

Stimulants

Topical Brief Series: Vol. 2, Issue 2

Overview

Use of illegal stimulants is increasing nationally and in Colorado. This is concerning because of related increases in drug overdoses involving stimulants, polysubstance use of stimulants and opioids, and fentanyl contamination in illegal stimulants.¹ Colorado communities would benefit from stimulant-specific prevention resources, increased harm reduction efforts, and treatment options that use evidence-based approaches for stimulant use disorders.

What are stimulants?

Stimulants refer to a class of drugs that stimulate the central nervous system, effectively speeding up the messages between the brain and the body. The effect can make a person feel more awake, alert, confident, or energetic. Stimulant drugs have both legal and

"The issue of stimulant use is underappreciated. Mostly because opioids have been such an overwhelming issue, an increasing issue over the last 15 years or so that the funding and awareness and all the messaging, it's kind of been dominated by opioids. Stimulant use really never went away."

-Colorado Behavioral Health Consultant

illegal forms. Legal stimulants include amphetamine-based prescription medications used to treat Attention Deficit Hyperactivity Disorder (ADHD) and narcolepsy.² Illegal forms of stimulants include methamphetamine,

Key Findings

- Overdose deaths involving illegal stimulants have increased in recent years nationally and in Colorado.
- In Colorado, the rate (age-adjusted per 100,000) of overdose deaths involving fentanyl and methamphetamine increased 12.5 times from 2016 to 2020.
- The rate of overdose deaths involving fentanyl and cocaine increased 18 times in the same period.
- Colorado public health officials can increase harm reduction efforts to reduce the incidence of overdose deaths.
- Treating stimulant use disorder is challenging for many reasons including stigma of seeking treatment, lack of medication-assisted treatment options for stimulant use disorder, and implementation of evidence-based behavioral treatment approaches.

cocaine, and crack cocaine. Chronic effects of stimulants misuse include depression, psychosis, impaired cognition, and permanently altered brain structure and function.

Trends in Stimulant Use & Misuse

Prescription Stimulants

Prescription rates for stimulants are increasing nationally, although the prevalence of misuse is unchanged. In 2019, approximately five million people (1.8%) 12 and older misused prescription stimulants in the past year. Young adults 18-25 misused at a higher prevalence compared to other age groups, however, misuse has declined since 2015.³ Data on misuse are unavailable at the state level. Nationally, the number of 12-17 year-olds who misused prescription stimulants for the first time in the past year remained stable between 2015 and 2019. Although there is not a link between prescription stimulant misuse and cocaine or methamphetamine use, prescription stimulant misuse can lead to substance use disorder.⁴⁻⁵ It is important to continue to monitor trends in prescription rates and misuse.

Cocaine

While cocaine use has remained stable nationally, use in Colorado increased from 2015-2019 with nearly 200,000 Coloradans 12 and older (4.12%) reporting use in the past year in 2019. Cocaine use among Coloradans is the highest among any state in the U.S.⁶ The percent of Colorado high school students who have used cocaine one or two times in their life remained steady between 2013 (5.8%) to 2019 (5.2%), and first-time cocaine use among 12-17 year-olds decreased nationally from 2002 (310,000) to 2019 (59,000).⁷⁻⁸ Nationally, populations at risk for cocaine use include young adults (18-25), lower-income individuals, and Black communities.

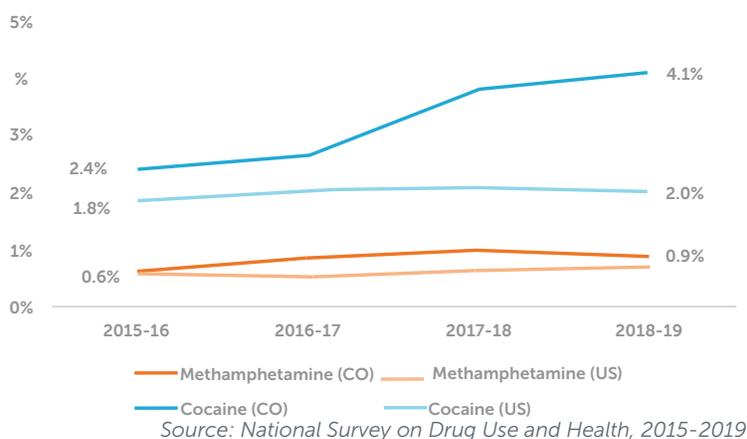
Prescription Stimulant Prescribing Rates in Colorado

Rates of stimulants prescriptions dispensed increased from 2014 to 2019 and are more common among men in the state. Pitkin and Douglas counties have the highest rate of stimulant prescriptions dispensed (average annual age-adjusted rate per 1,000 residents).

