an opioid use disorder stop using on their own?
Many people believe that they can stop using drugs on their own. However, most do not succeed in the long term. The brain gets used to opioids, and when the supply is cut off, it produces a very strong response called *withdrawal*. Symptoms of withdrawal include sweating, shaking, vomiting, sleep problems, and diarrhea. Because these symptoms can be so severe, it can take several attempts to stop drug use, even if the person knows they have a use disorder and really wants to stop. There are treatment options to help address these symptoms.

The challenge of beating addiction goes even beyond the physical symptoms of withdrawal. Opioid use leads to biochemical changes in the brain that manifest as uncontrollable cravings, compulsive drug use, and continued use in spite of any harm it may be causing. Strong cravings are common to all addictions. This means that recovery also depends on being able to reverse the changes rooted in the brain. While a few people can overcome all of these challenges on their own, seeking treatment will increase their chance of success.

How do opioids affect the brain?
Opioids, like other drugs, interfere with the way the brain sends and receives messages. When opioids are in the body, they trigger the release of dopamine, a neurotransmitter that drives the brain's reward system. Opioids can stimulate the release of up to 10 times more dopamine than normal. This creates memories of intense euphoria and, because the brain has evolved to seek rewards, drives cravings for more opioids.

Research shows that as the brain gets used to the increased dopamine levels, it compensates by reducing dopamine receptors and slowing its natural dopamine production. People who initially use drugs to receive the reward of pleasure and euphoria may eventually need them simply to relieve the pain of withdrawal. Without sufficient dopamine production, motivation is impaired, making it difficult to get out of bed, go to work, or live life normally. Many people continue to use opioids not to get high, but rather to avoid being sick.

Why is opioid use disorder a chronic disease? How does it compare with other chronic diseases?

Continued use of prescription or illicit opioids causes changes in the chemistry of the brain. This can lead to a chronic, or long-lasting, condition. Like many other chronic diseases, OUD can be managed in primary care.

How do I know if a friend or family member is struggling with opioid use disorder? How can I help?

First, know some of the signs.

- Physical signs include track marks from injecting, skin infections or abscesses, constricted (very small) pupils, nausea, itchiness, and drowsiness. Breathing, movement, and reactions may be slowed.
- Behavioral cues may include poor memory and concentration, mood swings, anxiety, apathy, and depression. People with substance use disorders frequently withdraw from society.

If you recognize these signs, encourage the person to consider treatment options.

- Medication is the first-line choice. It is the only treatment option backed by evidence to support its use. Medications include methadone, buprenorphine, and naltrexone. Some treat withdrawal while others help reduce cravings and block drug molecules from binding to receptors in case someone continues using drugs that provide full opioid effects. (Only methadone is dispensed from special treatment centers; the others can be prescribed from a doctor's office.)
- Counseling is used to address both psychological and behavioral aspects of addiction.
- Hospital and residential treatment centers offer structured 24-hour-a-day support.
- Comprehensive treatment programs might include a combination of therapies and services.
- Lastly, so-called "12-step" programs are a model of nonprofessional help. They outline a course of action to work toward and to maintain recovery.

Why does opioid use lead to so many overdose deaths?

While greater physician awareness appears to have reduced the use and availability of prescription opioids in the United States, there has been a steep

rise in deaths from cheaper, nonprescription alternatives—starting in 2010 with heroin and in 2013 with synthetic opioids, including fentanyl. Fentanyl is 50 times more potent than heroin and 100 times more potent than morphine. While pharmaceutical fentanyl is prescribed to manage severe pain, illicitly made and distributed fentanyl has been a major driver in increased deaths.

Can I stop an opioid overdose?

If you think someone has overdosed on opioids, call 911 and start CPR. When paramedics arrive, they will administer naloxone, a prescription drug that quickly reverses the effects of opioids. Some states allow pharmacies to sell naloxone without a prescription. This means that friends and family members can use it to save someone who is overdosing. If naloxone is given by a nonmedical person, the person who overdosed should still be taken to see a doctor immediately.

