



The Opioid Crisis in the Pandemic Era

Fentanyl overdoses soared and contributed to growing deaths from prescription opioids, methamphetamine, and cocaine

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Summary

This brief examines recent trends in the United States' opioid crisis and patterns in drug overdose death rates from 2019 to 2021, representing the first years of the COVID-19 pandemic.

As a companion piece to this [brief](#), SHADAC developed a state-level data table appendix on drug overdose death rates from 2019 to 2021.

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INTRODUCTION

A quarter-century into the U.S. opioid crisis, the situation is more dire and complicated than ever before. Despite state and national initiatives to reduce overprescribing and diversion, overdose deaths from prescription opioids have remained essentially unchanged since the Centers for Disease Control and Prevention (CDC) first declared an “epidemic” in 2011.¹ Meanwhile, fentanyl and other illicitly trafficked opioids emerged to fill the vacuum when prescription opioids became scarcer, eventually driving death rates to levels that might have seemed unimaginable a few years earlier. And, less predictable, deaths involving non-opioid drugs methamphetamine and cocaine were also caught in the rising tide of fentanyl trafficking, adding new levels of complexity that remain under-recognized and complicate efforts to stem the ever-rising death toll.

The opioid crisis today hardly resembles that of its early years. While consensus holds that prescription opioids such as Oxycontin initially triggered the problem, illicitly trafficked fentanyl has overtaken them in much the same way that an uncontrolled wildfire eclipses the unattended campfire that sparked the blaze. During 2021, overdose deaths involving fentanyl or related synthetic opioids alone killed almost 71,000 people in the U.S., more than 200 people each day. Total overdose deaths involving any drug exceeded 100,000 people in 2021.² These data highlight just one aspect of how the crisis has evolved with fentanyl now at its core. Not only do fentanyl and related synthetic opioids account for the majority of drug overdose deaths, but they also are involved in most methamphetamine, cocaine, and prescription opioid overdose deaths—the next most common substances associated with overdose deaths.³

This issue brief examines the opioid crisis as of 2021, the most recent year of complete national data on overdose death rates and which also happens to mark the 10-year anniversary of the CDC’s announcement of the opioid epidemic. We focus on the four categories of substances involved in the most U.S. overdose deaths:

FENTANYL

Although fentanyl overdose deaths are classified with other related synthetic opioids, we generally refer to these data as fentanyl overdoses, since evidence shows that fentanyl accounts for the overwhelming majority of overdose deaths involving synthetic opioids.

METHAMPHETAMINE

While methamphetamine overdose deaths are categorized under the broad group of “psychostimulants with abuse potential,” including drugs as varied as caffeine and MDMA (i.e., ecstasy), we refer to these data as “methamphetamine”, as evidence shows that drug accounts for the majority of deaths involving substances in this category.

PRESCRIPTION OPIOIDS

Prescription opioids is a common term used to describe natural and synthetic opioids that are derived or synthesized from products of the opium poppy, including the common prescription painkillers oxycodone and hydrocodone, as well as others. Although heroin is technically a semi-synthetic opioid, it is separated into its own category and not included in these data.

COCAINE

More straightforward than the other categories, these data refer to deaths that exclusively involve cocaine, regardless of form (e.g., powder vs. “crack” cocaine).

Figure 1. Timeline of the Evolving Opioid Crisis



History of the opioid crisis

The opioid crisis is widely considered to have its roots in the mid- to late-1990s, when a confluence of factors—including the beginning of the “Pain as the 5th Vital Sign” campaign and the U.S. Food and Drug Administration’s approval of Purdue Pharma’s blockbuster OxyContin—led the U.S. health care system to greatly increase prescribing of opioid painkillers.⁴ For more than a decade, the steadily increasing rate of overdose deaths involving prescription opioids continued with little notice. But that changed around 2011, when the CDC declared deaths from prescription painkillers an “epidemic.”

In the years that followed, the U.S. health care and public health systems took steps to rein-in prescribing of opioid painkillers. The CDC developed guidelines aimed at reducing risky prescribing patterns, and many states implemented legal restrictions in addition to the voluntary, well-meaning attempts made by many health care providers to be more cautious in prescribing opioid painkillers. The leveling-off of prescription opioid overdose deaths after 2011 suggest some degree of success, though it was limited, and rates never declined in any large or durable way.

Around that same time that prescription opioid deaths peaked, data on drug overdose deaths show that the opioid crisis made a distinct shift. Deaths began to climb first from heroin, an illegal opioid that has been trafficked for decades by criminal enterprises, then from fentanyl and similar synthetic opioids that criminal enterprises also began to traffic.^{5,6,7} Eventually, death rates from heroin began to recede, while those from fentanyl continued to surge.

In hindsight, basic principles of economics explain each of these developments. When many people who had become addicted during the rise of prescription opioids suddenly found themselves cut off from a substance on which they had become chemically dependent, some of them sought out a substitute.⁸ At first that substitute was often heroin, which is chemically closely related to prescription opioids and thus could satiate cravings and stave off withdrawal. But as drug traffickers discovered a new and growing market, they also sought new ways to exploit that market.