Methamphetamine

Methamphetamine use increased nationally and in Colorado since 2015. In 2019, it is estimated that 43,000 Coloradans 12 and older (.90%) used methamphetamine in the past year, which is higher

Figure 3. Cocaine and methamphetamine use in Colorado increased from 2015 to 2019.



than use nationally (.70%).⁹ The percent of Colorado high schoolers who have ever used methamphetamine decreased from 2013 (3.2%) to 2019 (2.3%).¹⁰ Nationally, the number of 12-17 year-olds who used methamphetamine for the first time in the past year remained stable between 2015 and 2019.¹¹ Seizures of methamphetamine at U.S. borders have also increased – more than doubling from 2018 to 2020.¹² Across the country, populations most at risk for methamphetamine use are rural, lower-income, and white or indigenous individuals. Methamphetamine use is also common among adults aged 26-49.

Young adults aged 18-25 years-old have the highest prevalence of use for prescription stimulants, cocaine, and methamphetamine.¹³ This is an indication of the importance of primary prevention for youth aged 12-17.

Harms of Stimulant Use & Misuse

Overdose Deaths

Overdose deaths involving illegal stimulants have increased in recent years nationally and in Colorado. In 2018 in the U.S., overdose rates involving cocaine were highest among adults aged 35-44.¹⁴ Cocaine-related overdose deaths in Colorado were 1.6 times higher in 2020 than 2010. Cocaine was involved in 217 deaths in Colorado in 2020. While methamphetamine use in Colorado is lower than cocaine use, there are more than double the number of overdose deaths involving methamphetamine. In Colorado, the rate increased 1.5 times from 2019 to 2020, while opioid-involved overdose deaths increased 1.7 times over the same period. Five hundred and seventeen people died from overdose involving methamphetamine in Colorado in 2020, which amounts to 41% of all unintentional drug overdoses.¹⁵

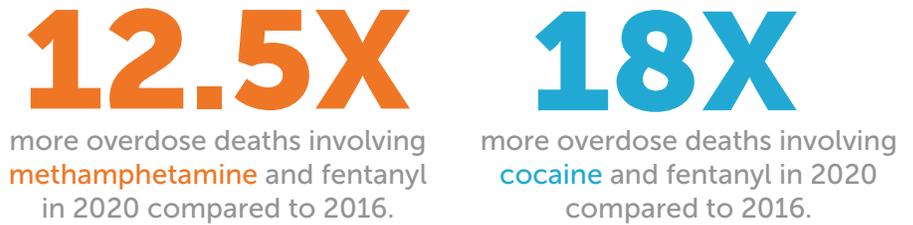
Polysubstance

In recent years polysubstance use of opioids and

methamphetamine has increased. Polysubstance use is associated with worse health outcomes, such as greater addictive effects, higher risk of overdose, and lower rates of treatment success. Overdose deaths involving illegal stimulants and opioids has increased nationally. In 2017 in the U.S., opioids were involved in 72.7% of cocaine overdose deaths and 50.4% of methamphetamine overdose deaths.¹⁶ In Colorado in 2020, these figures were 67% and 56%, respectively. Fentanyl is a highly potent, synthetic opioid often found in other drugs and linked to greater risk of overdose. Overdose deaths involving fentanyl have risen dramatically in recent years, as have seizures of illegal fentanyl at U.S. borders.¹⁷ In Colorado, the rate (age-adjusted per 100,000) of overdose deaths involving fentanyl and methamphetamine increased 12.5 times from 2016 to 2020. The rate of overdose deaths involving fentanyl and cocaine increased 18 times in the same period. In 2020, nearly half (48%) of overdose deaths from methamphetamine and opioids involved fentanyl and nearly three quarters (74%) of overdose deaths from cocaine and opioids involved fentanyl.¹⁸

Characterizing overdose death data by grouping all stimulant-related deaths – as is done for opioid-related deaths – would provide a clearer picture of the impact stimulants are having.

Figure 3. Overdose deaths in Colorado involving illegal stimulants and fentanyl rose dramatically in the past five years.

