# Emergency Department Visits for Unintentional Drug Overdose among Virginia Residents

Quarter 1 (January - March) 2022

## Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Background</td>
<td>2</td>
</tr>
<tr>
<td>Methodology</td>
<td>2</td>
</tr>
<tr>
<td>Emergency Department Visits for All Drug Overdose among Virginia Residents</td>
<td>3</td>
</tr>
<tr>
<td>Figure 1A. Quarterly Percent Change for All Drug Overdose</td>
<td>3</td>
</tr>
<tr>
<td>Figure 1B. Rate per 10,000 ED Visits by Calendar Quarter</td>
<td>3</td>
</tr>
<tr>
<td>Figure 1C. Rate per 10,000 ED Visits by Calendar Quarter and Health Region</td>
<td>4</td>
</tr>
<tr>
<td>Figure 1D. Rate per 10,000 ED Visits by Calendar Quarter and Sex</td>
<td>4</td>
</tr>
<tr>
<td>Figure 1E. Rate per 10,000 ED Visits by Calendar Quarter and Age Group (Years)</td>
<td>5</td>
</tr>
<tr>
<td>Emergency Department Visits for Opioid or Unspecified Substance Overdose (Excluding Heroin) among Virginia Residents</td>
<td>6</td>
</tr>
<tr>
<td>Figure 2A. Quarterly Percent Change for Opioid or Unspecified Substance Overdose (Excluding Heroin)</td>
<td>6</td>
</tr>
<tr>
<td>Figure 2B. Rate per 10,000 ED Visits by Calendar Quarter</td>
<td>6</td>
</tr>
<tr>
<td>Figure 2C. Rate per 10,000 ED Visits by Calendar Quarter and Health Region</td>
<td>7</td>
</tr>
<tr>
<td>Figure 2D. Rate per 10,000 ED Visits by Calendar Quarter and Sex</td>
<td>7</td>
</tr>
<tr>
<td>Figure 2E. Rate per 10,000 ED Visits by Calendar Quarter and Age Group (Years)</td>
<td>8</td>
</tr>
<tr>
<td>Emergency Department Visits for Heroin Overdose among Virginia Residents</td>
<td>9</td>
</tr>
<tr>
<td>Figure 3A. Quarterly Percent Change for Heroin Overdose</td>
<td>9</td>
</tr>
<tr>
<td>Figure 3B. Rate per 10,000 ED Visits by Calendar Quarter</td>
<td>9</td>
</tr>
<tr>
<td>Figure 3C. Rate per 10,000 ED Visits by Calendar Quarter and Health Region</td>
<td>10</td>
</tr>
<tr>
<td>Figure 3D. Rate per 10,000 ED Visits by Calendar Quarter and Sex</td>
<td>10</td>
</tr>
<tr>
<td>Figure 3E. Rate per 10,000 ED Visits by Calendar Quarter and Age Group (Years)</td>
<td>11</td>
</tr>
<tr>
<td>Emergency Department Visits for Stimulant Overdose among Virginia Residents</td>
<td>12</td>
</tr>
<tr>
<td>Figure 4A. Quarterly Percent Change for Stimulant Overdose</td>
<td>12</td>
</tr>
<tr>
<td>Figure 4B. Rate per 10,000 ED Visits by Calendar Quarter</td>
<td>12</td>
</tr>
<tr>
<td>Figure 4C. Rate per 10,000 ED Visits by Calendar Quarter and Health Region</td>
<td>13</td>
</tr>
<tr>
<td>Figure 4D. Rate per 10,000 ED Visits for by Calendar Quarter and Sex</td>
<td>13</td>
</tr>
<tr>
<td>Figure 4E. Rate per 10,000 ED Visits by Calendar Quarter and Age Group (Years)</td>
<td>14</td>
</tr>
</tbody>
</table>
The Coronavirus Disease 2019 (COVID-19) pandemic has affected healthcare seeking behavior across Virginia. Emergency department use decreased substantially in Quarter 2 2020 and remained below pre-pandemic levels through Quarter 1 2021. Visit volume was considered below pre-pandemic levels when quarterly ED visits were less than 90% of visits that occurred during the same quarter in 2018-2019. This period was denoted with light blue shading on the graphs below. VDH urges caution when comparing ED visit rates from this period to time periods prior to Quarter 2 2020 and after Quarter 1 2021. Please note this report format differs from drug overdose reports published by VDH prior to 2021.

