

Substance Use Trends in San Francisco through 2019

Prepared by:

Phillip O. Coffin MD MIA, Christopher Rowe MPH, and Nicola Gerbino

Center on Substance Use and Health

Department of Public Health, City and County of San Francisco

San Francisco, California

31 August 2020



Table of Contents

1	Introduction	3
2	Highlights	4
3	Substance Use Indicators, Overall	5
3.1	Overall Opioid, Cocaine, and Methamphetamine Overdose Mortality.....	5
3.2	Overall Substance Use Disorder Treatment Program Admissions.....	8
4	Substance Use Indicators, by Substance	9
4.1	Opioids	9
4.1.1	Any Opioids	9
4.1.2	Prescription Opioids.....	16
4.1.3	Heroin.....	22
4.1.4	Fentanyl.....	27
4.1.5	Buprenorphine	33
4.2	Cocaine/Crack	35
4.3	Methamphetamine	44
4.4	Alcohol	52
4.4.1	Sobering Center	56
4.5	Cannabis.....	57
4.6	Benzodiazepines	60
5	Health Sequelae Related to Substance Use.....	64
5.1	HIV.....	64
5.2	Hepatitis C Virus.....	65
5.2.1	SFDPH Surveillance	65
5.2.2	End Hep C SF	66
5.2.3	National HIV Behavioral Surveillance.....	68
5.2.4	UFO Study	70
5.2.5	Hep C Health Program.....	70
5.3	Group A Streptococcus	71
5.4	Endocarditis	72
6	Additional Interventions	73
6.1	Syringe Access	73
6.2	Naloxone	74
6.3	Addiction Care Team.....	75
6.4	Methamphetamine Task Force	76
7	Appendices.....	77
8	Sources.....	82

1 INTRODUCTION

We are pleased to release this report on substance use indicators for San Francisco. 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 opioid 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 opioid crisis has continued, San Francisco did ultimately witness an increase in overdose deaths beginning in 2018 and continuing through 2019, which can be attributed to a rise in fentanyl overdose. 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 data in this report do not yet reflect any impacts of the COVID-19 pandemic.

The report details ongoing efforts to address substance use in San Francisco, including: expanding naloxone distribution for overdose prevention, use of buprenorphine for both overdose prevention and treatment of opioid use disorder, syringe access for blood-borne disease prevention, programs to treat hepatitis C infection among people who inject drugs, the San Francisco Sobering Center for alcohol use management, and the Addiction Care Team of Zuckerberg San Francisco General Hospital.

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.

*Additional data regarding substance use in San Francisco can be found in the **San Francisco Community Health Needs Assessment**: <http://www.sfhip.org/chna/community-health-data/substance-abuse/>*

2 HIGHLIGHTS

Morbidity and mortality

- As the nation suffers from a persistent opioid crisis, the rate of overdose death in San Francisco from opioids, cocaine, and methamphetamine increased again in 2019.
- Overdose deaths continue 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 declined in 2019. Some possible reasons for this include:
 - Use of medications to treat alcohol and opioid use disorders has increased, expanding opportunities for SUD treatment beyond traditional programs.
 - Previously, San Francisco served many persons who resided in another county. Since 2017, when Drug Medi-Cal Organized Delivery System (DMC-ODS) began in San Francisco, residency requirements and limits on treatment episodes may have contributed to a decline in admissions.
 - 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.

Interventions

- Healthcare providers have reduced the number of opioid prescriptions and the number of morphine milligram equivalents in each prescription by 40% since 2010.
- In 2019, 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 2019, with 7,306 naloxone kits distributed by and 2,604 overdose reversals reported to community organizations alone.
- **End Hep C SF**, a citywide collaboration, continues to support and expand initiatives to prevent and treat hepatitis C infections among people who use substances.
- SFDPH convened the **Methamphetamine Task Force** in 2019, resulting in multiple recommendations including creation of a trauma-informed sobering and harm reduction center for people who use drugs, as well as overdose prevention sites.
- SFDPH is implementing **Mental Health SF**, a legislative package passed in 2019 that includes enhanced care coordination, street crisis response teams staffed with behavioral health clinicians and peers, expanded buprenorphine access, and drug sobering centers.
- SFDPH is developing **metrics** to guide a response to rising drug overdose deaths with a focus on racial equity.