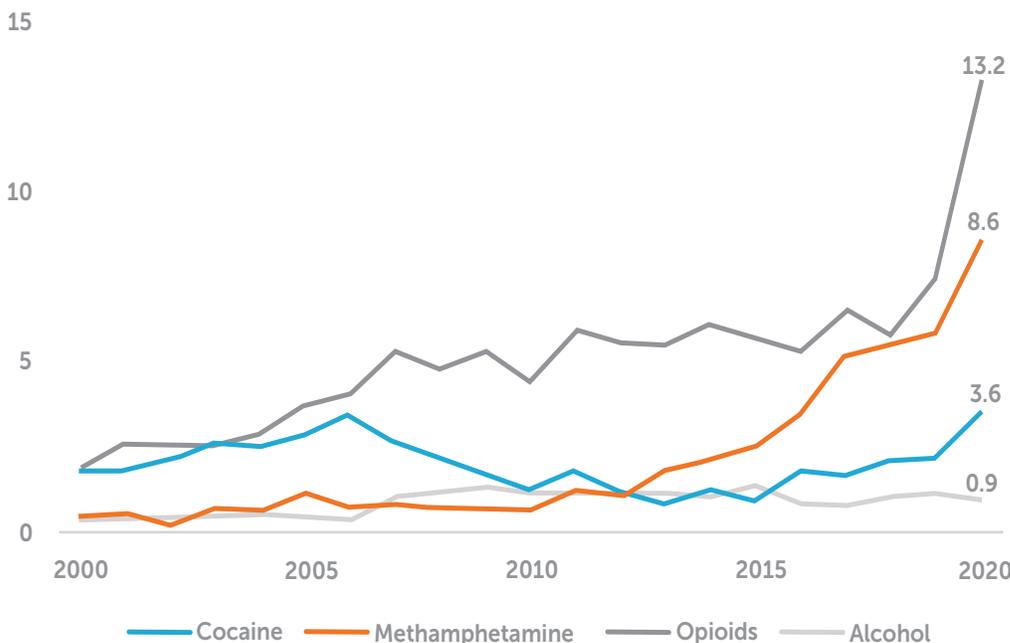


Source: Vital Statistics, CDPHE, 2016-2020

Treatment

In Colorado, treatment admissions for methamphetamine use disorder are increasing, and in 2019 they accounted for nearly a quarter (23.1%) of all people seeking treatment in licensed facilities.¹⁹ In 2010 the number of people seeking treatment for methamphetamine was 4,451, which increased to 10,118 in 2019. While the overall number of people seeking substance use disorder treatment increased from 2010-2019, the number of people seeking methamphetamine treatment grew disproportionately comparatively. Additionally, people seeking treatment for methamphetamine in Colorado are more likely to be admitted multiple times compared to people seeking treatment for other substances, which is an indicator of unsuccessful treatment. People seeking treatment for cocaine or crack use disorder accounted for 2.8% of all people seeking treatment in 2019, which is a decrease from 2010. People seeking treatment in Colorado for prescription stimulants is uncommon.²⁰

Figure 2. Overdose deaths in Colorado involving methamphetamine and cocaine are on the rise.



Source: Vital Statistics, CDPHE, 2016-2020

Why do people use or misuse stimulants?

There are many pathways to stimulant use. Prescription stimulant misuse has commonly been reported among high school and college students for academic performance, specifically among males.²¹⁻²² Researchers suggest that similar misuse among females is associated with weight loss desires.²³ Similar to other substances, initiation of cocaine use is associated with exposure to

risk factors such as peer pressure, family conflict, easy access to drugs, and deviant behavior.²⁴⁻²⁵

A recent study found methamphetamine use significantly increased among people seeking treatment for opioid use disorder between 2011 and 2017. Researchers suggest methamphetamine was used as an opioid substitute, in combination with opioids for a synergistic high, or to achieve normalcy to function. Additionally, limiting access to prescription opioids may be associated with an increase in methamphetamine use.²⁶ Heroin and methamphetamine polysubstance use was one of the most common combinations among people seeking treatment in Colorado in 2018 and the number of admissions with this substance combination quadrupled from 2014 to 2018.

What can be done?

Prevention & Education

Many public health professionals in Colorado working in substance use prevention have embraced a strengths-based, risk and protective factor approach to preventing the onset and increase of substance use. Implementing prevention strategies that reduce risk factors and increase protective factors prevents substance use generally. Each community, however, has its own strengths and challenges. Communities who experience higher rates of stimulant use and overdose deaths involving stimulants may choose to adopt strategies specific to raising

Treating Stimulant Use Disorder

Contingency Management

Contingency Management is an evidence-based behavioral therapy model used to discourage drug use through structured and meaningful incentives for positive behavior changes promoting a drug-free lifestyle.

