OPIOID-RELATED OVERDOSES & ENCOUNTERS IN SAN DIEGO COUNTY, 2017-2021

Overdose Data to Action (OD2A) Strategy 3: Surveillance

Epidemiology and Immunization Services Branch

September 2023

COUNTY OF SAN DIEGO
HEALTH AND HUMAN SERVICES AGENCY

LIVE WELL SAN DIEGO

Accredited Health Department · PHAB Advancing Public Health Performance · Public Health Accreditation Board

BACKGROUND

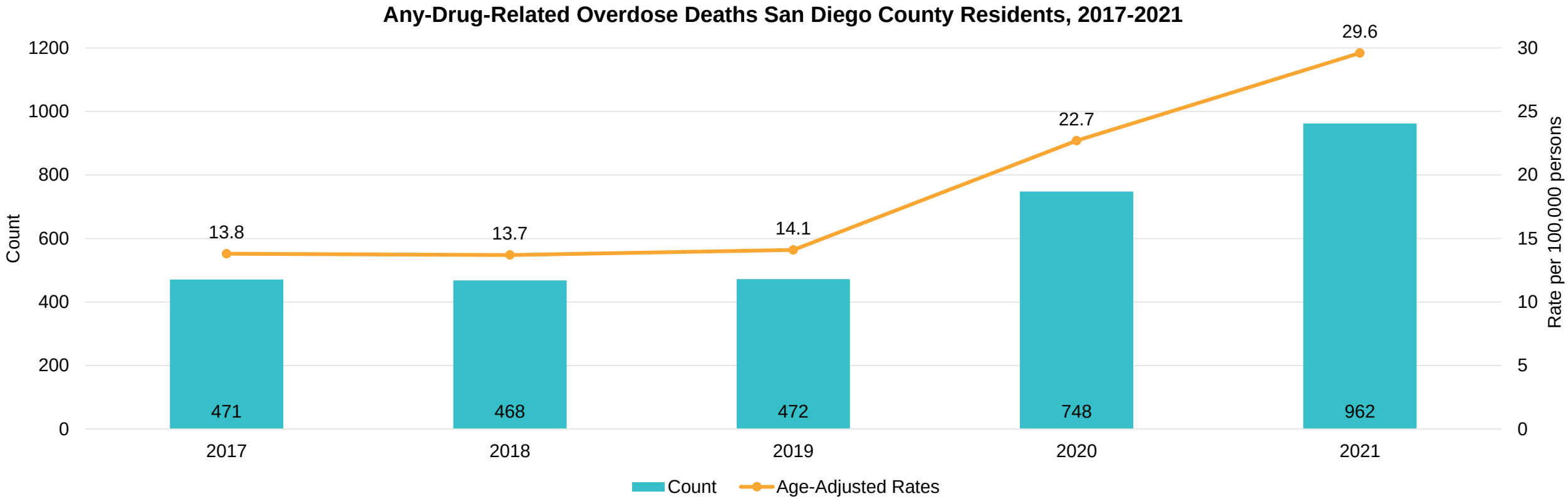
- The County of San Diego (CoSD) Health and Human Services Agency (HHSA) is one of the recipients of the 2019 Overdose Data to Action (OD2A) grant awarded by the CDC, funding opportunity number CDC-RFA-CE19-1904.

- Through innovative surveillance activities, linked with evidence-based prevention, this grant aims to reduce opioid misuse and opioid use disorder, increase evidence-based treatment for opioid use disorder, and reduce emergency department visits and deaths from opioid overdoses. These aims will be achieved through five strategies.

- This presentation shows trends in opioid-related fatal overdoses and nonfatal hospitalizations and emergency department encounters in San Diego County. Monitoring trends can provide a greater understanding of the opioid epidemic in San Diego County and help direct prevention and response activities.

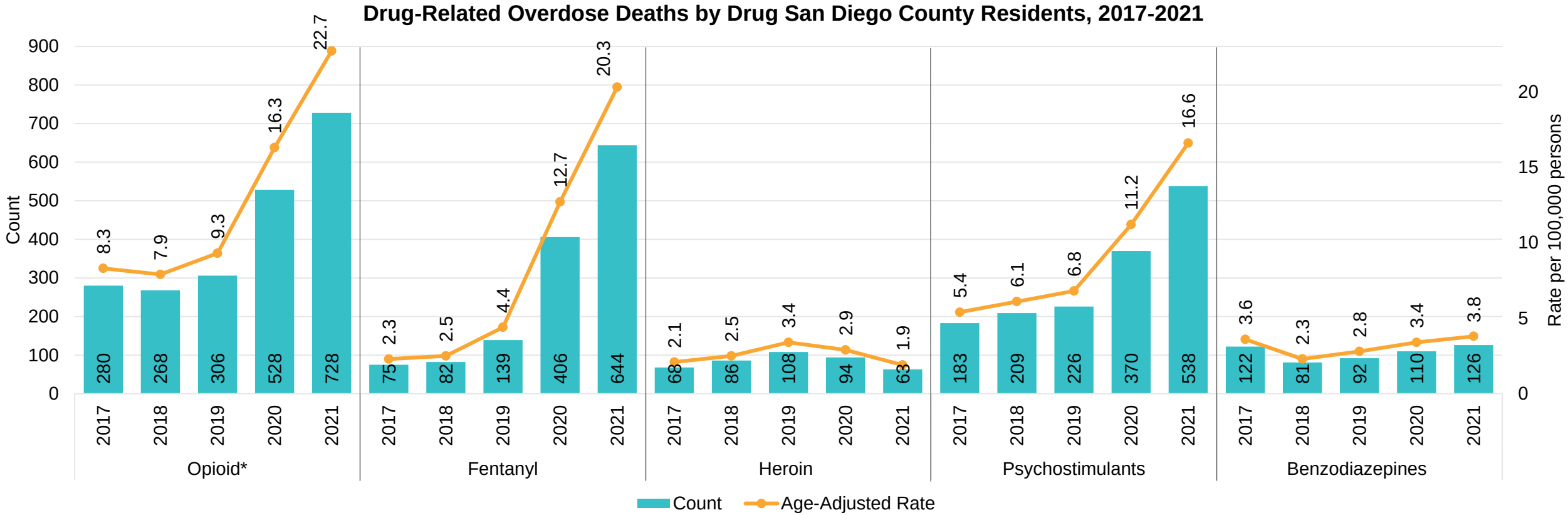
MORTALITY

DRUG-RELATED MORTALITY



- From 2017 to 2019 the number of any-drug-related overdose deaths in San Diego County remained stable, followed by a sharp increase from 2019 to 2020. This trend continued through 2021.
- The age-adjusted rate for any-drug-related overdose deaths more than doubled from 2017 to 2021.

