2021

Opioid Overdose in Oregon

This report summarizes the burden of opiate and opioid overdose among Oregonians as required by ORS 432.141. It describes progress and challenges in reducing opiate and opioid overdoses and related deaths in Oregon.

Oregon Health Authority
PUBLIC HEALTH DIVISION
Injury and Violence Prevention Program

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This report fulfills the OHA annual reporting of opiate and opioid overdoses that ORS 432.141 requires.

Contents

Executive summary

In 2021, opioid misuse and overdose are recognized as health threats of increasing urgency throughout the United States, including Oregon. Opioids include prescription painkillers and illicit drugs such as heroin. Fentanyl is a synthetic opioid that can be obtained through prescription or illicitly.

The types of drugs that most commonly cause overdose in Oregon have changed significantly in recent years. This includes shifts in the drug classifications as well as the origin of the drugs (prescription versus illicit). While the state has made notable progress in reducing misuse and overdose related to prescription opioids, there have been significant increases in overdoses from fentanyl and from non-opioid drugs such as methamphetamine, which are often mixed with opioids. Nearly half of opioid-related overdose deaths involve more than one drug and/or alcohol.

The Oregon Health Authority aims to reduce the burden of opioid misuse and abuse through several key strategies summarized below:

- Increasing equitable access to harm reduction supplies such as naloxone kits, sterile syringes, and fentanyl test strips. This helps prevent overdoses and prevent disease transmission. It also helps people who use drugs to reduce harm to themselves and others.
- Supporting overdose response planning and coordination
- Increasing access to substance use disorder treatment, including medication for opioid use disorder (MOUD)
- Supporting safe and effective non-opioid pain management
- Providing tools and guidelines to support appropriate prescribing, and
- Collecting and reporting data to inform response, prevention and policy.

In addition to overdose-related hospitalization and overdose death data from the State Medical Examiner and vital records shared in previous reports, the OHA Public Health Division can now report additional information. This includes data on overdose-related visits to emergency departments and urgent care centers, as well as information about suspected overdose deaths from the new State Unintentional Drug Overdose Reporting System. Also, recent updates in reporting processes have improved the ability to identify fentanyl-related deaths.

Oregon data through 2020 show the following:

- Prescription opioid overdoses and overdose-related deaths continued to fall between 2016 and 2020.
- Overdoses of all causes involving single or multiple drugs increased during 2020.
- Overdoses from heroin and synthetic opioids (for example, fentanyl) are increasing. The number and rate of overdose deaths related to these drugs is also increasing.
- Stimulant overdoses, including those involving methamphetamine and cocaine, have continued to increase since 2016.
- Overdoses and overdose deaths due to use of multiple drugs at one time are increasing.
- In 2020, the risk for unintentional drug overdose death was highest among people who are non-Hispanic American Indian and Alaska Native, non-Hispanic Black, male and people experiencing houselessness. The lowest risk was among people of Hispanic ethnicity and people who are non-Hispanic Asian and/or Pacific Islander.
- 2020 data indicate that mental illness and substance use disorder are common among people who die from unintentional overdose, yet few were receiving current treatment for mental health and substance use problems (8.7 percent) or substance abuse (2.7 percent).
- Hospitalizations related to opioid overdose declined substantially between 2016 and 2019. They leveled off in 2020.
- While overall visits to emergency departments and urgent care centers declined nationally from March through August 2020 due to the COVID-19 pandemic, overdose-related visits declined only slightly in March and rebounded by July 2020.

Data from the Oregon Prescription Drug Monitoring Program (PDMP) indicate the following:

- PDMP system user registration remained high in 2020 and 2021.
- PDMP system use (queries) decreased substantially in the second quarter of 2020 but rebounded to high levels by early 2021.
- Risky prescribing practices involving opioids have decreased substantially since 2018.

Overdose deaths

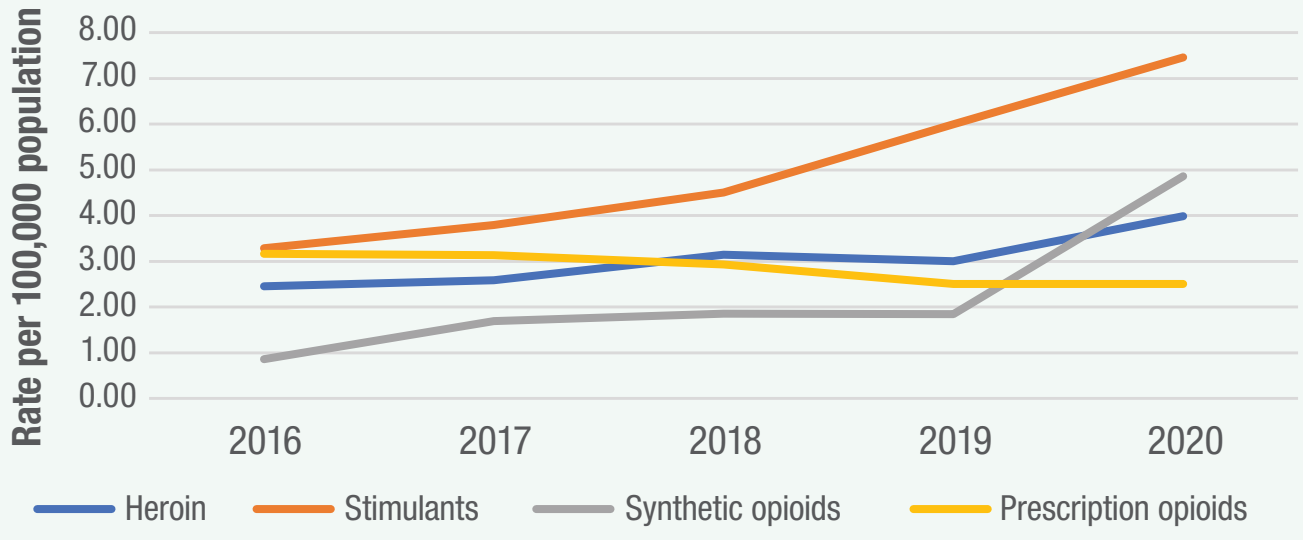
The rate of overdose deaths is the number of deaths due to overdoses per 100,000 residents in Oregon. The rate of most prescription opioid overdose deaths (natural and semi-synthetic opioids) has continued to decline through 2020, the most recent full year of data available. The decline is in part due to:

- Declining use of higher-risk opioids, such as methadone prescribed for pain, and other long-acting prescription opioids, and
- Prescribing guidelines that restrict access to many short-acting opioids.

