

## Drug Overdose Quarterly Report Quarter 4: October–December 2023



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

[www.sdepi.org](http://www.sdepi.org)

**March 2024**



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## Drug Overdose Surveillance Report

### Introduction and Sources

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 2-8). In addition, a different specific topic will be featured each quarter. The 'featured topic' for this report is drug overdoses by California Healthy Places Index (Pages 9-14).

Primary data sources included in this report are:

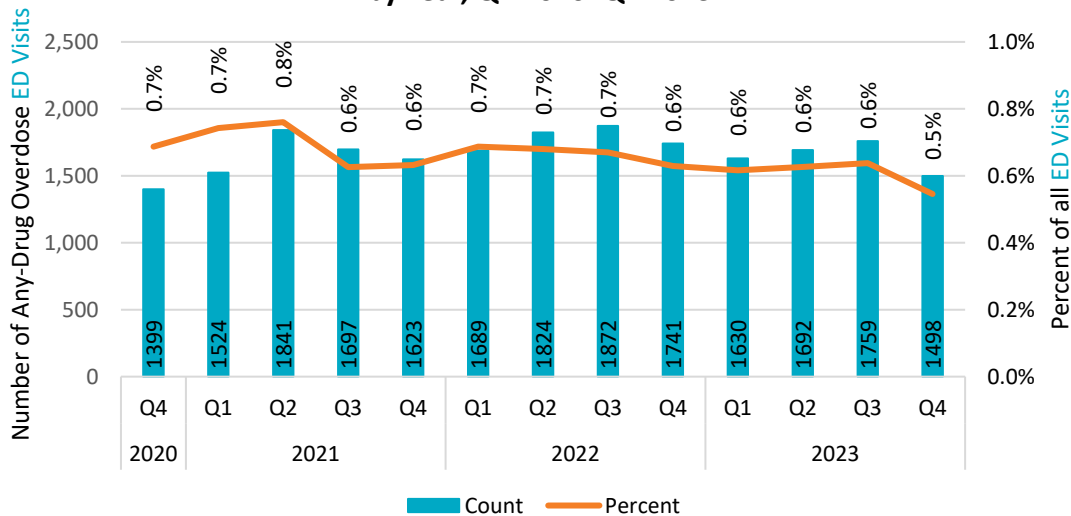
- County of San Diego (County) Emergency Department (ED) Syndromic Surveillance includes chief complaint and some discharge data received daily from 16 of 18 civilian EDs in San Diego County.
  - Unless otherwise noted, the ED data presented in the report are syndromic surveillance data.
  - ICD-10 codes for drug and/or overdose terms are not often available; therefore, word search queries are also used. Word search queries are reviewed and updated periodically; data may change to reflect these updates.
  - Syndromic data provide a more timely, though less complete, look at trends than the final ED data from [California Department of Health Care Access and Information](#) (HCAI).
- Mortality data are from the [Vital Records Business Intelligence System](#) (VRBIS), which is managed by the California Department of Public Health.
  - Deaths during the year 2023 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

- The numbers of any-drug overdose and opioid overdose related ED visits increased by 7% and 13%, respectively from Q4 2020 to Q4 2023 (Figure 3).
- In the first two quarters of 2023 preliminary data, 75% of overdose deaths were opioid-related (Figure 4).
- In Q4 2023, opioid overdose ED visits were 2.5 times higher among males compared to females (Figure 5); in Q2 2023, opioid overdose deaths were 3.7 times higher among males compared to females (Figure 6).
- The age-specific rates for opioid overdose ED visits and deaths are highest among those aged 25-34 and 35-44 (Figures 7 and 8).
- Opioid overdose ED visits were highest among residents in the Health and Human Services Agency (HHSA) Central Region (60.4 AAR) in Q4 2023 (Figure 11). Opioid overdose deaths were highest among residents in the HHSA Central Region (27.5 AAR) in Q2 2023 (Figure 12).

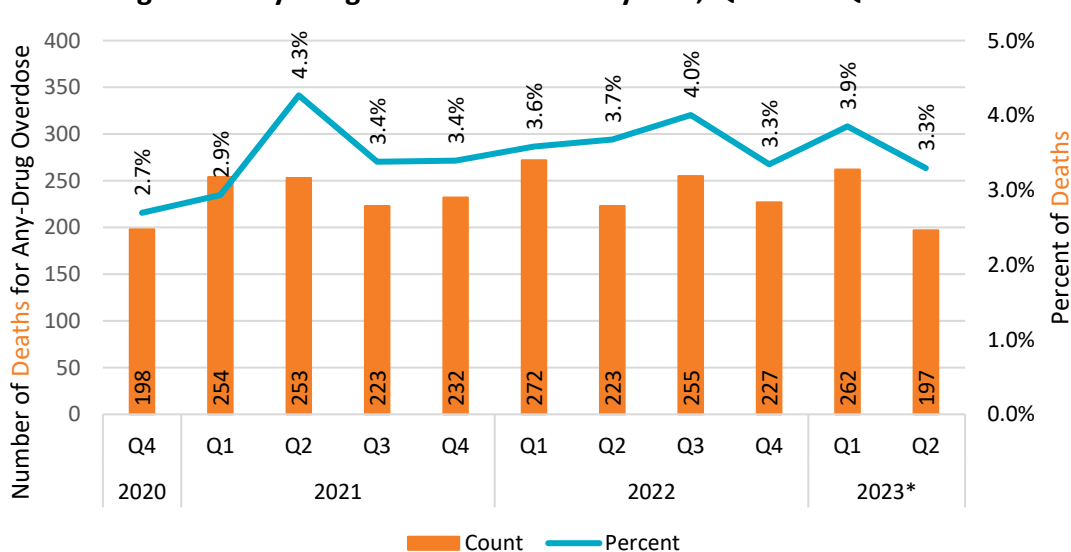
## Drug Overdoses by Year and Quarter

**Figure 1. Emergency Department Visits for Any-Drug Overdose by Year, Q4 2020–Q4 2023**



County of San Diego ED Syndromic Surveillance Data.

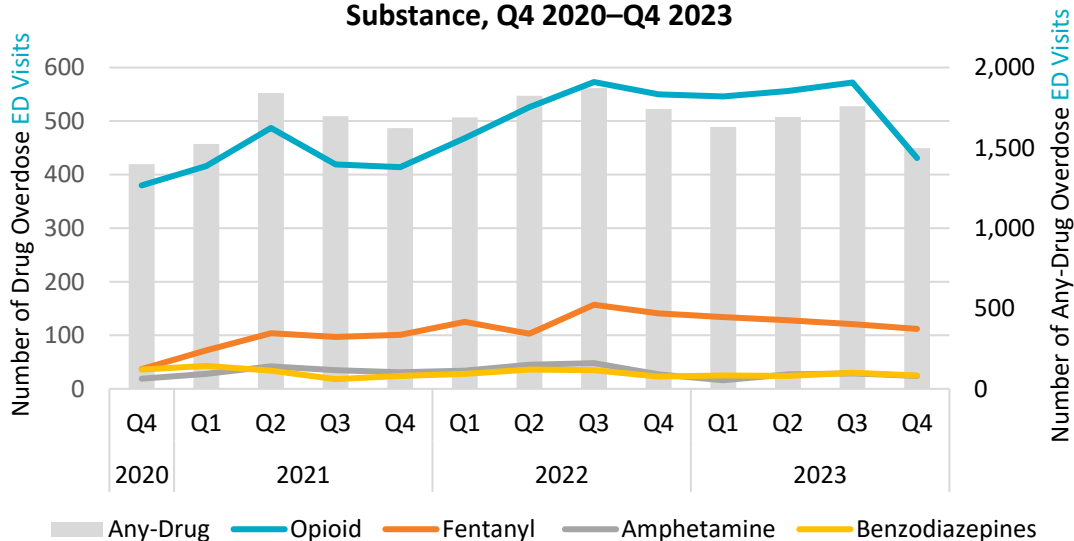
**Figure 2. Any-Drug Overdose Deaths by Year, Q4 2020–Q2 2023\***



\*Data from 2023 are preliminary and may change as new/updated information is received. Data obtained on 02/05/2024.

