



Overdose Quarterly Report



County of San Diego Health and Human Services Agency, Public Health Services, Epidemiology and Immunization Service Branch

www.sdepi.org

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Overdose Surveillance Report

Summary

This report provides an overview of statistics regarding fatal and non-fatal drug overdoses in San Diego County. Each quarterly report will include a standard set of figures, updated to the most recent calendar year quarter available (Pages 4-10). In addition, a different specific topic will be featured each quarter. The ‘featured topic’ for this report is fentanyl overdose. In addition to the syndromic emergency department (ED) and mortality data described below, this section includes non-fatal ED and hospitalization (HOSP) discharge data from [California Department of Health Care Access and Information](#) (HCAI). Primary data sources included in this report are:

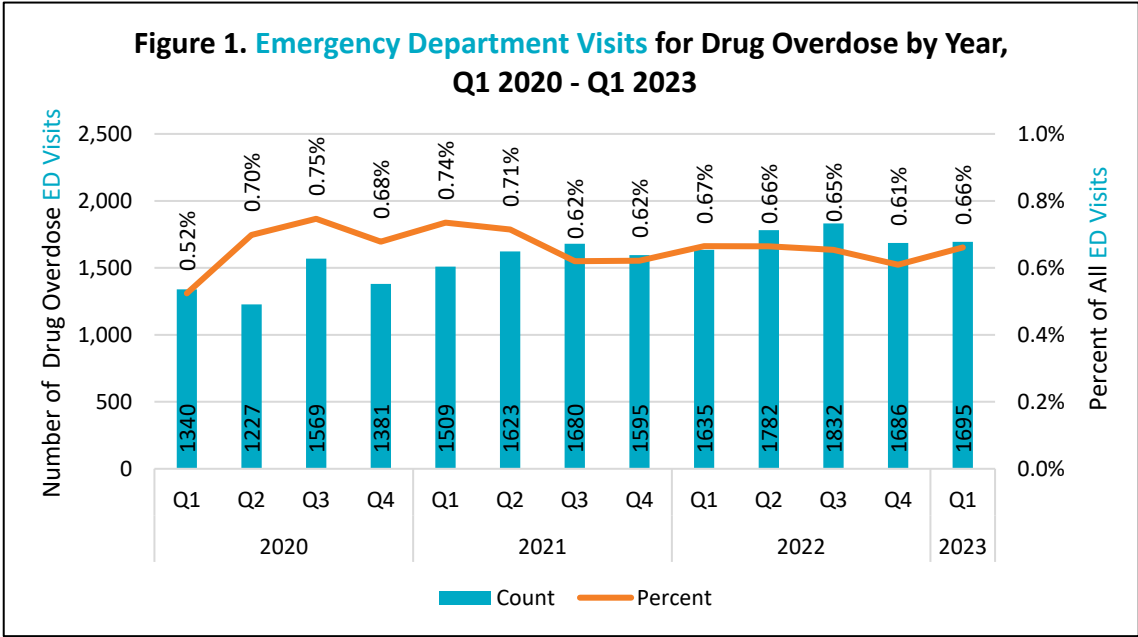
- County of San Diego (County) ED Syndromic Surveillance, which includes chief complaint and some discharge data received daily from 16 of 18 civilian EDs in San Diego County.
 - Unless otherwise noted, the ED data presented in the report are syndromic surveillance data.
 - ICD-10 codes for drug and/or overdose terms are not often available; therefore, word search queries are also used.
 - Syndromic data provide a more timely, though less complete, look at trends than the final ED data from HCAI.
- Mortality data, from the [Vital Records Business Intelligence System](#) (VRBIS), which is managed by the California Department of Public Health.
 - Deaths during the year 2022 are preliminary and subject to change. Data from the most recent quarters are too incomplete to present.
 - Unless otherwise noted, deaths are among San Diego County residents only.

Overview

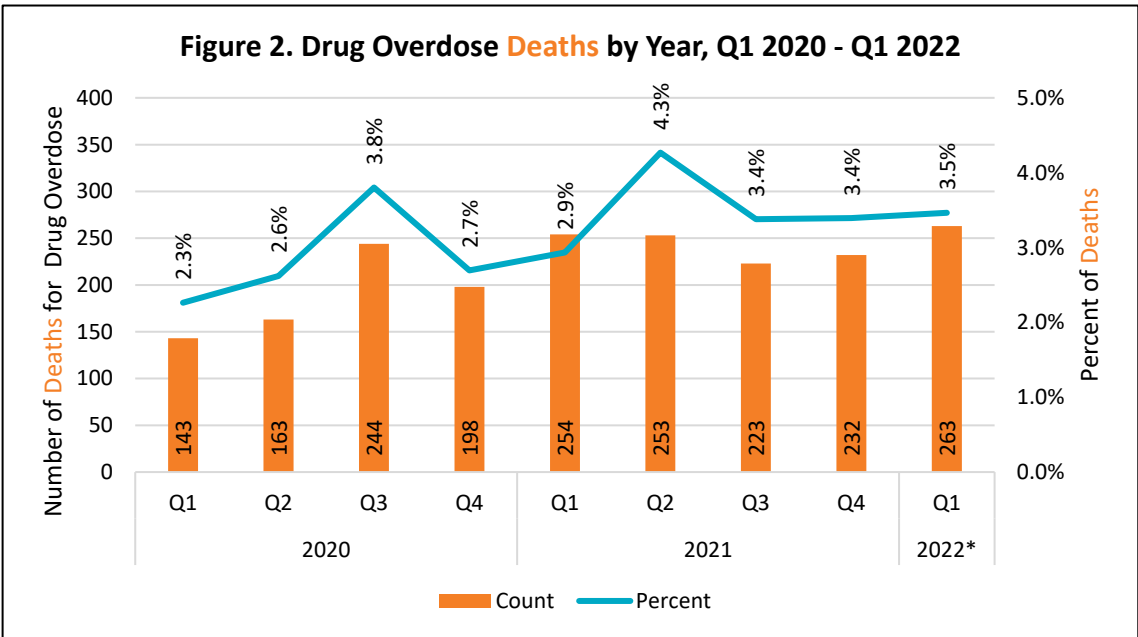
- Overall drug overdose deaths increased from Q1 2020 to Q1 2022.
- The numbers of all drug overdose and opioid overdose related ED visits increased by 26% and 87%, respectively from Q1 2020 to Q1 2023.
- Opioid and fentanyl overdose deaths increased 94% and 131%, respectively from Q1 2020 to Q1 2021, and remained stable at the higher level throughout 2021.
- Both opioid overdose ED visits and deaths are higher among males and the gender differential has increased since Q1 2020.
- The age-adjusted rates for opioid overdose ED visits and deaths is highest amongst those aged 25-59 years. The increase since the beginning of 2020 has primarily been in this age group.
- In the most recently available data, the age-adjusted rates for opioid overdose ED visits and deaths was highest among residents in the Health and Human Services Agency (HHSA) East and Central Regions.