Increased access to medication for opioid use disorder (MOUD) may also play a role in some areas of the state.

While prescription overdose deaths decreased, overdose deaths from heroin, synthetic opioids including fentanyl, and stimulants such as methamphetamine are increasing. Death certificate information about fentanyl-related overdose deaths cannot identify whether an overdose was caused by prescription or illicitly manufactured fentanyl (IMF); however, anecdotal information from law enforcement and people who use drugs suggests that IMF contributes to many of these deaths.

Figure 1: Unintentional drug overdose death rate, Oregon, 2016–2020 (1)



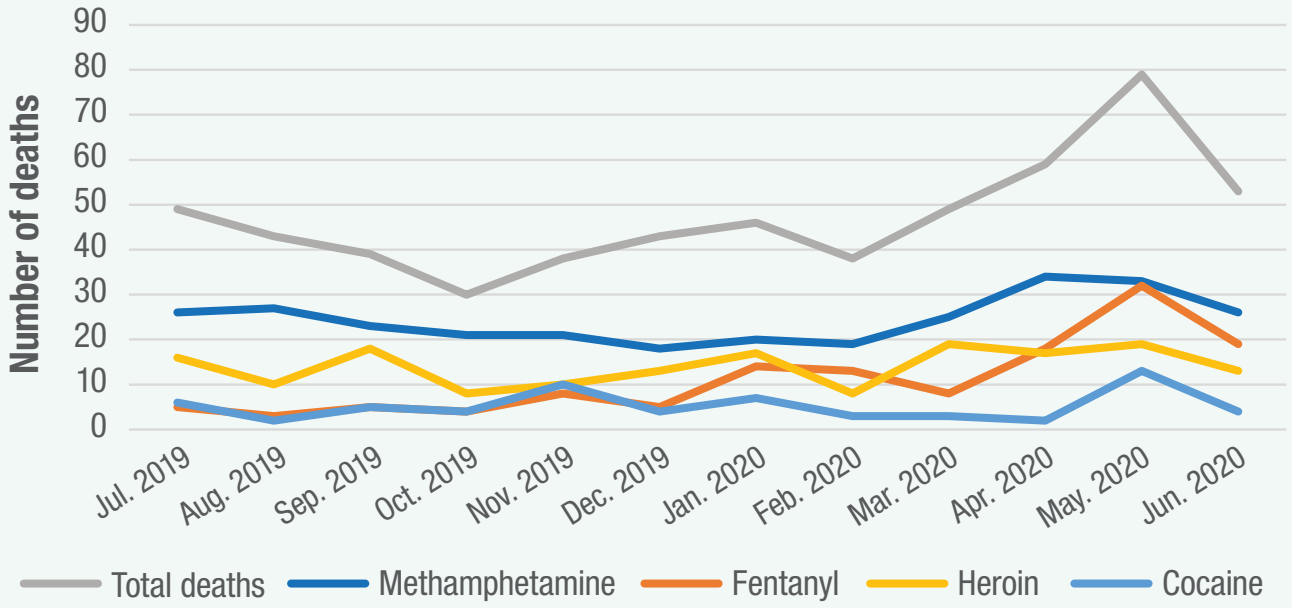
Source: Oregon Vital Records (Deaths), Center for Health Statistics, OHA

A newly available data resource — the State Unintentional Drug Overdose Reporting System, described below — indicates that most deaths reported under the ICD-10 code for synthetic opioids may be attributable to fentanyl. OHA will continue to use this resource to revise previous death counts reported for fentanyl, which were likely undercounted. The fentanyl-related overdose death data described in this report reflect this change.

Unintentional opioid overdose death counts

The State Unintentional Drug Overdose Reporting System (SUDORS) is a state-based data system now available in Oregon. The system collects information on all unintentional and undetermined drug overdose deaths from death certificates and medical examiner reports. It provides details about overdose deaths that can inform prevention and treatment interventions. SUDORS uses toxicology screening data to identify specific substances within broader drug reporting categories. For example, SUDORS will specify methamphetamine within the stimulant category and fentanyl within the synthetic opioid category. SUDORS is supported by a grant from the U.S. Centers for Disease Control and Prevention (CDC). (2) Data from the system became available in July of 2019. Finalized data are available through June 2020.

Figure 2: Unintentional drug overdose deaths by drug and month, Oregon, July 2019–June 2020



Note: When two or more drugs are attributed to a death, the death count is duplicated under different drugs.

Source: SUDORS

As shown in Figure 2 above, unintentional overdose deaths increased in the first half of 2020 compared to the last half of 2019. There was a notable increase in fentanyl-related deaths between March and May of 2020. Deaths due to methamphetamine also increased in the first half of 2020.