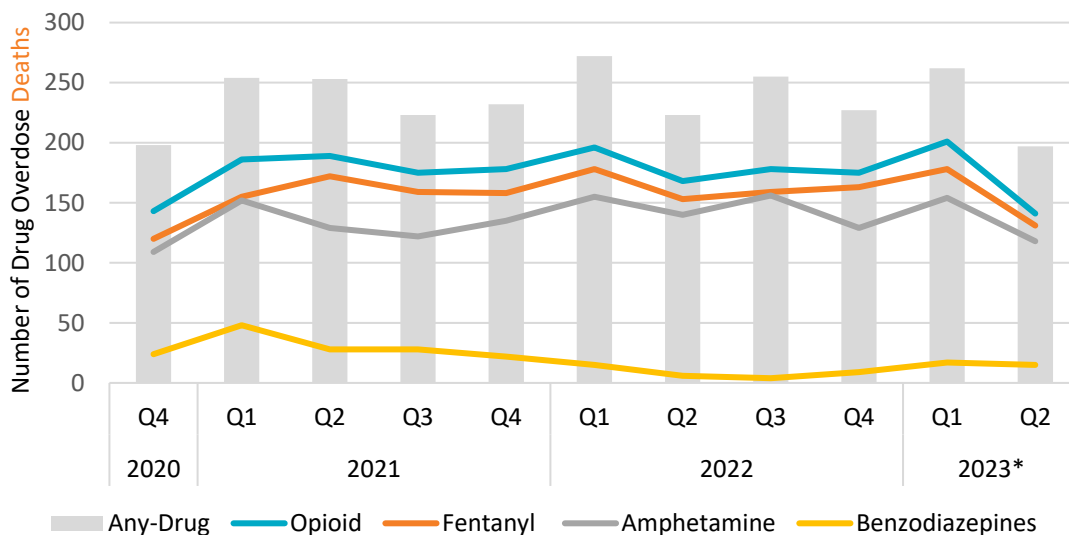
## Drug Overdoses by Substance

**Figure 3. Drug Overdose Emergency Department Visits by Substance, Q4 2020–Q4 2023**



County of San Diego ED Syndromic Surveillance Data. Many chief complaints do not include a specific drug. Drug categories are not mutually exclusive. For example, both opioids and amphetamine may have contributed to the same ED visit and these data do not show relative contributions of each. Fentanyl is also included in the opioid category.

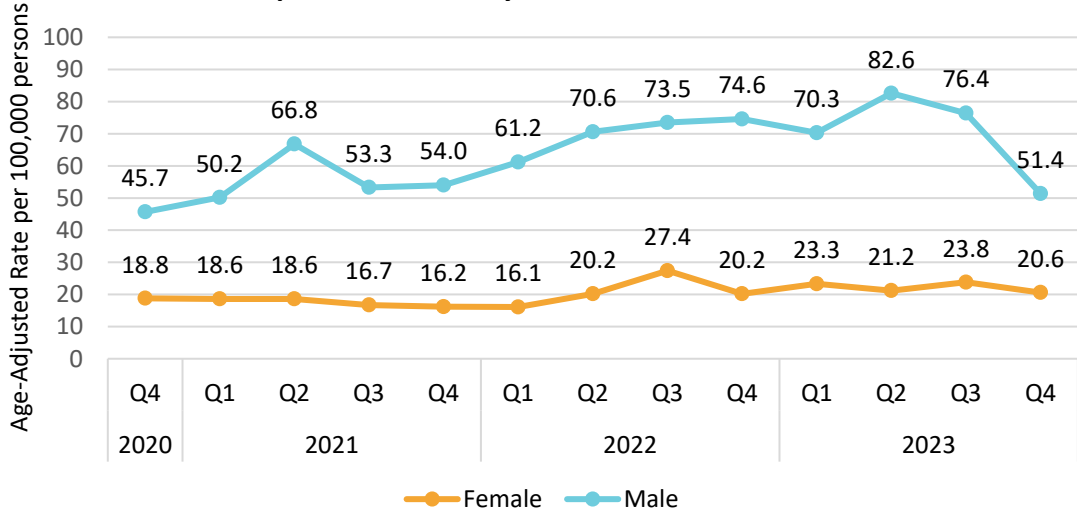
**Figure 4. Drug Overdose Deaths by Substance, Q4 2020–Q2 2023\***



\*Data from 2023 are preliminary and may change as new/updated information is received. Data obtained on 02/05/2024. Drug categories are not mutually exclusive. For example, both opioids and amphetamine may have contributed to the same death and these data do not show relative contributions of each. Fentanyl is also included in the opioid category.

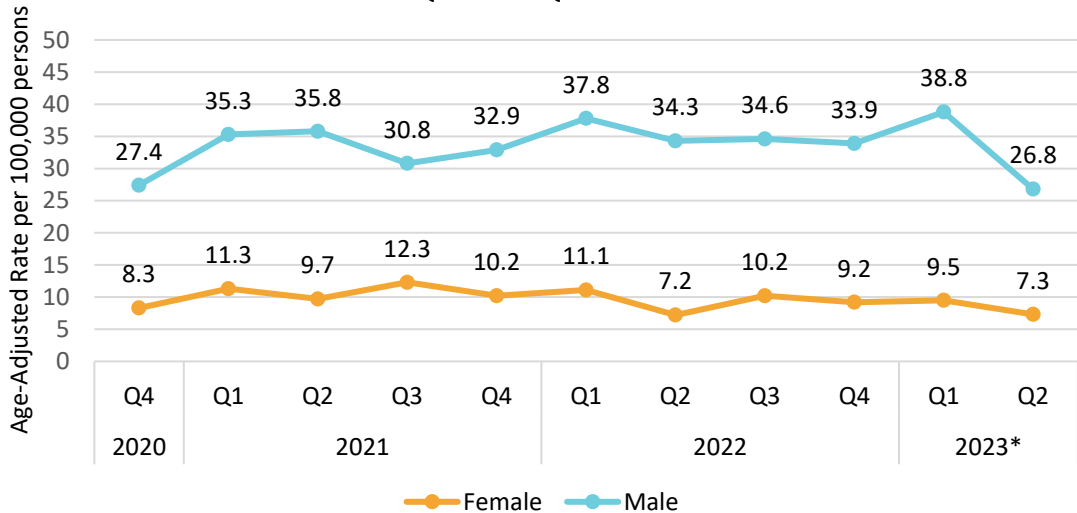
## Opioid Overdoses by Sex

**Figure 5. Age-Adjusted Emergency Department Visit Rates for Opioid Overdose by Sex, Q4 2020–Q4 2023**



County of San Diego ED Syndromic Surveillance Data.

