

Linking Prescription Drug Monitoring Program (PDMP) Data to Unintentional and Undetermined Intent Drug Overdose Death Data, Connecticut, 2020-2023

Overview:

Death data for unintentional and undetermined intent drug overdoses from 2020 to 2023 were linked to controlled substance prescription data up to 180 days prior to death. Prescription data were sourced from the Connecticut Prescription Drug Monitoring and Reporting System (CPMRS): [Prescription Monitoring Program \(ct.gov\)](https://www.ct.gov/dph/cpmrs)

- Prescription data were linked to death data for: 1) the number of opioid medications prescribed within 30 days prior to drug overdose death, 2) the number of pharmacies dispensing opioid prescriptions within 180 days prior to drug overdose death, and 3) the number of prescribers writing opioid prescriptions within 180 days prior to drug overdose death.
- Prescription Drug Monitoring Program (PDMP) data and Connecticut State Unintentional Drug Overdose Reporting System (SUDORS) data are linked twice a year with collaborative work between two agencies, the Connecticut Department of Public Health (DPH) and the Connecticut Department of Consumer Protection (DCP). The present report includes opioid prescription statistics for unintentional and undetermined intent drug overdose decedents from 2020 to 2023.
- Data from this report will be presented in the Alcohol and Drug Policy Council (ADPC) Prevention subcommittee meeting which will be attended by other agencies/organizations. This PDMP and death data linking report is disseminated to state stakeholders and made available on the DPH website for public viewing.

Methodology: The DPH and the Connecticut Office of the Chief Medical Examiner (OCME) partner to share unintentional and undetermined intent drug overdose death data. Decedents' opioid prescription data are provided by the DCP. Selected decedent information, including decedent name, date of birth (DOB) and residential address, is uploaded to a secure SFTP site and downloaded by DCP to the PDMP System. A bulk search is conducted by DCP to identify patients in the PDMP system who match by full name and DOB to the decedent information. If the first name, last name, and DOB are matched, the record is considered 'an exact match'. When the system finds multiple patients with the same first and last name and DOB, the residential address of the decedent is used to confirm identity, but this is rarely needed. As a routine process, the PDMP consolidates all patient records into one record which contains all the names that the patient has used to obtain prescriptions.

Matched data are collected and analyzed by the DCP PDMP analyst for each decedent for the following variables: (1) the number of opioid prescriptions within 30 days prior to drug overdose death, (2) the number of pharmacies dispensing opioid prescriptions within 180 days prior to drug overdose death, and (3) the number of prescribers writing opioid prescriptions during the 180 days prior to drug overdose death.

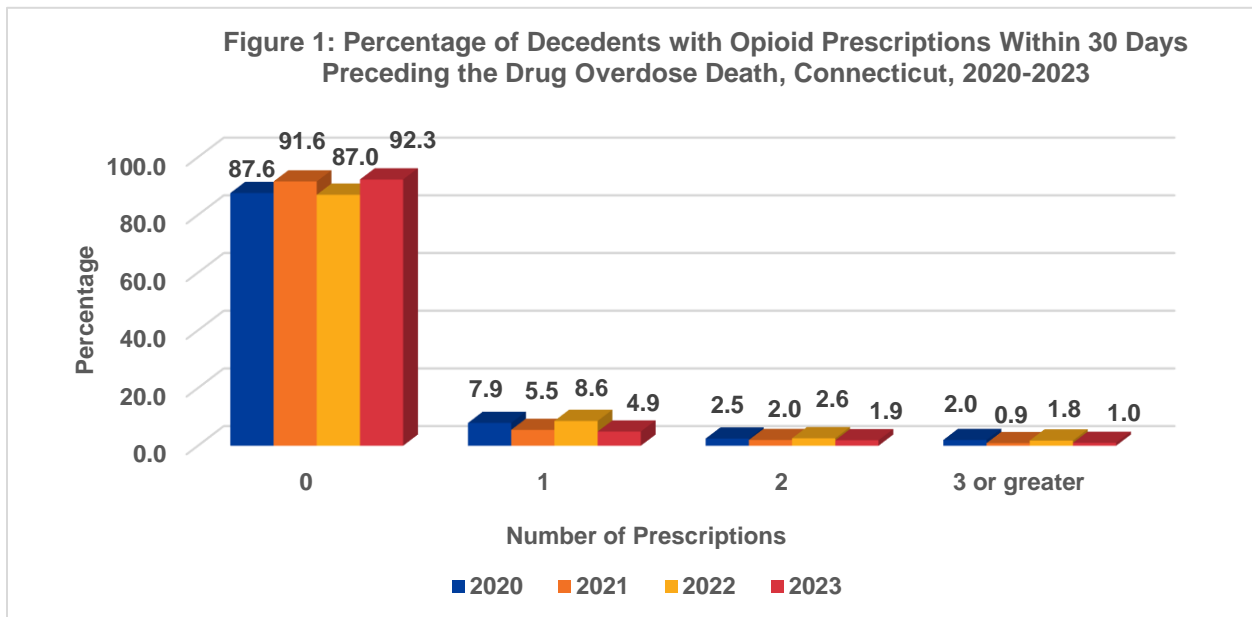
Results: Between 2020 and 2023, there was a total of 5,719 unintentional and undetermined intent drug overdose deaths in Connecticut, of which 4,300 were matched with patients in the PDMP system. On average, approximately 75% of the decedents were matched with PDMP