Drug Overdoses by Year and Quarter



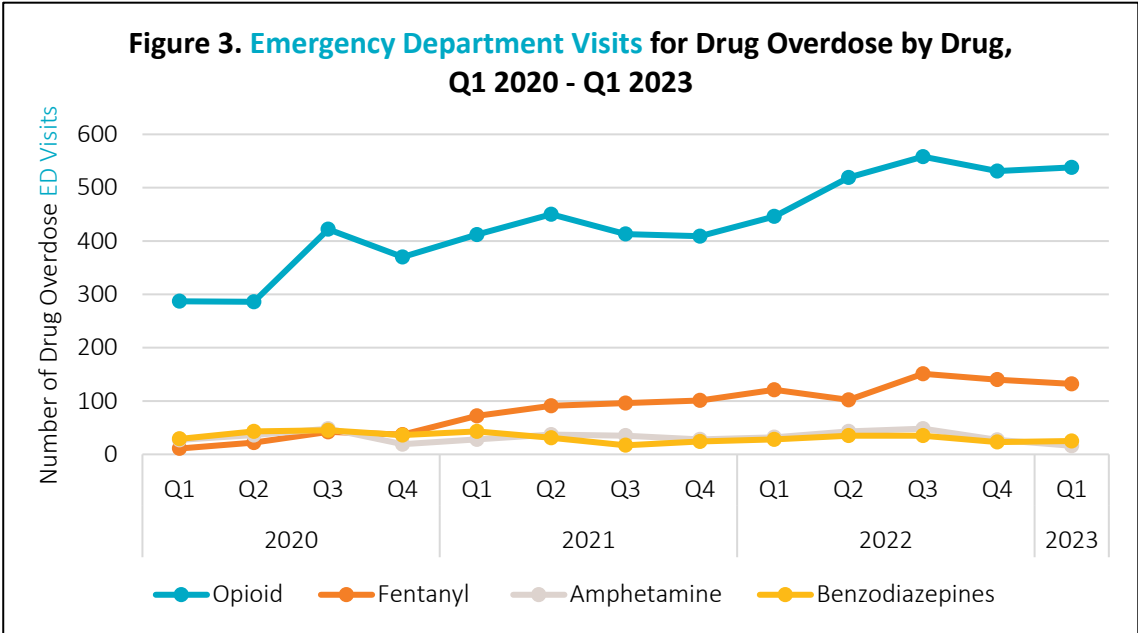
County of San Diego ED Syndromic Surveillance Data.



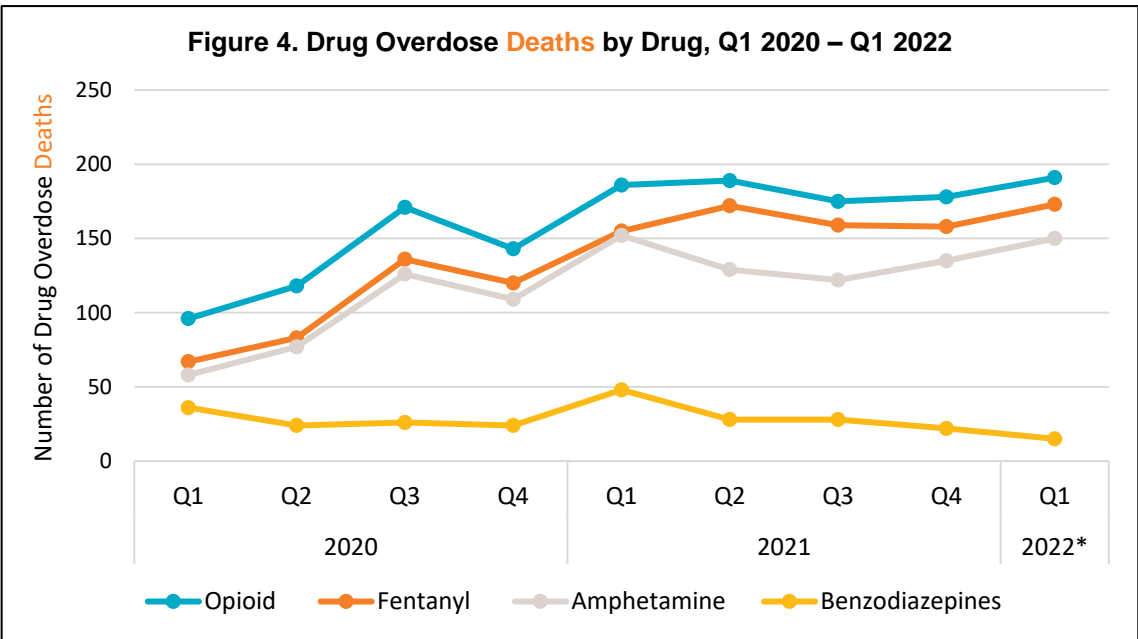
*Data from 2022 are preliminary and may change as new/updated information is received. Data obtained on 4/10/2023.



Drug Overdoses by Drug



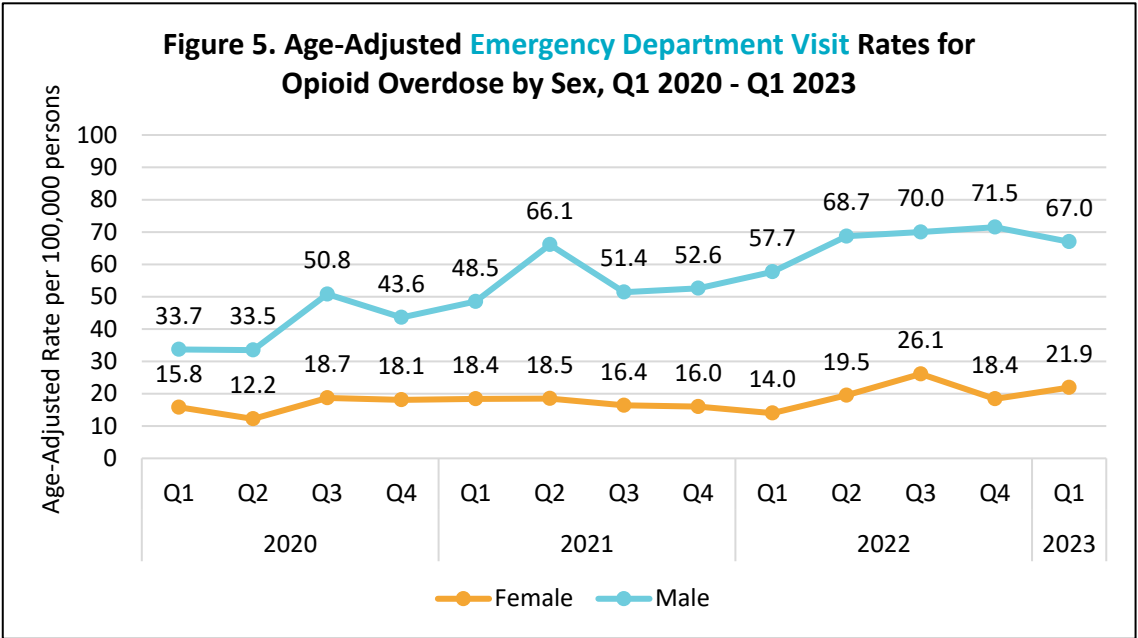
County of San Diego ED Syndromic Surveillance Data. Many chief complaints do not include a specific drug.



