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Opioid Overdose Crisis Compounded by Polysubstance Use

New strategies can reduce the risks from using more than one drug

Overview

Polysubstance use—when more than one drug is used or misused over a defined period of time¹—can occur from either the intentional use of opioids with other drugs or by accident, such as if street drugs are contaminated with synthetic opioids.² In the first half of 2018, nearly 63% of opioid overdose deaths in the United States also involved cocaine, methamphetamine, or benzodiazepines, signaling the need to address polysubstance use as part of a comprehensive response to the opioid epidemic.³ Fentanyl, a highly potent synthetic opioid, has been identified as a driver of overdose deaths involving other opioids, benzodiazepines, alcohol, methamphetamine, and cocaine.⁴

Two classes of drugs are frequently co-used with opioids: depressants and stimulants. Although there are medical uses for some drugs in these classes, they also all have high potential for misuse.⁵ Mixing opioids—which are depressants—with other depressants or stimulants, either intentionally or unknowingly, has contributed to the rising number of opioid overdose deaths, which have more than doubled since 2010.⁶ Efforts to reduce opioid overdose deaths should incorporate strategies to prevent, mitigate, and treat the use of multiple substances.

Depressants

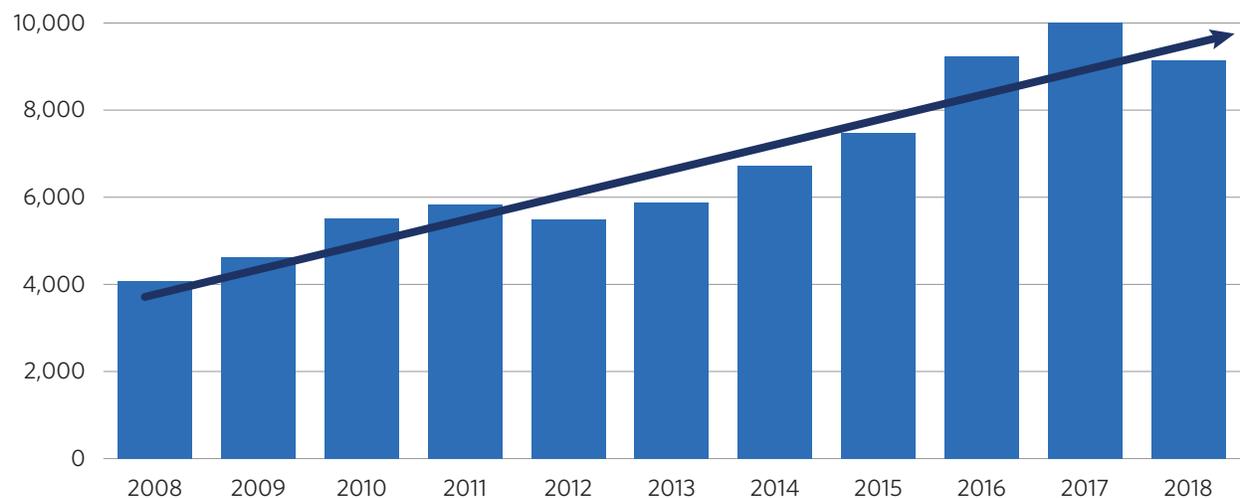
Depressants act on the central nervous system to induce relaxation, reduce anxiety, and increase drowsiness.⁷ Opioid use concurrent with the use of another sedating drug compounds the respiratory depressant effect of each drug, creating a higher risk for overdose and fatal overdose than when either drug is used alone.⁸

Benzodiazepines

Benzodiazepines are prescribed for medical use as sedatives but are commonly misused for nonmedical purposes and in combination with prescription and illicit opioids.⁹ In 2018, just over 9,000 U.S. deaths involved both opioids and benzodiazepines, more than twice the number of 2008 deaths due to such co-use.¹⁰ Moreover, in 2018, nearly half (47.2%) of benzodiazepine overdose deaths involved synthetic opioids (e.g., fentanyl).¹¹ Fatal overdoses involving both prescription opioids and benzodiazepines nearly tripled from 2004 to 2011.¹²

Figure 1

Overdose Deaths Involving Benzodiazepines and Opioids, 2008-2018



Source: CDC Wonder

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Alcohol

In 2017, 15% of opioid overdose deaths involved alcohol.¹³ From 2012 to 2014, more than 2 million people who misused prescription opioids were also binge drinkers of alcohol (defined as more than five drinks for a man or more than four drinks for a woman within a two-hour period); compared with nondrinkers, binge drinkers were associated with being twice as likely to misuse prescription opioids.¹⁴ Evidence indicates that about 23% of people with an opioid use disorder have a concurrent alcohol use disorder.¹⁵