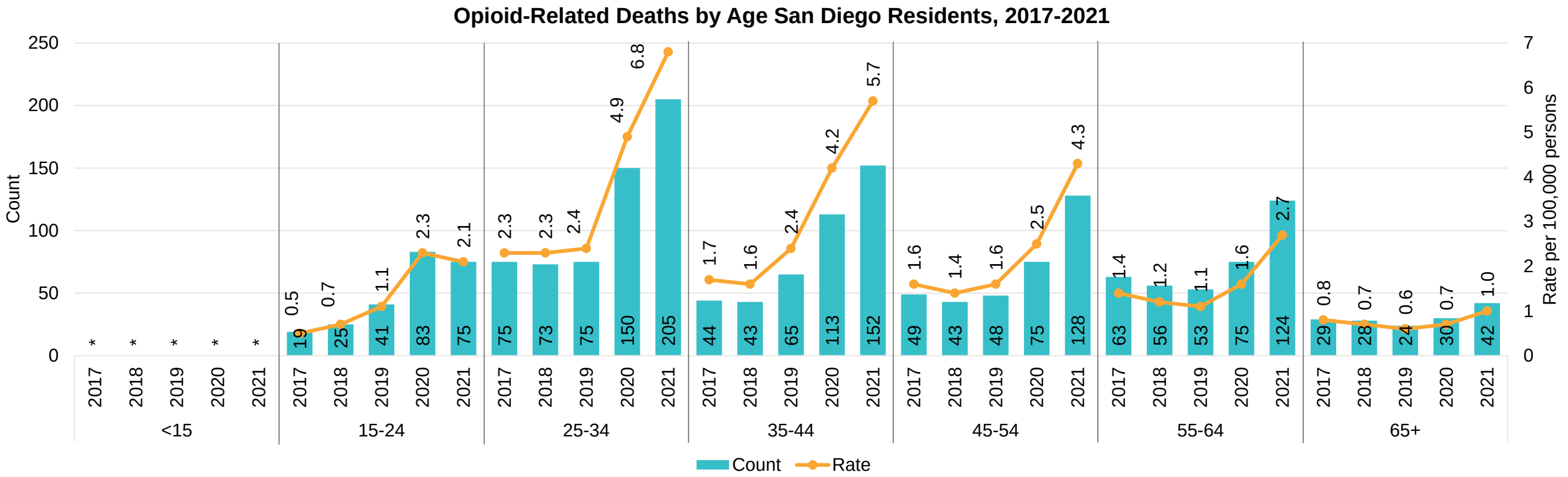
MORTALITY BY DRUG



- Opioid-related drug deaths have increased since 2018.
- Overdose deaths attributed to fentanyl were 1.6 times higher in 2021 than in 2020 and accounted for 88% of opioid-related deaths in 2021 compared to 77% in 2020.
- Psychostimulant-related deaths increased 45% from 2020 to 2021.

* Opioid includes fentanyl, heroin, and other opioids.

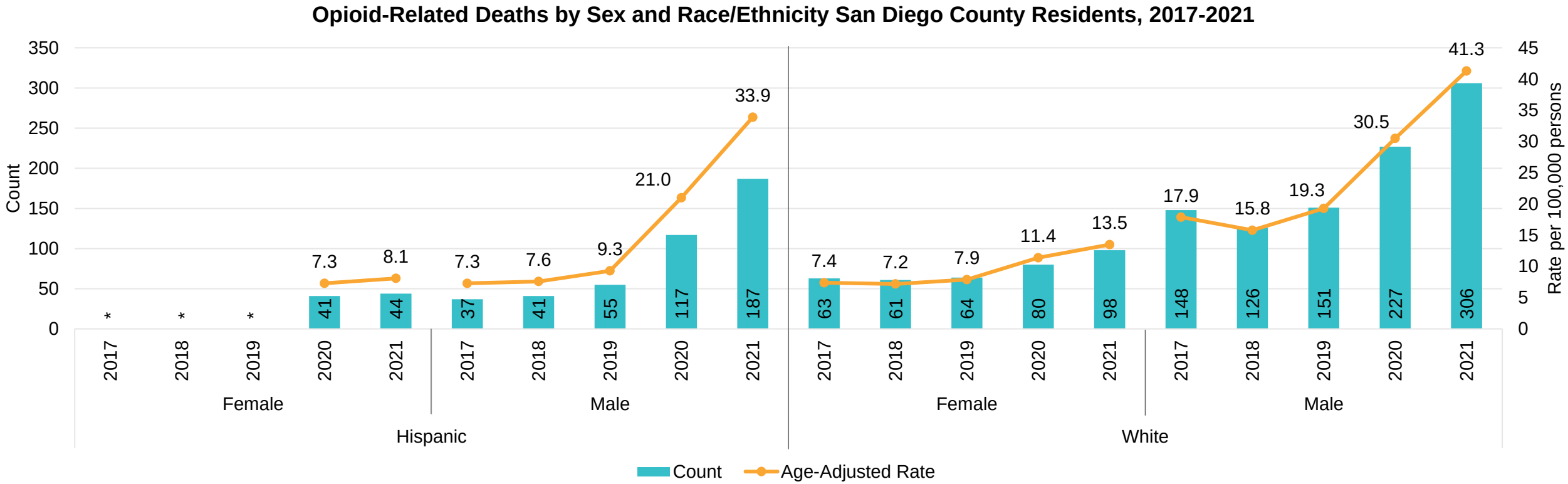
OPIOID-RELATED MORTALITY BY AGE



- Opioid-related deaths more than doubled between 2017 and 2021 in individuals between the ages of 15-54 years. In 2020-2021 the death rate plateaued among those 15-24 years of age but continued to increase for individuals between the age of 25-54 years.
- There was also an increase among 55-64-year-olds from 2019 to 2021, while deaths among those 65 years of age and older remained relatively stable during the 5-year period.

*Counts less than 15 are suppressed.