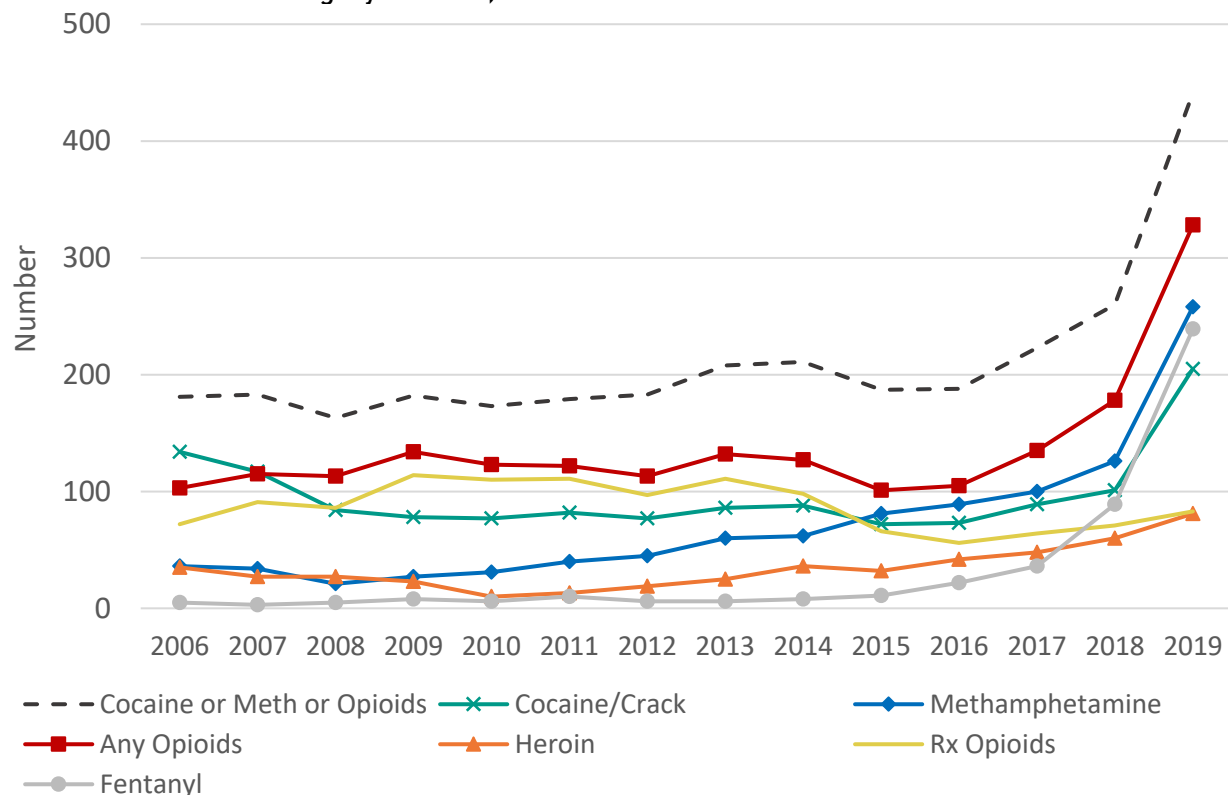
3 SUBSTANCE USE INDICATORS, OVERALL

3.1 OVERALL OPIOID, COCAINE, AND METHAMPHETAMINE OVERDOSE MORTALITY

Overdose (i.e. acute poisoning) mortality in San Francisco is led by deaths caused by opioids, methamphetamine, and cocaine. Overdose mortality was fairly stable between 2006 and 2016; however, it has risen in recent years due to fentanyl. From 2018 to 2019, overdose deaths involving fentanyl increased 169% from 89 to 239 deaths (**Figure 1**).

In total, 441 overdose deaths were caused by an opioid, cocaine, or methamphetamine in 2019. Of these, 74% involved an opioid (of the 441 overdose deaths, 19% involved prescription opioids, 18% involved heroin, and 54% involved fentanyl), 47% involved cocaine/crack, and 59% involved methamphetamine (**Figure 1**).

Figure 1: Number of Opioid, Cocaine, and Methamphetamine Overdose Deaths by Non-Mutually Exclusive Substance Category in CCSF, 2006–2019