Stimulants

Stimulants increase arousal and activity in the brain.¹⁶ In 2017, opioids were involved in more than half of stimulant-involved overdose deaths—about 15,000 total.¹⁷ The co-use of stimulants with synthetic opioids such as fentanyl either intentionally or through drug contamination has increased the number of stimulant-involved overdose deaths.¹⁸ The opposing impacts of increased arousal from stimulants and sedation from opioids on the body can make the outcomes of co-use less predictable and raise the risk of overdose.¹⁹

Methamphetamine

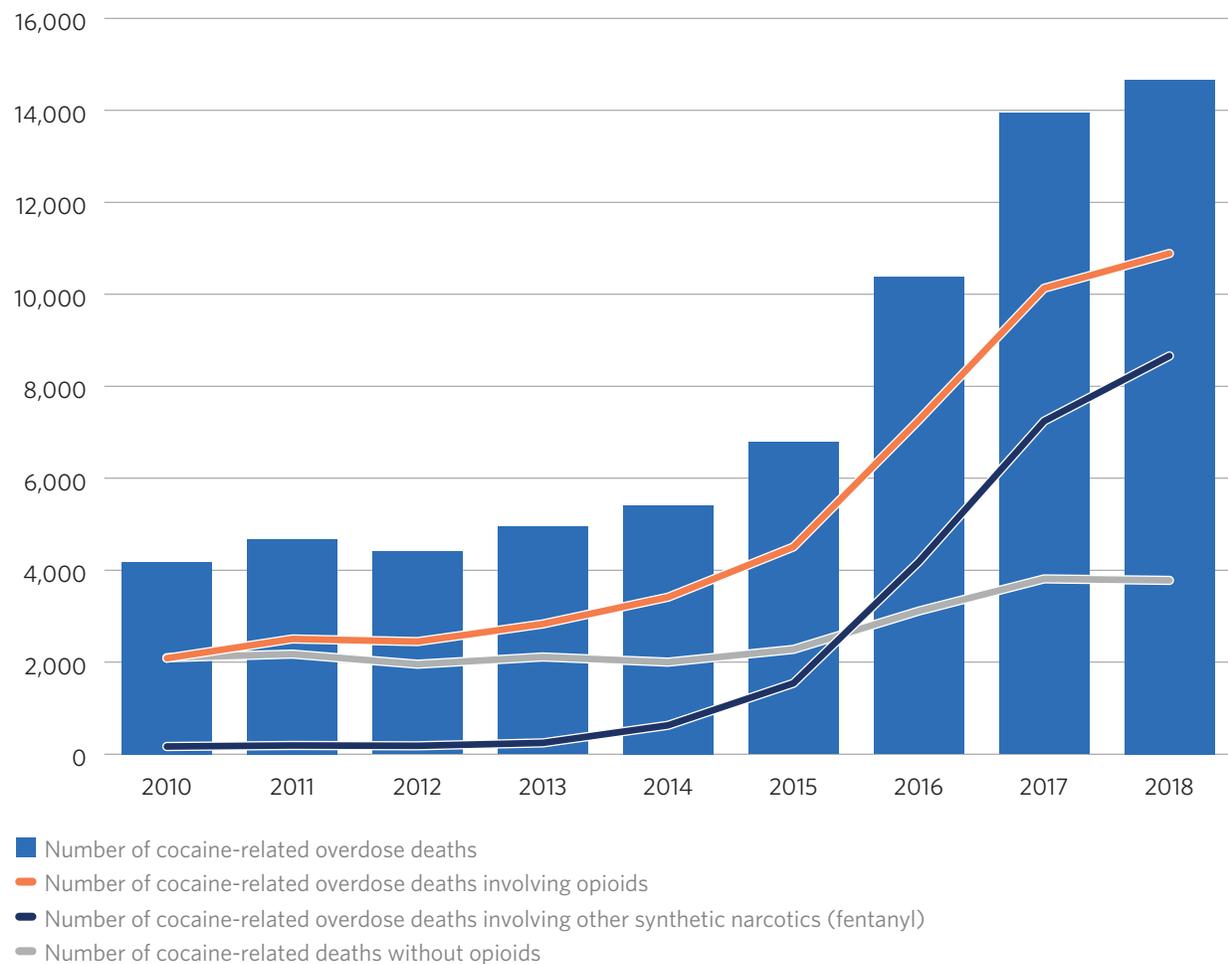
About 12% of opioid overdose deaths from January to June 2018 involved methamphetamine, an illicit drug.²⁰ In 2017, opioids were involved in 50% of methamphetamine-involved deaths, and recent data suggests synthetic opioids are driving increases in methamphetamine-involved deaths.²¹ One study found that 65% of those seeking opioid treatment had reported a history of methamphetamine use, with more than three-quarters of them indicating that they had used methamphetamines and opioids mostly at the same time or on the same day.²²

