

Substance Use Trends in San Francisco through 2020

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1 INTRODUCTION

We are pleased to release the 2020 report on substance use indicators for the City and County of San Francisco (CCSF). Substance use plays a role in the lives of all San Franciscans and for some can result in social, medical, or legal difficulties.

The goal of this report is to track the impact of substance use on health indicators in San Francisco. The data facilitate the assessment of trends in utilization of healthcare services for substance use disorders and related problems, diseases associated with substance use, and overdose and other substance-related deaths.

From 2006 through 2016, as the national overdose crisis escalated, San Francisco saw an increase in the estimated number of people who inject drugs from fewer than 10,000 to nearly 25,000 persons. Despite this change, the city did not see an increase in overall overdose mortality from opioids, cocaine, or methamphetamine during that same period. We attribute this success to the efforts made by San Francisco residents and service providers. For example, from research with the Drug Overdose Prevention and Education (DOPE) Project, we know people who use heroin or methamphetamine are also the most likely people to use naloxone to reverse an overdose, supporting their community by saving lives.

Unfortunately, as the national overdose crisis continued, San Francisco did ultimately witness an increase in overdose deaths beginning in 2018, continuing through 2019, and increasing much more in 2020 - which can be attributed to a rise in fentanyl overdose alongside the COVID-19 pandemic. Fentanyl initially affected the eastern half of the United States, as well as Canada, arriving in the West much later. Even regions with robust overdose prevention program, such as the supervised injection facilities of Vancouver, British Columbia, have struggled and had to further innovate to manage the arrival and growing use of fentanyl. The COVID-19 pandemic also influenced overdose mortality, particularly during Shelter-in-Place, which worsened social isolation.

The report details ongoing efforts to address substance use in San Francisco in 2020, including: expanding naloxone distribution for overdose prevention, use of buprenorphine not only for treatment of opioid use disorder but also overdose prevention, syringe access for blood-borne disease prevention, programs to treat hepatitis C infection among people who use substances, the San Francisco Sobering Center for alcohol use management, and the Addiction Care Team of Zuckerberg San Francisco General Hospital. Responses during the COVID-19 pandemic were also greatly expanded, particularly in shelter-in-place hotels.

We are proud of the residents and providers of San Francisco who care for our community. We hope this report informs renewed efforts to support the health and safety of all San Franciscans.

2 HIGHLIGHTS

Morbidity and mortality

- As the nation suffers from a persistent overdose crisis, the rate of overdose death in San Francisco from opioids, cocaine, and methamphetamine increased by 70% from 2018 to 2019, and 60% from 2019 to 2020.
- Overdose deaths continued to be driven by **fentanyl** and related analogues, often in combination with cocaine or methamphetamine. Deaths involving fentanyl tend to occur among younger persons than deaths not involving fentanyl.
- Males, persons aged 50 to 59 years, and Black/African Americans had the highest rates of overdose mortality related to opioids, methamphetamine, and cocaine/crack.

Substance use disorder (SUD) treatment

- Heroin, followed by alcohol and methamphetamine, were the most common primary substances resulting in admission to publicly funded SUD treatment programs or methadone maintenance programs. Admissions for fentanyl increased substantially.
- The overall number of SUD treatment admissions and the number of unique individuals admitted continued to decline in 2020. The most recent decline was likely due to the COVID-19 pandemic, whereas the overall trend may have been due to:
 - Use of medications to treat alcohol and opioid use disorders has increased outside of the specialty SUD treatment system (e.g., from 2015-2020, the number of people treated for opioid use disorder in the SUD treatment system dropped by 687, while the number treated with buprenorphine outside of SUD treatment settings rose by 1,194, suggesting an overall increase in SUD treatment for people who use opioids.
 - Homelessness has a complex effect, acting as a barrier to some SUD treatment services. In addition, new housing services in San Francisco may benefit from novel approaches to SUD treatment service delivery.
- SUD treatment rates were highest among males and Black/African Americans for all substances.

Additional Interventions

- Healthcare providers reduced the number of opioid prescriptions dispensed by 51% and the number of morphine milligram equivalents in each prescription by 34% since 2010.
- In 2019, the San Francisco Department of Public Health (SFDPH) implemented an online tracker showing the daily availability of beds for residential substance use disorder treatment: www.findtreatmentsf.org.
- The distribution of **naloxone**, continued to increase in 2020, with 10,550 naloxone kits distributed by and 4,307 overdose reversals reported to community organizations. Multiple other settings also furnished naloxone, including paramedics, primary care, the city's behavioral health pharmacy, and retail pharmacies.
- End Hep C SF, a citywide collaboration, continued to support initiatives to prevent and treat hepatitis C infections among people who use substances.
- SFDPH continued to implement multiple programs related to Mental Health SF, including enhanced care coordination, street crisis response teams staffed with behavioral health clinicians and peers, expanded buprenorphine access, and drug sobering centers.

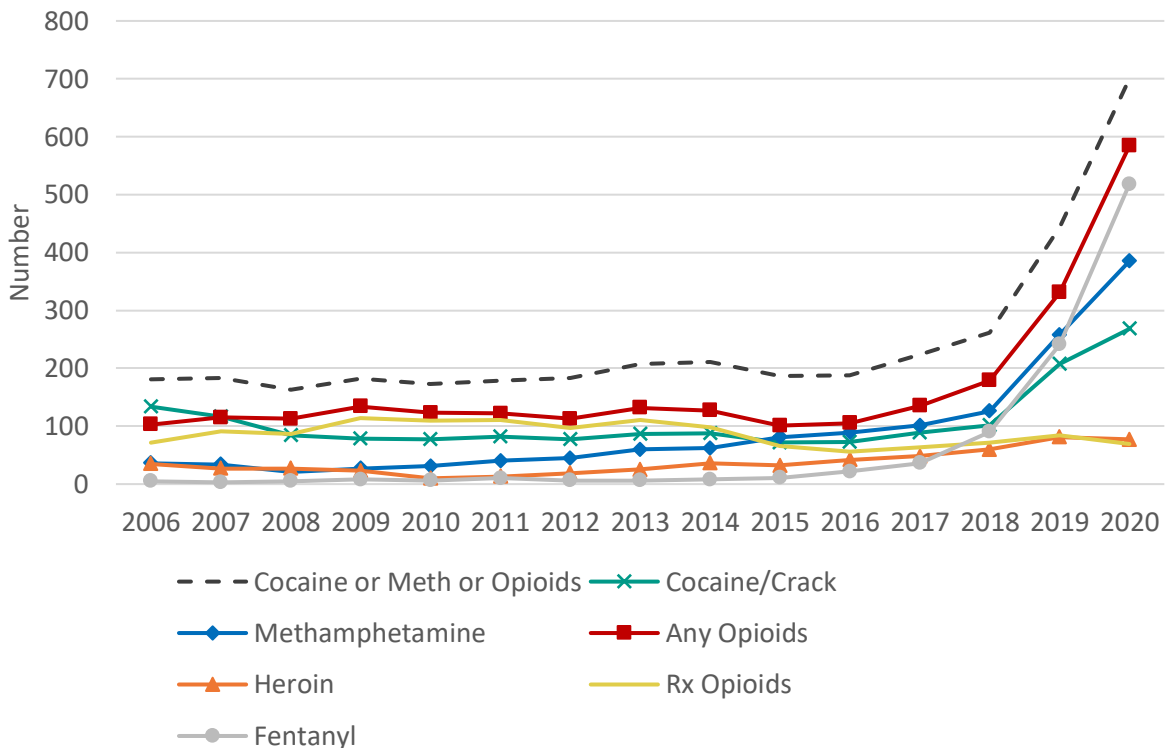
3 SUBSTANCE USE INDICATORS, OVERALL

3.1 OVERALL OPIOID, COCAINE, AND METHAMPHETAMINE OVERDOSE MORTALITY

The majority of overdose (i.e. acute poisoning) deaths in San Francisco involve opioids, methamphetamine, and cocaine. Overdose mortality was fairly stable between 2006 and 2016; however, it has risen in recent years due to fentanyl. From 2019 to 2020, overdose deaths involving fentanyl increased 115% from 241 to 518 deaths (**Figure 1**).

In total, 700 overdose deaths were caused by an opioid, cocaine, or methamphetamine in 2020. Of these, 83% involved an opioid (of the 700 overdose deaths, 10% involved prescription opioids, 11% involved heroin, and 74% involved fentanyl), 38% involved cocaine/crack, and 55% involved methamphetamine (**Figure 1**).

Figure 1: Number of Opioid, Cocaine, and Methamphetamine Overdose Deaths by Non-Mutually Exclusive Substance Category in CCSF, 2006–2020

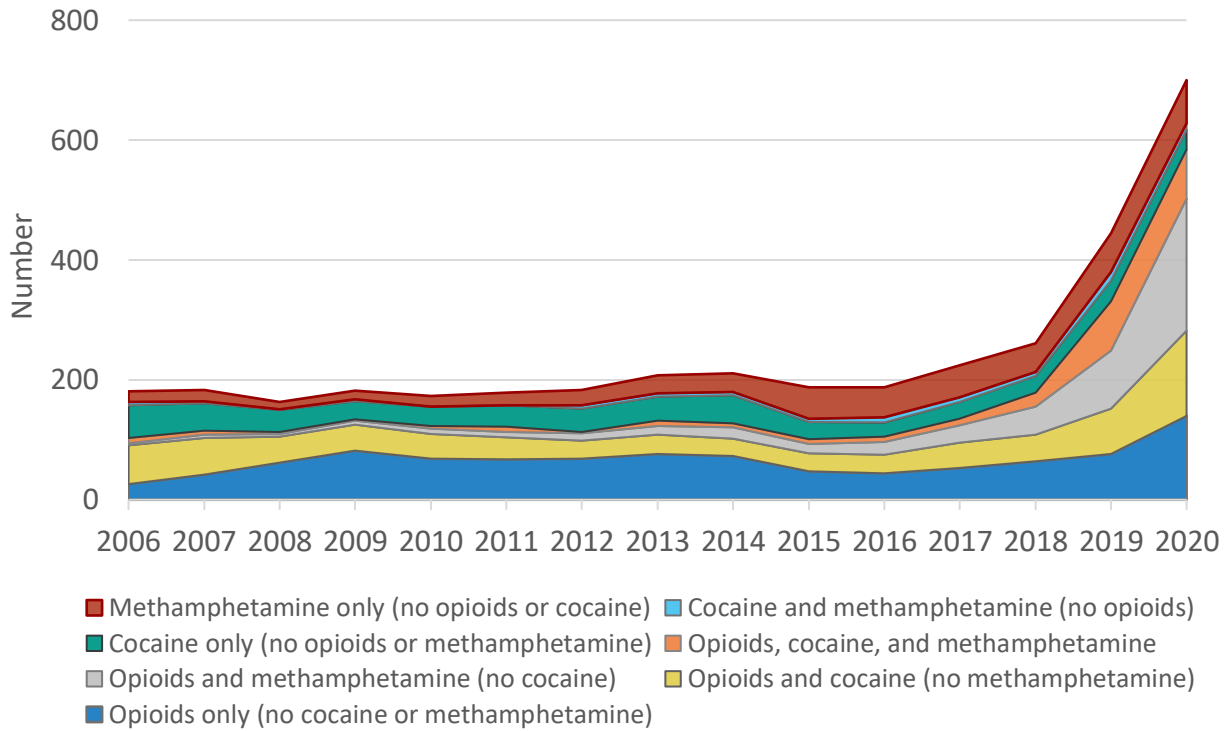


Substance-related overdose deaths were identified using textual cause of death fields, determined by the San Francisco Office of the Chief Medical Examiner. Homicides and suicides were excluded.

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

The increase in mortality between 2019 and 2020 shown in **Figure 2** was driven by opioids, or more precisely, fentanyl (see **Figure 26**).

Figure 2: Number of Opioid, Cocaine, and Methamphetamine Overdose Deaths by Mutually Exclusive Substance Category in CCSF, 2006–2020

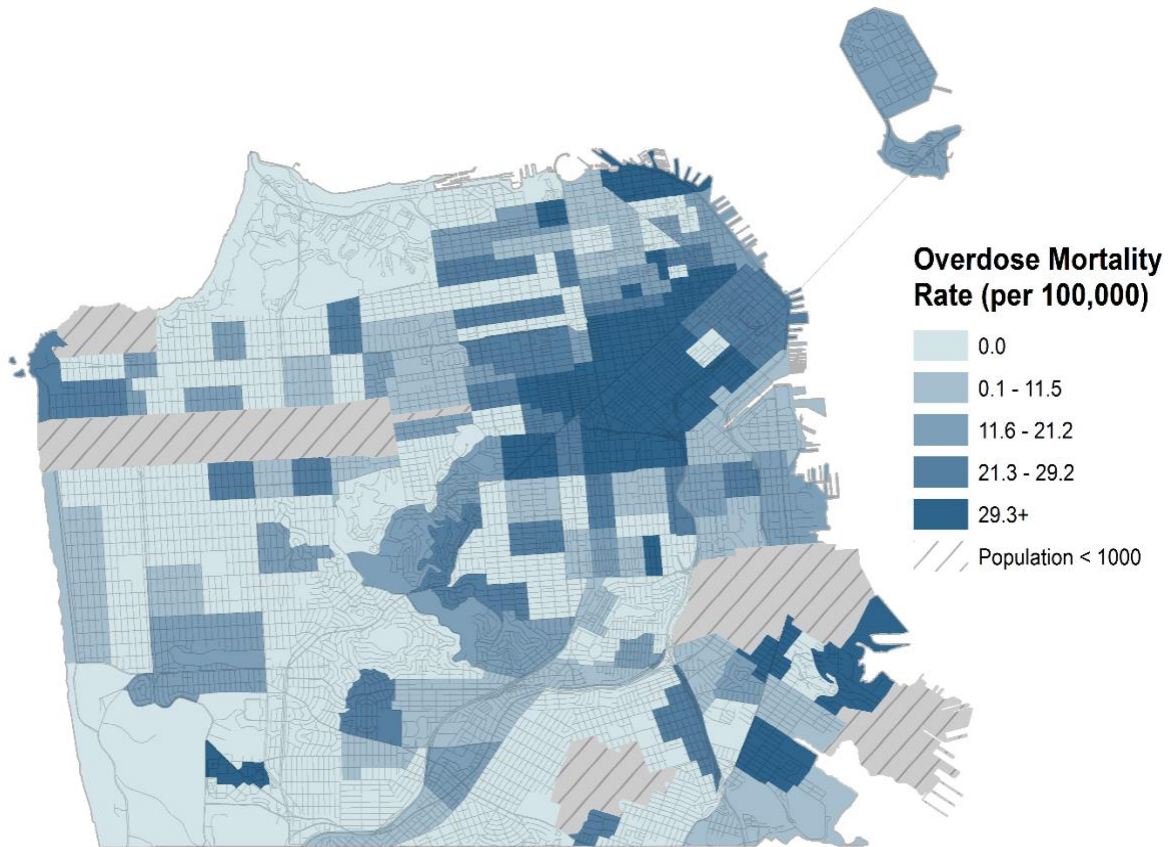


The height of each band corresponds to the number of events in that category. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded.

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

Drug overdose mortality tends to be concentrated in the Tenderloin, South of Market, and Mission neighborhoods of San Francisco (**Figure 3**). The map displayed includes all opioid, cocaine, and methamphetamine overdose deaths that occurred in San Francisco in 2016 and 2017 (the most recent years for which geocoding is currently available) by location of death, excluding the 64 (16%) that occurred in hospitals.

Figure 3: Annualized Rate of Opioids, Cocaine, or Methamphetamine Overdose Deaths by Census Tract in CCSF, 2016 and 2017



Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded, as were the 16% of deaths that occurred in a hospital. Rate is annualized and calculated as dividing the two-year rates by two. Census tracts with populations under 1,000 were excluded.

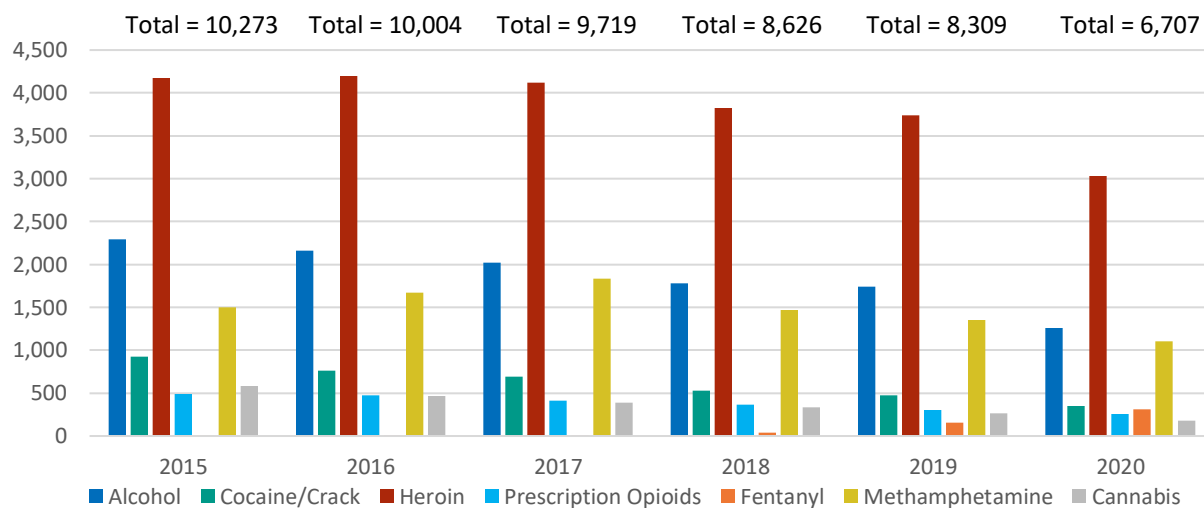
Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS). Census tract population denominators taken from U.S. Census Bureau, 2013-2017 American Community Survey 5-year Population Estimates.

3.2 OVERALL SUBSTANCE USE DISORDER TREATMENT PROGRAM ADMISSIONS

The number of admissions to programs treating substance use disorders (SUDs) in San Francisco declined from 10,273 in 2015 to 6,707 in 2020 (**Figure 4**; data include publicly funded and methadone maintenance treatment services, excluding Veterans Administration). The number of unique persons served also declined from 6,910 in 2015 to 4,657 in 2020. While the decline in 2020 can be attributed to the COVID-19 pandemic, the overall trend may be due to:

- The number of unique persons treated each year with buprenorphine outside of SUD treatment programs rose from 1,627 in 2015 to 2,821 in 2020; this increase exceeds the reduction in unique persons treated in SUD programs for any opioids from 3,640 in 2015 to 2,890, suggesting an overall increase in SUD treatment for people who use opioids.
- Use of alcohol use disorder medications outside of SUD treatment has likely increased.
- Under the Drug Medi-Cal Organized Delivery System (DMC-ODS), which began in CCSF in 2017, each county provides services for beneficiaries residing in that county. Previously, CCSF served many persons whose primary residence was another county.
- Data on hospitalizations and ED visits suggest heightened acuity of SUDs, which could create a barrier to accessing even fairly low-threshold SUD treatment triage services.
- Homelessness has a complex effect, acting as a barrier to some SUD treatment services, while new housing services provide opportunities to develop novel approaches to SUD treatment service delivery.

Figure 4: Number of Admissions to Programs Treating Substance Use Disorders by Primary Substance in CCSF, 2015–2020



Admissions: Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission does not necessarily represent a unique individual because some individuals were admitted to treatment more than once in a given period.

Source: San Francisco Department of Public Health (SFDPH), Community Behavioral Health Services Division.

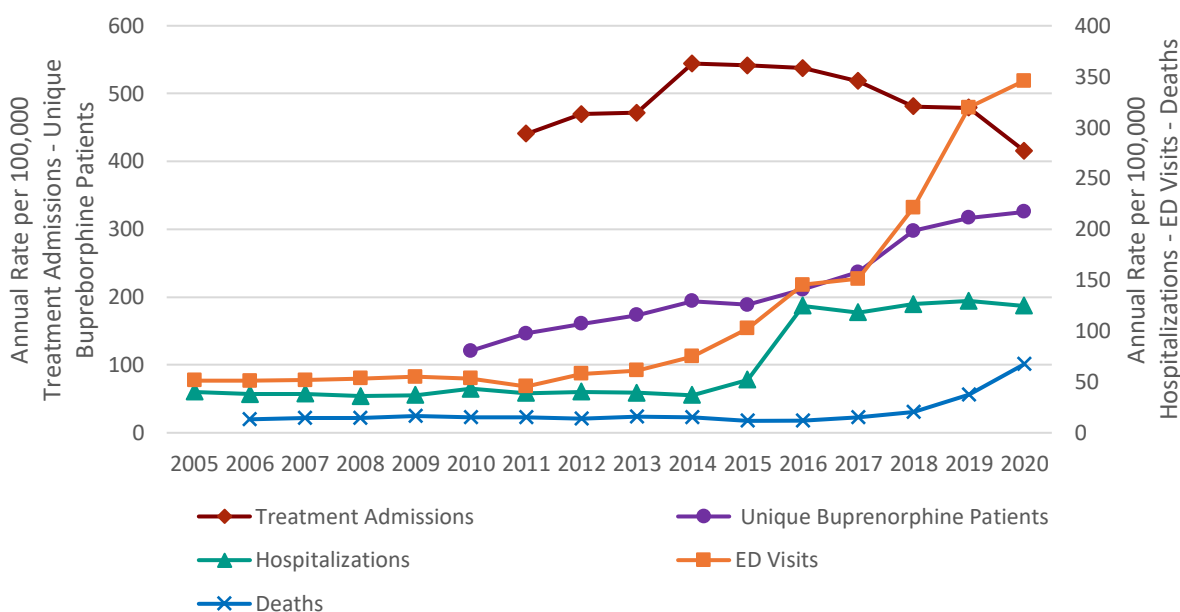
4 SUBSTANCE USE INDICATORS, BY SUBSTANCE

4.1 OPIOIDS

4.1.1 Any Opioids

Opioid use indicators in San Francisco demonstrate rising morbidity and mortality. The rate of overdose deaths due to any opioids increased in 2019 and again in 2020 (**Figure 5**). Treatment admissions for any opioid decreased in 2020, although the number of persons prescribed buprenorphine increased. Emergency department visits increased while hospitalization remained stable from 2018 to 2020.

Figure 5: Rate of Opioid Use Health Indicators in CCSF, 2005-2020



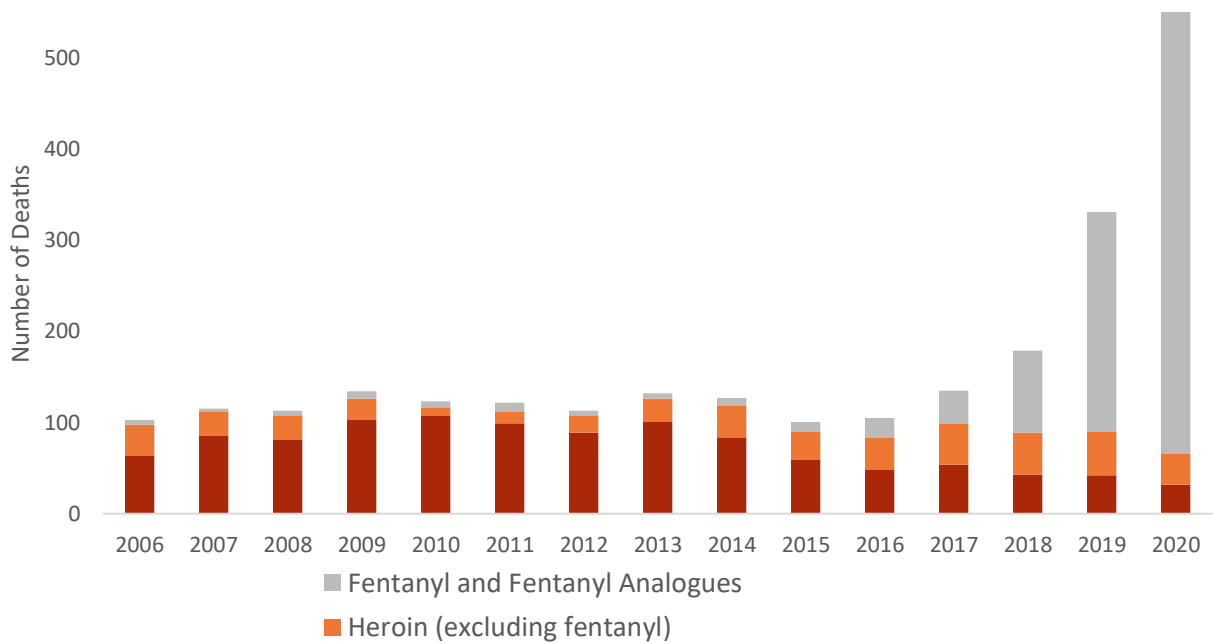
Rate is calculated per 100,000 CCSF population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Emergency department visits and hospitalizations include primary or nonprimary ICD-9 codes: E850.0, E850.1, E850.2, 965.0 (poisoning) and ICD-10 codes: T40.0, T40.1, T40.2, T40.3, T40.4, T40.6 (poisoning); as well as primary only ICD-9 codes: 304.0 (dependence), 304.7 (dependence), 305.5 (abuse) and ICD-10 code: F11 (dependence/abuse/use). For ICD-10 codes T40.0, T40.1, T40.2, T40.3, T40.4, T40.6, codes with a six in the sixth position involve underdosing and were excluded. Shifts in the trend of hospitalizations and emergency department visits from 2015 to 2016 may be artifacts of a change to the way healthcare visits were coded in the U.S. (from ICD-9 to ICD-10) that occurred on October 1, 2015. Hospitalizations and emergency department visits resulting in death were excluded.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS). Buprenorphine prescriptions: Data were provided by California Controlled Substance Utilization Review and Evaluation System (CURES 2.0) and include all buprenorphine prescriptions issued outside of SUD treatment programs. Treatment admissions were provided by Community Behavioral Health Services Division of the San Francisco Department of Public Health and include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration; admissions include clients admitted in prior years but still receiving services in a particular year. Hospital admissions and emergency

department visits for CCSF facilities were provided by the California Office of Statewide Health Planning and Development.

The number of opioid overdose deaths increased over 478% from 101 in 2015 to 584 in 2020. This increase was driven by fentanyl; deaths involving fentanyl and fentanyl analogues more than doubled between 2019 and 2020, while deaths from heroin (excluding fentanyl) and prescription opioids (excluding fentanyl and heroin) declined (**Figure 6**).

Figure 6: Number of Opioid Overdose Deaths by Mutually Exclusive Opioid Type in CCSF, 2006–2020

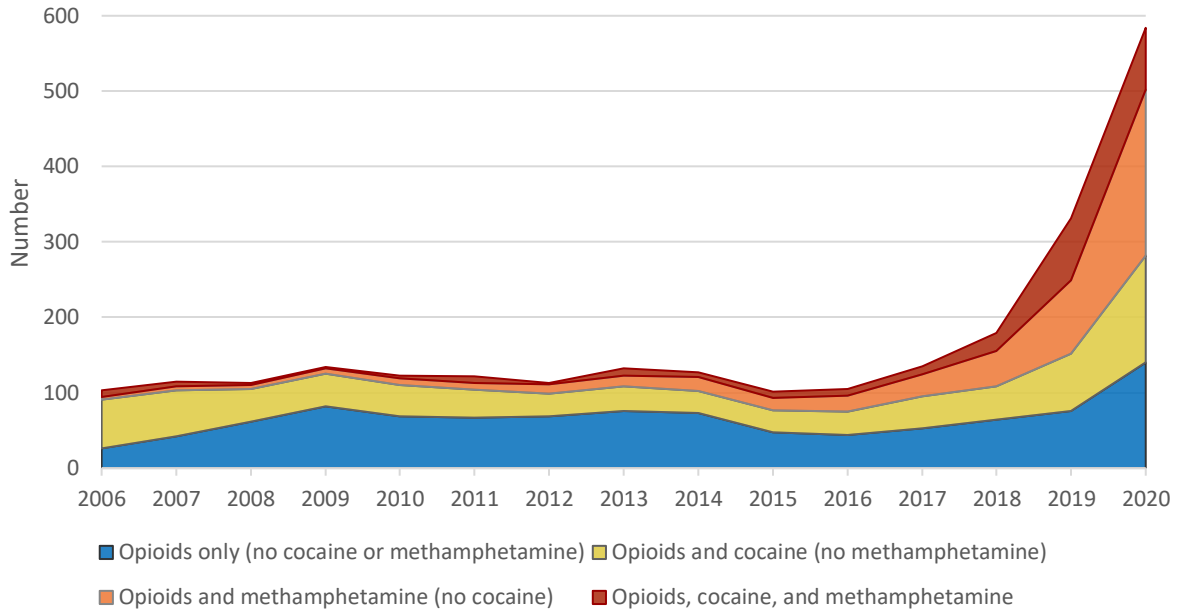


Overdose deaths were identified use textual cause of death fields. Homicides and suicides were excluded. Fentanyl overdose death was defined as any death caused by fentanyl; heroin overdose death was defined as any death caused by heroin but not fentanyl; prescription opioid overdose death was defined as all opioid overdose deaths not also caused by heroin or fentanyl. Fentanyl includes fentanyl analogues.

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

Since 2016, overdoses due to opioids only, as well as in combination with stimulants, have increased (**Figure 7**).

Figure 7: Number of Opioid Overdose Deaths by Mutually Exclusive Involvement of Cocaine or Methamphetamine in CCSF, 2006–2020

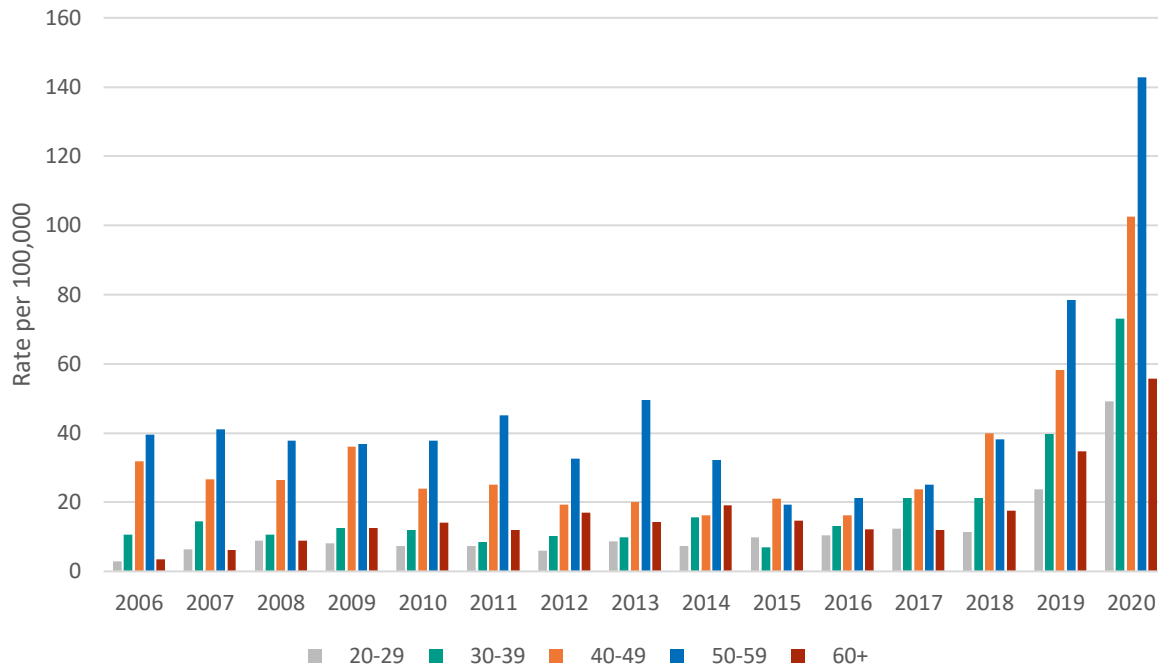


The height of each band corresponds to the number of events in that category. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded.

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

In 2020, the rate of opioid overdose deaths was highest among people aged 50-59 years (**Figure 8**), males (**Figure 9**), and among Black/African Americans (**Figure 10**). Of note, the greatest relative increase in opioid overdose death from 2019 to 2020 was among people aged 20-29 (**Figure 8**) and among Other, Non-Hispanics (**Figure 10**).

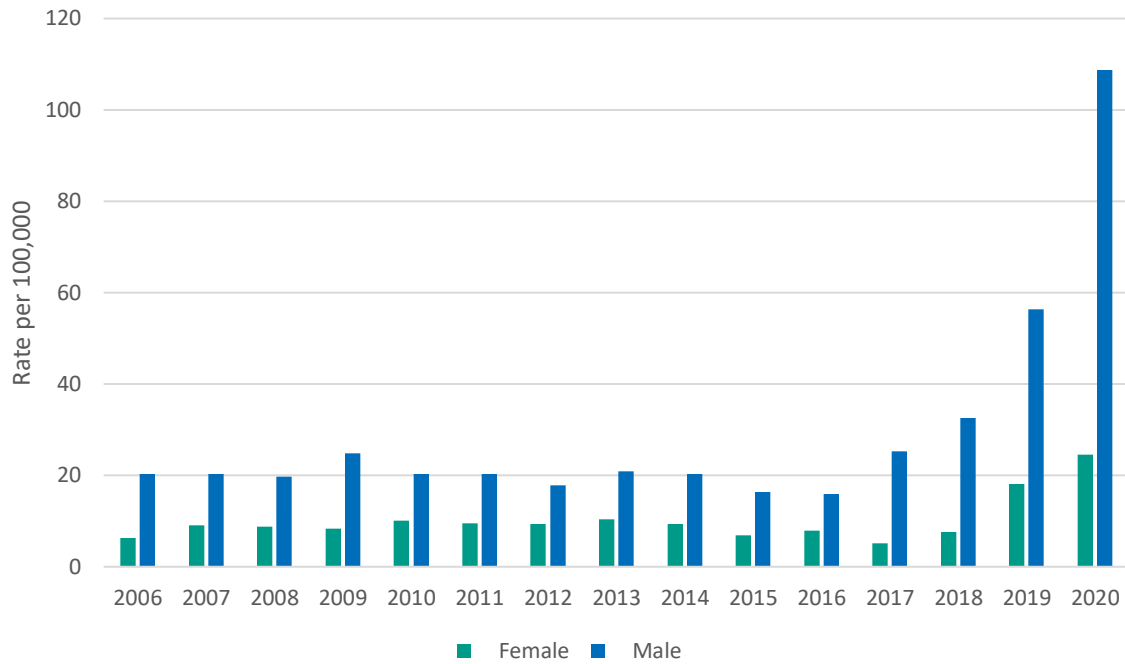
Figure 8: Rate of Opioid Overdose Deaths by Age Category in CCSF, 2006–2020



Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded.

