Substance Use Mortality Trends in San Francisco through 2025

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1 INTRODUCTION

We are pleased to release the report on substance use mortality through 2025 for the City and County of San Francisco (CCSF). In this report, we analyze trends in all substance-related mortality for 2013 through 2025. This year's report takes a slightly different approach than prior years. We first report on all substance-related deaths, including any deaths in which a substance was determined to contribute to the death, whether or not it was due to acute substance toxicity. We then report on acute toxicity deaths only for those attributed to opioids, commonly referred to as "overdose" deaths. Finally, we report on the remainder of substance-related deaths. The number of opioid-related deaths (Table 1) may be slightly greater than the number of opioid acute toxicity deaths (Table 2).

Unless otherwise noted, all data in this report were sourced from the California Vital Records Business Intelligence System (VRBIS). Because of different inclusion and exclusion criteria applied to VRBIS data, counts may differ slightly from data provided by the San Francisco Office of the Chief Medical Examiner. More detail on data sourcing is available in the Appendix.

We hope this report further informs the many ongoing efforts to support the health and safety of San Franciscans.

2 HIGHLIGHTS

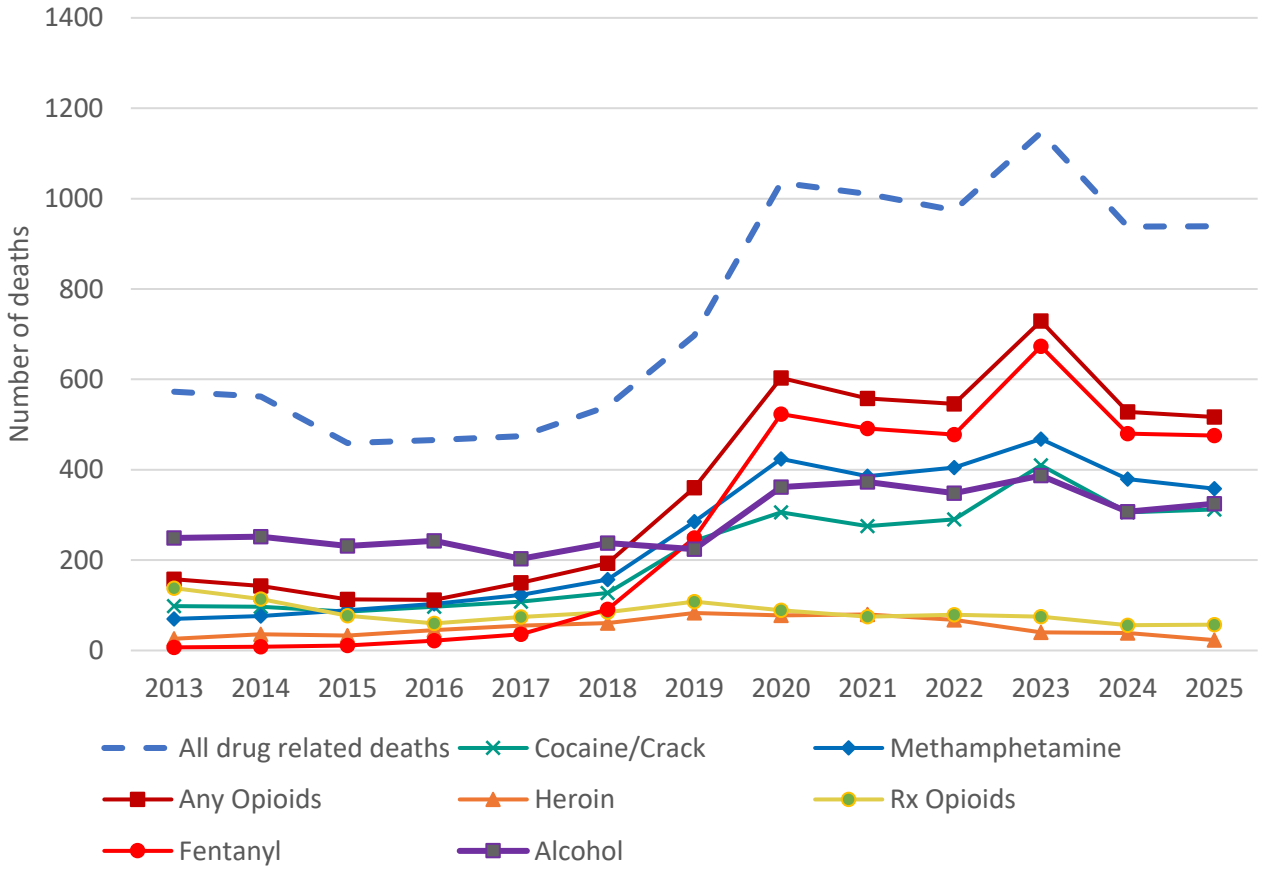
- Substance-related deaths in 2025 were nearly unchanged from 2024.
- Deaths attributed to acute toxicity from opioids decreased by 29% from 2023 to 2024, and remained stable in 2025.
- The proportion of opioid overdose deaths attributed to fentanyl and related analogues remained at 94% in 2025.
- Males, persons aged 50-59 years, and Black/African American people had the highest rates of mortality due to opioid overdose. Changes from 2024 to 2025 varied by race and ethnicity, with a slight increase in mortality among Black/African American and Latine/Hispanic people and a slight decrease for White, non-Hispanic people.
- Fentanyl analogues were common in acute toxicity deaths; the most common in 2025 was fluoro-fentanyl, which was present in 38 deaths, about a 50% decrease from 2024.
- Novel synthetic opioids other than fentanyl analogues, such as nitazenes, were present but uncommon in 2025.
- Alpha-2-andrenergic agonists, including medetomidine and xylazine, were implicated in several deaths in 2025. Xylazine was present in 27 acute toxicity deaths, a decrease from 2024, and 96% of these deaths also involved fentanyl.
- Mitragynine, the main psychoactive compound in kratom, is newly classified as an opioid in this year's report and was involved in a small number of deaths. Mitragynine is neither medically prescribed nor present in illicitly manufactured drug supply, but may be available over the counter in convenience stores or online.
- Benzodiazepine-involved acute toxicity deaths decreased to 25 in 2025. New designer benzodiazepines, most commonly bromazolam, were present in the majority of benzodiazepine-involved deaths.
- Cannabis was not included in this report, as no deaths were attributed to cannabis.
- Substance-related deaths among people aged 19 and under were very rare in San Francisco (less than 1% of all acute toxicity deaths). Due to the small number of events, we did not report separately on this age group.

3 Substance Use Mortality, Overall

3.1 Overall Substance-Related Mortality

Substance-related deaths refer to all unintentional deaths, including medical or traumatic deaths, in which a drug was reported to be involved in the cause of death or its use was considered a significant contributor to death. This includes acute toxicity deaths, and non-acute substance-related deaths, such as those from hepatic, cardiovascular, pulmonary, or infectious diseases associated with substance use. Prior to 2019, alcohol was the leading substance contributing to substance-related deaths in CCSF (**Figure 1**). Since 2019, opioids, led by fentanyl, surpassed alcohol as the substance contributing to the highest number of deaths. The annual substance-related deaths in 2025 was 939, similar to 2024.

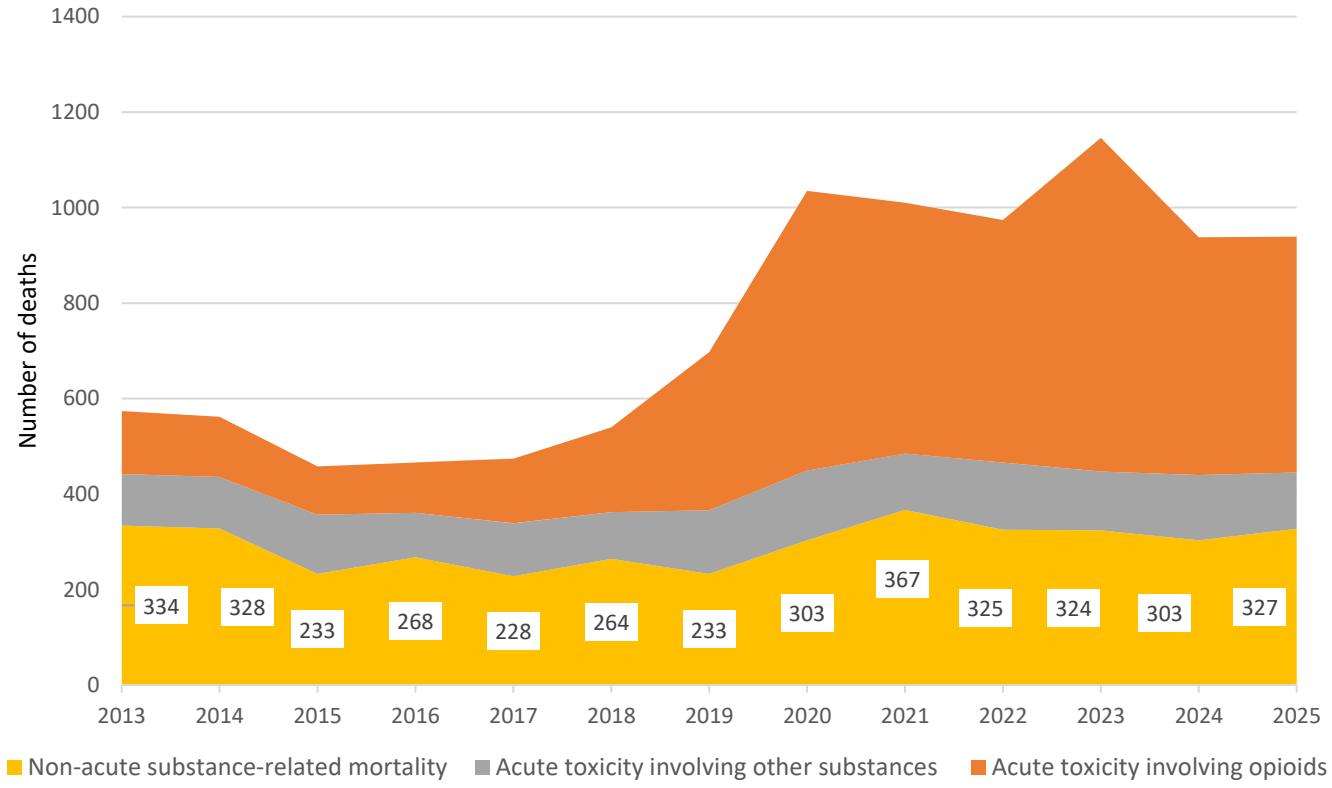
Figure 1: Substance-Related Deaths by Non-Mutually Exclusive Contributing Substance in CCSF, 2013-2025



The total "All drug related deaths" includes substances other than those listed in the legend, but excludes medications with no psychoactive effect (e.g., amiodarone or other cardiovascular medications). See Appendix for detail on data sources.

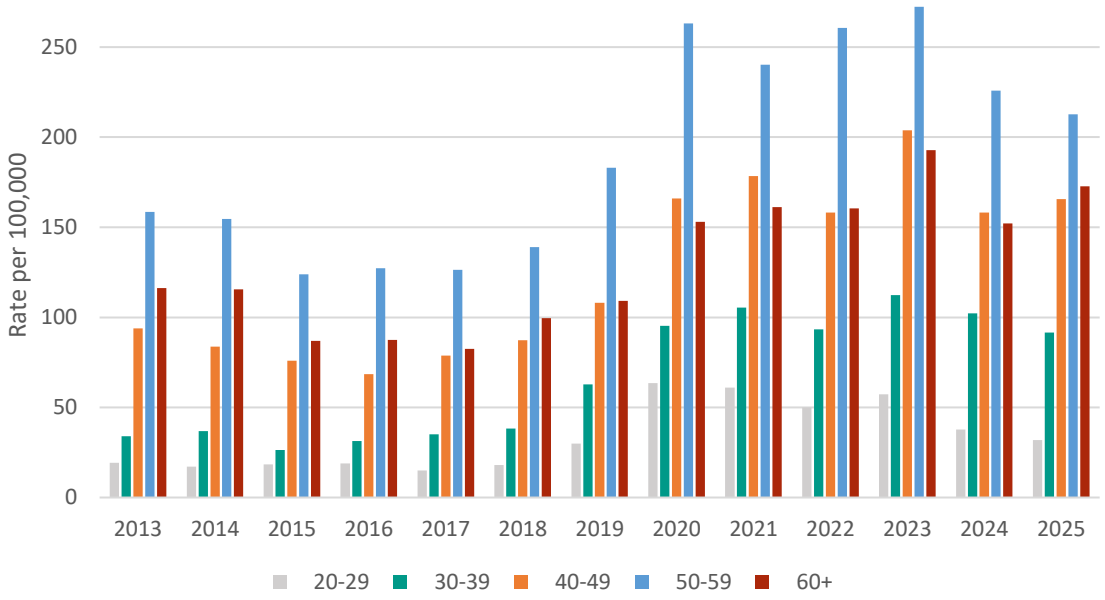
Figure 2 displays the share of substance-related deaths attributed to acute toxicity compared to non-acute substance-related causes. Most non-acute deaths were due to alcohol, while most acute toxicity deaths were due to opioids. Substances causing non-opioid acute toxicity deaths include cocaine, methamphetamine, and alcohol. The increase in non-acute substance-related deaths starting in 2020 was largely driven by alcohol-related deaths.

