Suspected Nonfatal Drug Overdoses During COVID-19

Archived Provisional Data Report: March through September 2020

The data report below comes from CDC’s DOSE system. The report displays total ED visits, ED visit counts for suspected overdoses, and overdose rates overall and by 42 states, including the District of Columbia, through September 2020. During the first several months of the COVID-19 pandemic, the number of total ED visits across the United States substantially declined; however, nonfatal overdoses did not decline at a similar pace.

There are several important caveats to consider when viewing the figures included in this report. During the COVID-19 pandemic, states onboarded new facilities that began sharing data; also, some facilities stopped sharing data during this period. Thus, the number of facilities was not constant over this time period. In addition, states collaborated with existing facilities to increase the proportion of ED visits that contained diagnosis codes, which facilitates the identification of overdose-related visits. Caution is warranted in interpreting counts, rates, and comparisons to previous years due to these data issues.

Data on suspected nonfatal drug overdoses presenting to emergency departments (EDs) from CDC’s Drug Overdose Surveillance and Epidemiology (DOSE) system are presented below, with a focus on total ED visits and ED visits for suspected overdoses during March through September 2020. This period was marked by a substantial decline in the number of total ED visits across the United States, at least in part because of delays in seeking care or avoiding care in EDs during the COVID-19 pandemic. However, nationwide nonfatal overdoses did not decline at a similar pace.

The figure below includes monthly data from 42 states, including the District of Columbia, sharing syndromic surveillance data with CDC’s DOSE system from January 2019 through September 2020. The data show:

- Total ED visits began declining after January 2020, reaching the lowest point in April 2020 (see gray bars). Starting in May 2020, total ED visits began increasing but remained lower than months prior to March 2020.
- During March through September 2020, compared to the previous time period, there were higher numbers of suspected overdose ED visits for all drugs (light blue line), opioids (yellow line), heroin (dark blue line), and stimulants (orange line), with peaks in the number of ED visits varying by substance.
  - Numbers of suspected all drug and opioid-involved overdoses were highest in July 2020 and gradually declined during the following months, with numbers still higher in September 2020 than before March 2020.
  - Numbers of suspected heroin- and stimulant-involved overdoses were highest in May 2020 and gradually declined during the following months, with numbers still higher in August 2020 than before March 2020.
Emergency Department (ED) Visit Totals and Suspected Nonfatal Overdose Numbers* for 42 States Sharing Syndromic Data† with CDC DOSE: January 2019-September 2020

Overdose visit numbers are not mutually exclusive but rather reflect nesting of drug categories: numbers of suspected opioid-, heroin-, and stimulant-involved overdose visits are included in the numbers of suspected all drug overdose visits; suspected heroin-involved overdose visits are included in the numbers of suspected opioid-involved overdose visits; and some overdose visits involved multiple substances (e.g., a given overdose ED visit could have involved both opioids and stimulants).

The 42 jurisdictions with data included are the District of Columbia and the following states: Alabama, Alaska, Arizona, Arkansas, Colorado, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Mississippi, Missouri, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Utah, Vermont, Virginia, Washington, Wisconsin, and West Virginia. Sums of overdose visits were aggregated from the 42 states prior to the application of data suppression rules, which are presented later in the state-specific graphics. Data from some states were not available in every month, only facilities sharing syndromic data within a state are represented in these data, and coverage varies across the states included.

*Overdose visit numbers are not mutually exclusive but rather reflect nesting of drug categories: numbers of suspected opioid-, heroin-, and stimulant-involved overdose visits are included in the numbers of suspected all drug overdose visits; suspected heroin-involved overdose visits are included in the numbers of suspected opioid-involved overdose visits; and some overdose visits involved multiple substances (e.g., a given overdose ED visit could have involved both opioids and stimulants).

†The 42 jurisdictions with data included are the District of Columbia and the following states: Alabama, Alaska, Arizona, Arkansas, Colorado, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Mississippi, Missouri, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Utah, Vermont, Virginia, Washington, Wisconsin, and West Virginia. Sums of overdose visits were aggregated from the 42 states prior to the application of data suppression rules, which are presented later in the state-specific graphics. Data from some states were not available in every month, only facilities sharing syndromic data within a state are represented in these data, and coverage varies across the states included.

Data tables for all graphics available upon request. To make a request, send an email to: dopinquiries@cdc.gov.
State-specific Suspected Nonfatal Drug Overdoses During COVID-19

State-specific data from CDC’s DOSE system are presented below (from March through September for 2019 and 2020) to indicate how overdoses changed between March 2020 and September 2020 across states and how overdoses during this time period in 2020 were similar or different during the same months in 2019. State-specific data include numbers of total ED visits, numbers of suspected drug overdose ED visits, and rates of suspected drug overdoses per 10,000 ED visits.