data. Table-1 below shows the prescription linkage matching to drug overdose decedents for the years 2020-2023.

Table-1: PDMP data linkage to unintentional and undetermined intent drug overdose deaths, Connecticut, 2020-2023

PDMP matching to death record	2020	2021	2022	2023
Number of deaths	1,376	1,535	1,465	1,343
Decedents matched with PDMP record	957 (69.5%)	1,225 (79.8%)	1,018 (69.5%)	1,100 (82.0%)
Decedents not matched with PDMP record	419 (30.5%)	310 (20.2%)	447 (30.5%)	243 (18.1%)

Measure #1: Number of opioid prescriptions within 30 days prior to drug overdose death 2020-2023: The chart (Figure 1) shows the percentages of opioid prescriptions within 30 days before the fatal drug overdose, between 2020 and 2023. PDMP matched data showed that an average of 89.6% of decedents had zero (0) opioid prescriptions during the 30 days preceding death. The average percentage of decedents who had one opioid prescription within the 30 days before the death was 6.7%. Among decedents who were matched with the PDMP system, the percentage of decedents who had one opioid prescription 30 days before the death were: 7.9% in 2020, 5.5% in 2021, 8.6% in 2022, and 4.9% in 2023. The lowest percentage of decedents with one opioid prescription was seen in 2023 compared to other years.



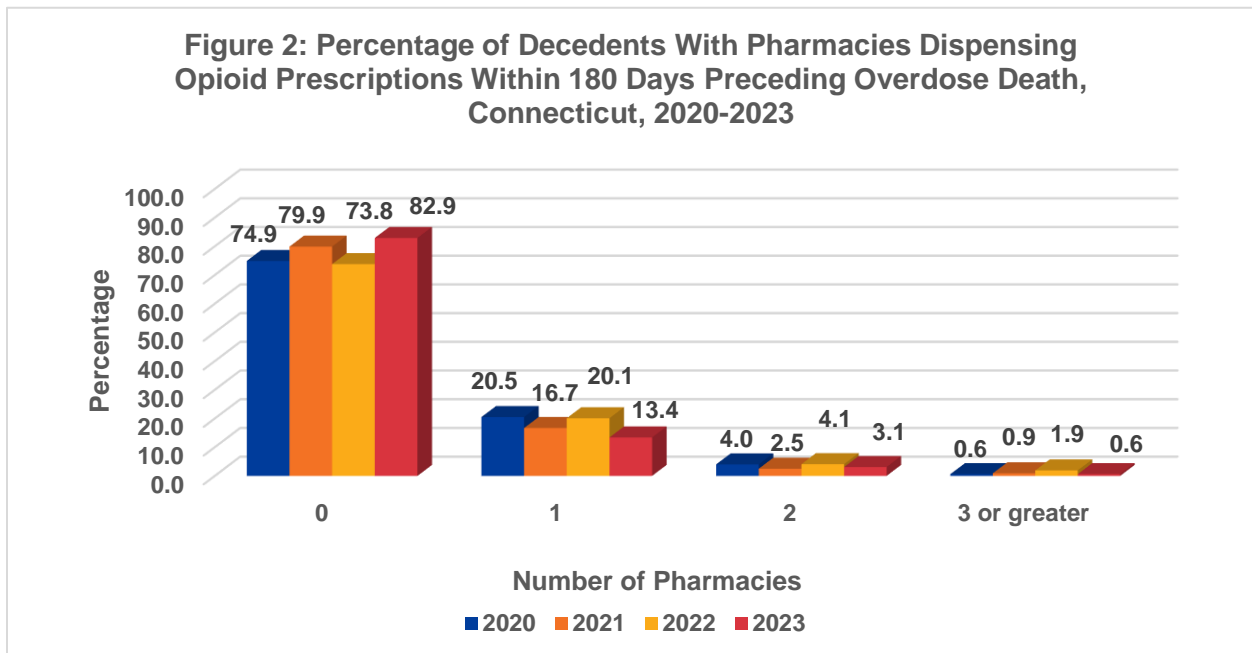
Some decedents had more than one opioid prescription during the 30 days prior to death. The average percentage of decedents having two opioid prescriptions was 2.3% and for three or more opioid prescriptions was 1.4%. Overall, for decedents who had one or more opioid prescriptions, the percentages varied: 12.4% (2020), 8.4% (2021), 13.0% (2022) and 7.8% (2023). Decedents had the lowest percentage of one or more opioid prescriptions in 2023 compared to the other years.

