



‘Fourth Wave’ of Opioid Epidemic Crashes Ashore, Propelled by Fentanyl and Meth

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The United States is knee-deep in what some experts call the opioid epidemic’s “fourth wave,” which is not only placing drug users at greater risk but is also complicating efforts to address the nation’s drug problem.

These waves, according to a [report out today](#) [February 21] from Millennium Health, began with the crisis in prescription opioid use, followed by a significant jump in heroin use, then an increase in the use of synthetic opioids like fentanyl.

The latest wave involves using multiple substances at the same time, combining fentanyl mainly with either methamphetamine or cocaine, the report found. “And I’ve yet to see a peak,” said one of the co-authors, [Eric Dawson](#), vice president of clinical affairs at [Millennium Health](#), a specialty laboratory that provides drug testing services to monitor use of prescription medications and illicit drugs.

The report, which takes a deep dive into the nation’s drug trends and breaks usage patterns down by region, is based on 4.1 million urine samples collected from January 2013 to December 2023 from people receiving some kind of drug addiction care.

Its findings offer staggering statistics and insights. Its major finding: how common polysubstance use has become. According to the report, an overwhelming majority of fentanyl-positive urine samples — nearly 93% — contained additional substances. “And that is huge,” said [Nora Volkow](#), director of the National Institute on Drug Abuse at the National Institutes of Health.

The most concerning, she and other addiction experts said, is the dramatic increase in the combination of meth and fentanyl use. Methamphetamine, a [highly addictive drug](#) often in powder form that poses several serious cardiovascular and psychiatric risks, was found in 60% of fentanyl-positive tests last year. That is an 875% increase since 2015.

“I never, ever would have thought this,” Volkow said.

Among the report’s other key findings:

- The nationwide spike in methamphetamine use alongside fentanyl marks a change in drug use patterns.
- Polydrug use trends complicate overdose treatments. For instance, though naloxone, [an opioid-overdose reversal medication](#), is widely available, there isn’t an FDA-approved medication for stimulant overdose.
- Both heroin and prescribed opioid use alongside fentanyl have dipped. Heroin detected in fentanyl-positive tests dropped by 75% since peaking in 2016. Prescription opioids were found at historic low rates in fentanyl-positive tests in 2023, down 89% since 2013.

But [Jarratt Pytell](#), an addiction medicine specialist and assistant professor at the University of Colorado’s School of Medicine, warned these declines shouldn’t be interpreted as a silver lining.

A lower level of heroin use “just says that fentanyl is everywhere,” Pytell said, “and that we have officially been pushed by our drug supply to the most dangerous opioids that we have available right now.”

“Whenever a drug network is destabilizing and the product changes, it puts the people who use the drugs at the greatest risk,” he said. “That same bag or pill that they have been buying for the last several months now is coming from a different place, a different supplier, and is possibly a different potency.”

In the illicit drug industry, suppliers are the controllers. It may not be that people are seeking out methamphetamine and fentanyl but rather that they’re what drug suppliers have found to be the easiest and most lucrative product to sell.

“I think drug cartels are kind of realizing that it’s a lot easier to have a 500-square-foot lab than it is to have 500 acres of whatever it takes to grow cocaine,” Pytell said.

Dawson said the report’s drug use data, unlike that of some other studies, is based on sample analysis with a quick turnaround — a day or two.

Sometimes researchers face a months-long wait to receive death reports from coroners. Under those circumstances, you are often “staring at today but relying on data sources that are a year or more in the past,” said Dawson.

Self-reported surveys of drug users, another method often used to track drug use, also have long lag times and “often miss people who are active for substance use disorders,” said Jonathan Caulkins, a professor at Carnegie Mellon University’s Heinz College. Urine tests “are based on a biology standard” and are good at detecting when someone has been using two or more drugs, he said.

But using data from urine samples also comes with limitations.

For starters, the tests don’t reveal users’ intent.

“You don’t know whether or not there was one bag of powder that had both fentanyl and meth in it, or whether there were two bags of powder, one with fentanyl in it and one with meth and they took both,” Caulkins said. It can also be unclear, he said, if people intentionally combined the two drugs for an extra high or if they thought they were using only one, not knowing it contained the other.

Volkow said she is interested in learning more about the demographics of polysubstance drug users. “Is this pattern the same for men and women, and is this pattern the same for middle-age or younger people? Because again, having a better understanding of the characteristics allows you to tailor and personalize interventions.”

All the while, the nation’s crisis continues. According to the Centers for Disease Control and Prevention, more than [107,000 people died](#) in the U.S. in 2021 from drug overdoses, most because of fentanyl.

Caulkins said he’s hesitant to view drug use patterns as waves because that would imply people are transitioning from one to the next.

“Are we looking at people whose first substance use disorder was an opioid use disorder, who have now gotten to the point where they’re polydrug users?” he said. Or, are people now starting substance use disorders with methamphetamine and fentanyl, he asked.

One point was clear, Dawson said: “We’re just losing too many lives.”

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