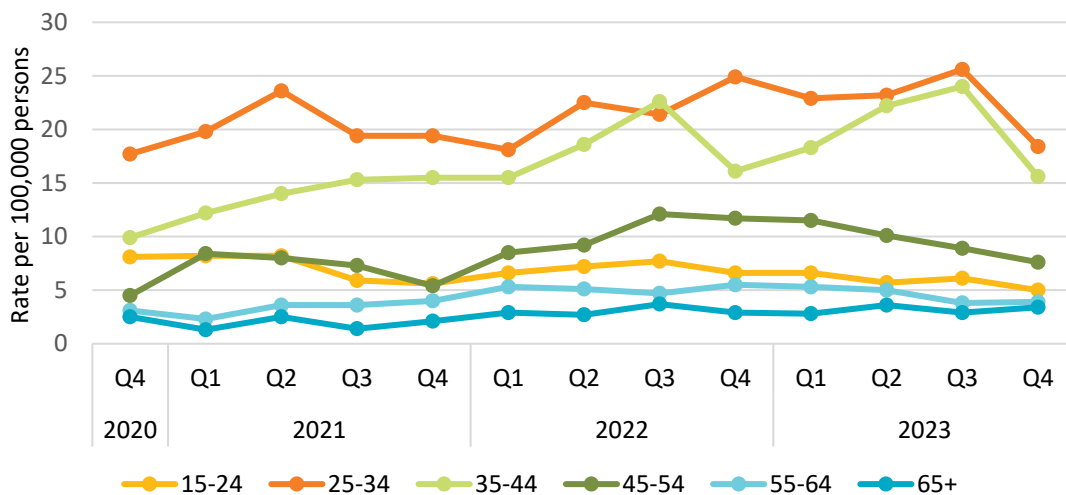
**Figure 6. Age-Adjusted Opioid Overdose Death Rates by Sex, Q4 2020–Q2 2023\***



\*Data from 2023 are preliminary and may change as new/updated information is received. Data obtained on 02/05/2024.

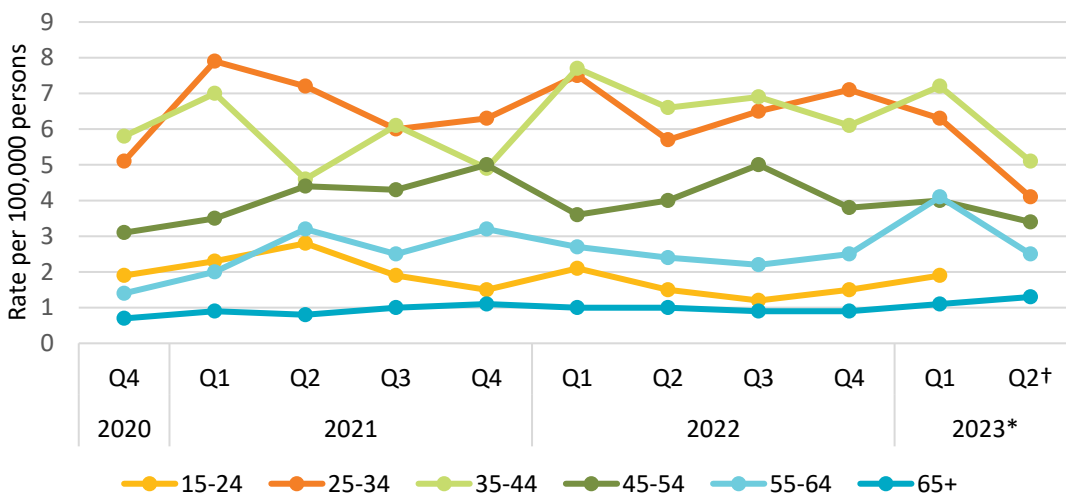
## Opioid Overdoses by Age

**Figure 7. Emergency Department Visit Rates for Opioid Overdose by Age, Q4 2020–Q4 2023**



Notes: Data <15 age group cannot be presented due to small numbers (<11).  
County of San Diego ED Syndromic Surveillance Data.

**Figure 8. Opioid Overdose Death Rates by Age, Q4 2020–Q2 2023\***



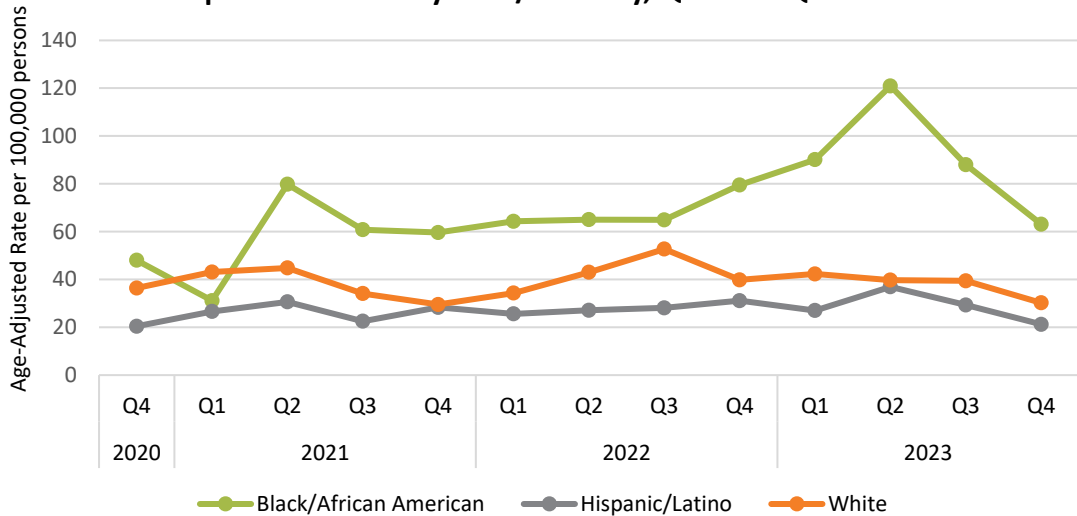
\*Data from 2023 are preliminary and may change as new/updated information is received. Data obtained on 02/05/2024.

† Data 15-24 age group not presented for Q2 2023 due to counts <11.

Notes: Data <15 age group cannot be presented due to small numbers (<11).