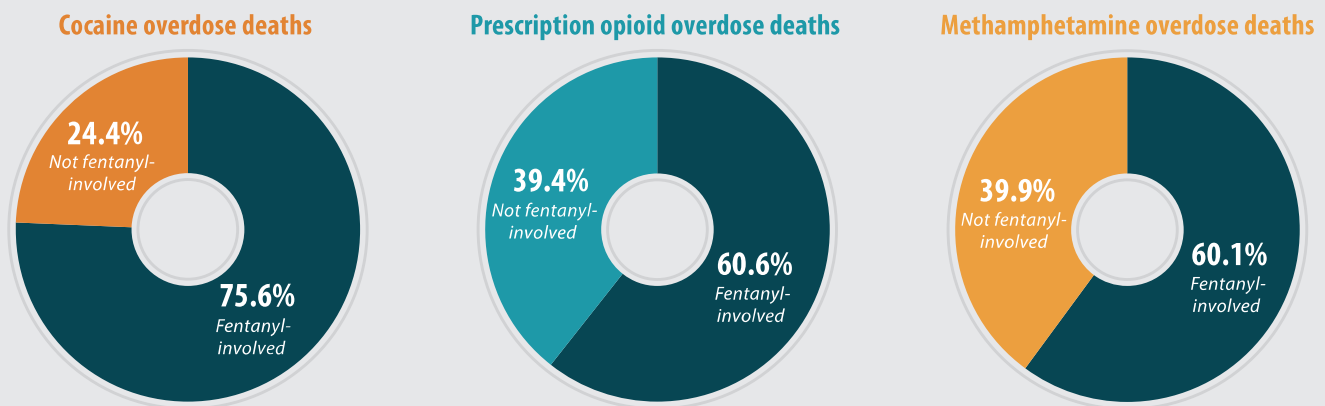
Fentanyl proved useful to drug traffickers for multiple reasons. One critical factor was the relative ease of producing large quantities of fentanyl, which requires precursor chemicals but not the fields of opium poppies needed to produce heroin. Another factor was the potency of fentanyl, which can be 50 times stronger than heroin, meaning that a relatively tiny quantity of fentanyl could be smuggled more easily and cheaply compared to its equivalent market value in heroin. In short, many people switched to illicitly trafficked opioids when prescription opioids became too difficult to obtain through the health care system, then fentanyl elbowed its way in to become a favorite substance for drug traffickers because it offered them an economic advantage.

Mechanisms driving the more-recent increases in death rates from methamphetamine and cocaine are more puzzling, but history and data offer clues. Well before the opioid crisis captured the nation’s attention, the U.S. had experienced drug crises related to both cocaine in the 1980s and 1990s, and methamphetamine in the 1990s and 2000s. Those eventually waned in severity, but they may have left the U.S. primed for a resurgence, with changes in drug trafficking dynamics tossing a spark into dry tinder.

Law enforcement data on seizures of smuggled drugs suggest there was increased trafficking of cocaine and methamphetamine in the years marked by growing overdose deaths.⁹ Contemporary cocaine, derived from the coca plant, is relatively unchanged from that of earlier years. But the contemporary supply of synthetically produced methamphetamine is considered to be qualitatively different from that of the 1990s and 2000s, when it was mostly produced domestically on a smaller scale and using less-sophisticated methods, resulting in a less-pure and less-potent product than the methamphetamine supplied today by international drug cartels.¹⁰

Data on the drugs most commonly involved in fatal overdoses indicate a close relationship between these substances. Our analysis of 2021 vital statistics data found that three-quarters of cocaine overdose deaths also involved fentanyl or similar synthetic opioids (75.6%), and almost two-thirds of prescription opioid and methamphetamine overdose deaths also involved fentanyl or similar synthetic opioids (60.6% and 60.1%, respectively) (Figure 2). Not only has fentanyl become the dominant substance driving today’s crisis of drug overdose deaths, but is also has become the center of gravity around which other drugs orbit.

Figure 2. Overlap of fentanyl with cocaine, prescription opioid, and methamphetamine overdose deaths, 2021



Source: SHADAC analysis of National Vital Statistics System (NVSS) 2021 data.

Trends since 2011

For this issue brief, we focus on the opioid crisis since the CDC declared an epidemic in 2011, as that year served as a turning point. While rising drug overdose deaths had until then been driven by prescription opioids, after that year the opioid crisis underwent a tectonic shift to instead revolve around drugs illicitly trafficked through criminal enterprises.

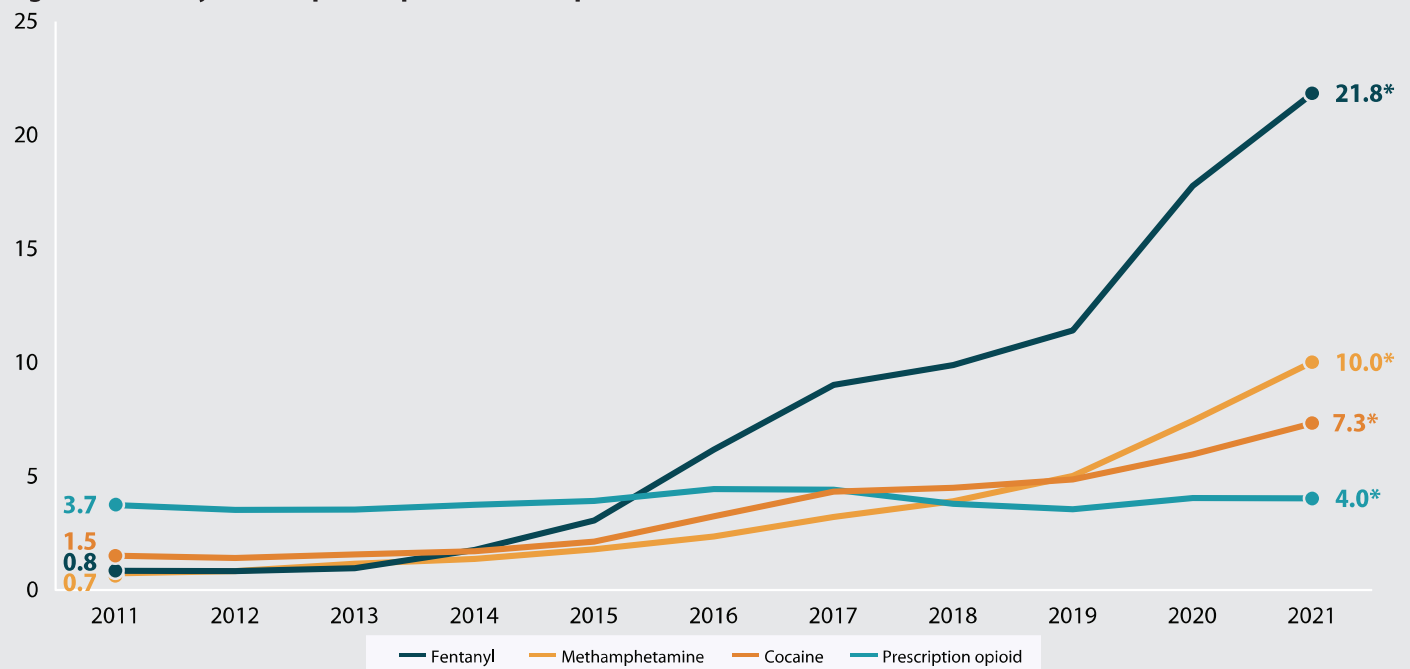
In Figure 3, we present trends in overdose death rates from 2011 to 2021. Starting with prescription opioids, we see that overdose death rates involving these substances have changed little compared to the others. After more than a decade of consistent growth, death rates from prescription opioids basically plateaued, varying a bit from year to year, but landing at 4.0 deaths per 100,000 people in 2021—a statistically significant increase from the rate of 3.7 deaths per 100,000 people in 2011, but a relatively small change compared to other drugs. Prescription opioids remain a public health threat, continuing to kill thousands of people from overdose deaths each year. But it is important to revisit the earlier point that most prescription opioid overdose deaths in 2021 also involved fentanyl. Prescription opioids are now both influenced and overshadowed by the fentanyl goliath.