Figure 2: Substance-Related Deaths by Acute and Non-Acute Status in CCSF, 2013-2025



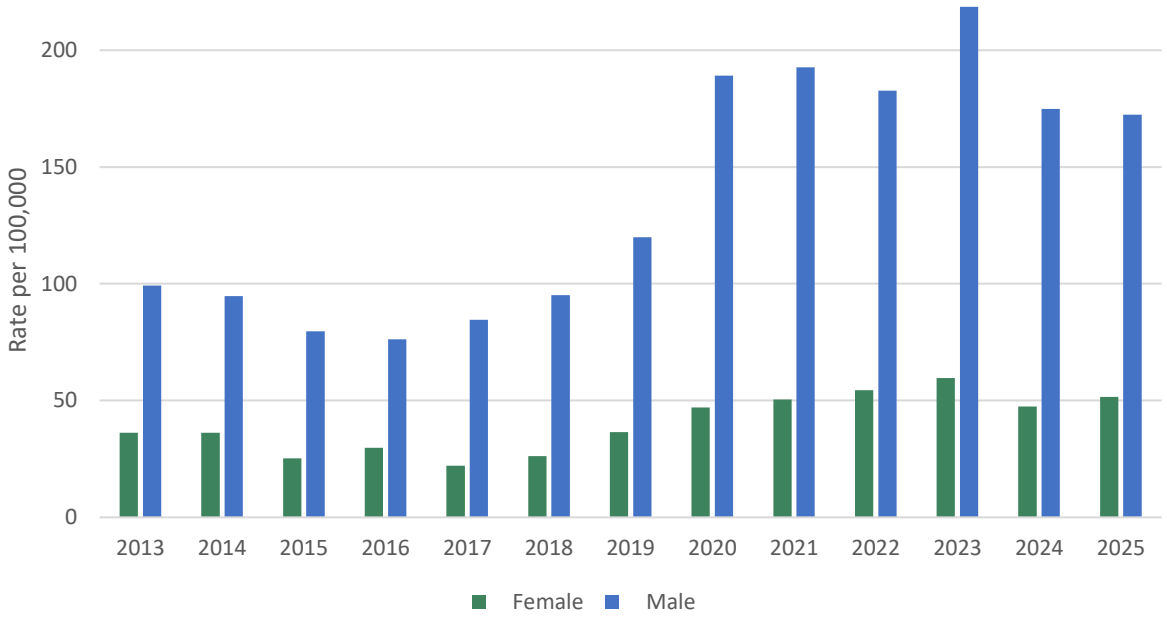
In 2025, the rate of substance-related deaths was highest among people aged 50-59 years (**Figure 3**), males (**Figure 4**), and Black/African American people (**Figure 5**). Black/African American people have consistently had a four to five-fold disparity in the rate of acute and non-acute substance-related death compared to all race/ethnicities throughout the period of 2013-2025 (**Figure 5**).

Figure 3: Substance-Related Death Rate by Age in CCSF, 2013-2025



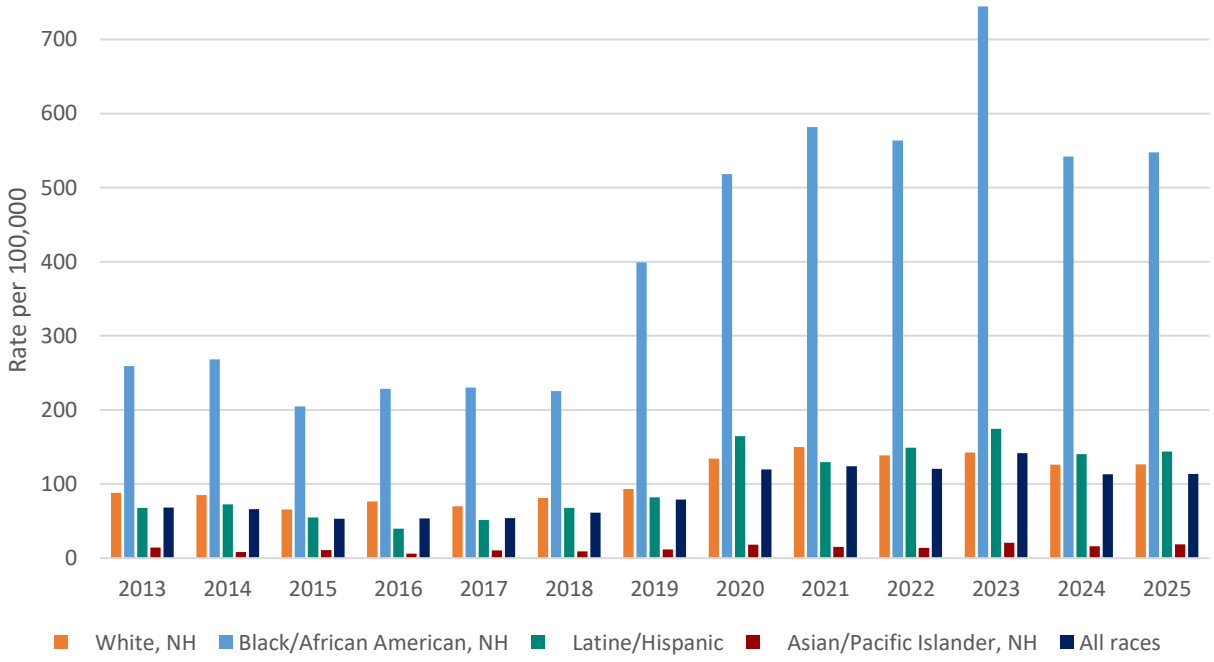
Rate was calculated per 100,000 population. People under age 20 were excluded due to small counts.

Figure 4: Substance-Related Death Rate by Sex in CCSF, 2013-2025



Rate was calculated per 100,000 population. Sex or gender at death is determined by the medical examiner. Decedents with unknown sex are excluded.

Figure 5: Substance-Related Death Rate by Race/Ethnicity in CCSF, 2013-2025



Rate was calculated per 100,000 population. NH = Non-Hispanic.

3.2 Opioid Overdose Mortality

The number of opioid overdose deaths in San Francisco decreased slightly from 498 to 494 in 2025, and most also involved cocaine or methamphetamine (**Figure 6 6**). The vast majority (94%) of opioid overdoses were caused by fentanyl, with or without other substances. The remaining 6% of opioid overdoses were cause by heroin, prescription opioids, or new synthetic opioids such as nitazenes. The majority of opioid overdose deaths in San Francisco occur in the Tenderloin and South of Market neighborhoods (**Figure 7**).

Figure 6: Opioid Overdose Deaths by Mutually Exclusive Substance Combinations, CCSF 2013-2025

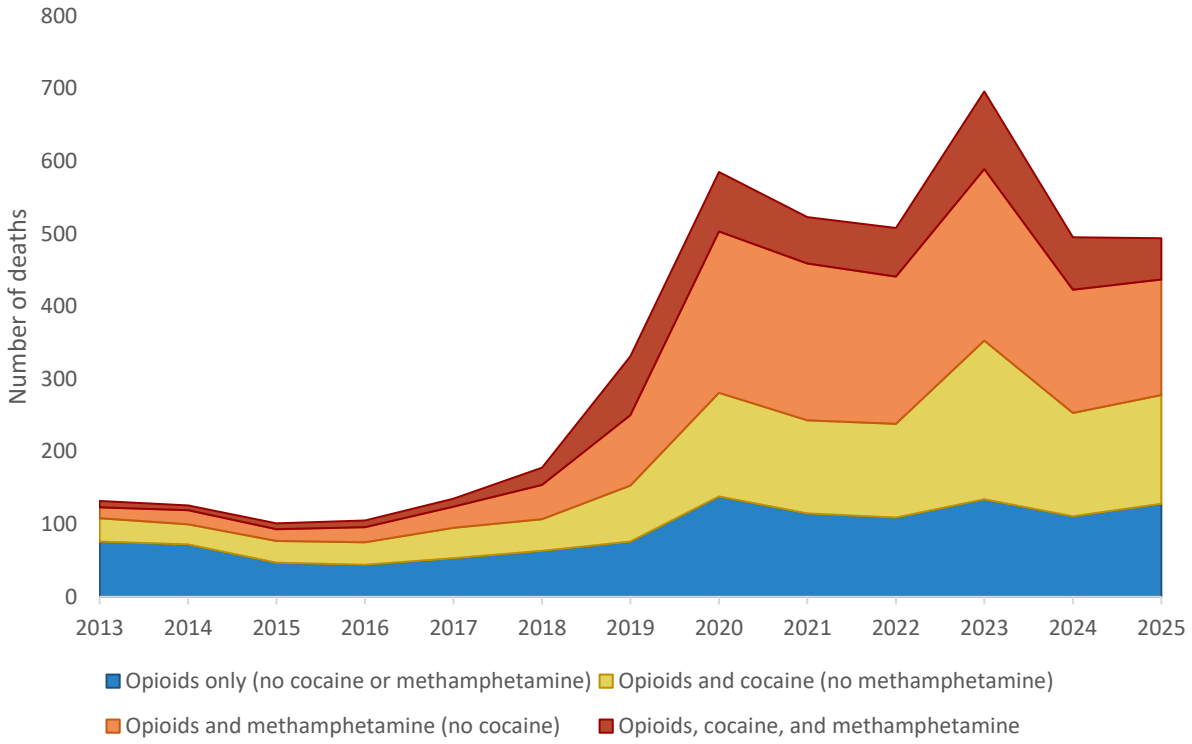
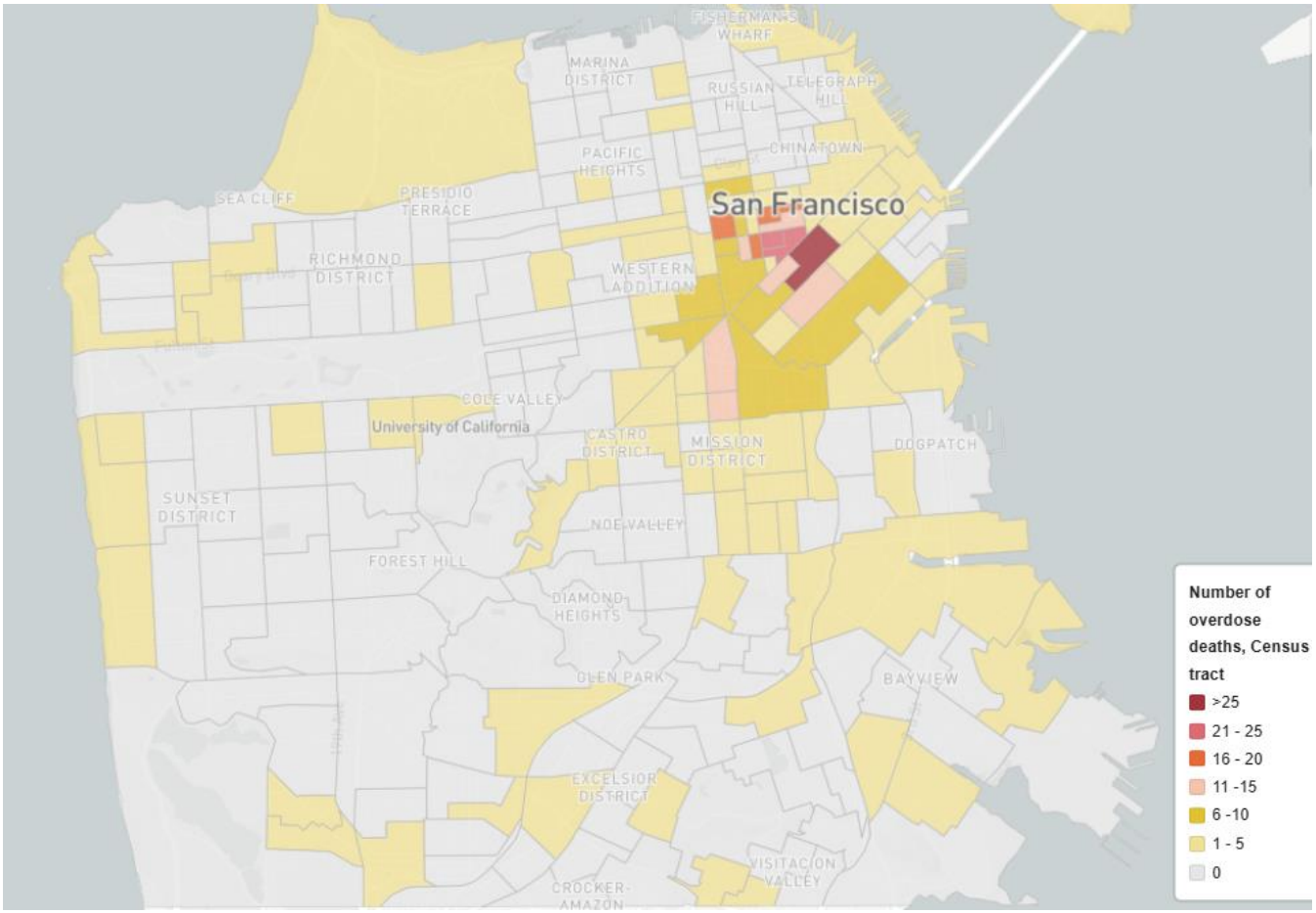


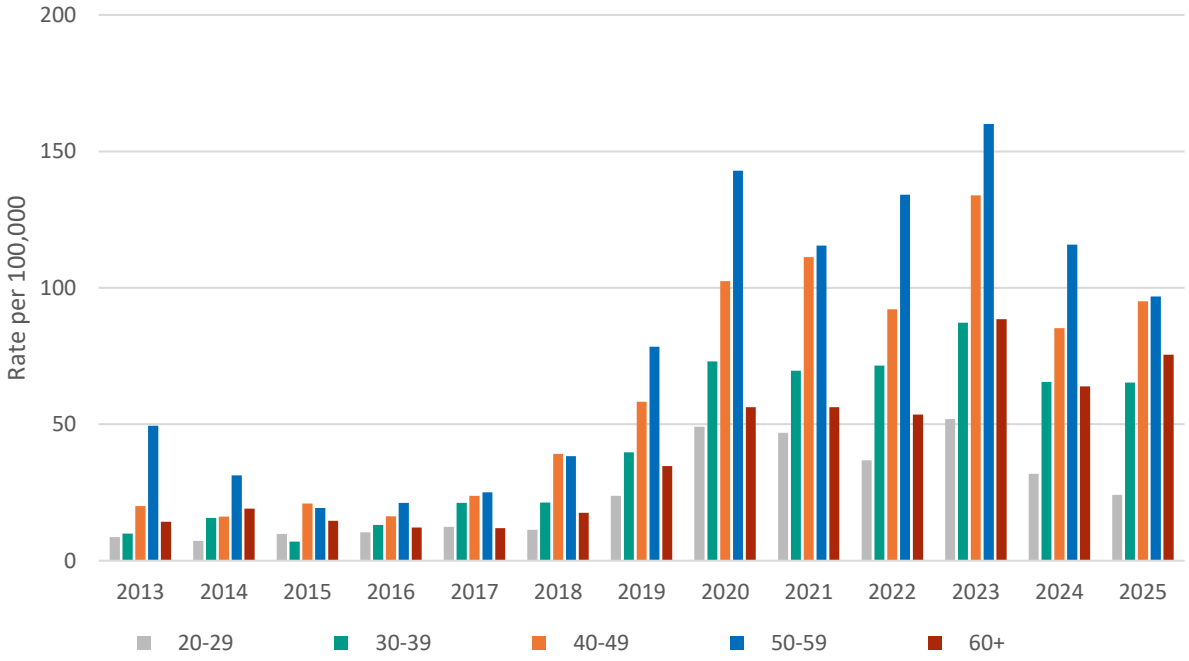
Figure 7: Location of 2025 Opioid Overdose Deaths by Census Tract, CCSF