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

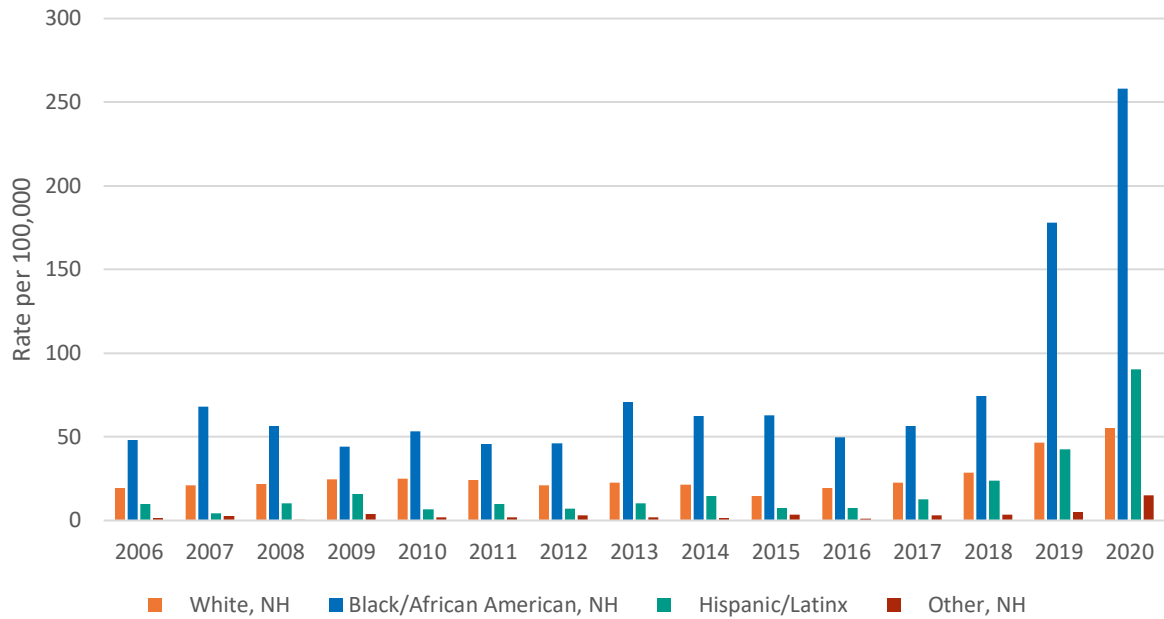
Figure 9: Rate of Opioid Overdose Deaths by Sex in CCSF, 2006–2020



Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. No other sex categories were noted.

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

Figure 10: Rate of Opioid Overdose Deaths by Race/Ethnicity in CCSF, 2006–2020



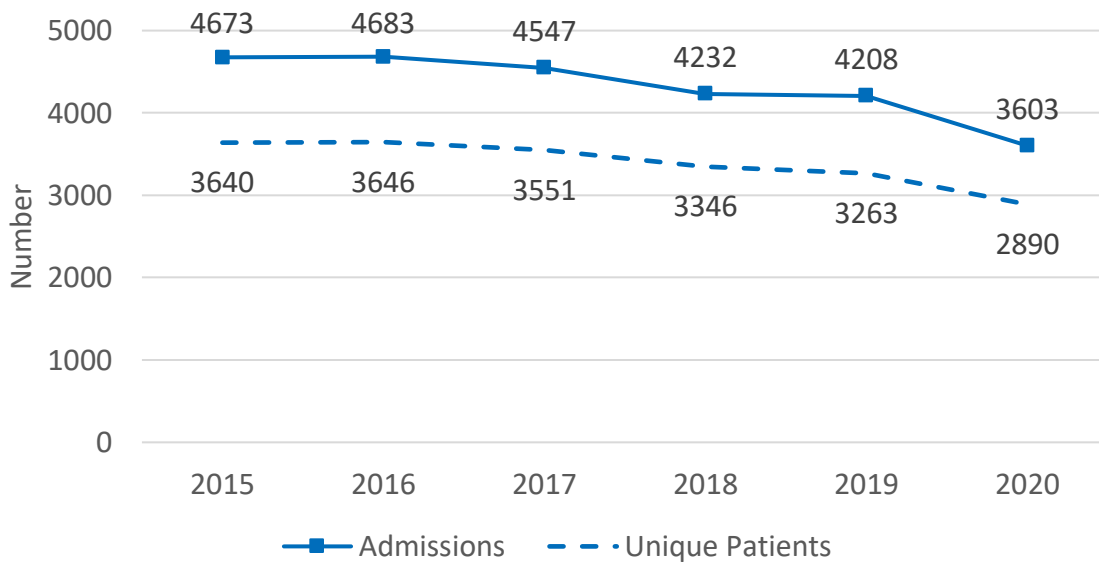
Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. NH=non-Hispanic.

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

SUD treatment admissions and unique patients admitted for all opioids declined by approximately 21% between 2015 and 2020 (**Figure 11**). Although not shown in these data, the number of unique individuals who received SUD treatment for opioids in San Francisco likely increased as a result of the substantial increase in the number of unique individuals who received buprenorphine outside of SUD treatment programs between 2015 and 2020 (see **Figure 32**).

The rate of SUD treatment admissions for opioids was highest among males (**Figure 12a**), people aged 50-59 years (**Figure 12b**), and Black/African Americans (**Figure 13**).

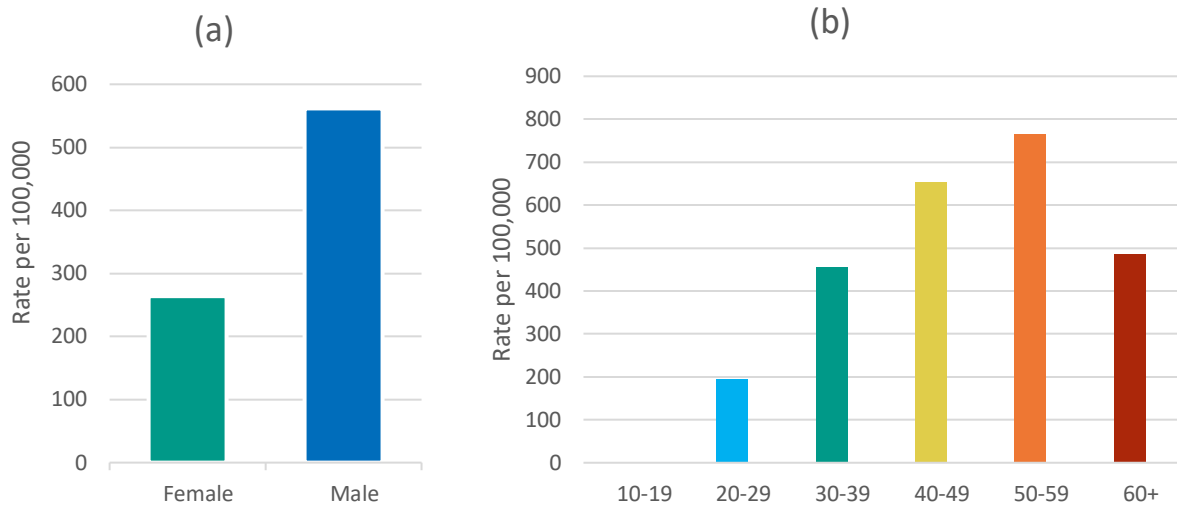
Figure 11: Number of Admissions and Unique Persons Admitted to Programs Treating Substance Use Disorders for All Opioids as the Primary Substance in CCSF, 2015–2020



Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

Source: San Francisco Department of Public Health (SFPDH), Community Behavioral Health Services Division.

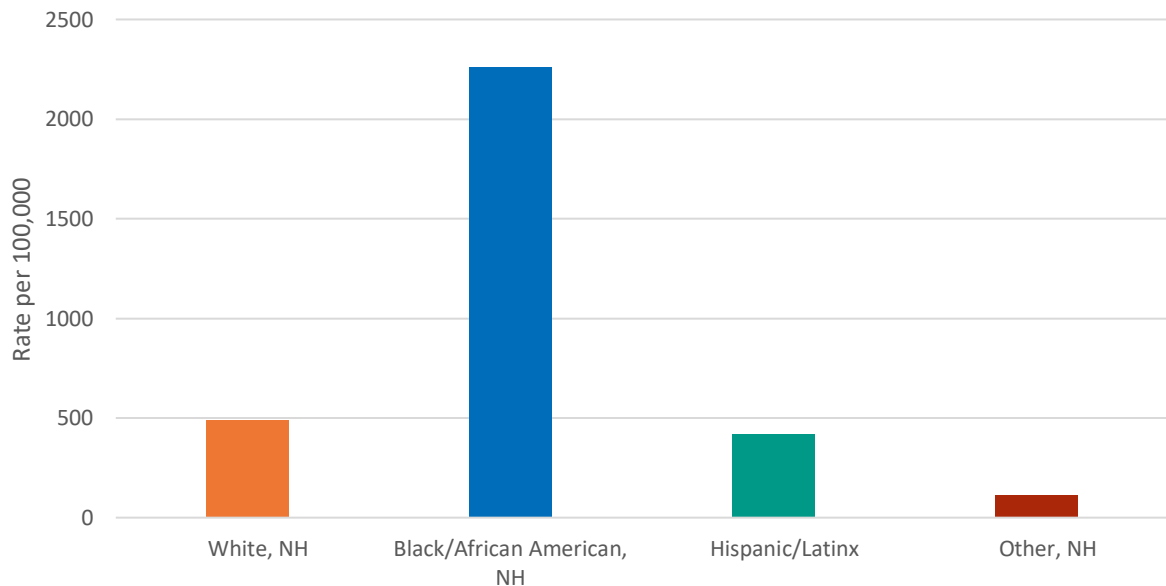
Figure 12: Rate of Admissions to Programs Treating Substance Use Disorders for Any Opioids by (a) Sex and (b) Age Group in CCSF, 2020



Rate is calculated per 100,000 population. Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. There were <5 admissions for heroin among persons 10 to 19 years of age.

Source: San Francisco Department of Public Health (SFPDH), Community Behavioral Health Services Division.

Figure 13: Rate of Admissions to Programs Treating Substance Use Disorders for Any Opioids by Race/Ethnicity in CCSF, 2020



Rate is calculated per 100,000 population. Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. NH=non-Hispanic.

Source: San Francisco Department of Public Health (SFPDH), Community Behavioral Health Services Division.

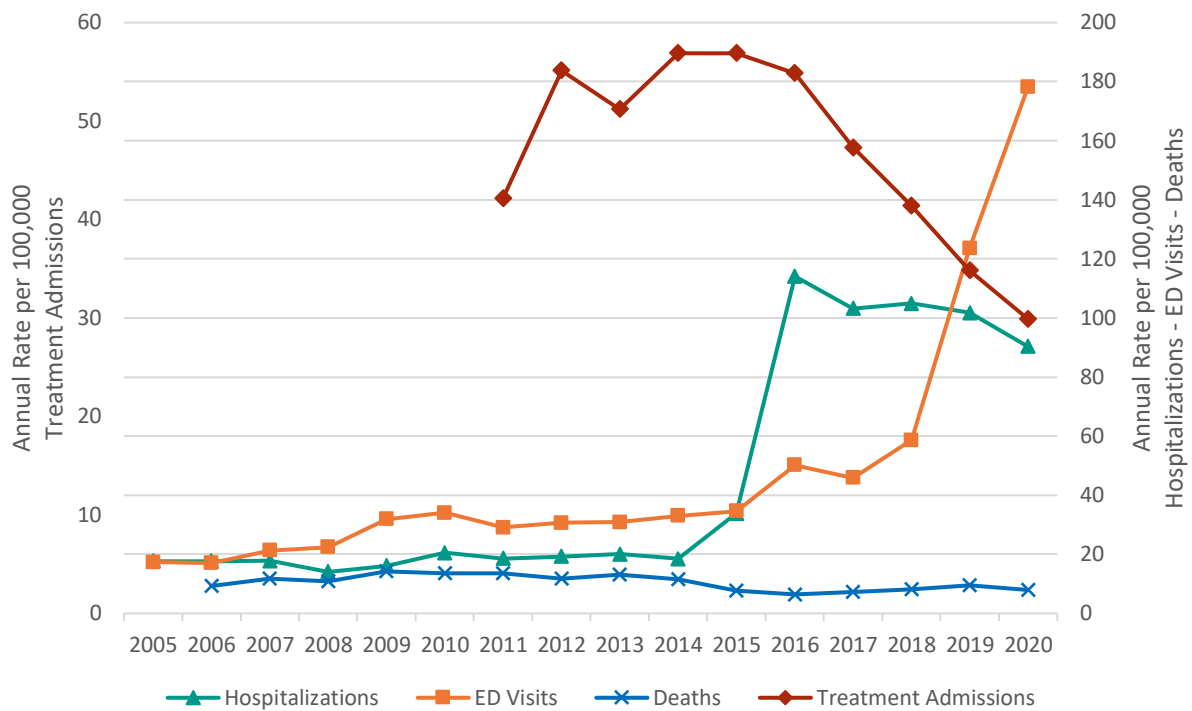
4.1.2 Prescription Opioids

Prescription opioids include opioids prescribed for pain or opioid use disorder treatment, such as oxycodone, hydrocodone, oxymorphone, hydromorphone, methadone, and morphine. For the purpose of this report, prescription opioids do not include heroin or fentanyl, the latter of which is mostly illicitly manufactured when involved in overdose deaths.

Indicators for prescription opioids suggest stable impact on the community. The rate of overdose death due to prescription opioids decreased after it peaked in 2009. While there appears to be a slight increase since 2016 (**Figure 14**), the number of prescription opioid overdose deaths without heroin or fentanyl has actually continued to decline, to a nadir of 32 deaths in 2020 (**Figure 6**). The sharp increase in both emergency department visits and hospitalizations involving prescription opioids from 2015 to 2016 may be artifacts of a change to the way healthcare visits were coded in the U.S. (from ICD-9 to ICD-10) that occurred on October 1, 2015. Due to lack of specificity in opioid-specific ICD coding, the emergency department visits include only acute poisoning (in contrast, the overall opioid measures (**Section 4.1.1**) include use/dependence/abuse codes).

Among the 69 overdose deaths caused by prescription opioids in 2020, 14% were exclusive to prescription opioids (meaning they did not involve heroin, fentanyl, cocaine, methamphetamine, or benzodiazepines), 48% involved fentanyl, 13% involved heroin, 32% involved cocaine, 43% involved methamphetamine, and 25% involved a benzodiazepine.

Figure 14: Rate of Prescription Opioid Health Indicators in CCSF, 2005–2020

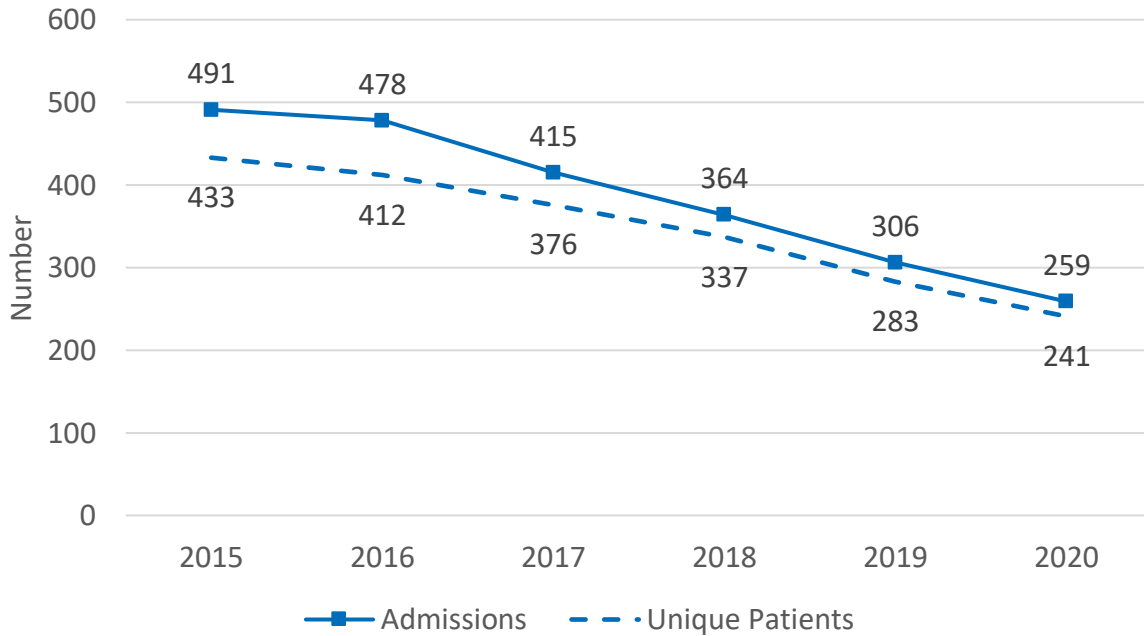


Rate is calculated per 100,000 CCSF population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Emergency department visits and hospitalizations include primary or non-primary ICD-9 codes: E850.1, E850.2, 965.00, 965.02, 965.09 (poisoning) and ICD-10 codes: T40.0, T40.2, T40.3, T40.6 (poisoning). For ICD-10 codes T40.0, T40.2, T40.3, T40.6, codes with a six in the sixth position involve underdosing and were excluded. Shifts in the trend of hospitalizations and emergency department visits from 2015 to 2016 may be artifacts of a change to the way healthcare visits were coded in the U.S. (from ICD-9 to ICD-10) that occurred on October 1, 2015. Hospitalizations and emergency department visits resulting in death were excluded.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS). Treatment admissions were provided by the Community Behavioral Health Services Division of the San Francisco Department of Public Health and include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration; admissions include clients admitted in prior years but still receiving services in a particular year. Hospital admissions and emergency department visits for CCSF facilities were provided by the California Office of Statewide Health Planning and Development.

Prescription opioids accounted for 259 (4.0%) of all SUD treatment admissions in 2020. The number of admissions and unique patients continued to decrease (**Figure 15**). The rate of SUD treatment admissions for prescription opioids was highest among males (**Figure 16a**), people aged 40-49 years (**Figure 16b**), and Black/African Americans (**Figure 17**). Over 75% of the admissions reported using prescription opioids orally (**Figure 18**). The most common secondary substances were methamphetamine (16%), cocaine/crack (12%), and heroin (9%).

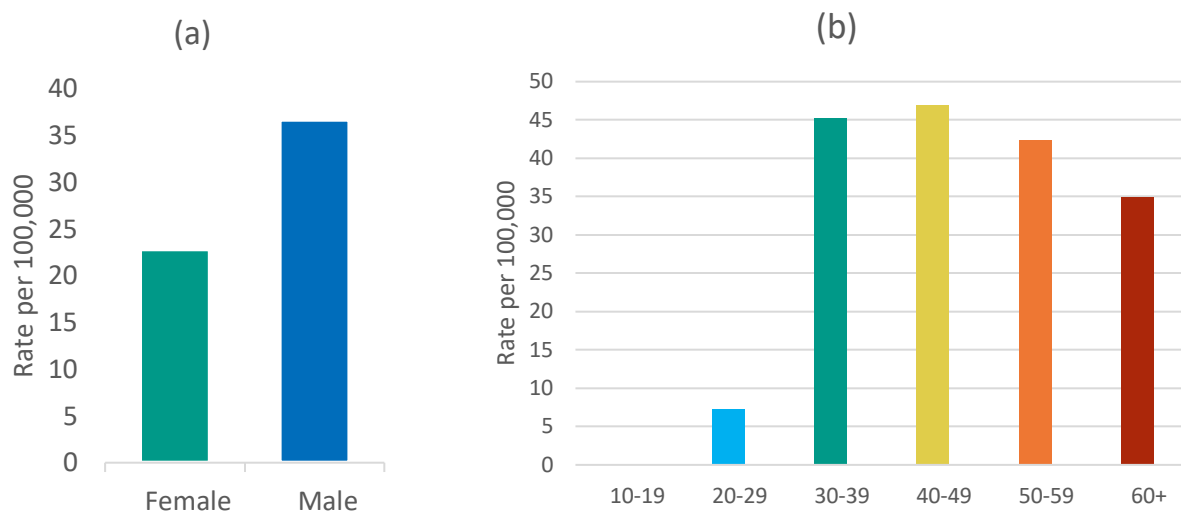
Figure 15: Number of Admissions and Unique Persons Admitted to Programs Treating Substance Use Disorders for Prescription Opioids as the Primary Substance in CCSF, 2015-2020



Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. Admissions for fentanyl are presented separately.

Source: San Francisco Department of Public Health (SFDPH), Community Behavioral Health Services Division.

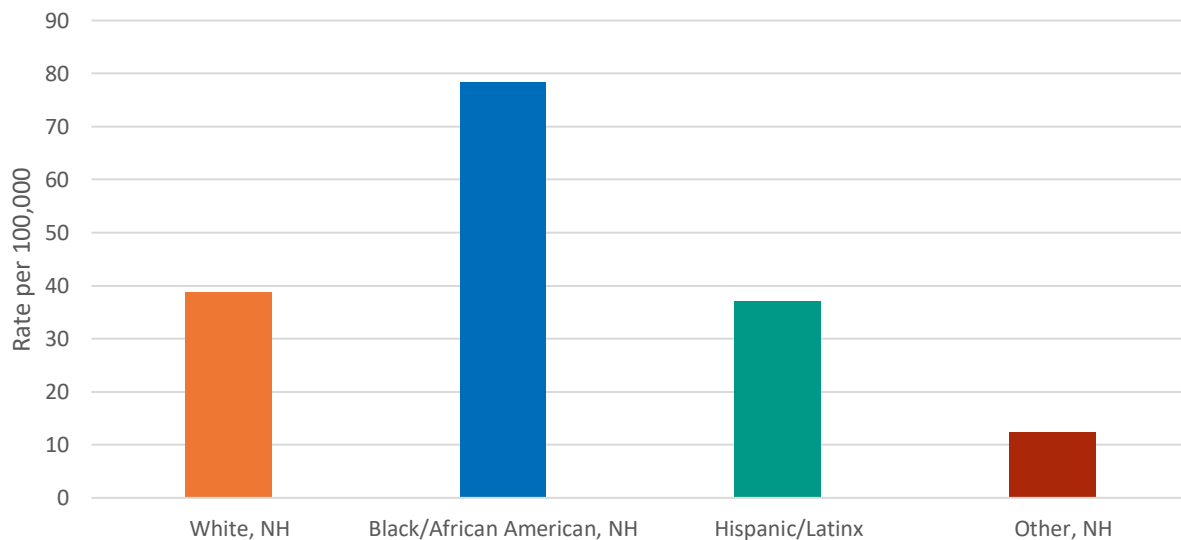
Figure 16: Rate of Admissions to Programs Treating Substance Use Disorders for Prescription Opioids by (a) Sex and (b) Age Group in CCSF, 2020



Rate is calculated per 100,000 population. Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. There were <5 admissions for prescription opioids among persons 10 to 19 years of age.

Source: San Francisco Department of Public Health (SFPDH), Community Behavioral Health Services Division.

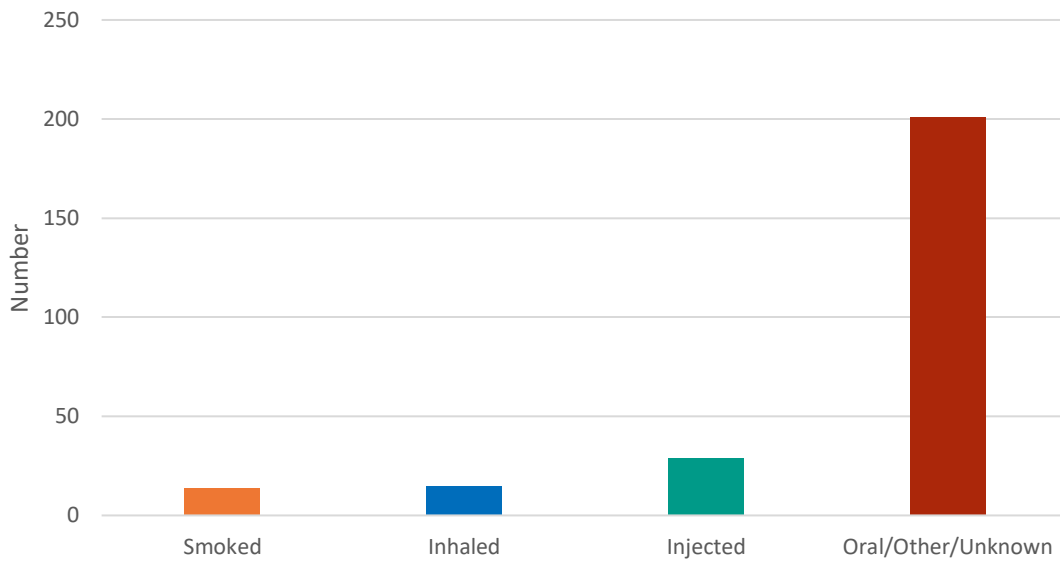
Figure 17: Rate of Admissions to Programs Treating Substance Use Disorders for Prescription Opioids by Race/Ethnicity in CCSF, 2020



Rate is calculated per 100,000 population. Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. NH=non-Hispanic.

Source: San Francisco Department of Public Health (SFPDH), Community Behavioral Health Services Division.

Figure 18: Number of Admissions to Programs Treating Substance Use Disorders for Prescription Opioids Use by Route of Administration in CCSF, 2020

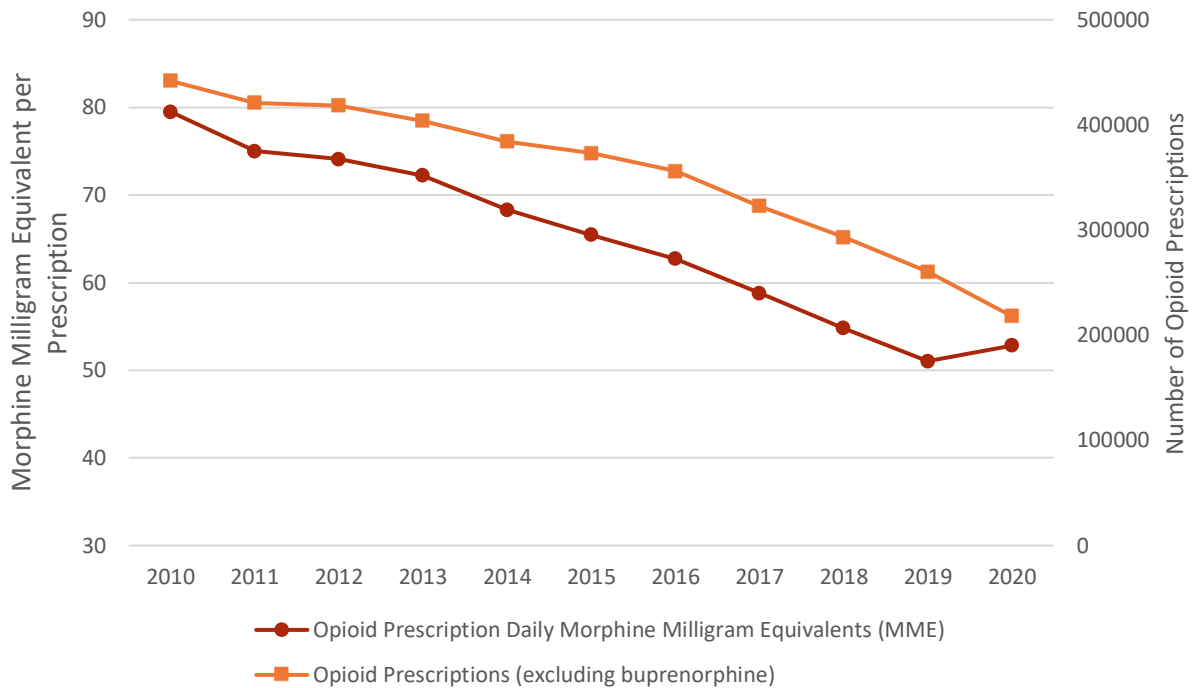


Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

Source: San Francisco Department of Public Health (SFPDH), Community Behavioral Health Services Division.

Since 2010, the number of opioid prescriptions (excluding buprenorphine) dispensed by pharmacies in San Francisco has decreased by 51% and the daily morphine milligram equivalent (MME; excluding buprenorphine) in each prescription issued has declined by 34% (**Figure 19**). There was a slight increase in MME per prescription in 2020, likely due to COVID-19 pandemic restrictions.

Figure 19: Number of Opioid Prescriptions and Daily MMEs per Opioid Prescription in CCSF, 2010–2020



Data exclude prescriptions for buprenorphine.

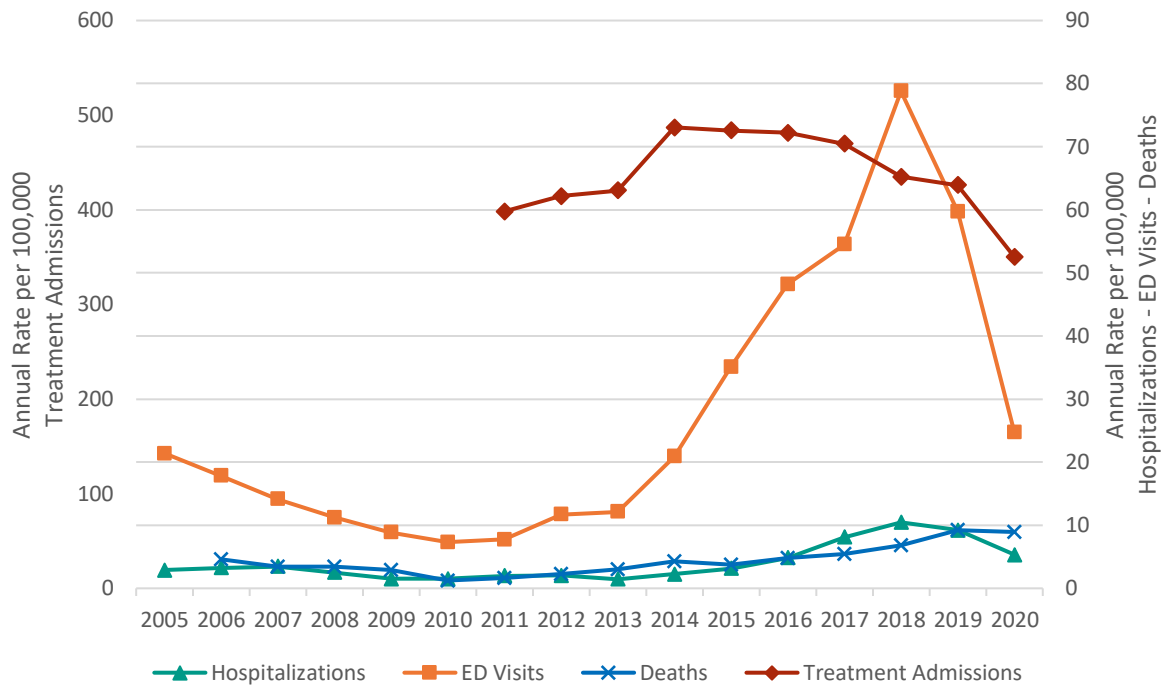
Source: California Controlled Substance Utilization Review and Evaluation System (CURES 2.0).

4.1.3 Heroin

Most indicators suggest a recent reduction in heroin-related morbidity in San Francisco (**Figure 20**). The rate of overdose death due to heroin increased from 1.2 deaths per 100,000 CCSF population at its lowest in 2010 to a recent peak of 9.2 in 2019 and 8.9 in 2020, although most of these recent heroin deaths occurred in combination with, and may be attributable to, fentanyl (see **Figure 6**). While the rate of treatment admissions for heroin decreased, both the rate and number of unique patients treated with buprenorphine increased in 2020 (see **Figure 32**). Heroin-related ED visits and hospitalizations have declined in recent years.

Among the 77 overdose deaths caused by heroin in 2020, 12% were exclusive to heroin, (meaning they did not involve prescription opioids, fentanyl, cocaine, methamphetamine, or benzodiazepines), 56% involved fentanyl, 12% involved prescription opioids, 42% involved cocaine, 45% involved methamphetamine, and 14% involved benzodiazepines. There were 34 deaths due to heroin in the absence of fentanyl in 2020.

