

# Linking Prescription Monitoring Program (PMP) Data to Unintentional and Undetermined Intent Drug Overdose Death Data, Connecticut, 2020-2022

## OD2A Surveillance Strategy 3b, Per DPH-DCP MOA Log #2023-0041

Reported by the Injury and Violence Surveillance Unit, Connecticut Department of Public Health, updated on 08-24-2023.

### Overview:

- Death data for unintentional and undetermined intent drug overdoses from 2020-2022 were linked to controlled substance prescription data from up to 180 days prior to death. Prescription data were sourced from the CT Department of Consumer Protection (DCP).
- 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 Monitoring Program (PMP) data and Connecticut State Unintentional Drug Overdose Reporting System (SUDORS) data are linked twice a year with collaborative work between two agencies, the CT Department of Public Health (DPH) and the DCP. The present report includes opioid prescription statistics for unintentional and undetermined intent drug overdose decedents from 2020-2022.
- This report was developed for CDC funded grant, 'Overdose Data to Action (OD2A) grant, Strategy-3b, Innovative Surveillance' and was submitted to CDC on 5/30/2023. Data from this report was presented to ADPC subcommittee (Alcohol and Drug Prevention Committee) which was attended by various agencies, on 8/21/2023.

**Methodology:** The Connecticut DPH and the Office of the Chief Medical Examiner (OCME) partner to share unintentional and undetermined intent drug overdose death data. Decedents' 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 PMP System. A bulk search is conducted by DCP to identify patients 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, PMP 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 PMP analyst for each decedent for the following variables: (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 during the 180 days prior to drug overdose death.

**Results:** Between 2020-2022, there were a total of 4,376 unintentional and undetermined intent drug overdose deaths in Connecticut, of which 3,200 were matched with patients in the PMP system. On average, approximately 73% of the decedents were matched with PMP data between 2020-2022. Table-1 below shows the prescription linkage matching to drug overdose

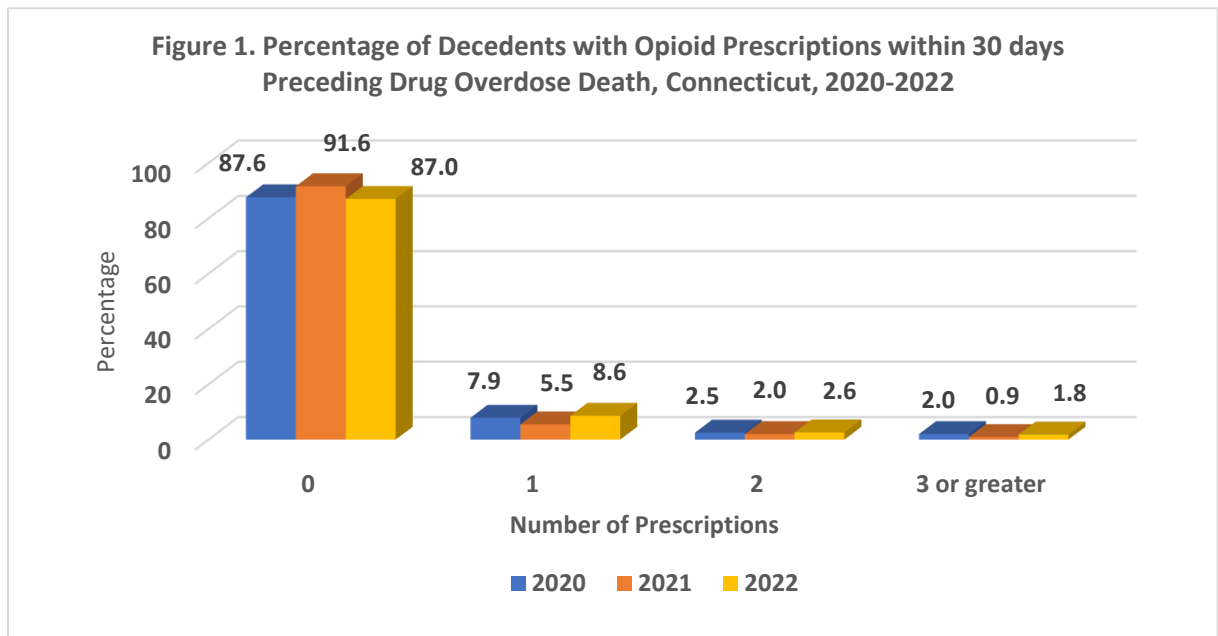
<b>PMP Matching to Death record</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Number of Deaths	1376	1535	1465
Decedents Matched with PMP Record	957 (69.5%)	1225 (79.8%)	1018 (69.5%)
Decedents Not Matched with PMP Record	419 (30.5%)	310 (20.2%)	447 (30.5%)

decedents for the years 2020-2022.