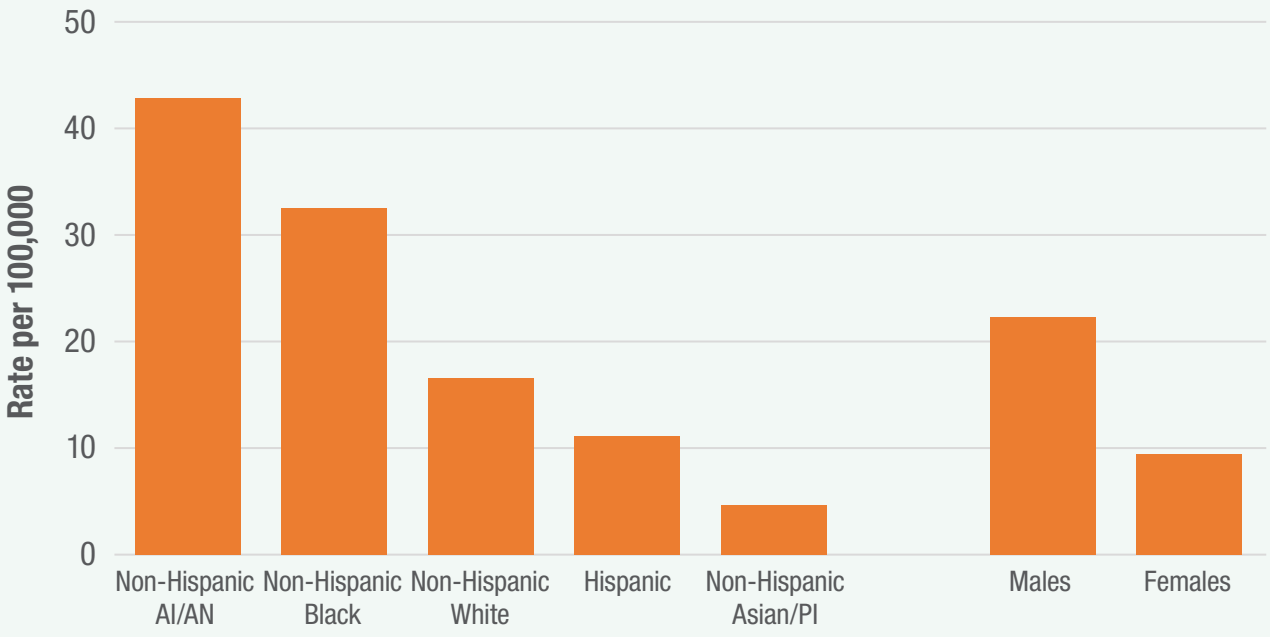
SUDORS data for July 2019 through June 2020 show the following:

- Almost half of Oregon's overdose deaths during that period involved more than one substance:
  - » 50.5 percent were due to a single drug overdose
  - » 28.1 percent involved two drugs, and
  - » 21.3 percent involved three or more drugs.
- Methamphetamine, heroin and fentanyl were involved with 51.8 percent, 29.7 percent and 23.7 percent of overdose deaths, respectively, and
- Methamphetamine, heroin and fentanyl, used alone or in combination with other drugs, accounted for 85.1 percent of all unintentional overdose deaths between July 2019 and June 2020.

Unintentional overdose death demographics

As shown in Figure 3 below, preliminary SUDORS data for 2020 indicate that non-Hispanic American Indian and Alaska Native and non-Hispanic Black were the racial and ethnic groups at highest risk for unintentional drug overdose. Groups at lowest risk were non-Hispanic Asian and Pacific Islander and those with Hispanic ethnicity. In 2020, males were 2.4 times as likely as females to die of unintentional overdose. Among males, those age 25–54 had the highest rate of death from unintentional overdose. Among females, those age 35–54 had the highest rate. (3)

Figure 3: Crude rates of unintentional drug overdose death by race/ethnicity and sex, Oregon, 2020



Source: SUDORS

Other risk factors for unintentional overdose death included:

- Non-alcohol-related substance use issues (97.7 percent)
- Diagnosed mental illness (30.8 percent), and
- Alcohol use issues (18.6 percent).

However, only 8.7 percent of Oregonians who died from an unintentional drug overdose in 2020 were receiving current treatment for mental health and substance use problems. Only 2.7 percent were receiving current treatment for substance use disorder, while 7.8 percent had received treatment in the past. Lack of stable housing is also a risk factor; 14 percent of unintentional overdose fatalities in 2020 occurred among people experiencing houselessness.

In 2020, almost three-quarters (74 percent) of unintentional fatal overdose incidents took place in the following urban counties:

- Multnomah (234)
- Lane (86)
- Marion (49)
- Clackamas (45)
- Washington (40), and
- Jackson (37).

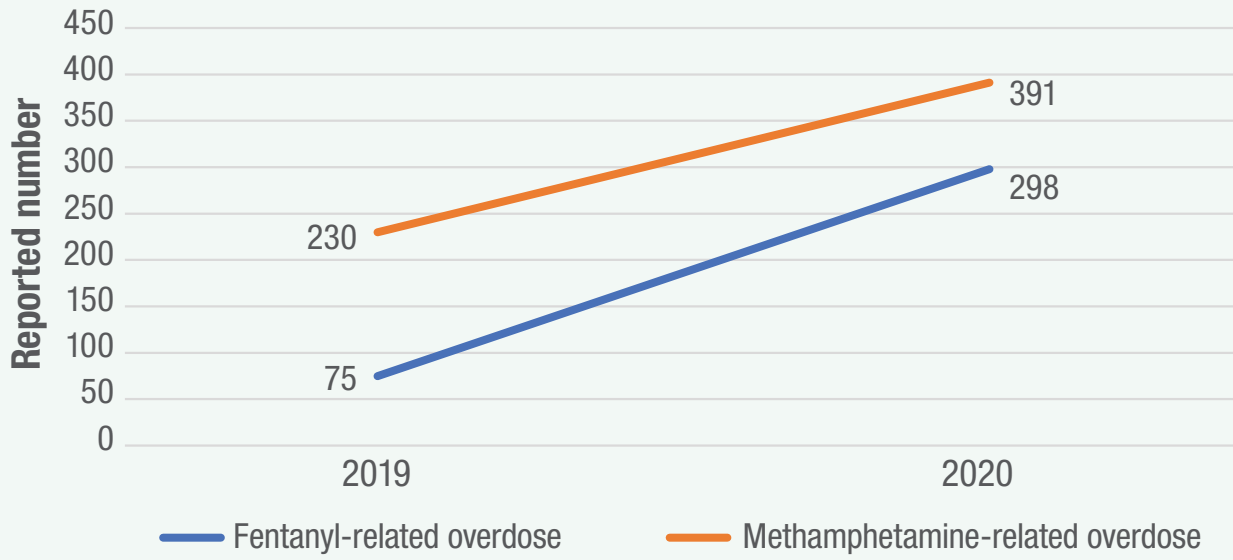
Two counties (Multnomah and Lane) had unintentional overdose death rates higher than the statewide average. Four counties (Washington, Benton, Deschutes and Coos) had lower death rates than the statewide average.