Figure 20: Rate of Heroin Health Indicators in CCSF, 2005–2020



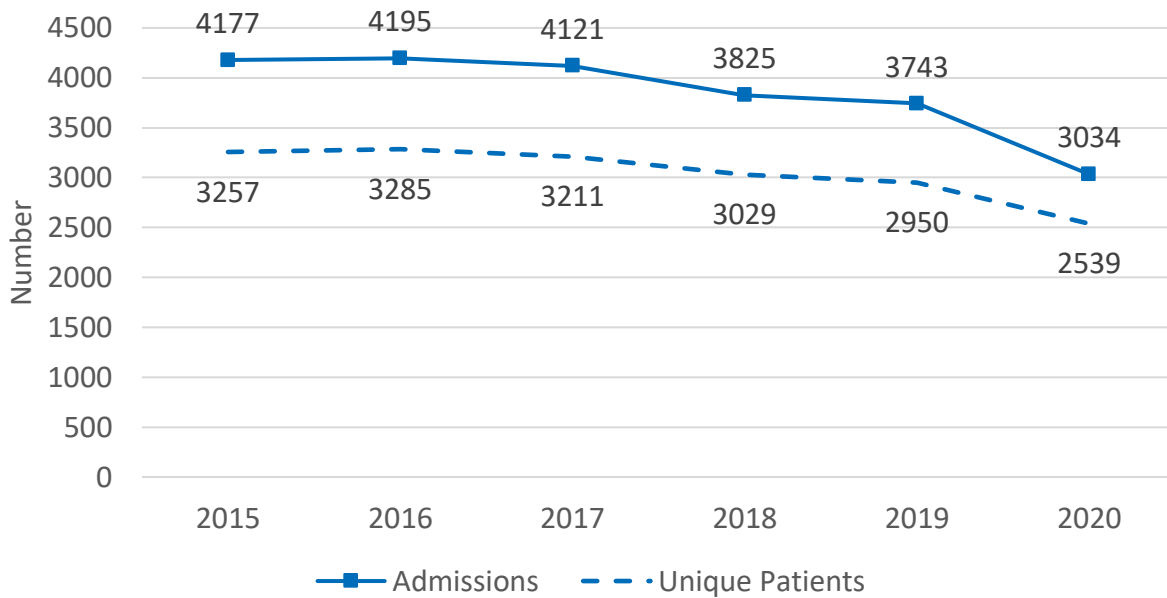
Rate is calculated per 100,000 CCSF population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Emergency department visits and hospitalizations include primary or non-primary ICD-9 codes: E850.0 (poisoning), 965.01 (poisoning) and ICD-10 code: T40.1 (poisoning). Shifts in the trend of hospitalizations and emergency department visits from 2015 to 2016 may be artifacts of a change to the way healthcare visits were coded in the U.S. (from ICD-9 to ICD-10) that occurred on October 1, 2015. Hospitalizations and emergency department visits resulting in death were excluded.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS). Treatment admissions were provided by the Community Behavioral Health Services Division of the San Francisco Department of Public Health and include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration; admissions include clients admitted in prior years but still receiving services in a particular year. Hospital admissions and emergency department visits for CCSF facilities were provided by the California Office of Statewide Health Planning and Development.

Both the number of SUD treatment admissions and the number of unique persons admitted for heroin treatment have declined since 2016. The decline in 2020 is likely related to the COVID-19 pandemic, while the overall trend is believed to be partly due to increased use of buprenorphine for opioid use disorder, as well as changes in the Drug Medi-Cal Organized Delivery System, and possibly shifts in services for people experiencing homelessness (see **Section 3.2**).

The number of SUD treatment admissions for heroin as the primary drug decreased slightly between 2019 and 2020 and accounted for 45% of all admissions (**Figure 21**). The rate of SUD treatment admissions for heroin was highest among males (**Figure 22a**), people aged 50-59 years (**Figure 16b**), and Black/African Americans (**Figure 23**). The most common route of administration was injection (64%; **Figure 24**) and the most common secondary substances were methamphetamine (28%) and cocaine/crack (26%).

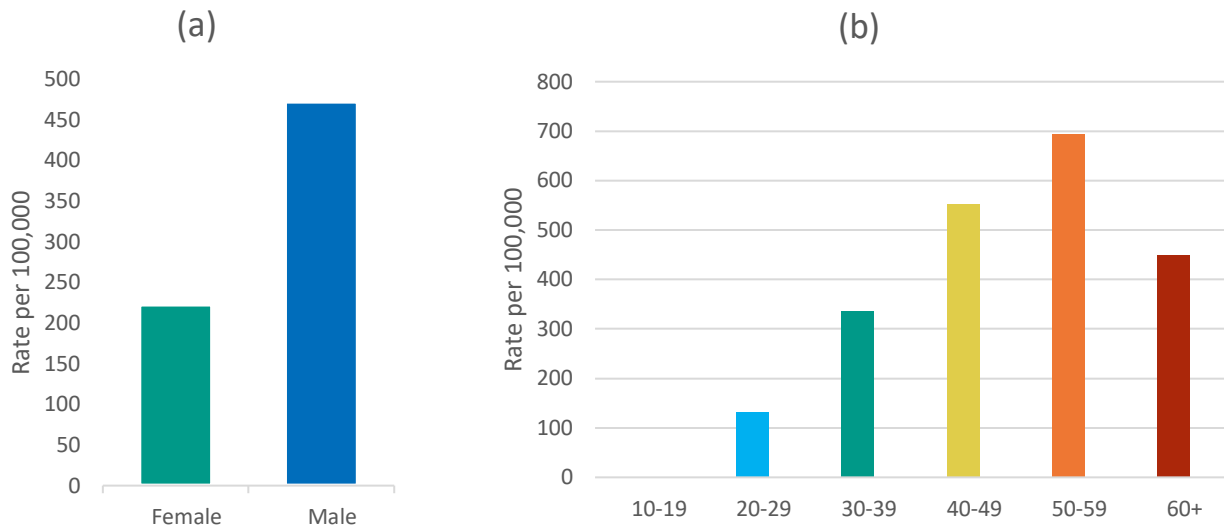
Figure 21: Number of Admissions and Unique Persons Admitted to Programs Treating Substance Use Disorders for Heroin as the Primary Substance in CCSF, 2015–2020



Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

Source: San Francisco Department of Public Health (SFPDH), Community Behavioral Health Services Division.

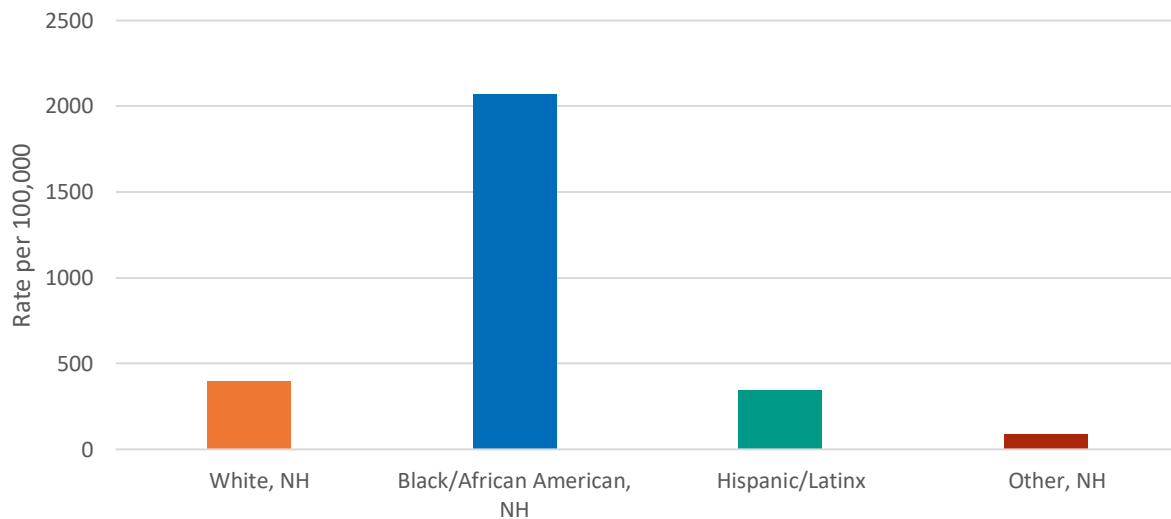
Figure 22: Rate of Admissions to Programs Treating Substance Use Disorders for Heroin by (a) Sex and (b) Age Group in CCSF, 2020



Rate is calculated per 100,000 population. Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. There were <5 admissions for heroin among persons 10 to 19 years of age.

Source: San Francisco Department of Public Health (SFPDH), Community Behavioral Health Services.

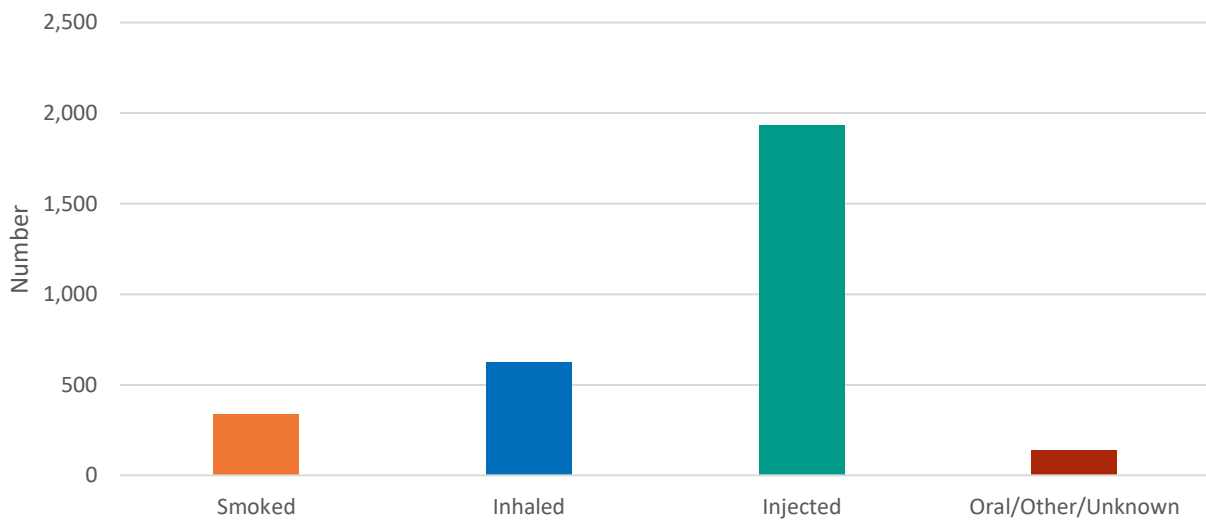
Figure 23: Rate of Admissions to Programs Treating Substance Use Disorders for Heroin by Race/Ethnicity in CCSF, 2020



Rate is calculated per 100,000 population. Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. NH=non-Hispanic.

Source: San Francisco Department of Public Health (SFPDH), Community Behavioral Health Services Division.

Figure 24: Number of Admissions to Programs Treating Substance Use Disorders for Heroin by Route of Administration in CCSF, 2020



Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

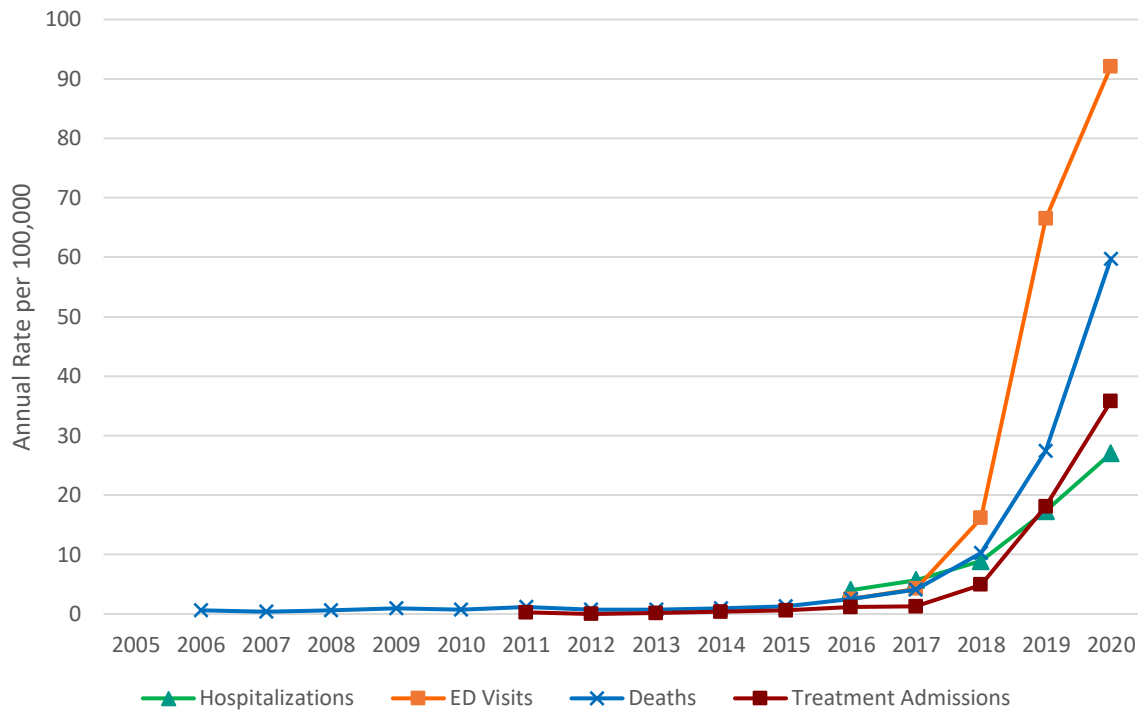
Source: San Francisco Department of Public Health (SFDPH), Community Behavioral Health Services Division.

4.1.4 Fentanyl

Fentanyl (including common analogues such as acetyl fentanyl) has impacted San Francisco substantially (**Figure 25**). The rate of fentanyl overdose deaths began increasing in 2016, with a significant spike in the latter half of 2018, accelerating through 2020. Among the 518 fentanyl-related overdose deaths in 2020, 18% were exclusive to fentanyl (meaning they did not involve prescription opioids, heroin, cocaine, methamphetamine, or benzodiazepines), 8% involved heroin, 6% involved prescription opioids, 40% involved cocaine, 54% involved methamphetamine, and 6% involved a benzodiazepine. Fentanyl-related ED visits and hospitalizations, while likely undercounted due to limited availability of fentanyl testing and use of more general billing codes, have also sharply increased.

Since 2015, there have been scattered reports of counterfeit opioid or benzodiazepine pills, cocaine/crack, and methamphetamine containing fentanyl (see, e.g., www.sfcddp.org/wp-content/uploads/2021/02/health-alert-fentanyl-overdoses-020521.pdf). Fentanyl is present in many forms, including white powders and “rocks” easily mistaken for methamphetamine, powder cocaine, or crack cocaine. Fentanyl is commonly smoked to allow for dose titration.

Figure 25: Rate of Fentanyl Health Indicators in CCSF, 2006–2020

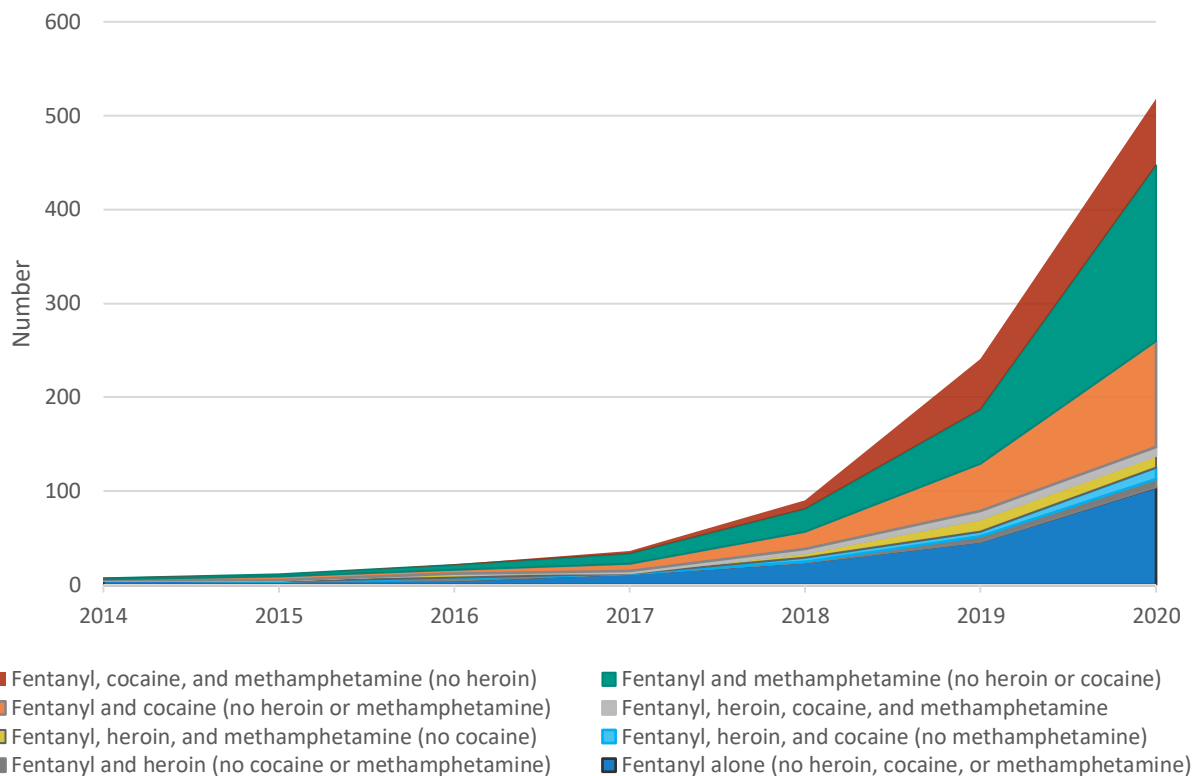


Rate is calculated per 100,000 CCSF population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Fentanyl includes fentanyl analogues.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS). Treatment admissions were provided by the Community Behavioral Health Services Division of the San Francisco Department of Public Health and include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration; admissions include clients admitted in prior years but still receiving services in a particular year. Hospital admissions and emergency department visits for CCSF facilities were provided by the California Office of Statewide Health Planning and Development.

From 2006 to 2014, overdose deaths related to fentanyl were low and constant (see **Figure 1**). Since 2015, the number of fentanyl related overdose deaths has risen precipitously. Fentanyl overdose deaths frequently involve cocaine or methamphetamine, while fentanyl deaths involving heroin have been less common (**Figure 26**). Fentanyl deaths involving methamphetamine, but not involving cocaine or heroin, have increased more than any other categories, totaling 187 deaths (36% of all fentanyl overdose deaths) in 2020.

Figure 26: Number of Fentanyl Overdose Deaths by Mutually Exclusive Involvement of Additional Causative Substance in CCSF, 2015–2020



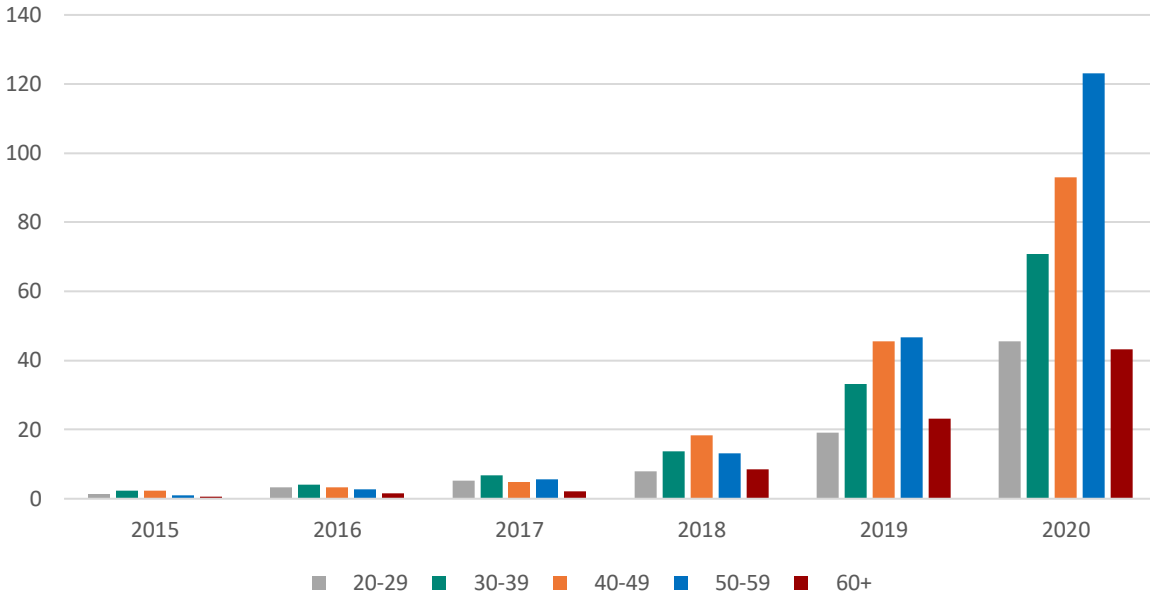
Fentanyl includes fentanyl analogues.

The height of each band corresponds to the number of events in that category. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Only data from 2015 onward included due to the rarity of fentanyl overdose deaths in preceding years.

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

In 2020, the rate of fentanyl overdose deaths was highest among people aged 50-59 years (Figure 27), males (Figure 28), and among Black/African Americans (Figure 29).

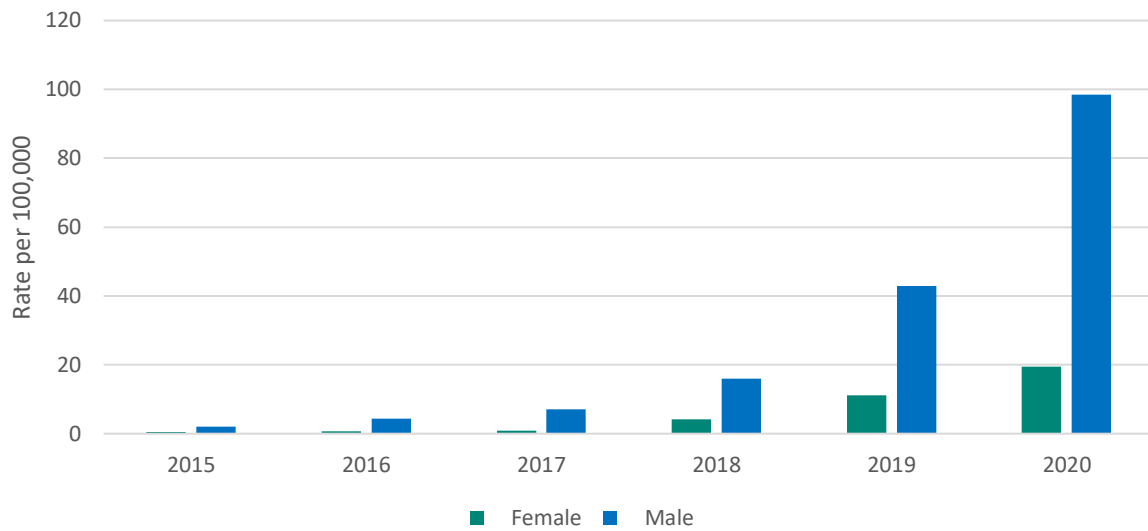
Figure 27: Rate of Fentanyl Overdose Deaths by Age Category in CCSF, 2015–2020



Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Only data from 2015 onward included due to the rarity of fentanyl overdose deaths in preceding years.

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

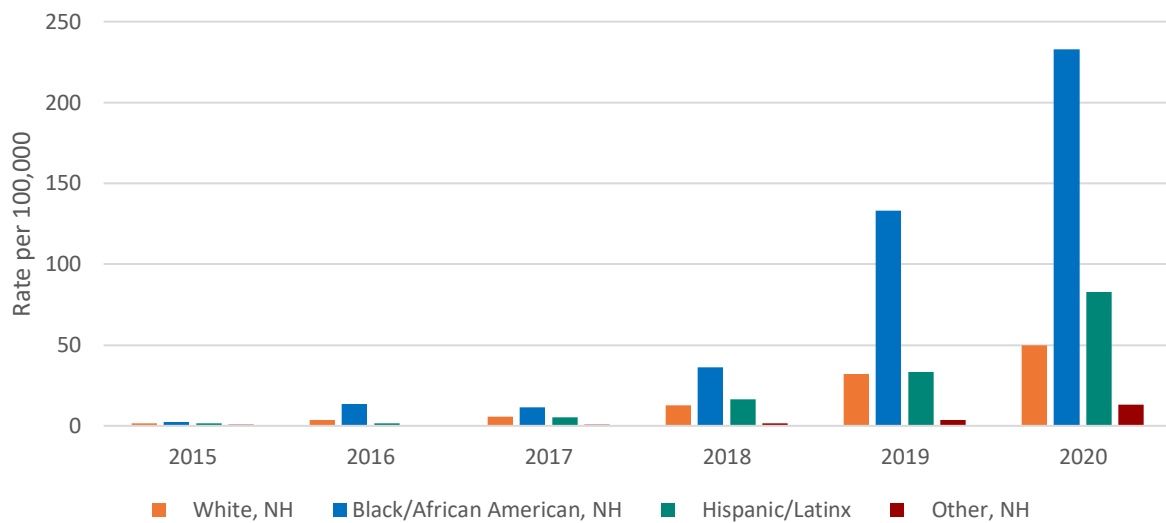
Figure 28: Rate of Fentanyl Overdose Deaths by Sex in CCSF, 2015–2020



Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. No other sex categories were noted. Only data from 2015 onward included due to the rarity of fentanyl overdose deaths in preceding years.

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

Figure 29: Rate of Fentanyl Overdose Deaths by Race/Ethnicity in CCSF, 2015–2020

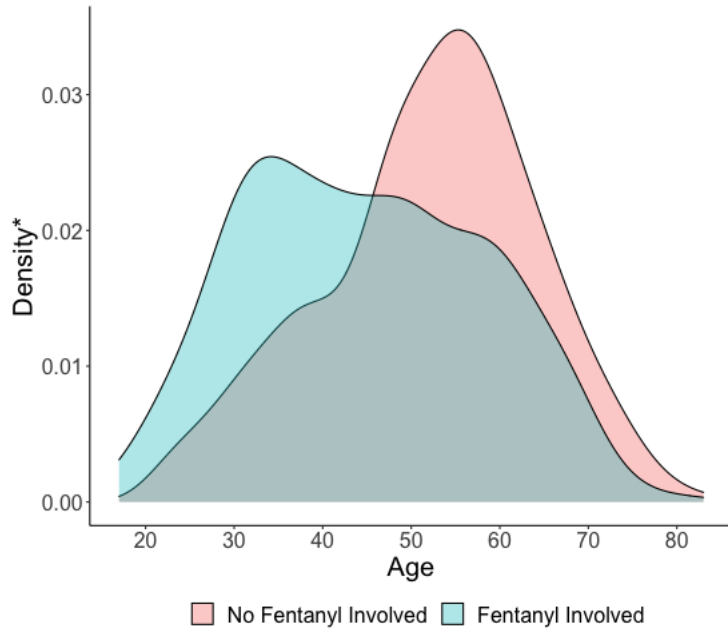


Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. NH=non-Hispanic. Only data from 2015 onward included due to the rarity of fentanyl overdose deaths in preceding years.

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

The below charts further explore the demographics of fentanyl overdose deaths. Fentanyl deaths overall tend to occur among younger decedents than overdose deaths that do not involve fentanyl (**Figure 30**). Furthermore, white and Latinx decedents from fentanyl overdose tend to be younger than Black/African American decedents from fentanyl overdose (**Figure 31**).

Figure 30: Age distribution of opioid, methamphetamine, and cocaine overdose deaths by fentanyl involvement in CCSF, 2018-2019

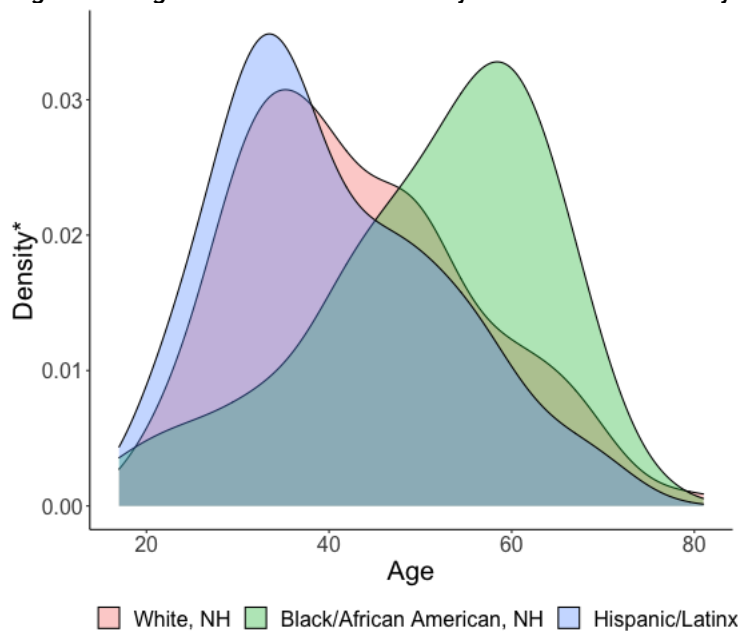


Shaded regions represent the proportion of deaths in that subgroup that occur at a given age. Shaded regions do NOT represent frequency, number, or rate.

Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded.

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

Figure 31: Age distribution of fentanyl overdose deaths by race/ethnicity in CCSF, 2018-2019



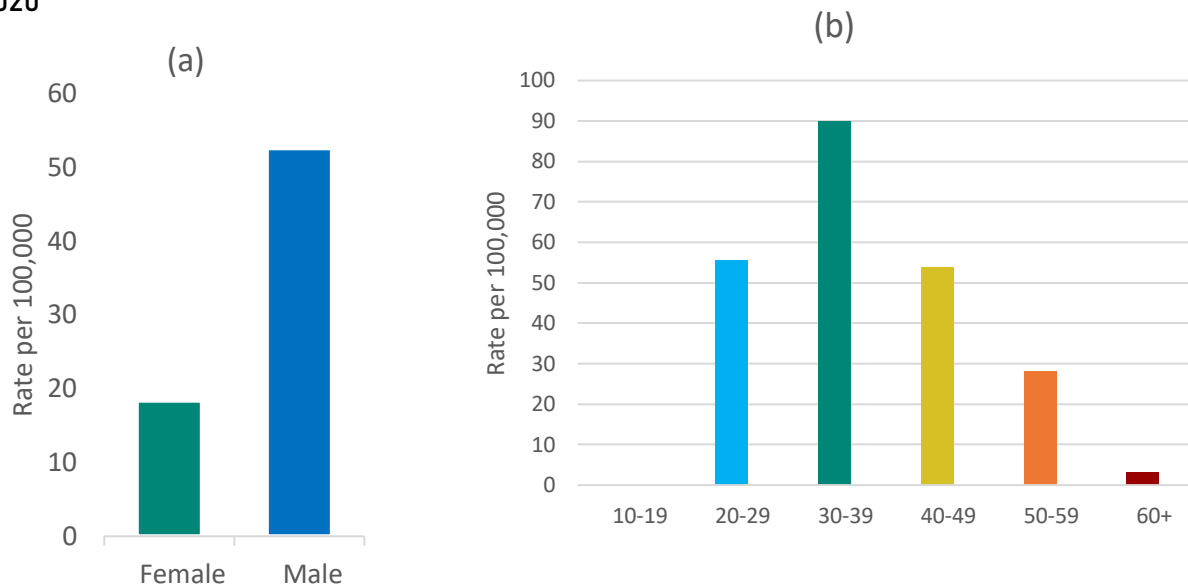
Shaded regions represent the proportion of deaths in that subgroup that occur at a given age. Shaded regions do NOT represent frequency, number, or rate.

Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. "Other, NH" race/ethnicity group was excluded due to small counts of events. NH=non-Hispanic.

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

The number of admissions to SUD treatment programs for fentanyl as the primary drug was generally fewer than 10 per year through 2017. The number of admissions rose to 43 in 2018, 159 in 2019, and 310 in 2020, representing 5% of all SUD treatment admissions that year. The highest rates of SUD treatment admissions for fentanyl were among males (**Figure 32a**), persons aged 50-59 years (**Figure 32b**), and Black/African Americans (**Figure 33**). The most common route of administration was smoking (52%; **Figure 34**) and the most common secondary substances were methamphetamine (42%) and heroin (13%).

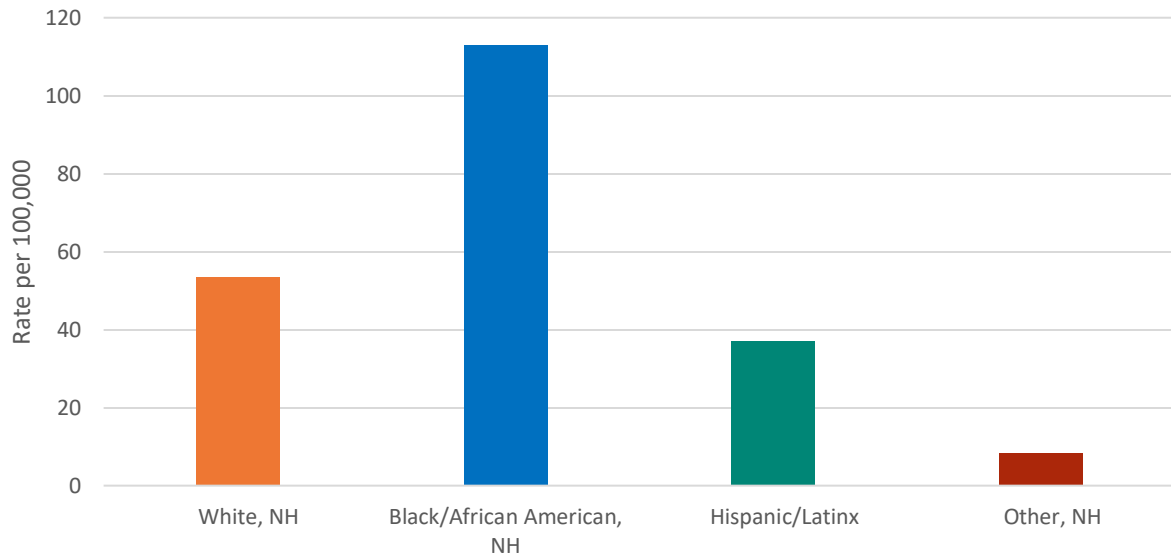
Figure 32: Rate of Admissions to Programs Treating Substance Use Disorders for Fentanyl by (a) Sex and (b) Age Group in CCSF, 2020



Rate is calculated per 100,000 population. Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. There were <5 admissions for fentanyl among persons 10 to 19 years of age.