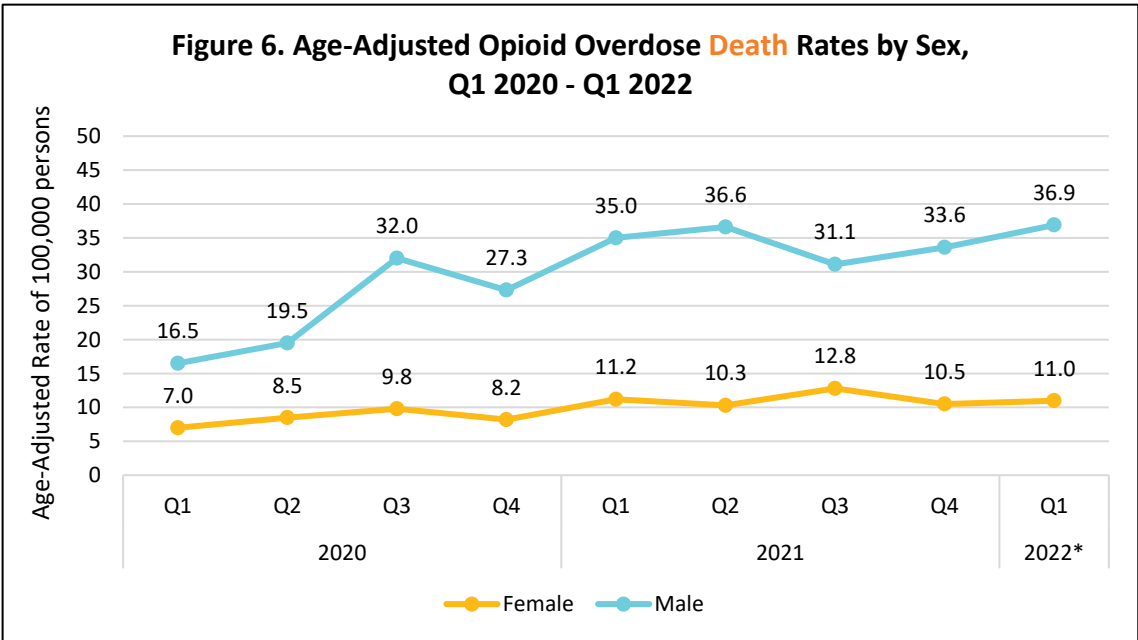
*Data from 2022 are preliminary and may change as new/updated information is received. Data obtained on 4/10/2023.



Opioid Overdoses by Sex



County of San Diego ED Syndromic Surveillance Data.

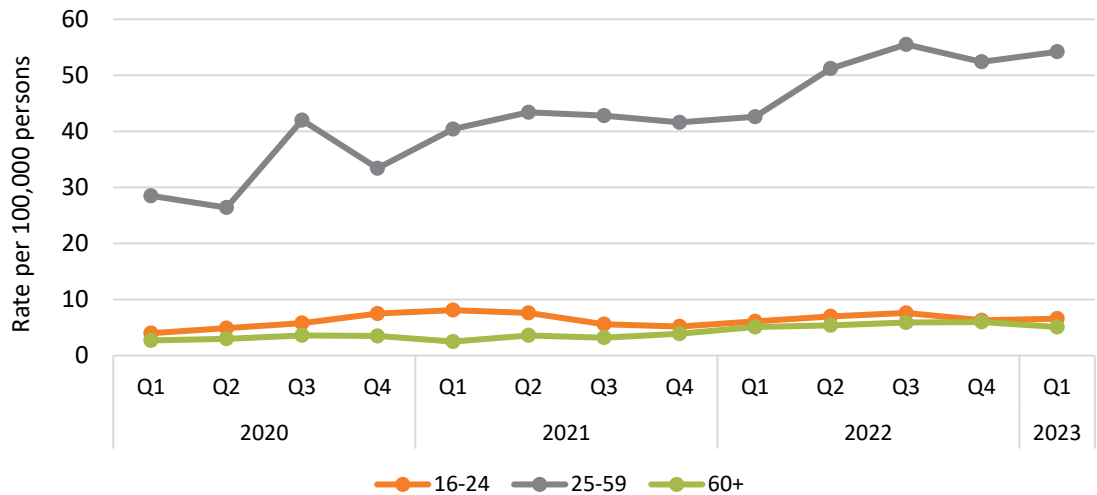


*Data from 2022 are preliminary and may change as new/updated information is received. Data obtained on 4/10/2023.



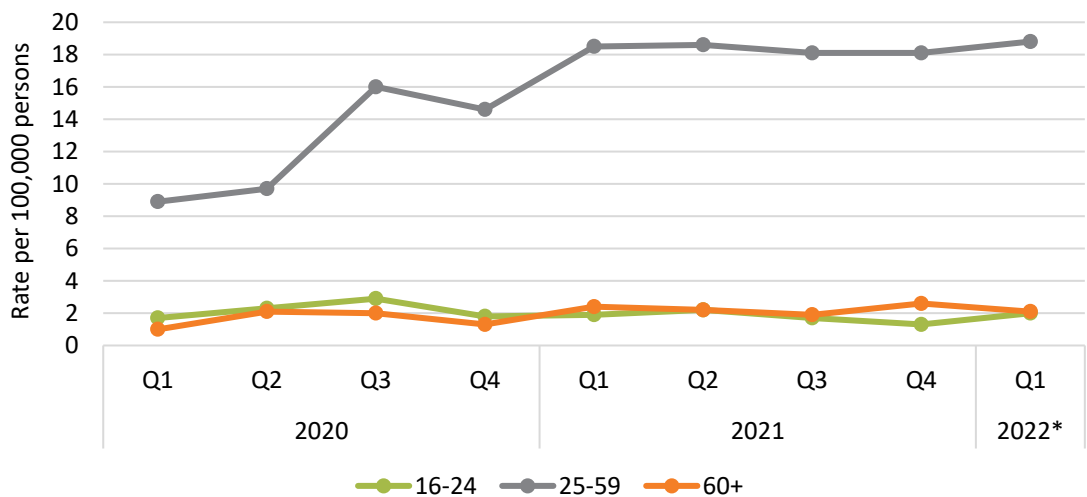
Opioid Overdoses by Age

Figure 7. Emergency Department Visit Rates for Opioid Overdose by Age, Q1 2019 - Q1 2023



County of San Diego ED Syndromic Surveillance Data.

Figure 8. Opioid Overdose Death Rates by Age, Q1 2020 - Q1 2022

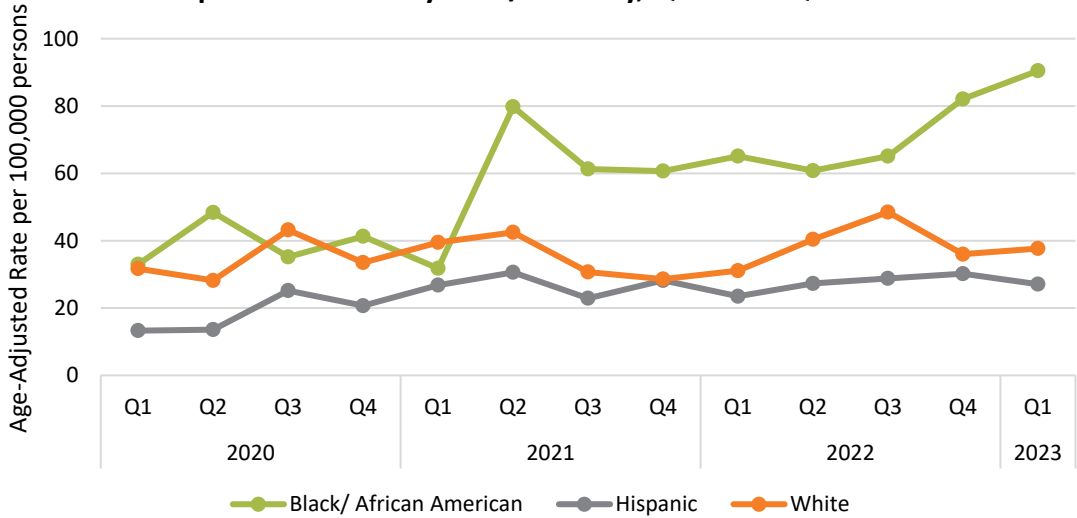


*Data from 2022 are preliminary and may change as new/updated information is received. Data obtained on 4/10/2023.