** Excludes deaths that occurred in a hospital (n=69), and those whose location could not be geocoded (n=15). Data courtesey of Office of the Chief Medical Examiner*

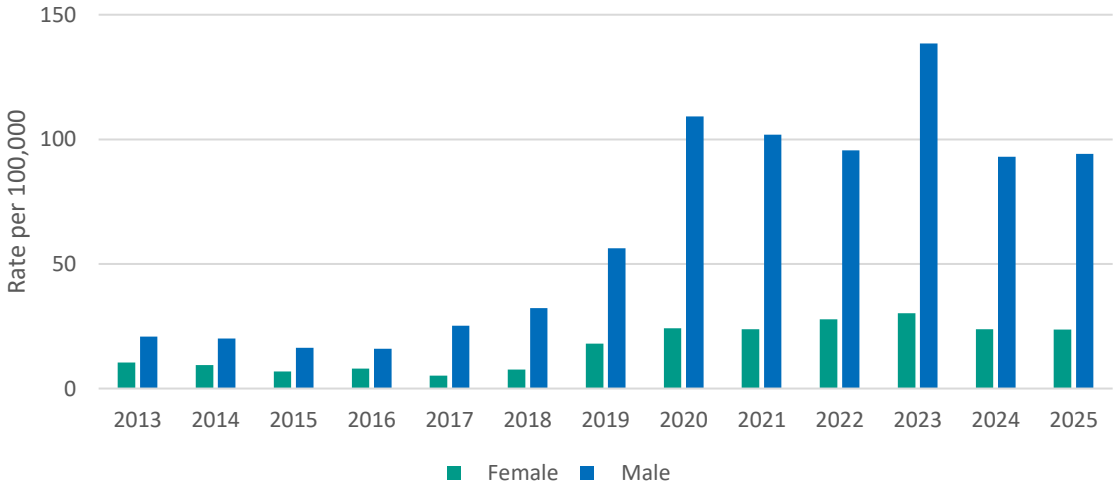
In 2025, the rate of opioid overdose deaths was highest among people aged 50-59 years (**Figure 8**), males (**Figure 9**), and Black/African American people (**Figure 10**). While the citywide rate of opioid overdose mortality did not change overall from 2024 to 2025, the rates for Black/African American and Latine/Hispanic people increased by 10%, while the rate for White, non-Hispanic people decreased by 10% (**Figure 10**).

Figure 8: Opioid Acute Toxicity Death Rate by Age Category in CCSF, 2013–2025



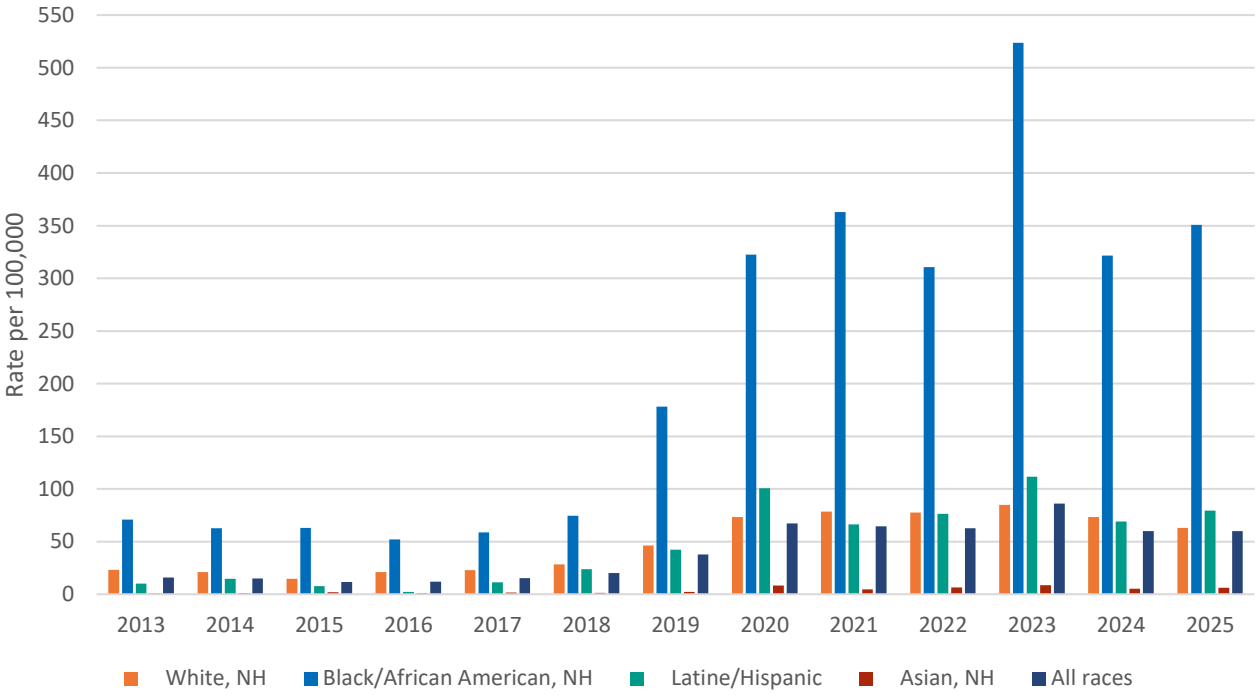
Rate was calculated per 100,000 population. People under age 20 are excluded due to small counts.

Figure 9: Opioid Acute Toxicity Death Rate by Sex in CCSF, 2013–2025



Rate was calculated per 100,000 population.

Figure 10: Opioid Acute Toxicity Death Rate by Race/Ethnicity in CCSF, 2013–2025

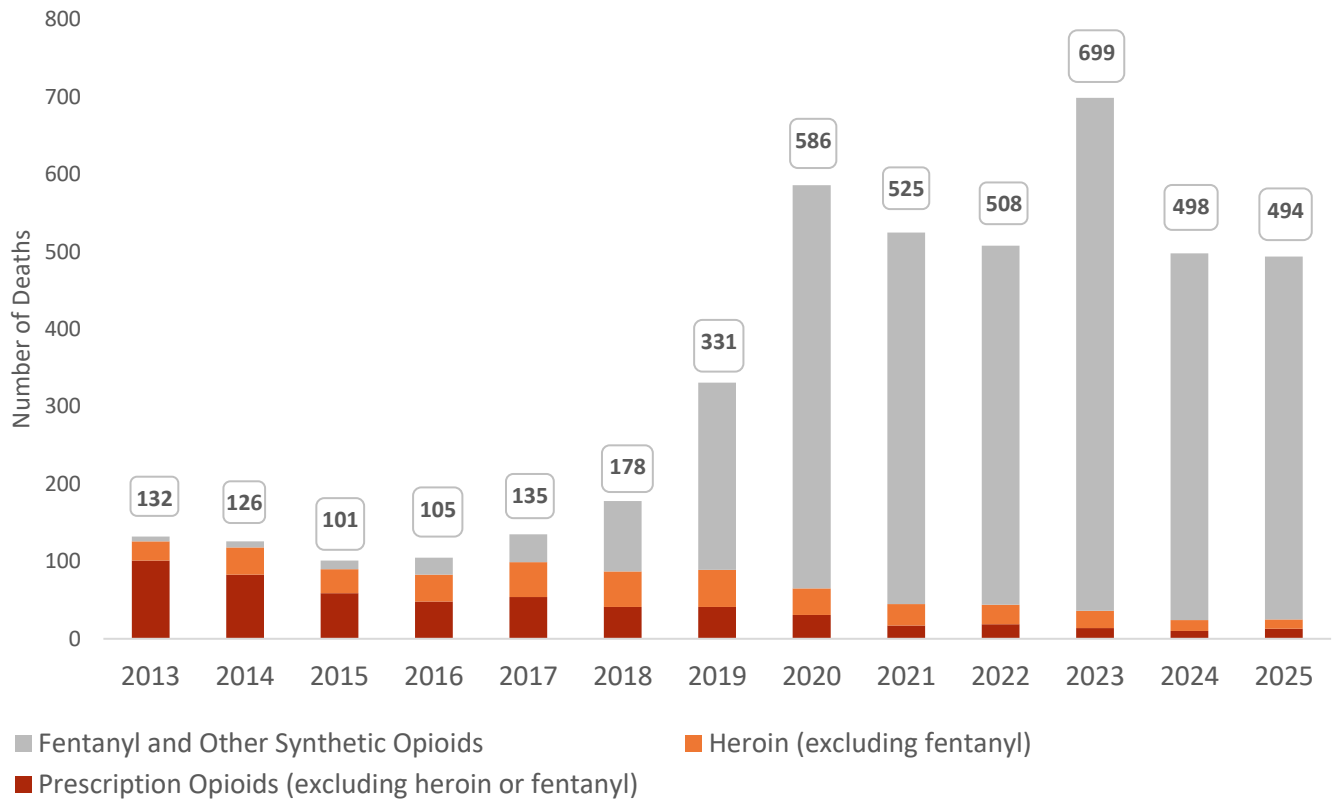


Rate was calculated per 100,000 population. NH=non-Hispanic.

3.2.1 Opioid Type

Deaths from opioids in the absence of fentanyl have declined since 2017 (**Figure 11**); in 2025, 94% of opioid overdose deaths were caused by fentanyl. Among the 19 overdose deaths attributed to heroin in 2025, 37% also involved fentanyl. Heroin in the absence of fentanyl caused 12 deaths in 2025 (see **Figure 11**). New synthetic opioids other than fentanyl have very rarely been implicated in deaths in San Francisco.

Figure 11: Number of Opioid Acute Toxicity Deaths by Mutually Exclusive Opioid Type in CCSF, 2013–2025



*For **Figure 12**, opioids were ranked by relative risk of overdose. Fentanyl and synthetic opioids acute toxicity death was defined as any death caused by fentanyl or fentanyl analogues, carfentanil, nitazenes, orphine analogues, whether or not any other substances were involved; heroin acute toxicity death was defined as any death caused by heroin but not fentanyl, regardless of the involvement of any other substances; prescription opioid acute toxicity death was defined as any opioid acute toxicity deaths (e.g., involving oxycodone, morphine, codeine, methadone, or other opioids that are commonly prescribed) not also caused by heroin, fentanyl, or other synthetic opioids.*

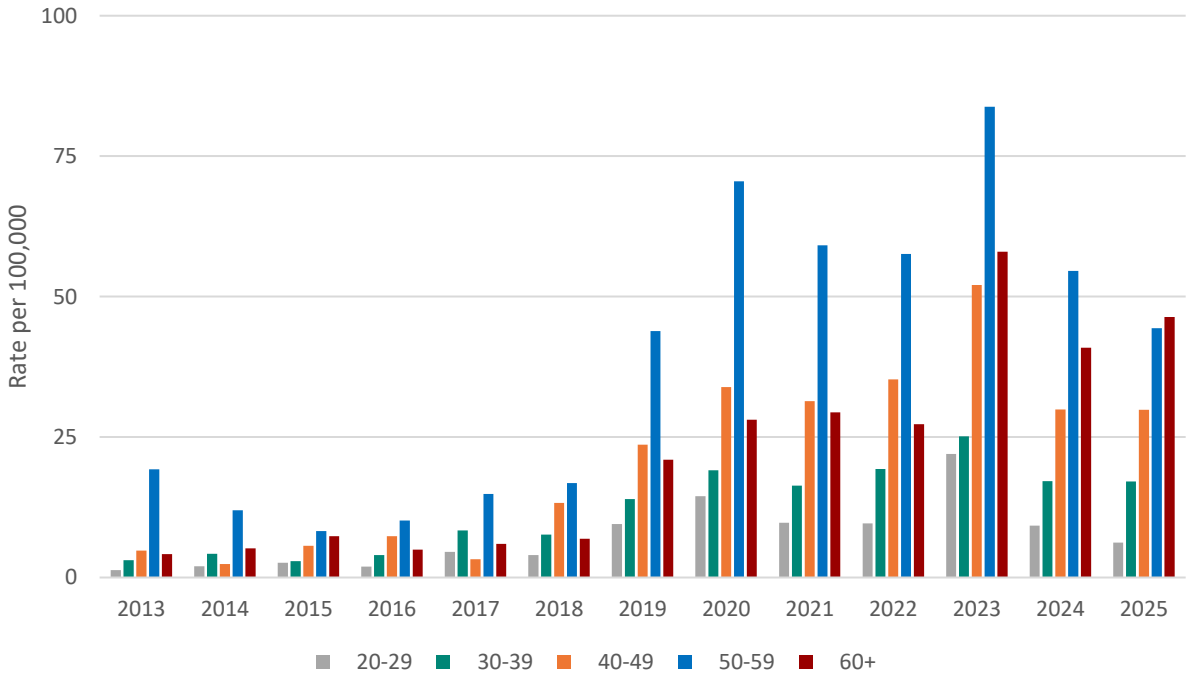
3.2.2 Opioids with Stimulants

The majority (74% in 2025) of opioid acute toxicity deaths were attributed to the combination of opioids and stimulants (**Figure 6**). Acute toxicity deaths due to opioids alone increased from 2024 to 2025 as did deaths due to the combination of opioids and cocaine (**Figure 6**). Deaths due to opioids in combination with methamphetamine or both methamphetamine and cocaine, decreased from 2024 to 2025.

3.2.2.1 Opioids with Cocaine

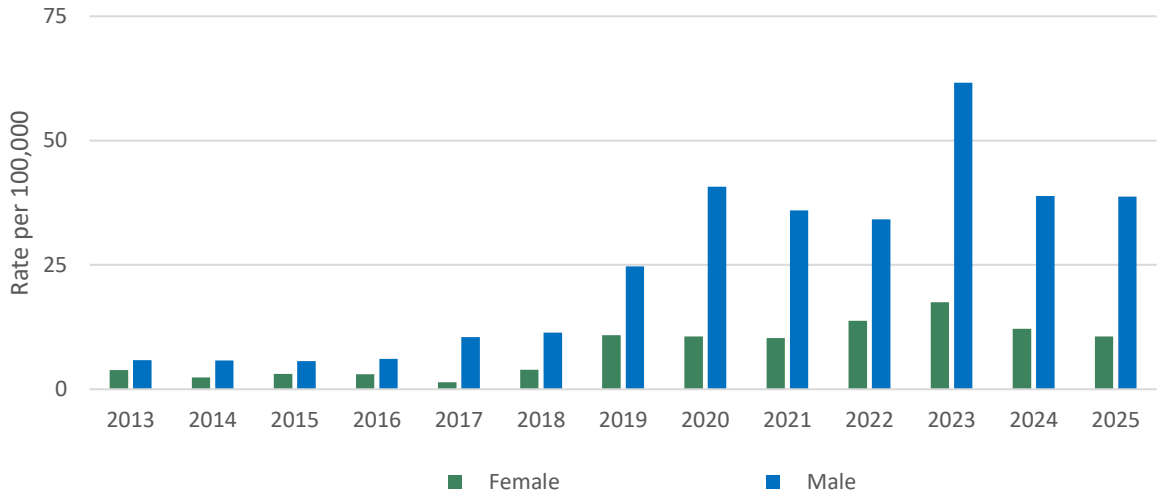
Among 207 deaths attributed to acute toxicity from opioids and cocaine in 2025, 94% involved fentanyl. The rate of opioid with cocaine overdose deaths was highest among persons aged 60 years and over for the first time (**Figure 12**), males (**Figure 13**), and Black/African American people (**Figure 14**).