It is important to review state-specific numbers and rates with caution. Important caveats to consider when interpreting the data include:

1. Some data may be missing. Data sent from EDs to health departments may be delayed or may stop for a period of time. When EDs begin sharing data again, information about visits during the lapse may never be shared.

2. Reporting facilities and the data they report can change. Several states continue efforts to onboard new facilities that can begin to share data in syndromic surveillance systems, and some facilities experience periodic interruptions or a cessation of syndromic surveillance data feeds. Some of these issues became more pronounced during the earlier phase of the COVID-19 pandemic. Syndromic data also can be updated with new information over time, for example, with additional diagnosis codes. Therefore, numbers and rates reported could change over time as more facilities began sharing data or sharing higher quality data, as well as from facilities that may have stopped sharing data for a period of time. Some states had increases in the number of EDs reporting data during March through September 2020, in part because data from some of these facilities were not submitted and available to be included in any counts or rates in data from March through September 2019. Some EDs also had increases in the proportion of ED visits in syndromic data that contain diagnosis codes, which facilitate the identification of overdose-related visits.

3. Data are updated over time. The chief complaint, or the reason for the ED visit, is available in syndromic surveillance systems within 48 hours for ~70% of ED visits. However, the chief complaint field may be incomplete. ED visit data may be updated over the course of several weeks, and relevant overdose discharge diagnosis codes or revised chief complaint text may be received during this time. Therefore, rates may change over time as the visit records are completed and new drug overdose visits are identified.

4. Data should not be interpreted as exact case numbers because quality of visit information may change over time, and facility data submission may be interrupted or delayed.

5. These are suspected overdoses. Because these data are not determined by toxicological testing, they are considered “suspected overdoses,” not confirmed cases.

6. Data likely represent an undercount, given inaccuracies in coding and missing chief complaint information.

7. Rates may be difficult to interpret. Although the calculation of rates per 10,000 ED visits accounts for changes in ED facility participation in DOSE over time, these rates may be influenced by characteristics of the populations served by EDs or changes in total ED visits, which declined substantially and remained low during the early months of the COVID-19 pandemic (March through September 2020). Therefore, changes in rates in some states may not necessarily provide an indication of a substantially worsening overdose crisis in those states. Because of the substantial changes in ED visit volume following the onset of the COVID-19 pandemic, readers must interpret data cautiously, especially if trends in suspected nonfatal drug overdose per 10,000 ED visits differ from trends in numbers of suspected drug overdoses.

8. Overdose visit numbers are not mutually exclusive but rather reflect nesting of drug categories: numbers of suspected opioid-, heroin-, and stimulant-involved overdose visits are included in the numbers of suspected all drug overdose visits; suspected heroin-involved overdose visits are included in the numbers of suspected opioid-involved overdose visits; and some overdose visits involved multiple substances (e.g., a given overdose ED visit could have involved both opioids and stimulants).

Data Suppression

Both counts and rates are suppressed when overdose counts are less than 20. Data for each specific figure are displayed if at least two data points can be presented in 2020. Additionally, 2019 data were included if there were at least two data points in 2019. In addition, data for some states were not available in every month during the time presented. Data presented in the tables are suppressed for overdose counts of less than 10, and rates are suppressed when overdose counts are less than 20.
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Arkansas

Figure 1. Total ED Visits, Arkansas

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Connecticut

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Delaware

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Figure 1. Total ED Visits, Washington, D.C.

Figure 2. Total ED Visits for Overdoses, by Drug Category, Washington, D.C.

Figure 3. Rate of ED Visits for Overdoses per 10,000 ED Visits, by Drug Category, Washington, D.C.

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Georgia

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Idaho

Figure 1. Total ED Visits, Idaho

Figure 2. Total ED Visits for Overdoses, by Drug Category, Idaho

Figure 3. Rate of ED Visits for Overdoses per 10,000 ED Visits, by Drug Category, Idaho

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Illinois

Figure 1. Total ED Visits, Illinois

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Indiana

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Figure 1. Total ED Visits, Kansas

Figure 2. Total ED Visits for Overdoses, by Drug Category, Kansas

Figure 3. Rate of ED Visits for Overdoses per 10,000 ED Visits, by Drug Category, Kansas

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Figure 1. Total ED Visits, Kentucky

Count

Month

Year
- 2019
- 2020

Figure 2. Total ED Visits for Overdoses, by Drug Category, Kentucky

Figure 3. Rate of ED Visits for Overdoses per 10,000 ED Visits, by Drug Category, Kentucky

Data tables for all graphics available upon request. To make a request, send an email to: dopinquries@cdc.gov.
Figure 1. Total ED Visits, Louisiana

![Graph showing total ED visits in Louisiana by month for 2019 and 2020.]

