Overdose Data and Dashboards

Annual meeting of the Consortium for Prescription Drug Abuse Prevention
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Overdose deaths mentioning fentanyl continue to increase in Colorado.

- 912 in 2021 (48% of 1,881 overdose deaths)
- 920 in 2022 (51% of 1,799 overdose deaths)

Age-adjusted death rate of overdose involving fentanyl rose and then remained high in 2022.

Rate of overdose deaths involving other substances without mention of fentanyl have remained low and stable.

Rate of ED visits for nonfatal overdoses involving synthetic opioids, including fentanyl, nearly quadrupled from 2020 to 2022.
Fentanyl overdose deaths continue to increase

Source: Colorado Vital Statistics, accessed via the overdose dashboard
Fentanyl death rates rose and remain high in 2022

Overdose death rates involving prescription opioids, psychostimulants, or cocaine without mention of fentanyl remained stable or decreased.

*without fentanyl

Source: Colorado Vital Statistics, accessed via the overdose dashboard
Enhanced overdose death surveillance

- Colorado participates in CDC’s State Unintentional Drug Overdose Reporting System.
- Data from death certificates and medical examiner/coroner reports on overdose deaths of unintentional or undetermined intent.
- To better understand the circumstances that surround overdose deaths.
- To identify specific substances causing or contributing to the death as well as emerging and polysubstance overdose trends to help inform overdose prevention and response efforts.

The figure shows age-adjusted rates for overdose deaths involving illicitly manufactured fentanyl.

Source: https://www.cdc.gov/drugoverdose/fatal/dashboard/
Enhanced overdose death surveillance

Potential opportunities for intervention in 2021, Colorado

Potential opportunities for intervention include linkage to care or life-saving actions at the time of the overdose.

- 3.8% Current treatment for substance use disorder(s)
- 8.8% Fatal drug use witnessed
- 25.3% Mental health diagnosis

51.0% Potential bystander present

68.1% of drug overdose deaths had at least one potential opportunity for intervention

Circumstance percentages are only among decedents with an available medical examiner or coroner report

Source: https://www.cdc.gov/drugoverdose/fatal/dashboard/
Rate of ED visits for nonfatal synthetic opioid overdoses quadrupled from 2020 to 2022 (dark line)

Source: CDPHE drug overdose dashboard
Regional rates* of nonfatal overdoses involving synthetic opioids

Higher in urban regions in 2021

Wide spread in 2022

*Age-adjusted rates of overdoses among Colorado residents treated and released from Colorado emergency departments from the CDPHE drug overdose dashboard
Key 2022 trends for other drugs

Fentanyl was combined with other drugs, such as cocaine and psychostimulants.

In 2022, the age-adjusted rate of psychostimulant overdoses (including meth) was 11.8 deaths per 100,000 persons, an increase from 8.9 deaths in 2019 but a slight decrease from 12.5 deaths in 2021.

The age-adjusted rate of cocaine overdoses was 4.2 deaths per 100,000 persons, slightly lower than 4.6 death per 100,000 persons in 2021.
Emerging drugs: Xylazine

- Non-opioid tranquilizer
- Produces some sedative effects as opioids
- FDA-approved for use in animals, not humans
- Makes cuts and wounds more severe
  - Necrotic tissue damage
- 4 associated deaths in 2022; 4 in 2023 to date
  - All involved fentanyl too
- CDPHE has started a coordinating work group
- CDPHE Harm Reduction Grant Fund recipients can use this funding to buy and distribute xylazine test strips

https://cdphe.colorado.gov/overdose-prevention/xylazine
Emerging drugs: Nitazenes

- a novel group of powerful illicit synthetic opioids
- created as a pain reliever nearly 60 years ago
- never approved for use in the United States
- potency of certain nitazenes exceeds fentanyl
- 10 Colorado deaths involving nitazenes (spanning mid-2021 to present)

Source of drug description: https://www.cdc.gov/mmwr/volumes/71/wr/mm7137a5.htm
Patterns of fatal overdose by demographic groups and geography
Fatal Overdose Age-Adjusted Rates by Race from 2018-2020

Key Demographic Trends 2020-2022 (Death Certificate Data)

● Race and Ethnicity Trends
  ○ Fatal opioid overdose rates by race follow a similar trend seen on the last slide.
    ■ Fatal overdose rates involving methamphetamine are higher among American Indian/Alaskan Natives in CO.