Figure 12: Opioids with Cocaine Overdose Death Rate by Age Category in CCSF, 2013-2025



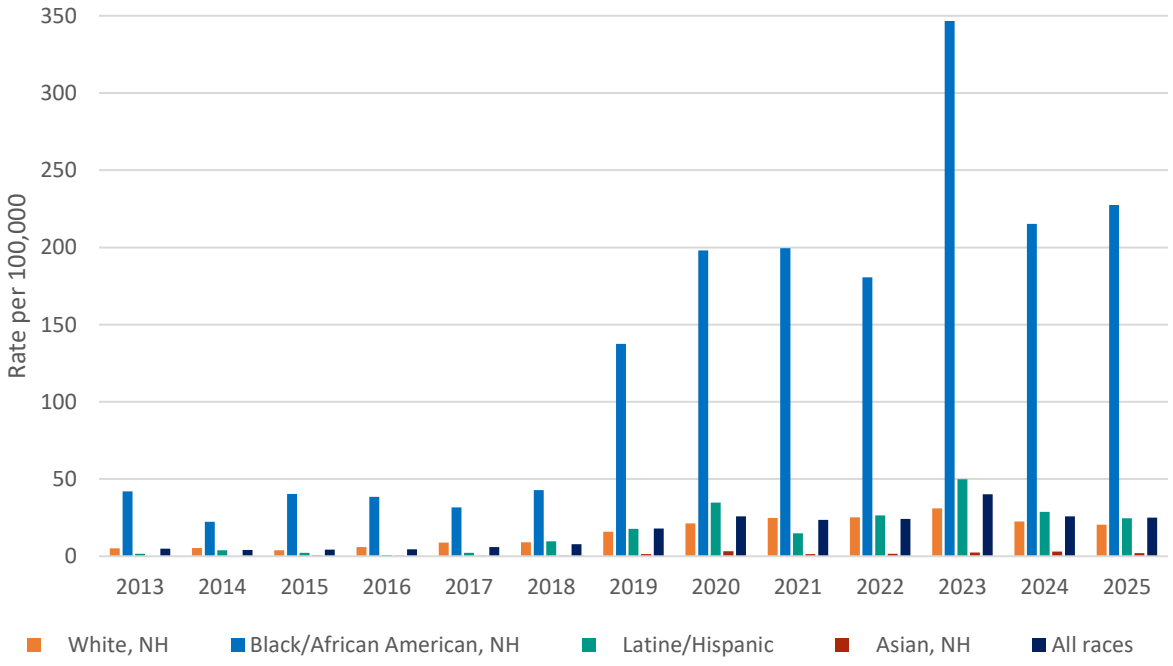
Rate was calculated per 100,000 population. People under age 20 excluded.

Figure 13: Rate of Opioids with Cocaine Acute Toxicity Deaths by Sex in CCSF, 2013–2025



Rate was calculated per 100,000 population.

Figure 14 : Opioids with Cocaine Acute Toxicity Death Rate by Race/Ethnicity in CCSF, 2013–2025

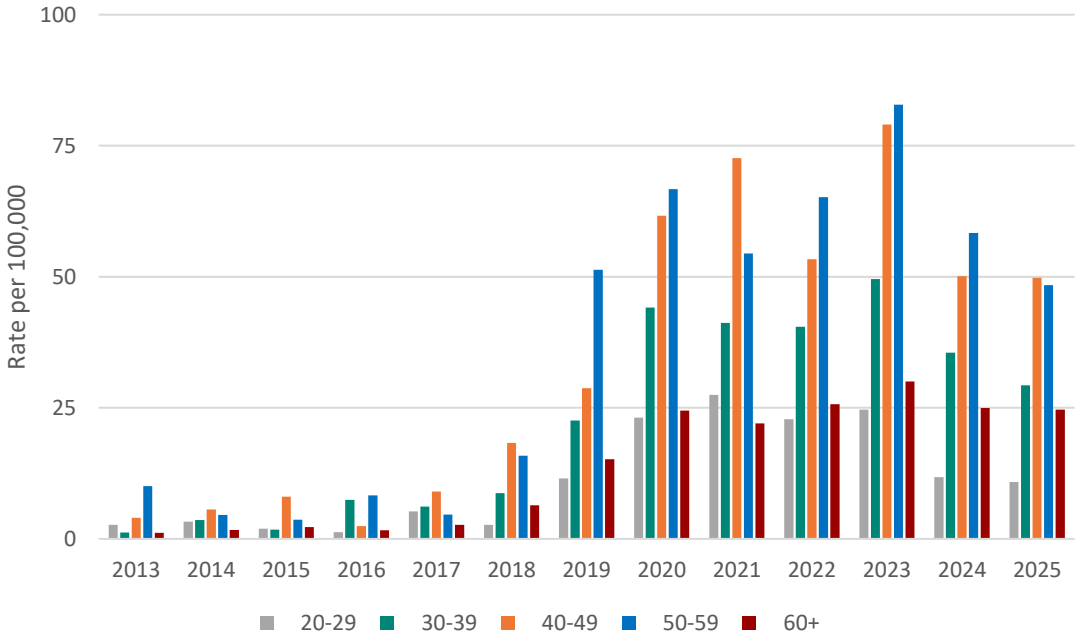


Rate is per 100,000 population. NH=non-Hispanic.

3.2.2.2 Opioids with Methamphetamine

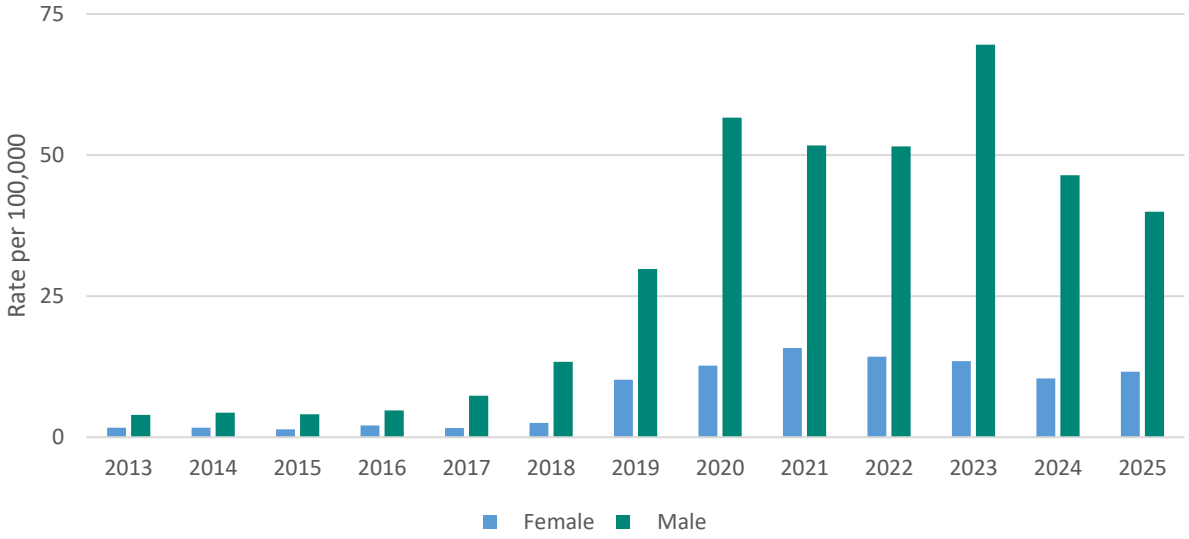
Among 215 deaths attributed to acute toxicity from opioids with methamphetamine in 2025, 97% involved fentanyl. The rate of opioid with methamphetamine acute toxicity deaths was highest among persons aged 40–49 years (**Figure 15**), males, (**Figure 16**), and Black/African American people (**Figure 17**).

Figure 15: Opioids with Methamphetamine Acute Toxicity Death Rates by Age Category, CCSF 2013-2025



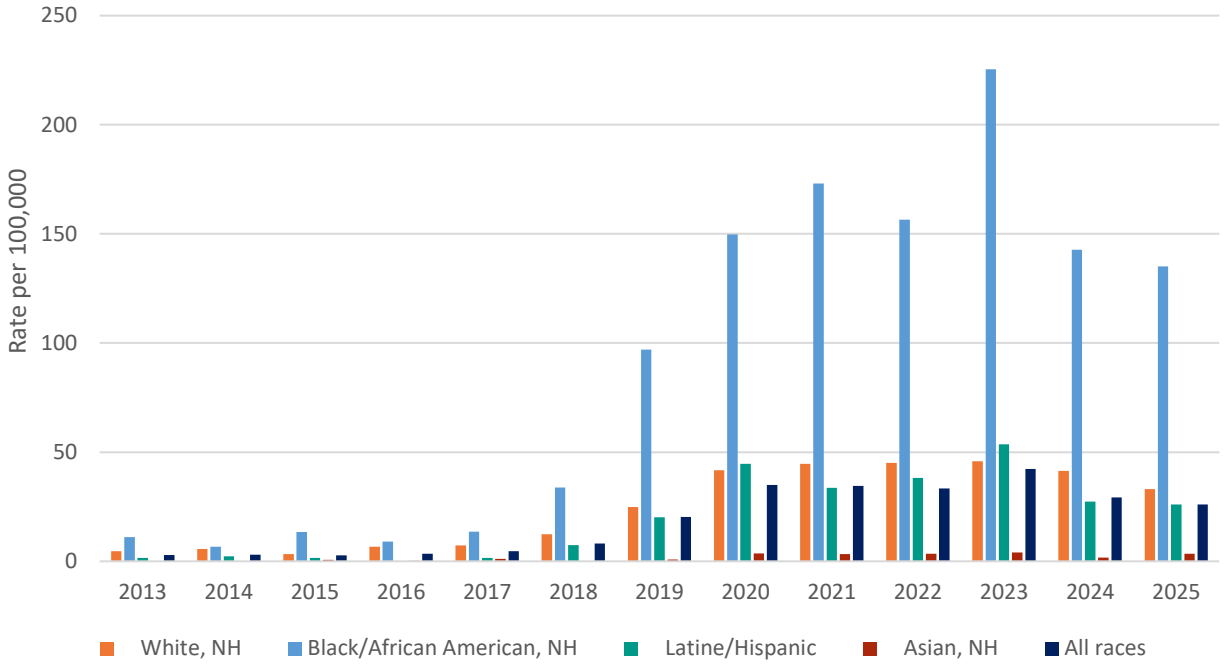
Rate was calculated per 100,000 population. People under age 20 are excluded..

Figure 16: Opioids with Methamphetamine Acute Toxicity Death Rate by Sex in CCSF, 2013–2025



Rate was calculated per 100,000 population.

Figure 17: Opioids with Methamphetamine Overdose Death Rate by Race/Ethnicity in CCSF, 2013–2025

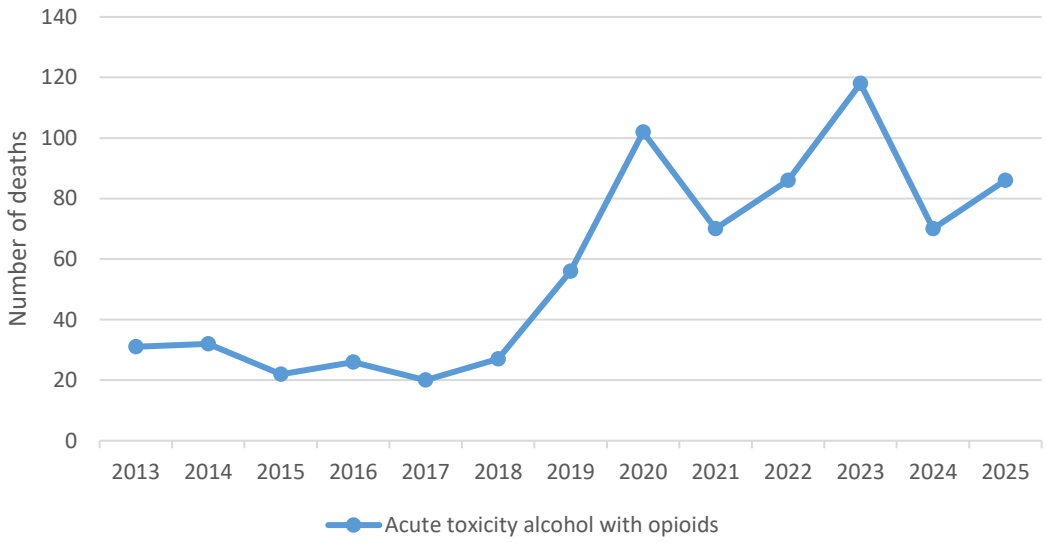


Rate was calculated per 100,000 population. NH=non-Hispanic.

3.2.3 Opioids with Alcohol

The use of alcohol and opioids in combination can lower the threshold for respiratory depression as compared to use of either substance alone (van der Schrier et al, *Anesthesiology*. 2017). In 2025, 17% (86/494) of opioid overdose deaths also involved alcohol. Of these, 94% involved fentanyl.