Figure 2. Total ED Visits for Overdoses, by Drug Category, Louisiana

![Bar charts showing total ED visits for overdoses by drug category (All Drug, Heroin, Opioid, Stimulant) for 2019 and 2020.]

Figure 3. Rate of ED Visits for Overdoses per 10,000 ED Visits, by Drug Category, Louisiana

![Line graphs showing the rate of ED visits for overdoses per 10,000 ED visits by drug category (All Drug, Heroin, Opioid, Stimulant) for 2019 and 2020.]

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Maine

Figure 1. Total ED Visits, Maine

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Figure 1. Total ED Visits, Maryland

Figure 2. Total ED Visits for Overdoses, by Drug Category, Maryland

Figure 3. Rate of ED Visits for Overdoses per 10,000 ED Visits, by Drug Category, Maryland

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Massachusetts

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Michigan

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Missouri

Figure 1. Total ED Visits, Missouri

![Graph showing total ED visits in Missouri by month for 2019 and 2020, with data ranging from 0 to 250,000 visits.](image)

Year
- 2019
- 2020

Figure 2. Total ED Visits for Overdoses, by Drug Category, Missouri

![Graphs showing total ED visits for overdoses by drug category for 2019 and 2020, with data for All Drug, Heroin, Opioid, and Stimulant categories.](image)

Figure 3. Rate of ED Visits for Overdoses per 10,000 ED Visits, by Drug Category, Missouri

![Graphs showing rate of ED visits for overdoses per 10,000 ED visits by drug category for 2019 and 2020, with data for All Drug, Heroin, Opioid, and Stimulant categories.](image)

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Montana

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New Mexico

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New York

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Figure 1. Total ED Visits, North Carolina

Figure 2. Total ED Visits for Overdoses, by Drug Category, North Carolina

Figure 3. Rate of ED Visits for Overdoses per 10,000 ED Visits, by Drug Category, North Carolina

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Ohio

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Pennsylvania Data tables for all graphics available upon request. To make a request, send an email to: dopinquiries@cdc.gov.

Figure 1. Total ED Visits, Pennsylvania

Year
- 2019
- 2020

Figure 2. Total ED Visits for Overdoses, by Drug Category, Pennsylvania

Figure 3. Rate of ED Visits for Overdoses per 10,000 ED Visits, by Drug Category, Pennsylvania
Figure 1. Total ED Visits, Rhode Island

Figure 2. Total ED Visits for Overdoses, by Drug Category, Rhode Island

Figure 3. Rate of ED Visits for Overdoses per 10,000 ED Visits, by Drug Category, Rhode Island

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Tennessee

Figure 1. Total ED Visits, Tennessee

Figure 2. Total ED Visits for Overdoses, by Drug Category, Tennessee

Figure 3. Rate of ED Visits for Overdoses per 10,000 ED Visits, by Drug Category, Tennessee

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Figure 1. Total ED Visits, Utah

Figure 2. Total ED Visits for Overdoses, by Drug Category, Utah

Figure 3. Rate of ED Visits for Overdoses per 10,000 ED Visits, by Drug Category, Utah

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Vermont

Figure 1. Total ED Visits, Vermont

![Graph showing total ED visits in Vermont by month for 2019 and 2020.](image)

Figure 2. Total ED Visits for Overdoses, by Drug Category, Vermont

![Bar graph showing total ED visits for overdoses in Vermont by month for all drugs and opioids in 2019 and 2020.](image)

Figure 3. Rate of ED Visits for Overdoses per 10,000 ED Visits, by Drug Category, Vermont

![Line graph showing rate of ED visits for overdoses per 10,000 ED visits in Vermont by month for all drugs and opioids in 2019 and 2020.](image)

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Figure 1. Total ED Visits, Washington

Figure 2. Total ED Visits for Overdoses, by Drug Category, Washington

Figure 3. Rate of ED Visits for Overdoses per 10,000 ED Visits, by Drug Category, Washington

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West Virginia

Figure 1. Total ED Visits, West Virginia

Count

Month

Year

- 2019
- 2020

Figure 2. Total ED Visits for Overdoses, by Drug Category, West Virginia

Figure 3. Rate of ED Visits for Overdoses per 10,000 ED Visits, by Drug Category, West Virginia

Data tables for all graphics available upon request. To make a request, send an email to: dopinquries@cdc.gov.
Wisconsin

Figure 1. Total ED Visits, Wisconsin

Figure 2. Total ED Visits for Overdoses, by Drug Category, Wisconsin

Figure 3. Rate of ED Visits for Overdoses per 10,000 ED Visits, by Drug Category, Wisconsin

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REFERENCE