## Opioid Overdoses by Race/Ethnicity

**Figure 9. Age-Adjusted Emergency Department Visit Rates for Opioid Overdose by Race/Ethnicity, Q4 2020–Q4 2023**

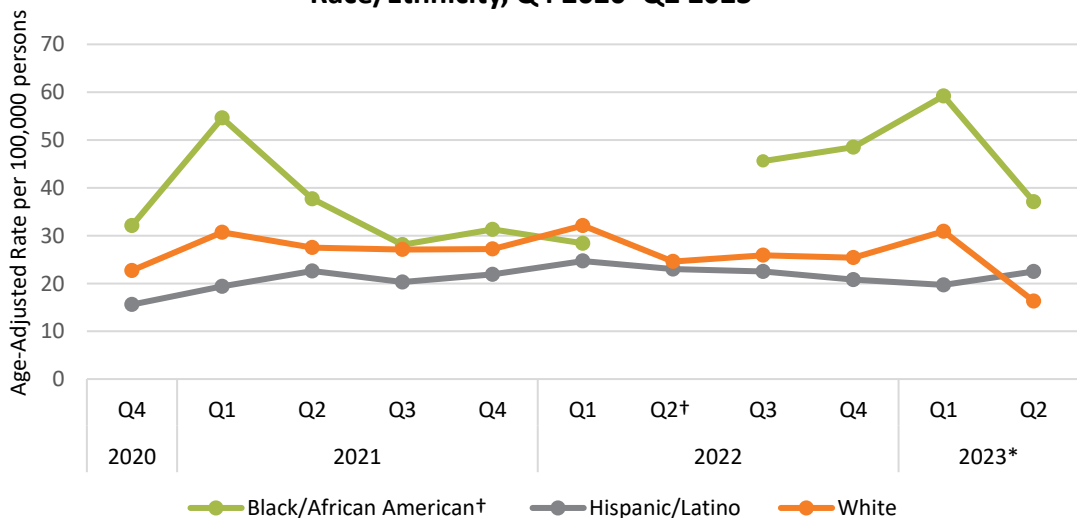


Notes: Data for other racial/ethnicity groups cannot be presented due to small numbers (<11).

Persons of Hispanic/Latino ethnicity may belong to any race group. All categories except Hispanic/Latino include persons who race is known but ethnicity is non-Hispanic or unknown.

County of San Diego ED Syndromic Surveillance Data.

**Figure 10. Age-Adjusted Opioid Overdose Death Rates by Race/Ethnicity, Q4 2020–Q2 2023\***



\*Data from 2023 are preliminary and may change as new/updated information is received. Data obtained on 02/05/2024.

† Data for Black/African American not presented for Q2 2022 due to counts <11.

Notes: Data for other racial/ethnicity groups cannot be presented due to small numbers (<11).

Persons of Hispanic/Latino ethnicity may belong to any race group. All categories except Hispanic/Latino include persons who race is known but ethnicity is non-Hispanic or unknown.

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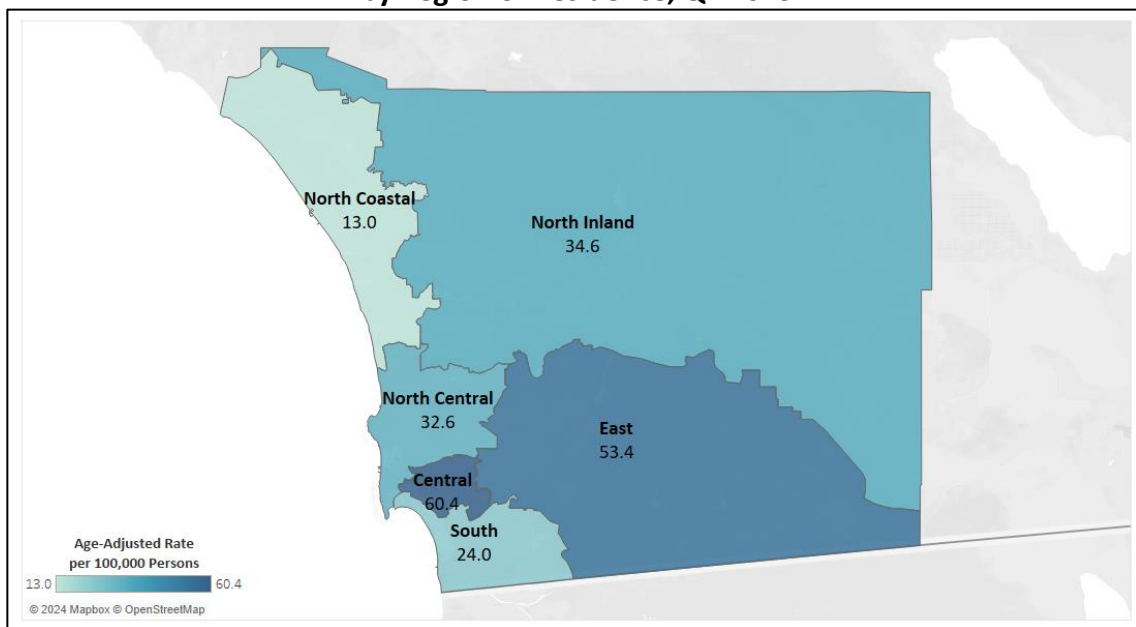
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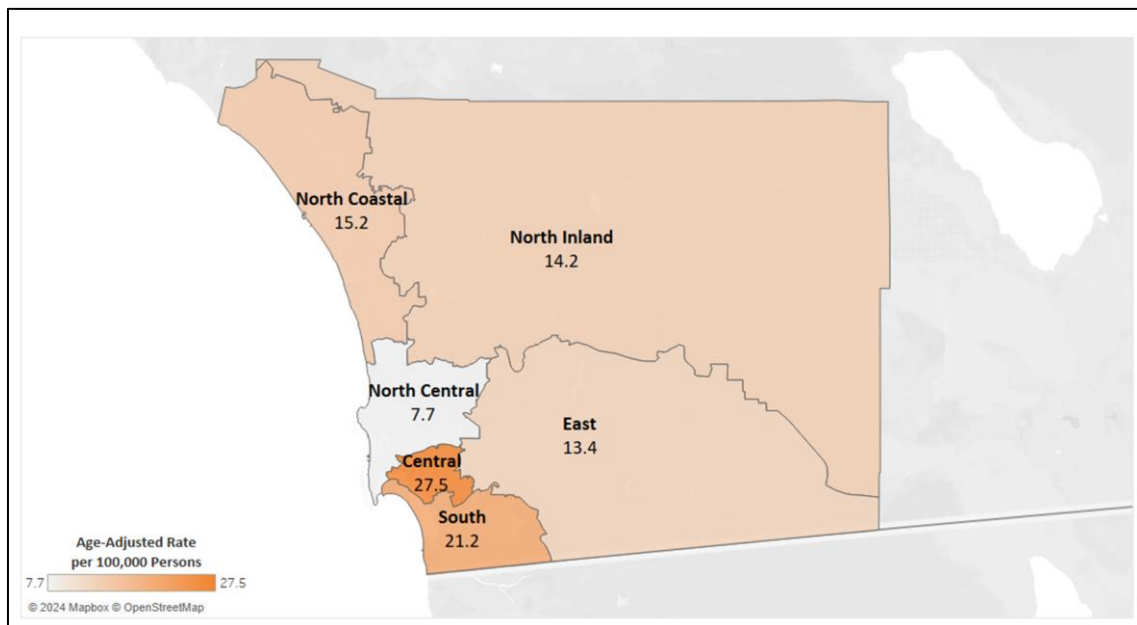
## Opioid Overdoses by Region of Residence

Figure 11. Age-Adjusted **Emergency Department Visit** Rates for Opioid Overdose by Region of Residence, Q4 2023



County of San Diego ED Syndromic Surveillance Data.