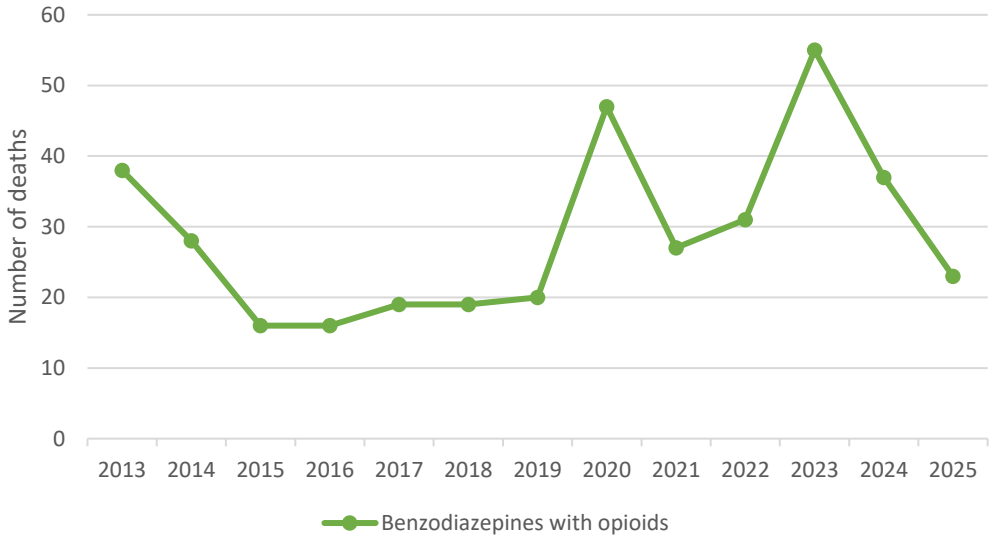
Figure 18: Opioids with Alcohol Overdose Deaths, CCSF 2013–2025



3.2.4 Opioids with Benzodiazepines

Similar to alcohol, the use of benzodiazepines and opioids in combination can lower the threshold for respiratory depression as compared to use of either substance alone. The number of acute toxicity deaths attributed to opioids and benzodiazepines decreased from 2024 to 2025 (**Figure 19**). Benzodiazepine-involved deaths in San Francisco since 2020 have been associated with novel designer benzodiazepines, most commonly bromazolam (Rodda, *Addiction*, 2024).

Figure 19: Opioids with Benzodiazepine Overdose Deaths, CCSF 2013–2025



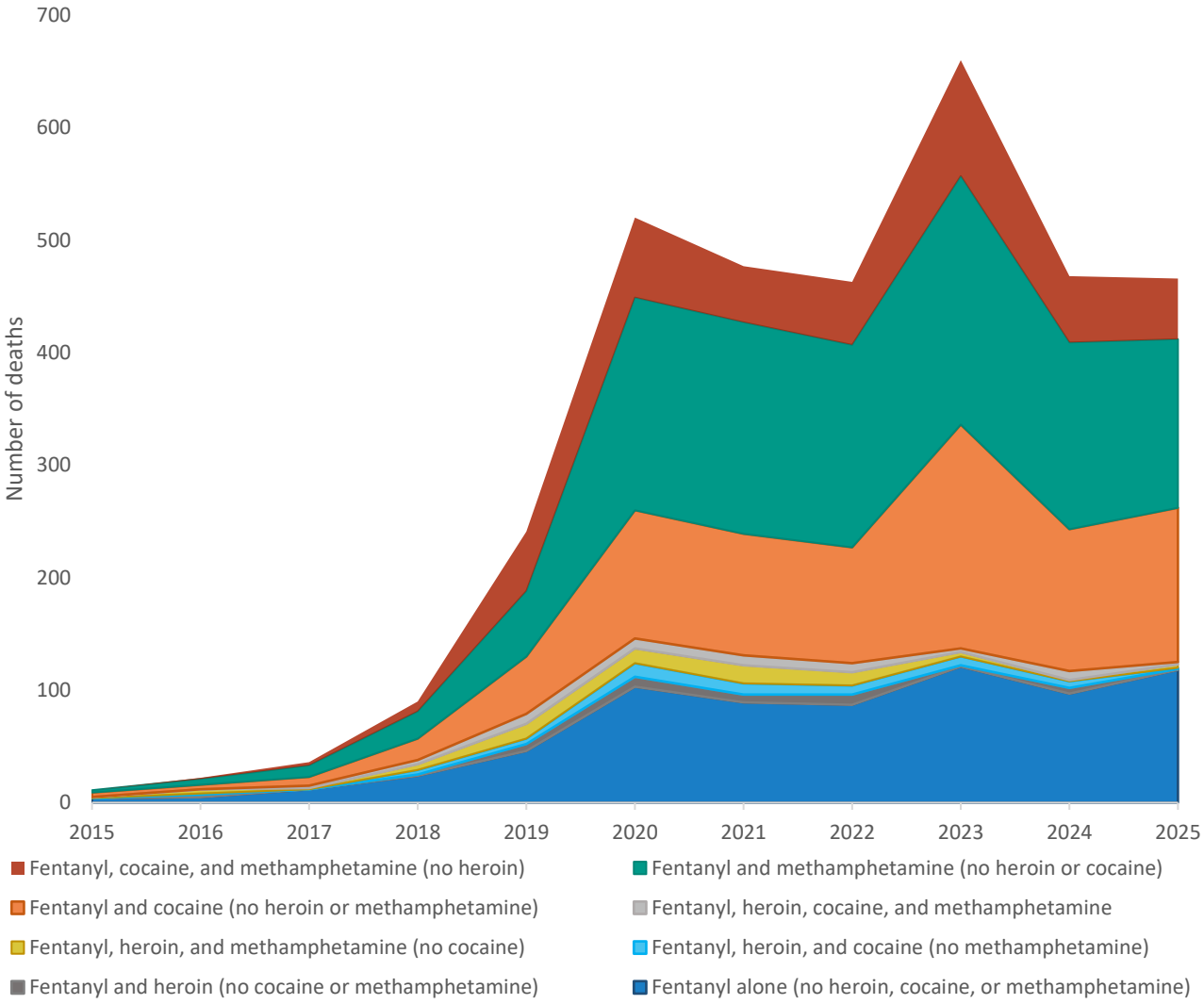
3.2.5 Fentanyl

Fentanyl (including common analogues such as acetyl and flouro fentanyl) acute toxicity deaths dramatically increased from 2016, with increases particularly in 2020 and 2023. Among the 466 fentanyl acute toxicity deaths in 2025, 25% involved fentanyl only (without prescription opioids, heroin, cocaine, methamphetamine, or benzodiazepines); 2% involved heroin; 6% involved prescription opioids; 45% involved cocaine; 41% involved methamphetamine; and 3% involved a benzodiazepine.

Fentanyl in San Francisco is commonly smoked and is often sold as white powders or "rocks" that can be mistaken for methamphetamine or cocaine. Data do not suggest that fentanyl is commonly put into other drugs; instead, the similar appearance of fentanyl, cocaine, and methamphetamine, as well as the use of similar smoking devices to consume each product, appears to result in frequent mistaken use of fentanyl (Bazazi, et al., J Urban Health, 2024).

Fentanyl deaths rose significantly after 2016. Fentanyl deaths remained unchanged from 2024 to 2025. (**Figure 20**).

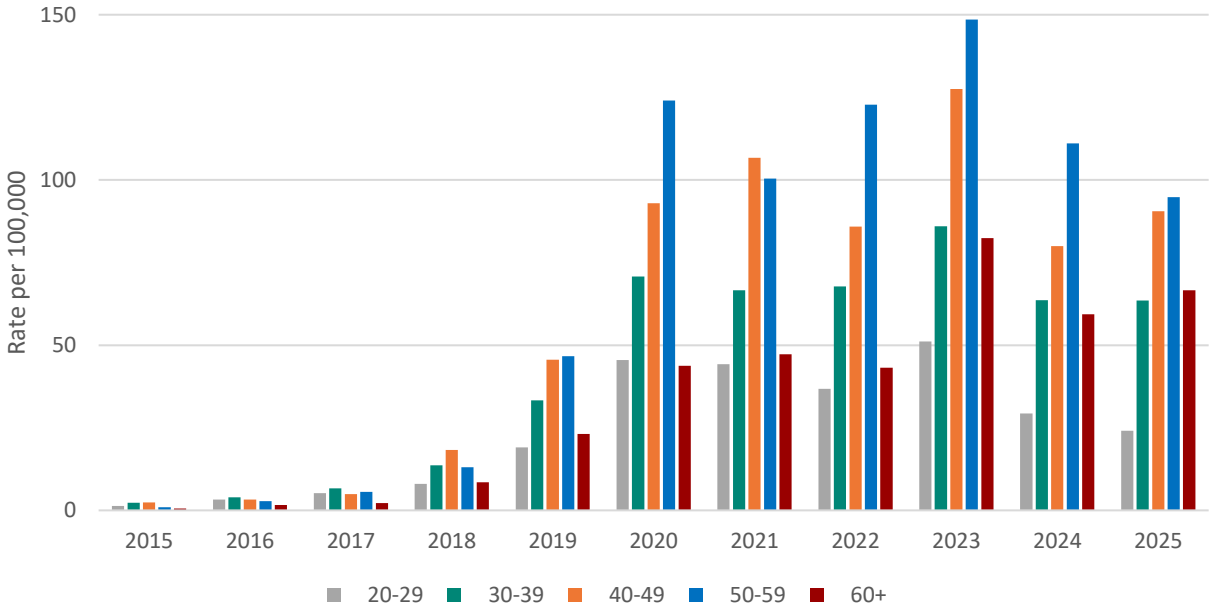
Figure 20: Fentanyl Acute Toxicity Deaths by Mutually Exclusive Involvement of Additional Causative Substance in CCSF, 2015–2025



Fentanyl includes fentanyl analogues. The height of each band corresponds to the number of events in that category.

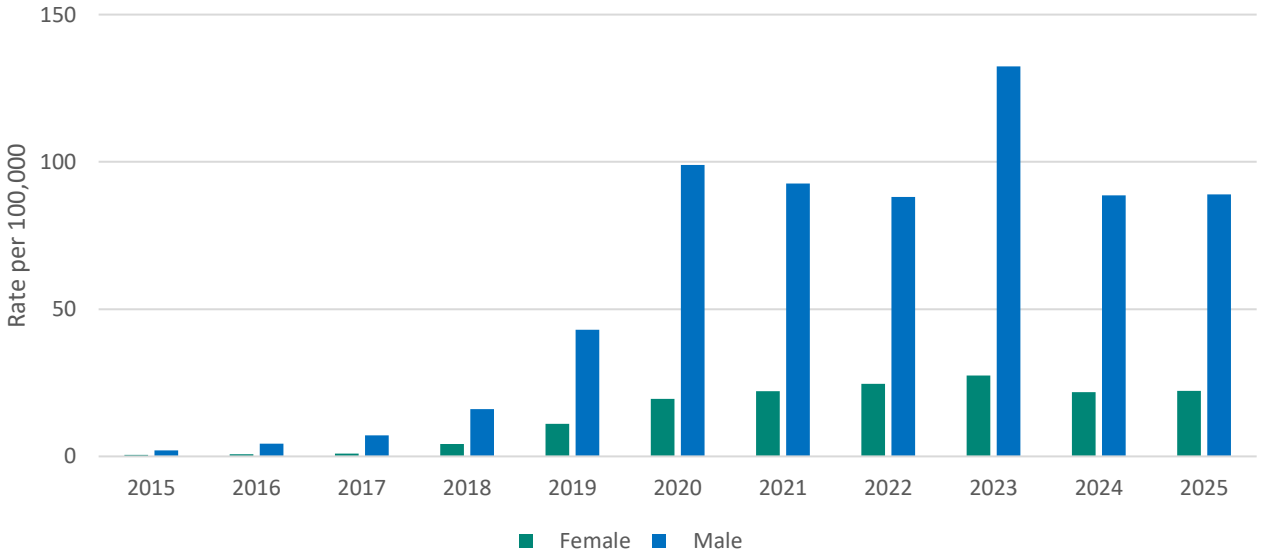
In 2024, the rate of fentanyl acute toxicity deaths was highest among people aged 50-59 years (**Figure 21**), males (**Figure 22**), and Black/African American people (**Figure 23**).

Figure 21: Fentanyl Acute Toxicity Death Rate by Age Category in CCSF, 2015–2025



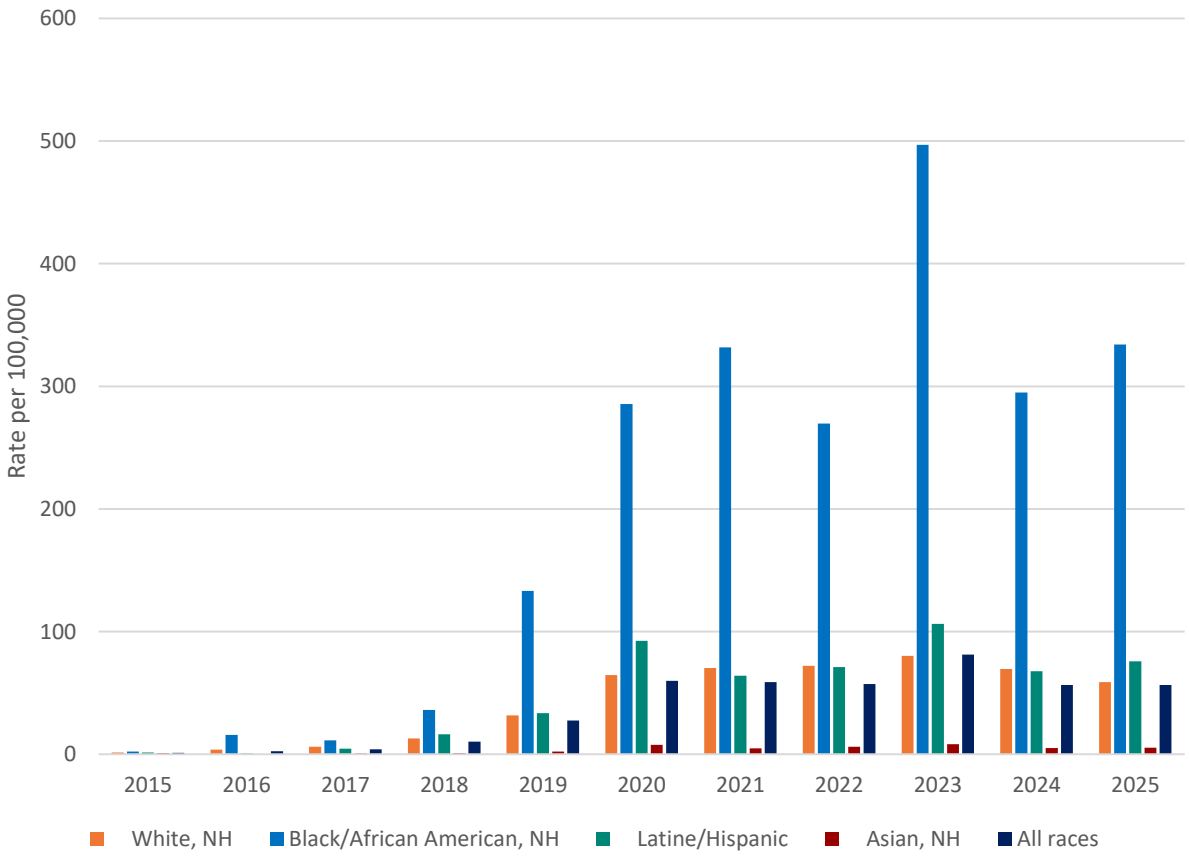
Rate was calculated per 100,000 population. Only data from 2015 onward included due to the rarity of fentanyl acute toxicity deaths in preceding years. People under age 20 are excluded.