**Table-1: PMP data linkage to unintentional and undetermined intent drug overdose deaths, Connecticut, 2020-2022**

**Measure #1: Number of opioid medications prescribed within 30 days prior to drug overdose death 2020-2022:** Of the PMP matched data, an average of 88.9% of decedents had zero (0) opioid prescriptions during the 30 days preceding death between 2020-2022. The average percentage of decedents who had one opioid prescription during the 30 days before the death was 7.3% during 2020-2022. Of decedents who were matched with the PMP system in 2020, 7.9% had one opioid prescription; in 2021, that percentage was 5.5% and in 2022, it was 8.6%.

Some decedents had more than one opioid prescribed during the 30 days prior to death. The average percentage of decedents having two opioid prescriptions was 2.4% and for three or more opioid prescriptions, it was 1.6%. Overall, for decedents who had one or more opioid prescriptions, the percentages varied from 12.4% during 2020 to 8.4% during 2021 and to 14.9% for 2022. The chart below (Figure 1) shows the percentages of opioid prescriptions written within 30 days before the fatal drug overdose, during the years 2020-2022.



**Average number of opioid prescriptions for PMP matched drug overdose decedents, Connecticut, 2020-2022:** Table-2 below illustrates the average, minimum and maximum number of opioid prescriptions written within 30 days prior to drug overdose death, during 2020-2022.

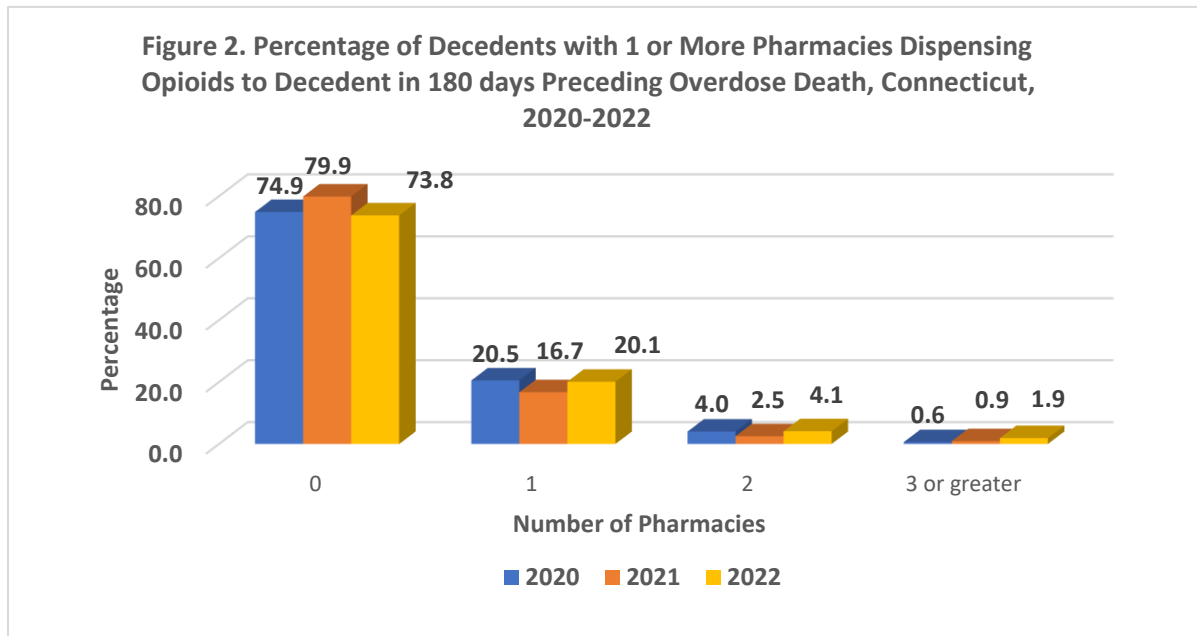
**Table-2: Average number of opioid prescriptions prescribed for decedents within 30 days prior to drug overdose death.**

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

**Measure #2 Number of pharmacies dispensing opioid prescriptions within 180 days prior to drug overdose death, 2020-2022:** Between 2020-2022, 20.5% of decedents had one pharmacy dispensing opioid prescriptions during the 180 days preceding death. That percentage fell to 16.7% in 2021 and rose again to 20.1% in 2022.

Some decedents had more than one pharmacy dispensing opioid prescriptions 180 days prior to death. In 2020, 4% of decedents had two pharmacies dispensing opioid prescriptions, which decreased to 2.5% in 2021 and increased to 4.1% in 2022. A lower percentage of decedents had three or more pharmacies dispensing opioid prescriptions; 0.6% in 2020, 0.9% in 2021 and 1.9% in 2022.

An average of 73.8% of decedents did not have any pharmacies dispensing opioid prescriptions during the 180 days prior to death. Figure 2 shows the percentage of overdose decedents with one of more pharmacies dispensing opioid prescriptions to decedents during 2020-2022.



**Average number of pharmacies dispensing opioid prescriptions for PMP-matched drug overdose decedents, Connecticut, 2020-2022:** Table-3 illustrates the average, minimum and maximum number of pharmacies dispensing opioid prescriptions during the 180 days prior to drug overdose death between 2020-2022.