Overdose deaths from fentanyl began to climb around 2013, just two years after the CDC made its opioid epidemic declaration. At first there was little market for fentanyl in the illicit drug trade. Instead of being sold as fentanyl, it was often used as an additive to boost the potency of heroin or even sold inaccurately as heroin. Additionally, it was often, and still continues to be, used as an ingredient in counterfeit opioid painkillers—fake OxyContin or similar pills that substitute cheaper, abundant fentanyl for the semi-synthetic opioids found in most prescription opioid painkillers. But within a few years, fentanyl was sufficiently well-known and demanded enough by customers that it no longer had to masquerade as other substances, although it still often does. The overdose data in Figure 2 track fentanyl’s deadly, meteoric rise: Accounting for only 0.8 deaths per 100,000 people in 2011, fentanyl deaths grew more than 25 times in a decade to 21.8 deaths per 100,000 people in 2021, an obvious as well as statistically significant increase.

Methamphetamine has followed a similar path to fentanyl. In 2011, both drugs were relatively uncommon as causes of overdose deaths, each accounting for less than one death per 100,000 people. Overdose death rates from methamphetamine grew relatively slowly for several years after 2011 before skyrocketing around 2018, becoming the second most common cause of drug overdose death in the U.S. by 2020. In 2021, overdose deaths from methamphetamine and other psychostimulants reached 10.0 deaths per 100,000 people—a statistically significant increase of almost 12 times its initial rate since 2011. In this case, it is worth mentioning that while most methamphetamine overdose deaths also involve fentanyl, the rate of methamphetamine deaths not involving fentanyl stood at 4.0 deaths per 100,000 people—more than 4 times the rate of methamphetamine deaths in 2011. While methamphetamine deaths are closely intertwined with fentanyl, methamphetamine stands as a public health threat in its own right, on par with the death rate from prescription opioids when the CDC first declared an epidemic.

Cocaine overdose death rates tell a somewhat different story. In 2011, cocaine deaths were roughly twice as common as deaths from both fentanyl and methamphetamine, a persistent public health threat going back to the 1990s and earlier. It wasn't until 2016 that cocaine overdose death rates began to exceed their relatively stable levels. Since then, they have increased more gradually than death rates from methamphetamine or fentanyl, but have clearly grown. By 2021, cocaine overdose deaths reached 7.3 per 100,000 people, a statistically significant increase of five times since 2011. But the relationship between cocaine and fentanyl is different than the relationship between methamphetamine and fentanyl. When excluding cocaine overdose deaths that also involve fentanyl, we find a death rate of cocaine-alone at 1.6 deaths per 100,000 people, essentially unchanged since the 2011 rate of 1.5 deaths per 100,000 people. Thus, the rise in cocaine overdose deaths appears to be driven primarily by the rise of fentanyl.

Figure 3. Fentanyl, Prescription Opioid, Methamphetamine, and Cocaine Overdose Death Rates, 2011-2021



Source: SHADAC analysis of National Vital Statistics System (NVSS) 2021 data.
*Rate significantly different from 2011 rate at 95% level.

Opioid deaths during the pandemic

As with many aspects of American society, the overdose crisis worsened demonstrably during the COVID-19 pandemic. Between 2019 and 2021, the U.S. methamphetamine overdose death rate doubled from 5.0 to 10.0 deaths per 100,000 people; the fentanyl overdose death rate almost doubled, from 11.4 to 21.8 deaths per 100,000 people; the cocaine overdose death rate grew by almost 50 percent, from 4.9 to 7.3 deaths per 100,000 people; and the prescription opioids death rate grew by about 10 percent, from 3.6 to 4.0 deaths per 100,000 people—all statistically significant increases.¹¹

Not only did the total population rates increase, but they also increased across nearly all demographic groups. And with the single exception of prescription opioids, overdose death rates increased across almost all states for each substance we examined.

Overdoses by age

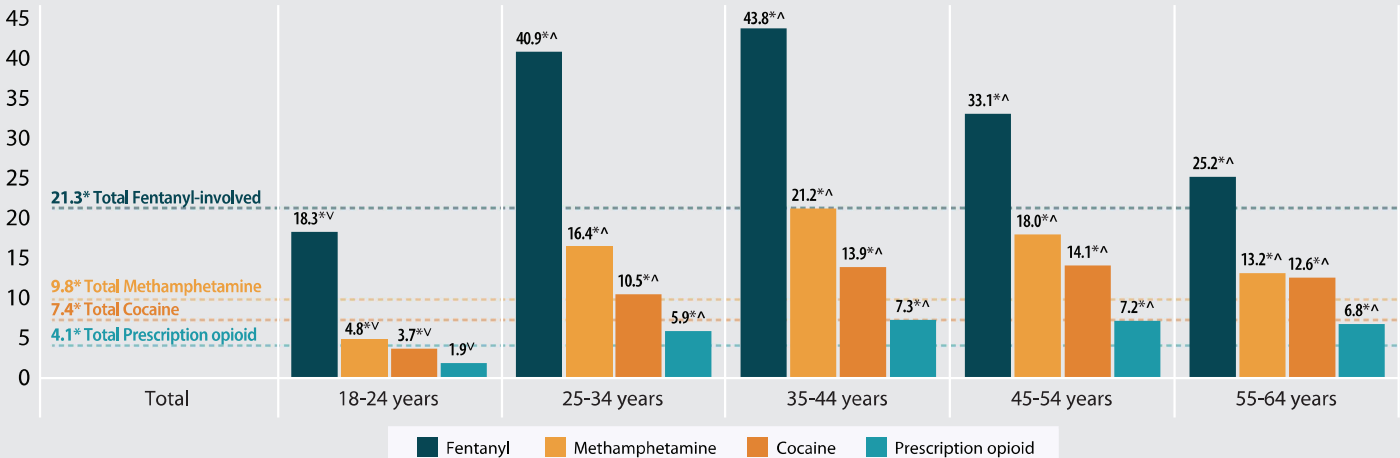
From 2019 to 2021, fentanyl overdose death rates increased significantly across all categories of non-elderly adults.¹² Adults nearing retirement age, 55-64 years old, experienced the largest growth in fentanyl overdose death rates, increasing 110 percent, from 12.0 to 25.2 deaths per 100,000 (Figure 4). Adults age 35-44 had the highest fentanyl overdose death rate in 2021, at 43.8 deaths per 100,000.