Fentanyl- and methamphetamine-related overdose deaths

The State Medical Examiner's office began using a new information system in 2019, which improved the quality and timeliness of overdose death data. Due to this change, overdose death information reported before 2019 can't be compared directly to data for 2019 and onward. Data quality has improved year to year, so changes in numbers reflect better testing and more complete reporting, as well as increased numbers of deaths due to certain types of overdoses.

During 2019 and 2020, methamphetamine and prescribed or illicit fentanyl (toxicology tests cannot differentiate between the two) were the top drugs reported for overdose deaths in Oregon. In 2020 there was a 306 percent increase in fentanyl-related overdose deaths and a 131 percent increase in methamphetamine-related deaths compared to 2019. Forty-one percent of all fentanyl-related overdose deaths and 52 percent of all methamphetamine-related overdose deaths were from a single drug. In 2020, more than 73 percent of all drug- or alcohol-related deaths involved fentanyl or methamphetamine.

Figure 4: Number of fentanyl- and methamphetamine-related deaths by year, Oregon, 2019–2020

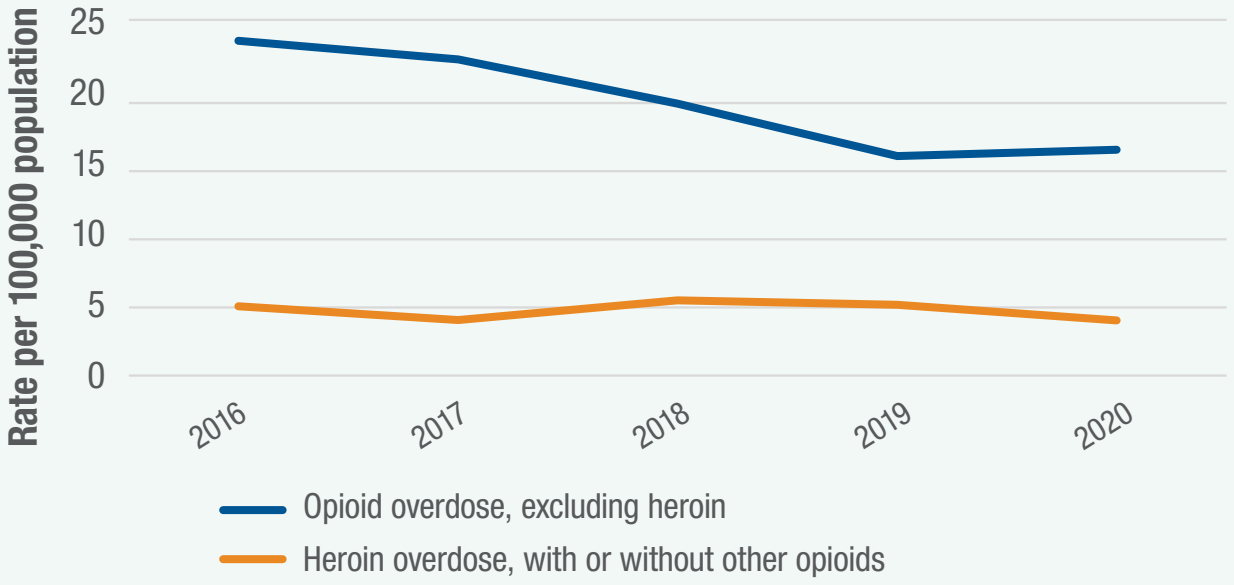


Source: Oregon State Medical Examiner 2020 and 2021 annual reports

Opioid overdose hospitalizations

Previous versions of this report showed an increase in opioid overdose hospital visits from 2000 through 2016. As shown in Figure 5, hospitalizations for opioid overdose declined from 2017 through 2020, the most recent full year of data available. Opioid overdose hospital visits declined substantially between 2016 and 2019 and leveled off between 2019 and 2020. Hospital visits for heroin overdoses have declined slightly since 2018.