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

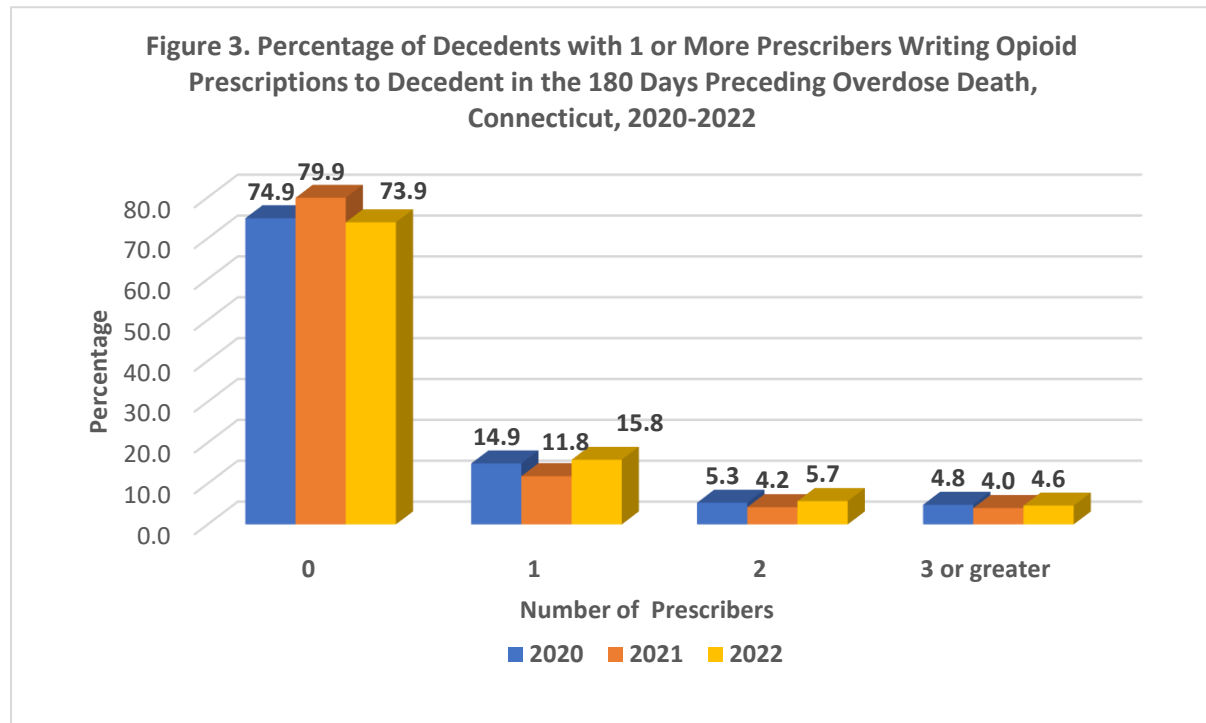
	2020	2021	2022
Average number of pharmacies	1.2	1.2	1.3
Median number	1	1	1
Minimum number	1	1	1
Maximum number	4	4	4

**Measure #3: Number of controlled substance prescribers writing opioid prescriptions within 180 days prior to drug overdose death, 2020-2022.** In 2020, 14.9% of decedents had one

controlled substance prescriber for opioid prescriptions during the 180 days preceding the death, which fell to 11.8% in 2021 and increased to 15.8% in 2022.

Some decedents had more than one prescriber of opioid prescriptions during the 180 days prior to death. In 2020, 5.3% of decedents had two prescribers for opioid prescriptions, which decreased to 4.2% in 2021 and increased to 5.7% in 2022. Decedents who had three or more prescribers for opioid prescriptions during the 180 days prior to death amounted to 4.8% in 2020, 4.0% in 2021, and 4.6% in 2022.

An average of 77.6% of decedents did not have a prescriber for opioid prescriptions during the 180 days prior to death. Figure 3 shows the percentage of overdose decedents with one or more prescribers writing opioid prescriptions to decedents during 2020-2022.



**Average number of prescribers writing opioid prescriptions for PMP-matched drug overdose decedents, Connecticut, 2020-2022:** 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 during 2020-2022.

**Table-4: Number of Prescribers Writing Opioid Prescriptions to Decedents during the 180 days Preceding Overdose Death.**

	2020	2021	2022
Average Number of Prescribers	1.8	1.8	1.7
Median number	1	1	1
Minimum number	1	1	1

Maximum number	7	9	7
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**Conclusion:** PMP matched data shows that on an average 10.5% of the matched drug overdose decedents were prescribed one or more opioid prescriptions between 2020-2022; 23.5% had one or more pharmacies dispensing opioid prescriptions within 180 days prior to their deaths and 23.5% 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. 10.5% 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 PMP 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 Monitoring and Reporting System (i.e., Prescription Monitoring Program):** CT Department of Consumer Protection (DCP)
- **Unintentional and Undetermined Intent Drug Overdose Death Data:** CT Office of the Chief Medical Examiner (OCME), Connecticut data as per State Unintentional Drug Overdose Reporting System (SUDORS) case definition.

**Data as of 8/24/2023.** Created By: Injury and Violence Surveillance Unit,  
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