OPIOID-RELATED MORTALITY BY SEX & RACE/ETHNICITY

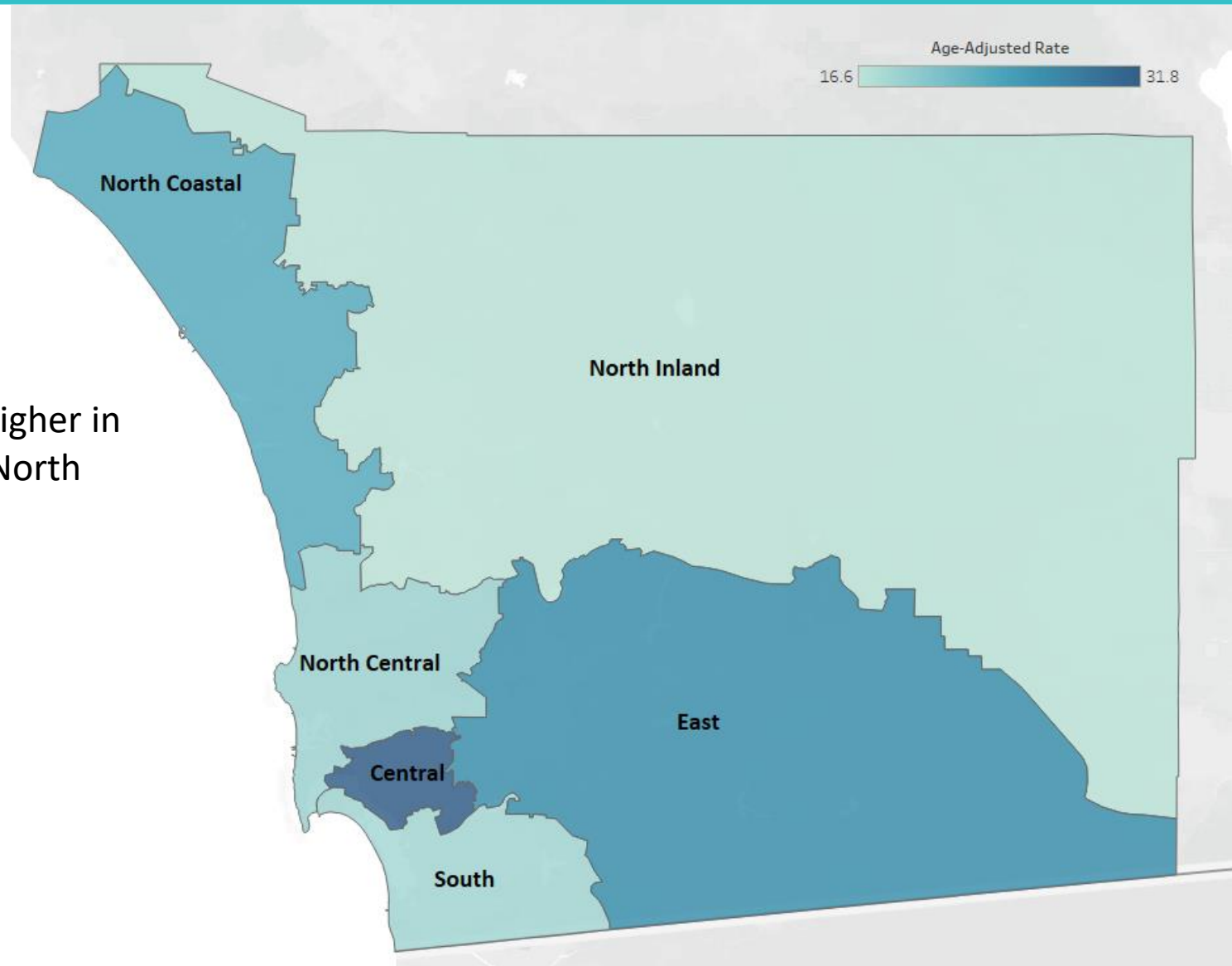


- White males had a higher rate of opioid-related deaths than any other group; deaths in this group doubled from 2017 to 2021. Although the rate for white females is lower compared to males, there is an observed increase in the death rate from 2019 to 2021.
- The count and age-adjusted rate of opioid-related deaths in Hispanic males more than tripled from 2019 to 2021.
- Other racial/ethnic groups are not shown due to small numbers.

*Counts less than 15 are suppressed.

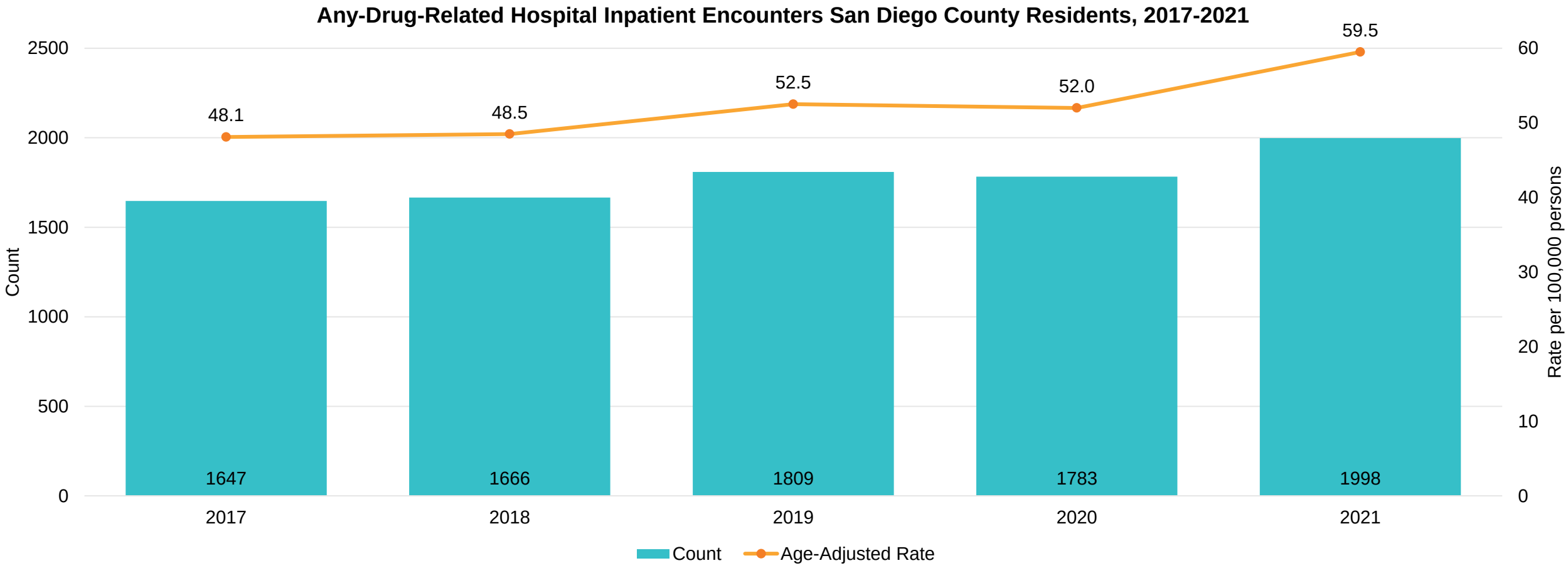
OPIOID-RELATED MORTALITY IN 2021 BY HHSA REGION OF RESIDENCE

- In 2021, opioid-related overdose deaths are higher in the Central Region, followed by the East and North Coastal Regions.