Figure 12. Age-Adjusted Opioid Overdose **Death** Rates by Region of Residence, Q2 2023



\*Data from 2023 are preliminary and may change as new/updated information is received. Data obtained on 01/22/2024.

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## Opioid Overdoses by Demographics

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

	2021 Q4	2022 Q4	2023 Q4	Percent Change 2022 to 2023
	N (%)	N (%)	N (%)	%
<b>Total Opioid Overdose Visits</b>	414 (100)	550 (100)	431 (100)	-19%
<b>HHS Region of Residence</b>				
North Coastal	21 (7)	13 (4)	18 (6)	+38%
North Central	75 (27)	63 (19)	53 (19)	-16%
Central	75 (26)	80 (24)	79 (28)	-1%
South	29 (10)	43 (13)	29 (10)	-33%
East	51 (18)	75 (23)	58 (20)	-23%
North Inland	33 (12)	57 (17)	48 (17)	-16%
Unknown	130	219	146	
<b>Sex</b>				
Female	66 (23)	79 (20)	85 (29)	+8%
Male	220 (77)	309 (80)	207 (71)	-33%
Unknown	128	162	139	
<b>Age Group</b>				
<15	**	**	**	**
15-24	50 (12)	59 (11)	44 (10)	-25%
25-34	146 (36)	187 (35)	138 (33)	-26%
35-44	104 (25)	108 (20)	105 (25)	-3%
45-54	40 (10)	87 (16)	56 (13)	-36%
55-64	46 (11)	63 (12)	44 (10)	-30%
65+	23 (6)	32 (6)	37 (9)	+16%
<b>Race/Ethnicity</b>				
Black/African American	24 (12)	32 (13)	26 (13)	-19%
Hispanic <sup>†</sup>	80 (38)	88 (34)	60 (30)	-32%
White	105 (50)	137 (53)	113 (57)	-18%
Unknown	160	250	205	

\*County of San Diego ED Syndromic Surveillance Data.

\*\*Data for other demographic groups cannot be presented due to small numbers (<11).

<sup>†</sup>Notes: Persons of Hispanic/Latino ethnicity may belong to any race group. All categories except Hispanic/Latino include persons who race is known but ethnicity is non-Hispanic or unknown.

There was a larger than usual amount of zip code data missing in 2022 data, across hospitals in multiple regions; changes between 2022 and 2023 should be interpreted with caution.

## Feature Topic: Overdoses by Healthy Places Index

### Introduction

The [California Healthy Places Index](#) (HPI), is a resource developed in 2018 by the Public Health Alliance of Southern California, a coalition of 10 local health departments in Southern California. The main goal of the HPI is to advance health equity through accessible data. The platform has been used to identify opportunities for advancing neighborhood health, conduct plans and assessments, develop guidance, provide local health departments with the tools needed to prioritize investments, and undertake research projects focusing on health inequities. HPI reviews neighborhood conditions and incorporates the following as health outcome indicators: socioeconomic status, education, housing, transportation, environmental pollution, built environment, and health care access. This quarter's feature topic looks at overdose deaths, hospitalizations, and ED visits in San Diego County by HPI.

### Methods

This report leverages mortality data from [VRBIS](#), and non-fatal ED and inpatient hospitalization discharge data from [HCAI](#). Case definitions, including ICD-10 codes, for any-drug and opioid categories are included on pages 14-15. Mortality and HCAI data are presented from 2016-2022 and 2016-2021, respectively. Age-adjusted rates are per 100,000 people using 2021 SANDAG San Diego County Population Estimates.

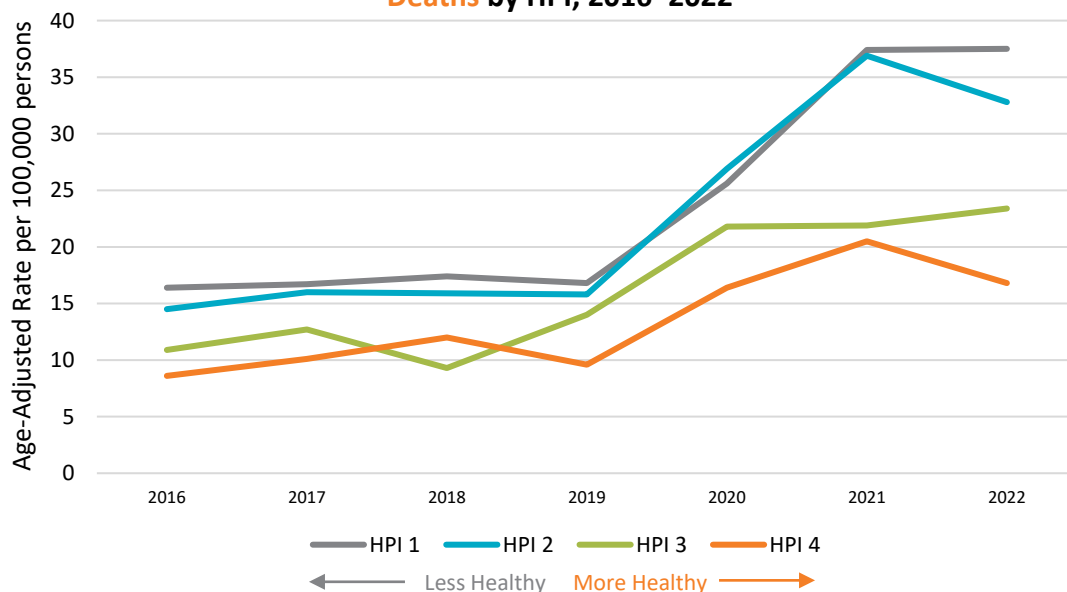
The California Healthy Places Index assesses the association among 23 identified key factors of health and life expectancy at birth. A ranked composite score reflecting cumulative community conditions is calculated for California census tracts. HPI score is divided into four quartiles from least- (1) to most-healthy (4). Health outcomes can then be examined among the different population groupings by HPI quartile. See [page 17](#) for a map of HPI quartiles in San Diego County by census tract.