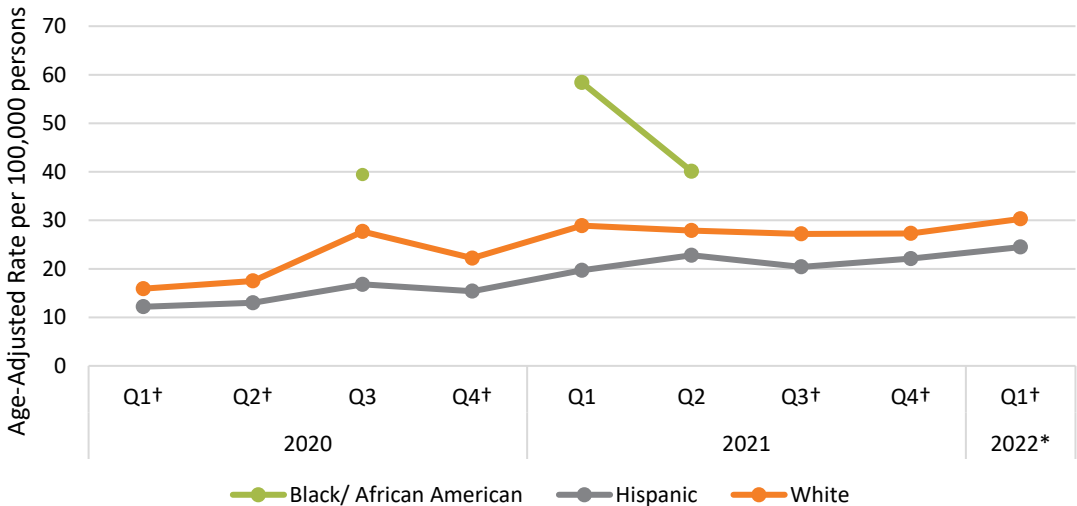
Opioid Overdoses by Race/Ethnicity

Figure 9. Age-Adjusted Emergency Department Visit Rates for Opioid Overdose by Race/Ethnicity, Q1 2020 - Q1 2023



Note: Data for other racial/ethnicity groups cannot be presented due to small numbers (<15).
County of San Diego ED Syndromic Surveillance Data.

Figure 10. Age-Adjusted Opioid Overdose Death Rates by Race/Ethnicity, Q1 2020 - Q1 2022



Note: Data for other racial/ethnicity groups cannot be presented due to small numbers (<15).
*Data from 2022 are preliminary and may change as new/updated information is received. Data obtained on 4/10/2023.
† Data for African American not presented for Q1, Q2, Q4 2020 and Q3 & Q4 2021, and Q1 2022 due to counts <15.

Opioid Overdoses by Region of Residence

Figure 11. Age-Adjusted **Emergency Department Visit** Rates for Opioid Overdose by Region of Residence, Q1 2023

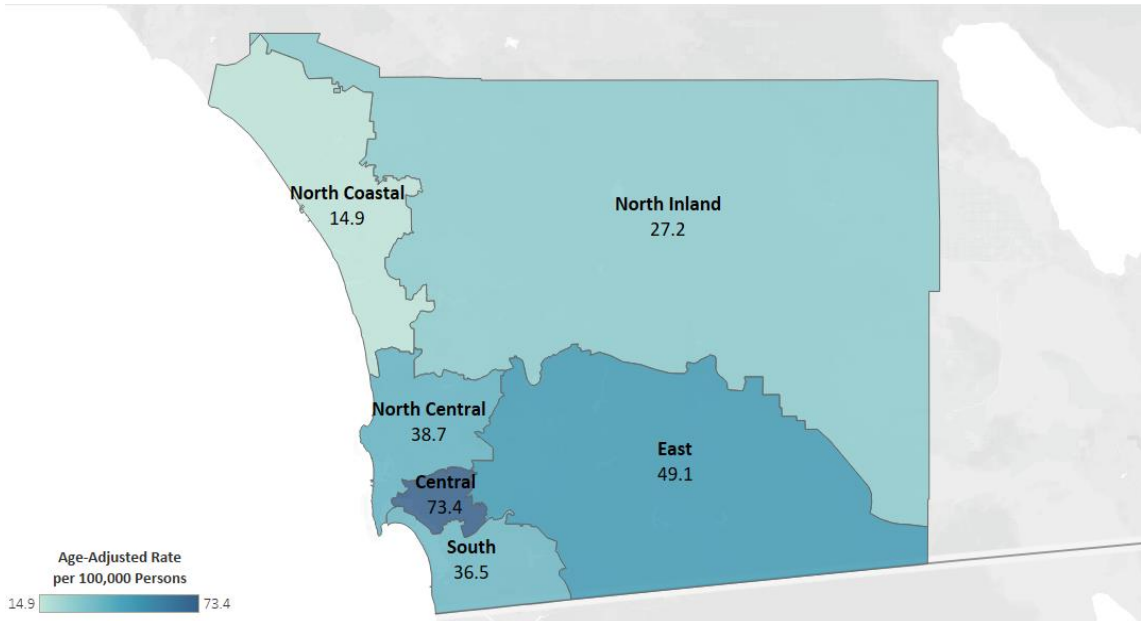
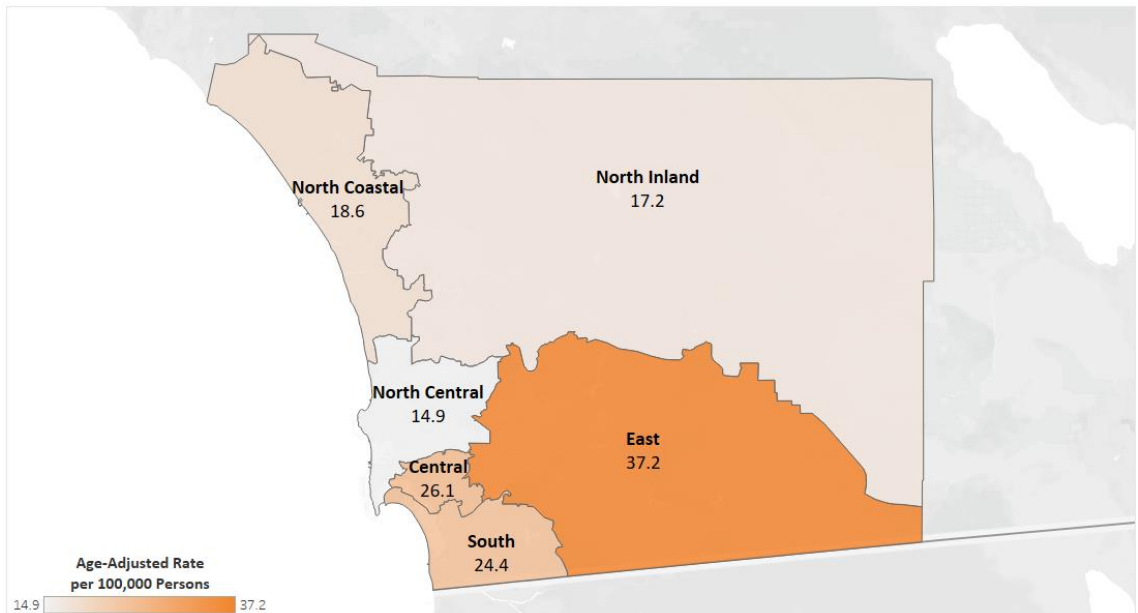