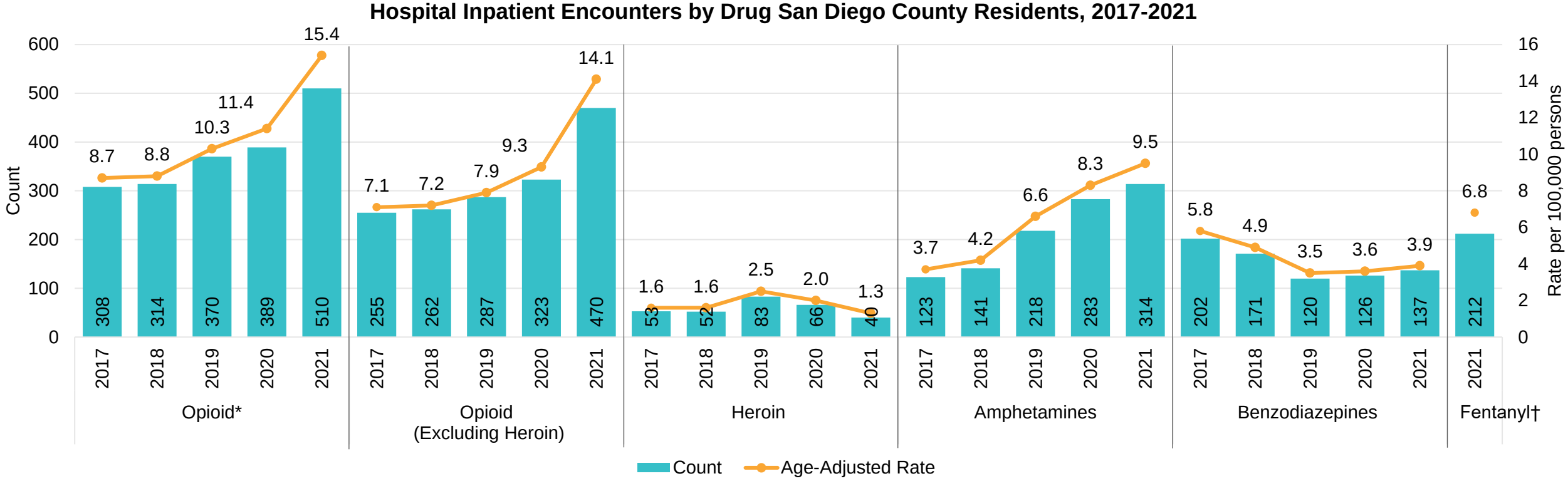
HOSPITAL INPATIENT ENCOUNTERS

DRUG-RELATED HOSPITALIZATION



- There was a gradual increase in the rate of any-drug-related overdose inpatient encounters at hospitals in San Diego County between 2017 and 2021.

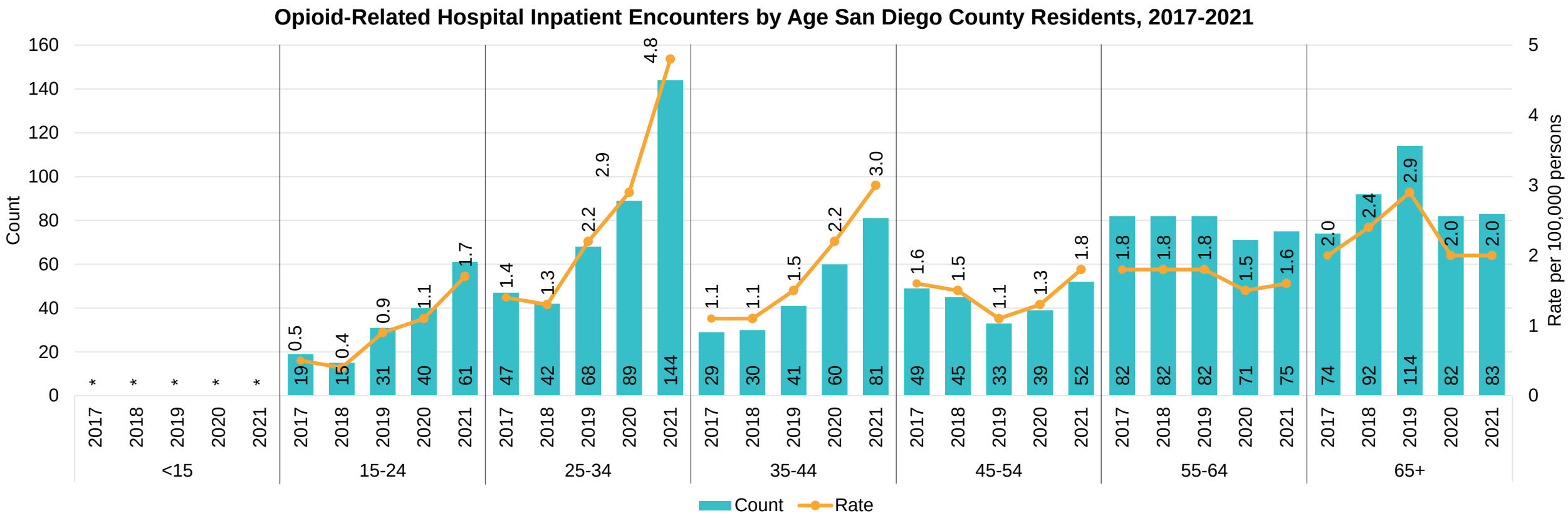
HOSPITALIZATION BY DRUG



- Between 2017 and 2020, rates of opioid-related hospitalizations initially increased gradually, this was followed by a sharp increase from 2020 to 2021.
- Amphetamine-related hospitalizations more than doubled over the 5-year period, while benzodiazepine-related hospitalizations showed a clear downward trend from 2017 to 2019, followed by a slight increase.

*Opioid includes heroin and other opioids.
† Fentanyl-specific data from this source is only available starting in 2021.