Cocaine

Of the nearly 15,000 cocaine overdose deaths in 2018, nearly 11,000 also involved opioids; this number accounts for about 23% of the total opioid overdose deaths that year.²³ In fact, since 2010 the number of deaths caused by a combination of opioids and cocaine has increased more than fivefold.²⁴ People who primarily use cocaine but sometimes co-use opioids are at high risk for overdose because of the increasing presence and potency of fentanyl in the drug supply and a lower tolerance for opioids than someone who regularly uses them.²⁵

Figure 2

Opioids Involved in Cocaine-Related Overdose Deaths, 2010-2018



Source: CDC Wonder

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What should be done?

It is critical that state policies addressing the rise in polysubstance use and its link to increased risk of overdose span across prevention, harm reduction, and treatment strategies. To effectively accomplish this, states should:

- **Enact policies that increase provider use of prescription drug monitoring programs (PDMPs) to reduce the co-prescription of opioids and benzodiazepines.**²⁶ PDMPs, state-based electronic databases that contain information on controlled substance prescriptions, allow prescribers and pharmacists to monitor patients' prescription drug use and can promote safer prescribing practices that help prevent overdoses. High rates of benzodiazepine prescribing are correlated with the drug's involvement in opioid overdose deaths.²⁷
- **Expand naloxone distribution to reach people who use stimulants.**²⁸ Naloxone reverses the respiratory depression effects of opioids to safeguard against a fatal overdose and remains effective when people use opioids in combination with other drugs.²⁹ Considering that opioids are frequently implicated in cocaine and methamphetamine overdose deaths, people who primarily use stimulants are recognized as an at-risk population for opioid overdose.³⁰ Laws that allow for increased community distribution of naloxone can help safeguard against polysubstance use overdoses.³¹
- **Amend drug paraphernalia laws to allow possession of fentanyl test strips.** Fentanyl test strips can detect the presence of fentanyl in a person's drug supply when dipped into a solution of a small amount of the drug in water. People who use drugs have indicated that if a test strip found fentanyl in their supply, they would take measures to prevent an overdose, such as injecting at a slower pace or using less of the drug at a time.³² Fentanyl test strips are mainly used by people who inject opioids but can also be helpful for those who use stimulants and fear fentanyl contamination by preventing unintentional co-use that could lead to a fatal overdose.³³ Amending drug paraphernalia laws to allow the possession of drug-checking devices, including fentanyl test strips, would permit agencies and organizations to distribute test strips to people who use drugs and help to prevent fentanyl-related overdose deaths.³⁴
- **Prohibit the discharge of patients from publicly funded opioid use disorder (OUD) treatment programs for their continued substance use.**³⁵ Treatment programs often discharge patients from treatment involuntarily because of their continued illicit drug use (a practice commonly called administrative discharge).³⁶ This practice poses a particular risk for patients being treated for OUD with methadone or buprenorphine who are at high risk for overdose if discharged without medication.³⁷ Although co-use of other drugs, such as stimulants, with medications for OUD can interfere with treatment, it remains safer for patients to continue medication treatment because of their high risk for overdose from using illicit opioids.³⁸ People with OUD who use benzodiazepines are particularly at higher risk for overdose when not on medication treatment.³⁹ Federal guidelines recommend avoiding administrative discharge and instead suggest that treatment programs re-evaluate a patient's needed level of care if the current treatment plan proves ineffective.⁴⁰

Conclusion

As the increase in opioid use evolves into an increase in polysubstance use, understanding how different substances interact may inform strategies that help prevent overdose. Though some individuals knowingly combine or co-use opioids with stimulants or other depressants, an additional and growing concern is the adulteration of other drug supplies with fentanyl. Strengthening policy efforts across the continuum of prevention, harm reduction, and treatment to address the risks of polysubstance use can slow the rates of drug overdose deaths in the United States.

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Contact: Erin Davis, communications manager
Email: edavis@pewtrusts.org
Project website: pewtrusts.org/substancemisuse

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