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Mass. Study: Illicit Fentanyl Involved in Most Opioid Fatalities

— Most deaths occurred 'seconds to minutes' after drug use

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The highly-potent, short-acting opiate fentanyl was involved in two-thirds of roughly 200 recent opioid overdose deaths occurring within a six-month period in southeast Massachusetts, researchers report.

A joint investigation by state public health officials and the CDC highlights the growing role of the drug, especially illegally manufactured "street" fentanyl, in the opioid epidemic.

It also emphasized the rapidly fatal nature of overdose deaths involving fentanyl, and the importance of educating users about the opioid-reversing medication naloxone and making it readily available.

"Our report underscores the importance of getting naloxone into people's hands to save lives," Nicholas Somerville, MD, of the CDC's Epidemic Intelligence Service and the Massachusetts Department of Public Health, told *MedPage Today*.

Fentanyl is a synthetic opioid that is similar to morphine, but it is 50 to 100 times more potent.

Among 196 opioid overdose deaths in three counties in Massachusetts occurring from October 2014 through March 2015, 64% involved fentanyl. Just over 80% of fentanyl-related deaths involved illicitly manufactured versions of the drug, researchers reported.

The study was published online Thursday in the CDC's *Morbidity and Mortality Weekly Report*.

Opioid overdose deaths in Massachusetts overall increased by 150% from 2012 to 2015.

The investigation included deaths occurring in Barnstable, Bristol, and Plymouth counties in Massachusetts -- which all have experienced dramatic increases in opioid overdose deaths - during the six-month period.

In April of 2016, interviews were also conducted with 64 opioid users living in the three-county area who had either experienced or witnessed an opioid overdose. About half of those interviewed were men, 61% were between the ages of 25 and 44 years old, and 81% were non-Hispanic whites.

Some 95% of respondents said they witnessed an overdose during the previous six months and 42% overdosed themselves.

The interviews revealed that:

- Three-fourths who had witnessed a suspected fentanyl-related overdose described the overdose as occurring within seconds to minutes after drug use
- One-fourth reported witnessing the overdose when the fentanyl was snorted, while the remainder reported that the drug was injected alone or with heroin
- Three-fourths reported witnessing naloxone administration, administering naloxone themselves, or receiving naloxone to reverse their own opioid or fentanyl overdose
- 83% said two or more naloxone doses were administered for a suspected overdose before the person responded

Among the 196 opioid overdose deaths, 73% were male, half were younger than age 35, and 91% occurred among non-Hispanic whites.

Just 4% of fentanyl-related deaths appeared to involve prescription fentanyl, and 14% involved an unknown source.

Another important finding: when fatal overdoses occurred, three-fourths of the victims were alone or "spatially separated" from bystanders who could have administered naloxone.

The researchers concluded that a comprehensive public health response is needed to address the increasing problem of illicitly manufactured fentanyl.

"First, fentanyl should be included on standard toxicology screens to facilitate early identification," they wrote.

In addition, harm reduction education aimed at users and their contacts should highlight the importance of direct observation of anyone injecting or snorting illicit opioids, training in naloxone use and having naloxone available.

"The high percentage of fatal overdoses occurring at home with no naloxone present, coupled with the rapid onset of overdose symptoms after using fentanyl through injection or insufflation, underscores the urgent need to expand initiatives to link persons at high risk for overdose to harm reduction services and evidence-based treatments," they wrote.

Primary Source

CDC Morbidity and Mortality Weekly Report

Source Reference: [Somervill NJ, et al. "Characteristics of fentanyl overdose - Massachusetts, 2014-2016" MMWR 2017, April 14: 66\(14\): 382-386.](#)