Source: San Francisco Department of Public Health (SFDPH), Community Behavioral Health Services.

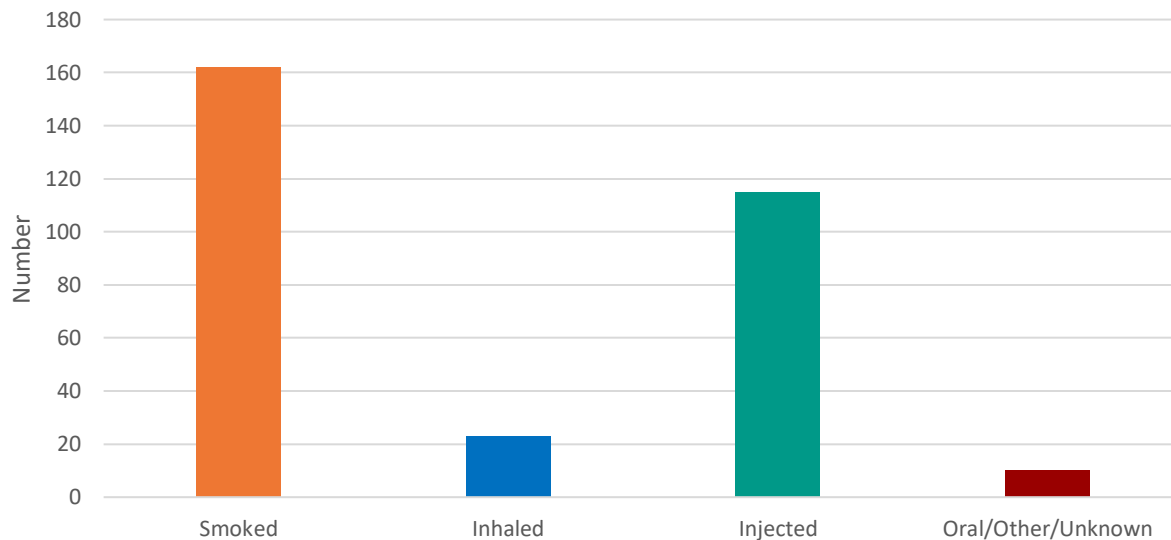
Figure 33: Rate of Admissions to Programs Treating Substance Use Disorders for Fentanyl by Race/Ethnicity in CCSF, 2020



Rate is calculated per 100,000 population. Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. NH=non-Hispanic.

Source: San Francisco Department of Public Health (SFPDH), Community Behavioral Health Services Division.

Figure 34: Number of Admissions to Programs Treating Substance Use Disorders for Fentanyl by Route of Administration in CCSF, 2020



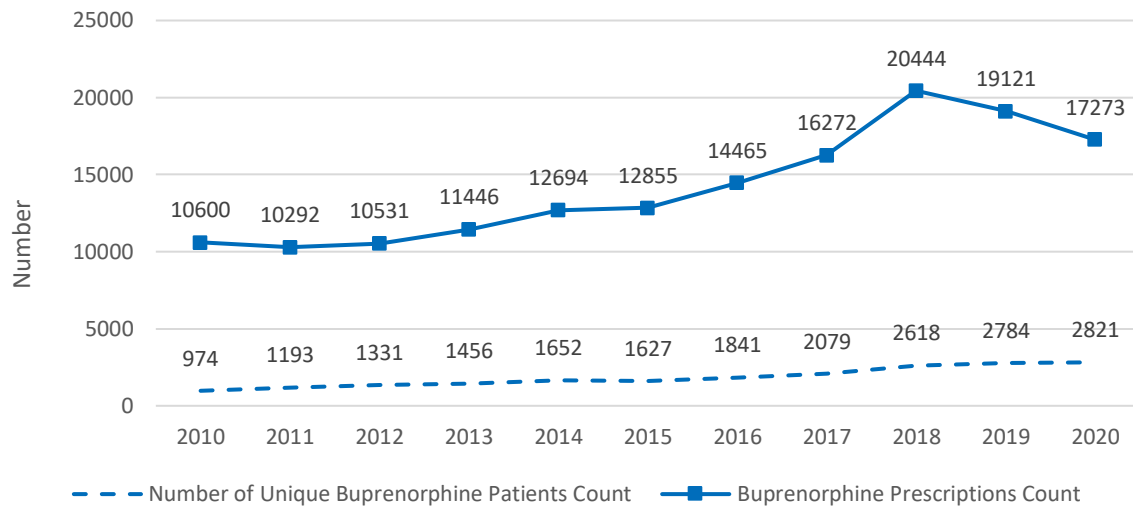
Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

Source: San Francisco Department of Public Health (SFPDH), Community Behavioral Health Services Division.

4.1.5 Buprenorphine

Buprenorphine is a highly effective treatment for opioid use disorder that has also been shown to reduce overdose mortality. The overall number of buprenorphine prescriptions increased steadily from 2010 to 2018 but have decreased somewhat since then, while the number of unique buprenorphine patients continued to increase through 2020 (**Figure 35**). This suggests that more people are being reached with buprenorphine, however the average amount of time on treatment may have declined.

Figure 35: Annual Number of Buprenorphine Prescriptions and Number of Unique Patients Receiving Buprenorphine Prescriptions in CCSF, 2010–2020



Data include all buprenorphine prescriptions issued outside of substance use disorder treatment programs.

Source: California Controlled Substance Utilization Review and Evaluation System (CURES 2.0)

Several efforts have been made to expand buprenorphine access in San Francisco, aiming to both treat opioid use disorder and reduce overdose risk, particularly with the increased presence of fentanyl. Buprenorphine waiver trainings have increased the number of providers who can offer the medication. Programs have been initiated to start buprenorphine when patients are in emergency departments or admitted to hospitals.

There were multiple efforts to provide buprenorphine, such as Whole Person Integrated Care Street Medicine, Shelter Health, and Urgent Care, that had challenges tracking data due to the COVID-19 pandemic. Together, in 2020, these services prescribed buprenorphine to 325 patients, 247 of whom were new starts in 2020. About a third (83) of patients were residents at shelter-in-place hotels. DPH Street Medicine can assess for and initiate buprenorphine at the 50 Ivy Street clinic, syringe access sites, health fairs, navigation centers, on the streets, and in parks. During the Shelter-in-Place order started March 2020 in CCSF, the number of buprenorphine inductions started by DPH Street Medicine increased three-fold. Low barrier delivery of medications for substance use disorders also expanded to Shelter-in-Place hotels and safe sleeping sites during that time.

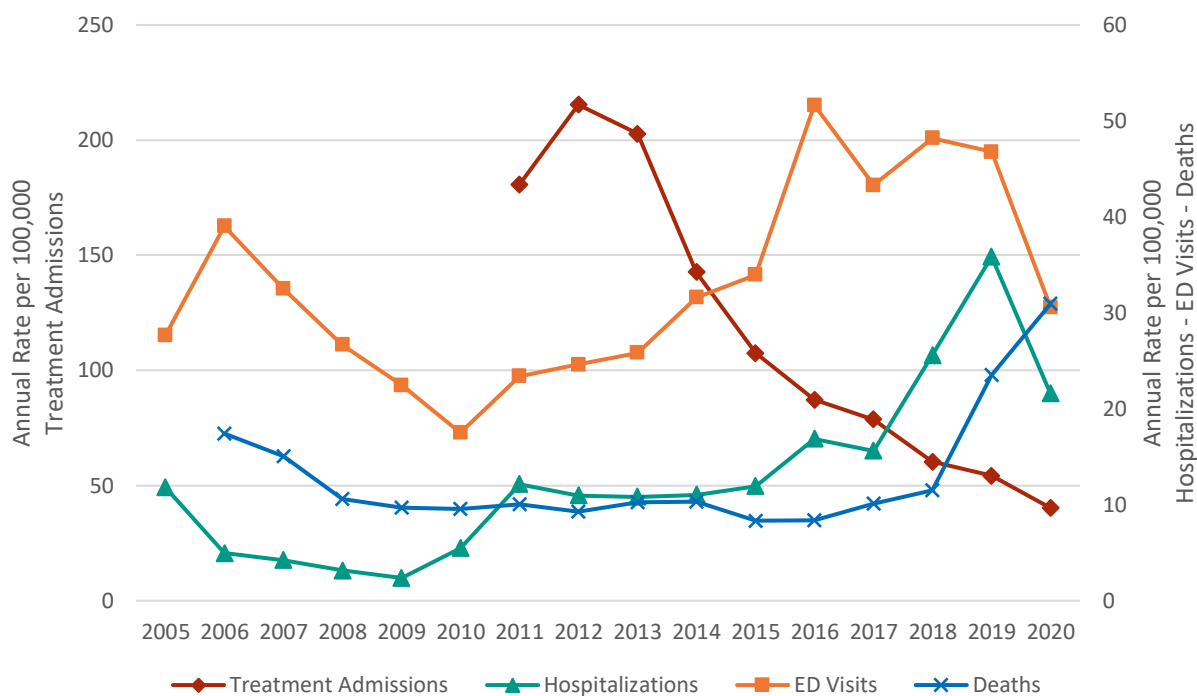
In addition, the Community Behavioral Health Pharmacy at 1380 Howard Street provides buprenorphine treatment to over 400 clients per month, about 30% of whom are also Whole Person Integrated Care clients, including observed dosing and urine drug screens. During the COVID-19 pandemic, pharmacists also began delivering buprenorphine products and providing client education to five shelter-in-place sites.

Bridge Clinic and the Houdini Link program also provide medications for treatment of opioid use disorder. There were 542 hospital encounters at ZSFG in which methadone or buprenorphine were administered for opioid use disorder, including many new initiations. Houdini Link treated 62 patients in 2020 (31 initiated on buprenorphine, 28 on methadone, and 3 on extended-release naltrexone).

4.2 COCAINE/CRACK

From 2019 to 2020, the number of cocaine/crack related overdose deaths increased by 29%. However, deaths due to cocaine alone have remained low and the increase can be attributed to fentanyl. Since 2012, when the annual rate (per 100,000 residents) for cocaine/crack SUD treatment admissions was highest, admissions have decreased 81% (**Figure 36**). Shifts in the trend of hospitalizations and emergency department visits from 2015 to 2016 may be artifacts of a change to the way healthcare visits were coded in the U.S. (from ICD-9 to ICD-10) that occurred on October 1, 2015.

Figure 36: Rate of Cocaine Health Indicators in CCSF, 2005–2020



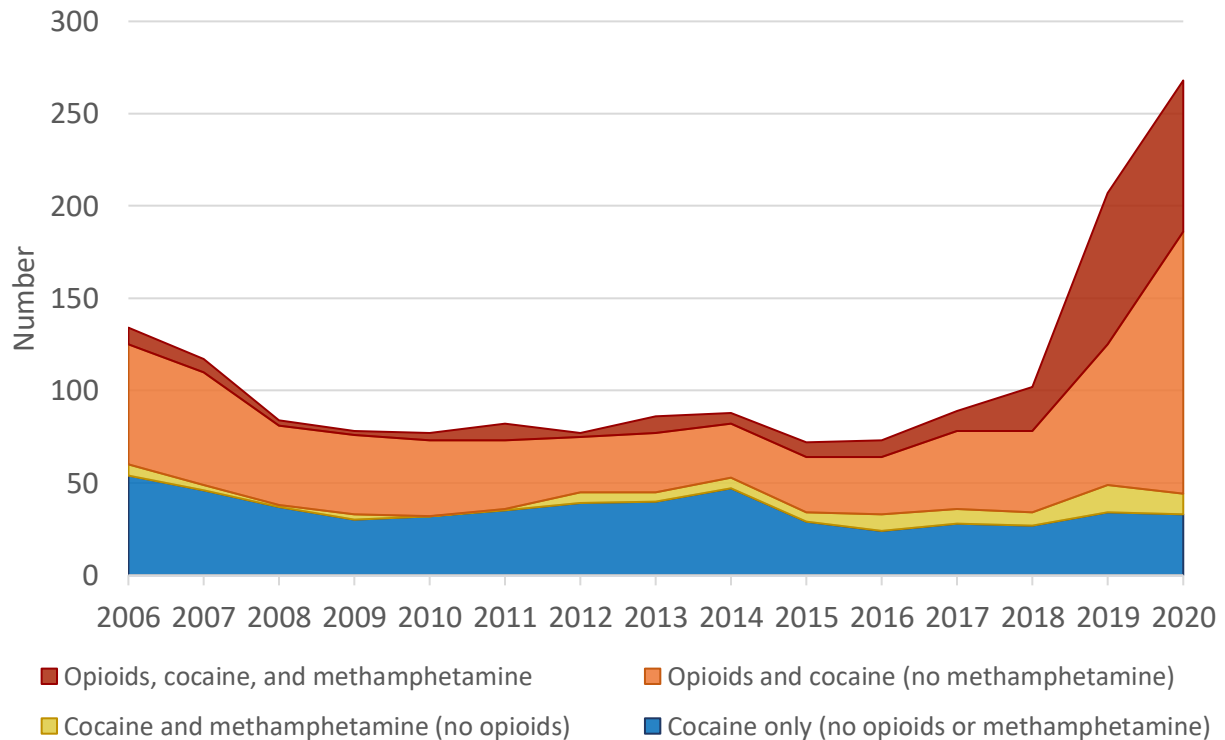
Rate is calculated per 100,000 CCSF population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Emergency department visits and hospitalizations include primary or nonprimary ICD-9 codes: E855.2 (poisoning), 970.81 (poisoning) and ICD-10 code: T40.5 (poisoning); primary only ICD-9 codes: 304.2 (dependence), 305.6 (abuse) and ICD-10 code: F14 (dependence/abuse/use). For ICD-10 code T40.5, a six in the sixth position involve underdosing and were excluded. Shifts in the trend of hospitalizations and emergency department visits from 2015 to 2016 may be artifacts of a change to the way healthcare visits were coded in the U.S. (from ICD-9 to ICD-10) that occurred on October 1, 2015. Hospitalizations and emergency department visits resulting in death were excluded.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS). Treatment admissions were provided by the Community Behavioral Health Services Division of the San Francisco Department of Public Health and include publicly funded treatment services, excluding the Veterans Administration; admissions include clients admitted in prior years but still receiving services in a particular year. Hospital admissions and emergency department visits for CCSF facilities were provided by the California Office of Statewide Health Planning and Development.

Overdose deaths involving cocaine remained relatively stable between 2008 and 2018 but increased in 2019 and 2020, although that increase may be attributed to fentanyl. Among the 268 cocaine-related overdose deaths in San Francisco in 2020, 12% were exclusive to cocaine, 76% involved fentanyl, 12% involved heroin, 8% involved prescription opioids, 35% involved methamphetamine, and 7% involved a benzodiazepine. The increase in cocaine overdose deaths beginning in 2016 is due to the involvement of opioids (**Figure 37**) and, specifically, fentanyl (**Figure 38**).

There have been several recent suspected and confirmed reports of nonfatal and fatal overdose from cocaine/crack that either contained fentanyl or was fentanyl mistaken for cocaine/crack (see, e.g., www.sfcddcp.org/health-alerts-emergencies/health-alerts/).

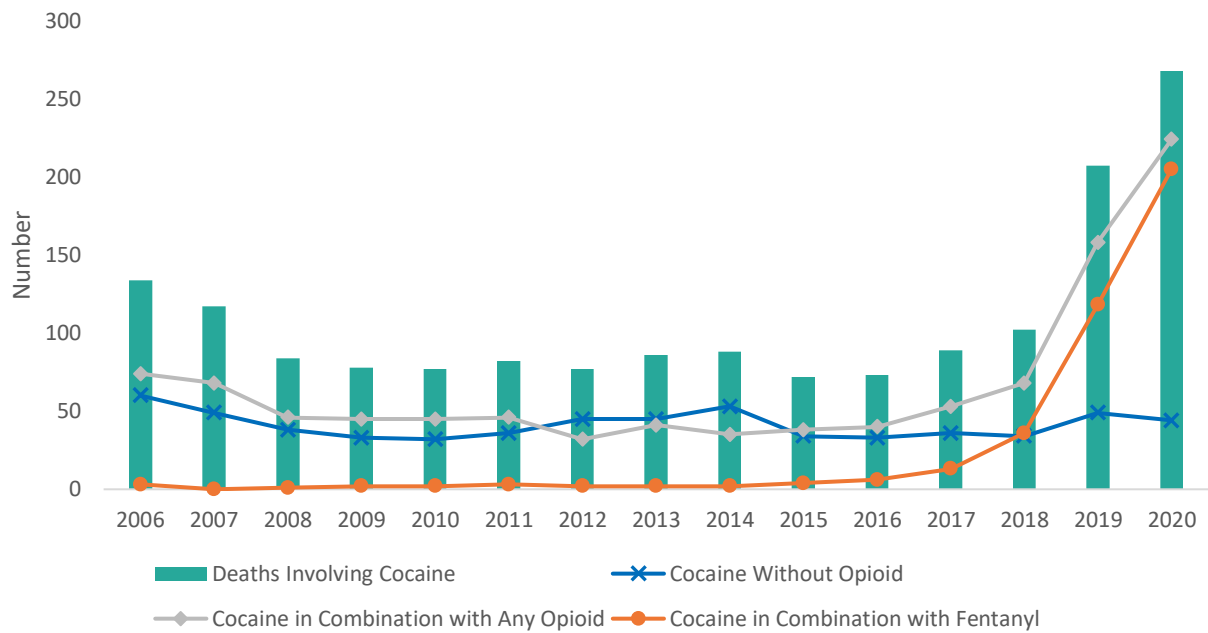
Figure 37: Number of Cocaine Overdose Deaths by Mutually Exclusive Additional Causative Substances in CCSF, 2006–2020



The height of each band corresponds to the number of events in that category. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded.

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

Figure 38: Number of Cocaine Overdose Deaths by Opioid/Fentanyl Involvement in CCSF, 2006–2020

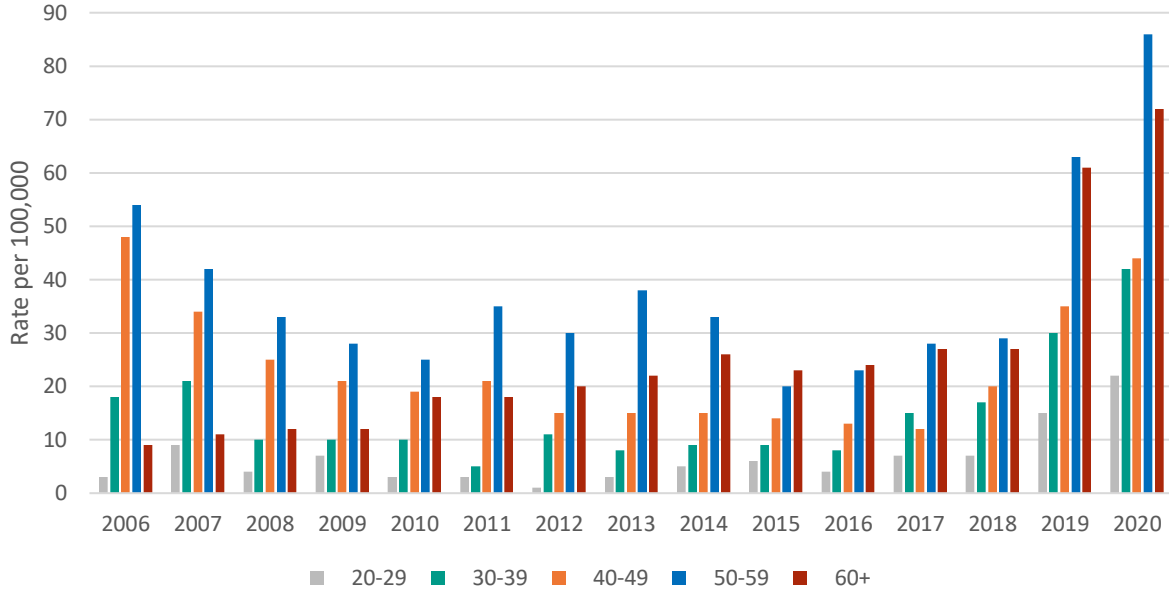


Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Fentanyl includes fentanyl analogues.

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

Cocaine overdose deaths were most likely to occur among persons aged 50 years or older (Figure 39), Black/African Americans (Figure 40), and males compared to females (Figure 41).

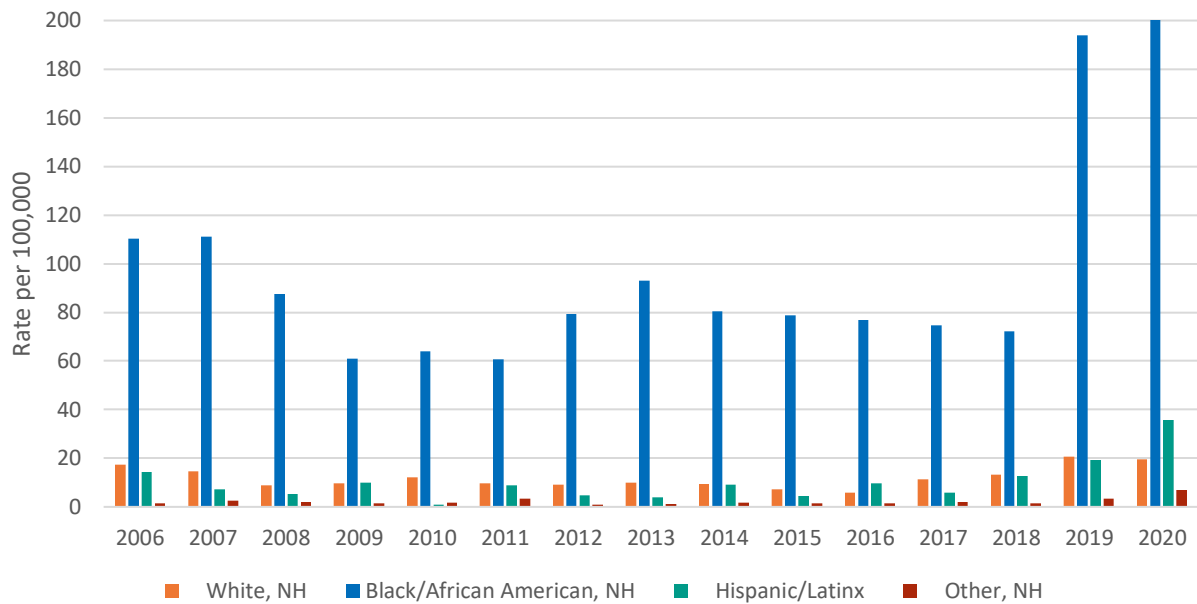
Figure 39: Rate of Cocaine Overdose Deaths by Age Category in CCSF, 2006–2020



Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides, suicides; <5 deaths due to cocaine among individuals <20 years of age excluded.

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

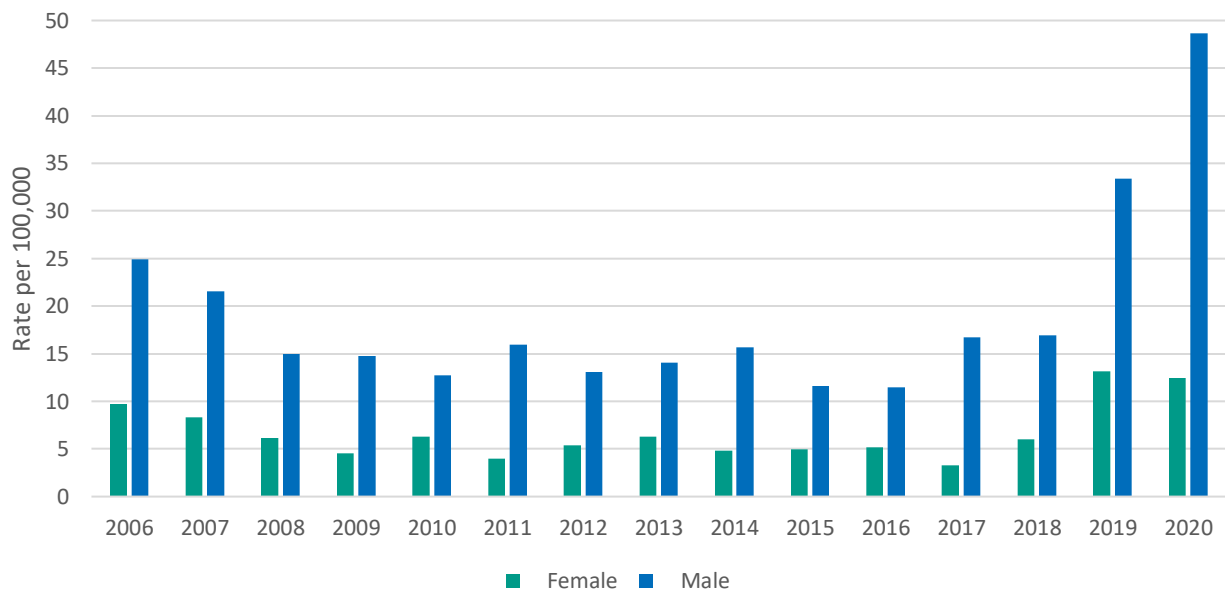
Figure 40: Rate of Cocaine Overdose Deaths by Race/Ethnicity in CCSF, 2006–2020



Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. NH=non-Hispanic.

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

Figure 41: Rate of Cocaine Overdose Deaths by Sex in CCSF, 2006–2020

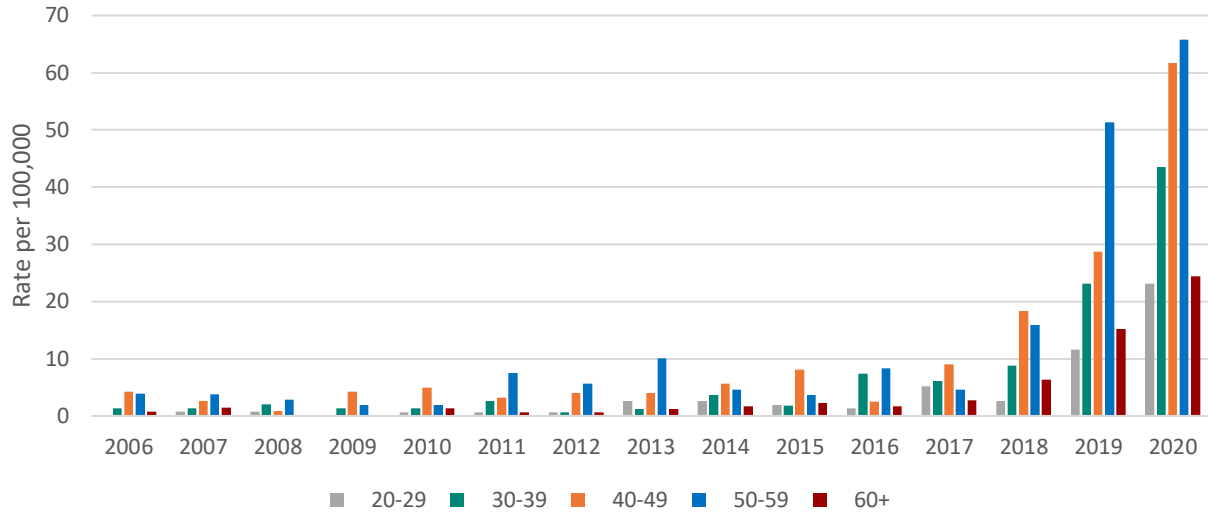


Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. No other sex categories were noted.

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

In the absence of opioids, deaths due to cocaine overdose were rare among younger persons (Figures 42 and 43).

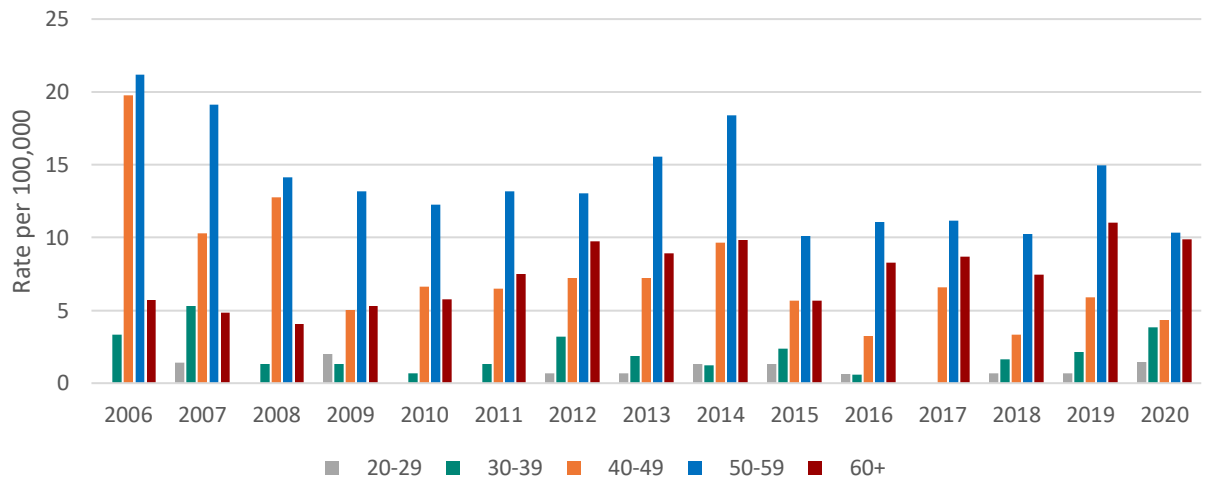
Figure 42: Rate of Cocaine with Opioid Overdose Deaths by Age Category in CCSF, 2006–2020



Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides, suicides; <5 deaths due to cocaine among individuals <20 years of age excluded.

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

Figure 43. Rate of Cocaine without Opioid Overdose Deaths by Age Category in CCSF, 2006–2020



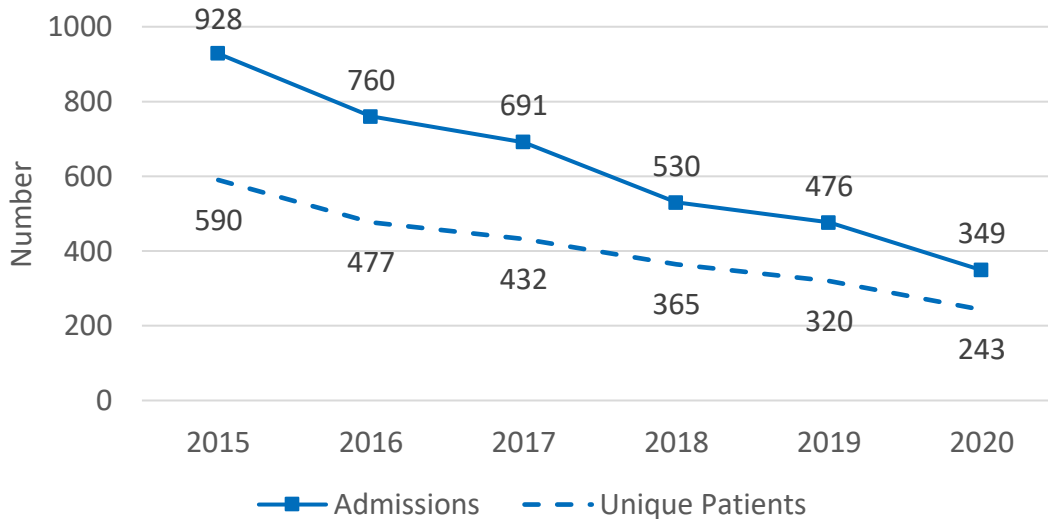
Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides, suicides; <5 deaths due to cocaine among individuals <20 years of age excluded.

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

The number of SUD treatment admissions and unique persons admitted for cocaine/crack as the primary drug has steadily declined since at least 2012 (data since 2015 shown here). While the decline in 2020 can be attributed to the COVID-19 pandemic, the overall decline is believed to be partly due to changes in the Drug Medi-Cal Organized Delivery System, and possibly shifts in services for people experiencing homelessness (See **Section 3.2**).

From 2019 to 2020, SUD treatment admissions for cocaine/crack in San Francisco decreased 27% (**Figure 44**). The rate of SUD treatment admissions for cocaine was highest among males (**Figure 45a**), people aged 50-59 years (**Figure 45b**), and Black/African Americans (**Figure 46**). The most common route of administration was smoking (73%, **Figure 47**). The most common secondary substances included alcohol (32%), followed by heroin (12%), and methamphetamine (11%), and cannabis (9%).