Average number of opioid prescriptions for PDMP-matched drug overdose decedents, Connecticut, 2020-2023: Table 2 below illustrates the average, minimum and maximum number of opioid prescriptions within 30 days prior to drug overdose death, during 2020-2023.

Table-2: Average Number of Opioid Prescriptions for Decedents Within 30 Days Prior to Drug Overdose Death

	2020	2021	2022	2023
Average number of opioid prescriptions	1.7	1.5	1.5	1
Median number	1	1	1	1
Minimum number	1	1	1	1
Maximum number	12	4	5	6

Measure #2: Number of pharmacies dispensing opioid prescriptions within 180 days prior to drug overdose death, 2020-2023: Figure 2 shows the percentage of overdose decedents with one or more pharmacies dispensing opioid prescriptions to decedents between 2020 and 2023. A four-year average of 17.7% of decedents had one pharmacy dispensing opioid prescriptions within 180 days preceding death.



A four-year average of 77.9% of decedents who did not have any pharmacies dispensing opioid prescriptions during the 180 days prior to death. The percentage of decedents with one pharmacy dispensing opioid prescriptions was different each year between 2020 and 2023. Year 2023 had the lowest percentage (13.4%) of decedents who had one pharmacy dispensing opioid prescriptions followed by 2021 (16.7%), 2022 (20.1%) and 2020 (20.5%).

Some decedents had more than one pharmacy dispensing opioid prescriptions within 180 days prior to death. There was no trend identified year over year. In 2020, 4.0% of decedents had two pharmacies dispensing opioid prescriptions, 2.5% in 2021, 4.1% in 2022, and 3.1% in 2023. A lower percentage of decedents had three or more pharmacies dispensing opioid prescriptions, 0.6% in 2020, 0.9% in 2021, 1.9% in 2022 and 0.6% in 2023.

Average number of pharmacies dispensing opioid prescriptions for PDMP-matched drug overdose decedents, Connecticut, 2020-2023: Table 3 illustrates the average, minimum and maximum number of pharmacies dispensing opioid prescriptions during the 180 days prior to drug overdose death between 2020 and 2023.

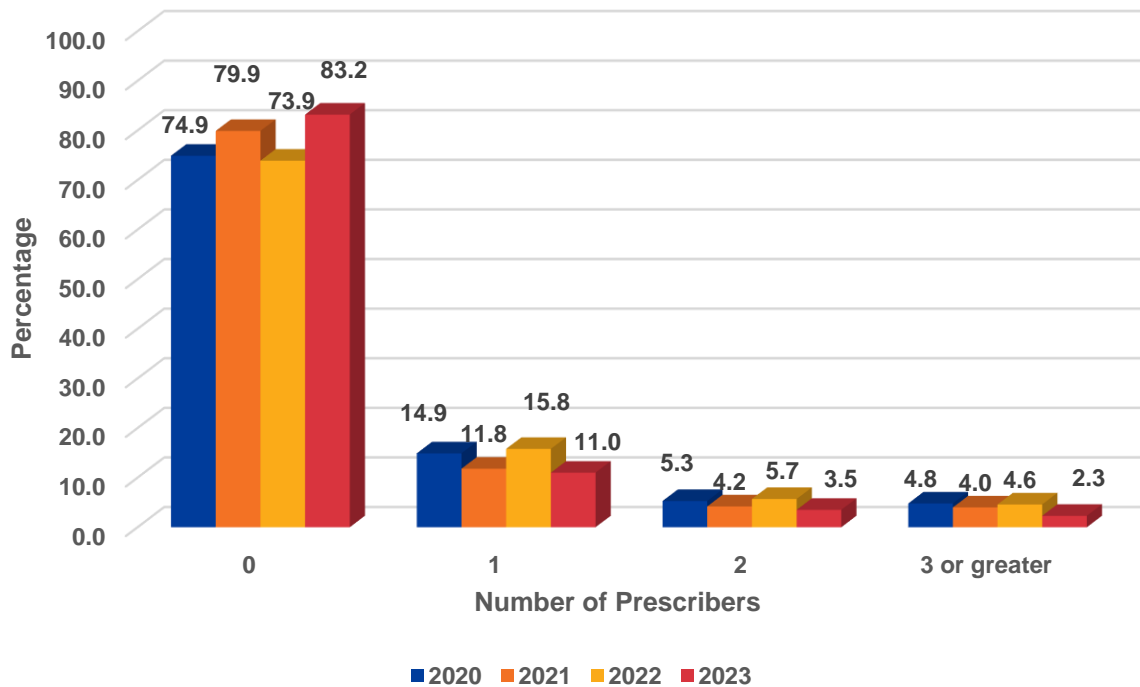
Table 3: Number of Pharmacies Dispensing Opioids to Decedent During the 180 Days Preceding Overdose Death