### Summary

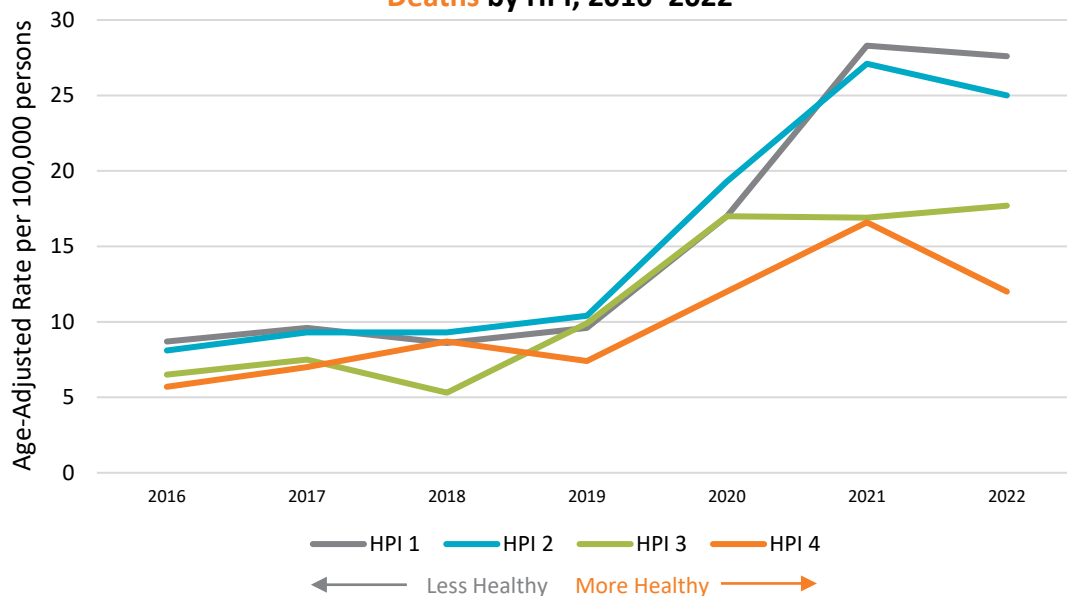
- From 2016 to 2022, average any-drug-related overdose death AARs for HPI quartiles 1 and 2 were 1.6 times higher than quartiles 3 and 4 (Figure 13). Similarly, opioid-related overdose death AARs were 1.5 times higher in HPI quartiles 1 and 2 compared to 3 and 4 (Figure 14).
- Average any-drug- and opioid-related overdose death AARs increased by 2.3 and 3.1 times, respectively, from 2016 to 2022 in HPI quartiles 1 and 2 (Figures 13 and 14).
- In 2022, the ZIP code with the highest rate of any-drug- and opioid-related fatal overdoses was 92113 (Central Region-Southeastern San Diego), which is a community in the lowest HPI quartile (Figures 15 and 16).
- From 2016 to 2021, any-drug-related overdose hospitalization rates were higher among HPI quartiles 1 and 2 compared to quartiles 3 and 4, averaging 6.6 AAR to 5.1 AAR, respectively (Figure 17).

## Mortality by HPI

**Figure 13. Age-Adjusted Rates of Any-Drug-Related Overdose Deaths by HPI, 2016–2022**



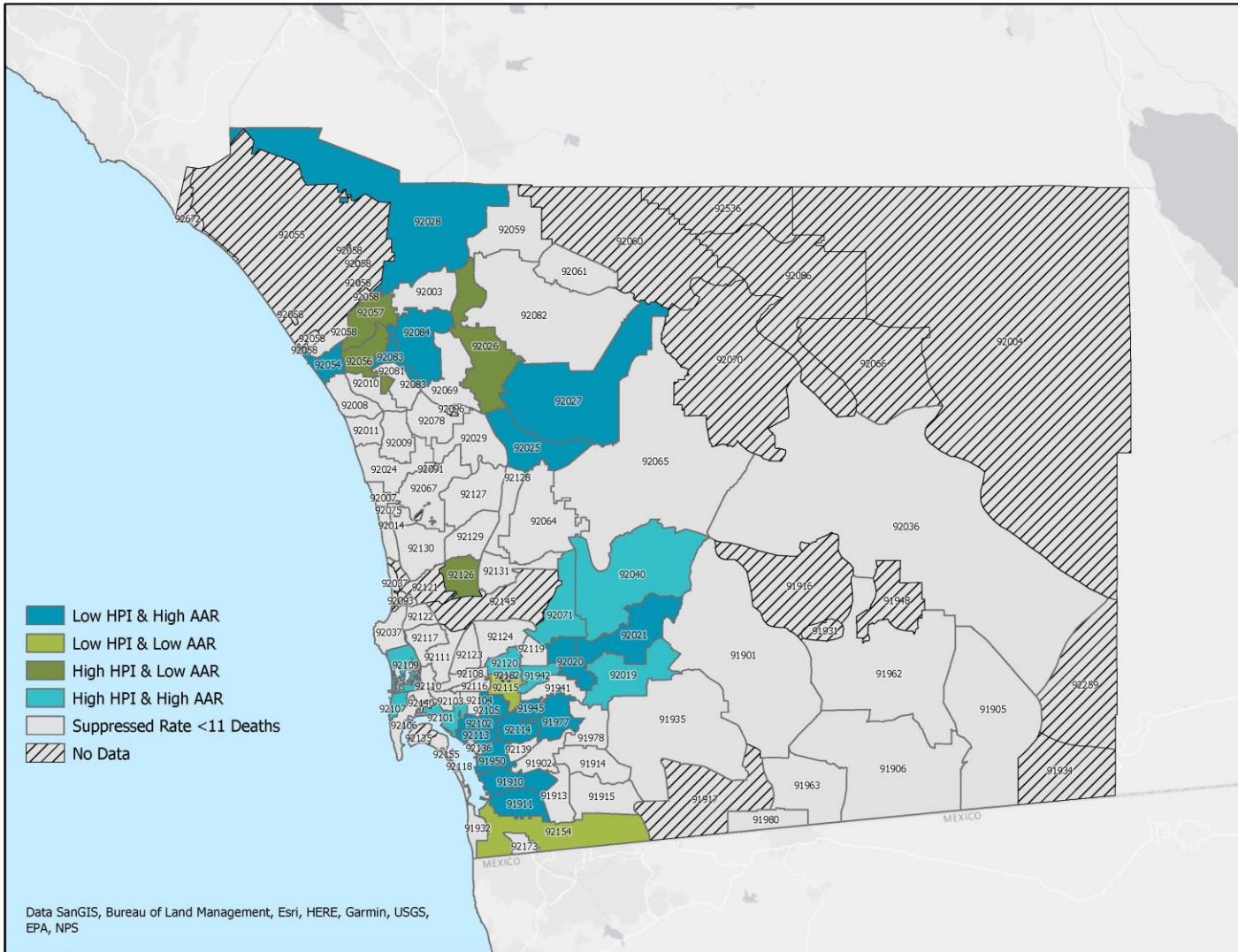
**Figure 14. Age-Adjusted Rates of Opioid-Related Overdose Deaths by HPI, 2016–2022**



Data Source: Vital Records Business Intelligence System (VRBIS).

