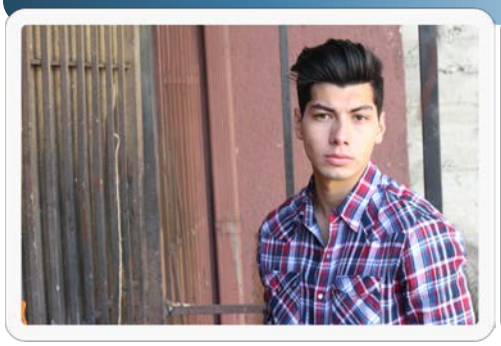


Opioids and Adolescent Health

January 2018

The U.S. opioid crisis is affecting youth of all backgrounds and is not limited to youth of a specific socioeconomic status, race, gender, or geographic location, although the crisis has affected some adolescent demographic groups more than others.[1] This tip sheet provides an overview of the opioid crisis, how it affects youth, and what grantees can do about adolescent use.

WHAT ARE OPIOIDS AND HOW DO THEY WORK?

Opioids are prescription drugs primarily used to alleviate pain (e.g., after surgery). Some examples of commonly prescribed opioids are oxycodone, codeine, fentanyl, morphine, and hydrocodone. Heroin, an illegal drug in the United States, is also an opioid. While opioids can be referred to by their prescription names, there are also street names for each of these drugs.

The chemicals in opioids attach to opioid receptor cells in the brain, spinal cord, gastrointestinal tract, and other organs in the body.[2] These receptor cells are responsible for the drugs' ability to relieve pain.[3] Opioids also produce a sense of euphoria that many people find pleasurable. Other side effects can include sleepiness, clouded thinking, respiratory depression, nausea, and constipation. It takes 15–30 minutes to feel pain relief and the sense of euphoria if an opioid is taken by mouth, and less time if it is taken by intravenous injection or snorted.

Opioid pain relievers are generally safe when taken for a short time and as prescribed. However, because they produce feelings of euphoria, in addition to pain relief, they can be misused (e.g., administered in a different way, taken in a larger quantity than prescribed, or taken without a prescription). Regular use of opioids can lead to tolerance, which occurs when a person no longer responds to a drug in the way they did initially.[4] When a person builds tolerance to an opioid, they need higher doses to achieve the same effect. Misuse of prescription opioids can also open the door to injection drug use (e.g., heroin).[5]

Example Street Names of Opioids

Oxycodone: Oxy, Kickers
Codeine: Pancakes with Syrup, Cody
Fentanyl: China Girl, Tango
Morphine: Miss Emma, Dreamer
Hydrocodone:
- **Vicodin:** Watsons
- **Lortab:** Tabs

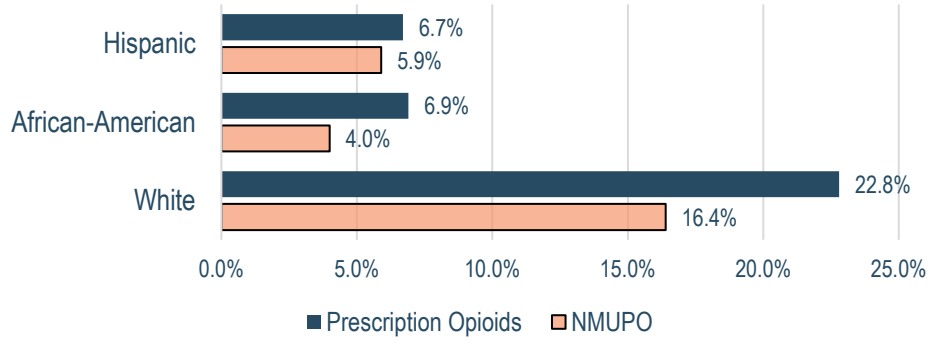
Heroin: Dope, Antifreeze

Note that street names of opioids can vary by region and change quickly.
Visit https://www.drugabuse.gov/drugs-abuse/commonly-abused-drugs-charts for additional name examples.