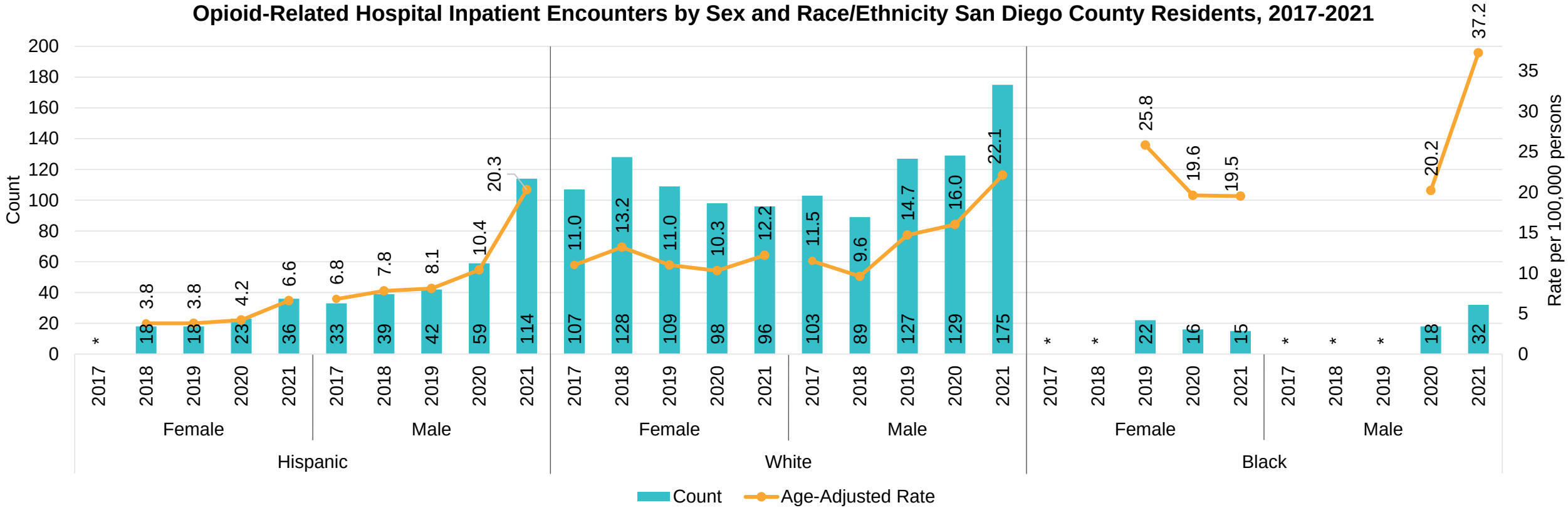
OPIOID-RELATED HOSPITALIZATION BY AGE



- Opioid-related hospital inpatient encounters in individuals between 15-44 years of age increased from 2017 to 2021, with the largest increase in 2021 among those 25-34 years of age.
- Initially, the individuals older than 55 years of age had a higher hospitalization rate. Opioid-related hospital inpatient encounters rate is now higher among younger age groups, especially for those ages 25-34 years.

*Counts less than 15 are suppressed.

OPIOID-RELATED HOSPITALIZATION BY SEX & RACE/ETHNICITY

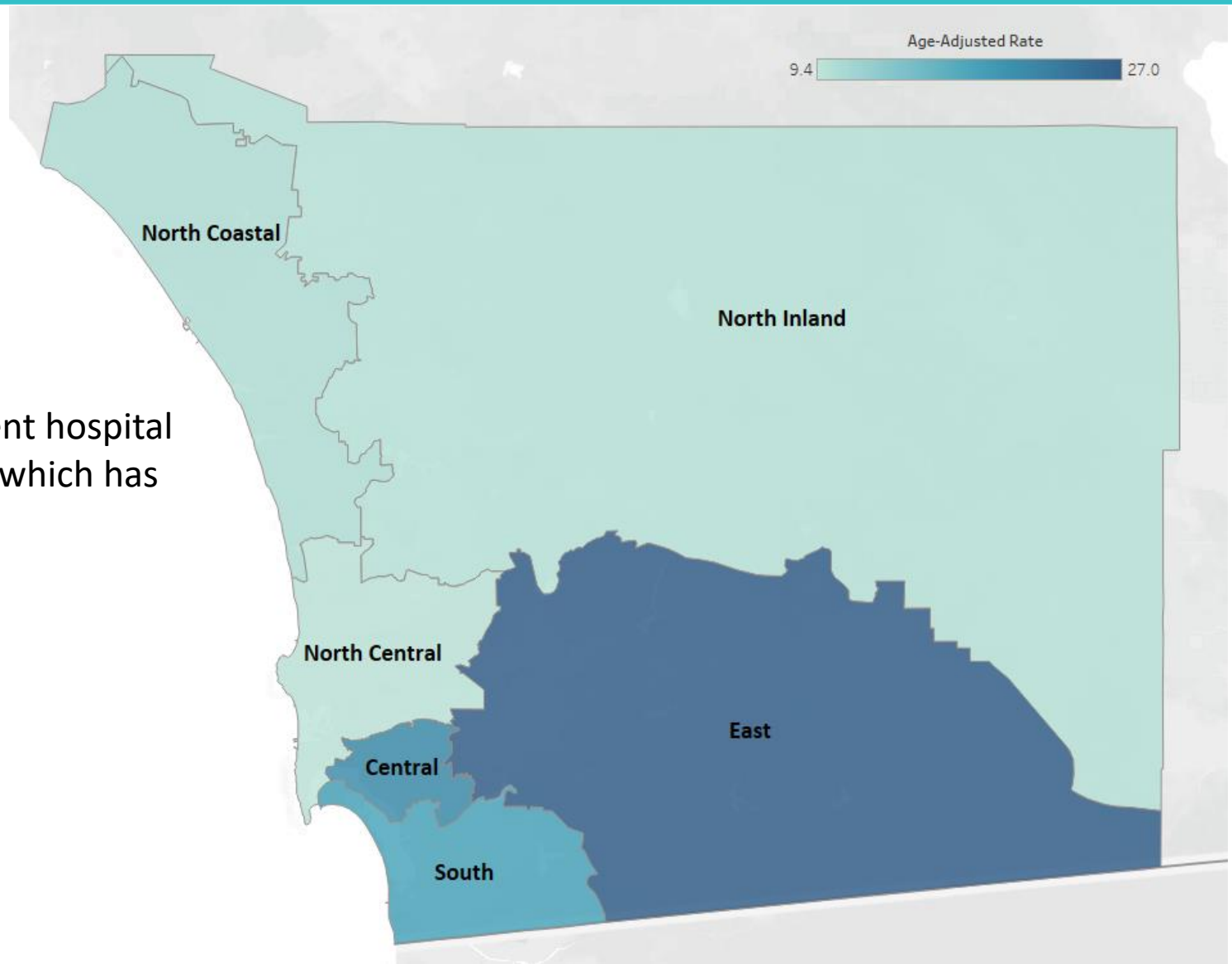


- The rates of opioid-related hospital inpatient encounters among White individuals were higher than Hispanic individuals.
- The hospitalization rate among males has increased each year with the sharpest increasing being among Black males.

*Counts less than 15 are suppressed.