Figure 5: Hospitalizations involving opioid overdose, Oregon, 2016–2020



Source: Oregon Hospital Discharge Database, 2016–2020

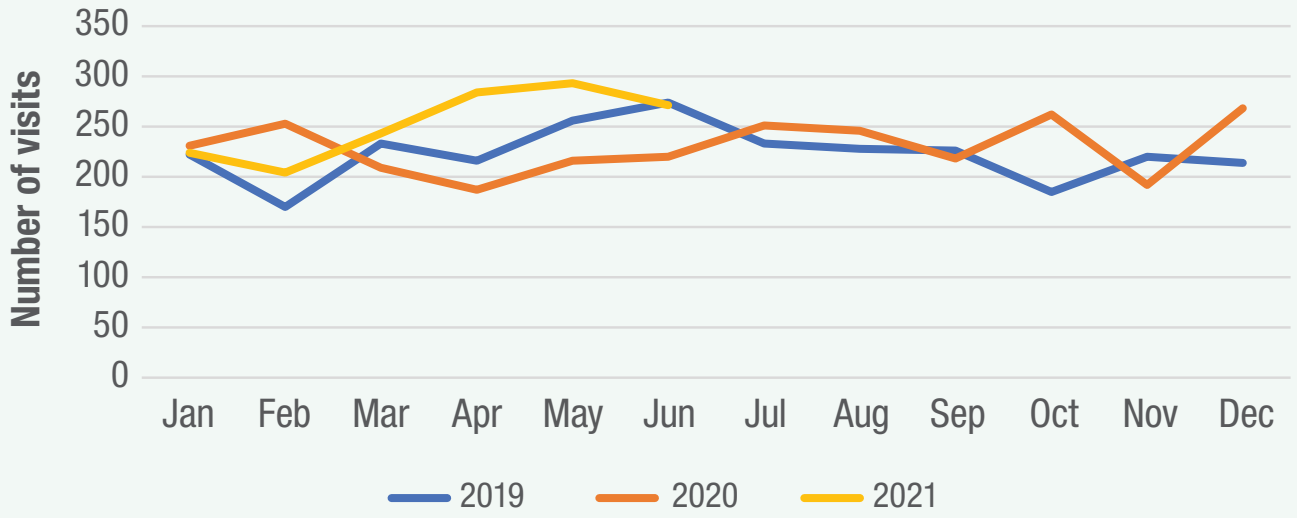
Emergency department and urgent care center visits related to opioid overdoses

The Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE) is a state-based data system that collects visits from all non-federal Oregon emergency departments and the urgent care centers that currently share their data with the Oregon Health Authority (OHA). Funding from a recent CDC grant (4) enabled OHA to use data from ESSENCE to identify trends in emergency department and urgent care center visits related to opioid overdoses.

Because it is reported daily, ESSENCE opioid overdose data allow OHA to better identify notable increases (spikes). Although data completeness and quality differ by facility, ESSENCE is a timely and powerful resource. An Opioid Overdose Public Health Surveillance Update report that uses ESSENCE data is available monthly by subscription. (5)

National data show a significant decrease in overall emergency department and urgent care visits from March through August 2020 due to COVID-19. (6) Figure 6 below shows that Oregon overdose-related visits declined only slightly starting in March 2020 and rebounded by July 2020.

Figure 6: Opioid overdose visits to emergency departments and urgent care centers, monthly, 2019–2021



Source: ESSENCE

ESSENCE findings show that the number of opioid-related overdose emergency department and urgent care visits in the second quarter of 2021 was higher than during the same months in 2020 and 2019.

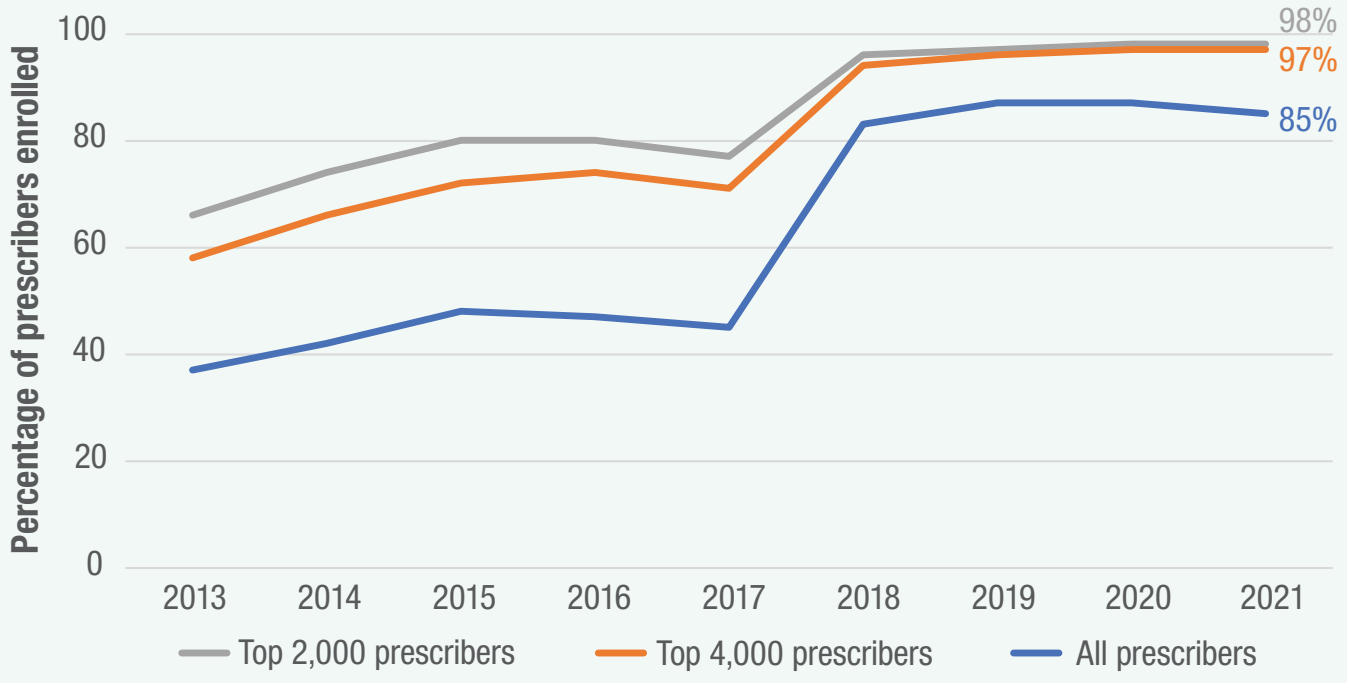
The Oregon Prescription Drug Monitoring Program: An important tool for patient safety

In 2009, the Oregon Legislature passed Senate Bill 355. The bill directed the Oregon Health Authority to develop a Prescription Drug Monitoring Program (PDMP). The PDMP is a tool healthcare providers can use when prescribing Schedule II through IV controlled substances. It also tracks Oregon-specific listed substances such as pseudoephedrine and gabapentin. The PDMP displays information about a patient's history with controlled prescription medications. The data is collected from retail pharmacies that dispense the medications. Providers can use PDMP data to prescribe controlled substances more safely.

