



Increase in Illicit Fentanyl Overdose Deaths

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Fentanyl, heroin, and some prescription painkillers (such as morphine and oxycodone) belong to the class of drugs known as opioids, which act on receptors in the brain important in regulating pain and emotion. Opioids have susceptibility for abuse and potential for overdose. In 2016, [more than 42,000 of the nearly 64,000 drug overdose deaths in the United States](#) involved opioids. Led by fentanyl, a synthetic opioid 50-100 times more potent than morphine, [synthetic opioids emerged as the leading cause of opioid-related overdose deaths in 2016](#). The steep increase in deaths involving fentanyl is seen as a “new chapter” in the opioid epidemic.

What Is Fentanyl?

Currently, two types of fentanyl exist: (1) pharmaceutical fentanyl used to treat pain and (2) illicit, nonpharmaceutical fentanyl used illegally as a recreational drug. [Pharmaceutical fentanyl is a Schedule II narcotic approved by the Food and Drug Administration \(FDA\) as an analgesic](#) for severe pain. While some pharmaceutical fentanyl is diverted from legitimate use, most fentanyl-related overdoses are associated with [illicit, nonpharmaceutical fentanyl](#). Illicit fentanyl is abused by itself or mixed with heroin or other drugs, [sometimes without the consumer’s knowledge](#). Illicit fentanyl comes in many chemical formulations, known as *analogues*. The availability of illicit fentanyl over the past several years has increased substantially. There has also been a rise in the amount of illicit fentanyl mixed with other drugs such as heroin and cocaine or pressed into counterfeit painkillers.

Congressional Research Service

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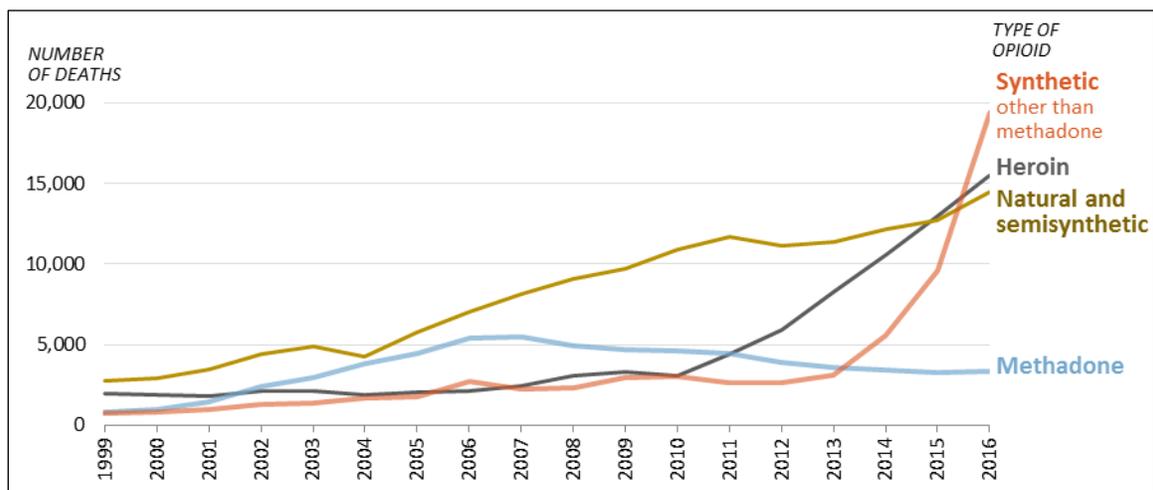
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Rise of Fentanyl Overdoses

Until 2001, overdose deaths attributed to fentanyl were relatively uncommon compared to heroin and prescription drugs. The Centers for Disease Control and Prevention (CDC) distinguishes between opioid-involved deaths by the following categories: (1) heroin, (2) natural and semisynthetic opioids (including most prescription painkillers), (3) methadone, and (4) synthetic opioids other than methadone. Deaths involving synthetic opioids other than methadone, like fentanyl, rose gradually from 2001 through 2013. Beginning in 2013, the number of deaths involving synthetic opioids rose precipitously. **Dominated by fentanyl**, deaths involving synthetic opioids increased 625% between 2013 and 2016, according to the CDC (see **Figure 1**). By 2016, synthetic opioids accounted for 19,413 deaths, surpassing heroin and prescription drugs as the number one cause of opioid-related deaths. According to a **National Center for Health Statistics (NCHS) Data Brief**, the rate of overdose deaths involving synthetic opioids increased from 1.0 per 100,000 in 2013 to 6.2 per 100,000 in 2016.

