

Rising Stimulant Drug Deaths Started Long Before Pandemic

— Mortality stems mainly from illicit drugs, often combined with opioids

by [Judy George](#), Senior Staff Writer, MedPage Today February 1, 2021



Cocaine-, methamphetamine-, and amphetamine-involved death rates doubled about every 4 years since 2010, an analysis of death certificates showed.

The mortality rate involving all stimulants, medical and illicit, rose from 2.913 deaths per 100,000 population in 2010 to 9.690 in 2017, reported Joshua Black, PhD, of Denver Health's Rocky Mountain Poison and Drug Safety division in Colorado, and co-authors.

Mortality rates increased for methamphetamine (annual rate ratio 1.278, 95% CI 1.261-1.295), cocaine (ARR 1.234, 95% CI 1.222-1.245), and amphetamine (ARR 1.118, 95% CI 1.082-1.155), they wrote in a *JAMA Internal Medicine* research letter.

"The drug overdose crisis in the U.S. continues, and mortality involving psychoactive stimulant drugs is rising," Black said.

Not only are certain stimulants more frequently involved in deaths, but concomitant use with opioids, benzodiazepines, and antidepressants was common, he noted. "Polysubstance use complicates treatment for substance use disorder, which has consequences on what tools can be used to combat the crisis," he told *MedPage Today*.

The findings come on the heels of a [CDC Health Alert Network advisory](#) about rising overdose deaths that appeared to spike during the COVID-19 pandemic. The advisory showed that, in the 12-month period ending May 2020, cocaine-related overdose deaths increased by 26.5% and were likely connected to using cocaine with illicitly manufactured fentanyl or heroin. Overdose deaths involving stimulants like methamphetamine climbed faster than deaths involving cocaine, consistent with methamphetamine growth in the illicit drug supply and increases in treatment admissions, the CDC said.

In their analysis, Black and co-authors used the [Drug Involved Mortality](#) database from the National Center for Health Statistics, which included drug-related terms mentioned on death certificates for every death in the U.S. from 2010 to 2017. They looked at mortality rates for three groups: all stimulants, illicit stimulants (like cocaine), and medical stimulants (like methylphenidate).

About one in 10 deaths involving drugs had stimulants listed on the death certificate (130,560 of 1,220,143 deaths, or 10.7%). Of these, 71.8% of decedents were men, 75.5% were white, and median age was 45.

A total of 120,803 death certificates (92.5%) named illicit stimulants only, 5,444 (4.2%) listed medical stimulants only, and 3,524 (2.7%) showed both. The majority of illicit stimulant deaths (61.9%) involved cocaine; 39.9% involved methamphetamine. Among medical stimulants, 90.9% involved amphetamine, 0.3% involved methylphenidate, and 0.7% involved pseudoephedrine.

About 43% of all stimulant-related deaths also involved opioids, 10% involved concomitant benzodiazepines, and 4% involved antidepressants.

There currently are no medications approved to treat stimulant use disorder, nor a reversal agent for stimulant-induced overdose, Black and co-authors noted.

"Opioid-involved mortality in 2000 [had a similar rate](#) (approximately 3 deaths per 100,000 population) and rose more slowly than our results have shown for stimulant-involved mortality," the researchers pointed out. "A notable difference is that stimulant-involved mortality predominantly stems from illicit drugs. These results should be a call to address stimulant-associated use before mortality reaches epidemic levels."

The study has limitations, they acknowledged. Amphetamine is in the metabolic pathway of other stimulants, which may have produced misclassification. In addition, changes in accuracy of identifying substances over time are unknown.