	2020	2021	2022	2023
Average number of pharmacies	1.2	1.2	1.3	1
Median number	1	1	1	1
Minimum number	1	1	1	1
Maximum number	4	4	4	4

Measure #3: Number of controlled substance prescribers writing opioid prescriptions within 180 days prior to drug overdose death, 2020-2023. Figure 3 shows the percentage of overdose decedents with one or more prescribers writing opioid prescriptions to decedents between 2020 and 2023 and there was no linear trend identified year over year. In 2020, 14.9% of decedents had one controlled substance prescriber writing opioid prescriptions during the 180 days preceding the death, 11.8% in 2021, 15.8% in 2022, and 11.0% in 2023. Overall, 2023 had the lowest percentage of decedents who had only one prescriber writing opioid prescriptions. A four-year average of 78% of decedents did not have a prescriber writing opioid prescriptions during the 180 days prior to death.

Some decedents had more than one prescriber writing opioid prescriptions during the 180 days prior to death. Again, no linear trend was seen year over year. In 2020, 5.3% of decedents had two prescribers writing opioid prescriptions, 4.2% in 2021, 5.7% in 2022, and 3.5% in 2023. Decedents who had three or more prescribers writing opioid prescriptions during the 180 days prior to death amounted to 4.8% in 2020, 4.0% in 2021, 4.6% in 2022 and 2.3% in 2023. Year 2023 had the lowest percentage of decedents with 3 or more prescribers writing opioid prescriptions.

Figure 3: Percentage of Decedents with 1 or More Prescribers Writing Opioid Prescriptions in the 180 Days Preceding Overdose Death, Connecticut, 2020-2023



Average number of prescribers writing opioid prescriptions for PDMP-matched drug overdose decedents, Connecticut, 2020-2023: Table 4 illustrates the average, minimum and maximum number of controlled substance prescribers writing opioid prescriptions during the 180 days prior to drug overdose death between 2020 and 2023.

Table 4: Number of Prescribers Writing Opioid Prescriptions to Decedents During the 180 Days Preceding Overdose Death

	2020	2021	2022	2023
Average number of prescribers	1.8	1.8	1.7	1.1
Median number	1	1	1	1
Minimum number	1	1	1	1
Maximum number	7	9	7	6

Conclusion: PDMP matched data shows that, on average, 10.4% of the matched drug overdose decedents were prescribed one of more opioid prescriptions between 2020 and 2023; 22.1% had one or more pharmacies dispensing opioid prescriptions within 180 days prior to their deaths; and 22.0% had one or more controlled substance prescribers writing opioid

prescriptions within 180 days of their deaths. The data indicate that prescription opioid medications could have contributed to some of the decedents' cause of death as 10.4% of the decedents had an opioid prescription 30 days prior to fatal overdose. Also, some of the decedents were prescribed more than two opioid prescriptions prior to fatal overdose and some decedents had two or more pharmacies dispensing opioid prescriptions within the 180 days prior to their deaths. These results indicate that prescribers and pharmacists need to check the PDMP records of patients and question their opioid prescription history before writing and dispensing opioid prescriptions. And for harm reduction purposes to mitigate the likelihood of an opioid overdose, naloxone needs to be given out to all patients receiving an opioid prescription, especially for those patients with overlapping opioid prescriptions, substantial number of days of the prescription, and/or high daily doses > 50 MME.

Data Sources:

- **Connecticut Prescription Drug Monitoring and Reporting System (i.e., Prescription Monitoring Program):** Connecticut Department of Consumer Protection (DCP)
- **Unintentional and Undetermined Intent Drug Overdose Death Data:** Office of the Chief Medical Examiner (OCME), Connecticut data as per State Unintentional Drug Overdose Reporting System (SUDORS) case definition.

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