Community Reinforcement Approach

Community Reinforcement Approach is a treatment method by which the clinician works with the patient to identify some of the root causes of addiction and the "positive" aspects that a person gets from their addiction and works with the patient to slowly replace those aspects with healthier, prosocial and sober activities.

“ [We] are missing a little bit of what we could be doing for people - community engagement, talking to people about education around stimulants, understanding how dosing works, and understanding the risks long-term. We do a lot of that education for opioids. We don't do that for methamphetamine.”

-Colorado Harm Reduction Action Center Staff

awareness and knowledge around this class of drug. Community prevention professionals can identify the prevalence of cocaine and methamphetamine use among youth with the Healthy Kids Colorado Survey data. They can access the Colorado Consortium for Prescription Drug Abuse Prevention dashboard for rates or prescription stimulants. Additionally, the Colorado Department of Public Health and Environment's Drug Overdose Dashboard provides county-level estimates of overdose deaths involving methamphetamine and cocaine. For more information on Colorado substance use dashboards, visit the [SEOW dashboards page](#).

Rise Above Colorado, previously named The Colorado Meth Project, has developed several stimulant use prevention resources available to communities who wish to provide specific information around [prescription stimulants](#) and [methamphetamine](#).

Harm Reduction

Colorado public health officials can increase harm reduction efforts to reduce the incidence of overdose deaths. Fentanyl test strips are used by people to test their own drugs prior to use. They can detect fentanyl and fentanyl

“ People who are using stimulants overwhelmingly are saying they're not using it when they find fentanyl in their methamphetamine.”

-Colorado Harm Reduction Action Center Staff

analogous in injectable drugs, powders, and pills by mixing the substance with water and using a test strip. A line appears on the strip within two minutes if fentanyl is present, creating an opportunity for individuals to take a harm-reducing action. In 2020, the Harm Reduction Action Center of Colorado (HRAC) trained 680 individuals to use fentanyl test strips and collected results from over 2,000 tests. More than 900 tests came back positive for fentanyl, with 372 of those tests used on methamphetamine. Eighty percent of people who received a positive test took action to protect themselves or others, including using less, having someone with them in case of overdose, or throwing away their drugs.²⁷ To learn more about harm reduction strategies, visit the [HRAC website](#).

Treating Stimulant Use Disorder

Treating stimulant use disorder is challenging for many reasons. First, and not specific to stimulants, stigma affects an individual's willingness to seek treatment. Among Coloradans who did not receive needed substance use treatment services, 73% were concerned about someone finding out they had a problem or did not feel comfortable talking about personal problems.²⁸ Secondly, treatment providers do not have medically assisted treatment (MAT) options for stimulant use disorder like they have for opioid use disorder and alcohol use disorder.²⁹⁻³⁰ MAT, in combination with therapy, can treat substance use disorder and support sustained recovery.³¹

Finally, although several approaches have shown promise for treating Stimulant Use Disorder, providers have expressed barriers in using them. The two approaches recommended by the Substance Abuse and Mental Health Services Administration are Community Reinforcement Approach (CRA) and Contingency Management (CM). CRA is challenging because of high certification requirements, a lack of flexibility in adapting the model to be culturally appropriate, and the difficulty in maintaining client participation.³² CM

is challenging to implement with fidelity because of federal restrictions on how grant funding may be used by grantees. Despite these challenges, some Colorado providers are currently using CRA and CM to treat stimulant use disorder. For more information, contact Meredith Davis (Meredith.m.davis@state.co.us) with the Colorado Department of Human Services, Office of Behavioral Health.

“Even in the treatment community, there's a belief that stimulant treatment doesn't work, that it's just hopeless when somebody is on stimulants. They're not knowledgeable about effective treatment modalities and where to get them.”

-Colorado Behavioral Health Consultant

Conclusion

Given increases in illegal stimulant use, overdose deaths involving stimulants, and treatment admissions, public health professionals should continue to monitor trends in stimulant use and related harms. Doing so supports the identification of appropriate strategies for preventing use, reducing harm, and supporting stimulant use disorder treatment. Communities working together across prevention, treatment, and recovery is a key factor in addressing substance use disorders and related harms.

“When people are provided with accurate information and the tools to make positive choices for their health, they will.”

-Colorado Office of Behavioral Health Staff

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