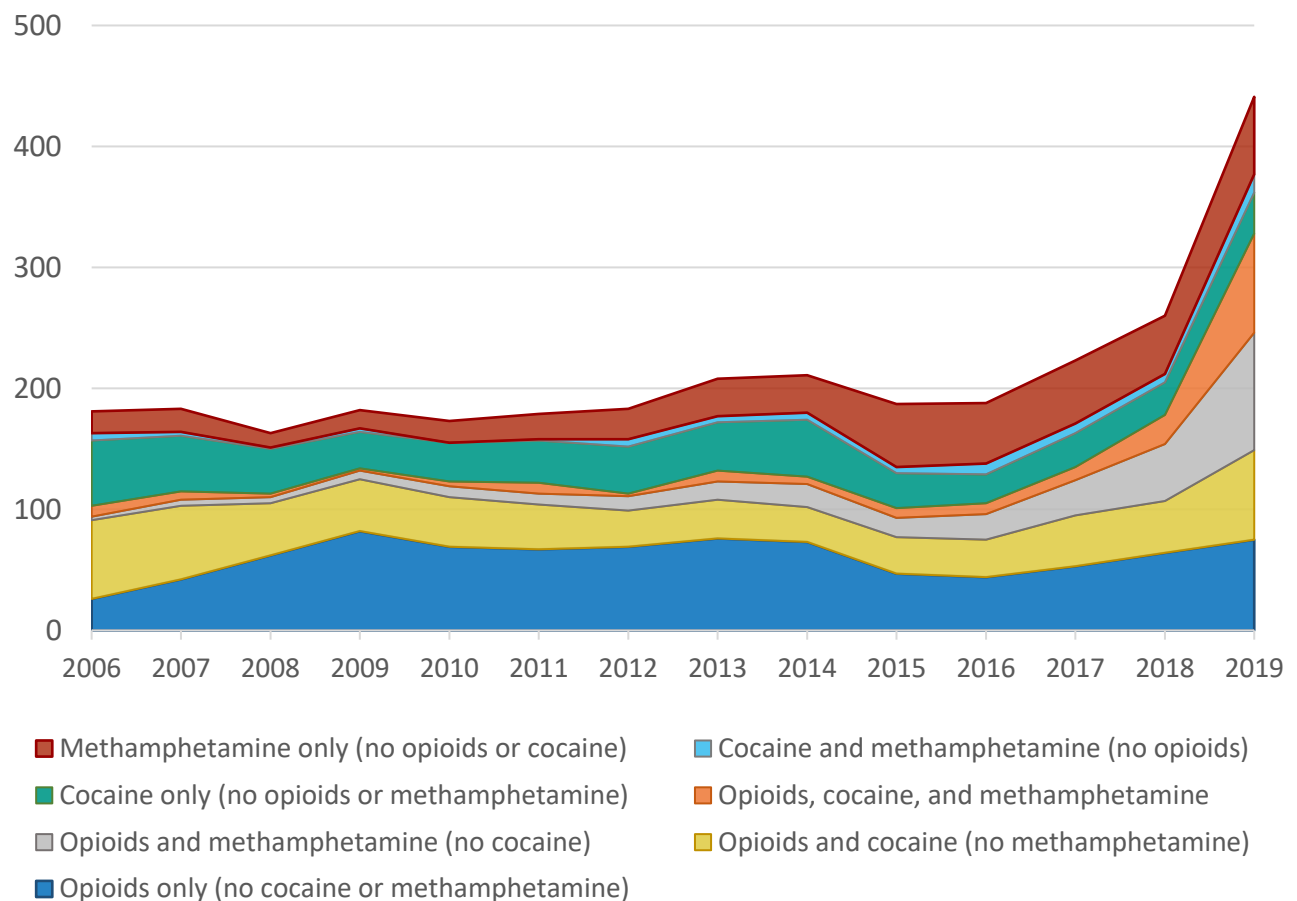


Substance-related overdose deaths were identified using textual cause of death fields, determined by the San Francisco Office of the Chief Medical Examiner. Homicides and suicides were excluded.

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 2018 and 2019 shown in **Figure 2** was driven by opioids, or more precisely, fentanyl in combination with methamphetamine and cocaine (**Figure 26**).

Figure 2: Number of Opioid, Cocaine, and Methamphetamine Overdose Deaths by Mutually Exclusive Substance Category in CCSF, 2006–2019

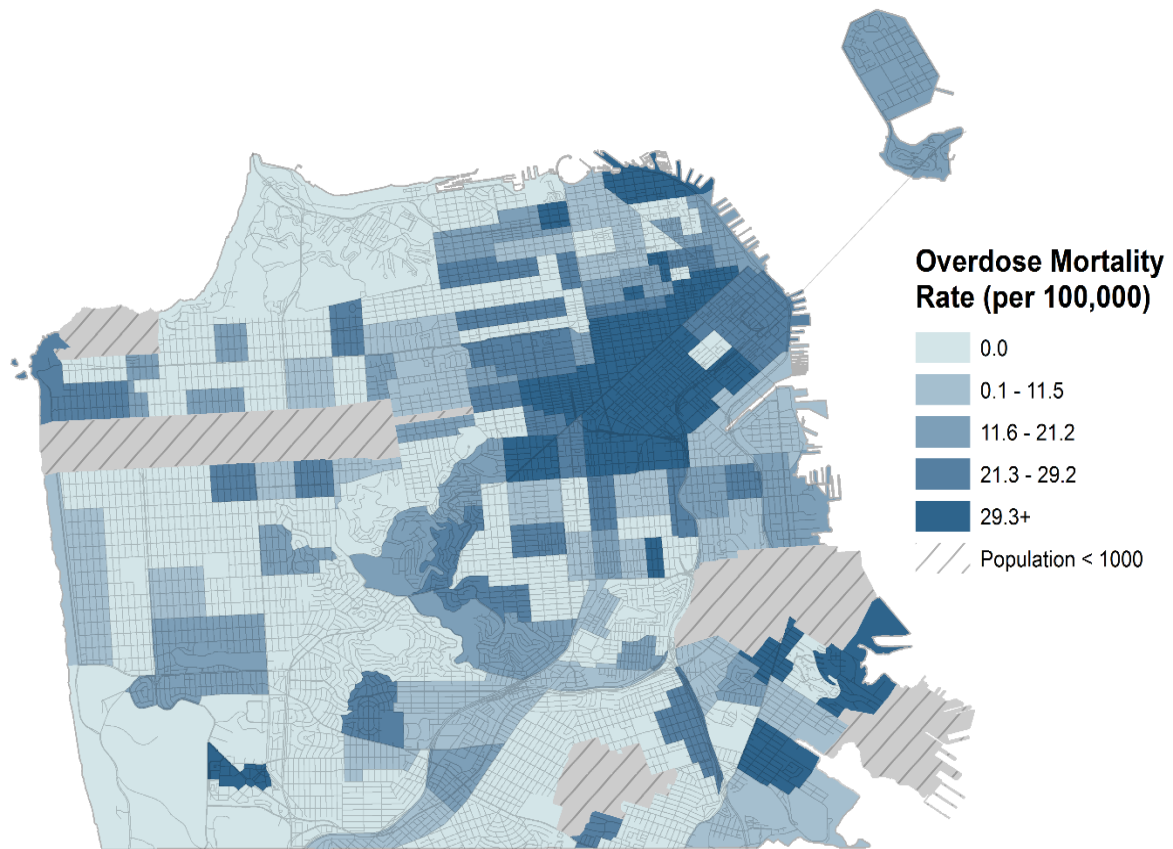


The height of each band corresponds to the number of events in that category. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded.

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.