Background
The Virginia Department of Health (VDH) Office of Epidemiology collects and analyzes health data from emergency departments (EDs) to conduct public health surveillance. This report summarizes ED visit trends for unintentional drug overdose among Virginia residents for all drugs, opioids, heroin, and stimulants. Visits from 84 acute care hospital EDs and 22 free-standing EDs in Virginia are analyzed in this report.

VDH analyzes chief complaints and discharge diagnoses of ED visits to identify and monitor issues of public health concern. The chief complaint is a free-text field that captures the patient’s primary reason for seeking medical care as interpreted by the ED registration staff. The discharge diagnosis is a coded field using standardized values defined by the International Classification of Diseases (ICD) 9th and 10th Revision or SNOMED Clinical Terms (CT) code sets.

Methodology
ED visits are categorized into the following four unintentional drug overdose case definitions: 1) all drug overdose, 2) opioid or unspecified substance overdose (excluding heroin), 3) heroin overdose, and 4) stimulant overdose. VDH revises these case definitions based on guidance from the Centers for Disease Control and Prevention (CDC) and findings from ongoing data quality evaluations. Information on the current case definitions and case definition revisions, including historic definitions, can be found on the VDH website.


Overdose rates are presented as a rate per 10,000 ED visits in this report. This metric provides a consistent rate calculation across time when data reporting by EDs changes (increases or decreases) as compared to the rate per 100,000 population. Geography-specific ED visit counts and rates per 100,000 population are located within the Monthly and Annual Statistics Excel file on the VDH website.

This report provides regional and statewide data. Date for Virginia cities and counties are not presented in this report. Geography information for the VDH Health Regions can be found here - https://www.vdh.virginia.gov/data/vdh-geography-locator-tool/.

Please direct questions or comments to the Division of Surveillance and Investigation, Enhanced Surveillance Team: syndromic@vdh.virginia.gov
Emergency Department Visits for All Drug Overdose among Virginia Residents

Figure 1A. Quarterly Percent Change for All Drug Overdose.

Figure 1B. Rate per 10,000 ED Visits for All Drug Overdose among Virginia Residents by Calendar Quarter, 2020 - 2022.
Figure 1C. Rate per 10,000 ED Visits for All Drug Overdose among Virginia Residents by Calendar Quarter and Health Region, Most Recent 9 Quarters.

Figure 1D. Rate per 10,000 ED Visits for All Drug Overdose among Virginia Residents by Calendar Quarter and Sex, Most Recent 9 Quarters.
Figure 1E. Rate per 10,000 ED Visits for All Drug Overdose among Virginia Residents by Calendar Quarter and Age Group (Years), Most Recent 9 Quarters.

Note: Blue shading indicates quarters when overall ED volume was lower than expected due to the COVID-19 pandemic.
Emergency Department Visits for Opioid or Unspecified Substance Overdose (Excluding Heroin) among Virginia Residents

**Figure 2A.** Quarterly Percent Change for Opioid or Unspecified Substance Overdose (Excluding Heroin).

**Figure 2B.** Rate per 10,000 ED Visits for Opioid or Unspecified Substance Overdose (Excluding Heroin) among Virginia Residents by Calendar Quarter, 2020 - 2022.

---

**Figure 2A.**

- **Opioid or Unspecified Substance Overdose, Quarter 4 2021 to Quarter 1 2022**
  - Percent Change in Rate per 10,000 ED Visits
  - **Increase**
  - **Stable (change of 0 ±4%)**
  - **Decrease**

**VDH Health Region**
- Northern (↑4%)
- Northwest (↑4%)
- Central (↑13%)
- Eastern (↑10%)
- Southwest (↑4%)
- Statewide (↑5%)