PDMP registration trends

As shown in Figure 7 below, PDMP use has increased steadily since the program began in September 2011. In 2018, registration with the PDMP became mandatory for all Drug Enforcement Administration-licensed prescribers. Since then, the percentage of prescribers and pharmacists registered with the PDMP has remained high.

Figure 7: Oregon PDMP registration, 2013–2021



Source: Appriss AWARxE and PMPi Gateway. Queries were de-duplicated using last name, date of birth, prescriber ID and date of query.

As of November 2021, the PDMP serves nearly 28,000 individual prescribers, pharmacists and their staff. Registered users include:

- 85 percent of all Oregon licensed prescribers, and
- 98 percent of the 2,000 prescribers that prescribe the highest volume of controlled substances.

PDMP utilization

PDMP query activity increased dramatically when the PDMP was integrated into electronic health record systems starting in 2018. The increase was mainly due to automated queries. Automated queries pull PDMP data into hospital and clinic electronic medical records. The information is then instantly available for prescribing clinicians at the point of need.

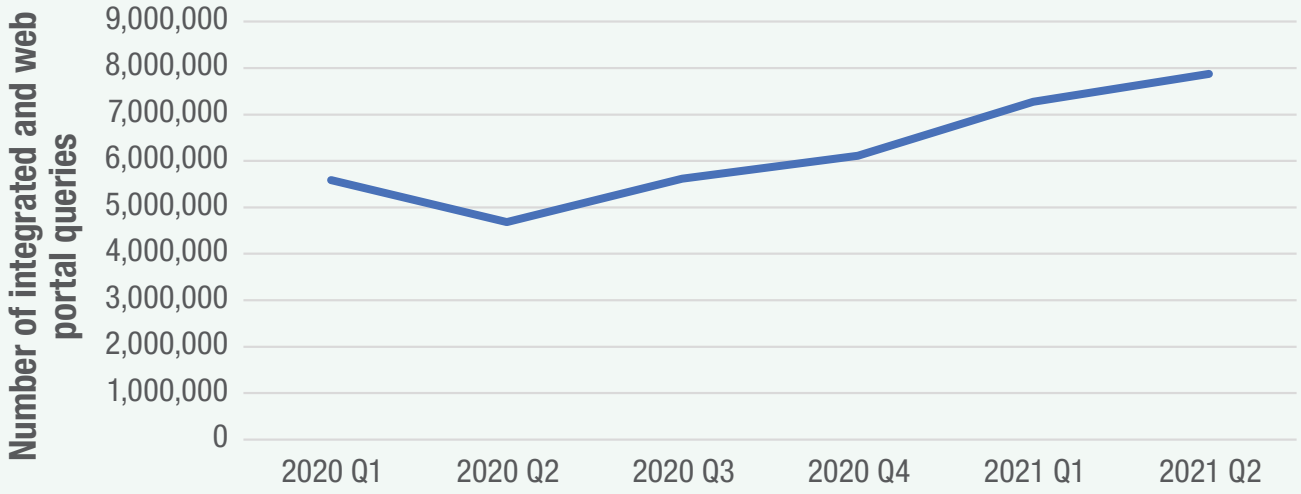
As shown in Figure 8, total Oregon PDMP queries (including those integrated into electronic health record systems and those made through the web-based PDMP interface) fell somewhat starting in the second quarter (April–June) of 2020. During these early months of the COVID-19 pandemic, queries fell by 19 percent compared to the first quarter of 2020 (January–March) and by 68 percent compared to the second quarter of 2021 (April–June).

However, as shown in Figure 9, the number of controlled substance prescription fills in the second quarter of 2020 decreased only eight percent compared to the three months before and only six percent compared to the same quarter in 2021.

Even though the Oregon PDMP was fully functional and controlled substance prescription fills were constant, the decline in PDMP queries indicates that fewer prescribing decisions were informed by PDMP data. A national study reported that during the spring and early summer of 2020, many non-essential surgeries and appointments were postponed, and ambulatory care visits declined dramatically across the country. (6) This could, in part, explain the drop in PDMP queries in the second quarter of 2020. However, it does not explain the smaller drop of controlled substance prescribing during the same period.

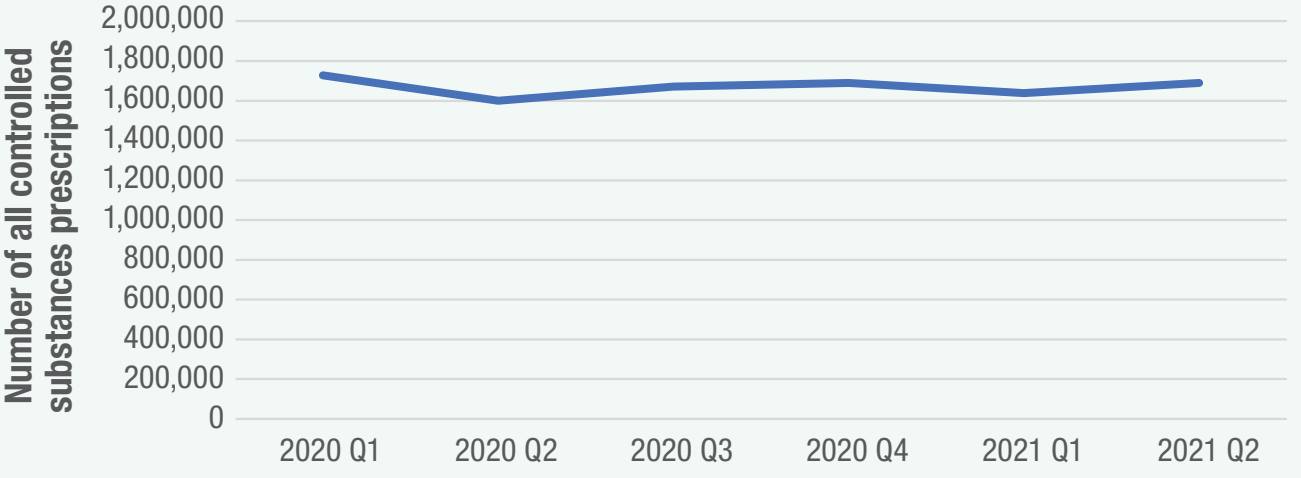
Oregon PDMP queries rebounded by the fourth quarter (October–December) of 2020 and increased to a high of close to 8 million queries per quarter in the second quarter of 2021. The number of controlled substance prescriptions in Oregon remained steady throughout that period. This indicates that prescribers returned to using the PDMP to support informed prescribing of opioids and other controlled substances.