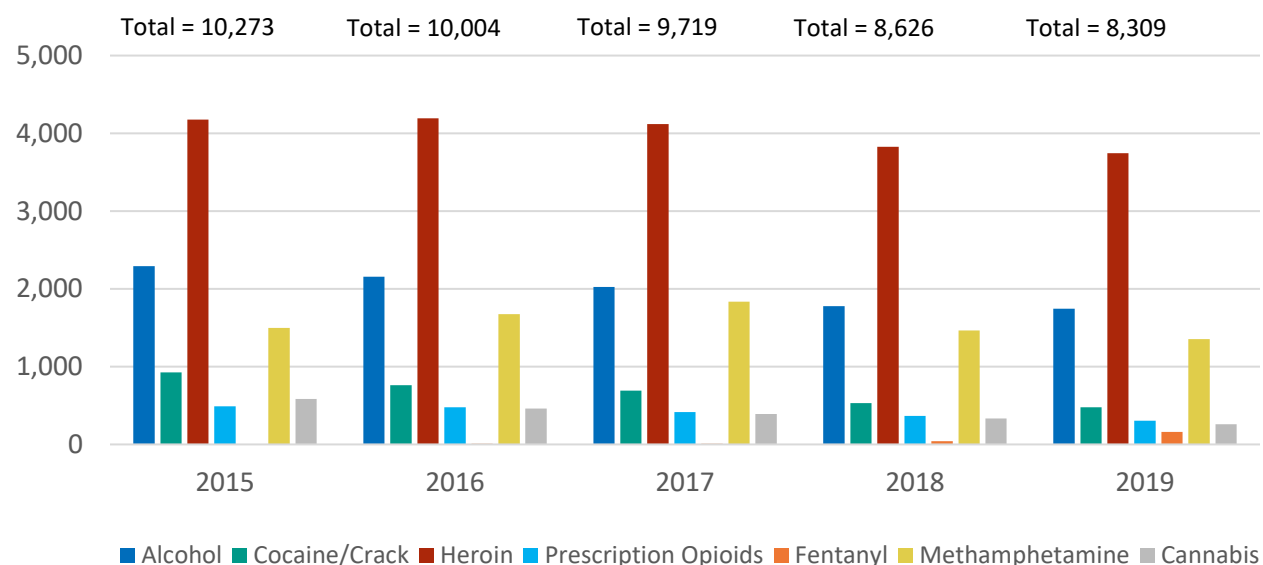
Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS). Census tract population denominators taken from U.S. Census Bureau, 2013-2017 American Community Survey 5-year Population Estimates.

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 8,309 in 2019 (**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 5,570 in 2019. Possible reasons for this decline include:

- The number of unique persons treated each year with buprenorphine outside of SUD treatment programs rose from 1,627 in 2015 to 2,784 in 2019; this increase exceeds the reduction in unique persons treated for any opioids from 3,695 in 2015 to 3,347 in 2019, 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.
- Other data suggest heightened acuity of several 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, 2015–2019



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 (SFPDH), Community Behavioral Health Services Division.

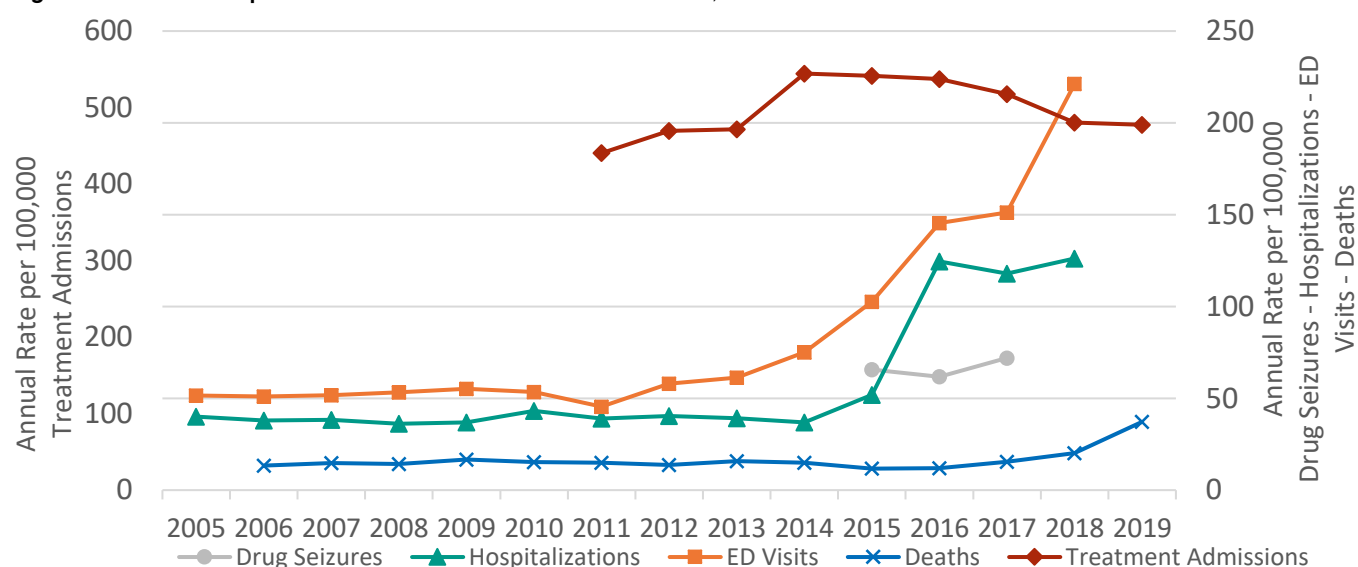
4 SUBSTANCE USE INDICATORS, BY SUBSTANCE

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 2018 and again in 2019 (**Figure 5**). Treatment admissions for any opioid remained stable between 2018 and 2019, although the number of persons prescribed buprenorphine increased. Emergency department visits increased while hospitalization remained stable from 2017 to 2018.