Figure 12. Age-Adjusted Opioid Overdose **Death** Rates by Region of Residence, Q1 2022





Opioid Overdoses by Demographics

Table 1. Number of Emergency Department Visits* for Opioid Overdose, Trends and Change by Quarter

	2021 Q1	2022 Q1	2023 Q1	Percent Change 2022 to 2023
	N (%)	N (%)	N (%)	%
Total Opioid Overdose Visits	412 (100)	446 (100)	538 (100)	+35
HHS Region of Residence				
North Coastal	42 (14)	18 (11)	19 (6)	+6
North Central	62 (21)	21 (12)	63 (20)	+200
Central	71 (24)	66 (39)	95 (30)	+44
South	41 (14)	25 (15)	44 (14)	+76
East	39 (13)	13 (8)	53 (17)	+308
North Island	45 (15)	28 (16)	39 (12)	+39
Unknown	112	275	225	
Sex				
Female	73 (27)	60 (20)	88 (24)	+47
Male	201 (73)	243 (80)	280 (76)	+15
Unknown	138	143	170	
Age Group[†]				
16-24	73 (18)	55 (13)	59 (11)	+7
25-59	303 (75)	320 (74)	407 (78)	+27
60+	27 (7)	56 (13)	56 (11)	0
Race/Ethnicity[†]				
Black/African American	†	27 (13)	36 (15)	+33
Hispanic	74 (35)	64 (31)	74 (30)	+16
White	137 (65)	116 (56)	134 (55)	+16
Unknown	155	209	253	

*County of San Diego ED Syndromic Surveillance Data .

† Data for other demographic groups cannot be presented due to small numbers (<15).



Feature Topic: Fentanyl Overdoses

Summary

Fentanyl is a synthetic opioid that is used to treat severe pain, such as advanced cancer pain, and is up to 50 times more potent than heroin and 100 times more potent than morphine. Fentanyl can be illicitly manufactured and produced in illegal laboratories and is sometimes mixed with other drugs (e.g., heroin, cocaine, and methamphetamine). Although fentanyl is also used intentionally, in some cases, people who use drugs may not be aware that fentanyl is in their drug supply, which can lead to overdose or death due to its potency.¹ From 2019 to 2020, rates of overdose deaths due to synthetic opioids (including fentanyl and fentanyl analogs) increased 56% in the United States.² Based on preliminary 2021 data, 84% of opioid-related overdose deaths in California were related to fentanyl.³ This section of the report will focus on trends of fatal and non-fatal fentanyl overdoses within San Diego County using the following data sources:

- County of San Diego (County) Emergency Department Syndromic Surveillance, prepared by the County Epidemiology and Immunization Services Branch.
- Mortality data from the [Vital Records Business Intelligence System](#) (VRBIS), which is managed by the California Department of Public Health.
- Non-fatal ED and non-fatal inpatient hospitalization (HOSP) discharge data from [California Department of Health Care Access and Information](#) (HCAI), previously California's Office of Statewide Health Planning and Development (OSHPD). Fentanyl-specific data from this source are only available starting in 2021.

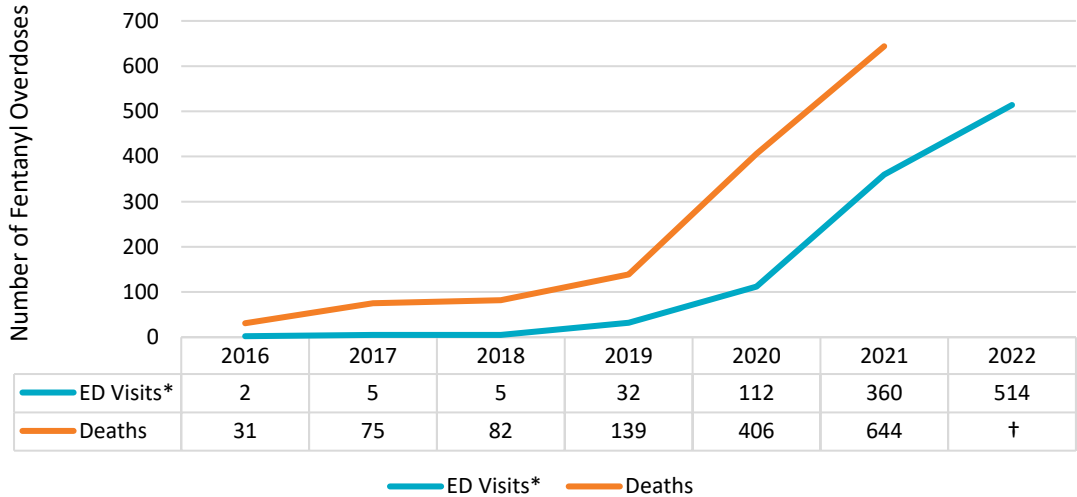
Overview

- Coding for fentanyl is not as complete or specific in the syndromic ED data as the HCAI ED data.
 - In 2021, there were 360 ED visits for fentanyl overdoses in the syndromic surveillance data and twice as many (743) in the HCAI data.
 - However, unlike HCAI data, syndromic ED data can be monitored close to real-time. Keeping in mind the difference in magnitude, syndromic data are useful for monitoring trends.
- From 2016 through 2021, 1,377 deaths were attributed to fentanyl overdose.
- In 2021:
 - The demographic groups with the highest age-adjusted rates of fentanyl-related ED visits, hospitalizations, and deaths were those aged 25-59, males, and persons of Black/African American race.
 - Nearly half of fentanyl overdose deaths took place in the decedent's home.
 - Residents of other jurisdictions accounted for 17% of fentanyl overdose deaths in San Diego County.
 - 50% of fentanyl overdose deaths were among those with only a high school diploma, followed by 23% among those with some college.
- Fentanyl overdose deaths increased 59% from 2020 to 2021.
- ED visits for fentanyl overdose increased 43% from 2021 to 2022.



Fentanyl Overdoses

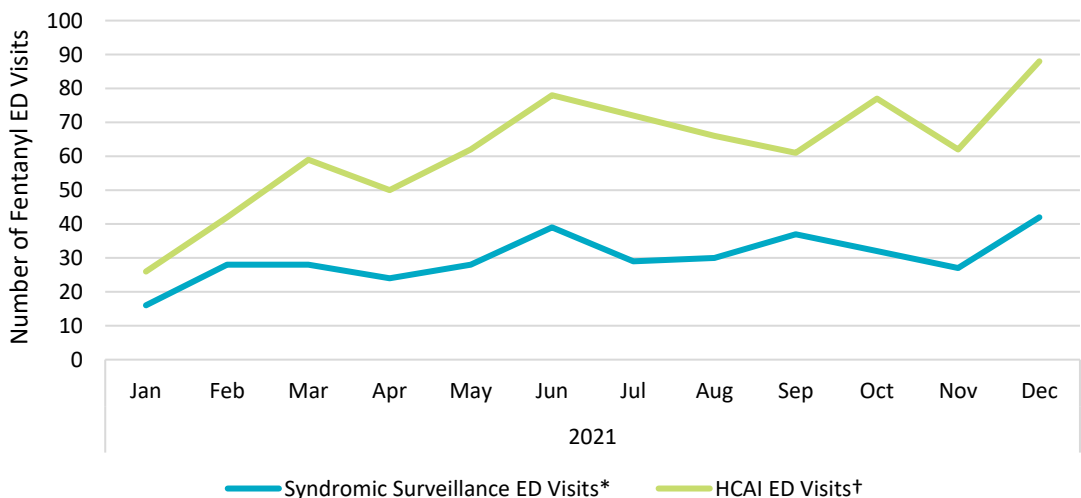
Figure 13. Fentanyl Overdose Syndromic Surveillance ED Visits* and Deaths by Year



*County of San Diego ED Syndromic Surveillance Data.