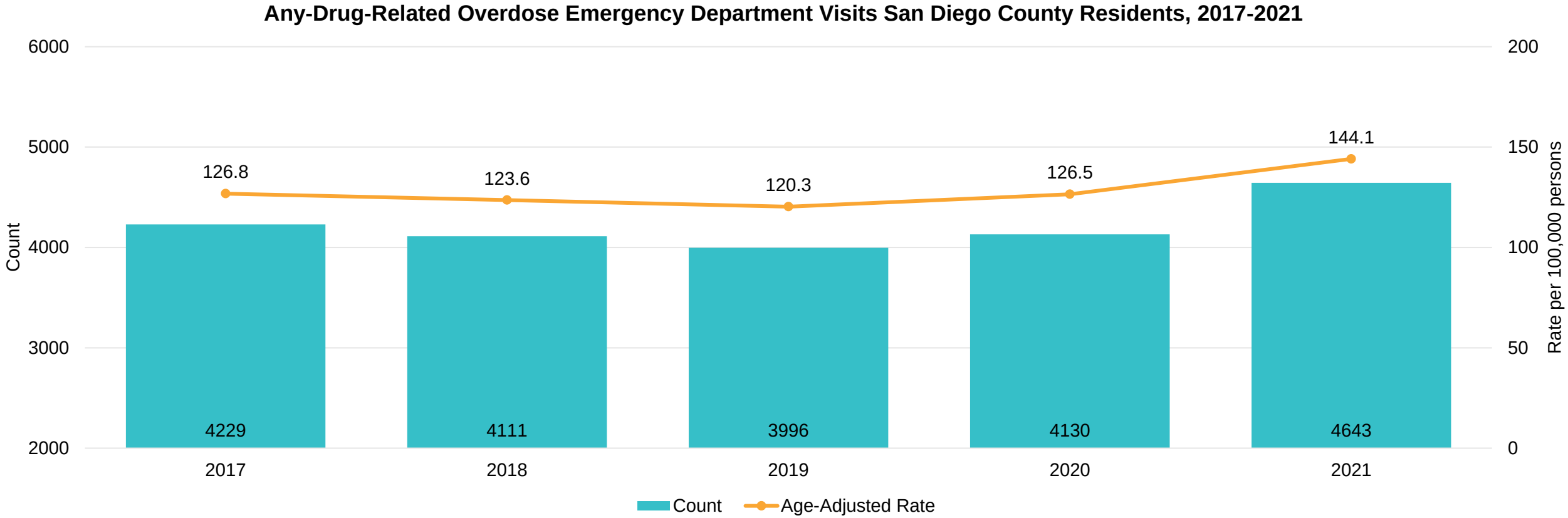
OPIOID-RELATED HOSPITAL ENCOUNTERS IN 2021 BY HHSA REGION OF RESIDENCE

- In 2021, opioid-related overdose inpatient hospital encounters is higher in the East Region, which has remained stable from 2017 to 2021.



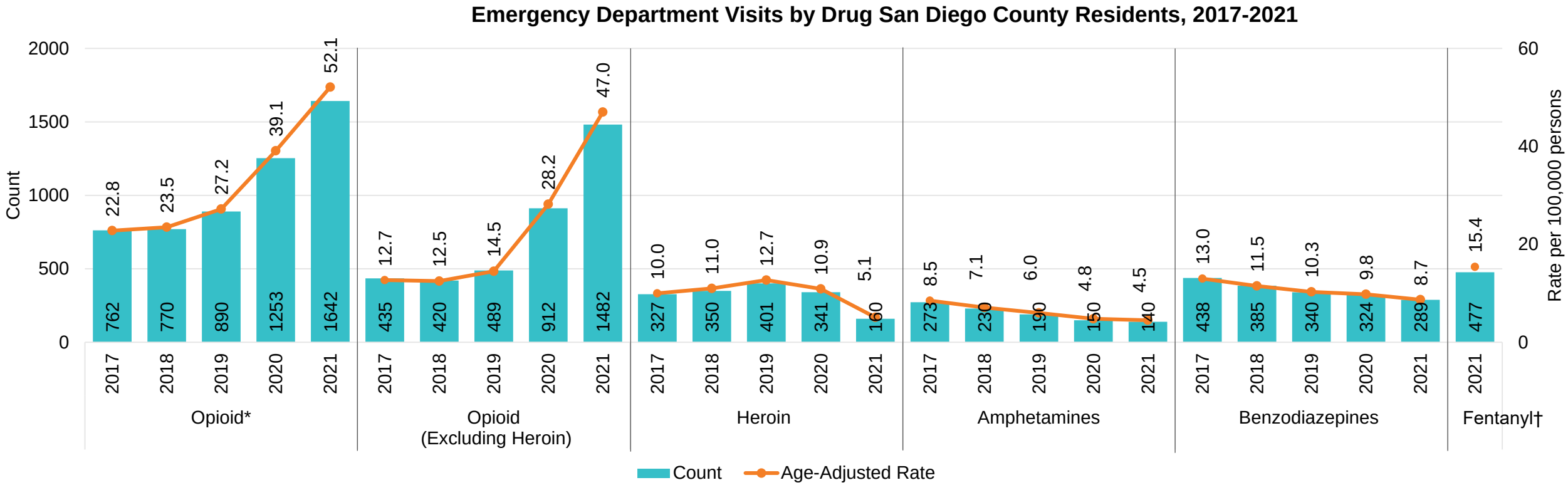
EMERGENCY DEPARTMENT VISITS

ALL DRUG-RELATED EMERGENCY DEPARTMENT VISITS



- From 2017 to 2021, there was little variation in any-drug-related overdose encounters at emergency departments in San Diego County.