WHO IS USING OPIOIDS?

Findings from the 2016 Monitoring the Future (MTF)[a] study demonstrate continued declines in the use of many drugs, including opioids, among high school youth (see Figure 1).[b] However, the nonmedical use of prescription opioids (NMUPO) remains a significant health threat to adolescents and adults alike. The MTF study estimated that 22.3% of all U.S. high school seniors have had some medical or nonmedical exposure to opioids.[6] Of these students, the lifetime prevalence of any medical use of prescription opioids was 22.8% among White 12th graders, 6.9% among African-American 12th graders, and 6.7% among Hispanic 12th graders. The lifetime prevalence of NMUPO was 16.4% among White 12th grade students, 4.0% among African-American 12th grade students, and 5.9% among Hispanic 12th grade students.[7] By 12th grade, males surpass females in the use of illicit drugs, including heroin, and White 12th grade students have the highest level of heroin use when compared to African-American and Hispanic 12th grade students.[8]

Figure 1: Lifetime Prevalence of Medical Use and Non-Medical Use of Opioids Among 12th Grade Students (by Race)



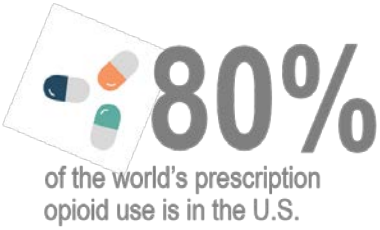
Opioids are also a problem for youth across the nation and in the U.S. territories, regardless of location. Although the absolute death toll related to opioid use is the greatest in big cities, like Chicago and Baltimore, misuse, overdose, and death are most concentrated in rural regions such as Appalachia, New England, and the Midwest.[9,10]

WHAT ARE SOME OF THE POSSIBLE CONSEQUENCES OF NMUPO?

The misuse of opioids can have several negative health consequences, including organ damage, increased exposure to HIV and hepatitis with injectable drug use, withdrawal symptoms (e.g., restlessness, muscle and bone pain, insomnia, diarrhea, vomiting, cold flashes), and overdose that can lead to death.[11,12,c] In addition, adolescents who misuse opioids are more likely to have lower grades, be absent from school, drop out of school, associate with antisocial peer groups, and engage in sexual risk behavior compared to adolescents who do not misuse opioids.[13,14,15,d] When pregnant women use opioids, their infants may experience withdrawal symptoms (i.e., neonatal abstinence syndrome).[16,e]

WHAT FACTORS ARE DRIVING OPIOID MISUSE AND OVERDOSE?

Increase in Prescriptions for Opioids. There has been consistent growth in the number of prescriptions written for opioids in the United States, increasing from 76 million prescriptions in 1991 to 207 million prescriptions in 2013.[17] In fact, the United States accounts for 80% of the world's prescription opioid use.[18] In addition, pharmaceutical companies have increased the marketing of drugs, including opioids,



[a] The MTF study is a nationally representative survey of high school students funded by the National Institute on Drug Abuse. To learn more about the MTF study, see the full 2016 report at http://www.monitoringthefuture.org.

[b] Figure 1 was created using MTF survey data.

[c] See overdose death data for people aged 15–24 at https://teens.drugabuse.gov/sites/default/files/overdose-data-youth-1999-2015.pdf.

[d] Substance use and sexual risk behaviors share some common underlying factors that may predispose adolescents to these behaviors. Because substance use clusters with other risk behaviors, it is important to learn whether precursors can be determined early to help identify youth who are most at risk. More research is needed in this area.