● Age Trends
  ○ The age group 25-44 years old were most prevalent in fatal overdoses for most substances.
    ■ Fatal overdose rates involving methamphetamine are higher among those 35-54 years old.
Fatal Overdose Age-Adjusted Rates in CO by Race and Substance Involved from 2020-2022

Any opioid overdose (prescription or heroin)

- White, alone: 19.1 per 100,000 population
- Black or African American, alone: 10.2 per 100,000 population
- American Indian/Alaska Native, alone: 26.7 per 100,000 population
- Asian, alone: 4.1 per 100,000 population
- Other or unknown: 21.0 per 100,000 population

Prescription opioid overdose (fully synthetic with mention of Fentanyl)

- White, alone: 12.5 per 100,000 population
- Black or African American, alone: 20.8 per 100,000 population
- American Indian/Alaska Native, alone: 16.0 per 100,000 population
- Asian, alone: 2.8 per 100,000 population
- Other or unknown: 26.7 per 100,000 population

https://cohealthviz.dphe.state.co.us/PSDVIP-MHPPUBLIC/views/DrugOverdoseDashboard/LandingPage?:showAppBanner=false&:display_count=n&:showVizHome=n&:origin=viz_share_link
Fatal Overdose Age-Adjusted Rates in CO by Race and Substance Involved from 2020-2022

Cocaine involved overdose

<table>
<thead>
<tr>
<th>Race</th>
<th>Age-adjusted rate per 100,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other or unknown</td>
<td>2.0</td>
</tr>
<tr>
<td>American Indian/Alaska Native, alone</td>
<td>1.2</td>
</tr>
<tr>
<td>Asian, alone</td>
<td>15.0</td>
</tr>
<tr>
<td>Black or African American, alone</td>
<td>3.2</td>
</tr>
<tr>
<td>Native Hawaiian or other Pacific Islanders, alone</td>
<td>3.7</td>
</tr>
<tr>
<td>Two or more races</td>
<td>15.0</td>
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<tr>
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Methamphetamine (and other psychostimulants) involved overdose

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<td>15.6</td>
</tr>
<tr>
<td>Black or African American, alone</td>
<td>8.0</td>
</tr>
<tr>
<td>Native Hawaiian or other Pacific Islanders, alone</td>
<td>7.3</td>
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<tr>
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<td>11.0</td>
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Fatal Overdose Crude Rates in CO by Age Group and Substance Involved from 2020-2022

Any opioid overdose (prescription or heroin)

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<thead>
<tr>
<th>Age group</th>
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<tr>
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<td>*</td>
</tr>
<tr>
<td>1 through 4 years</td>
<td>1.4</td>
</tr>
<tr>
<td>5 through 14 years</td>
<td>0.3</td>
</tr>
<tr>
<td>15 through 24 years</td>
<td>18.5</td>
</tr>
<tr>
<td>25 through 34 years</td>
<td>22.1</td>
</tr>
<tr>
<td>35 through 44 years</td>
<td>20.6</td>
</tr>
<tr>
<td>45 through 54 years</td>
<td>37.6</td>
</tr>
<tr>
<td>55 through 64 years</td>
<td>35.9</td>
</tr>
<tr>
<td>65 through 74 years</td>
<td>7.7</td>
</tr>
<tr>
<td>75 through 84 years</td>
<td>2.4</td>
</tr>
<tr>
<td>85 and above</td>
<td>4.3</td>
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Prescription opioid overdose (fully synthetic with mention of Fentanyl)

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Fatal Opioid Overdose Age-Adjusted Rate Map 2020-2022

Any opioid overdose (prescription or heroin)

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Fatal Fentanyl Overdose Age-Adjusted Rate Map 2020-2022

https://cohealthviz.dphe.state.co.us/IPS/DVIP-MHPPUBLIC/views/DrugOverdoseDashboard/LandingPage?showAppBanner=false&display_count=n&showVizHome=n&origin=viz_share_link
Fatal Meth Overdose Age-Adjusted Rate Map 2020-2022

Methamphetamine (and other psychostimulants) involved overdose

https://cohealthviz.dphe.state.co.us/r/PSDVIP-MHPPUBLIC/views/DrugOverdoseDashboard/LandingPage?:showAppBanner=false&display_count=n&showVizHome=n&origin=viz_share_link
Enhanced overdose death surveillance: State Unintentional Drug Overdose Reporting System (SUDORS)

State Unintentional Drug Overdose Reporting System (SUDORS)

- Developed and funded by the Centers for Disease Control and Prevention (CDC) as part of the OD2A* grant.
- Administered in 47 states and District of Columbia (Colorado funding started in 2019).
- Data collected from death certificates and coroner/medical examiner reports.
- Captures over 200 variables for overdoses of unintentional or undetermined intent.
- Collect Who, When, Where, How in order to understand the WHY.