Figure 22: Fentanyl Acute Toxicity Death Rate by Sex in CCSF, 2015–2025



Rate was calculated per 100,000 population. Only data from 2015 onward included due to the rarity of fentanyl acute toxicity deaths in preceding years.

Figure 23: Fentanyl Acute Toxicity Death Rate by Race/Ethnicity in CCSF, 2015–2025



Rate was calculated per 100,000 population. NH=non-Hispanic.

3.3 STIMULANTS

The most commonly used stimulants are cocaine and methamphetamine (considered separately below). Most acute toxicity deaths involving stimulants also involved opioids (**Figure 6**); most deaths attributed to a combination of opioids and stimulants were likely due to opioids and thus are now included in **Section 3.2.2** (Chang et al, Addiction., 2025).

Deaths attributed to stimulants without acute opioid involvement involve a very high rate of chronic cardiovascular or related diseases (Coffin, et al., Circulation: Population Health Outcomes, 2026). For the first time this year, stimulant without opioid acute toxicity deaths are reported with all other stimulant-related deaths, rather than with acute opioid deaths. Stimulant without opioid deaths have approximately doubled since 2013 (Error! Reference source not found.); the rate was higher among older people, and such deaths were less common among those under 50 years (**Figure 28, Figure 31**).

Figure 24: Number of Stimulant-Related Deaths, Excluding Acute Opioid Deaths, by Mutually Exclusive Substance Type in CCSF, 2013–2025

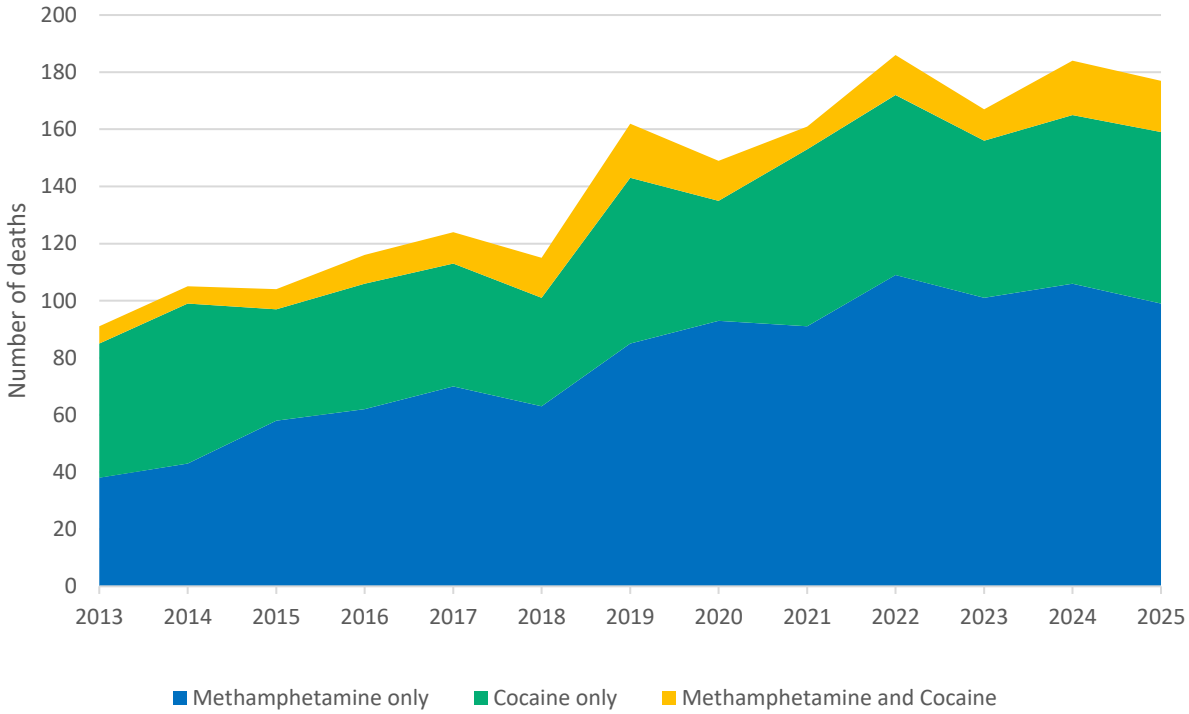
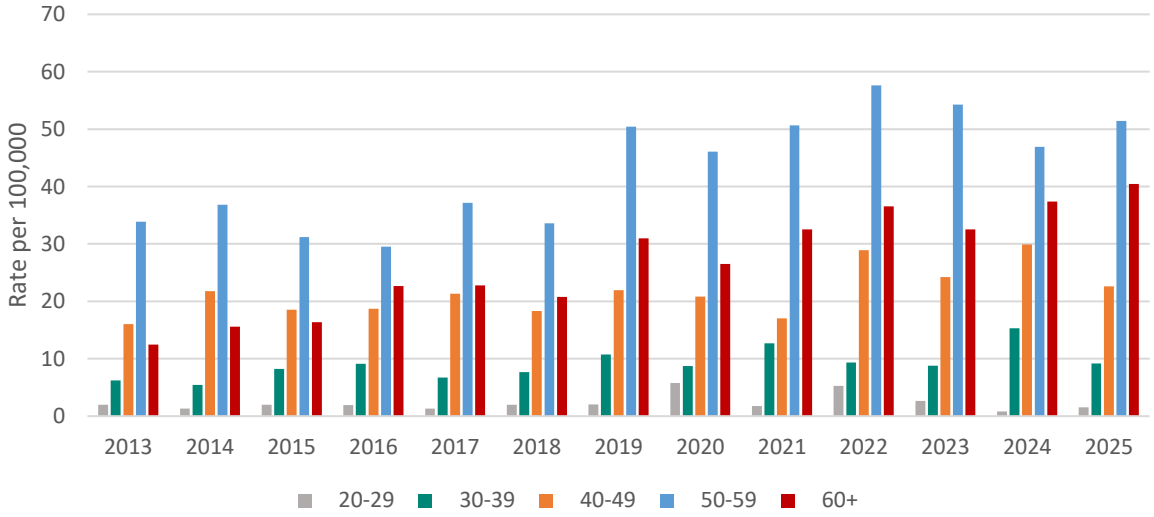
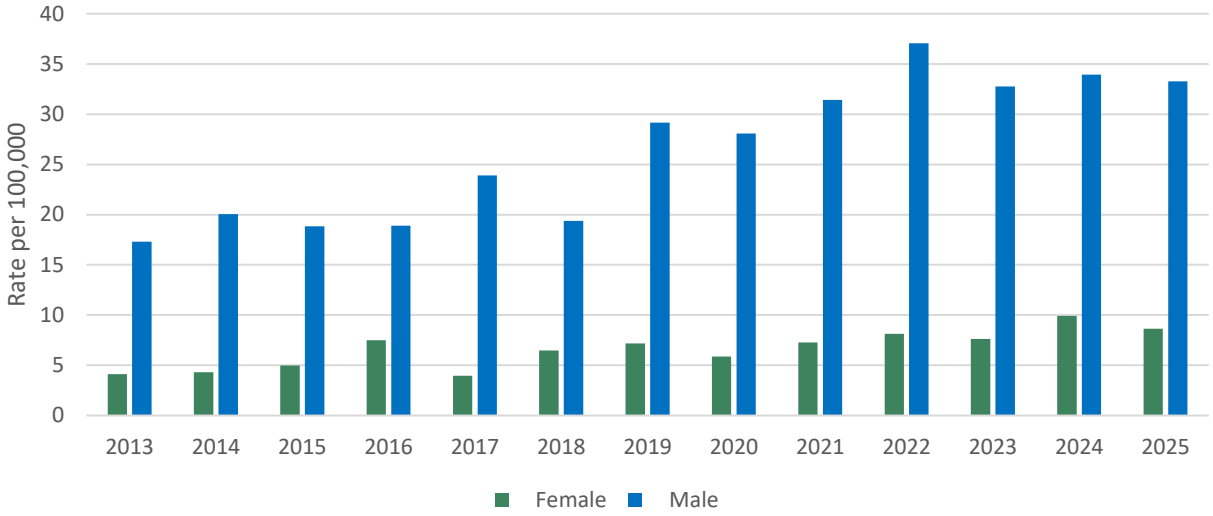


Figure 25: Stimulant-Related Death Rate Excluding Acute Opioid Deaths, By Age, CCSF 2013-2025



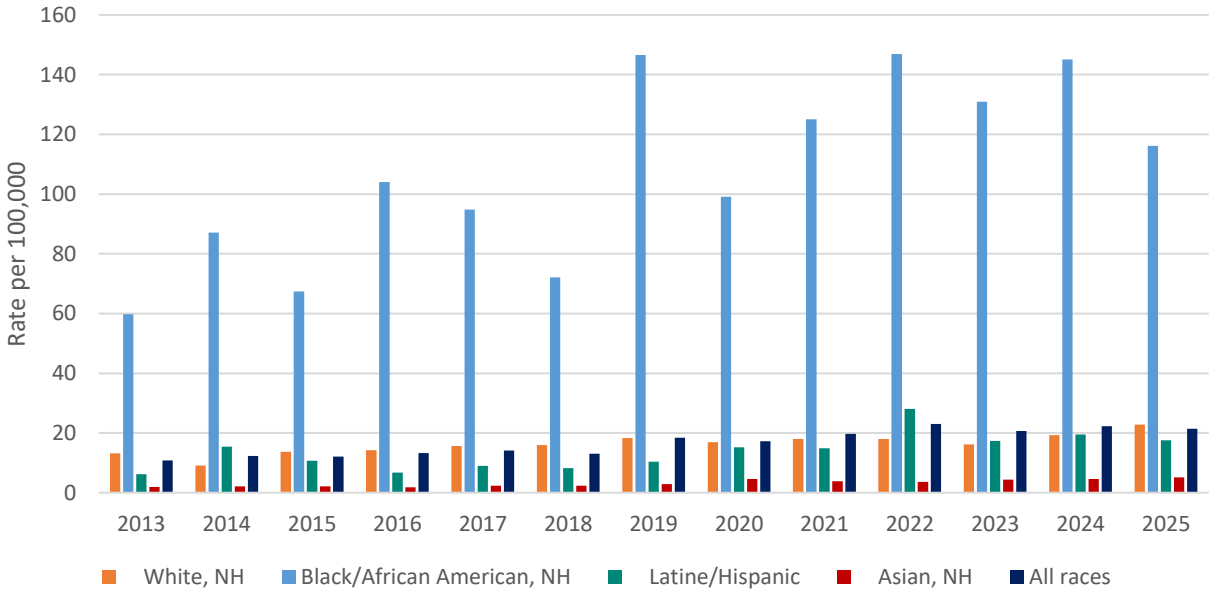
Rate is per 100,000 population. People under age 20 are excluded.

Figure 26: Stimulant-Related Death Rate Excluding Acute Opioid Deaths, By Sex, CCSF 2013-2025



Rate is per 100,000 population.

Figure 27: Stimulant-Related Death Rate Excluding Acute Opioid Deaths, By Race/Ethnicity, CCSF 2013-2025

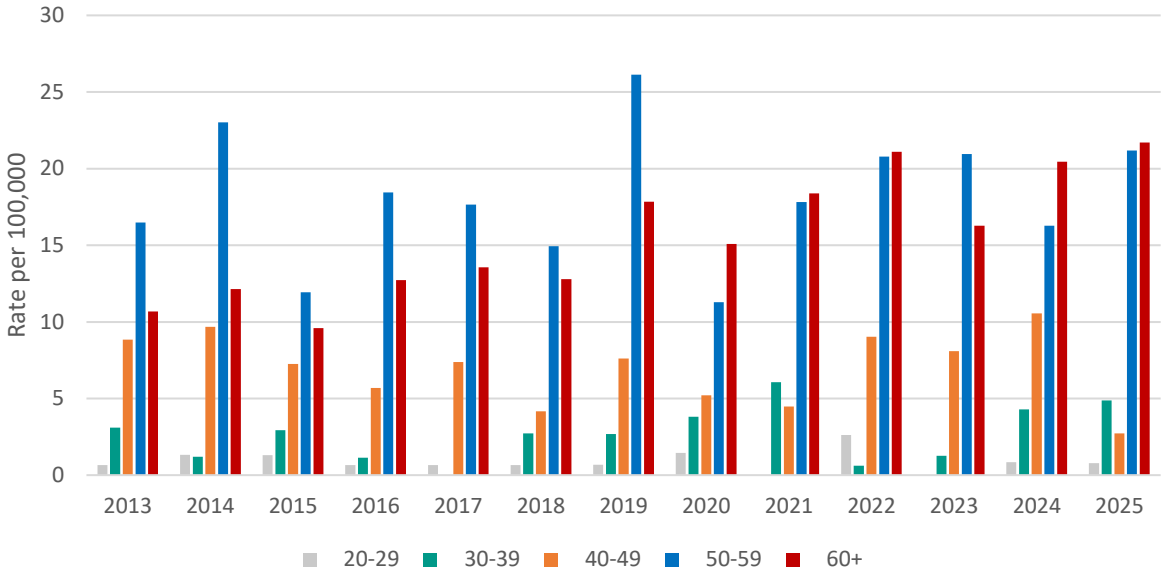


Rate is per 100,000 population.NH= Non-HIspanic

3.3.1 Cocaine/Crack

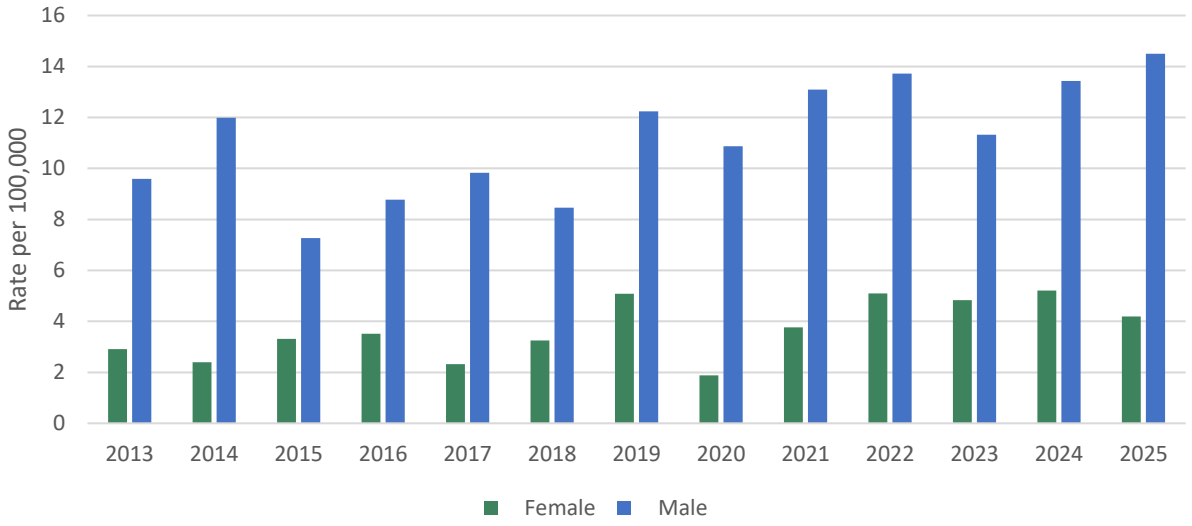
In the absence of opioids, the rate of death attributed to cocaine (whether due to acute toxicity or complications of chronic use) was highest among persons 60 years or older (**Figure 28**), males (**Figure 29**), and Black/African American people (**Figure 30**). The rate of deaths attributed to cocaine among Black/African American people was 8.5 times higher compared to the population average rate.