[e] For more information about the risks of opioid use during pregnancy, visit https://www.cdc.gov/drugoverdose/pdf/pregnancy_opioid_pain_factsheet-a.pdf.

to health care providers and patients.[19] These factors partially explain the greater availability and social acceptance of opioids.[20]

Lack of Understanding about Opioids. The misuse or nonmedical use of prescription drugs is greater than the use of illicit drugs, with the exception of marijuana, among adolescents and young adults. This can be attributed to adolescents' perception that prescription drug use is safer than illicit drugs, that these drugs are easier to access, and that there is a lower societal stigma about misuse compared to illicit drug use.[21,22]

In addition, many adolescents lack education on the dangers associated with opioid misuse, believe opioids are safe because they are prescribed by a doctor, and do not have enough information about where to get help. In one study, prescription opioid use before high school graduation was associated with a 33% increase in the risk of future opioid misuse after high school. This association was concentrated among individuals who have little to no history of drug use and a strong disapproval of illegal drug use at baseline.[23] Additionally, individuals who misuse opioids can develop an opioid tolerance and later dependence. Opioid dependence is difficult to overcome, and withdrawal symptoms can be very painful.

Influence of Social and Psychological Factors. Adolescents often misuse opioids for the same reasons they misuse other illicit substances (e.g., curiosity, boredom, peer pressure, wanting to get high, self-medication of physical or mental pain, lack of school connectedness, alienation, rebelliousness, history of posttraumatic stress disorder, sexual abuse, witnessing violence, and lower socioeconomic status).[24,25,26] Although adolescents from any demographic may experience opioid use and misuse, those in the Medicaid patient population are more likely to be prescribed opioids and for longer periods of time. Opioid medication overdose deaths are also more common among Medicaid-eligible populations.[27] Other social factors that can influence opioid misuse are lack of parental involvement, parental use of opioids, and favorable parental attitudes toward opioid use.[28]

Ease of Obtaining Opioids. Opioids are relatively easy for youth to find. According to one study, adolescents aged 12–17 obtained opioids for nonmedical use for free (46%) or purchased them (20%) from a friend or relative.[29] Other sources of opioids include legal prescriptions, drug dealers, and online.[30] Some teens (and adults) will turn to heroin because it can be purchased on the street for a significantly lower cost than prescription opioids, especially if they build a tolerance to a prescription opioid and can no longer obtain a prescription from their doctor.

Combining Opioids with Other Substances. Adolescents may mix prescription opioids with other substances (e.g., marijuana or alcohol).[31] They may also use opioids more intensely, such as in higher doses or by snorting or injecting. Both mixing substances and intense use can lead to a higher risk of unintentional overdose, especially if opioid pills are for modified release or extended release.[f] Opioids purchased on the street (including heroin) are often not as pure or of higher dosage, which can also lead to unintentional overdose.[32]

Lack of Services. There is a lack of prevention and treatment services for opioid misuse and overdose, especially for adolescents. There are not enough medication-assisted treatment facilities for opioid addiction, and those that are operating are stretched thin, creating a treatment gap of nearly 1 million people in the United States.[33,g] According to one study, 12% of opioid-addicted adults received medication for treatment, compared to less than 1% of adolescents.[34] Similarly, 26% of adult heroin addicts received medication-assisted treatment, compared to 2% of heroin-addicted adolescents.[35]

[f] This refers to the mechanism used in pills and capsules to dissolve a drug over time to release more slowly and steadily into the bloodstream.
[g] For more information about evidence-based treatments for adolescent opioid addiction, visit https://www.drugabuse.gov/publications/principles-adolescent-substance-use-disorder-treatment-research-based-guide/evidence-based-approaches-to-treating-adolescent-substance-use-disorders.

HOW ARE OPIOID DEPENDENCE, ADDICTION,[h] AND OVERDOSE TREATED?

- **Medications for Addiction:** Effective medications exist to treat opioid addiction. *Agonists* like methadone (which activate opioid receptors) and *partial agonists* like buprenorphine (which also activate opioid receptors but produce a diminished response) can be used.[36] Both of these medications stop and prevent opioid withdrawal and reduce opioid cravings, allowing the person to focus on other aspects of recovery. *Antagonists,* like naltrexone, block opioid receptors and interfere with the rewarding effects of opioids.[37]
- **Medications for Overdose:** An opioid overdose can be reversed with the drug naloxone when administered right away.[38]
- **Therapy:** Counseling and behavioral therapy are available for adolescents and their families.[i]
- **Psychiatric Help:** This includes screening and treatment of comorbid psychiatric diseases.