*Overdose Data to Action grant: https://www.cdc.gov/drugoverdose/od2a/index.html
SUDORS National Dashboard: Fatal Overdose Data

https://www.cdc.gov/drugoverdose/fatal/dashboard/index.html
SUDORS National Dashboard, Colorado 2021 final data

https://www.cdc.gov/drugoverdose/fatal/dashboard/index.html
Colorado SUDORS Publications

No. 119  HealthWatch  February 2022

Colorado's State Unintentional Drug Overdose Reporting System: Overdose Deaths from July 2019 to December 2020, an 18-month summary

Prepared by: Christine Demont, MPH, Kirk Bol, MDPH

Introduction

The use and misuse of prescription and illicit drugs resulting in death remain a public health crisis in Colorado and the United States. The U.S. Centers for Disease Control and Prevention funds and maintains the State Unintentional Drug Overdose Reporting System (SUDORS), through the Overdose Data-to-Action grant to address this public health issue. SUDORS aims to bring together multiple sources of data to get a better understanding of the circumstances, toxicology and risk factors associated with deaths resulting from the overdose of drugs to guide prevention efforts. The Colorado Department of Public Health and Environment began collecting data for the SUDORS program in January of 2020. This report contains the data for the 18 month period, from July 2019 to December 2020, for the state of Colorado.

Methods

Data in this report comes from the State Unintentional Drug Overdose Reporting System (SUDORS) data collected by the Colorado Department of Public Health and Environment. The SUDORS program aims to collect data from death certificates and coroner/medical examiner reports, which include a variety of documents including autopsy reports, toxicology reports, investigation summaries, and scene descriptions. Inclusion of cases in the SUDORS system is based on the death certificate underlying cause of death codes using the International Classification of Disease, 10th Revision (ICD-10). The results presented reflect both unintentional (non-accidental) and non-medicinal manner, and reflect all relevant deaths occurring in Colorado, irrespective of residence, between July 2019 and December 2020.

Data in this report are presented as counts and percentages of the total Colorado deaths captured by the SUDORS system. Data are presented by demographic categories, residential information, contributing circumstances, and substances that caused death. Additionally, this report includes select enhanced SUDORS data elements: type

No. 123  HealthWatch  August 2023

Comparison of Adolescent Drug Overdose Deaths in Colorado compared to the United States, State Unintentional Drug Overdose Reporting System (SUDORS), July 2019 to December 2021

Prepared by: Christine Demont, MPH, Kirk Bol, MDPH

Introduction

Drug overdose deaths have increased in Colorado and the United States over the past decade across all age groups and sharply among adolescents over the past few years. A recent Mortality and Morbidity Weekly Report (MMWR) found that monthly drug overdose deaths nearly tripled among adolescents aged 10 to 19 years during the first 2 years of the COVID-19 pandemic. Median monthly overdose deaths among adolescents aged 10-19 years increased 190% from July-December 2019 to July-December 2021 and median monthly drug overdose deaths involving illicit manufactured fentanyl (IMF) increased 305%.1 The Centers for Disease Control and Prevention funds and maintains a timely data related to unintentional and undetermined intent drug overdose deaths by participating jurisdiction through the State Unintentional Drug Overdose Reporting System (SUDORS), through the Overdose Data-to-Action grant.1 SUDORS collects data from multiple sources to get a better understanding of the circumstances, toxicology and risk factors associated with deaths resulting from the overdose of drugs to guide prevention efforts. This report compares drug overdose deaths and surrounding circumstances among adolescents in Colorado with national estimates.

Methods

The Colorado data in this report comes from the State Unintentional Drug Overdose Reporting System (SUDORS) data collected by the Colorado Department of Public Health and Environment. National estimates come from the published MMWR report, ‘Drug Overdose Deaths Among Persons Aged 10-19 Years — United States, July 2019–December 2021’ published on December 16, 2022.1 The SUDORS program collects data from death certificates and coroner/medical examiner reports, which include autopsy reports, toxicology reports, investigation summaries, and scene descriptions. Inclusion of cases in the SUDORS system is based on the death certificate underlying cause of death codes using the International Classification of Disease, 10th Revision (ICD-10). The results presented reflect both unintentional (non-accidental) and non-medicinal manner, and reflect all relevant deaths occurring in Colorado, irrespective of residence, between July 2019 and December 2021.

Data in this report are presented as counts and percentages of the total Colorado deaths captured by the SUDORS system. Data are presented by demographic categories, contributing circumstances, and substances that caused death. Additionally, this report includes select enhanced SUDORS data elements: type

Drug overdose deaths (unintentional and undetermined manner) by type of overdose

- **Substance use/misuse**: 82.1%
- **Unintentionally took a drug or wrong dose**: 14.9%
- **Overmedication**: 0.3%
- **Took prescribed dosage**: 0.5%
- **Other**: 1.7%
- **Unknown/missing**: 0.5%

Mental Health Conditions and Treatment among unintentional drug overdose decedents ages 10-19 years