† Mortality data for 2022 are not yet available.

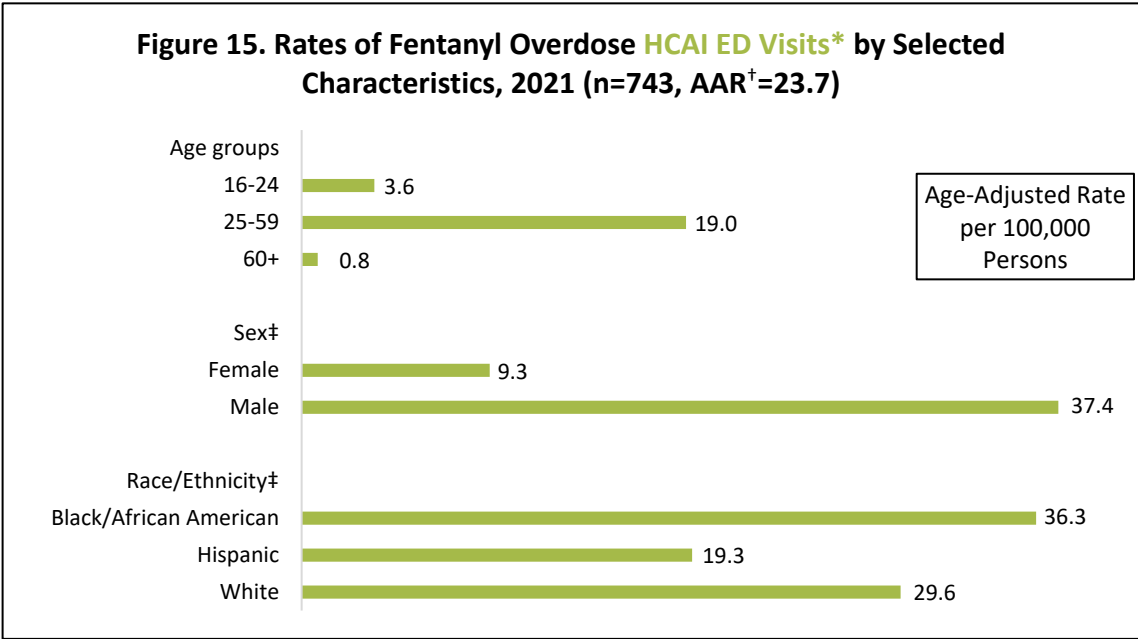
Figure 14. Syndromic Surveillance ED Visits* and HCAI ED Visits†, 2021



*County of San Diego ED Syndromic Surveillance Data.

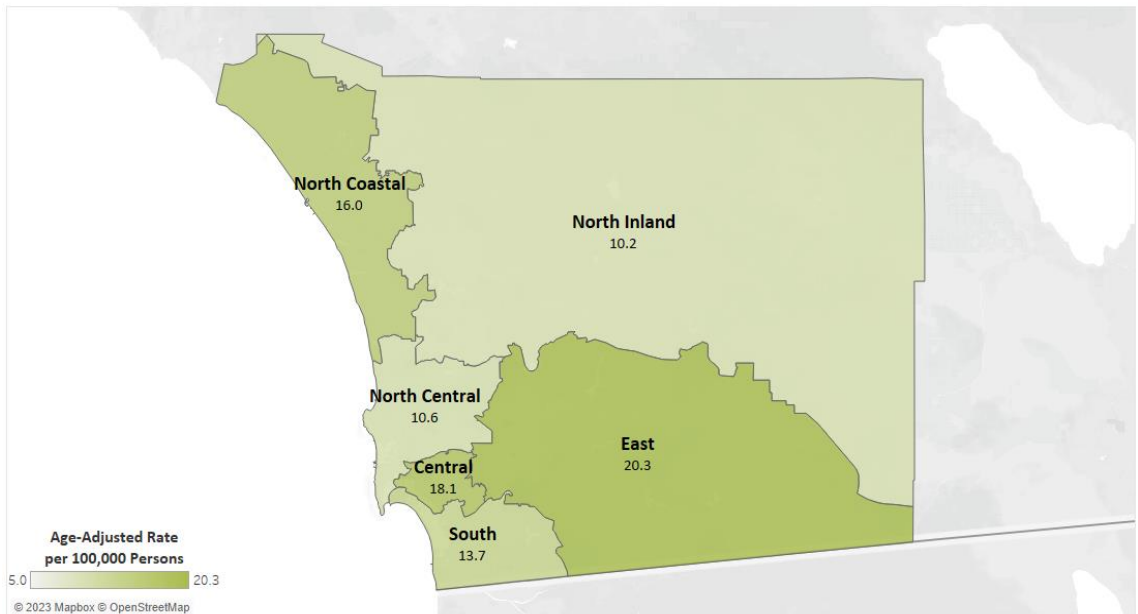
† HCAI, formerly the Office of Statewide Health Planning and Development.

Fentanyl Overdoses by Demographics, 2021



Note: Data for other demographic groups cannot be presented due to small numbers (<15).
 *HCAI, formerly the Office of Statewide Health Planning and Development. Non-fatal ED visits only.
[†]Age-Adjusted Rates (AAR).
[‡]Rates by sex and race/ethnicity are age-adjusted.

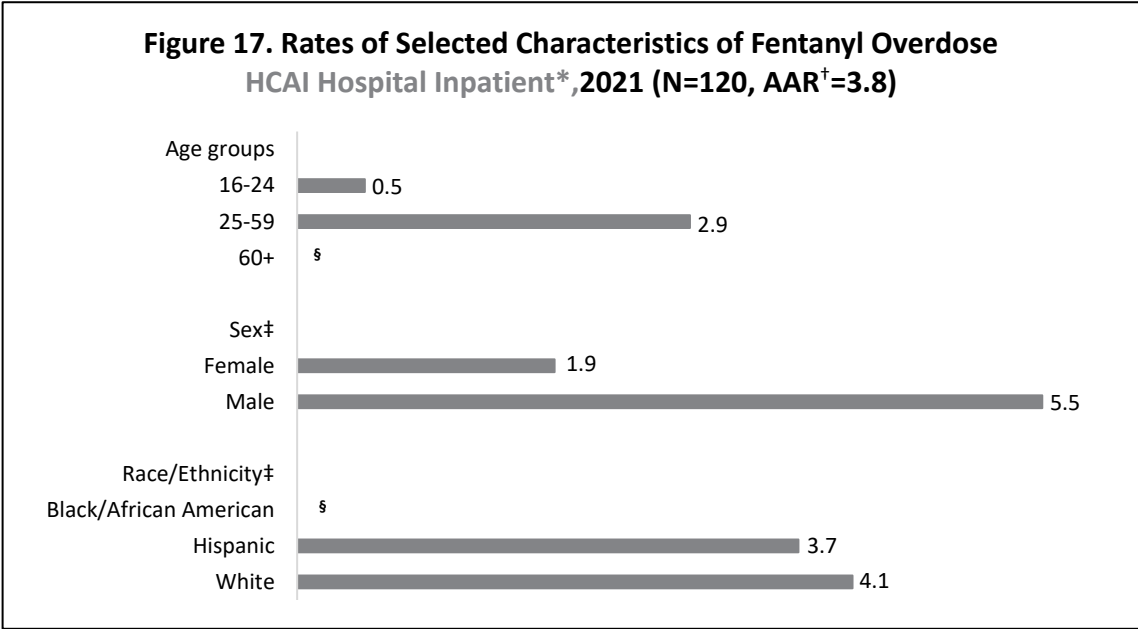
Figure 16. Age-Adjusted HCAI ED Visit* Rates for Fentanyl Overdose by Region of Residence, 2021



*HCAI, formerly the Office of Statewide Health Planning and Development. Non-fatal ED visits only.