WHAT CAN ADOLESCENT SEXUAL AND REPRODUCTIVE HEALTH PROFESSIONALS DO ABOUT ADOLESCENT OPIOID USE?

Get Educated and Educate Others

- Participate in professional development training about opioid use and misuse.
- Develop and provide educational activities for parents, schools, and the community that specifically address adolescent opioid use and misuse (as opposed to substance use in general).
- Develop, test, and promote effective messages about preventing opioid misuse in adolescent populations.
- Integrate messages and information about opioids into other health education efforts (e.g., sexual health, mental health, fitness).

Be Alert and Ready to Help

- Recognize the signs of opioid misuse and overdose, including changes in a young person's relationships with family or friends, confusion, poor concentration, avoiding eye contact, pinpoint pupils, unexplained giggling, clumsiness, lack of coordination, slow gait, drowsiness, flushing, mood changes, and changes in sleeping patterns.
- Know the resources and services in your community and provide referrals when appropriate. Make sure the resources in your community provide evidence-based treatment for opioid addiction, not just detox, which can result in relapse and is risky for pregnant women.[39]
- Know and abide by the reporting requirements that apply to your profession.
- Do not stigmatize people who use or misuse drugs by shaming, ridiculing, or blaming. Doing so will alienate adolescents and discourage them from asking for help.
- Remember that opioid addiction is a chronic condition and should be treated as such.[40] Some people who struggle with opioid addiction will need to be on Methadone Maintenance Therapy (MMT) for the rest of their lives to avoid a relapse. It is important to destigmatize MMT by considering it a treatment for a chronic condition.[41]

Organize, Collaborate, and Advocate

- Convene and partner with adult and youth leaders (e.g., state and local governments, tribal councils, schools, universities, community-based organizations, health care organizations, treatment centers, funders, communities of faith, private businesses, police, and parents) to advocate for greater education to prevent youth opioid use and misuse.
- Advocate for improved access to opioid addiction treatment for adolescents (including counseling, treatment centers, and treatment drugs) to address the NMUPO in your community.
- Advocate for the removal of barriers to clean syringe programs (for the prevention of HIV and other infections).[42]
- Advocate for the increased availability of the overdose-reversing drug, naloxone. If you work with youth who have substance use problems, obtain naloxone and get trained in its use.
- Advocate for more research on the associations between opioid use and adolescent sexual and reproductive health.

[h] For an explanation of the difference between dependence and addiction, see https://www.drugabuse.gov/publications/principles-drug-addiction-treatment-research-based-guide-third-edition/frequently-asked-questions/there-difference-between-physical-dependence

[i] For examples of evidence-based therapeutic approaches, visit https://www.drugabuse.gov

WHERE CAN I GET MORE INFORMATION?

National Organizations

- National Institute on Drug Abuse (NIDA): https://www.drugabuse.gov/drugs-abuse/opioids and https://teens.drugabuse.gov
- Substance Abuse and Mental Health Services Administration (SAMHSA): https://www.samhsa.gov
- Centers for Disease Control and Prevention (CDC): https://www.cdc.gov/drugoverdose/opioids
- American Academy of Pediatrics: https://www.aap.org
- Community Anti-Drug Coalition of America (CADCA): http://www.preventrxabuse.org
- Partnership for Drug-Free Kids: https://drugfree.org/medicine-abuse-project

Helplines

- National Suicide Prevention Lifeline: 1-800-273-TALK (8255)
- SAMHSA's Helpline: 1-800-662-HELP (4357)
- Crisis Text Line: Visit www.crisistextline.org or text "START" to 741-741

Treatment Locators

- SAMHSA Behavioral Health Treatment Services Locator: https://findtreatment.samhsa.gov
- SAMHSA Opioid Treatment Program Directory: http://dpt2.samhsa.gov/treatment/directory
- National Council on Alcoholism and Drug Dependence: https://www.ncadd.org/people-in-recovery/local-resources

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