Prescription opioid overdose deaths increased significantly for each of the age categories we examined, except for young adults, whose rate remained unchanged at 1.9 deaths per 100,000 people. Adults age 25-34 experienced the largest increase, at 15 percent, and adults age 35-44 had the highest prescription opioid overdose death rate in 2021, at 7.3 deaths per 100,000 people.

Methamphetamine overdose deaths increased significantly across all ages of non-elderly adults. Those age 25-34 and 35-44 experienced the largest growth in overdose death rates, at 105 percent (8.0 to 16.4 deaths per 100,000 people and 10.4 to 21.2 deaths per 100,000 people, respectively). At 21.2 deaths per 100,000 people, adults age 35-44 also had the highest methamphetamine death rate in 2021.

Cocaine overdose deaths also increased significantly across all ages of non-elderly adults. Adults nearing retirement age, 55-64 years old, experienced the largest growth, at 75 percent. Those age 45-54 had the highest cocaine overdose death rate, at 14.1 deaths per 100,000 people in 2021.

Figure 4. Drug Overdose Death Rates by Age, 2021



* Rate significantly higher than 2019 rate at 95% level.
 ^ Rate significantly higher than total rate at 95% level.
 ∇ Rate significantly lower than total rate at 95% level.
 Source: SHADAC analysis of National Vital Statistics System (NVSS) data.

Overdoses by race and ethnicity

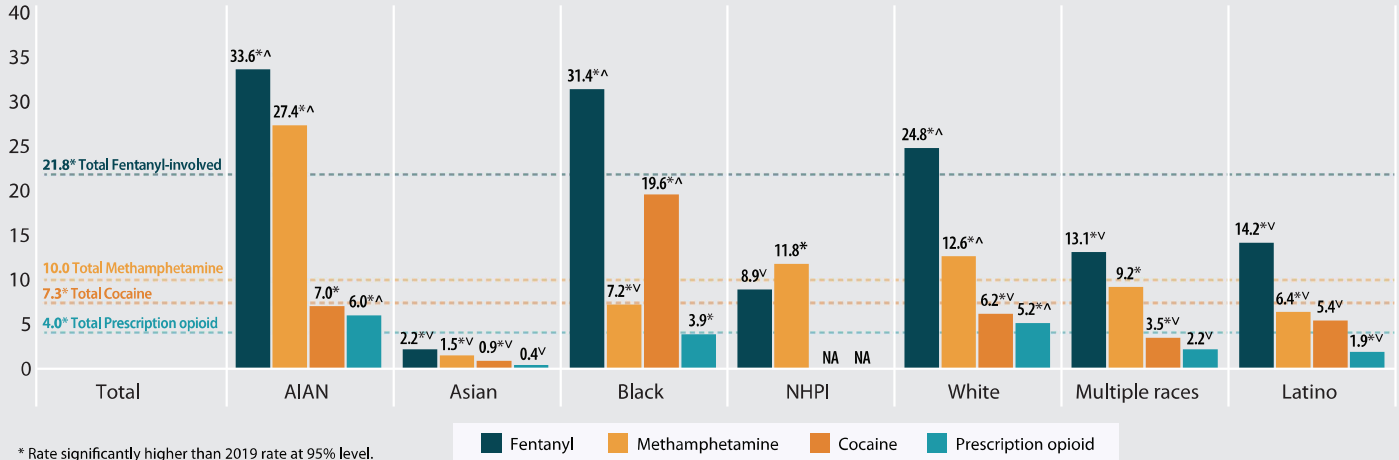
Between 2019 and 2021, fentanyl overdose death rates increased significantly across all racial and ethnic groups we were able to test.¹³ American Indian and Alaska Native people experienced the largest growth in fentanyl overdose death rates, at 212 percent (10.8 to 33.6 deaths per 100,000 people) (Figure 5). At 33.6 deaths per 100,000 people, American Indian and Alaska Native people also had the highest fentanyl overdose death rate in 2021.

Prescription opioid overdose deaths increased significantly across all racial and ethnic groups we were able to test. American Indian and Alaska Native people experienced the largest growth in prescription opioid overdose death rates, at 40 percent (4.3 to 6.0 deaths per 100,000 people). At 6.0 deaths per 100,000 people, American Indian and Alaska Native people also had the highest prescription opioid overdose death rate in 2021.

Methamphetamine overdose death rates increased significantly across all racial and ethnic groups. Black people experienced the largest growth in methamphetamine overdose death rates, at 146 percent (2.9 to 7.2 deaths per 100,000 people). American Indian and Alaska Native people had the highest methamphetamine overdose death rate in 2021, at 27.4 deaths per 100,000 people.

Cocaine overdose deaths also increased significantly across all racial and ethnic groups we were able to test. American Indian and Alaska Native people and Black people experienced the largest growth in cocaine overdose death rates, at 81 percent (3.9 to 7.0 deaths per 100,000 people and 10.8 to 19.6 deaths per 100,000 people, respectively). At 19.6 deaths per 100,000 people, Black people had the highest cocaine overdose death rate in 2021.