## Mortality by HPI

**Figure 15. Age-Adjusted Rates of Any-Drug-Related Overdose  
Deaths by Zip Code and HPI, 2022**

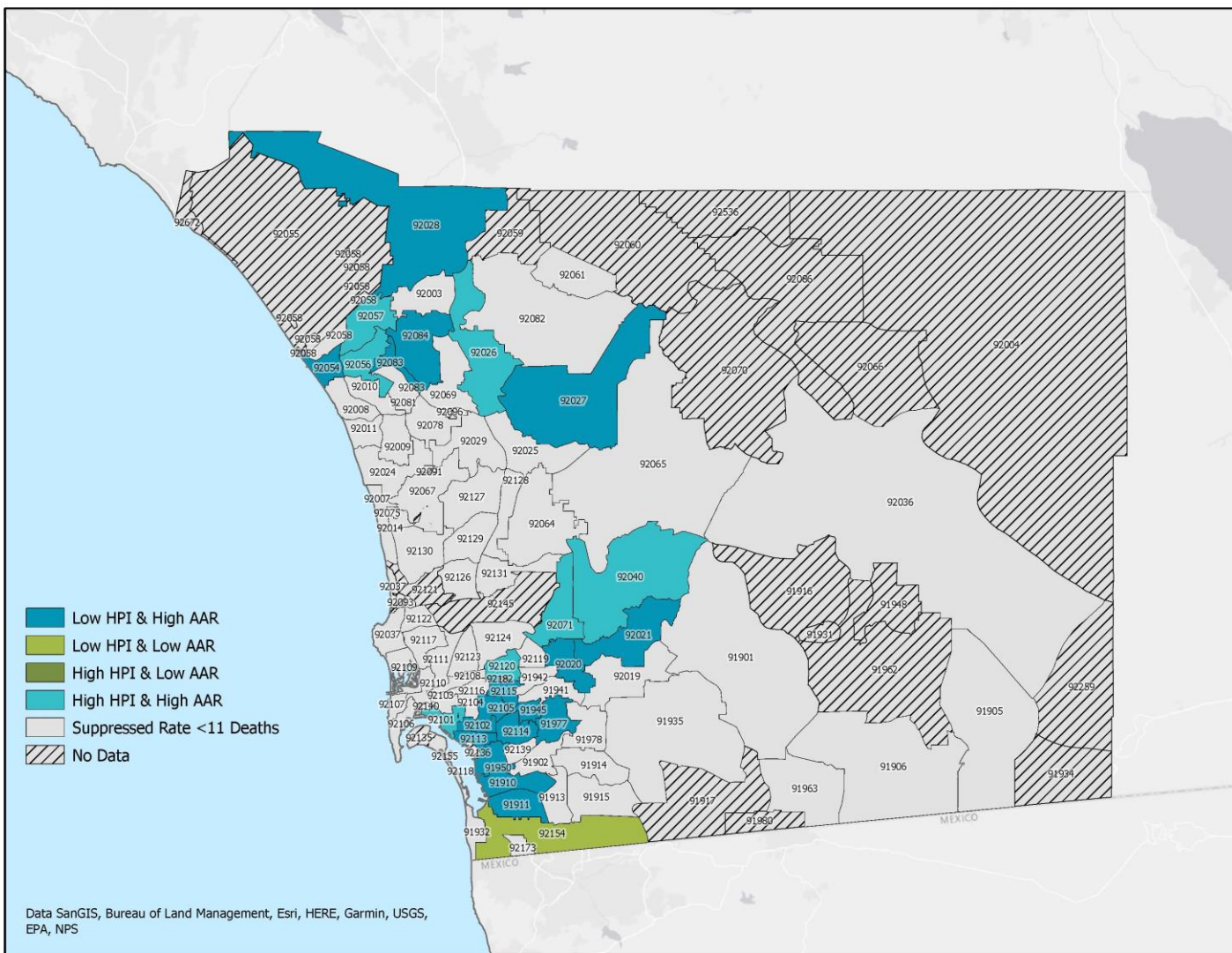


Data Source: Vital Records Business Intelligence System (VRBIS).  
HPI scores were only calculated for census tracts with at least 1,500 people and where fewer than 50% of county residents reside in institutional settings i.e. dorms, nursing homes, and prisons.  
Low HPI is defined as quartiles 1 and 2, communities with the least-healthy conditions, and high HPI is defined as quartiles 3 and 4, communities with the most-healthy conditions. High and low AAR is determined using the median rate, with low AAR at or below the median and high AAR above the median.



## Mortality by HPI

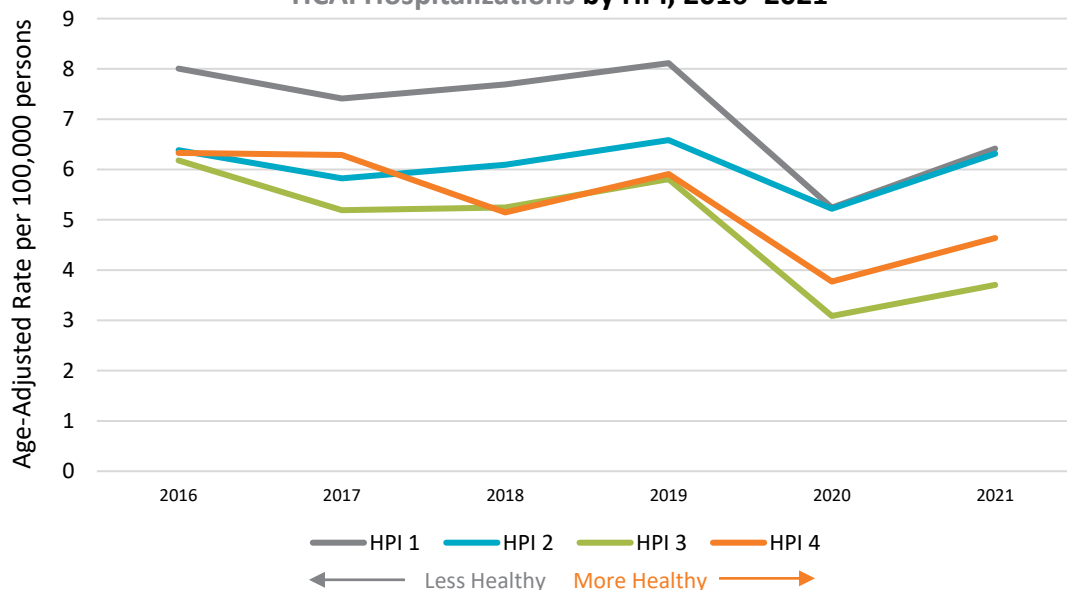
**Figure 16. Age-Adjusted Rates of Opioid-Related Overdose Deaths by Zip Code and HPI, 2022**



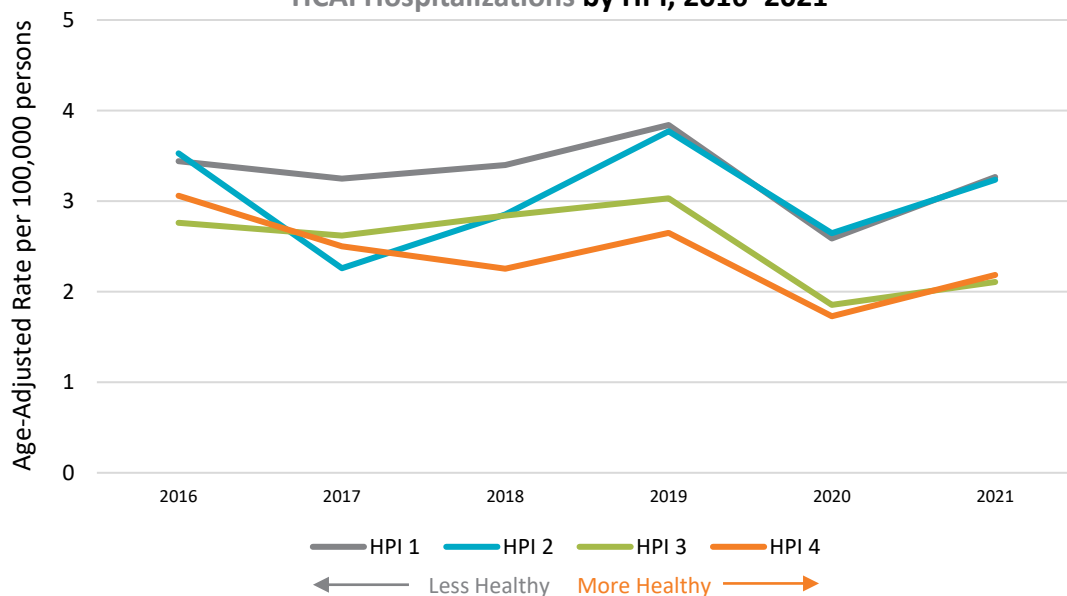
Data Source: Vital Records Business Intelligence System (VRBIS).  
HPI scores were only calculated for census tracts with at least 1,500 people and where fewer than 50% of county residents reside in institutional settings i.e. dorms, nursing homes, and prisons.  
Low HPI is defined as quartiles 1 and 2, communities with the least-healthy conditions, and high HPI is defined as quartiles 3 and 4, communities with the most-healthy conditions. High and low AAR is determined using the median rate, with low AAR at or below the median and high AAR above the median.