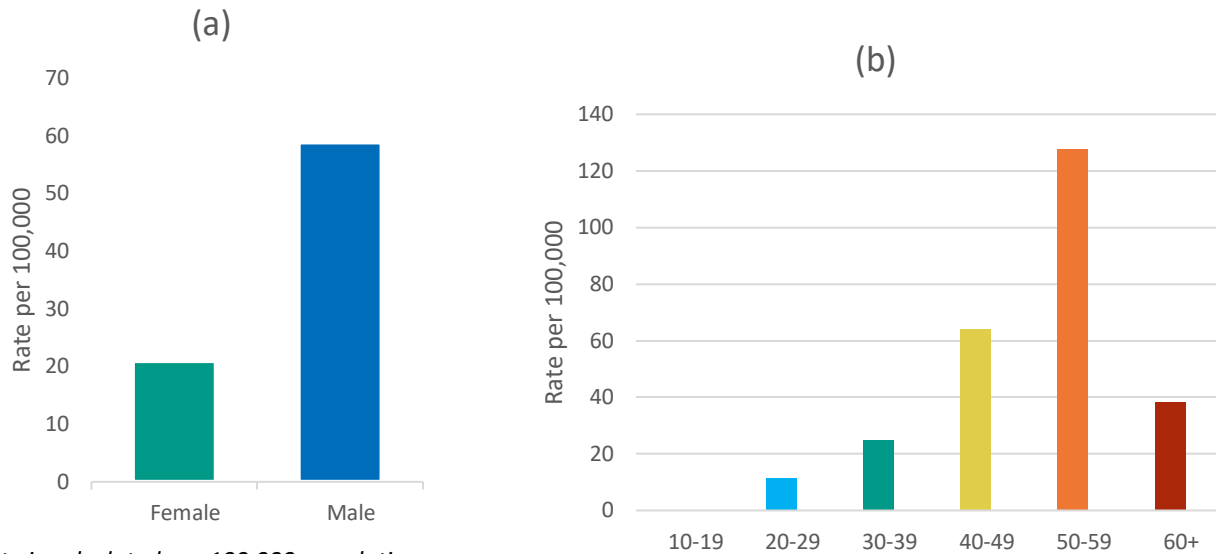
Figure 44: Number of Admissions and Unique Persons Admitted to Programs Treating Substance Use Disorders for Cocaine/Crack as the Primary Substance in CCSF, 2015–2020



Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

Source: San Francisco Department of Public Health (SFPDH), Community Behavioral Health Services Division.

Figure 45: Rate of Admissions to Programs Treating Substance Use Disorders for Cocaine/Crack by (a) Sex and (b) Age Group in CCSF, 2020

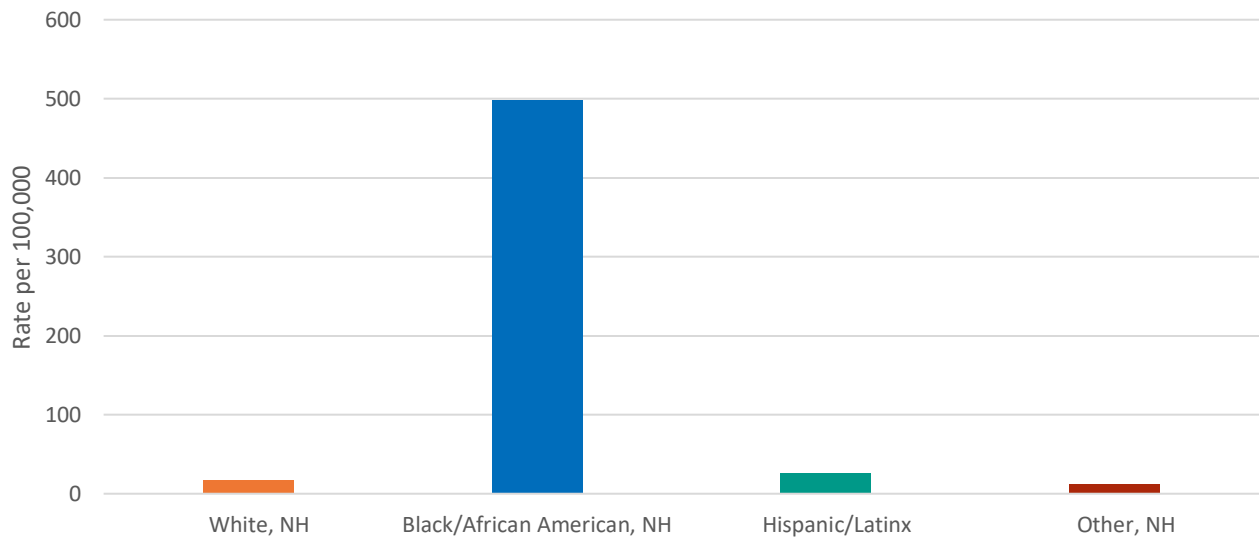


Rate is calculated per 100,000 population.

Data only include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. There were <5 admissions for cocaine/crack among persons 10 to 19 years of age.

Source: San Francisco Department of Public Health (SFDPH), Community Behavioral Health Services Division.

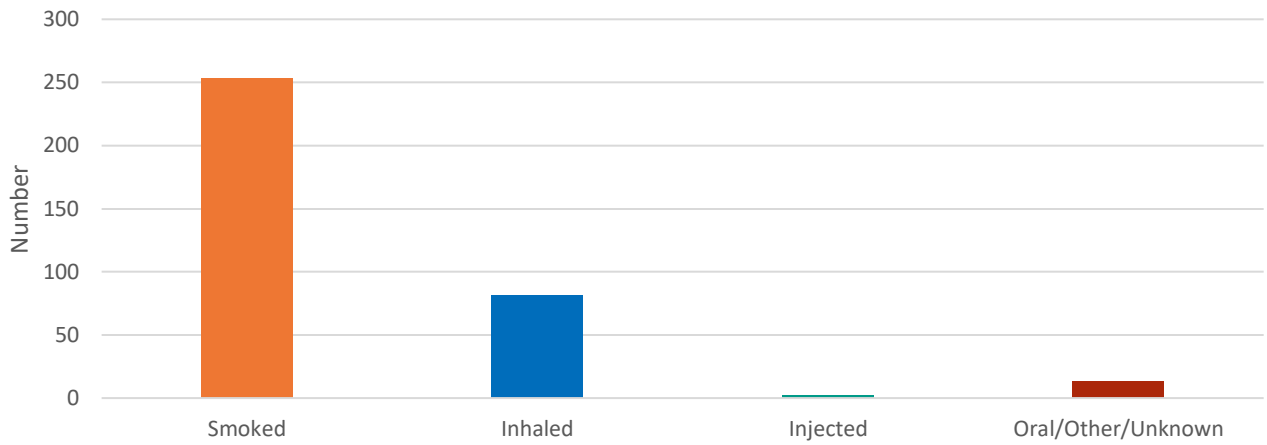
Figure 46: Rate of Admissions to Programs Treating Substance Use Disorders for Cocaine/Crack by Race/Ethnicity in CCSF, 2020



Rate is calculated per 100,000 population. Data include publicly treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. NH=non-Hispanic.

Source: San Francisco Department of Public Health (SFDPH), Community Behavioral Health Services Division.

Figure 47: Number of Admissions to Programs Treating Substance Use Disorders for Cocaine/Crack by Route of Administration in CCSF, 2020



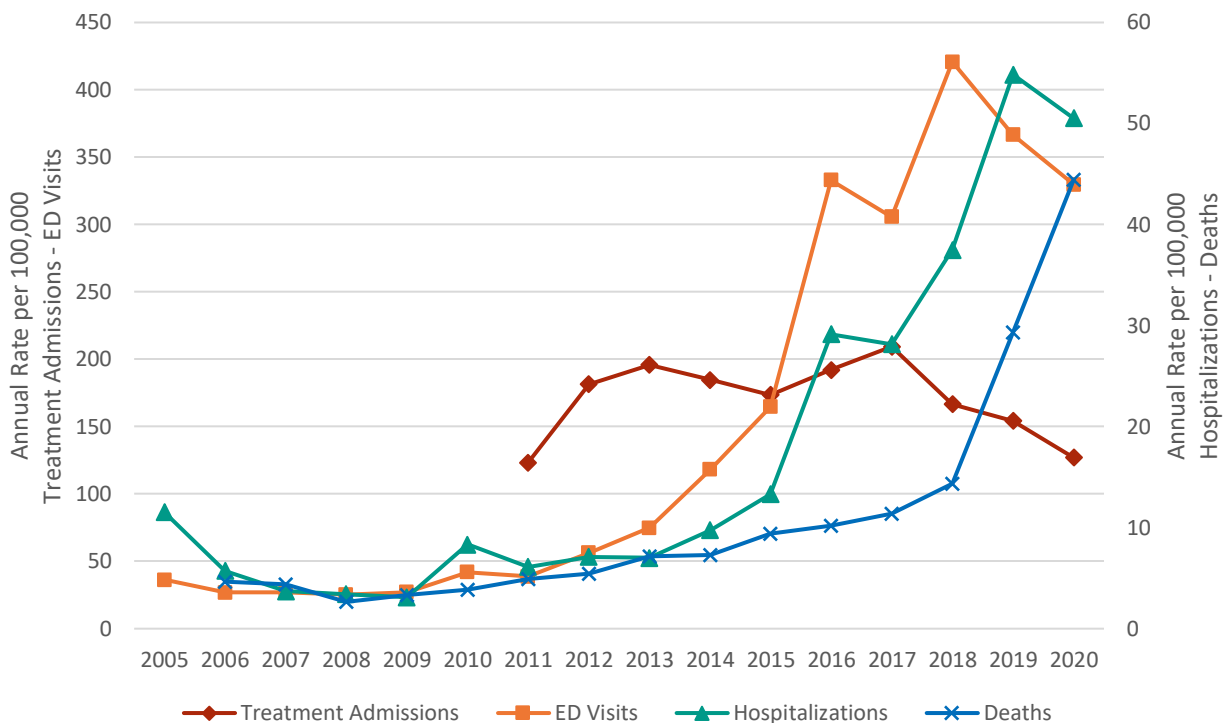
Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

Source: San Francisco Department of Public Health (SFPDH), Community Behavioral Health Services Division.

4.3 METHAMPHETAMINE

Indicators continue to suggest an increase in methamphetamine-related morbidity and mortality in San Francisco. The rate of overdose death due to methamphetamine has steadily increased since 2009, and tripled from 2018 to 2020. As is the case with cocaine/crack, most of the recent increase in methamphetamine overdose death can be attributed to fentanyl (see **Figure 50**). SUD treatment admissions have decreased somewhat since a peak in 2017 (**Figure 48**). Shifts in the trend of hospitalizations and emergency department visits from 2015 to 2016 may be artifacts of a change to the way healthcare visits were coded in the U.S. (from ICD-9 to ICD-10) that occurred on October 1, 2015.

Figure 48: Rate of Methamphetamine Health Indicators in CCSF, 2005–2020



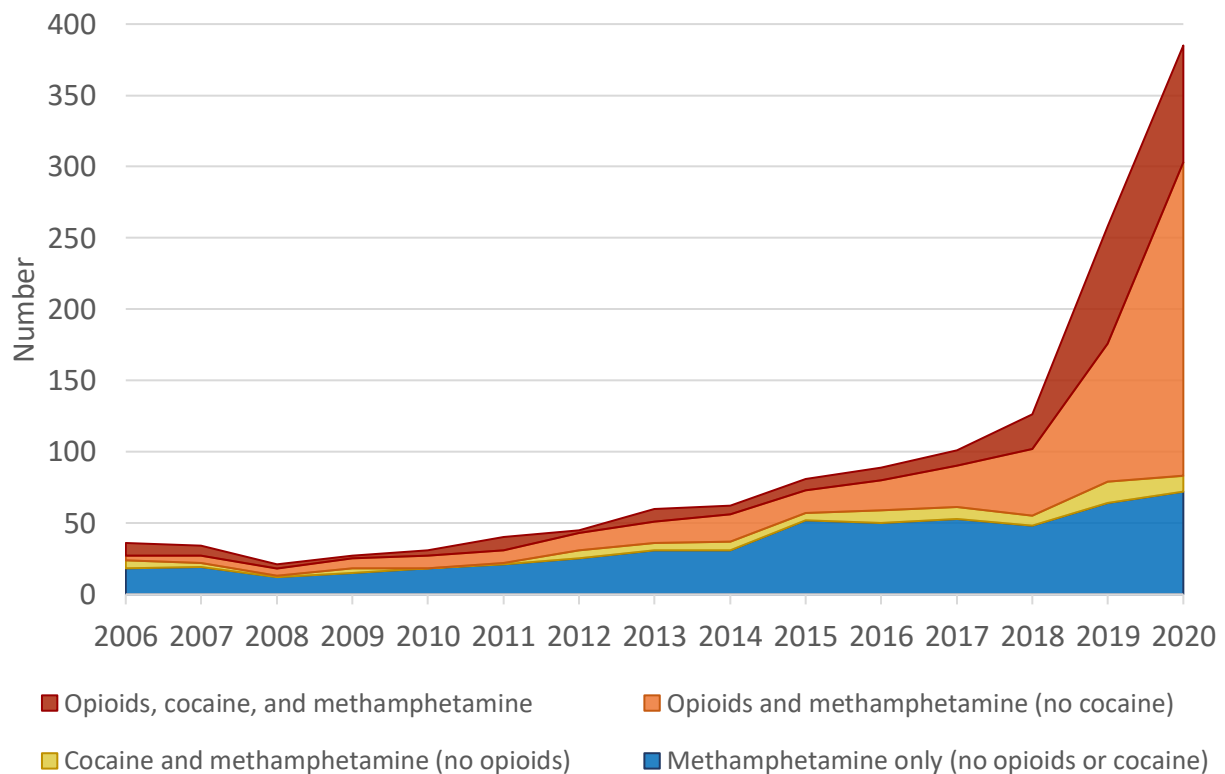
Rate is calculated per 100,000 CCSF population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Emergency department visits and hospitalizations include primary or non-primary ICD-9 codes: E854.2, 969.72 (poisoning), and ICD-10 code: T43.62 (poisoning); primary only ICD-9 codes: 304.4 (dependence), 305.7 (abuse) and ICD-10 code: F15 (dependence/abuse/use). For ICD-10 code: T43.62, a six in the sixth position involve underdosing and were excluded. Shifts in the trend of hospitalizations and emergency department visits from 2015 to 2016 may be artifacts of a change to the way healthcare visits were coded in the U.S. (from ICD-9 to ICD-10) that occurred on October 1, 2015. Hospitalizations and emergency department visits resulting in death were excluded.

Sources: *Overdose mortality* obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS). *Treatment admissions* were provided by the Community Behavioral Health Services Division of the San Francisco Department of Public Health and include publicly funded treatment services, excluding the Veterans Administration; admissions include clients admitted in prior years but

still receiving services in a particular year. *Hospital admissions and emergency department visits for CCSF facilities were provided by the California Office of Statewide Health Planning and Development.*

Among the 385 overdose deaths caused by methamphetamine in San Francisco in 2020, 19% involved methamphetamine exclusively (meaning they did not involve any opioids, cocaine, or benzodiazepines), 73% involved fentanyl, 9% involved heroin, 8% involved prescription opioids, 24% involved cocaine, and 4% involved a benzodiazepine. Prior to 2015, increases in methamphetamine overdose deaths were driven by deaths due to methamphetamine without opioids. However, since 2016, deaths caused by opioids, particularly fentanyl, have driven the increase in methamphetamine-related deaths (**Figures 49 and 50**).

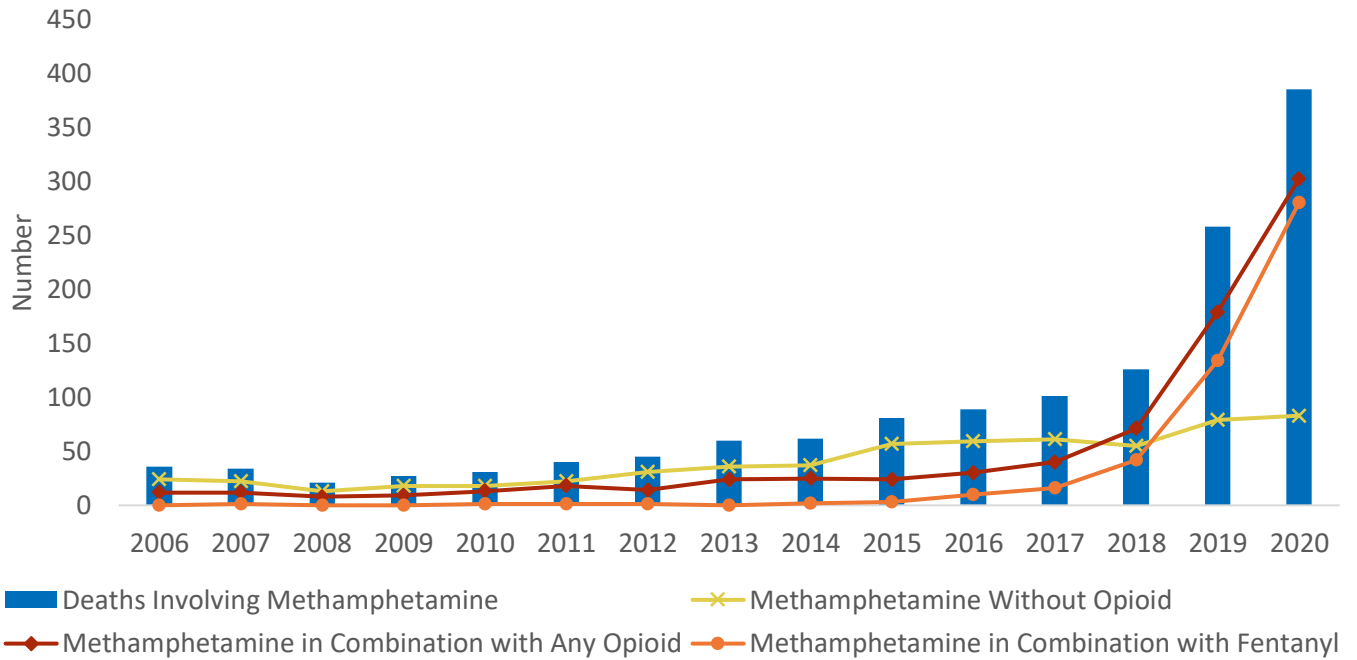
Figure 49: Number of Methamphetamine Overdose Deaths by Mutually Exclusive Additional Causative Substance in CCSF, 2006–2020



The height of each band corresponds to the number of events in that category. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded.

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

Figure 50: Number of Methamphetamine Overdose Deaths by Opioid/Fentanyl Involvement in CCSF, 2006–2020

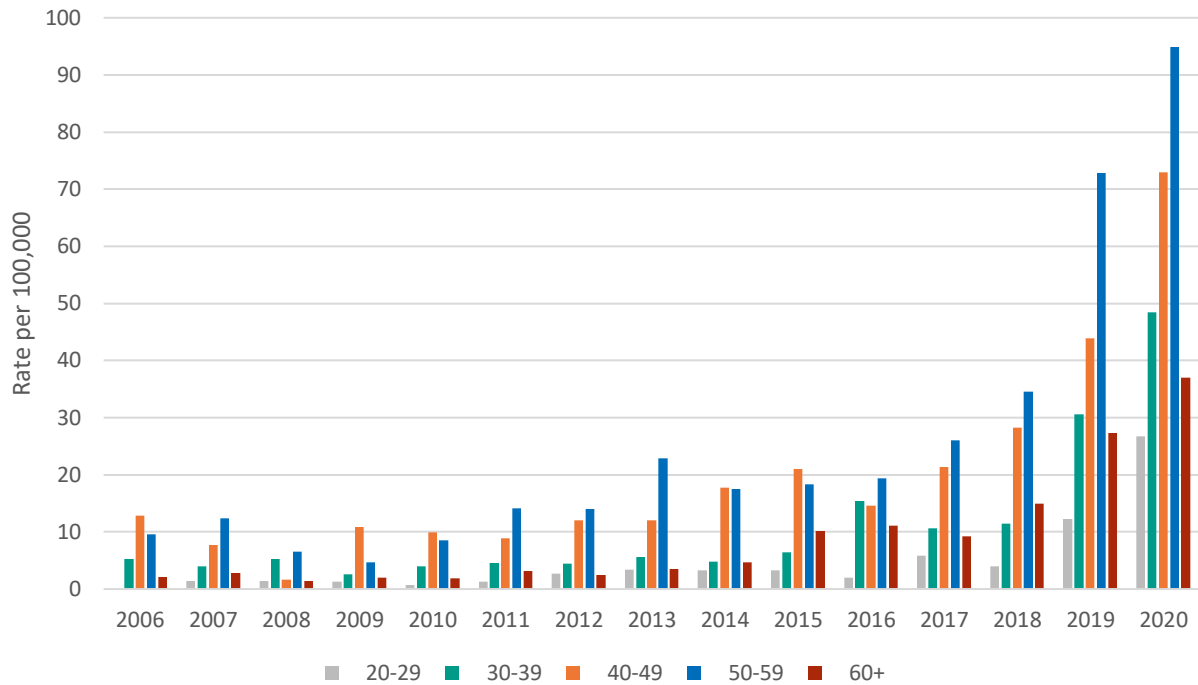


Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Fentanyl includes fentanyl analogues.

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

Methamphetamine overdose deaths were most likely to occur among persons aged 50–59 years (**Figure 51**), Black/African Americans (**Figure 52**), and males compared to females (**Figure 53**).

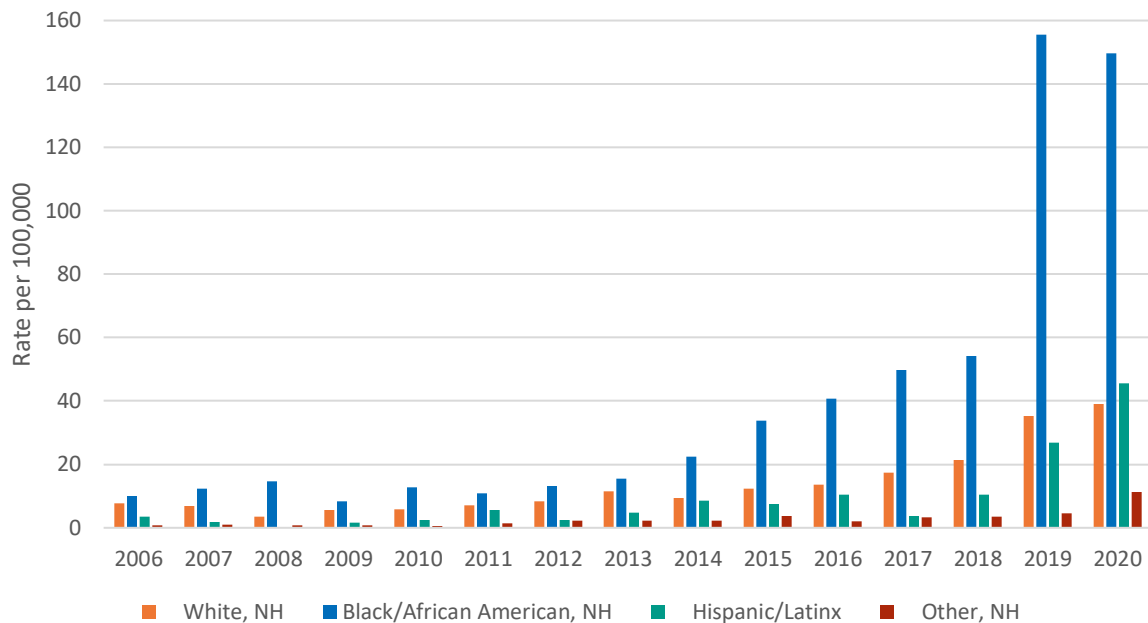
Figure 51: Rate of Methamphetamine Overdose Deaths by Age Category in CCSF, 2006–2020



Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides, suicides, <5 deaths due to methamphetamine among individuals <20 years of age excluded.

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

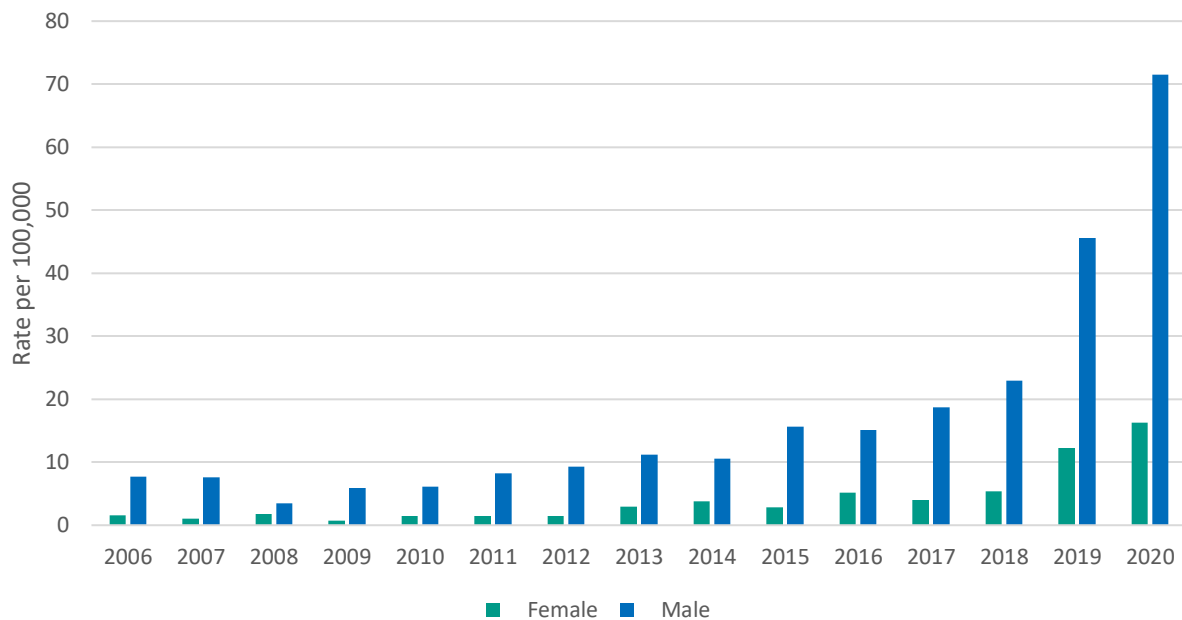
Figure 52: Rate of Methamphetamine Overdose Deaths by Race/Ethnicity in CCSF, 2006–2020



Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. NH=non-Hispanic.

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

Figure 53: Rate of Methamphetamine Overdose Deaths by Sex in CCSF, 2006–2020

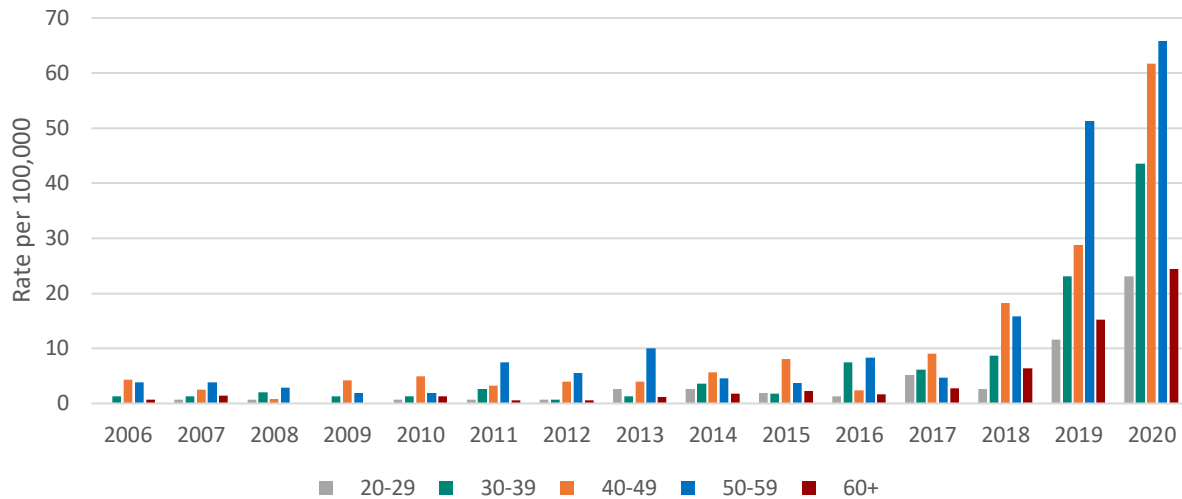


Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. No other sex categories were noted.

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

In the absence of opioids, deaths due to methamphetamine overdose were rare among younger persons (**Figures 42 and 43**).

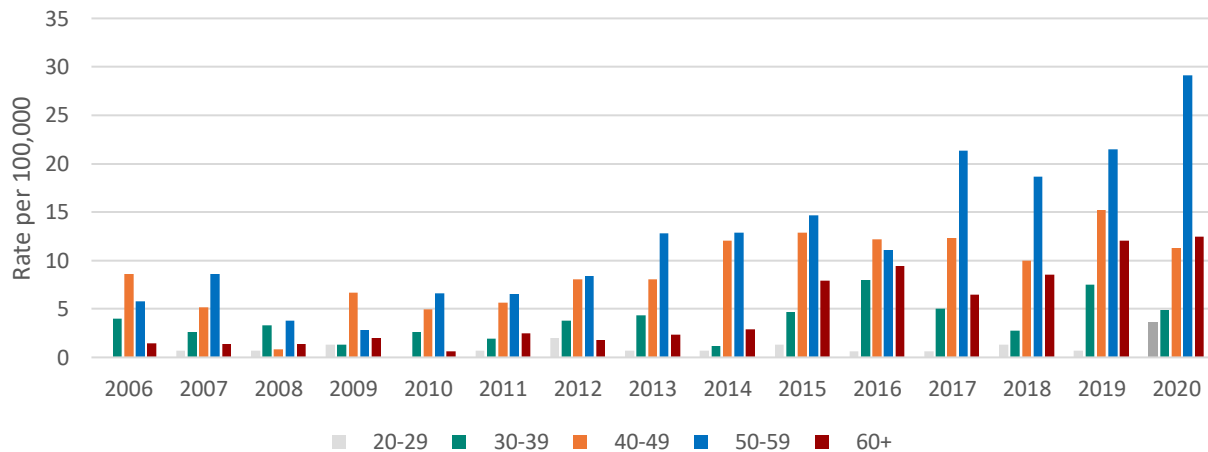
Figure 54: Rate of Methamphetamine with Opioids Overdose Deaths by Age Category in CCSF, 2006–2020



Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides, suicides, <5 deaths due to methamphetamine among individuals <20 years of age excluded.

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

Figure 55: Rate of Methamphetamine without Opioids Overdose Deaths by Age Category in CCSF, 2006–2020

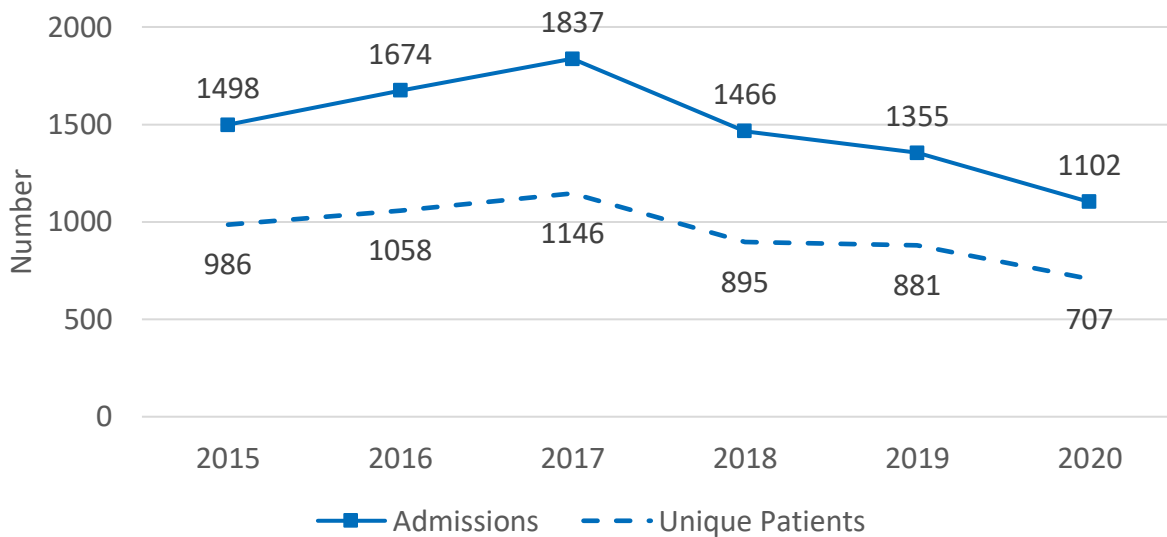


Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides, suicides, <5 deaths due to methamphetamine among individuals <20 years of age excluded.

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

The number of SUD treatment admissions for methamphetamine decreased by 19% from 2019 to 2020, and the number of unique patients decreased by 20% (Figure 56). The reduction in 2020 is attributable to the COVID-19 pandemic. The highest rates of SUD treatment admissions for methamphetamine were among males (Figure 57a), persons aged 40–49 years (Figure 57b), and Black/African Americans (Figure 58). The most common reported route of administration was smoking (69%, Figure 59) and the most common secondary substances were alcohol (20%), cannabis (17%), and benzodiazepines (17%).