Figure 5: Rate of Opioid Use Health Indicators in CCSF, 2005-2019

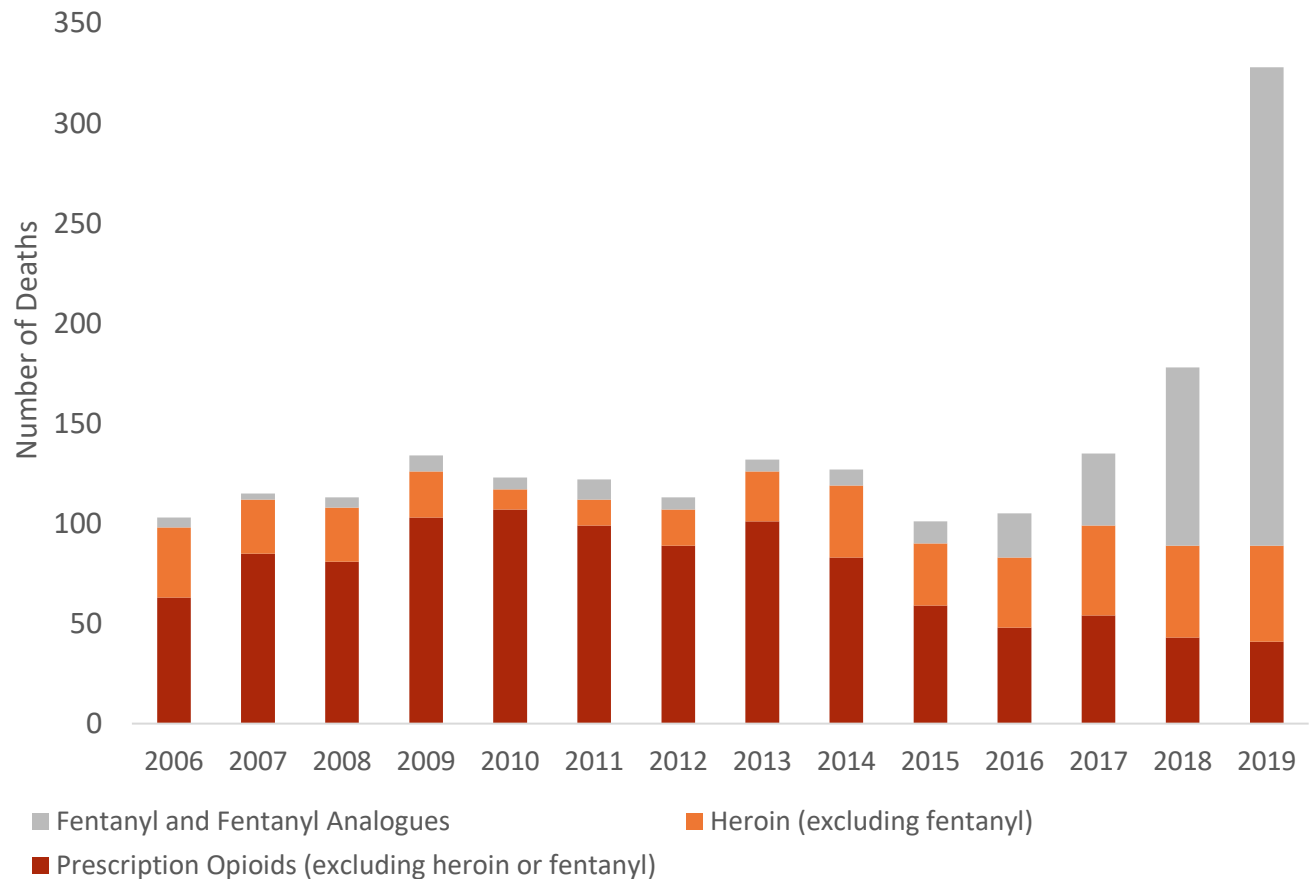


Rate is calculated per 100,000 CCSF population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Emergency department visits and hospitalizations include primary or nonprimary ICD-9 codes: E850.0, E850.1, E850.2, 965.0 (poisoning) 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). Drug seizure data provided by the National Forensic Laboratory Information System (NFLIS), Drug Enforcement Administration (DEA). Data were retrieved on Identified Drugs of Total Analyzed Drug Reports, San Francisco, NFLIS, DEA. NFLIS methodology allows for accounting up to three drugs per item submitted for analysis; presented is a combined count including primary, secondary, and tertiary reports for each drug. 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 220% from 101 in 2015 to 328 in 2019. This increase was driven by fentanyl; deaths involving fentanyl and fentanyl analogues more than doubled between 2018 and 2019, while deaths from heroin (excluding fentanyl) and prescription opioids (excluding fentanyl and heroin) remained constant (**Figure 6**).

Figure 6: Number of Opioid Overdose Deaths by Mutually Exclusive Opioid Type in CCSF, 2006–2019