Fentanyl Overdoses by Demographics, 2021



Note: Data for other demographic groups cannot be presented due to small numbers (<15).

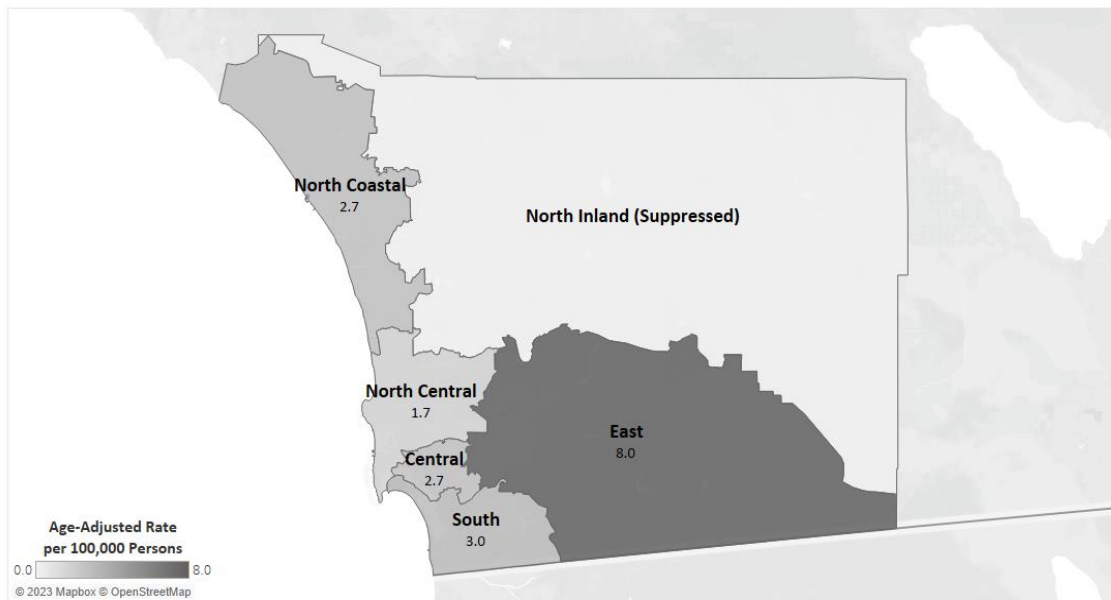
*HCAI, formerly the Office of Statewide Health Planning and Development. Non-fatal ED visits only.

†Age-Adjusted Rates (AAR).

‡Rates by sex and race/ethnicity are age-adjusted.

§Data for African American and age group 60+ not presented for 2021 due to counts <15.

Figure 18. Age-Adjusted HCAI Hospitalization* Rates for Fentanyl Overdose by Region of Residence, 2021



*HCAI, formerly the Office of Statewide Health Planning and Development. Non-fatal inpatient hospitalizations only.

Fentanyl Overdoses by Demographics

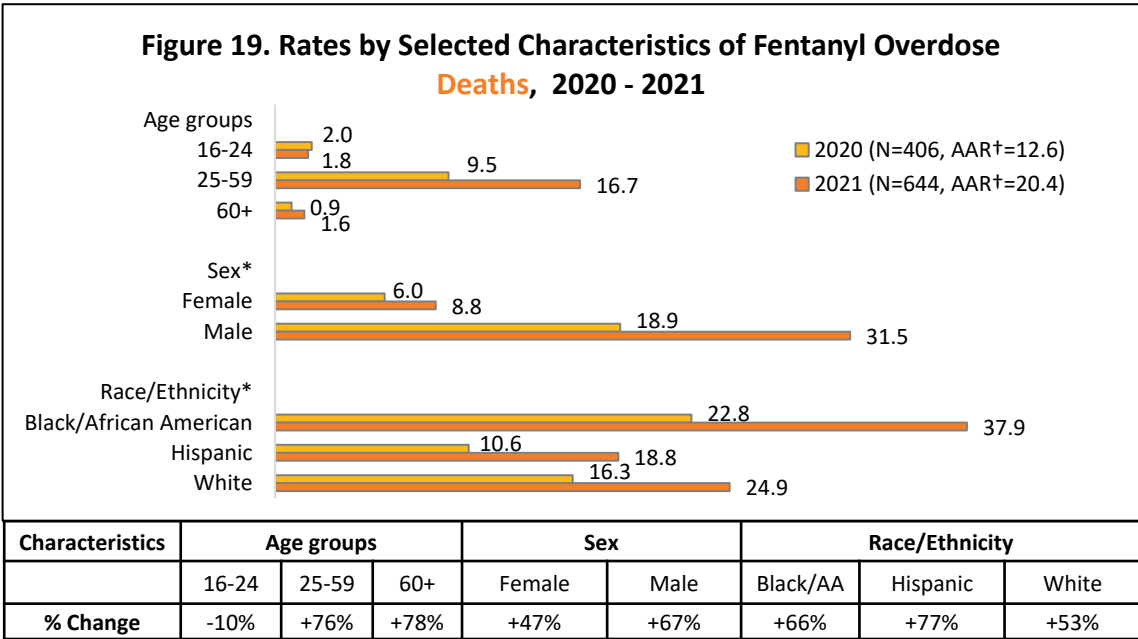


Figure 20. Age-Adjusted Fentanyl Overdose Death Rates by Region of Residence, 2021



