

National Center for Injury Prevention and Control 

**Characteristics of Opioid Deaths with Evidence of Rapid Overdose, 11 States, July 2016-June 2017**

Presenter: Mbabazi Kariisa, PhD, MPH  
Co-authors: Julie O'Donnell, PhD, Christine Mattson, PhD, Pujja Seth, PhD

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**Learning Objectives**

- Describe the burden of opioid deaths with evidence of rapid overdose
- Describe the characteristics associated with opioid deaths with evidence of rapid overdose

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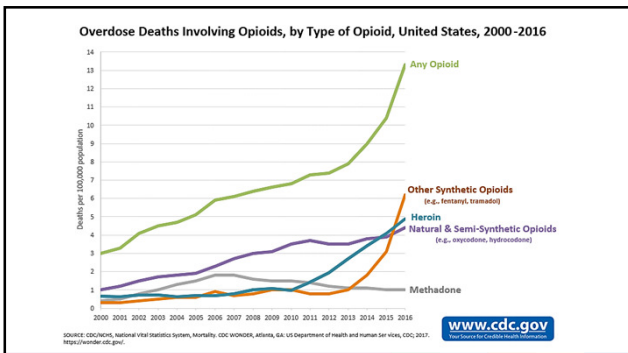
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**Opioid Deaths with Evidence of Rapid Overdose**

- Increased use of more potent opioids, such as fentanyl and fentanyl analogs, can lead to increased risk of overdose soon after ingestion
- 'Rapid overdoses' occur within 5 to 10 minutes of drug use
- Symptoms include slower heart rate, shallow breathing, severe sleepiness
- Identification of rapid overdoses can be challenging using death certificate data

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**Enhanced State Opioid Overdose Surveillance (ESOOS)**

Nonfatal opioid overdoses

Fatal opioid overdoses

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**Enhanced State Opioid Overdose Surveillance (ESOOS)**

Nonfatal opioid overdoses

**SUDORS**

**Fatal opioid overdoses**

Death certificates

Medical examiner/coroner reports

Toxicology reports

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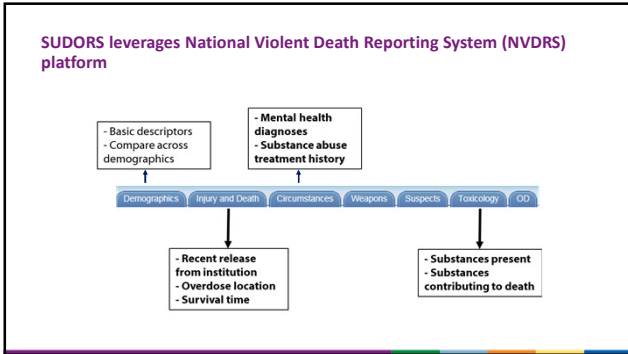
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**Overdose-specific fields**

Scene Indications of Drug Use

Any evidence of drug use       Evidence of rapid overdose

No evidence of drug use       Tourniquet around arm

Needle location:       Witness report rapid overdose:

Other - Explain:

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**Mock Case Narrative**

- The decedent (D) was a black, male, aged 38 years old. D was found by his wife upon returning home. She found D **unresponsive on the floor with a needle in his arm**. D had multiple puncture wounds on his body.
- EMS arrived and administered 5 doses of Narcan and transported D to the hospital, but he ultimately died. D had a history of obesity, hypertension, heroin use and hepatitis C. D's toxicology was positive for carfentanil and marijuana.

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Methods

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**Analysis**

- Restricted to 11 states (Kentucky, Maine, Massachusetts, Missouri, New Hampshire, New Mexico, Ohio, Oklahoma, Rhode Island, West Virginia, Wisconsin)
- Reporting period from July 2016 – June 2017
- Exclude individuals under 15 years
- Rapid overdoses identified using checkbox for 'Evidence of Rapid Overdose' to indicate decedent went unresponsive within seconds to minutes after taking drugs

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Results

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**Demographic characteristics of opioid deaths with evidence of rapid overdose—July 2016–June 2017**

- 11,984 opioid-involved overdoses
- 12% (1387) of opioid overdose deaths had evidence of rapid overdose
- 85% of decedents were White, non-Hispanic
- 75% were male and 38% were between the ages of 25 and 34 (mean age of 37.9)
- Most decedents were found at home (80%)

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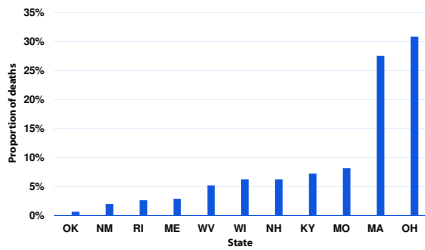
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**Proportion of opioid deaths with evidence of rapid overdose, by state—July 2016–June 2017 (n=1387)**




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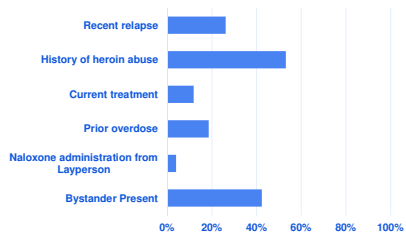
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**Characteristics of opioid deaths with evidence of rapid overdose—July 2016–June 2017 (n=1387)**




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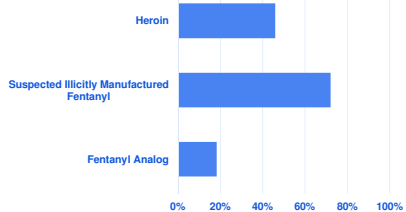
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Most common opioids contributing to deaths with evidence of rapid overdose—July 2016–June 2017 (n=1387)



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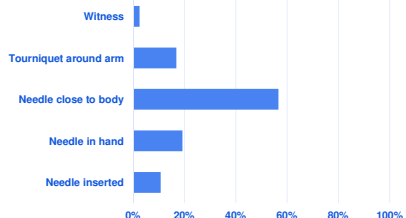
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Most common scene evidence for opioid deaths with evidence of rapid overdose—July 2016–June 2017 (n=1387)



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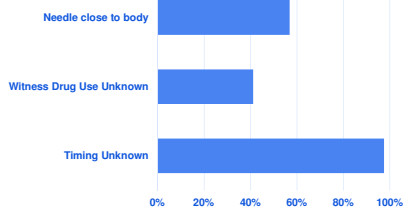
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Data limitations and challenges



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**Summary of Findings**

- 12% of opioid involved deaths had evidence of rapid overdose
- Fentanyl was listed as a cause of death for 73% of deaths
- Bystanders were present for less than half of deaths
- Naloxone was rarely administered

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**Conclusions**

- Challenges in correctly classifying some opioid deaths as rapid overdoses based on limited evidence
- Strengthen abstractor training and limit potential misclassification
- Information captured in medical examiner reports critical in identifying these deaths

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## Thank You!

[mkariisa@cdc.gov](mailto:mkariisa@cdc.gov)  
[opioidsurveillance@cdc.gov](mailto:opioidsurveillance@cdc.gov)

For more information, contact CDC  
1-800-CDC-INFO (232-4636)  
TTY: 1-888-232-6348 [www.cdc.gov](http://www.cdc.gov)

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.



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