Figure 8: Total number of integrated and web queries by year and quarter during COVID-19



Source: Oregon Prescription Drug Monitoring Program

Figure 9: Number of all controlled substance prescriptions by year and quarter during COVID-19



Source: Oregon Prescription Drug Monitoring Program

Risky prescribing practices

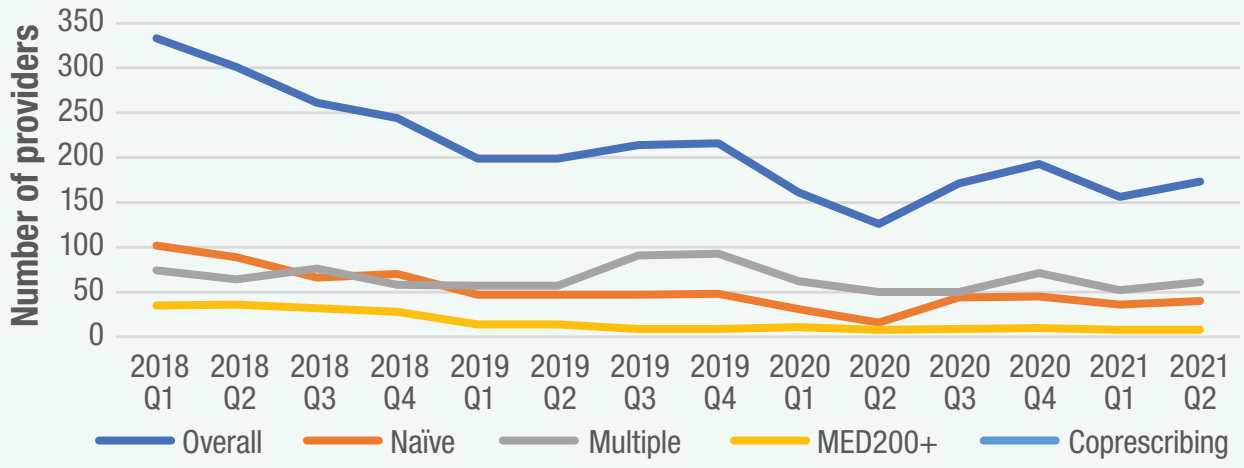
Since 2018 the OHA Prescription Drug Monitoring Program has tracked prescribing behavior using measures developed by clinicians. The program notifies prescribers engaged in risky prescribing practices and gives them information about current prescribing guidelines. Risky prescribing among Oregon clinicians has declined by nearly half (48 percent) since these notifications began.

Risky prescribing measures

The PDMP tracks several types of risky prescribing. Figure 10 shows trends for the number of notifications sent to prescribers from the PDMP Prescribing Practices Review Subcommittee. (7) The types of notifications shown in Figure 10 are defined as follows:

- **Co-prescribing:** prescribing opioids and benzodiazepines to the same patient within the same month (these types of medications can combine to cause serious side effects, including overdose)
- **Naïve:** prescribing more than a seven-day supply of opioids to patients who have not been prescribed opioids before (opioid-naïve patients)
- **MED 200+:** prescribing high dosages of opioids (daily morphine equivalent dose 200 or more) for more than 20 patients within the quarter
- **Multiple:** prescribing opioids to patients receiving opioids from four or more prescribers and four or more pharmacies in a six-month period

Figure 10: Risky prescribing notifications, Oregon PDMP, Q1 2018–Q2 2021



Source: Oregon Prescription Drug Monitoring Program

Discussion

Opioid prescribing continues to decrease in Oregon. Contributing factors include:

- Use of prescribing guidelines for chronic and acute pain
- More availability of non-opioid pain treatments through the Oregon Health Plan, and
- Increased use of the Prescription Drug Monitoring Program (PDMP) to inform prescribing decisions.

Queries to the PDMP temporarily reduced in the early months of the COVID-19 pandemic. This was especially true for integrated hospital and clinic portal queries. Dispensing of opioid medication did not decrease at the same rate. However, queries began to increase again in the summer of 2020 and the trend continued through June 2021.

The overall rate of prescription opioid overdose deaths in Oregon continues to decrease. However, the following rates of overdose deaths are rising:

- Deaths due to heroin and synthetic opioids
- Deaths related to fentanyl, and
- Deaths due to stimulants, particularly methamphetamine.

Also, an increasing proportion of overdose deaths involve multiple drug types.

It is unclear exactly how the COVID-19 pandemic has contributed to these trends. However, stressors related to school, housing, food, utilities, transportation, employment, institutionalized racism, other forms of trauma, and social isolation may increase feelings of anxiety and depression, and these feelings can lead to a harmful level of drug use. Also, data from the Oregon-Idaho High Intensity Drug Trafficking Area (HIDTA) program show that counterfeit prescription pills containing dangerous amounts of fentanyl are becoming more common in the illicit drug market in the Pacific Northwest. (8)

New federal funding has expanded OHA's capacity to monitor and report opioid and opiate overdoses. This expansion includes monthly updates of overdose data from emergency department and urgent care visits from the Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) system. Also, the agency can now report provisional data on suspected drug overdose deaths through the State Unintentional Drug Overdose Reporting System (SUDORS) and other sources such as hospitalization data. As of late 2020, the addition of new diagnosis codes has helped identify fentanyl-related overdoses treated in emergency departments. Previously these were included in the broader category of synthetic opioids.