EMERGENCY DEPARTMENT VISITS BY DRUG

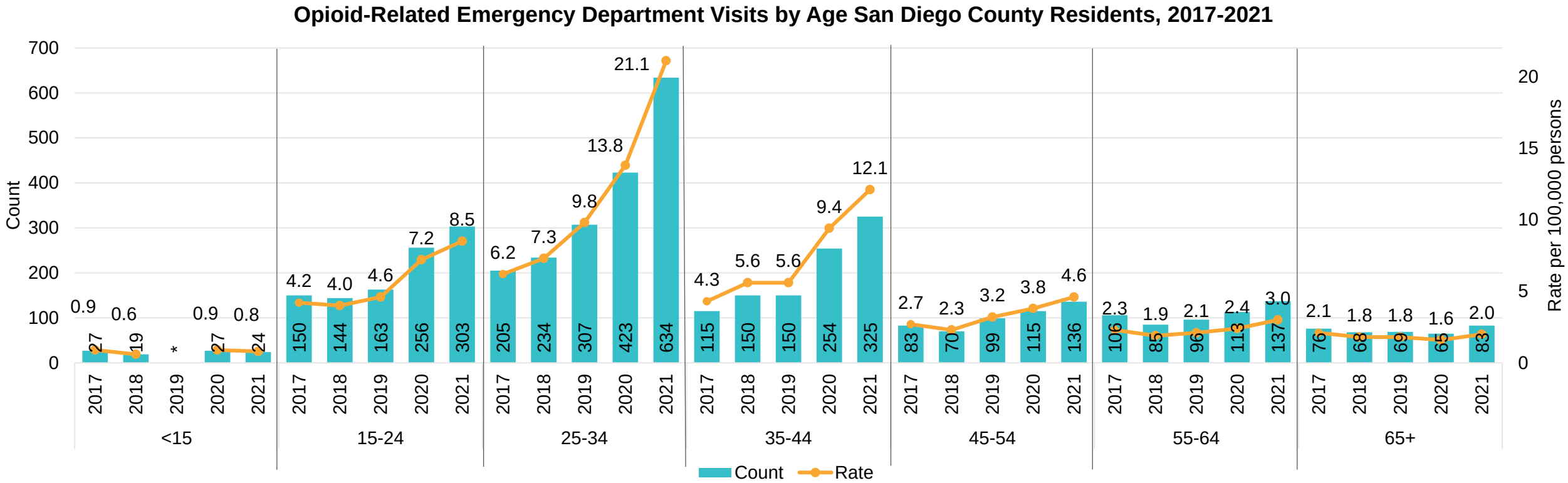


- Opioid-related overdose emergency department encounters gradually increased from 2017 to 2019, followed by a sharp increase from 2019 to 2021.
- From 2017 to 2021, amphetamine- and benzodiazepine- related overdose emergency department encounters gradually decreased.

*Opioid includes heroin and other opioids.

† Fentanyl-specific data from this source is only available starting in 2021.

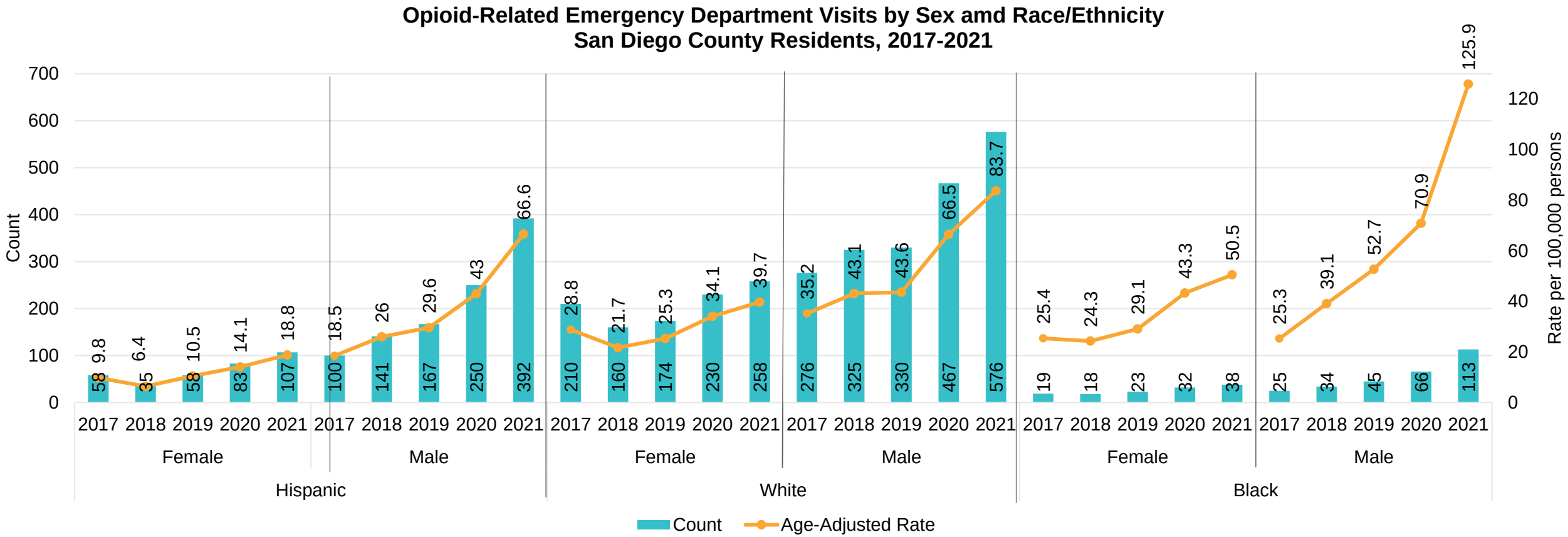
OPIOID-RELATED EMERGENCY DEPARTMENT VISITS BY AGE



- Opioid-related emergency department encounters, in individuals between the ages of 15-44 years, increased from 2017 to 2021 and the visit rate was higher in 2017 compared to the rates of individuals older than 45 years of age.
- Individuals between the ages of 25-44 years, accounted for 58% of the total opioid-related overdose emergency department encounters in 2021.

*Counts less than 15 are suppressed.