![Bar chart showing mental health conditions and treatment among unintentional drug overdose decedents ages 10-19 years in Colorado and the United States.](https://www.cdc.gov/mmwr/volumes/71/wr/mm7150a2.htm)
## Comparison between Intentional versus Unintentional drug overdose

<table>
<thead>
<tr>
<th>Circumstance</th>
<th>Intentional Drug Overdose Deaths (N=321)</th>
<th>Unintentional Drug Overdose Deaths (N=2,557)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>Current diagnosed mental health problem</td>
<td>221</td>
<td>68.9</td>
</tr>
<tr>
<td>Ever treated for mental health/substance use problem</td>
<td>177</td>
<td>55.1</td>
</tr>
<tr>
<td>Current mental health/substance use treatment</td>
<td>145</td>
<td>45.2</td>
</tr>
<tr>
<td>Problem with alcohol</td>
<td>120</td>
<td>37.4</td>
</tr>
<tr>
<td>Problem with other substance</td>
<td>116</td>
<td>36.1</td>
</tr>
<tr>
<td>Intimate partner problem</td>
<td>87</td>
<td>27.1</td>
</tr>
<tr>
<td>Family relationship problem</td>
<td>68</td>
<td>21.2</td>
</tr>
<tr>
<td>Job problem</td>
<td>51</td>
<td>15.9</td>
</tr>
</tbody>
</table>

Trends in Buprenorphine Treatment for Opioid Use Disorder in Colorado
Background

• Opioid overdoses continue to rise in Colorado*
• Buprenorphine is medication-assisted treatment for opioid use disorder (OUD)
• **Purpose**: Identify trends and patterns of buprenorphine treatment across Colorado

Methods

• **Data**: Colorado Prescription Drug Monitoring Program (PDMP) data 1/2020 to 12/2022

• **Analysis** by year quarter and county:
  – Count buprenorphine prescribers, patients, and prescriptions
  – Avg. patients per prescriber, days’ supply, and dose
  – Percent of buprenorphine-naïve patients
  – Percent of prescribers with buprenorphine “X-waiver” (2021)
Results

Count of Buprenorphine Prescriptions in Most Populated Urban Counties in Colorado

Year Quarter

Count of Buprenorphine Prescriptions

- Denver
- Arapahoe
- Jefferson
- El Paso
- Adams
Results

Count of Buprenorphine Patients in Most Populated Urban Counties in Colorado

- Denver
- Arapahoe
- El Paso
- Jefferson
- Adams

Year Quarter

Count of Buprenorphine Patients

2020 Q1
2020 Q2
2020 Q3
2020 Q4
2021 Q1
2021 Q2
2021 Q3
2021 Q4
2022 Q1
2022 Q2
2022 Q3
2022 Q4

0
500
1000
1500
2000
2500
3000
3500
Results

Count of Buprenorphine Prescribers in Most Populated Urban Counties in Colorado

Year Quarter

Count of Buprenorphine Prescribers

Denver
Arapahoe
Adams
El Paso
Jefferson
Results

Count of Buprenorphine Prescriptions in Rural Counties in Colorado

- Rio Grande
- San Miguel
- Archuleta
- Lake
- Yuma

Count of Buprenorphine Prescriptions

2020 Q1 2020 Q2 2020 Q3 2020 Q4 2021 Q1 2021 Q2 2021 Q3 2021 Q4 2022 Q1 2022 Q2 2022 Q3 2022 Q4

Year Quarter
Results

Count of Buprenorphine Patients in Rural Counties in Colorado

Year Quarter

Count of Buprenorphine Patients

Rio Grande
San Miguel
Archuleta
Lake
Yuma
Results

Count of Buprenorphine Prescribers in Rural Counties in Colorado

Count of Buprenorphine Prescribers

Quarter Year


Rio Grande
San Miguel
Yuma
Lake
Archuleta
Results

• Three of Colorado’s rural counties, Crowley (40%), Lake (33.3%), and Saguache (33.3%) Counties had the highest percent of prescribers with a buprenorphine waiver in 2021 among all counties

• Average number of patients per prescriber did not change for most counties from Q1 2020 to Q4 2022

• Average days supply ranged from 3 to 30 days

• Percent of buprenorphine-naïve patients remained stable in urban counties
Conclusions

• More federal funding + less restrictive federal requirements → more buprenorphine prescriptions and prescribers

• Next steps:
  – Include age and other demographics
  – Length of time on buprenorphine
  – Colorado totals
  – Public dashboard launch
Dashboard Demo
Where to access data?

- CDPHE Drug Overdose dashboard
- NEMSIS Non-Fatal Opioid Overdose Tracker
- Consortium Opioid Dashboard
- Health Watch publications
- CDPHE Open Data Portal
- SEOW data publications
- SEOW fentanyl brief
- CDPHE Mortality Statistics Dashboard
- Colorado SUDORS Website
THANKS!

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