Figure 28: Cocaine-Related Death Rate Excluding Acute Opioid Deaths, by Age Category in CCSF, 2013-2025



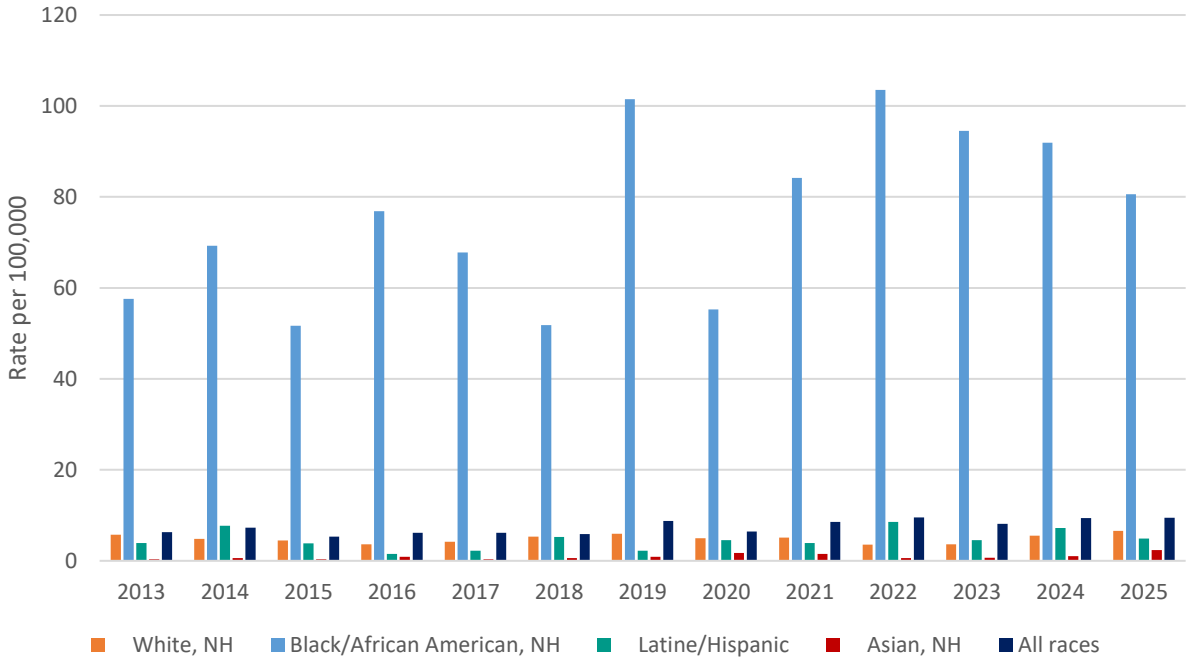
Rate is per 100,000 population. People under age 20 are excluded.

Figure 29: Cocaine-Related Death Rate Excluding Acute Opioid Deaths, by Sex in CCSF, 2013–2025



Rate is per 100,000 population.

Figure 30: Cocaine-Related Death Rate Excluding Acute Opioid Deaths, by Race/Ethnicity in CCSF, 2013–2025

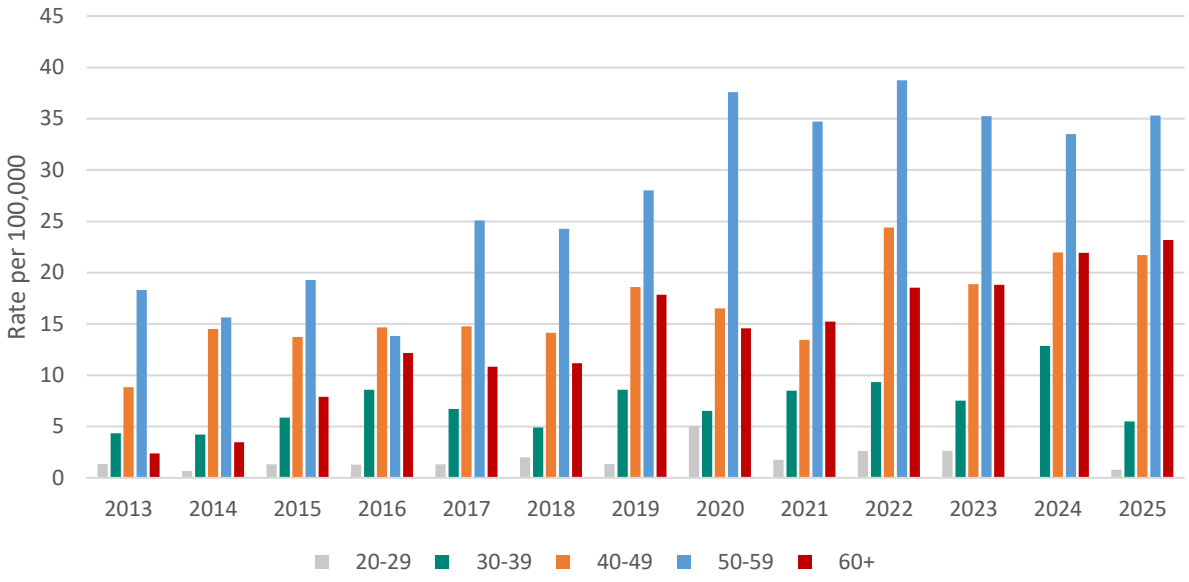


Rate is per 100,000 population. NH=non-Hispanic.

3.3.2 Methamphetamine

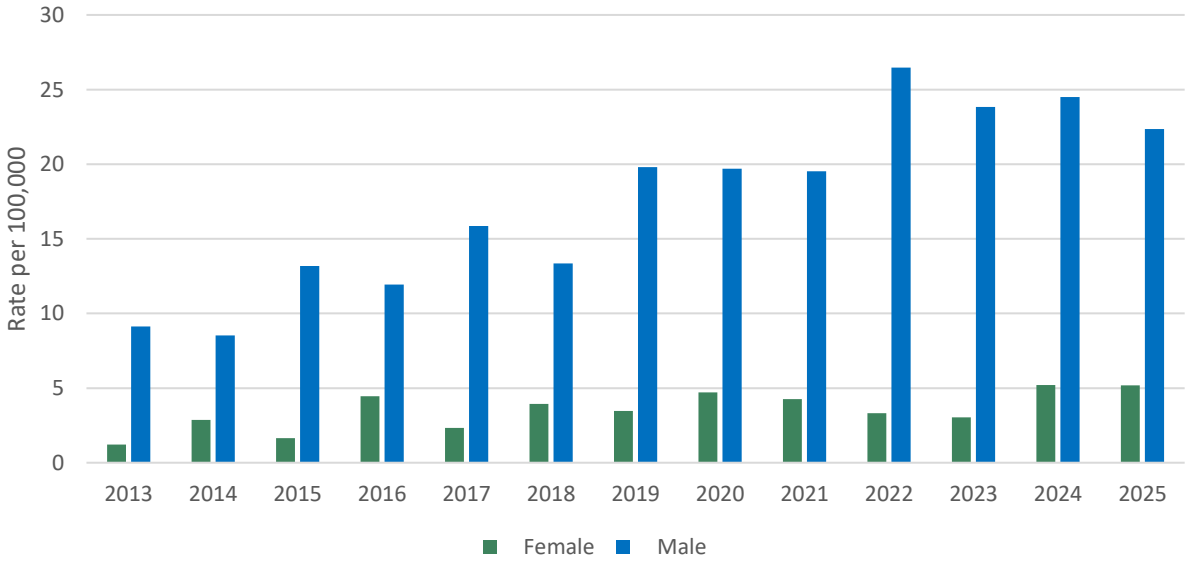
In the absence of opioids, the rate of death attributed to methamphetamine (attributed either to acute toxicity or to complications of chronic use) was highest among persons 50-59 years (**Figure 31**), males (**Figure 32**), and Black/African American people (**Figure 33**).

Figure 31: Methamphetamine-Related Death Rate Excluding Acute Opioid Deaths, by Age Category, CCSF 2013-2025



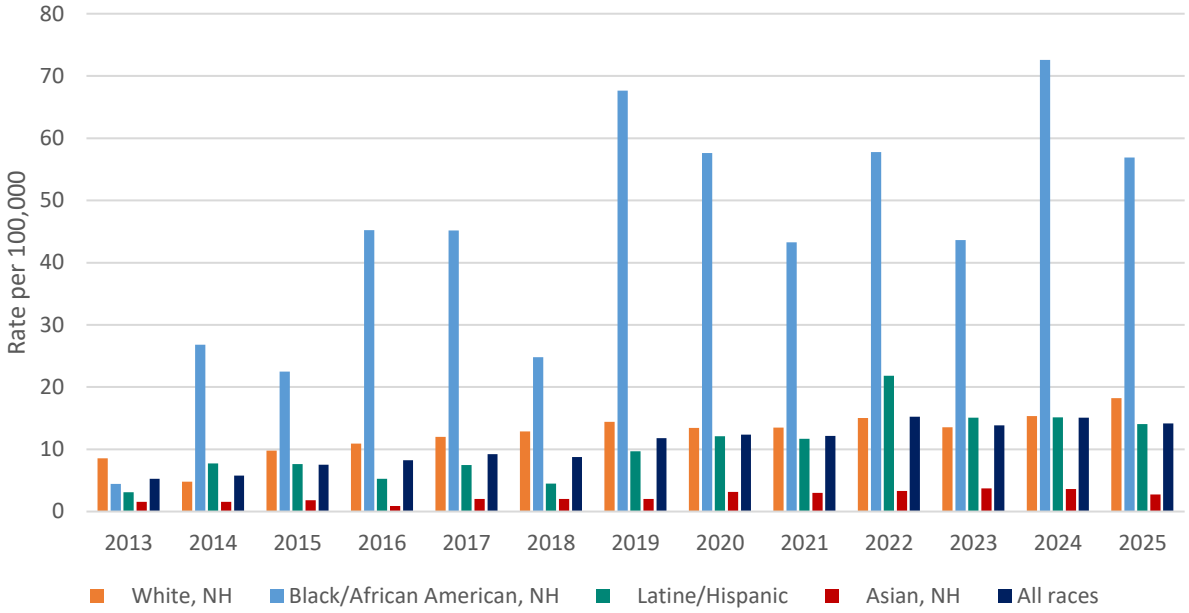
Rate was calculated per 100,000 population.Persons under age 20 were excluded.

Figure 32: Methamphetamine-Related Death Rate Excluding Acute Opioid Deaths, by Sex in CCSF, 2013-2025



Rate was calculated per 100,000 population.

Figure 33: Methamphetamine-Related Death Rate Excluding Acute Opioid Deaths, by Race/Ethnicity in CCSF, 2013–2025

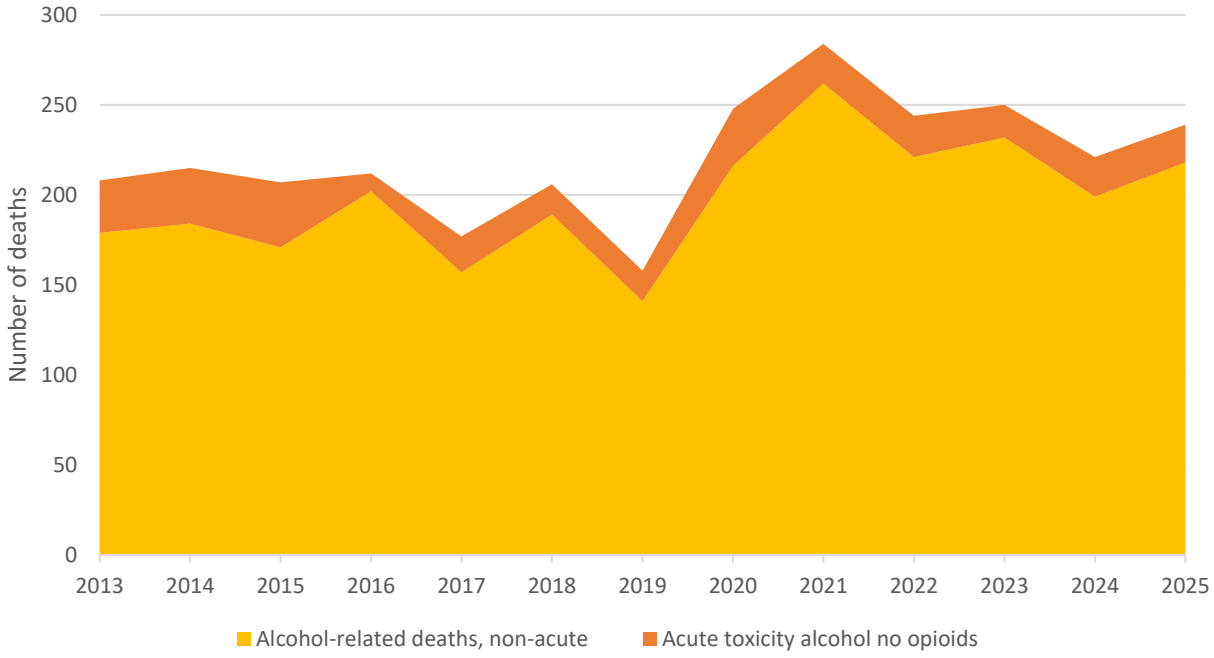


Rate was calculated per 100,000 population. NH=non-Hispanic.