Figure 5. Drug Overdose Death Rates by Race and Ethnicity, 2021

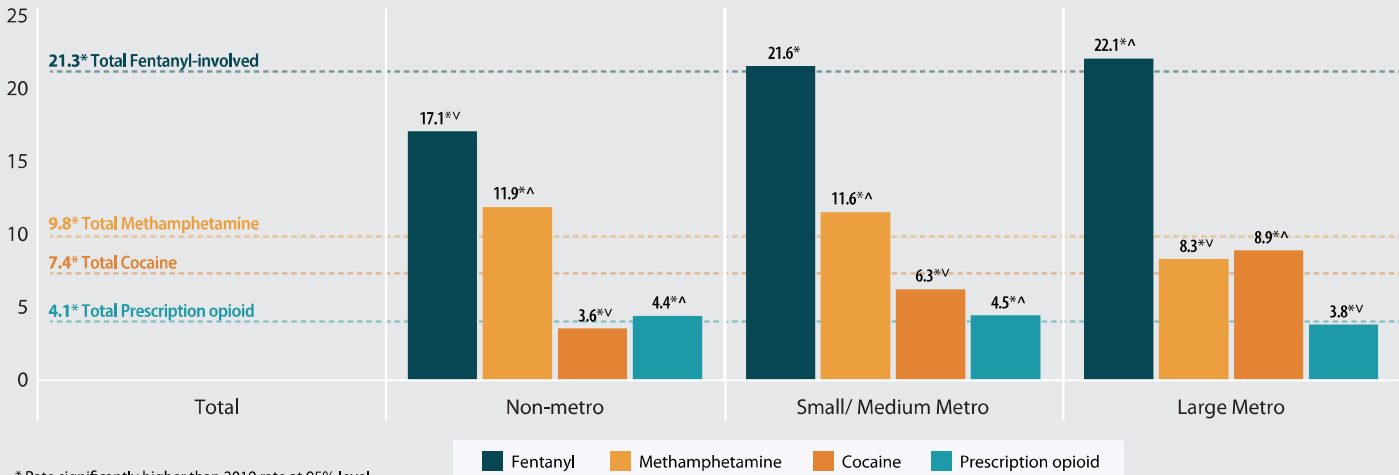


* Rate significantly higher than 2019 rate at 95% level.
 ^ Rate significantly higher than total rate at 95% level.
 v Rate significantly lower than total rate at 95% level.
 AIAN: American Indian or Alaska Native. NHPI: Native Hawaiian or Pacific Islander.
 Source: SHADAC analysis of National Vital Statistics System (NVSS) data.

Overdoses by urbanization

Overdose death rates increased significantly across all levels of urbanization for all substances we studied. Fentanyl overdose death rates grew the most for non-metro areas, at 136 percent (7.2 to 17.1 deaths per 100,000 people); but large metro areas had the highest fentanyl overdose death rate in 2021, at 22.1 deaths per 100,000 people (Figure 6). Prescription opioid overdose death rates grew the most for non-metro areas, at 27 percent (3.5 to 4.4 deaths per 100,000 people); but small and medium metro areas had the highest rate of prescription opioid overdose deaths in 2021, at 4.5 deaths per 100,000 people. Methamphetamine overdose death rates grew the most for small and medium metro areas, at 104 percent (5.7 to 11.6 deaths per 100,000 people); but non-metro areas had the highest rate of methamphetamine deaths in 2021, at 11.9 deaths per 100,000 people. Cocaine overdose death rates increased most for non-metro areas, at 62 percent (2.2 to 3.6 deaths per 100,000 people); but large metro areas had the highest cocaine overdose death rate in 2021, at 8.9 deaths per 100,000 people.

Figure 6. Drug Overdose Death Rates by Urbanization, 2021



* Rate significantly higher than 2019 rate at 95% level.
 ^ Rate significantly higher than total rate at 95% level.
 v Rate significantly lower than total rate at 95% level.
 Source: SHADAC analysis of National Vital Statistics System (NVSS) data.

Overdoses across the states

Fentanyl

During the first two years of the pandemic, from 2019 to 2021, 43 states and the District of Columbia experienced statistically significant increases in their fentanyl overdose death rates (Appendix A). Only four states did not experience significant changes (Delaware, New Hampshire, New Jersey, and South Dakota). No states saw significant declines.¹⁴

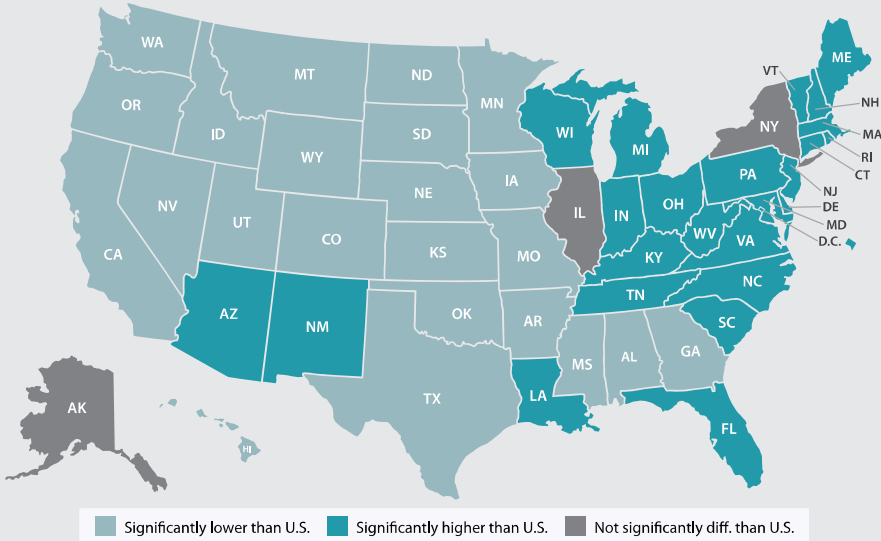
Across the states, fentanyl overdose death rates ranged from a low of 3.7 deaths per 100,000 people in Hawaii to a high of 73.5 deaths per 100,000 people in West Virginia—a difference of roughly 20 times (Figure 7).