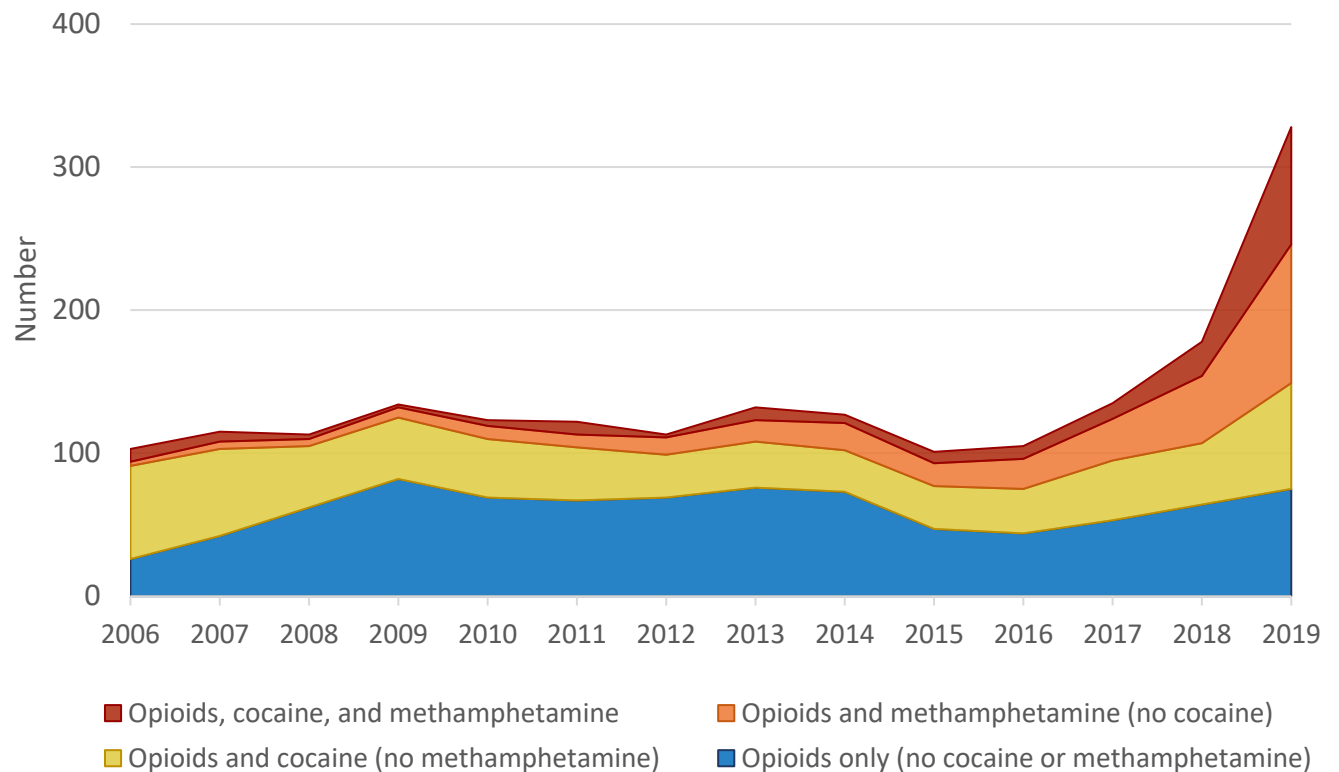


Overdose deaths were identified use textual cause of death fields. Homicides and suicides were excluded. Fentanyl overdose death was defined as any death caused by fentanyl; heroin overdose death was defined as any death caused by heroin but not fentanyl; prescription opioid overdose death was defined 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 (not including cocaine or methamphetamine) have increased slightly. Meanwhile, overdose deaths due to opioids in combination with stimulants have increased rapidly. The increase in 2019 was driven by overdoses involving opioids with cocaine and/or methamphetamine (**Figure 7**).

Figure 7: Number of Opioid Overdose Deaths by Mutually Exclusive Involvement of Cocaine or Methamphetamine in CCSF, 2006–2019

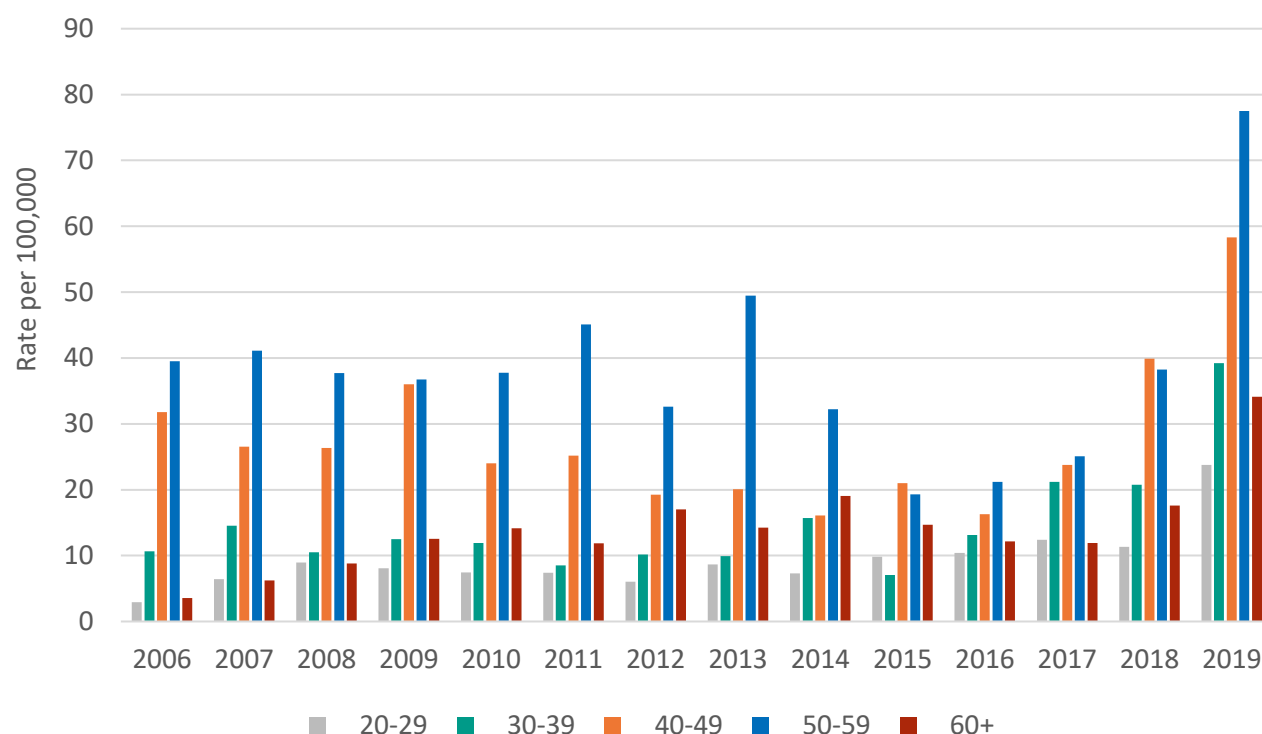


The height of each band corresponds to the number of events in that category. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded.