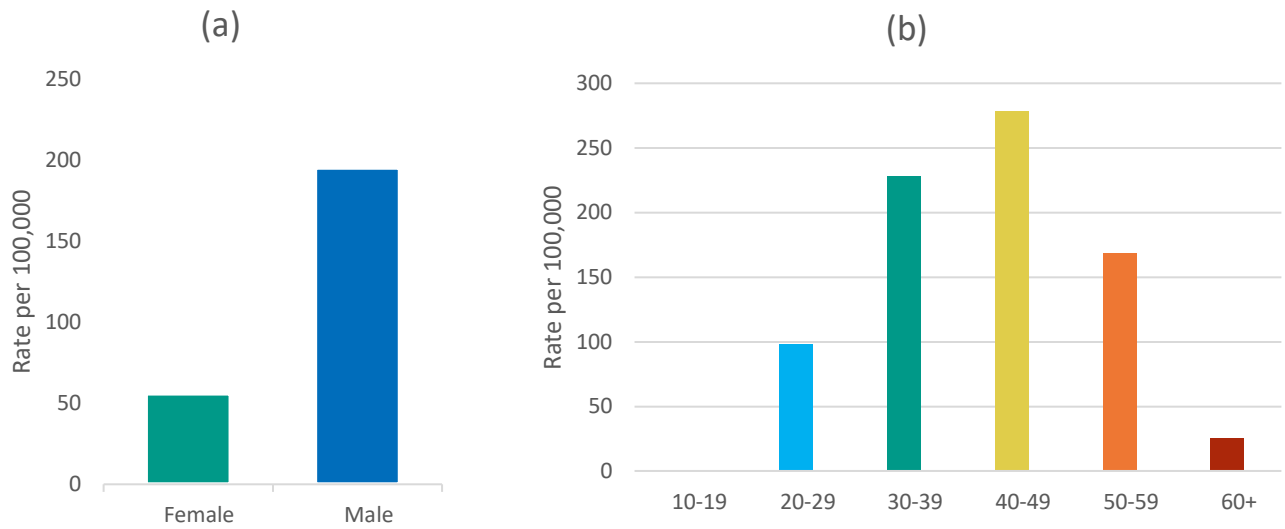
Figure 56: Number of Admissions and Unique Persons Admitted to Programs Treating Substance Use Disorders for Methamphetamine as the Primary Substance in CCSF, 2015–2020



Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

Source: San Francisco Department of Public Health (SFPDH), Community Behavioral Health Services Division.

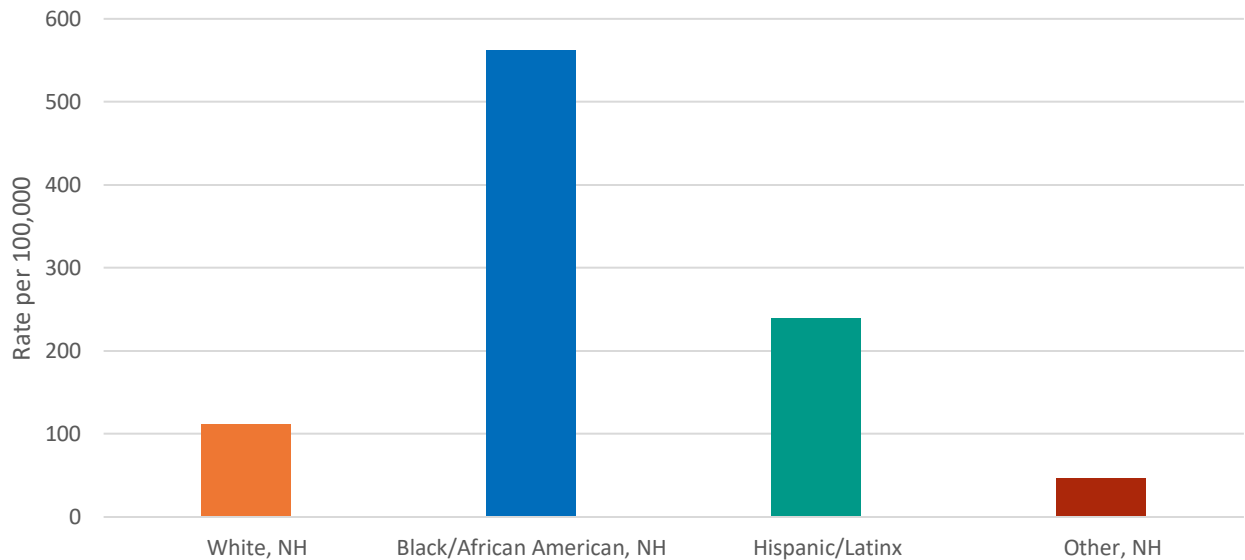
Figure 57: Rate of Admissions to Programs Treating Substance Use Disorders for Methamphetamine as the Primary Substance by (a) Sex and (b) Age Group in CCSF, 2020



Rate is calculated per 100,000 population. Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. There were <5 admissions for methamphetamine among persons 10 to 19 years of age.

Source: San Francisco Department of Public Health (SFPDH), Community Behavioral Health Services Division.

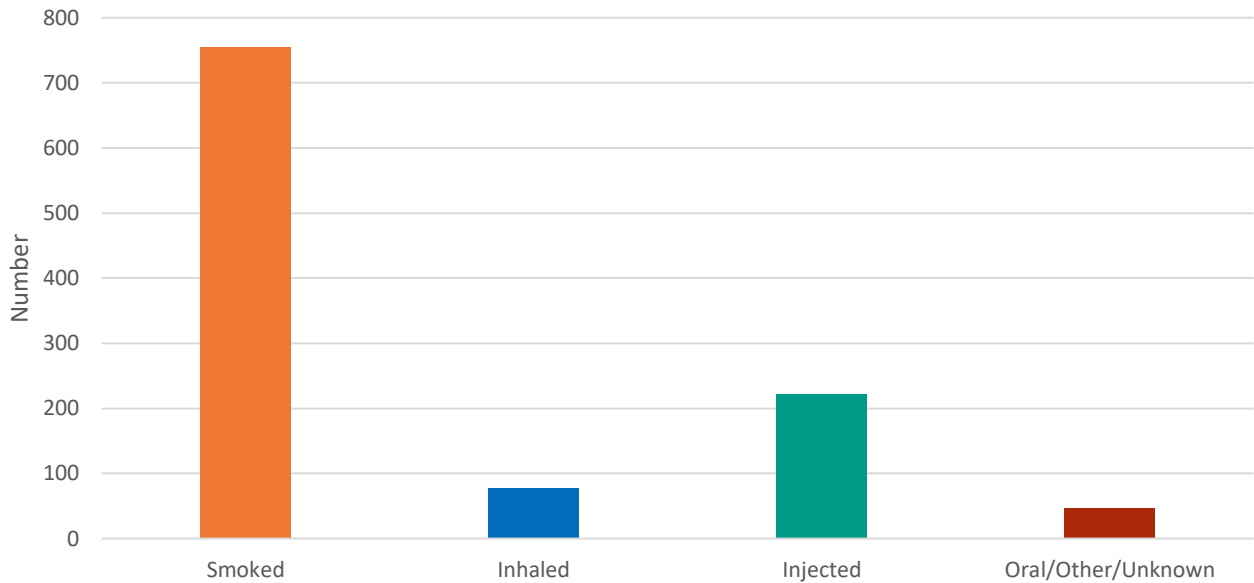
Figure 58: Rate of Admissions to Programs Treating Substance Use Disorders for Methamphetamine as the Primary Substance by Race/Ethnicity in CCSF, 2020



Rate is calculated per 100,000 population. Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. NH=non-Hispanic.

Source: San Francisco Department of Public Health (SFPDH), Community Behavioral Health Services Division.

Figure 59: Number of Admissions to Programs Treating Substance Use Disorders for Methamphetamine as the Primary Substance by Route of Administration in CCSF, 2020



Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

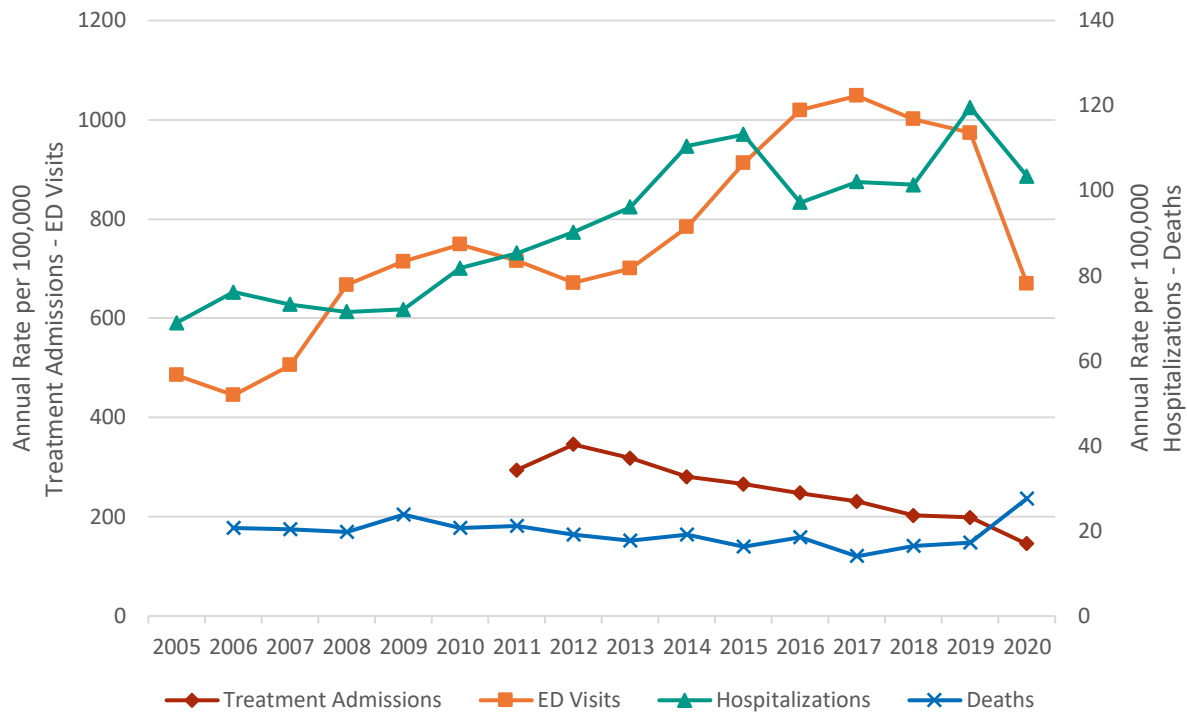
Source: San Francisco Department of Public Health (SFDPH), Community Behavioral Health Services Division.

4.4 ALCOHOL

Morbidity and mortality related to alcohol use is measured differently from other substances. Alcohol-related deaths are defined as deaths with alcohol as a contributing factor, such as alcoholic liver disease, in contrast to other substances which are limited to overdose/acute poisoning deaths. Alcohol-related deaths had remained below their peak in 2009 until exceeding that level in 2020 (**Figure 60**). Alcohol was responsible for 19% of all SUD treatment admissions in 2020, making it the second-leading primary substance for SUD treatment admissions in 2020. Alcohol was also one of the most common substances resulting in hospitalizations and emergency department visits.

For additional information regarding the impact of alcohol use on CCSF, see **Economic and Administrative Costs Related to Alcohol Abuse in the City and County of San Francisco** at: www.sfbos.org/sites/default/files/BLA_Report_Alcohol_Final-041017.pdf.

Figure 60: Rate of Alcohol Health Indicators in CCSF, 2005–2020

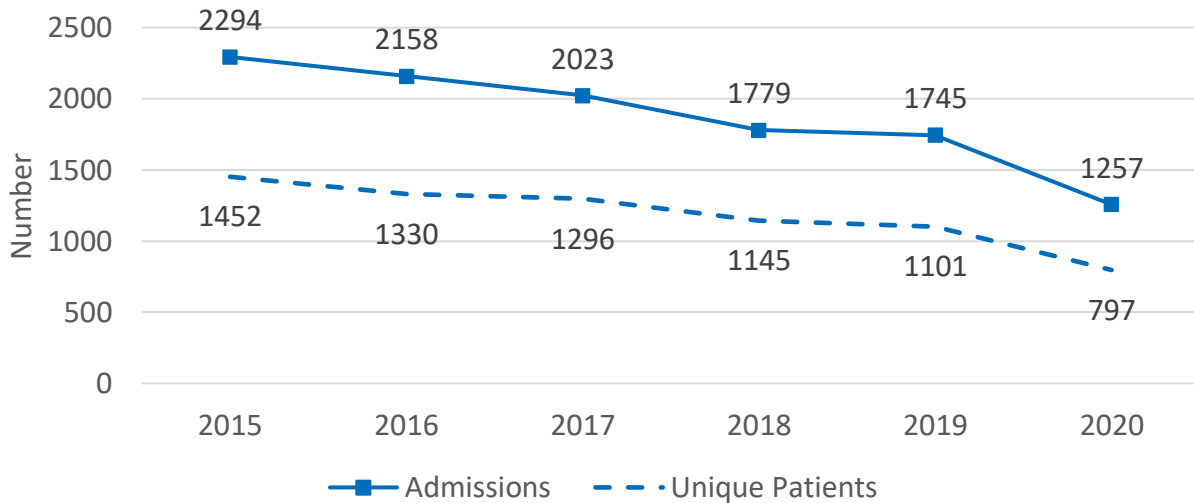


Alcohol-related deaths include both acute poisoning and other deaths involving acute or chronic use of alcohol (e.g., combined toxicity of heroin and ethanol, acute ethanol intoxication, complications of chronic ethanolism, end-stage liver disease due to alcoholism, complications of alcoholic cardiomyopathy). Homicides and suicides were excluded. Emergency department visits and hospitalizations include primary or non-primary ICD-9 codes: E860.0, E860.1, E860.2, E860.9 (acute effects), 980.0, 980.1, 980.9 (acute effects) and ICD-10 code: X45, Y15, T51.0, T51.1, TF1.9 (acute effects); primary only ICD-9 codes: 291, 305.0, 303.0, 303.9, 790.3 (non-acute effects) and ICD-10 codes: F10, R78.0 (non-acute effects); admissions and visits resulting in death were excluded. Shifts in the trend of hospitalizations and emergency department visits from 2015 to 2016 may be artifacts of a change to the way healthcare visits were coded in the U.S. (from ICD-9 to ICD-10) that occurred on October 1, 2015.

Sources: Alcohol-related mortality obtained from California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS). Treatment admissions provided by the Community Behavioral Health Services Division of the San Francisco Department of Public Health and include publicly funded treatment services, excluding the Veterans Administration; admissions include clients admitted in prior years but still receiving services in a particular year. Hospital admissions and emergency department visits for CCSF facilities were provided by the California Office of Statewide Health Planning and Development.

SUD treatment admissions and the number of unique patients treated for alcohol have decreased continuously since at least 2015 (**Figure 61**). The rate of SUD treatment admissions for alcohol was highest among males (**Figure 62a**), people aged 50-59 years (**Figure 62b**), and Black/African Americans (**Figure 63**). The most common secondary substances were methamphetamine (13%), cocaine/crack (11%), and cannabis (8%).

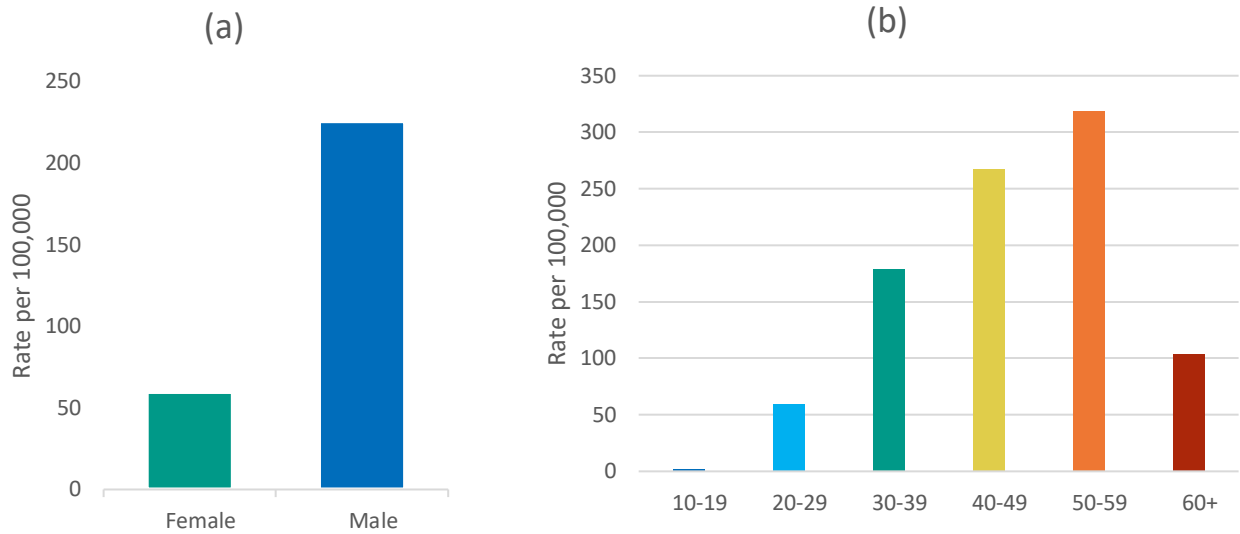
Figure 61: Number of Admissions and Unique Persons Admitted to Programs Treating Substance Use Disorders for Alcohol as the Primary Substance in CCSF, 2015–2020



Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

Source: San Francisco Department of Public Health (SFPDH), Community Behavioral Health Services Division.

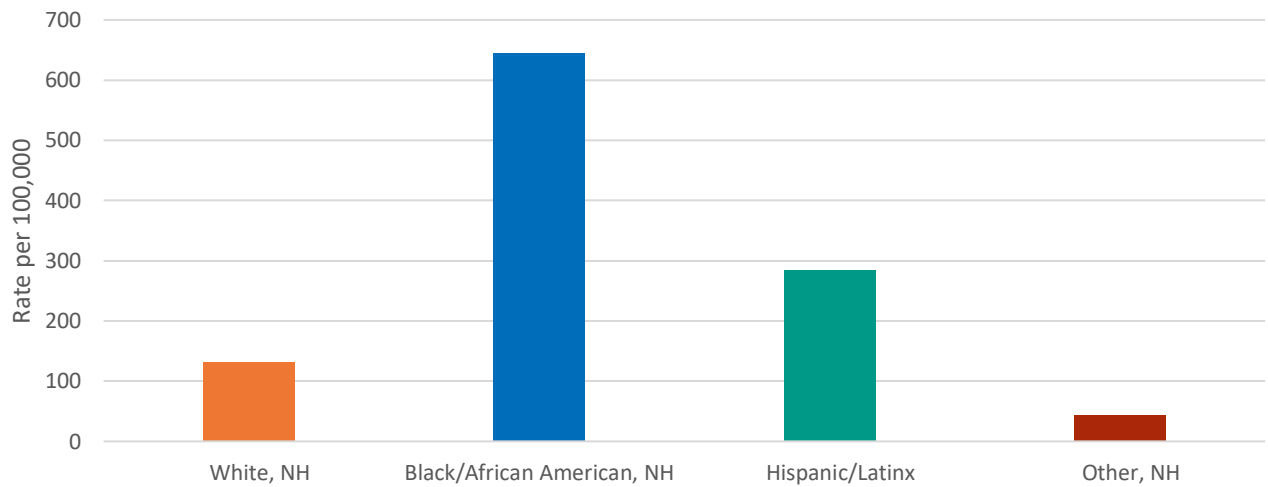
Figure 62: Rate of Admissions to Programs Treating Substance Use Disorders for Alcohol by (a) Sex and (b) Age Group in CCSF, 2020



Rate is calculated per 100,000 population. Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. There were <5 admissions for alcohol among persons 10 to 19 years of age.

Source: San Francisco Department of Public Health (SFDPH), Community Behavioral Health Services Division.

Figure 63: Rate of Admissions to Programs Treating Substance Use Disorders for Alcohol by Race/Ethnicity in CCSF, 2020



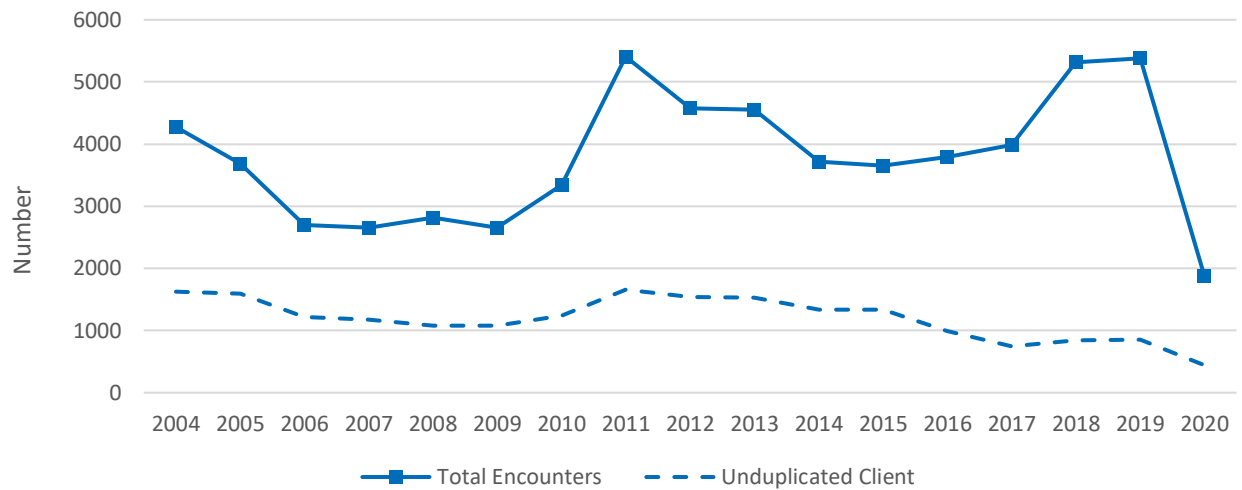
Rate is calculated per 100,000 population. Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. NH=non-Hispanic.

Source: San Francisco Department of Public Health (SFDPH), Community Behavioral Health Services Division.

4.4.1 Sobering Center

The Sobering Center, founded in San Francisco in 2003, is a 24/7 program providing support to individuals who are actively intoxicated by alcohol (and sometimes also intoxicated due to other substances). A team including registered nurses, medical assistants, health workers, and respite workers serves clients aged 18 years and older from ambulance and police services, as well as walk-ins through a pre-hospital diversion unit. The Sobering Center saw 442 unique individuals and had 1,882 encounters in 2020, a large decrease from previous years. The total number of clients and encounters at the sobering center was impacted by COVID-19 and a two-month closure during 2020. (Figure 64).

Figure 64: Annual Number of Sobering Center Visits and Unduplicated Clients in CCSF, 2004–2020

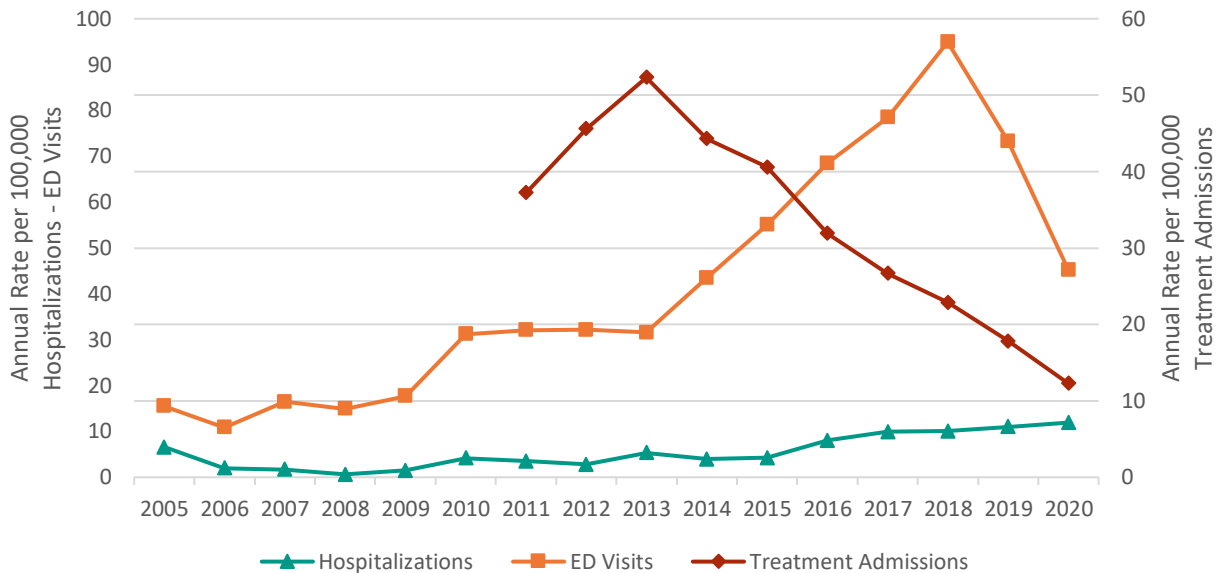


Source: Sobering Center, San Francisco Department of Public Health.

4.5 CANNABIS

Local indicators for cannabis in San Francisco were mixed. Emergency department visits involving cannabis increased through 2018, but have declined since, while hospitalizations remained fairly stable. SUD treatment admissions for cannabis continued to decrease in 2020, with a 32% decrease from 2019 to 2020 (**Figure 65**). Cannabis-related deaths are not reported due to low numbers.

Figure 65: Rate of Cannabis Health Indicators in CCSF, 2005–2020

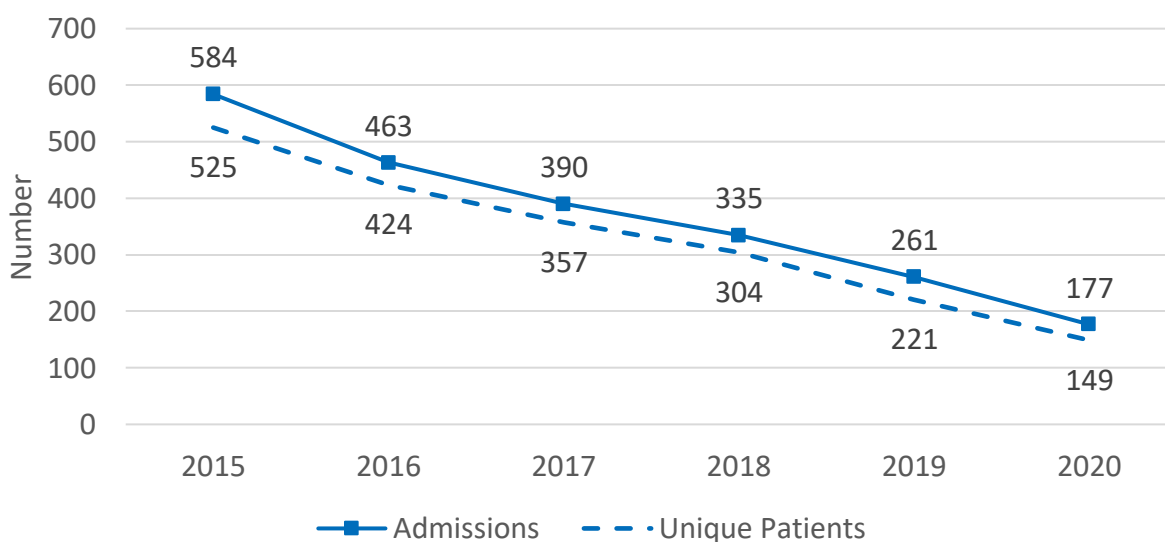


Emergency department visits and hospitalizations include primary or non-primary ICD-9 codes: E854.1.0, (poisoning), 969.6 (poisoning) and ICD-10 code: T40.7(poisoning); primary only ICD-9 codes: 304.3, 305.2 (dependence) (abuse) and ICD-10 codes: F12 (dependence/abuse/use). For ICD-10 code: T40.7, a six in the sixth position involve underdosing and were excluded, as were events resulting in death. Shifts in the trend of hospitalizations and emergency department visits from 2015 to 2016 may be artifacts of a change to the way healthcare visits were coded in the U.S. (from ICD-9 to ICD-10) that occurred on October 1, 2015.

Sources: Treatment admissions were provided by the Community Behavioral Health Services Division of the San Francisco Department of Public Health and include publicly funded treatment services, excluding the Veterans Administration; admissions include clients admitted in prior years but still receiving services in a particular year. Hospital admissions and emergency department visits for CCSF facilities were provided by the California Office of Statewide Health Planning and Development.

Cannabis is an uncommon reason for SUD treatment admissions in San Francisco, representing only 3% of total SUD admissions in 2020 (**Figure 66**). The rate of SUD treatment admissions for cannabis was highest among males (**Figure 67a**), people aged 10-19 years (**Figure 67b**), and Black/African Americans (**Figure 68**). The most common secondary substances were methamphetamine (27%) and alcohol (25%).

Figure 66: Number of Admissions and Unique Persons Admitted to Programs Treating Substance Use Disorders for Cannabis as the Primary Substance in CCSF, 2015–2020

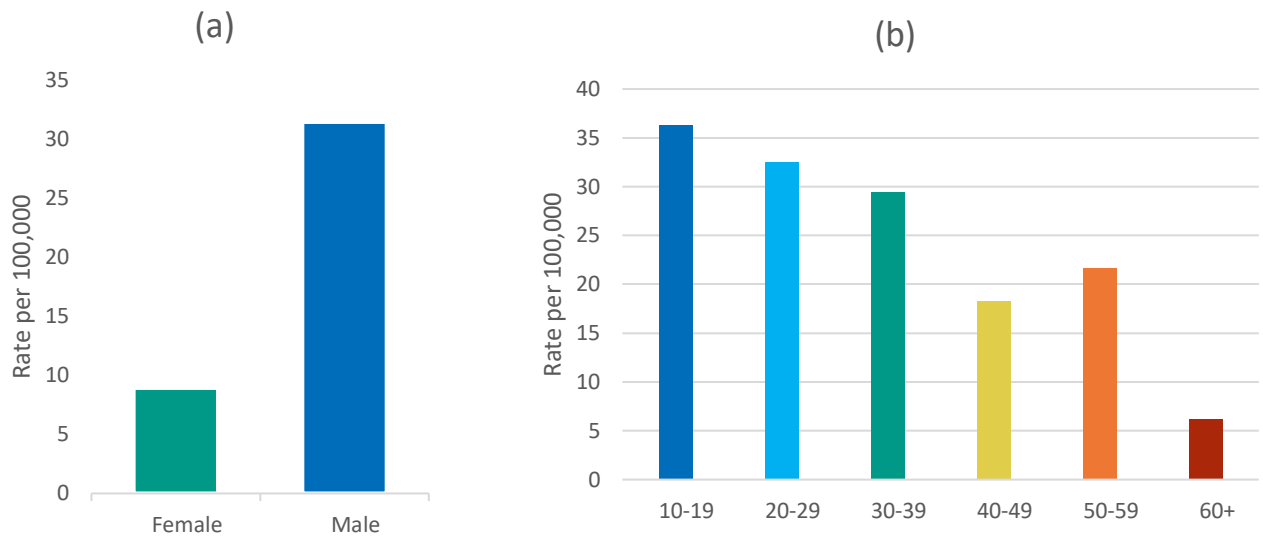


Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

Source: San Francisco Department of Public Health (SFDPH), Community Behavioral Health Services Division.

- California Proposition 64, legalizing the sale and distribution of cannabis products, took effect in January 2018. Additional information about cannabis legalization in San Francisco can be found at the CCSF City Performance Unit publication “Cannabis in San Francisco: A Review Following Adult-Use Legalization” (sfcontroller.org/cannabis-industry-equity-applicants-face-lengthy-permitting-process), and “Cannabis Legalization in San Francisco: A Health Impact Assessment” (sfdph.org/dph/files/EHSdocs/HIA/SFDPH-CannabisReport-Fall2017.pdf).
- San Francisco initiated a cannabis social marketing campaign in 2019: www.truthornahsf.org.

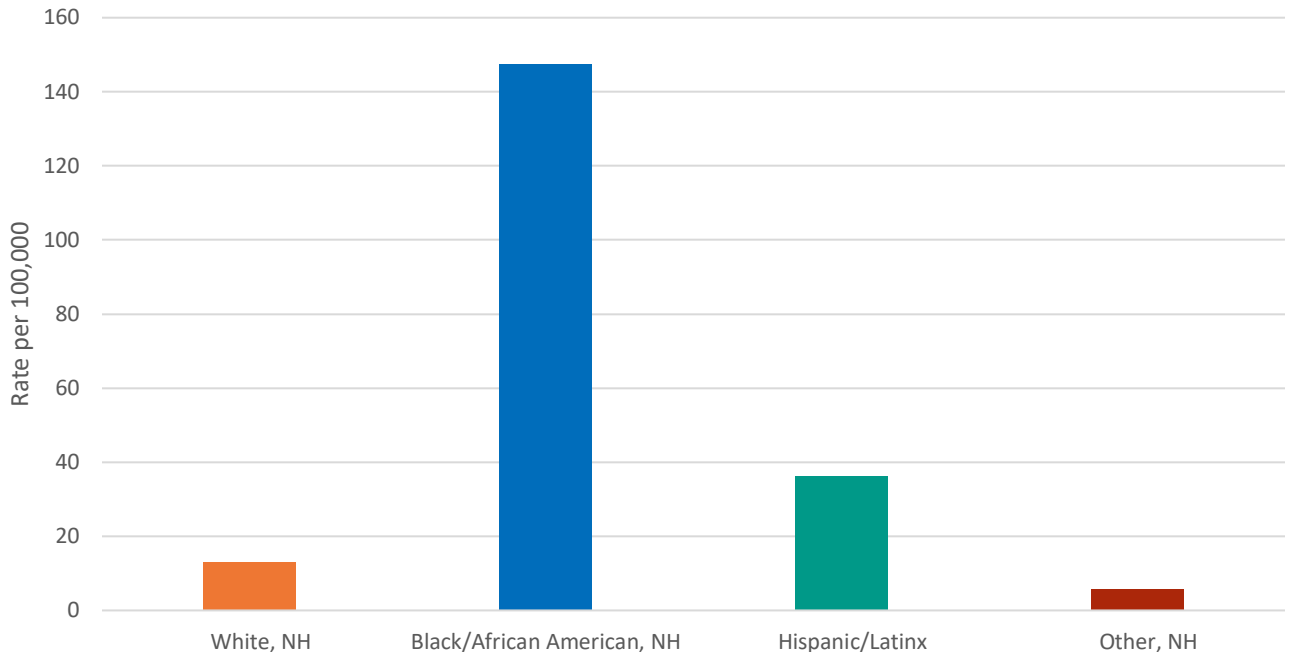
Figure 67: Rate of Admissions to Programs Treating Substance Use Disorders for Cannabis by (a) Sex and (b) Age Group in CCSF, 2020



Rate is calculated per 100,000 population. Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

Source: San Francisco Department of Public Health (SFPDH), Community Behavioral Health Services Division.