Figure 7. Highest and Lowest State Fentanyl Overdose Death Rates per 100,000 people, 2021

Five highest rates	
West Virginia	73.5
Dist. of Columbia	46.3
Delaware	44.0
Tennessee	42.1
Kentucky	41.0
Five lowest rates	
Hawaii	3.7
South Dakota	4.1
Nebraska	4.9
Texas, Utah	6.3
Montana, Iowa	7.1

Source: SHADAC analysis of National Vital Statistics System (NVSS) data.

Figure 8. State vs U.S. Fentanyl Overdose Death Rates, 2021



Source: SHADAC analysis of National Vital Statistics System (NVSS) data.

Prescription opioids

From 2019 to 2021, 21 states experienced statistically significant increases in their prescription opioid overdose death rates. Only three states experienced statistically significant declines (Florida, Maryland, and Utah). The remaining 26 states and the District of Columbia did not experience significant changes.

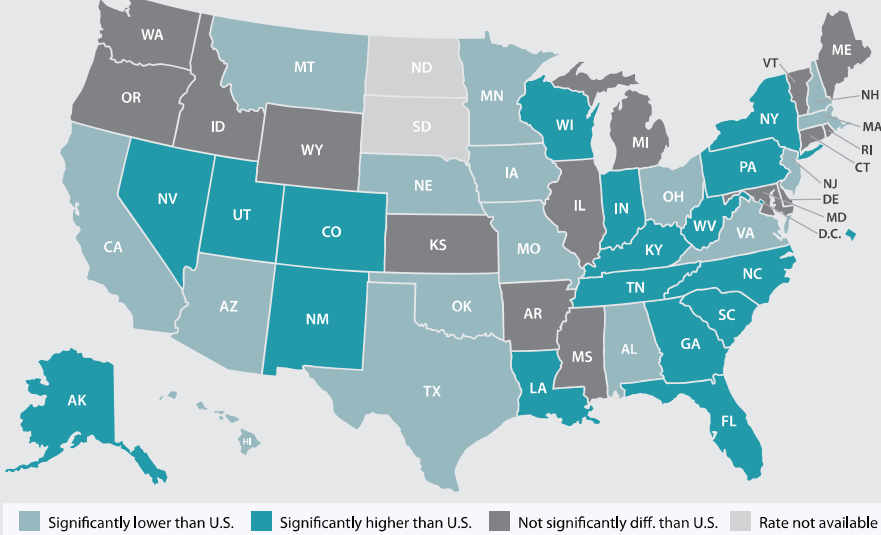
Across the states, prescription opioid death rates ranged from a low of 1.8 deaths per 100,000 people in Hawaii to a high of 12.2 deaths per 100,000 people in West Virginia—a difference of about 10 times (Figure 9).

Figure 9. Highest and Lowest State Prescription Opioid Overdose Death Rates, 2021

Five highest rates	
West Virginia	12.2
Alaska	9.7
Kentucky	8.9
Tennessee	8.6
South Carolina	7.3
Five lowest rates	
Hawaii	1.8
Nebraska	2.0
Iowa, Texas	2.1
California	2.4
New Hampshire	2.6

Source: SHADAC analysis of National Vital Statistics System (NVSS) data.

Figure 10. State vs U.S. Prescription Opioid Overdose Death Rates, 2021



Source: SHADAC analysis of National Vital Statistics System (NVSS) data.

Methamphetamine

From 2019 to 2021, 44 states experienced statistically significant increases in their methamphetamine overdose death rates. Only five states (Connecticut, Hawaii, Nebraska, New Hampshire, and Wyoming) did not experience significant changes. No states saw significant declines.

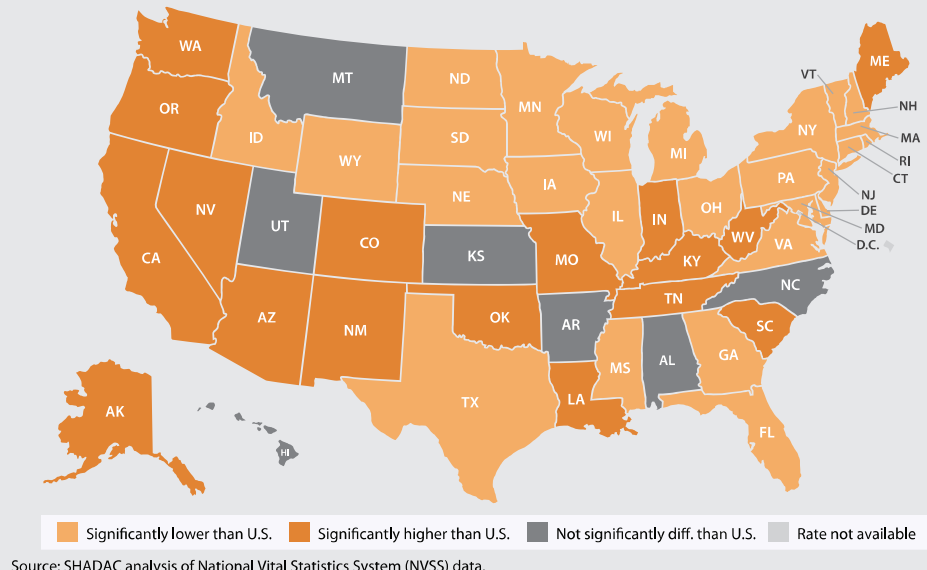
Across the states, prescription opioid death rates ranged from a low of 2.3 deaths per 100,000 people in Maryland to a high of 49.9 deaths per 100,000 people in West Virginia—a difference of approximately 20 times (Figure 11).

Figure 11: Highest and Lowest State Methamphetamine Overdose Death Rates, 2021

Five highest rates	
West Virginia	49.9
New Mexico	26.3
Kentucky	25.0
Tennessee	23.3
Alaska	22.8
Five lowest rates	
Maryland	2.3
Connecticut	2.6
New York	3.2
Nebraska	3.3
Massachusetts	3.4

Source: SHADAC analysis of National Vital Statistics System (NVSS) data.