This FAQ was compiled using information and statistics from the following sources:

- Agency for Healthcare Research and Quality (www.ahrq.gov)
- Centers for Disease Control (www.cdc.gov)
- Indivior PLC (www.suboxone.com)
- Magellan Health Insights (www.magellanhealthinsights.com)
- Mayo Clinic (www.mayoclinic.org)
- National Institute on Drug Abuse (www.drugabuse.gov)
- U.S. Department of Health and Human Services (www.hhs.gov)

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Resources

The following sites contain helpful information (in alphabetical order):

- **American Society of Addiction Medicine—Directory of Addiction Medicine Professionals**
  https://asam.ps.membersuite.com/directory/SearchDirectory_Criteria.aspx

- **Centers for Disease Control and Prevention—Rx Awareness Campaign**
  https://www.cdc.gov/rxawareness/

- **The National Institute on Alcohol Abuse and Alcoholism**
  https://www.niaaa.nih.gov/

- **National Institute on Drug Abuse—Parents & Educators Section**
  https://www.drugabuse.gov/parents-educators

- **National Institute on Drug Abuse for Teens—Teens: Drug Use and the Brain**
  https://teens.drugabuse.gov/

  Fact Sheets
  - Prescription Pain Medication (Opioids)
    https://teens.drugabuse.gov/drug-facts/prescription-pain-medications-opioids
  - Heroin
    https://teens.drugabuse.gov/drug-facts/heroin
  - Brain and Addiction
    https://teens.drugabuse.gov/drug-facts/brain-and-addiction

- **Operation Prevention—Classroom Resources (High School)**
  https://www.operationprevention.com/classroom#hs

- **Partnership for Drug-Free Kids & Center on Addiction**
  https://drugfree.org/

- **Substance Abuse and Mental Health Services Administration—Behavioral Health Treatment Services Locator**
  https://findtreatment.samhsa.gov/

- **U.S. Department of Health & Human Services—Office of Adolescent Health**
  https://www.hhs.gov/ash/oah/adolescent-development/substance-use/drugs/opioids/index.html

Glossary of Terms

- **addiction**—a chronic, relapsing brain disease that is characterized by compulsive activity, despite harmful consequences
- **buprenorphine** (brand name: Suboxone)—a medication used to treat opioid addiction at home or in a doctor's office; it partially works like an opioid but produces less potent opioid effects and helps with withdrawal
- **cognitive function**—mental activities relating to reasoning, memory, attention, and problem solving
- **dopamine**—a neurotransmitter that helps control the brain's reward and pleasure centers
- **epidemic**—a widespread occurrence of a disease in a community at a particular time
- **evidence-based treatment**—treatment whose effectiveness is supported by scientific evidence
- **fentanyl**—an opioid that is up to 100 times more potent than morphine and up to 50 times more potent than heroin
- **heroin**—an illegal and highly addictive recreational drug processed from morphine that is known for the surge of euphoria, or rush, it produces
- **methadone**—an opioid medication used to help people reduce or quit their use of heroin or other opioids; it must be administered at a clinic
- **naloxone** (brand names: Narcan, Evzio)—a medication that can reverse an overdose by pulling opioids off receptors in the brain
- **naltrexone** (brand name: Vivitrol, Revia)—a medication that prevents the euphoric and sedative effects of opioids by blocking opioid molecules from attaching to receptors; it is reported to reduce opioid cravings

- **narcotic**—in moderate doses, a drug that dulls the senses, relieves pain, and induces profound sleep; in excessive doses, causes stupor, coma, or convulsions
- **needle exchange**—a place or program that provides new, sterile syringes to people who use drugs in exchange for used ones to help reduce the risk of infection and disease transmission
- **opioids**—a class of drug that affects the brain's reward system and can relieve pain and cause euphoria; includes prescription painkillers, such as OxyContin and Vicodin, as well as illegal drugs, such as heroin
- **overdose**—to take a lethal or toxic amount of a drug
- **stigma**—a mark of disgrace associated with a particular circumstance, quality, or person
- **withdrawal**—the syndrome of often painful physical and psychological symptoms that follows discontinuance of an addicting substance