Fentanyl Overdose Deaths

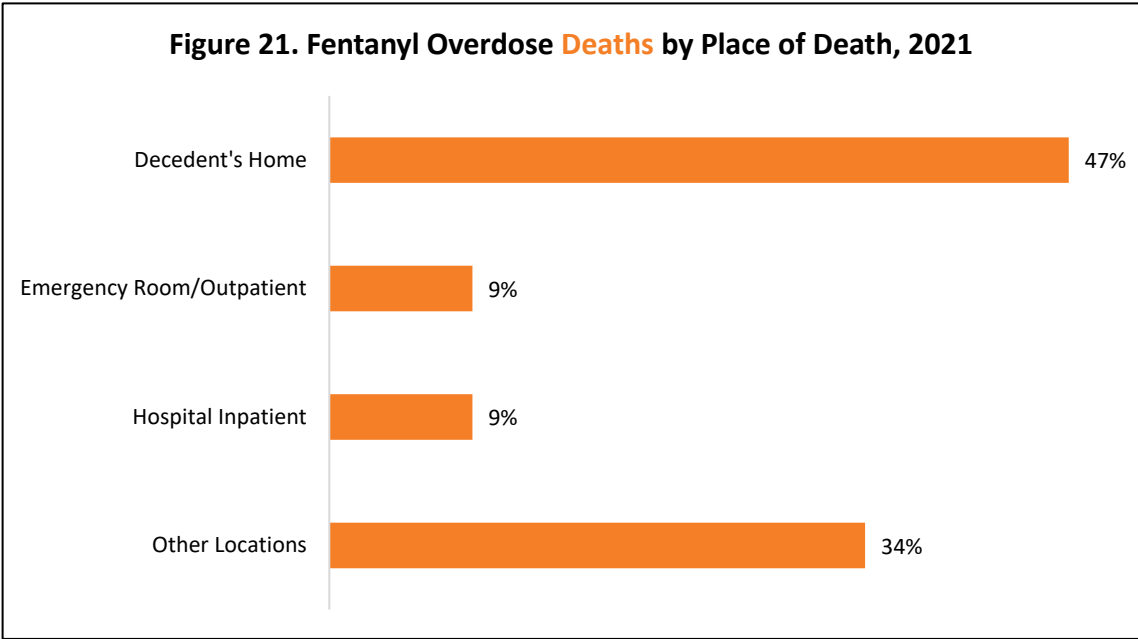


Figure 22. Fentanyl Overdose Deaths in San Diego County, 2021

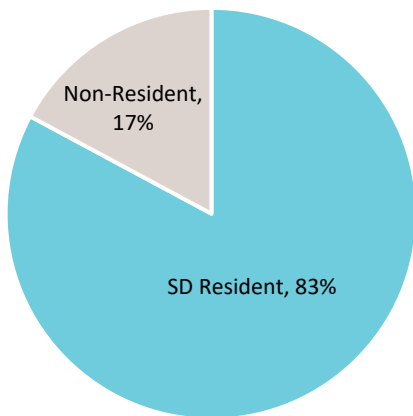
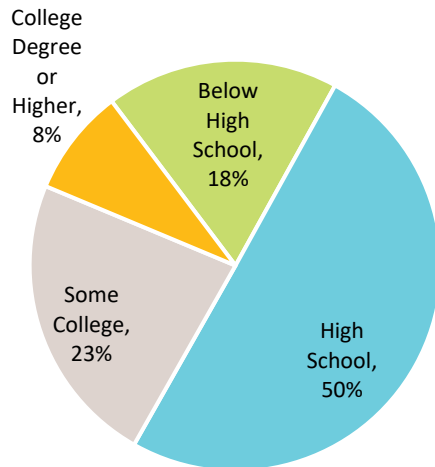


Figure 23. Fentanyl Overdose Deaths Among San Diego Residents by Education Level, 2021





Definitions

Quarters are based upon calendar year and are defined as followed:

- Quarter 1 (Q1): January 1 – March 31
- Quarter 2 (Q2): April 1 – June 30
- Quarter 3 (Q3): July 1 – September 30
- Quarter 4 (Q4): October 1 – December 31

Case definitions for syndromic surveillance data:

- *Any Drug Overdose*: Encounters with ICD-10 diagnosis codes for poisoning by drugs (T36-T50). If the diagnosis field is blank, then any drug overdoses are identified using a text search algorithm for words related to overdose, any drug type, or naloxone.
- *Opioid Overdoses*: Encounters with ICD-10 diagnosis codes for poisoning by opioids (T40.0X, T40.1X, T40.2X, T40.3X, T40.4, T40.60, T40.69). If the diagnosis is blank, then opioid overdoses are identified using a text search algorithm for words related to general opioids, overdose, heroin, fentanyl, and naloxone.
- *Fentanyl Overdoses*: Encounters with ICD-10 diagnosis code for poisoning by fentanyl (T40.41). If the diagnosis is blank, then fentanyl overdoses are identified using a text search algorithm for words related to fentanyl and overdose.
- *Amphetamine Overdoses*: Encounters with ICD-10 diagnosis code for poisoning by amphetamines (T43.62). If the diagnosis is blank, then amphetamine overdoses are identified using a text search algorithm for words related to amphetamine and overdose.
- *Benzodiazepine Overdoses*: Encounters with ICD-10 diagnosis code for poisoning by benzodiazepine (T42.4X). If the diagnosis is blank, then benzodiazepine overdoses are identified using a text search algorithm for words related to benzodiazepine and overdose.

Case definitions for mortality data (per [CDPH Overdose Surveillance Dashboard](#)):

- *Any Drug Overdose*: All overdose deaths, regardless of intent (e.g., unintentional, suicide, assault, or undetermined). This indicator does not include: (1) deaths related to chronic use of drugs (e.g., damage to organs from long-term drug use), 2) deaths due to alcohol and tobacco, and 3) deaths that occur under the influence of drugs, but do not involve acute poisoning. Deaths with any of the following ICD-10 codes as the underlying cause of death: X40-X44: Accidental poisonings by drugs; X60-X64: Intentional self-poisoning by drugs; X85: Assault by drug poisoning; Y10-Y14: Drug poisoning of undetermined intent.
- *Opioid Overdose*: Any opioid as a contributing cause of death, regardless of intent. Opioids include both prescription opioid pain relievers such as hydrocodone, oxycodone, and morphine, as well as heroin and opium. Deaths related to chronic use of drugs are excluded from this indicator. ICD-10 codes include: T40.0: Opium; T40.1: Heroin; T40.2: Natural and semisynthetic opioids; T40.3: Methadone; T40.4: Synthetic opioids, other than methadone; T40.6: Other and unspecified narcotics.
- *Fentanyl Overdoses*: Drug overdose deaths caused by acute poisonings that involve fentanyl or fentanyl analogs as a contributing cause of death, regardless of intent. Deaths related to chronic use of drugs are excluded from this indicator. Overdose deaths involving fentanyl and associated analogs were identified by using a text search algorithm.



Definitions

- *Amphetamine Overdoses*: Drug overdose deaths caused by acute poisonings that involve psychostimulants with abuse potential excluding cocaine (T40.5), regardless of intent. Psychostimulants with abuse potential include methamphetamine, MDMA, dextroamphetamine, and levoamphetamine. Deaths related to chronic use of drugs are excluded from this indicator. Overdose deaths involving amphetamine and associated analogs were identified by using a text search algorithm.
- *Benzodiazepine Overdoses*: Drug overdose deaths caused by acute poisonings that involve benzodiazepines as a contributing cause of death, regardless of intent. Benzodiazepines include anti-anxiety medications such as alprazolam (Xanax) and lorazepam (Ativan). Deaths related to chronic use of drugs are excluded from this indicator. Overdose deaths involving benzodiazepine and associated analogs were identified by using a text search algorithm.

Case definitions for HCAI ED visits and HCAI Hospitalizations (per [CDPH Overdose Surveillance Dashboard](#)):

- *Fentanyl Overdoses*: ED visits or inpatient hospitalizations caused by non-fatal acute poisonings due to the effects of fentanyl or fentanyl analogs, regardless of intent. ED visits or inpatient hospitalizations related to late effects, adverse effects, and chronic poisonings due to the effects of drugs (e.g., damage to organs from long-term drug use) are excluded from this indicator. This indicator is only available beginning in 2021. ICD-10 codes include: T40.41.

Limitations

- Overdoses that result in ED visits, hospitalizations, or deaths represent only a portion of the overall burden of drug overdoses.
- The accuracy of indicators based on ICD-10-CM codes found in syndromic surveillance ED visit data is limited by the completeness and quality of reporting and coding.
- Syndromic surveillance chief complaint is recorded as a free text field and captures the patient's primary reason for seeking medical care in near real-time; this may lack content that could assist public health with interpretation of the reason for visit.

References

1. Fentanyl Facts. Centers for Disease Control and Prevention, 23 Feb. 2022, [Fentanyl Facts \(cdc.gov\)](#) .
2. Fentanyl . Centers for Disease Control and Prevention, 14 Jun. 2022, [Fentanyl | Opioids | CDC](#)
3. Fentanyl & Overdose Prevention. California Department of Public Health, 6 Oct. 2022, [Fentanyl & Overdose Prevention \(ca.gov\)](#)