Figure 12. State vs U.S. Methamphetamine Overdose Death Rates, 2021



Cocaine

From 2019 to 2021, 37 states experienced statistically significant increases in their cocaine overdose death rates. Only one state (New Hampshire) experienced a significant decline. Five states (Delaware, Iowa, Oklahoma, Utah, and West Virginia) saw no significant changes.

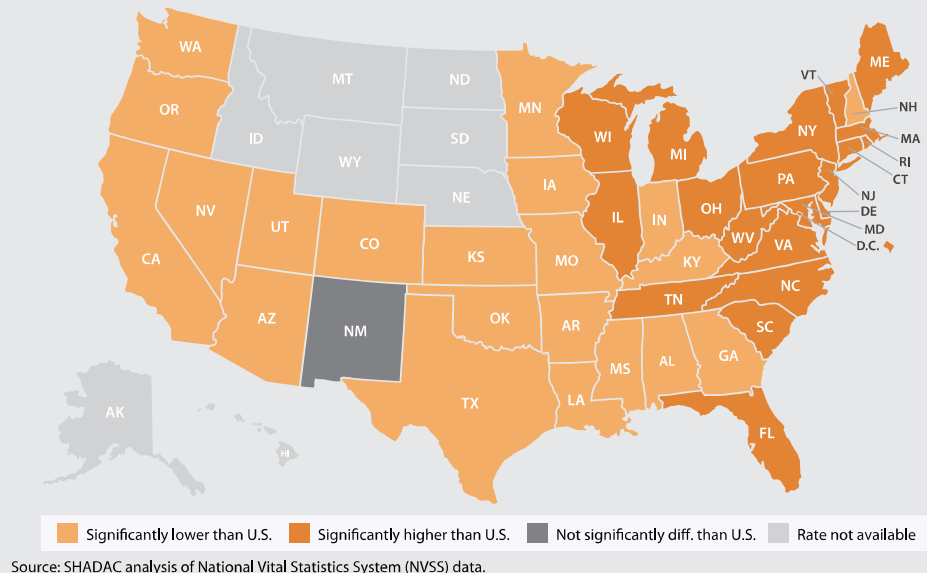
Across the states, cocaine overdose death rates ranged from a low of 1.1 deaths per 100,000 people in Iowa to a high of 32.1 deaths per 100,000 people in the District of Columbia—a difference of about 30 times (Figure 13).

Figure 13. Highest and Lowest State Cocaine Overdose Death Rates, 2021

Five highest rates	
Dist. of Columbia	32.1
Rhode Island	20.3
Delaware	20.1
Vermont	17.3
Massachusetts	16.6
Five lowest rates	
Iowa	1.1
Oklahoma	1.4
Utah	1.5
Oregon, Arkansas	2.2
Kansas	2.5

Source: SHADAC analysis of National Vital Statistics System (NVSS) data.

Figure 14. State vs U.S. Cocaine Overdose Death Rates, 2021



CONCLUSION AND DISCUSSION

The opioid crisis has been a growing and evolving threat in the United States since the 1990s. But despite enhanced focus on the issue by the American public, news media, and policymakers over the past decade, the situation has only grown worse. In 2021, the U.S. marked a macabre milestone that no one hoped to see, with drug overdose deaths exceeding 100,000 lives in a single year. That astronomical death toll wasn't an aberration, though. Instead, it represents a culmination of continual growth in drug overdose deaths, as well as the consequences of inadequate, ineffective, and sometimes counterproductive policy strategies to combat the threat.

The U.S. playbook for responding to the current crisis still centers on decades-old approaches that failed to prevent previous drug crises and arguably contributed additional harm, leaning heavily on law enforcement while underinvesting in addiction prevention and treatment. Compounding that problem, the U.S. has been painfully slow to make even relatively small changes in policy with the potential to save lives. It also wasn't until 2023—a quarter-century into the opioid crisis—when the U.S. Congress finally ended the “X-waiver,” a federal policy that placed onerous restrictions and requirements on health care providers that discouraged them from offering evidence-based medication for treatment of opioid use disorder. Restrictions such as those are widely understood to pose a major barrier preventing people experiencing opioid use disorder from accessing treatment.

While the rise of fentanyl has become a national focus, that spotlight has yet to yield effective or innovative strategies to curb the crisis in deep or lasting ways. For instance, some advocates have pressed for supervised injection sites, such as those found in other countries, where people may use fentanyl and other illicit substances under the watchful eye of health care professionals who can monitor and treat people for overdoses. But those efforts have faced serious roadblocks, such as a prohibition on supervised drug use sites at the federal level, as well as resistance in state governments.^{15,16} As we presented in this brief, fentanyl overdose deaths nearly doubled in the two years between 2019 and 2021. Additionally, it has infiltrated other aspects of the illicit drug supply so pervasively that fentanyl was involved in most prescription opioid, methamphetamine, and cocaine overdose deaths, as well.

Examining drug overdose death rates across demographic subpopulations yields information that can be used to better understand the dynamics of the crisis and devise better interventions. Data by age categories on overdose deaths across drug types demonstrate how the crisis affects all working-age adults, from young adults to those nearing retirement age. But contrary to popular imagination, data show that young adults experimenting with drugs aren't driving the death rates, which are consistently highest among those age 25 to 54. The data illustrate differences across racial and ethnic groups, such as how the fentanyl toll is particularly high among American Indian and Alaska Native people, Black people, and White people; the methamphetamine toll highest among American Indian and Alaska Native people and White people; and the cocaine toll highest among Black people. And they show how, with minor variation by drug type, the overdose crisis is a serious problem across community sizes—limited neither to cities nor rural areas.

At the state level, drug overdose deaths data also point to certain hot spots in the opioid crisis. For instance, West Virginia had the highest overdose death rate for fentanyl, prescription opioids, and methamphetamine in 2021, and Kentucky and Tennessee were also among those with the highest rates for each of those drug categories. Those patterns illustrate the destructive grip the opioid crisis has held on the Appalachian region since it emerged as both the epicenter and a bellwether. We should be concerned by the stunning rates of drug overdose deaths in Appalachia, both for what it means for the people suffering in the region and for what it portends for the rest of the U.S. if we fail to change directions.