OPIOID-RELATED EMERGENCY DEPARTMENT VISITS BY SEX & RACE/ETHNICITY

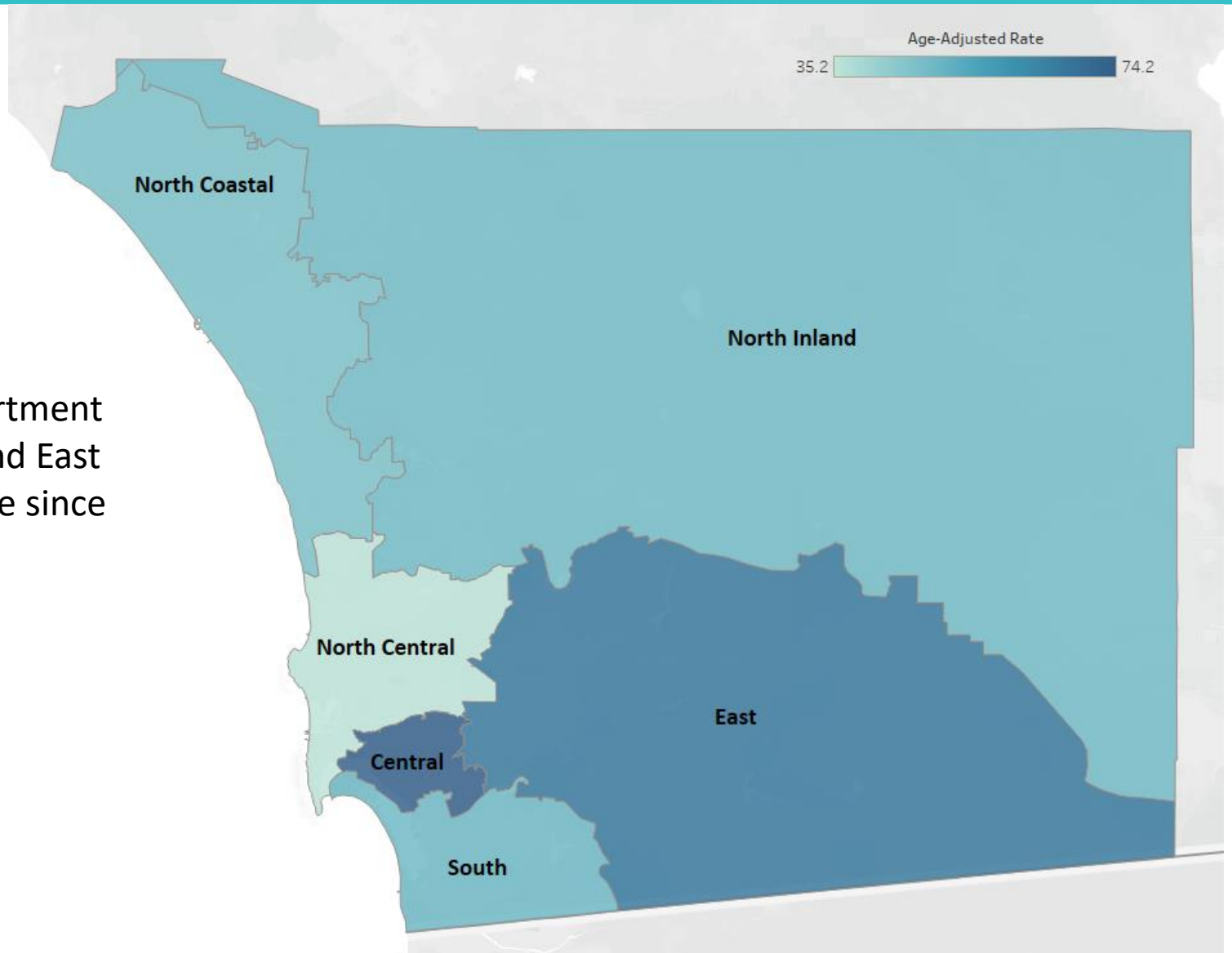


- Rates of opioid-related emergency department encounters were higher among males in the White, Hispanic, and Black populations in San Diego County.
- The rate of opioid-related emergency department encounters increased across all groups, from 2018 to 2021.

*Counts less than 15 are suppressed. Other Race/ethnicity groups have been censored due to small counts.

OPIOID-RELATED EMERGENCY DEPARTMENT VISITS IN 2021 BY HHSA REGION OF RESIDENCE

- In 2021, opioid-related emergency department encounters were higher in the Central and East Regions, a trend that has remained stable since 2017.



CONCLUSIONS

- In 2020, opioid overdose deaths and emergency department visits increased dramatically, a trend that continued in 2021, when a similar increase was seen in hospitalizations.
- In 2021, 88% of opioid-related deaths involved fentanyl, an increase from 45% of opioid-related deaths in 2019.
- In 2021, fentanyl contributed to 42% of opioid-related hospitalizations and 29% of opioid-related emergency department visits.
- In 2021, opioid-related deaths, hospitalizations, and emergency department visits were highest among individuals 25-34 years of age.
- Opioid-related overdose deaths and emergency department visits were higher among males than females from 2017 to 2021.
- In 2021, the Central and East HHSA Regions had the highest rates of opioid-related deaths, hospitalizations, and emergency department visits.
- From 2020 to 2021, psychostimulant-related deaths increased by 45%.
- Amphetamine-related hospitalizations more than doubled from 2017 to 2021, while amphetamine-related emergency department encounters gradually decreased.

NOTES AND SOURCES

- Retrospective analysis of fatal overdoses and nonfatal drug encounters regardless of intent among San Diego County residents, from 2017 to 2021.
- Data Sources:
  - Mortality data from the Vital Records Business Intelligence System (VRBIS), managed by the California Department of Public Health (CDPH).
  - Emergency Department (ED) and 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).
  - Data are available from the State annually ~9-12 months after the end of each year.
  - 2017-2021 SANDAG population estimates were used to calculate rates, using the populated estimates data file obtained in October 2022.
- Null values and counts <15 were suppressed.
- Rates between reports may differ due to updates in population estimates.
- More than one drug may contribute to a person's death, hospitalization, or ED visit; that death, hospitalization, or ED visit is included in multiple categories, which are not mutually exclusive.
- Beginning in the 4th quarter of 2020, the generic ICD-10-CM code for other synthetic narcotics was replaced by three more specific codes in HCAI data.
- Hospital inpatient encounter data use date of discharge for annual counts, which differs from previous retrospective reports, which utilized date of admission.

CASE DEFINITIONS

Case definitions for mortality data (following the definitions used on the 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.
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.
Opioid Excluding Heroin	Any opioid as a contributing cause of death, regardless of intent, except for heroin. Opioids include both prescription opioid pain relievers such as hydrocodone, oxycodone, and morphine, and opium. Deaths related to chronic use of drugs are excluded from this indicator.
Heroin Overdose	Drug overdose deaths caused by acute poisoning that involve heroin as a contributing cause of death, regardless of intent. Deaths related to chronic use of drugs are excluded from this indicator.
Psychostimulants Overdose	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 Overdose	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.
Fentanyl Overdose	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.

CASE DEFINITIONS (CONTINUED)

Case definitions for HCAI ED visits and HCAI Hospitalizations (following the definitions used on the 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.
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).
Opioid Excluding Heroin	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).
Heroin Overdose	Emergency department visits or inpatient hospitalizations caused by non-fatal acute poisonings due to the effects of heroin, regardless of intent. Emergency department visits or inpatient hospitalizations related to late effects, adverse effects, and chronic poisonings due to the effects of drugs.
Amphetamine Overdose	ED visits or inpatient hospitalizations caused by non-fatal acute poisonings due to the effects of amphetamines (stimulants such as methamphetamine), 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.
Benzodiazepine Overdose	Emergency department visits or inpatient hospitalizations caused by non-fatal acute poisonings due to the effects of benzodiazepines, regardless of intent (e.g., suicide, unintentional, or undetermined). Emergency department 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.
Fentanyl Overdose	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 are excluded from this indicator. This indicator is only available beginning in 2021.

County of San Diego

Health and Human Services Agency

Public Health Services

Epidemiology and Immunization Services Branch

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The Public Health Services department, County of San Diego Health and Human Services Agency, has maintained national public health accreditation, since May 17, 2016, and re-accredited by the Public Health Accreditation Board on August 21, 2023.