**Age Group (years)**
- 0-14: 43%
- 15-19: 9%
- 20-24: 3%
- 25-34: 3%
- 35-44: 4%
- 45-54: 14%
- 55-64: 12%
- 65+: 1%

**Figure 2B.**

- **Rate per 10,000 ED Visits**
  - **2020**
  - **2021**
  - **2022**

- **Q1**
  - 2020: 30
  - 2021: 35
  - 2022: 40

- **Q2**
  - 2020: 35
  - 2021: 40
  - 2022: 45

- **Q3**
  - 2020: 40
  - 2021: 45
  - 2022: 50

- **Q4**
  - 2020: 45
  - 2021: 50
  - 2022: 55
**Figure 2C.** Rate per 10,000 ED Visits for Opioid or Unspecified Substance Overdose (Excluding Heroin) among Virginia Residents by Calendar Quarter and Health Region, Most Recent 9 Quarters.

![Graph showing rates per 10,000 ED Visits for opioid or unspecified substance overdose over time by health region.](image)

Note: Blue shading indicates quarters when overall ED volume was lower than expected due to the COVID-19 pandemic.

**Figure 2D.** Rate per 10,000 ED Visits Opioid or Unspecified Substance Overdose (Excluding Heroin) among Virginia Residents by Calendar Quarter and Sex, Most Recent 9 Quarters.

![Graph showing rates per 10,000 ED Visits for opioid or unspecified substance overdose over time by sex.](image)

Note: Blue shading indicates quarters when overall ED volume was lower than expected due to the COVID-19 pandemic.
**Figure 2E.** Rate per 10,000 ED Visits for Opioid or Unspecified Substance Overdose (Excluding Heroin) among Virginia Residents by Calendar Quarter and Age Group (Years), Most Recent 9 Quarters.

Note: Blue shading indicates quarters when overall ED volume was lower than expected due to the COVID-19 pandemic.
Emergency Department Visits for Heroin Overdose among Virginia Residents

Figure 3A. Quarterly Percent Change for Heroin Overdose.

Figure 3B. Rate per 10,000 ED Visits for Heroin Overdose among Virginia Residents by Calendar Quarter, 2020 – 2022.
Figure 3C. Rate per 10,000 ED Visits for Heroin Overdose among Virginia Residents by Calendar Quarter and Health Region, Most Recent 9 Quarters.

![Graph showing ED visits by quarter and region for Virginia residents.]

Note: Blue shading indicates quarters when overall ED volume was lower than expected due to the COVID-19 pandemic.

Figure 3D. Rate per 10,000 ED Visits for Heroin Overdose among Virginia Residents by Calendar Quarter and Sex, Most Recent 9 Quarters.

![Graph showing ED visits by quarter and sex for Virginia residents.]

Note: Blue shading indicates quarters when overall ED volume was lower than expected due to the COVID-19 pandemic.
Figure 3E. Rate per 10,000 ED Visits for Heroin Overdose among Virginia Residents by Calendar Quarter and Age Group (Years), Most Recent 9 Quarters.

Note: Blue shading indicates quarters when overall ED volume was lower than expected due to the COVID-19 pandemic.
Emergency Department Visits for Stimulant Overdose among Virginia Residents

Figure 4A. Quarterly Percent Change for Stimulant Overdose.

Figure 4B. Rate per 10,000 ED Visits for Stimulant Overdose among Virginia Residents by Calendar Quarter, 2020 – 2022.
**Figure 4C.** Rate per 10,000 ED Visits for Stimulant Overdose among Virginia Residents by Calendar Quarter and Health Region, Most Recent 9 Quarters.

Note: Blue shading indicates quarters when overall ED volume was lower than expected due to the COVID-19 pandemic.

**Figure 4D.** Rate per 10,000 ED Visits for Stimulant Overdose among Virginia Residents by Calendar Quarter and Sex, Most Recent 9 Quarters.

Note: Blue shading indicates quarters when overall ED volume was lower than expected due to the COVID-19 pandemic.
Figure 4E. Rate per 10,000 ED Visits for Stimulant Overdose among Virginia Residents by Calendar Quarter and Age Group (Years), Most Recent 9 Quarters.

Note: Blue shading indicates quarters when overall ED volume was lower than expected due to the COVID-19 pandemic.