The data we presented on overdose deaths, as well as provisional CDC data showing these problems persisted into 2022 and 2023, are evidence that the U.S. approach to treating the opioid crisis and has been so far unsuccessful. They also demonstrate how policymakers must view the crisis differently than they did in 2011. The driver of today's opioid crisis is fentanyl, but it has become an insidious threat that has branched off in unpredictable directions. Now we need to address the serious and growing danger posed by cocaine and methamphetamine, and we need to develop better systems for public health surveillance to identify emerging concerns, such as the drug xylazine, before they become crises of their own.¹⁷ As the U.S. looks for solutions to the new opioid crisis landscape, it would be wise to take a layered approach that addresses multiple facets of the problem, rather than attempt to address different aspects in isolation.¹⁸ Otherwise, the current approach to the opioid crisis may continue to play out like the hydra of Greek mythology, with two new threats for each one we attempt to vanquish.

References

- ¹ Centers for Disease Control and Prevention (CDC). (2011, November 1). *Prescription painkiller overdoses at epidemic levels*. https://www.cdc.gov/media/releases/2011/p1101_flu_pain_killer_overdose.html
- ² National Center for Health Statistics (NCHS). (2022, May 11). *U.S. Overdose Deaths In 2021 Increased Half as Much as in 2020 – But Are Still Up 15%*. Centers for Disease Control and Prevention (CDC). https://www.cdc.gov/nchs/pressroom/nchs_press_releases/2022/202205.htm
- ³ Spencer, M.R., Warner, M., Cisewski, J.A., Miniño, A., Dodds, D., Perera, J., & Ahmad, F.B. (May 2023). *Estimates of Drug Overdose Deaths Involving Fentanyl, Methamphetamine, Cocaine, Heroin, and Oxycodone: United States, 2021* (NVSS Rapid Release Report No.27). National Center for Health Statistics (NCHS). <https://www.cdc.gov/nchs/data/vsrr/vsrr027.pdf>
- ⁴ Planalp, C., Hest, R., & Lahr, M. (June 2019). *The Opioid Epidemic: National Trends in Opioid-Related Overdose Deaths from 2000 to 2017*. State Health Access Data Assistance Center (SHADAC). <https://www.shadac.org/sites/default/files/publications/2019%20NATIONAL%20opioid%20brief%20FINAL%20VERSION.pdf>
- ⁵ While we have presented data on heroin overdose deaths in prior research, this issue brief does not include a focus on them, as heroin deaths have become a waning public threat. After peaking in 2016, heroin overdose death rates have declined through 2021, and CDC provisional data indicate they continued to decline into 2023. One way to think of heroin is that is served as a trigger that precipitated the much-larger fentanyl crisis.
- ⁶ Planalp, C., Hest, R. (August 2020). *Overdose Crisis in Transition: Changing National Trends in a Widening Drug Death Epidemic*. State Health Access Data Assistance Center (SHADAC). https://www.shadac.org/sites/default/files/publications/2020%20NATIONAL_SHADAC_Opioid-brief.pdf
- ⁷ Ahmad, F.B., Cisewski, J.A., Rossen, L.M., & Sutton, P. (2023, August 16). *Provisional drug overdose death counts* [Data set]. National Center for Health Statistics (NCHS). <https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm>
- ⁸ Pitt, A.L., Humphreys, K., & Brandeau, M.L. (2018). Modeling Health Benefits and Harms of Public Policy Responses to the US Opioid Epidemic. *American Journal of Public Health*, 108(10), 1394-1400. <https://ajph.aphapublications.org/doi/pdfplus/10.2105/AJPH.2018.304590>
- ⁹ Drug Enforcement Administration (DEA). (March 2021). *2020 National Drug Threat Assessment* (DEA PRB 01-12-21-43). U.S. Department of Justice. https://www.dea.gov/sites/default/files/2021-02/DIR-008-21%202020%20National%20Drug%20Threat%20Assessment_WEB.pdf
- ¹⁰ Wedenoja, L. (2020, July 28). The Second Wave of the Methamphetamine Epidemic. *Epidemic in a Pandemic*, Rockefeller Institute of Government. <https://rockinst.org/blog/the-second-wave-of-the-methamphetamine-epidemic/>
- ¹¹ Overdose death rates in most of the report are based on data that are age-adjusted by the CDC, and they may not match the rates that are not age-adjusted in the sections on differences across age and urbanization categories.
- ¹² For this study, we did not examine overdose death rates specifically for children or elderly adults, but they are included in the total overdose death rates.
- ¹³ For this study, we were unable to test for statistical significance in overdose death rates for fentanyl, cocaine, and prescription opioids among Native Hawaiian and Pacific Islander adults because 2019 data were suppressed by the CDC due to low numbers of occurrences.
- ¹⁴ For each substance, there were some states which we were unable to test for statistically significant changes in overdose death rates because data were suppressed by the CDC due to low numbers of occurrences.
- ¹⁵ Feldman, N. (2021, January 12). Federal appeals court rules Safehouse supervised injection site would be illegal. *WHYY*. <https://whyy.org/articles/federal-appeals-court-rules-safehouse-supervised-injection-site-would-be-illegal/>
- ¹⁶ Cowan, J. (2022, August 22). Governor Newsom Vetoes Bill for Drug-Injection Sites in California. *The New York Times*. <https://www.nytimes.com/2022/08/22/us/gavin-newsom-vetoes-drug-injection-sites.html>
- ¹⁷ Kariisa, M., O'Donnell, J., Kumar, S., Mattson, C.L., & Goldberger, B.A. (2023). Illicitly Manufactured Fentanyl–Involved Overdose Deaths with Detected Xylazine — United States, January 2019–June 2022. *MMWR*, 72(26), 721-727. <https://www.cdc.gov/mmwr/volumes/72/wr/mm7226a4.htm>
- ¹⁸ Stein, B.D., Kilmer, B., Taylor, J., & Vaiana, M.E. (2023). *America's Opioid Ecosystem: How Leveraging System Interactions Can Help Curb Addiction, Overdose, and Other Harms*. RAND Corporation. https://www.rand.org/pubs/research_reports/RRA604-1.html