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

In 2019, 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 2018 to 2019 was among people aged 20-29 (**Figure 8**) and among Black/African Americans (**Figure 10**).

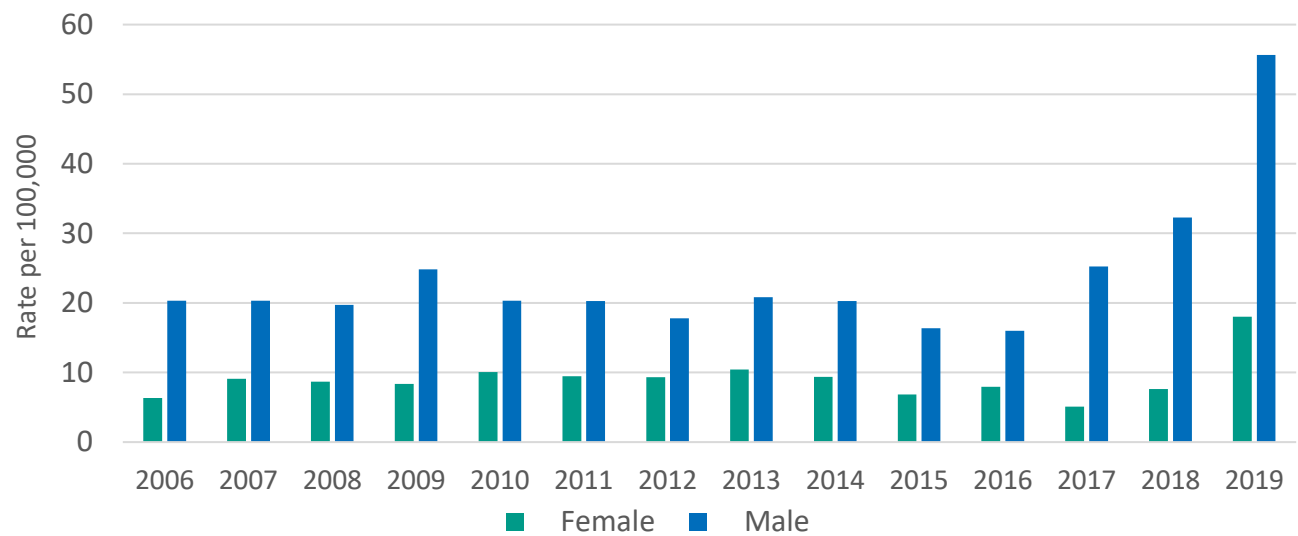
Figure 8: Rate of Opioid Overdose Deaths by Age Category in CCSF, 2006–2019



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.

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

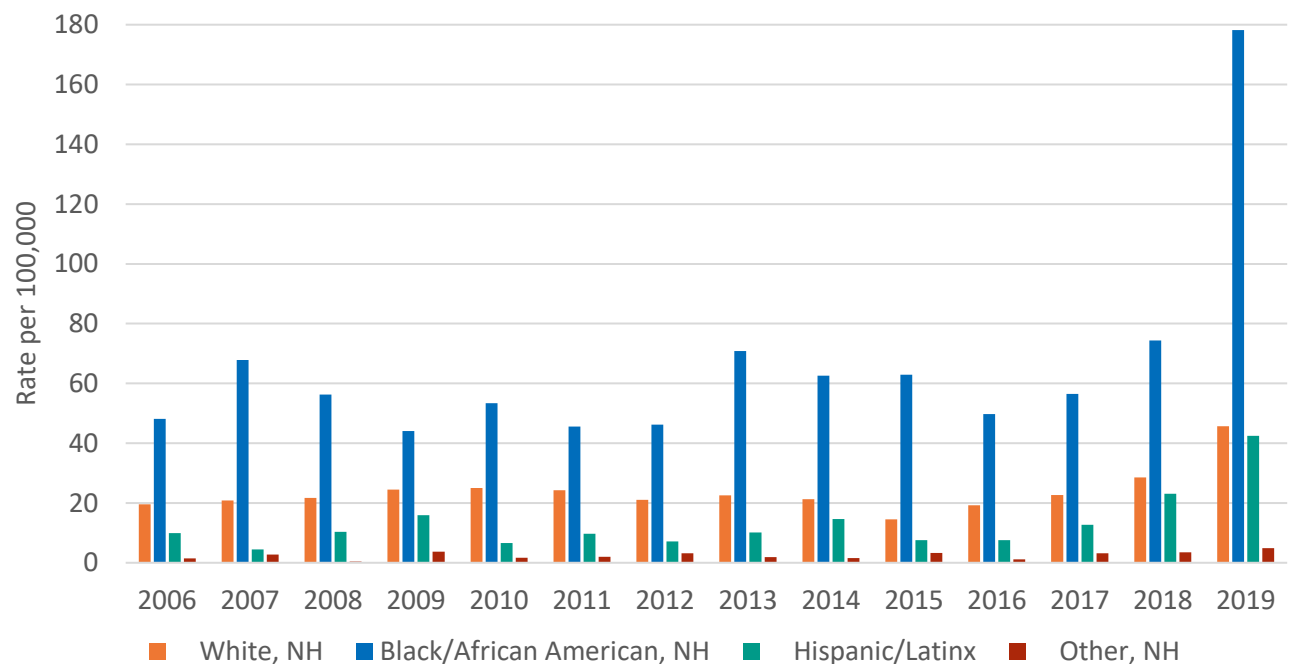
Figure 9: Rate of Opioid Overdose Deaths by Sex in CCSF, 2006–2019