Figure 68: Rate of Admissions to Programs Treating Substance Use Disorders for Cannabis by Race/Ethnicity in CCSF, 2020



Rate is calculated per 100,000 population. Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. NH=non-Hispanic.

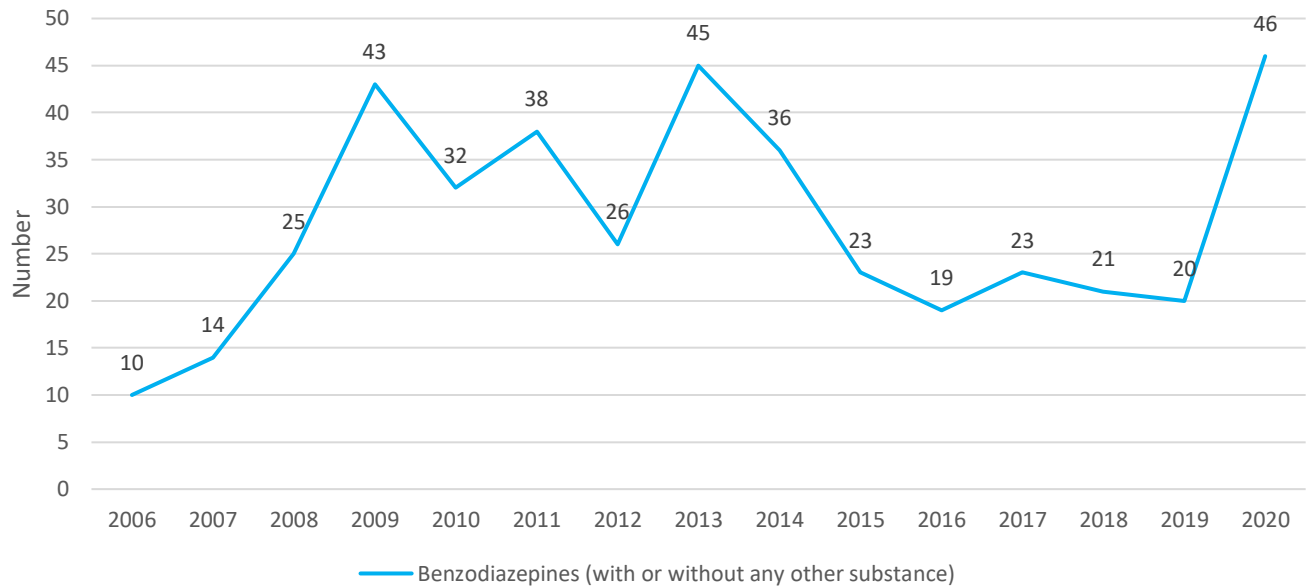
Source: San Francisco Department of Public Health (SFPDH), Community Behavioral Health Services Division.

4.6 BENZODIAZEPINES

The number of overdose deaths due to benzodiazepines had declined from a peak in 2013, however increased in 2020, likely related to the COVID-19 pandemic (**Figure 69**).

Benzodiazepines alone rarely cause overdose deaths; the vast majority of benzodiazepine-related overdose deaths involved opioids (**Figure 70**). In 2020, only three deaths were caused by benzodiazepines in the absence of opioids.

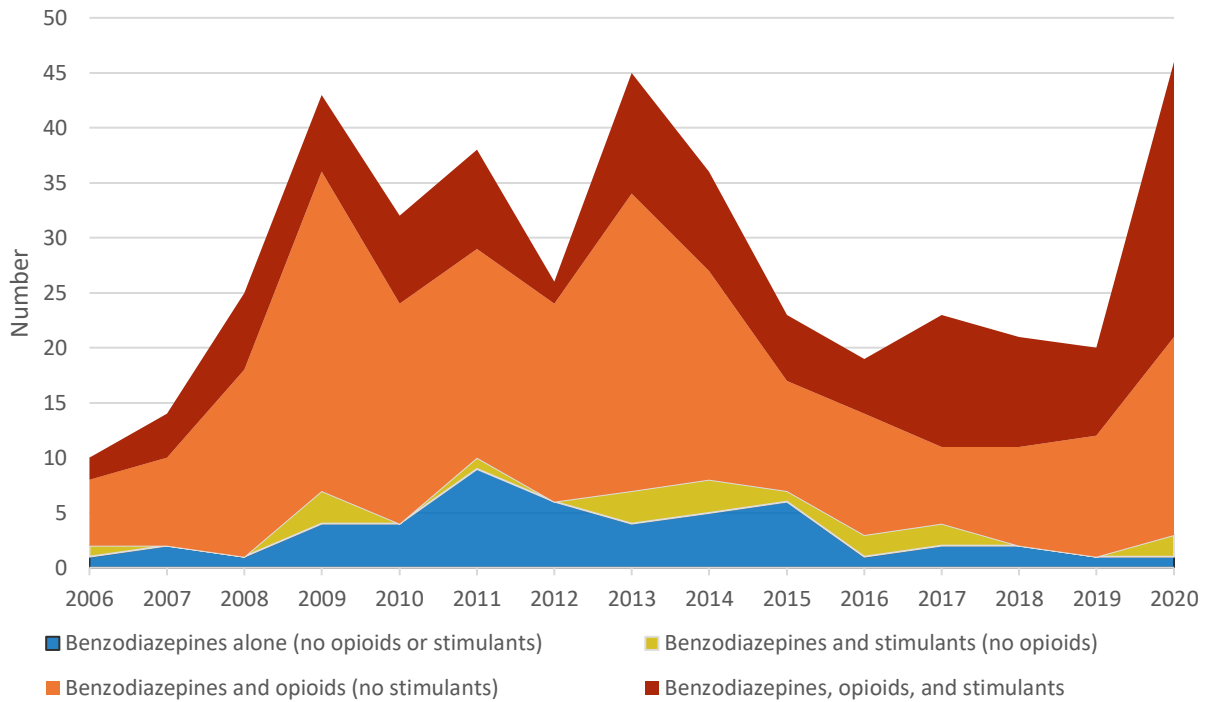
Figure 69: Number of Benzodiazepine Overdose Deaths in CCSF, 2006–2020



Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded.

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

Figure 70: Number of Benzodiazepines Overdose Deaths by Mutually Exclusive Involvement of Opioids and Stimulants as Cause of Death in CCSF, 2006–2020

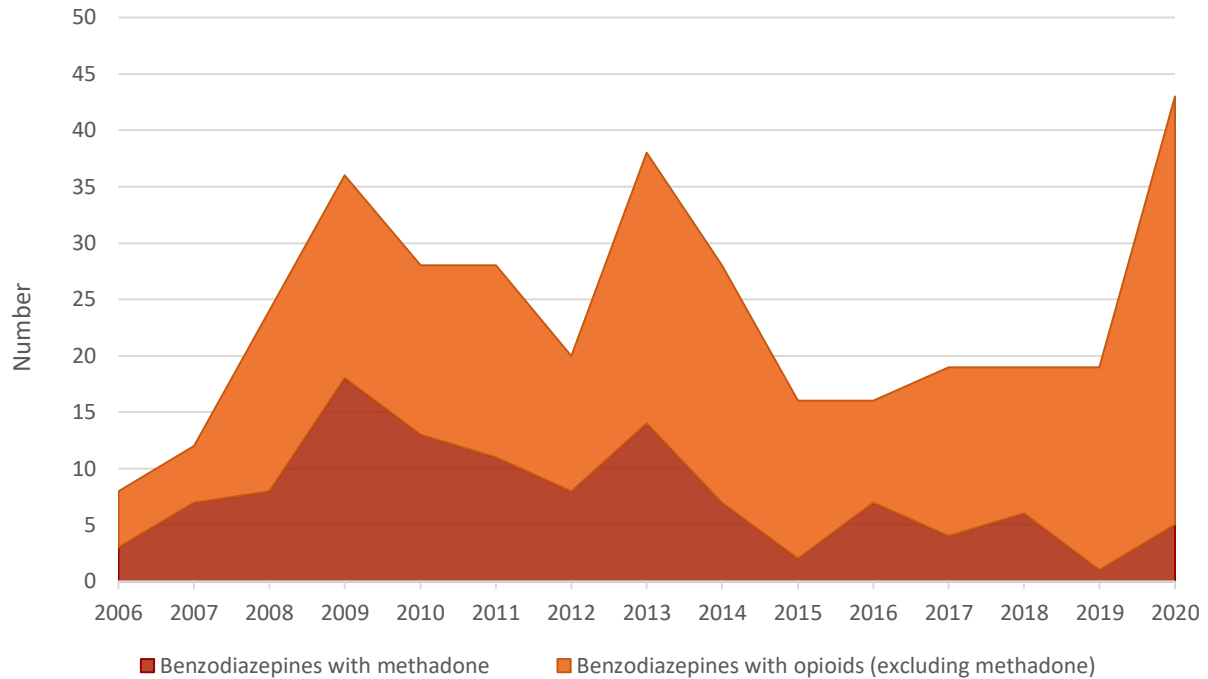


The height of each band corresponds to the number of events in that category. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded.

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

Previously, the opioid most often involved with benzodiazepine overdose deaths was methadone. In recent years, deaths involving benzodiazepines and methadone have decreased, with five occurring in 2020. Deaths involving other opioids are now more common (**Figure 71**).

Figure 71: Number of Overdose Deaths Due to Benzodiazepines and Opioids, by Mutually Exclusive Involvement of Methadone or Other Opioids in CCSF, 2006–2020

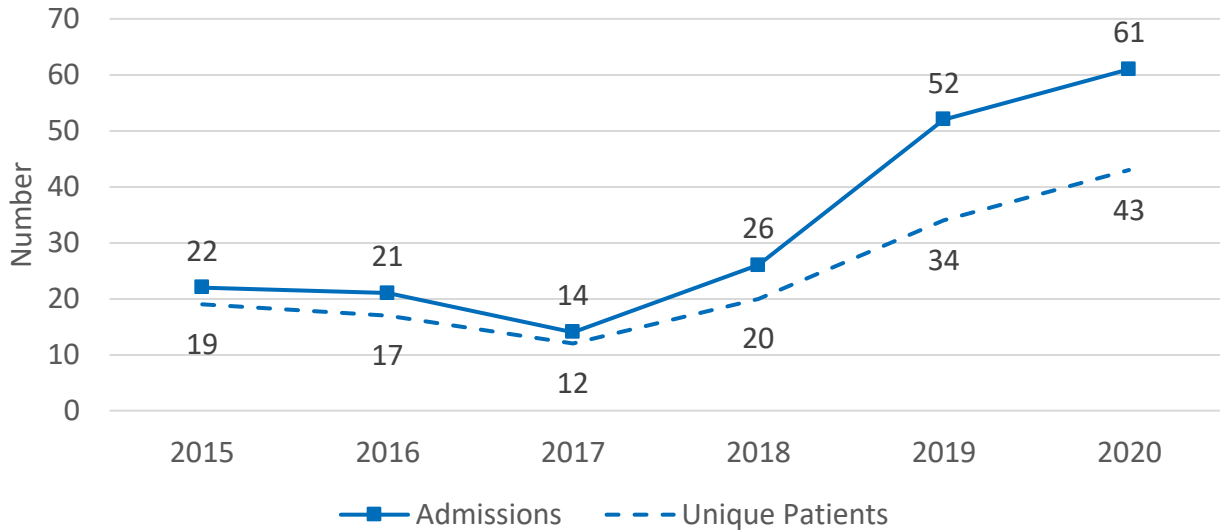


The height of each band corresponds to the number of events in that category. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded.

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

Benzodiazepine SUD treatment admissions increased by 17% between 2019 and 2020 (**Figure 72**). Treatment admissions for benzodiazepines represented less than 1% of all SUD admissions in San Francisco in 2020.

Figure 72: Number of Admissions and Unique Persons Admitted to Programs Treating Substance Use Disorders for Benzodiazepines as the Primary Substance in CCSF, 2015–2020



Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

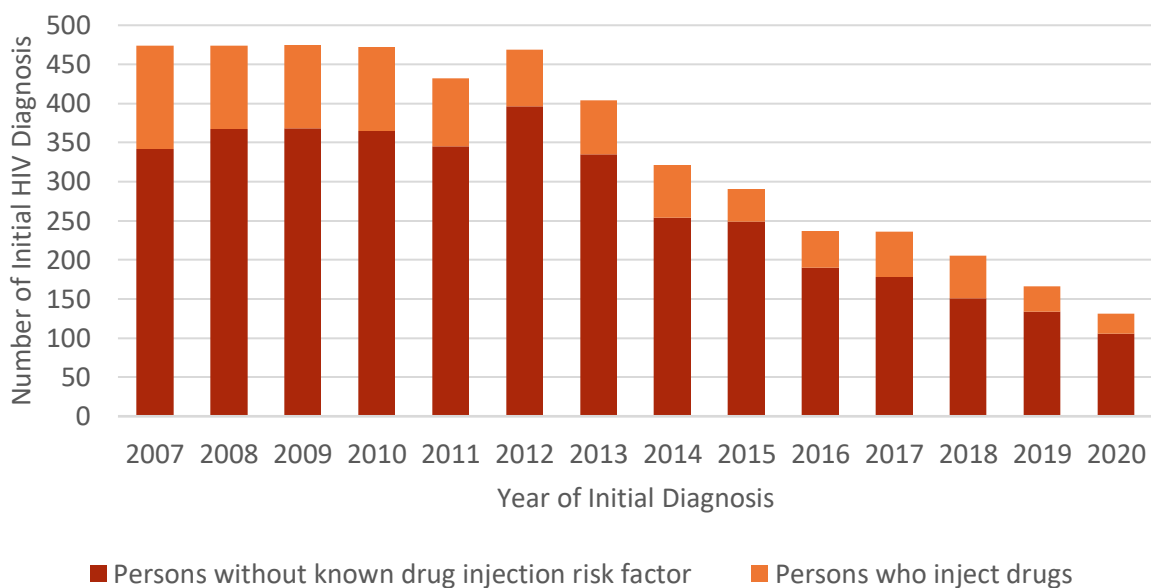
Source: San Francisco Department of Public Health (SFPDH), Community Behavioral Health Services Division.

5 HEALTH SEQUELAE RELATED TO SUBSTANCE USE

5.1 HIV

Overall, new HIV diagnoses in San Francisco have steadily decreased over the last 10 years (**Figure 73**). In 2020, there were 131 new HIV diagnoses. Among the 131 new diagnoses in 2020, 61% were among men who have sex with men (MSM); 19% were among people who inject drugs (PWID; 10% among PWID and 9% among MSM-PWID); and 16% were among heterosexual and those with other or unidentified risk category. Of the approximately 15,811 individuals living with HIV in San Francisco as of December 2020, 19% were people who inject drugs.

Figure 73: HIV Infection by Transmission Category of Initial HIV Diagnosis in CCSF, 2007–2019



Source: SFPDPH HIV Epidemiology Annual Report, September 2020.

For more information on HIV in San Francisco, see:

2020 Annual Report:

www.sfdph.org/dph/files/reports/RptsHIVAIDS/AnnualReport2020-Purple_20210817Web.pdf

5.2 HEPATITIS C VIRUS

Hepatitis C Virus (HCV) epidemiology is challenged by the nature of testing for HCV and limits of surveillance capabilities. There are several sources of data regarding HCV in CCSF: (a) surveillance data from SFDPH; (b) data and estimates generated by End Hep C SF; (c) data from the National HIV Behavioral Surveillance Study (NHBS); (d) incidence data from the UFO Study; and (e) results from the Hep C Health Program providing HCV treatment at program sites.

Overall, most HCV infections in San Francisco are among PWID or people with a history of injection drug use. A collaborative effort in San Francisco was found to have resulted in a tripling of the number of people treated for HCV infection in 2016 and 2017 (Facente et al., *Infectious Disease Clinics of North American*, 2018). The best data available as of 2018 suggest approximately 36% of PWID with HCV had been treated for their infection, most of whom achieved cure, defined as undetectable HCV RNA at 12 weeks post-treatment (**Figure 76**).

SFDPH has recently funded or expanded funding to support low-threshold HCV-treatment for PWID and people experiencing homelessness through services including the UCSF DeLiver van, the Street Medicine team, and the San Francisco AIDS Foundation. SFDPH also received funding from the California Department of Public Health for HCV, part of which will support Shanti Project for HCV navigation efforts. Finally, SFDPH also supported the first San Francisco Hepatitis C Research Symposium: Data and Dialogue to End Hep C in 2019 (see <https://endhepcsf.org/san-francisco-hepatitis-c-research-symposium/>).

5.2.1 SFDPH Surveillance

In 2019, 1,234 new HCV cases were reported to SFDPH; this represents an ongoing decline from 1,961 new HCV cases reported in 2016. HCV surveillance captures new positive HCV testing results from laboratories throughout San Francisco. These results may indicate prior exposure or current infection (distinct from HIV, a positive serology for HCV does not necessarily indicate current infection). These data do not represent incidence or prevalence of HCV.

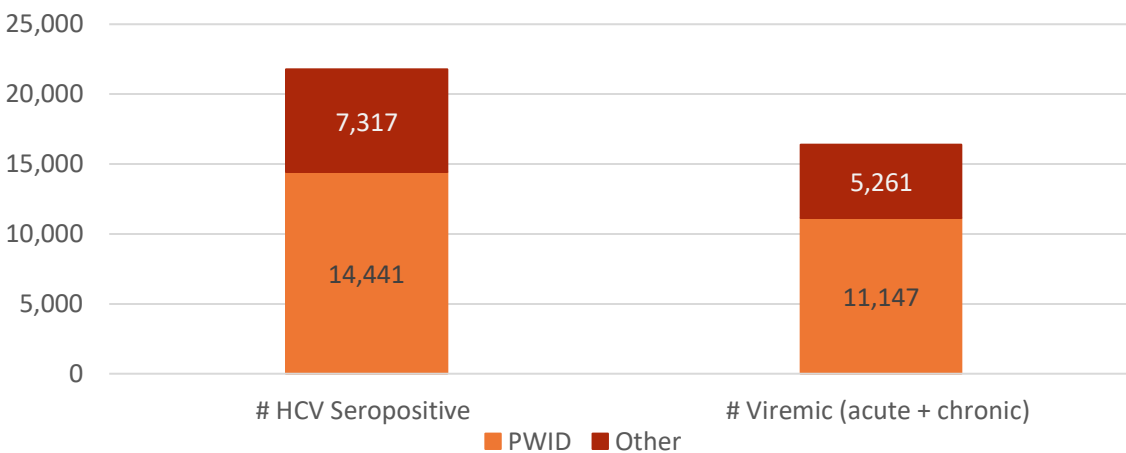
Table 1: Race/Ethnicity of Hepatitis C Cases Reported to Surveillance in CCSF, 2019

Race/Ethnicity of HCV cases newly reported to SFDPH in 2019 (N=1234)	%
White	49.9
Black/African American	15.3
Asian/Pacific Islander	11.3
American Indian/Alaska Native	0.9
Hispanic/Latinx	10.6
Other	12.1

5.2.2 End Hep C SF

End Hep C SF is a multi-sector, collective impact initiative that works to eliminate HCV as a public health threat in San Francisco. To estimate and characterize HCV prevalence, members of End Hep C SF's Research and Surveillance work group developed a local prevalence estimate. As of 2017, there were an estimated 21,758 HCV seropositive (i.e., antibody-positive) persons in CCSF, of whom 16,408 were estimated to be living with current HCV infection. The majority of persons living with HCV infection in 2017 had a history of injection drug use (68%, **Figure 74**). MSM, baby boomers, and transgender women also experienced a disproportionate burden of HCV in CCSF.

Figure 74: Estimated Number of HCV Seropositive and Viremic Individuals in CCSF, 2017



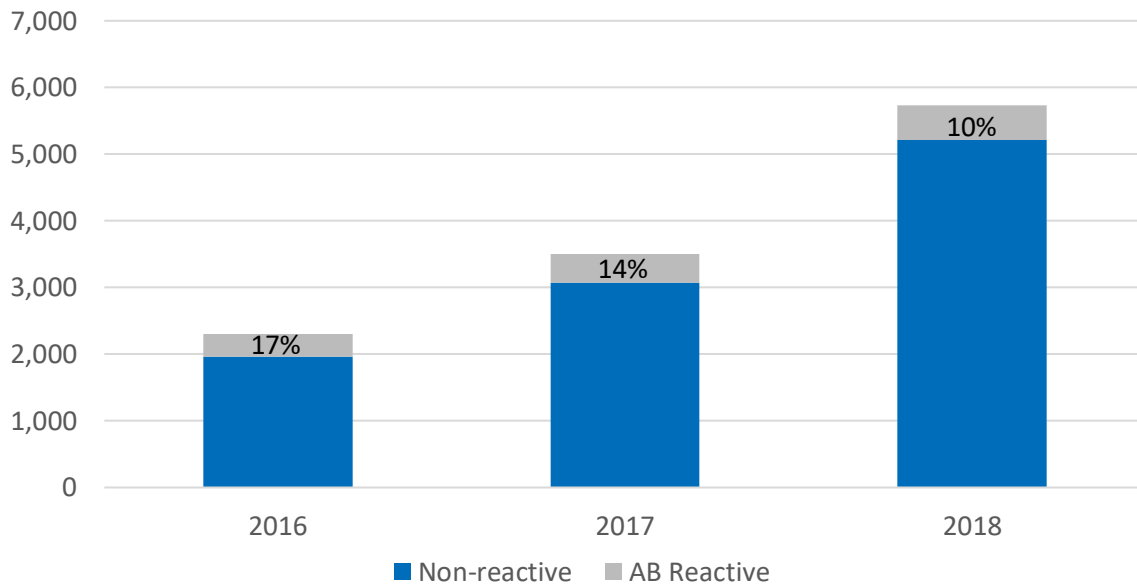
Estimated number of HCV viremic includes those who have been treated and cured of HCV since becoming chronically infected

Source: Facente SN, Grebe E, Burk K, Morris MD, Murphy EL, Mirzazadeh A, et al. (2018) Estimated hepatitis C prevalence and key population sizes in San Francisco: A foundation for elimination. PLoS ONE 13 (4): e0195575

PWID have also been disproportionately burdened by co-infection with HCV and HIV. HCV treatment is covered by Medi-Cal and many other payers for all people living with HIV, and HCV treatment access has significantly expanded in San Francisco since 2014. End Hep C SF developed an implementation plan for HCV elimination among people living with HIV. The main aspects of this implementation program were HCV/HIV surveillance and data management, provider collaborations and technical assistance, and increased support within communities that have the highest barriers to treatment and cure. The HCV Micro-Elimination goal has been planned to be implemented over three years, from 2020-2022. The goals include a 90% reduction of HCV among people living with HIV by the end of 2022 (*Source: End Hep C SF: HIV/HCV Micro-Elimination Planning*).

End Hep C SF also reported on testing conducted by community-based organizations among persons in community settings who experience barriers to access and are less likely to be treated for HCV in a traditional healthcare setting. The data below (**Figure 75**) show the number of rapid HCV tests performed by community-based organizations. In 2018, those community-based organizations tested 5,732 persons for antibodies (Ab) to HCV, 1,685 of whom were PWID. Ten percent of tests were reactive.

Figure 75: Total HCV Tests and Antibody Reactivity by End Hep C SF Annual Evaluation in CCSF, 2016–2018



Source: End Hep C SF Annual Evaluation Report, Year 3.

5.2.3 National HIV Behavioral Surveillance

An additional source of data on HCV in San Francisco is the National HIV Behavioral Surveillance Study (NHBS). NHBS is funded by the Centers for Disease Control and Prevention (CDC) and surveys PWID every three years (most recently in 2018) through respondent-driven sampling. NHBS is able to produce estimates that may approximate disease burden among PWID throughout CCSF.

Among 464 PWID sampled, 67% were male, 67% were white, and 72% identified as heterosexual. The plurality were 45–54 years of age, although from 2005-2018, there was an overall shift toward an older population suggesting the possibility of an aging cohort of PWID in San Francisco (*Source: SFPDH National HIV Behavioral Surveillance, Center for Public Health Research, Population Health Division*).

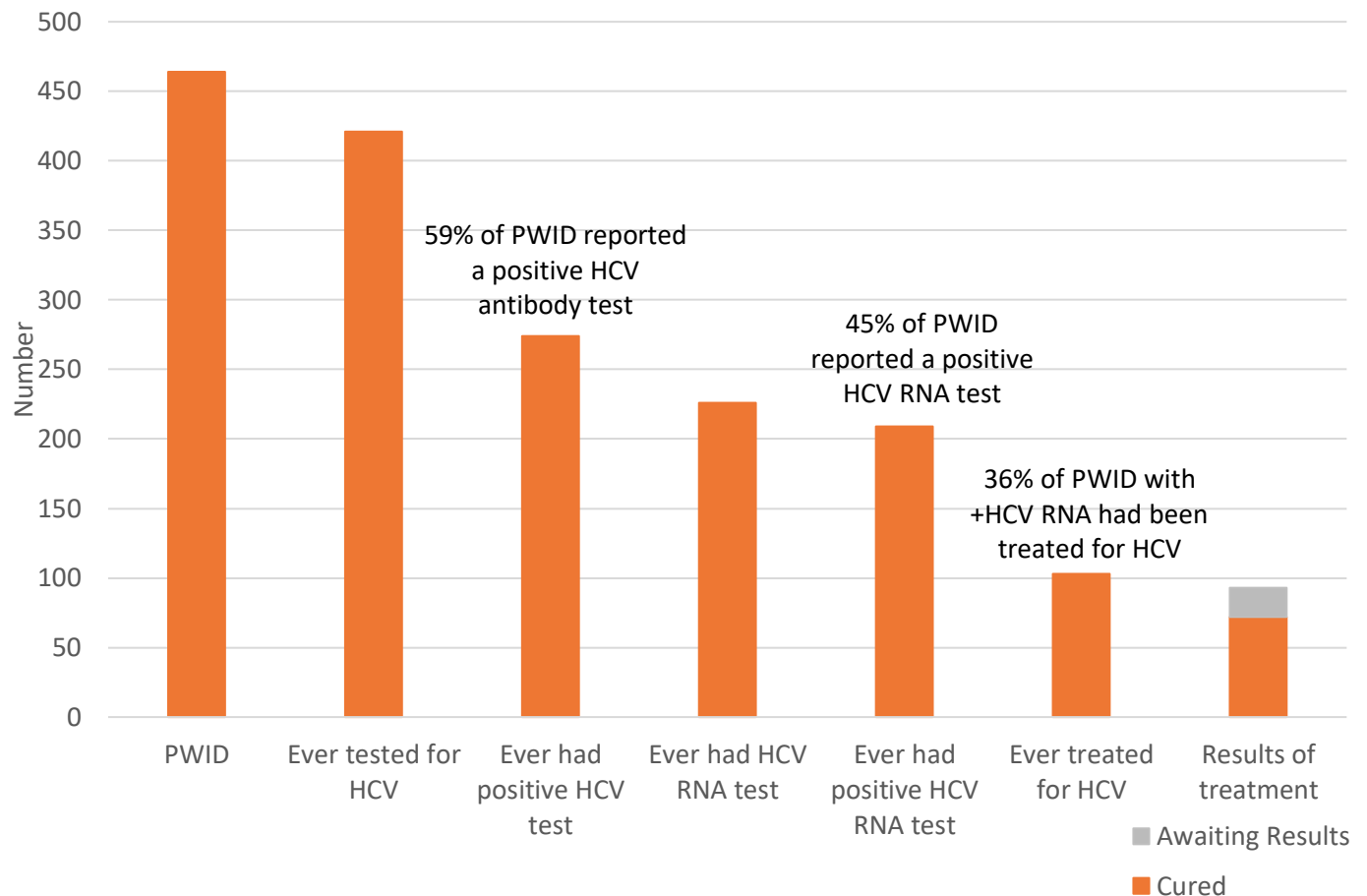
In NHBS, HCV was evaluated both through self-report and, in a subsample, through serology and RNA testing.

5.2.3.1 HCV by Self-Report in NHBS

Among the 464 PWID sampled, 91% reported being tested for HCV at some point. Of those tested, 65.1% reported they had tested positive, 82.5% of whom had received an HCV RNA test. Of the 209 respondents who had a positive HCV RNA test, 49% (36% of the total) reported ever receiving HCV treatment, 70% of whom had been cured and 21.0% of whom were still awaiting results. (**Figure 76**).

Among PWID who reported being tested or being treated for HCV in the NHBS 2018 survey, 74.8% reported that their most recent test occurred in 2017 or 2018 and 79% reported that treatment occurred in 2017 or 2018.

Figure 76: Hepatitis C Cascade of Care by Self-Report Among PWID in the National HIV Behavioral Surveillance Study in CCSF, 2018



Cured = undetectable HCV RNA at 12 weeks post-treatment.

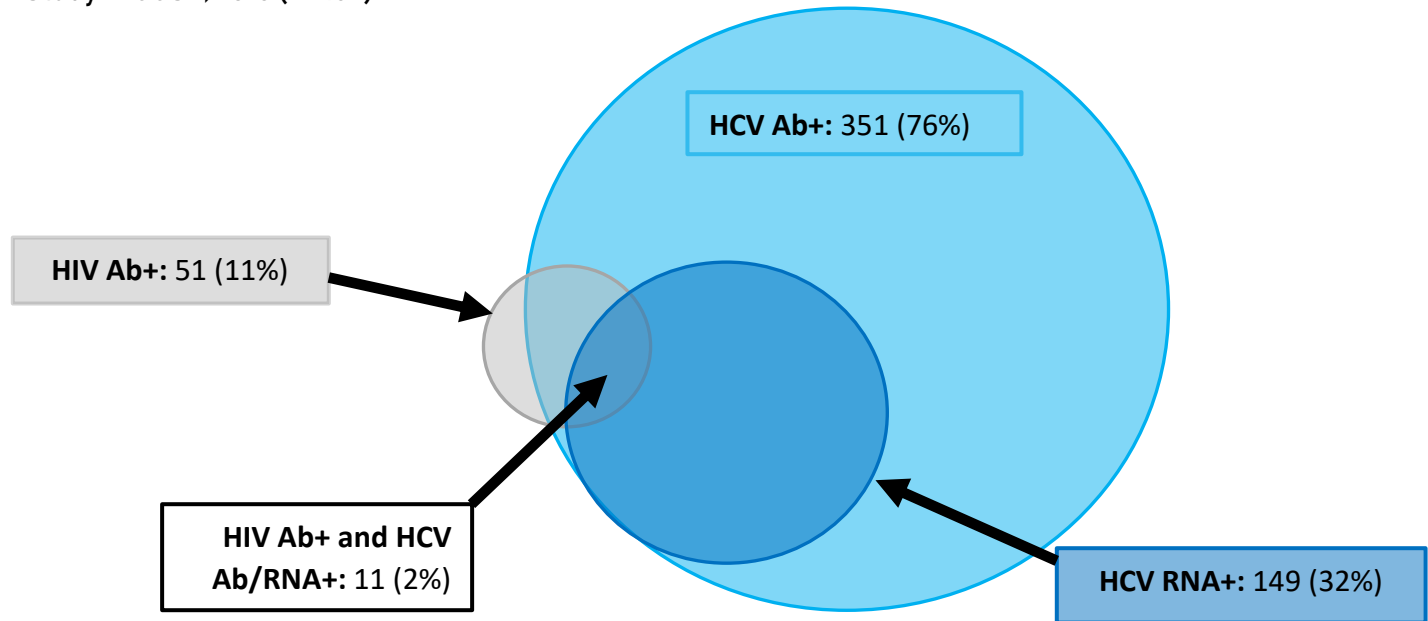
Source: Hep C Health Project, San Francisco AIDS Foundation.

5.2.3.2 HCV by Testing in NHBS

HCV status by self-report in NHBS was supplemented by lab testing, which may more accurately represent current infection status, but would fail to capture the impact of HCV treatment. Of 464 NHBS participants tested for HCV antibodies during the study, 65% were seropositive. Of the 369 persons tested for RNA, 40.3% were living with current HCV infection. Of the 126 persons testing antibody positive but RNA negative (i.e., previously exposed to or infected with HCV, but not currently infected), 49.2% reported having received HCV treatment.

NHBS also evaluated HCV and HIV co-infection. Almost one-third (32.3%) of participants were living with current HCV infection, 11% were living with HIV, and 2.4% were living with both HIV and HCV (**Figure 77**).

Figure 77: HIV and HCV Co-infection Among PWID in the National HIV Behavioral Surveillance Study in CCSF, 2018 (n=462)



HIV Ab+ is evidence of confirmed HIV infection. HCV RNA+ is evidence of confirmed current infection with HCV. HCV Ab+ is evidence of exposure, past infection, or current infection with HCV.

Source: SFPDH National HIV Behavioral Surveillance, Center for Public Health Research, Population Health Division

5.2.4 UFO Study

The UFO Study followed PWID under 30 years of age who were not previously infected with HCV for the occurrence of incident infections. As of 2007, HCV incidence in this population was 26.7/100 person years. This value had not changed substantially in UFO Study data as recently as 2017 (*Source: Page K, et al. Journal of Infectious Disease. 2009; Personal Communication*).