The opioid issue is complex and multi-faceted. OHA's broad approach includes partnerships between public health, health care systems and law enforcement. The approach focuses on:

- Increasing capacity and access to harm reduction resources, treatment and recovery services, behavioral health services and peer-delivered services, and
- Community awareness, preparedness and response.

Informed by data from the sources highlighted in this report, OHA continues to expand its approach and partnerships to prevent overdoses and deaths from opioids and other types of drugs.

OHA-supported community responses to the recent rise in fentanyl-related overdoses include distribution of the overdose reversal drug naloxone and test strips that detect fentanyl in drugs. These are often distributed through community-based harm reduction services for people who use injection drugs. The increasing threat of illicit fentanyl and methamphetamine have spurred collaboration with law enforcement, emergency preparedness, communications and other sectors. Many agencies and organizations across the state are working together to respond to the threat. Efforts are also underway to improve capacity and access to substance use disorder treatment and recovery services. OHA's focus on health equity emphasizes that providing culturally specific support — especially for groups experiencing racism, trauma and toxic stress — is crucial to addressing the evolving overdose epidemic.

Oregon's evolving approach to addressing substance use disorder is outlined in the Oregon Alcohol and Drug Policy Commission Strategic Plan. (9) It emphasizes a comprehensive approach including systems-based prevention, recovery and treatment augmented by intervention and harm reduction. It describes the importance of addressing primary contributors as well as ensuring equitable services specific to culture, language and gender. *Healthier Together Oregon,* the OHA 2020–2024 State Health Improvement Plan, (10) prioritizes behavioral health as well as factors such as:

- Institutional bias
- Adversity, trauma and toxic stress
- Economic drivers of health, and
- Access to equitable preventive health care.

Addressing the many factors that contribute to substance use and overdoses — including the impact of racism, stigma and other forms of trauma — will be important to the state's continued response to and recovery from the long-term effect of the COVID-19 pandemic. This work will continue as the joint ODHS-OHA COVID Response and Recovery Unit is integrated into the OHA Public Health Division in 2022. This approach will also help achieve OHA's 2030 strategic goal to eliminate health disparities in Oregon. Guided by community-informed plans, OHA's response to the increasing burden of overdose and misuse of opioids and other drugs and substances (including alcohol) will continue to evolve with the changing overdose epidemic.

Data notes

Death data: Not all counties report data to the State Medical Examiner.

Hospitalizations: Due to a change in the ICD coding classification system, this report only contains data based on the new classification system (International Classification of Diseases, Tenth Revision, Clinical Modification [ICD-10-CM]) that took effect for data Oct. 1, 2015 onward. Hospitalization data in this report are not directly comparable to the hospitalization data in previous reports for years prior to 2016.

PDMP: Opioid drug class definitions and high-dose opioid fill definitions are based on CDC MME (morphine milligram equivalents) conversion factors.

For more information see: https://www.oregon.gov/oha/ph/PreventionWellness/SubstanceUse/Opioids/Pages/data.aspx

End notes

1. The Oregon Health Authority, Public Health Division uses data from state death certificates and the State Medical Examiner to describe drug overdose deaths in Oregon. 2020 is the latest complete year for reporting. The data include codes from the International Classification of Diseases, Tenth Revision (ICD-10), a system used by healthcare providers to classify diagnoses. The prescription opioids category includes deaths due to natural and semi-synthetic opioids (T40.2) and methadone (T40.3). The synthetic opioids category (T40.4) includes deaths due to fentanyl. The stimulants category includes all amphetamine-based stimulants (T43.6) and cocaine (T40.5). ICD-10 codes do not differentiate between the source of these drugs (legal versus illicit) or whether the deceased person was taking the drugs as intended.
2. Overdose Data to Action. For more information visit https://www.cdc.gov/drugoverdose/od2a/index.html
3. Transgender people are included in the breakouts of death data by sex based on their gender identity at the time of death. Overdose deaths among transgender people are not reported as a distinct category per agency guidelines that protect privacy and confidentiality.
4. Emergency Department Surveillance of Non-Fatal Suicide Related Outcomes (ED-SNSRO). For more information visit https://www.cdc.gov/suicide/programs/ed-snsro/index.html.
5. Opioid Overdose Data Reports based on information from ESSENCE are updated monthly at https://www.oregon.gov/oha/ph/preventionwellness/substanceuse/opioids/pages/index.aspx.
6. Chatterji P, Li Y. Effects of the COVID-19 Pandemic on Outpatient Providers in the United States. Med Care. 2021 Jan;59(1):58-61. doi: 10.1097/MLR.0000000000001448. PMID: 33136711
7. Risky prescribing criteria are set by the PDMP Advisory Commission Prescribing Practice Review Subcommittee as established by ORS 431A.896. Current prescribing guidelines recommend a daily Morphine Equivalent Dose at or below 90 as the standard of care. The 200+ MED category shown in Figure 10 indicates prescribing practice that carries the highest level of risk to patient safety.

8. Oregon-Idaho High Intensity Drug Trafficking Area (HIDTA) Program. 2022 Drug Threat Assessment, June 2021. https://static1.squarespace.com/static/579bd717c534a564c72ea7bf/t/60c0ed0dcb1c35591bfc2c5e/1623256345150/ORIDHIDTA+014-2021+%28U%29+Oregon-Idaho+HIDTA+2022+Drug+Threat+Assessment_FINAL_051121.pdf
9. Oregon Alcohol and Drug Policy Commission. 2020-2025 Strategic Plan.
10. Oregon Health Authority. Healthier Together Oregon: 2020-2024 State Health Improvement Plan.

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