3.4 ALCOHOL

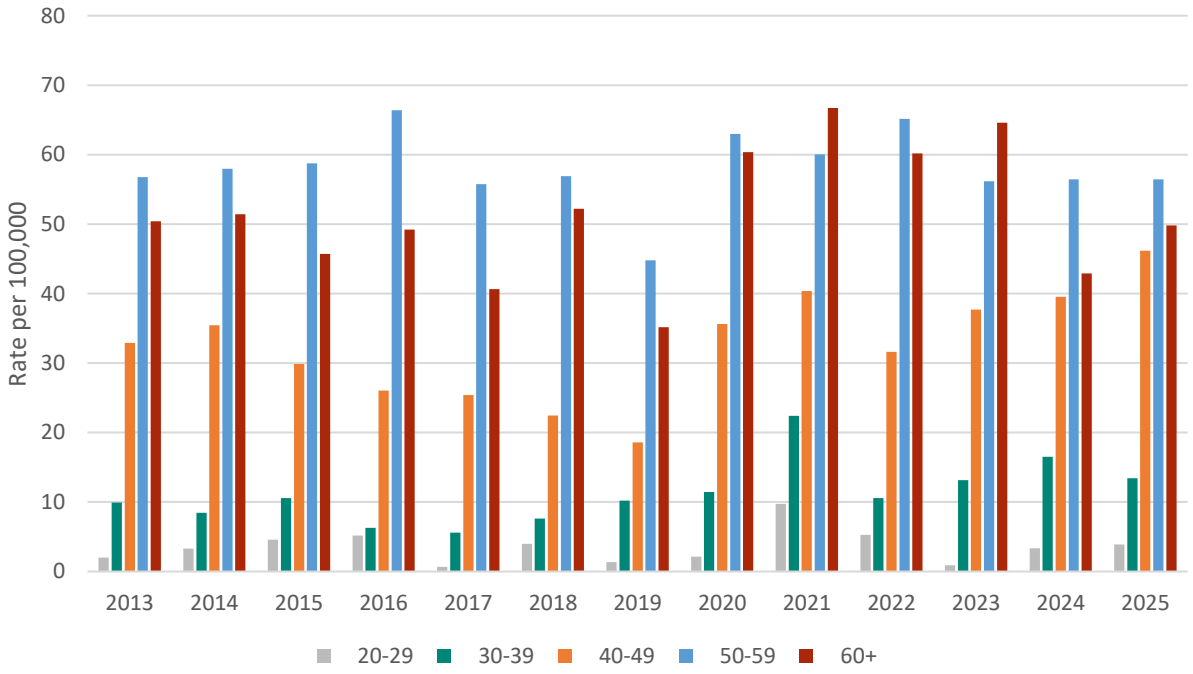
Alcohol was the leading contributor to substance-related mortality in San Francisco until 2019, when it was overtaken by fentanyl. In contrast to opioids, most alcohol-involved deaths were not due to acute toxicity, but rather to complications of long-term use, such as liver disease. Moreover, among alcohol deaths attributed to acute toxicity, 80% involved fentanyl – these deaths are counted in **Section 3.2.3** as opioid overdoses. Only acute alcohol deaths not involving opioids are counted in the following figures (**31-34**). Alcohol-related deaths increased 61% in 2020 with the COVID-19 pandemic; deaths attributed to the chronic effects of alcohol use increased by 17% in 2025 compared to 2024 (**Figure 34**).

Figure 34: Alcohol-Related Deaths Excluding Acute Opioid Deaths, By Acuity, CCSF 2013-2025



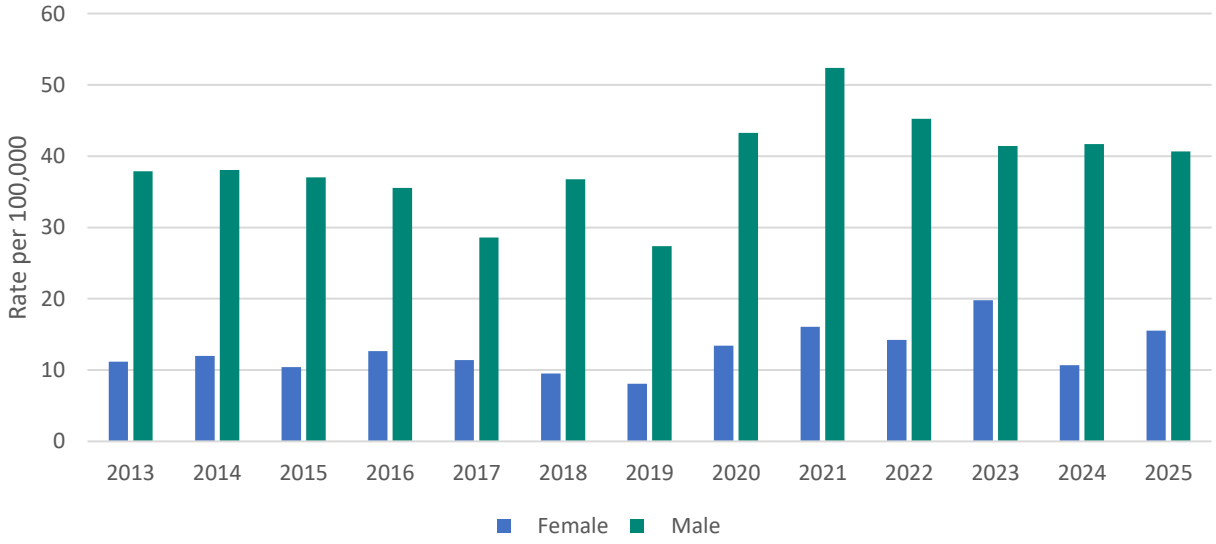
Excluding deaths attributed to opioid acute toxicity, rates of alcohol-related death were highest in 2024 among people aged 50-59 (**Figure 35**), males (**Figure 36**), and Black/African American people (**Figure 37**), though disparities were less substantial than for opioid or stimulant acute toxicity deaths. People of Latine/Hispanic ethnicity also had an elevated rate of alcohol-related mortality.

Figure 35: Alcohol-Related Death Rate, Excluding Opioid Acute Deaths, by Age in CCSF, 2013-2025



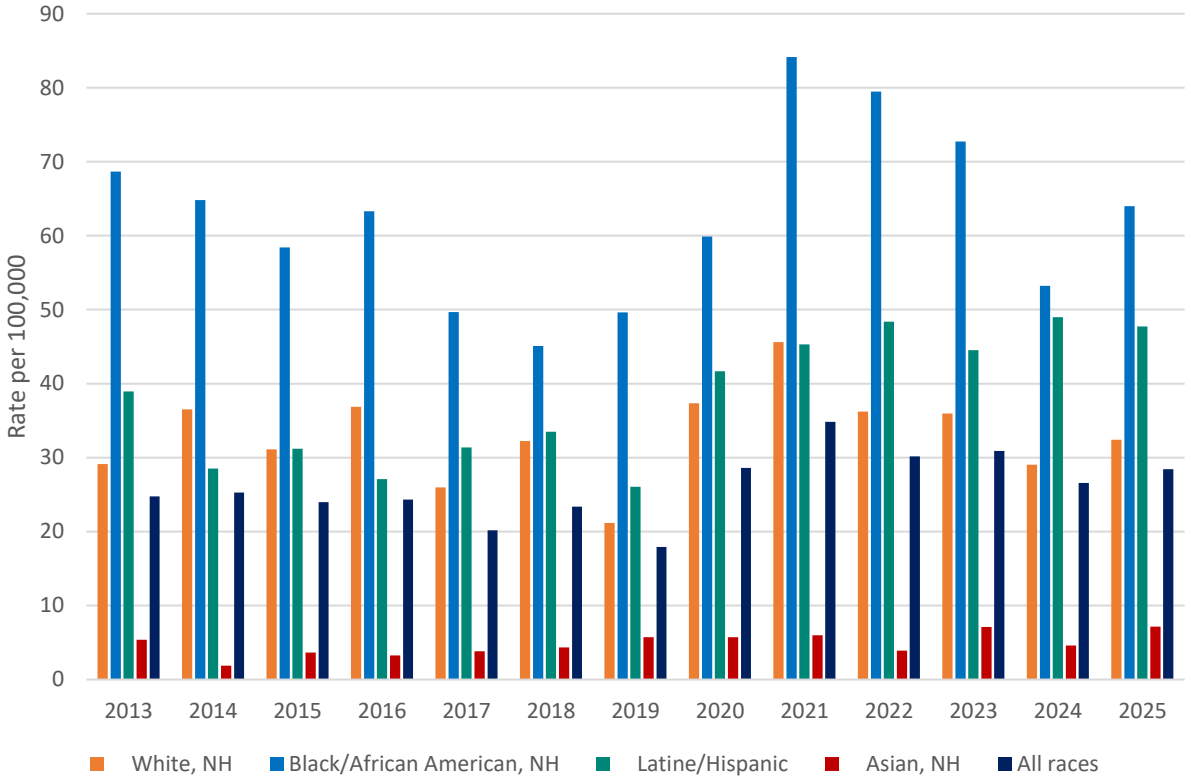
Rate is per 100,000 population. Excludes people under age 20. Includes non-acute deaths caused by alcohol use and deaths caused by acute alcohol toxicity; excludes deaths caused by acute opioid toxicity.

Figure 36: Alcohol-Related Death Rate, Excluding Opioid Acute Deaths, by Sex in CCSF, 2013-2025



Rate is per 100,000 population. Includes non-acute deaths caused by alcohol use and deaths caused by acute alcohol toxicity; excludes deaths caused by acute opioid toxicity.

Figure 37: Alcohol-Related Death Rate, Excluding Opioid Acute Deaths, by Race and Ethnicity in CCSF, 2013-2025



Rate is per 100,000 population. NH = Non-Hispanic. Includes non-acute deaths caused by alcohol use and deaths caused by acute alcohol toxicity; excludes deaths caused by acute opioid toxicity.

4 APPENDICES

Table 1: Number of Substance-Related Deaths by Non-Mutually Exclusive Substance Category in CCSF, 2013–2025

Substance	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
All substance-related deaths †	574	562	458	466	474	540	697	1035	1010	975	1146	938	939
Any Opioid	158	143	113	112	150	193	360	603	558	546	725	523	517
Fentanyl	*	*	11	22	36	91	249	523	491	478	673	480	476
Heroin	26	36	33	45	55	61	83	78	80	68	40	39	23
Prescription Opioid	138	114	77	60	74	85	108	89	75	79	75	56	57
Cocaine/Crack	98	97	83	95	108	127	243	306	275	290	410	306	312
Methamphetamine	70	76	89	103	123	157	285	424	386	405	468	379	358
Benzodiazepines	73	43	26	23	26	26	24	55	43	40	65	49	29
Alcohol	249	252	231	243	203	238	224	362	373	348	387	307	325
Cannabis	72	54	*	*	*	*	12	13	*	*	*	*	*

Substance-related deaths were identified use textual cause of death fields and significant conditions fields, where substance use was listed as a contributing factor. Homicides and suicides were excluded. The number of deaths attributed to fentanyl in this table is greater than in Table 2 because this table includes all deaths in which a substance contributed in any way to death, while Table 2 is restricted to deaths determined to be due to acute toxicity.

†Total includes substances not listed in table. Substances included any used for psychoactive purposes (e.g., alcohol, opioids, stimulants, sedatives, inhalants, etc.); deaths attributed to non-psychoactive medications (e.g., cardiovascular or oncologic medications) or medical procedures (e.g., anesthetics not known to be available outside of medical settings) were not included.

**Fewer than 10 deaths*

Sources: California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

Table 2: Number of Fentanyl or Fentanyl Analogue Acute Toxicity Deaths by Mutually Exclusive Substance Categories in CCSF, 2013-2025

Substance	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Fentanyl (with or without any substance)	*	*	11	22	36	90	241	518	472	463	660	468	466
Fentanyl alone (no heroin, cocaine, or methamphetamine)	*	*	*	*	12	24	46	104	95	89	121	97	118
Fentanyl and heroin (no cocaine or methamphetamine)	*	*	*	*	*	*	*	*	*	*	*	*	*
Fentanyl, heroin, and cocaine (no methamphetamine)	*	*	*	*	*	*	*	12	10	*	*	*	*
Fentanyl, heroin, and methamphetamine (no cocaine)	*	*	*	*	*	*	13	13	16	12	*	*	*
Fentanyl, heroin, cocaine, and methamphetamine	*	*	*	*	*	*	*	*	*	*	*	*	*
Fentanyl and cocaine (no heroin or methamphetamine)	*	*	*	*	*	19	50	113	111	103	199	126	137
Fentanyl and methamphetamine (no heroin or cocaine)	*	*	*	*	10	24	58	189	188	180	221	166	150
Fentanyl, cocaine, and methamphetamine (no heroin)	*	*	*	*	*	*	53	71	50	56	103	59	54

Acute toxicity deaths were identified use textual cause of death fields. Homicides and suicides were excluded. The number of deaths is smaller than in Table 1 because this table is restricted to deaths attributed to acute toxicity.

**= fewer than 10 deaths (inclusive of zero).*

Sources: California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

Table 3: Number of Substance-Related Deaths Involving Novel Synthetic or Other Opioids by Presence of Fentanyl in CCSF, 2025

Substance	Number of deaths
Xylazine	27
Medetomidine	*
Carfentanil	*
Any nitazene	*
Mitragynine	*

90% of of deaths involving the above substances also involved fentanyl. No deaths in San Francisco involved cychlorphines or brorphine analogues in 2025.

**= fewer than 10 deaths (inclusive of 0).*

5 SOURCES

Data	Source and Description
Deaths	California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS), accessed on 22 July 2026. Substance-related deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Non-psychoactive substances were excluded. CA-EDRS does not report gender identity; sex options are male and female.
Location of death geocoding (Figure 7)	Office of the Chief Medical Examiner of San Francisco, accessed on 11 August, 2026. Includes all deaths from acute opioid toxicity investigated by the Medical Examiner with manner of death deemed Accidental.
Population Estimates	Population denominators for figures displaying population mortality rates by age, race or ethnicity, and sex were derived from the United States Census Bureau Annual County Resident Population Estimates by Age, Sex, Race, and Hispanic Origin.