## HCAI Hospitalizations by HPI

**Figure 17. Age-Adjusted Rates of Any-Drug-Related Overdose  
HCAI Hospitalizations by HPI, 2016–2021**



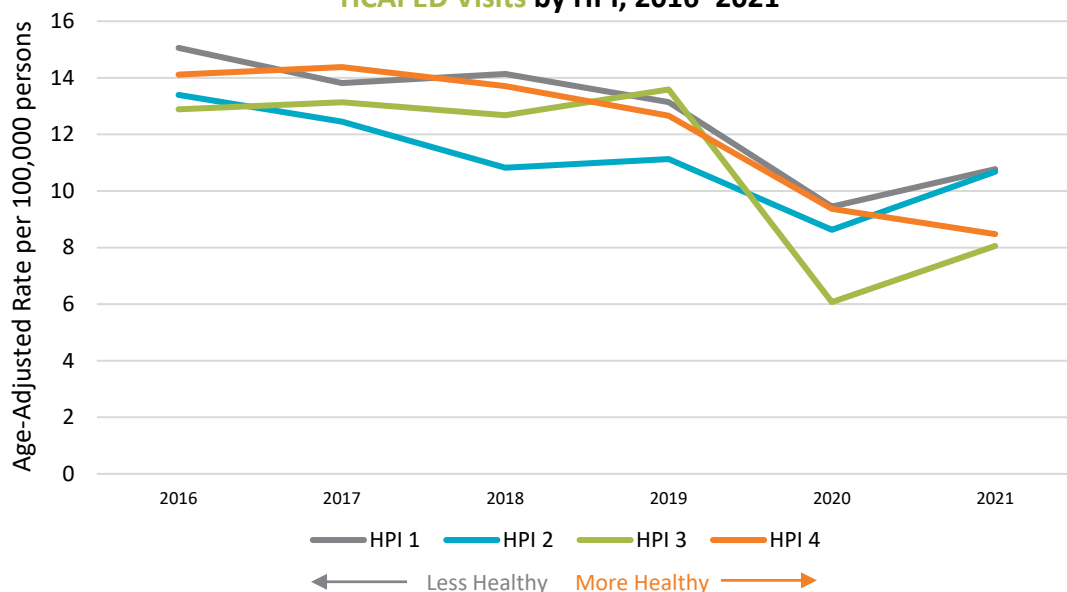
**Figure 18. Age-Adjusted Rates of Opioid-Related Overdose  
HCAI Hospitalizations by HPI, 2016–2021**



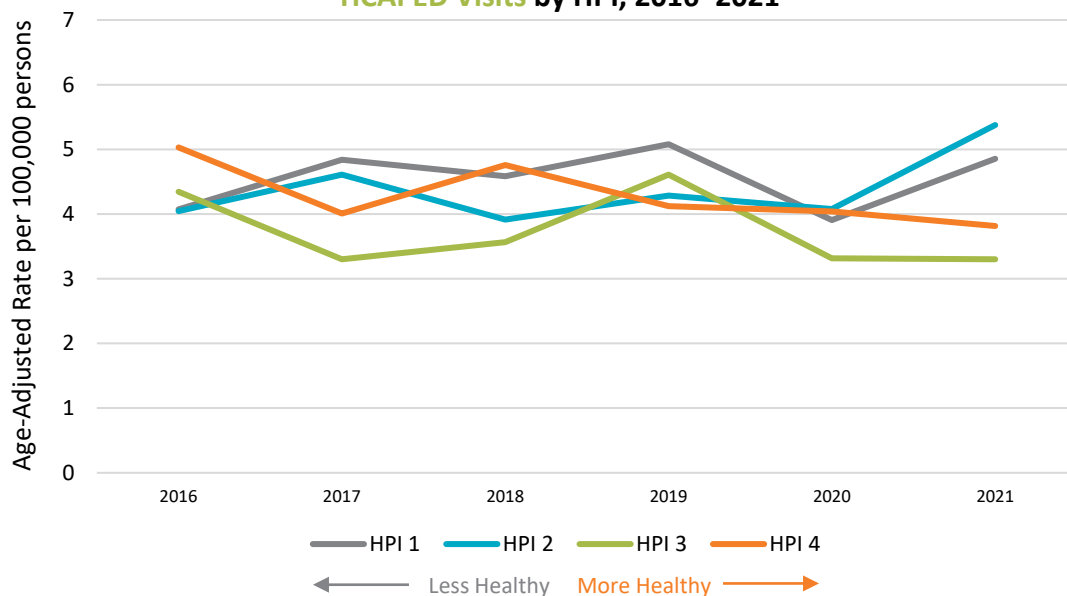
Data Source: California Department of Health Care Access and Information (HCAI).

## HCAI ED Visits by HPI

**Figure 19. Age-Adjusted Rates of Any-Drug-Related Overdose**  
HCAI ED Visits by HPI, 2016–2021



**Figure 20. Age-Adjusted Rates of Opioid-Related Overdose**  
HCAI ED Visits by HPI, 2016–2021



Data Source: California Department of Health Care Access and Information (HCAI).



## 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 Overdoses*: 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 Overdoses*: 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 (continued)

- **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](#)):

- **Any-Drug Overdose:** ED visits or inpatient hospitalizations caused by non-fatal acute poisonings due to the effects of drugs, 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. ICD-10 codes include: T36-T50.
- **Opioid Overdose:** ED visits or inpatient hospitalizations caused by non-fatal acute poisonings due to the effects of any opioid drugs, regardless of intent. ED visits or inpatient hospitalizations related to late effects, adverse effects, and chronic poisonings due to the effects of drugs are excluded from this indicator. Beginning in the 4th quarter of 2020, the generic ICD10-CM code for other synthetic narcotics (T40.4X) was replaced by three more specific codes (T40.41, T40.42, T40.49). ICD-10 codes include: T40.0X, T40.1X, T40.2X, T40.3X, T40.41, T40.42, T40.49, T40.60, T40.69.

## 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.

## Sources

- Public Health Alliance of Southern California. California Healthy Places Index. <https://healthyplacesindex.org>

San Diego County Map of HPI by Census Tract