Figure 1. Opioid-Related Deaths
Number of Deaths by Type of Opioid 1999-2016



Source: CRS presentation of data from the CDC [NCHS Data Brief](#).

Notes: Deaths involving more than one opioid category are counted in both categories.

According to the CDC, the opioid epidemic is “[spreading geographically and increasing across demographic groups.](#)” In 2016, overdose deaths increased in all demographic categories, including all age groups over 15 years old, both sexes, all racial or ethnic groups, and across all levels of urbanization. In the last half of 2016, fentanyl was detected in [56.3% of opioid overdose deaths](#) in 10 states included in the CDC’s Enhanced State Opioid Overdose Surveillance program. Fentanyl is exponentially more potent, and the maximum physical effects of the drug, including respiratory depression, may occur faster than intravenous heroin. The [CDC](#) and [FDA](#) report that in many cases multiple doses of naloxone—an emergency overdose reversal medication—may be needed to revive a patient during a fentanyl overdose. **Figure 2** depicts the physical size of a lethal dose of fentanyl.

Figure 2. Size of a Lethal Dose of Fentanyl

Source: Drug Enforcement Administration Multi-Media Library: [Fentanyl](#).

Notes: Two milligrams of fentanyl—here compared to a U.S. penny—is a lethal dose for most people. Fentanyl causes respiratory depression, which can cause breathing to stop completely, resulting in death.

Availability of Fentanyl

According to the CDC, a “[substantial portion](#)” of the increase in deaths due to synthetic opioids appears to be related to the availability of illicit fentanyl. Areas reporting large increases in illicit fentanyl seizures have also reported [sharp increases](#) in fentanyl-related deaths. Fentanyl is less expensive and easier to manufacture than heroin. It is shipped in small amounts, which reduces [risks of detection](#).

[Nonpharmaceutical fentanyl is widely available](#) in the United States. It is [manufactured in China and likely Mexico](#), and commonly transported in the mail [directly from China](#) (or from China through Canada) and [smuggled](#) across the southwest border from Mexico. It is often mixed with or sold as heroin, and is increasingly available in counterfeit pills that resemble prescription opioids. The increased potency of synthetic fentanyl compounds, which when combined with heroin and other synthetic opioids are especially deadly, is extremely dangerous. Law enforcement expects that the fentanyl market will continue to expand in the future as [new fentanyl analogues](#) are created.

Policy Considerations

The rise in deaths due to fentanyl is an area of interest for Congress. Members have introduced [over 150 bills related to opioids during the 115th Congress](#).

Since [nonmedical use of prescription opioids remains the most common pathway to heroin use](#), policies curbing inappropriate prescribing may reduce further addictions and illicit opioid use; however, restricting access to prescription opioids may result in those already dependent on opioids pursuing illicit forms, including fentanyl. Preventing further addiction by regulating prescribing practices, while also ensuring that individuals with dependency issues do not seek illicit and more fatal sources elsewhere, has been referred to as “[two major and urgent – yet partly conflicting – tasks](#).” Emphasizing one, without balancing the other, may exacerbate the problem. Some [patient advocates also warn that restricting opioid prescribing practices may deny patients helpful medications](#) for pain management. Additional options

include [improving reporting of drug overdose mortality data](#), [increasing access to naloxone](#), and improving the ability [to test for the presence of fentanyl](#) in other substances.

Another possible strategy is to reduce the availability of illicit fentanyl and other opioids by bolstering law enforcement efforts. Among [several recommendations it made in a report to Congress](#), the Government Accountability Office (GAO) proposed that U.S. Customs and Border Protection (CBP) assess the volume of illicit fentanyl at each port of entry to efficiently target resources for interdiction efforts. It further recommended that law enforcement agencies, such as the Drug Enforcement Administration, establish performance measures to assess their strategies for dealing with the illicit opioid supply. Such measures, however, may be difficult to develop, partly because the opioid threat continues to evolve and the nature of the threat varies by region.

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