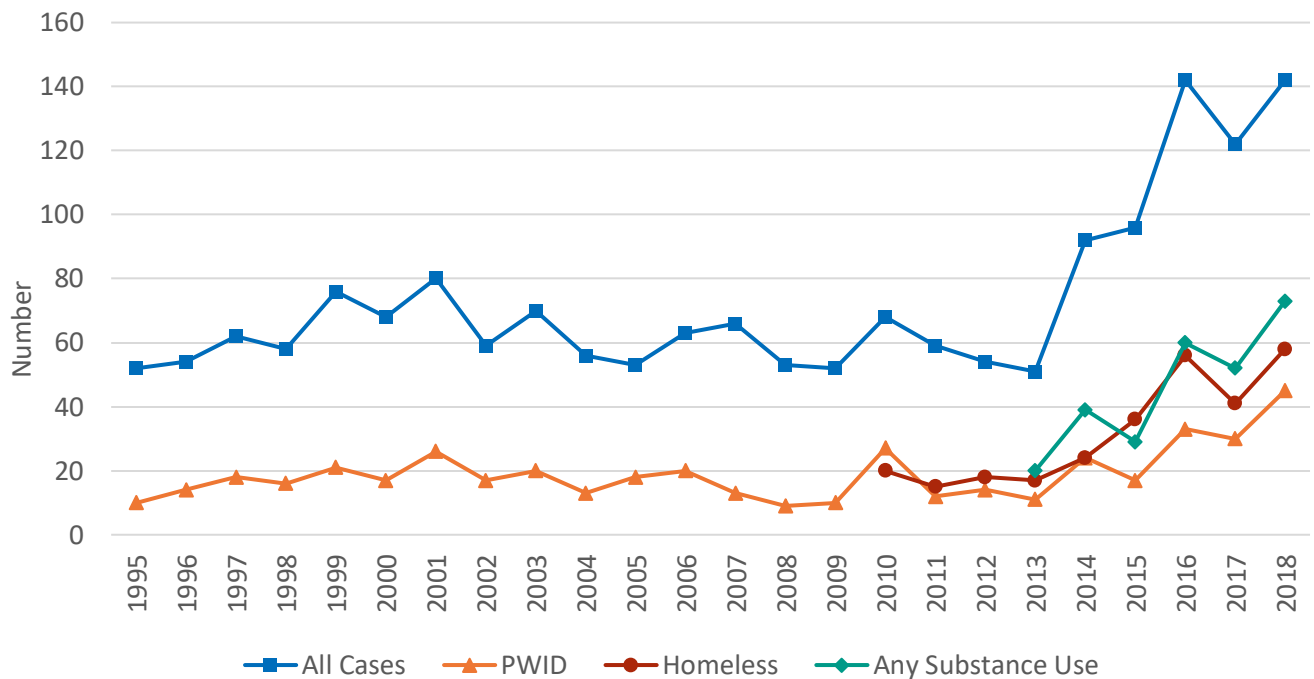
5.2.5 Hep C Health Program

The Hep C Health Program of the San Francisco AIDS Foundation provides treatment for HCV at the 6th Street Syringe Access Program and at Magnet. In 2019, 70 participants were eligible for HCV treatment and 67 began treatment. Forty-three completed treatment and achieved sustained viral response at 12 weeks (considered a “cure”); an additional 12 participants had an undetectable viral load, 5 of whom are not yet due for repeat viral load testing 12 weeks after treatment and 7 of whom completed treatment but did not return for repeat viral load testing. Reasons for not completing treatment included incarceration, moving out of the area, and hospitalization. The COVID-19 pandemic has disrupted participant engagement and follow-up in 2020. (*Source: Hep C Health Project, San Francisco AIDS Foundation*).

5.3 GROUP A STREPTOCOCCUS

Group A streptococcus (GAS) is a bacterium that can cause life-threatening invasive infections. Invasive GAS infections are more common among PWID, and persons with limited access to hygiene, compared to the general population. The number of invasive GAS infections increased since 2014 (Figure 78). People experiencing homelessness, PWID, and those with any record of substance use account for a substantial proportion of invasive GAS infections. In 2018, 41% of invasive GAS infections were among persons experiencing homelessness, 32% were among PWID, and 51% were among persons reporting any substance use.

Figure 78: Annual Number of Invasive Group A Streptococcus Cases in CCSF, 1995–2018



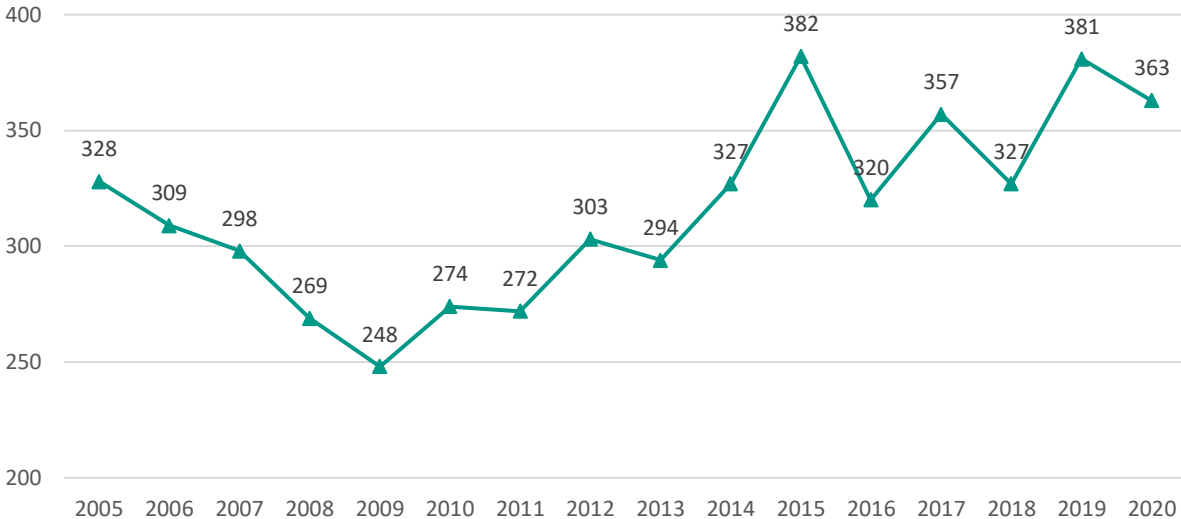
Due to inconsistent data entry, case classification by these characteristics (substance use and homelessness) is not comprehensive. For cases that were not affirmatively identified as individuals who injected drugs, were experiencing homelessness, or used any substance, their status for these characteristics is unknown, and thus the reported counts of cases with each of these characteristics are likely to underestimate the true counts. Year corresponds to date of first positive culture. Data on housing status were only available starting in 2010 and substance use other than injection drug use only available starting in 2013.

Source: California Emerging Infections Program, provisional infectious diseases data provided per Data Request, 12/18/2018.

5.4 ENDOCARDITIS

Endocarditis is frequently a complication of injection drug use, although it can occur in any person. The chart below (**Figure 79**) includes all cases of endocarditis, not limited to those occurring among PWID. As can be seen, the number of hospitalizations for endocarditis increased somewhat from 2009–2014 and have remained over 300 per year since then.

Figure 79: Number of Hospitalizations for Endocarditis in CCSF, 2005–2020



Admissions were identified using ICD-9 codes: 391.1; 397.9; 421.0; 421.1*; 421.9*; 424.90; 424.91; 424.99; 115.04; 115.14; 115.94; 112.81; 036.42; 074.22; 093.20; 093.21; 093.22; 093.23; 093.24; 098.84; and ICD-10 codes: I33*; I38*; I39*; A01.02; A18.84; A32.82; A39.51; A52.03; A54.83; B33.21; B37.6*; M05.3*; M32.11; I01.1*. Shifts in the trend of hospitalizations and emergency department visits from 2015 to 2016 may be artifacts of a change to the way healthcare visits were coded in the U.S. (from ICD-9 to ICD-10) that occurred on October 1, 2015.*

Source: Hospital admission data for CCSF facilities were provided by the California Office of Statewide Health Planning and Development.

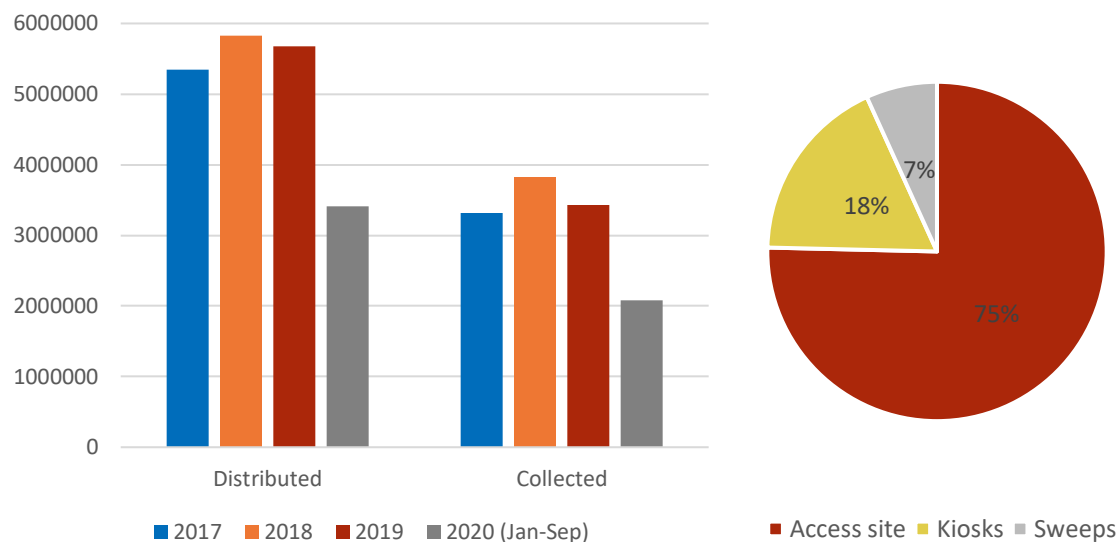
6 ADDITIONAL INTERVENTIONS

6.1 SYRINGE ACCESS

Syringe access programs reduce HIV infection and improve engagement in care for people who use drugs. Furthermore, increased access to syringes decreases the likelihood that injection equipment will carry a blood-borne pathogen. The City and County of San Francisco makes substantial efforts both to ensure access to syringes and associated injection equipment, and to reduce syringe/needle waste. Sixty-one percent of distributed syringes were collected through dedicated syringe collection activities in 2020 (**Figure 80**). The main source of syringe collection is syringe access sites (75%), followed by kiosks placed in key locations of San Francisco (18%), as well as manual sweeps conducted by SFPDH (7%). Of note, kiosks represented a much larger proportion of syringes collected in 2020 compared to prior years; this may be due to shelter-in-place and general social isolation during the COVID-19 pandemic.

The data below are from the San Francisco AIDS Foundation, Glide Health, San Francisco Drug Users Union, Homeless Youth Alliance, St. James Infirmary, UCSF Alliance Health Project, and the Community Health Response Team of SFPDH.

Figure 80: (a) Number of Syringes Dispensed and Collected, 2017–2020* and (b) Sources of Collected Syringes, 2020 in CCSF



*Access sites = syringe access programs; Kiosks = syringe disposal units in public spaces; Sweeps = teams of workers collecting syringes from public settings. Syringes collected does not include syringes collected by the San Francisco Department of Public Works. *2020 data only through September 2020 due to COVID-19 delays in data.*

Source: Community Health Equity and Promotion Branch, San Francisco Department of Public Health.

In March of 2020, SFPDH declared syringe access an essential service, to be continued during Shelter-in-Place restrictions due to the COVID-19 pandemic. Syringe access services continued uninterrupted during the pandemic, overcoming multiple barriers and expanding care,

including serving through a pickup window, conducting supply drops, and developing staff pods, and adding COVID-19 prevention services.

More information regarding syringe access and disposal programs can be found at:

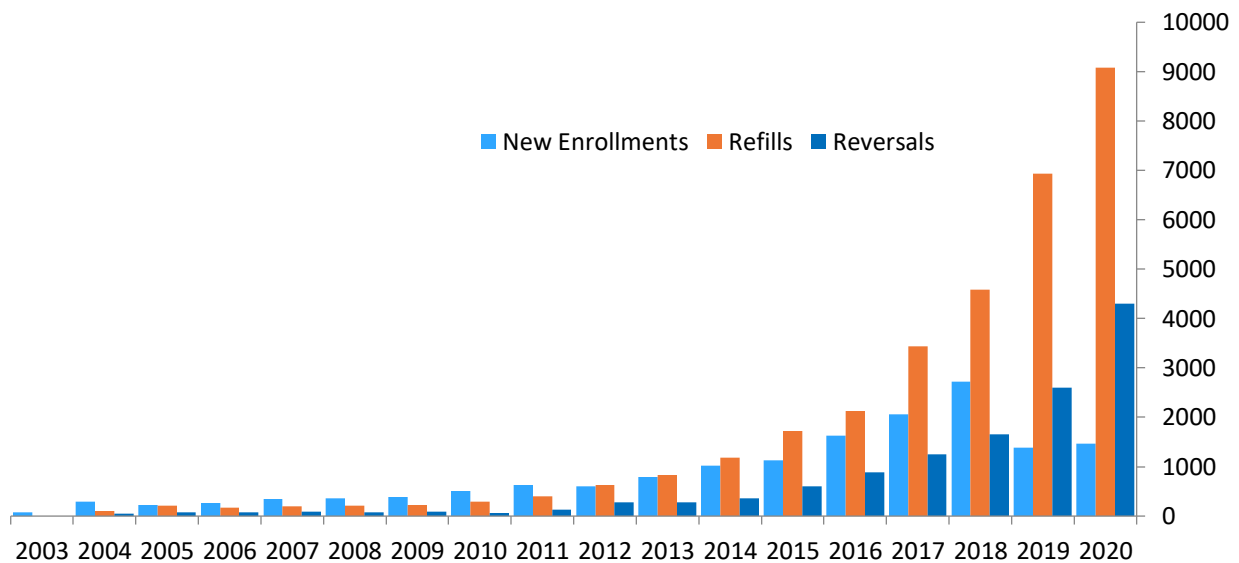
- www.sfhiv.org/syringe.php
- www.sfaf.org/services/syringe-access-disposal/syringe-pick-up-crew/

6.2 NALOXONE

The distribution of naloxone, the short-acting opioid antagonist used to reverse opioid overdose, by community-based organizations continued to increase, with 4,307 overdose reversals reported in 2020 (**Figure 81**). This represents a substantial increase over 2,604 reversals in 2019.

Naloxone distribution in San Francisco is led by the Drug Overdose Prevention and Education (DOPE) Project of the Harm Reduction Coalition. The DOPE Project provides naloxone at syringe access sites, some SUD treatment settings, other community settings, and pre-release at the San Francisco County Jail.

Figure 81: Naloxone Enrollments, Refills, and Reversal Reports to the Drug Overdose Prevention and Education Project, 2003–2020



Source: Drug Overdose Prevention and Education Project

In 2020, the DOPE Project provided 51,450 doses of injectable naloxone to 23 community partners in the Bay Area, who distributed it onward, as well as 900 nasal naloxone kits. They also provided 631 nasal naloxone kits to providers / organizations to have on hand in the event of an overdose.

Naloxone is also provided through several other venues, including primary care and pharmacies, at the Community Behavioral Health Services Pharmacy at 1380 Howard Street (824 furnishings in 2020, down from 990 in 2019), at selected SUD treatment programs, and at selected emergency departments. Project FRIEND, funded by the Substance Use and Mental Health Services Administration (SAMHSA), allows paramedics to provide take-home naloxone to at-risk patients and caretakers. Naloxone is also carried by several groups of first responders, including some law enforcement officers.

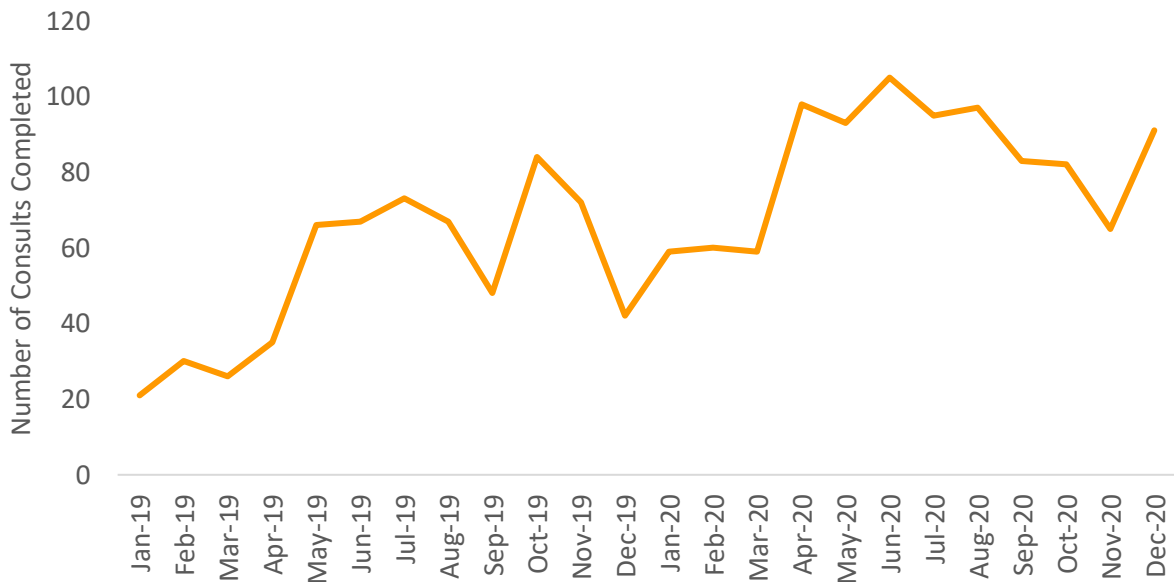
6.3 ADDICTION CARE TEAM

The Addiction Care Team (ACT) is an addiction medicine consult service at Zuckerberg San Francisco General Hospital (ZSFG), in collaboration with the University of California San Francisco, funded by grants and philanthropy since January 2019. The ACT is inter-professional, including licensed vocational nurses (LVNs), a nurse practitioner, patient navigators, and physicians. The ACT is a rotation for physicians training in the UCSF Primary Care Addiction Medicine Fellowship as well as for pharmacy, medical, and nursing students and residents.

In 2020, ACT inpatient consults increased by 56% to 987 (**Figure 82**). ACT staffed 823 (84%) of requested consults, a 73% increase from 2019. The emergency department patient navigator saw 641 patients from March to December 2020, and LVNs saw 2,310 patients with unhealthy alcohol or tobacco use. ACT discharged 74 individuals to residential addiction treatment from the hospital, representing a 236% increase from 2019. Nearly 60% of ACT patients are experiencing homelessness and have a mental health diagnosis. Preliminary results suggest that patients with an SUD seen by ACT have lower mortality rates (5.6% versus 9.4%). ACT also aims to empower ZSFG staff and clinicians with addiction skills, advocate for more equitable and stigma free policies (e.g. in hospital substance use, harm reduction kits), and increase access to evidence-based addiction treatment by expanding the hospital formulary.

In 2020, ACT increased staffing to one attending physician, three patient navigators, and four fellows. Demand for and services provided by the ACT have steadily increased.

Figure 82: Monthly consults completed by the Addiction Care Team (ACT) at Zuckerberg San Francisco General Hospital from 2019 through 2020.



7 APPENDICES

Table 1 (page 1 of 3): Rate per 100,000 Population of Treatment Admissions, Hospitalizations, ED Visits, and Deaths Involving or Caused by Cocaine/Crack, Methamphetamine, all Opioids, Heroin, Prescription Opioids, Fentanyl and Fentanyl Analogues, Cannabis, Alcohol, and Endocarditis in CCSF, 2005–2020

Substance	Measure	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cocaine/Crack	Treatment Admissions							180.71	215.33	202.69	142.67	107.50	87.22	78.75	60.25	54.16	40.27
	Hospitalizations	11.80	4.94	4.24	3.16	2.37	5.46	12.14	10.98	10.84	11.05	11.93	16.87	15.61	25.58	35.84	21.58
	ED Visits	27.65	39.03	32.49	26.67	22.45	17.50	23.42	24.61	25.84	31.61	33.94	51.64	43.31	48.20	46.77	30.58
	Deaths		17.43	15.03	10.62	9.73	9.56	10.05	9.29	10.24	10.34	8.34	8.38	10.14	11.48	23.55	30.93
Methamphetamine	Treatment Admissions							123.33	181.43	195.79	184.74	173.53	192.12	209.35	166.65	154.18	127.16
	Hospitalizations	11.53	5.72	3.72	3.41	3.12	8.32	6.13	7.12	7.03	9.75	13.32	29.15	28.15	37.51	54.85	50.54
	ED Visits	36.30	26.80	27.10	25.28	27.06	41.96	38.74	56.34	74.79	118.11	164.73	333.05	305.77	420.84	366.63	329.79
	Deaths		4.68	4.37	2.65	3.37	3.85	4.90	5.43	7.15	7.29	9.38	10.21	11.40	14.32	29.36	44.43
All Opioids	Treatment Admissions							440.48	469.50	471.72	544.35	541.33	537.45	518.19	481.09	478.82	415.76
	Hospitalizations	40.10	37.99	38.27	36.15	36.91	43.20	38.99	40.41	39.18	36.90	51.90	124.64	118.07	126.30	129.60	124.85
	ED Visits	51.51	51.00	51.75	53.34	55.12	53.38	45.48	57.90	61.33	74.98	102.64	145.41	151.34	221.45	319.86	345.95
	Deaths		13.40	14.77	14.28	16.71	15.27	14.96	13.63	15.72	14.93	11.70	12.05	15.39	20.35	37.66	67.39

Table 1 (page 2 of 3): Rate per 100,000 Population of Treatment Admissions, Hospitalizations, ED Visits, and Deaths Involving or Caused by Cocaine/Crack, Methamphetamine, all Opioids, Heroin, Prescription Opioids, Fentanyl and Fentanyl Analogues, Cannabis, Alcohol, and Endocarditis in CCSF, 2005–2020

Substance	Measure	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Heroin	Treatment Admissions							398.07	414.37	420.39	487.12	483.88	481.44	469.65	434.82	425.91	350.10
	Hospitalizations	2.88	3.25	3.47	2.53	1.50	1.49	1.96	2.05	1.43	2.23	3.13	4.82	8.09	10.46	9.22	5.31
	ED Visits	21.36	17.82	14.13	11.25	8.85	7.32	7.72	11.70	12.15	20.92	35.10	48.20	54.47	78.78	59.74	24.69
	Deaths		4.55	3.47	3.41	2.87	1.24	1.59	2.29	2.98	4.23	3.71	4.82	5.47	6.82	9.22	8.89
Prescription Opioids	Treatment Admissions							42.17	55.13	51.21	56.88	56.88	54.86	47.30	41.38	34.82	29.89
	Hospitalizations	17.69	17.69	17.85	14.03	16.09	20.48	18.63	19.30	20.01	18.45	33.83	114.08	103.25	104.92	101.73	90.35
	ED Visits	17.30	17.04	21.32	22.37	31.92	34.02	29.06	30.64	30.84	33.02	34.64	50.15	45.93	58.66	123.57	178.28
	Deaths		9.37	11.69	10.87	14.22	13.66	13.61	11.70	13.22	11.52	7.65	6.43	7.29	8.07	9.56	7.96
Fentanyl and Other Synthetic Opioids	Treatment Admissions							0.25	0.00	0.12	0.35	0.58	1.15	1.25	4.89	18.09	35.77
	Hospitalizations												4.02	5.70	8.87	17.30	27.00
	ED Visits												2.52	4.22	16.14	66.45	92.08
	Deaths		0.65	0.39	0.63	1.00	0.74	1.23	0.72	0.71	0.94	1.27	2.52	4.10	10.23	27.42	59.77

Table 1 (page 3 of 3): Rate per 100,000 Population of Treatment Admissions, Hospitalizations, ED Visits, and Deaths Involving or Caused by Cocaine/Crack, Methamphetamine, all Opioids, Heroin, Prescription Opioids, Fentanyl and Fentanyl Analogues, Cannabis, Alcohol, and Endocarditis in CCSF, 2005–2020

Substance	Measure	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cannabis	Treatment Admissions							62.0	76.0	87.2	73.8	67.7	53.1	44.4	38.1	29.70	20.42
	Hospitalizations	3.93	1.17	1.03	0.38	0.87	2.48	2.08	1.69	3.22	2.35	2.55	4.82	5.93	6.02	6.60	7.15
	ED Visits	9.31	6.50	9.89	8.97	10.60	18.75	19.25	19.30	18.94	26.09	33.02	41.09	47.07	56.95	43.92	27.12
	Deaths		0.00	0.13	0.00	0.25	0.74	1.10	0.84	2.02	0.35	0.23	0.11	0.00	0.00	0.80	0.92
Alcohol	Treatment Admissions							293.62	345.37	318.09	280.29	265.74	247.66	230.55	202.23	198.56	145.05
	Hospitalizations	68.94	76.11	73.20	71.54	72.08	81.81	85.33	90.23	96.11	110.47	113.18	97.21	102.11	101.40	119.59	103.39
	ED Visits	485.31	444.94	505.22	667.38	714.28	748.59	715.59	671.44	700.25	783.39	912.38	1019.23	1048.13	1001.16	973.69	670.32
	Deaths		20.69	20.29	19.72	23.82	20.73	21.09	19.06	17.74	19.16	16.33	18.48	14.02	16.37	17.18	27.58
Endocarditis	Hospitalizations	42.99	40.20	38.27	34.00	30.93	34.02	33.35	36.55	35.01	38.43	44.25	36.72	40.69	37.17	43.35	41.89

Boxes grayed out where data were not available.

Source: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS). Deaths caused by any opioid, cocaine/crack, and methamphetamine were due to acute poisoning/overdose; deaths due to alcohol include alcohol-related deaths. Treatment admissions data were provided by the Community Behavioral Health Services Division of the San Francisco Department of Public Health (SFDPH). Treatment episodes include clients admitted in prior years who were still receiving services in a particular year (e.g., methadone maintenance clients). Hospital admission data for CCSF facilities were provided by the California Office of Statewide Health Planning and Development. Emergency department visit data for CCSF facilities were provided by the California Office of Statewide Health Planning and Development.

Table 2: Number of Opioid, Cocaine, and Methamphetamine Overdose Deaths by Mutually Exclusive Substance Category in CCSF, 2006–2020

Substance	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Opioids only (no cocaine or methamphetamine)	26	42	62	82	69	67	69	76	73	47	44	53	64	76	140
Opioids and cocaine (no methamphetamine)	65	61	43	43	41	37	30	32	29	30	31	42	44	76	142
Opioids and methamphetamine (no cocaine)	*	*	*	*	*	*	12	15	19	16	21	29	47	97	220
Opioids, cocaine, and methamphetamine	*	*	*	*	*	*	*	*	*	*	*	11	24	82	82
Cocaine only (no opioids or methamphetamine)	54	46	37	30	32	35	39	40	47	29	24	28	27	34	33
Cocaine and methamphetamine (no opioids)	*	*	*	*	*	*	*	*	*	*	*	*	*	15	11
Methamphetamine only (no opioids or cocaine)	18	19	12	15	18	21	25	31	31	52	50	52	48	64	72

*Overdose deaths were identified use textual cause of death fields. Homicides and suicides were excluded. *= fewer than 10 deaths.*

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

Table 3: Number of Fentanyl Overdose Deaths by Mutually Exclusive Substance Categories in CCSF, 2006-2020

Substance	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Fentanyl (with or without any substance)	*	*	*	*	*	10	*	*	*	11	22	36	90	241	518
Fentanyl alone (no heroin, cocaine, or methamphetamine)	*	*	*	*	*	*	*	*	*	*	*	12	24	46	104
Fentanyl and heroin (no cocaine or methamphetamine)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Fentanyl, heroin, and cocaine (no methamphetamine)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	12
Fentanyl, heroin, and methamphetamine (no cocaine)	*	*	*	*	*	*	*	*	*	*	*	*	*	13	13
Fentanyl, heroin, cocaine, and methamphetamine	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Fentanyl and cocaine (no heroin or methamphetamine)	*	*	*	*	*	*	*	*	*	*	*	*	19	50	113
Fentanyl and methamphetamine (no heroin or cocaine)	*	*	*	*	*	*	*	*	*	*	*	10	24	58	187
Fentanyl, cocaine, and methamphetamine (no heroin)	*	*	*	*	*	*	*	*	*	*	*	*	*	54	71

Overdose deaths were identified use textual cause of death fields. Homicides and suicides were excluded. *= fewer than 10 deaths.

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

Table 4: Admissions to Programs Treating Substance Use Disorders in CCSF, 2015–2020

	2015		2016		2017		2018		2019		2020	
	(#)	(%)	(#)	(%)	(#)	(%)	(#)	(%)	(#)	(%)	(#)	(%)
Total Admissions (#)	10,273		10,004		9,710		8,626		8,309		6,707	
Primary Substance												
Alcohol	2,294	22.3%	2,158	21.6%	2,023	20.8%	1,779	20.6%	1,745	21.0%	1,257	18.7%
Cocaine/Crack	928	9.0%	760	7.6%	691	7.1%	530	6.1%	476	5.7%	349	5.2%
Heroin	4,177	40.7%	4,195	41.9%	4,121	42.4%	3,825	44.3%	3,743	45.0%	3,034	45.2%
Prescription Opioids	491	4.8%	478	4.8%	417	4.3%	366	4.2%	306	3.7%	259	3.9%
Fentanyl	*	*	10	0.1%	*	*	41	0.5%	159	1.9%	310	4.6%
Methamphetamine	1,498	14.6%	1,674	16.7%	1,837	18.9%	1,466	17.0%	1,355	16.3%	1,102	16.4%
Cannabis	584	5.7%	463	4.6%	390	4.0%	335	3.9%	261	3.1%	177	2.6%
Benzodiazepines	22	0.2%	21	0.2%	14	0.1%	26	0.3%	52	0.6%	61	0.9%
MDMA	13	0.1%	*	*	*	*	*	*	11	0.1%	*	0.1%
Other Drugs/Unknown	261	2.5%	240	2.4%	210	2.2%	251	2.9%	201	2.4%	152	2.3%

Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. *= fewer than 10 admissions.

MDMA= 3,4-methylenedioxy-methamphetamine

Source: San Francisco Department of Public Health (SFPDH), Community Behavioral Health Services Division.

Table 5: Naloxone Enrollments, Refills, and Reversal Reports to the Drug Overdose Prevention and Education Project, 2006–2020

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
New Enrollments	261	345	362	380	503	634	604	792	1023	1123	1624	2062	2721	1384	1473
Refills	176	194	207	226	288	395	633	838	1189	1727	2130	3437	4585	6928	9077
Reversals	81	87	72	86	62	125	274	275	365	604	886	1247	1658	2604	4307

8 SOURCES

Data	Source and Description
Deaths	California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS), accessed on 26 June 2020. Substance-related deaths were identified using textual cause of death fields. Homicides and suicides were excluded.
Treatment Admissions	Community Behavioral Health Services Division of the San Francisco Department of Public Health (SFDPH). Treatment episodes include clients admitted in prior years who were still receiving services in a particular year (e.g., methadone maintenance clients).
Hospitalizations	California Office of Statewide Health Planning and Development. Admissions by substance or for endocarditis were identified using ICD code as specified in the body of the report. Admissions that resulted in death were excluded. Shifts in the trend of hospitalizations visits from 2015 to 2016 may be artifacts of a change to the way healthcare visits were coded in the U.S. (from ICD-9 to ICD-10) that occurred on October 1, 2015.
Emergency Department Visits	California Office of Statewide Health Planning and Development. Visits by substance were identified using ICD codes. Visits that resulted in death were excluded. Shifts in the trend of emergency department visits from 2015 to 2016 may be artifacts of a change to the way healthcare visits were coded in the U.S. (from ICD-9 to ICD-10) that occurred on October 1, 2015.
Prescription Data	Opioid prescription data, including buprenorphine, were provided by the California Controlled Substance Utilization Review and Evaluation System (CURES 2.0)
HIV	SFDPH HIV Epidemiology Annual Report, September 2019 & Mid-Year Report, June 2020
Hepatitis C	Viral Hepatitis Surveillance Program, Applied Research, Community Health Epidemiology and Surveillance Branch (ARCHES), Population Health Division. Viral Hepatitis C Surveillance Report 2018- 2019, San Francisco, California. San Francisco Department of Public Health; July 2021. 17 pp. Available from: www.sfcddp.org/communicable-disease/publications-data-and-reports/ Facente SN, Grebe E, Burk K, Morris MD, Murphy EL, Mirzazadeh A, et al. (2018) Estimated hepatitis C prevalence and key population sizes in San Francisco: A foundation for elimination. <i>PLoS ONE</i> . 13 (4): e0195575 End Hep C SF Annual Evaluation Report, Year 3 (http://www.endhepcsf.org/end-hep-c-sf-year-3-evaluation/) End Hep C SF: HIV/HCV Microlamination Planning (http://www.endhepcsf.org/end-hep-c-sf-micro-elimination-plan/) SFDPH National HIV Behavioral Surveillance, Center for Public Health Research, Population Health Division Hep C Health Project, San Francisco AIDS Foundation Page K, Hahn J.A., Shiboski S, Lum, P, Delwart E, et al. (2009) Acute hepatitis C virus infection in young adult injection drug users: A prospective study of incident infection, resolution and reinfection. <i>Journal of Infectious Disease</i> . Doi: 10.1086/605947
Group A Strep	Provisional infectious diseases data by the California Emerging Infections Program, per data request, 12/18/2018
Sobering Center	San Francisco Department of Public Health
Naloxone	Drug Overdose Prevention and Education Project
Syringe Access	Community Health Equity and Promotion Branch, San Francisco Department of Public Health
Addiction Care Team	Addiction Care Team, UCSF / Zuckerberg San Francisco General Hospital