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. 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, 2006–2019



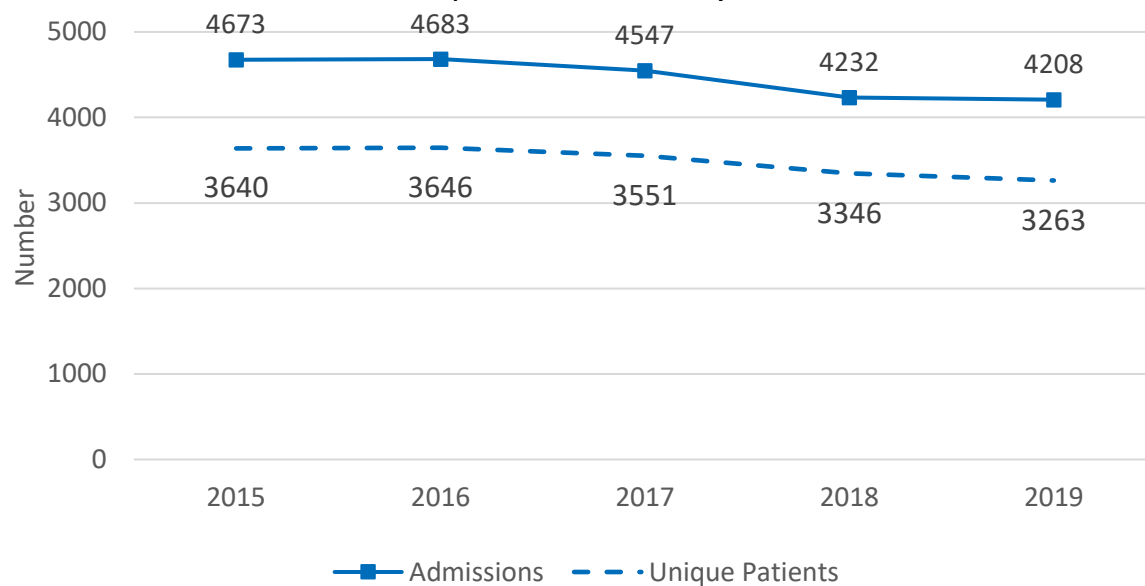
Rate is calculated per 100,000 CCSF population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. NH=non-Hispanic.

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 10% between 2015 and 2019 (**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 2019 (**Figure 32**).

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

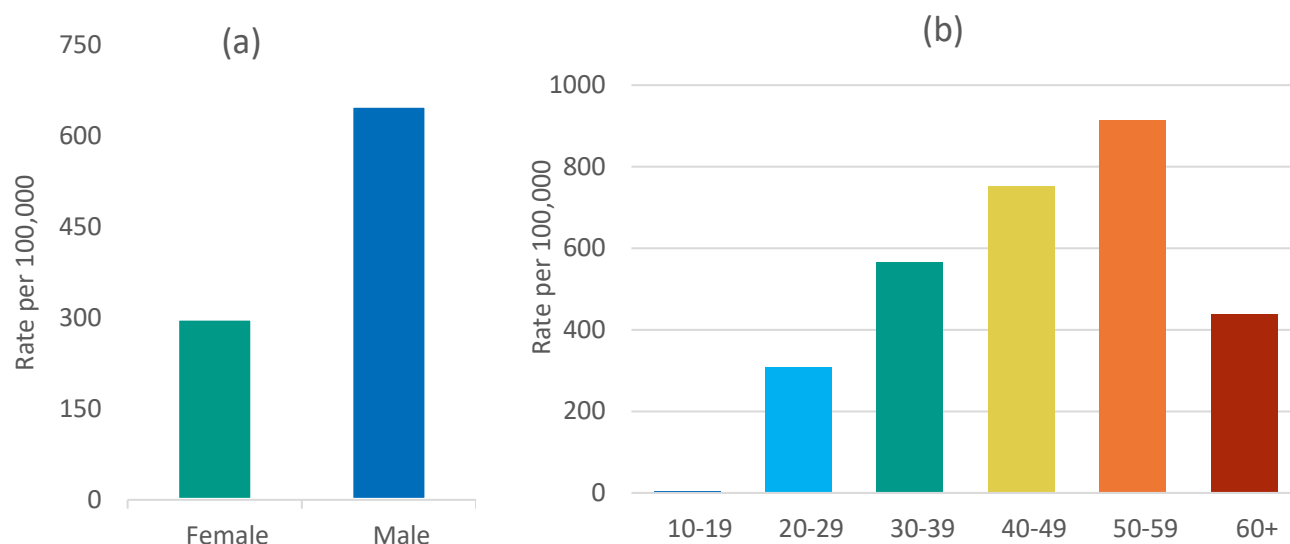
Figure 11: Number of Admissions and Unique Persons Admitted to Programs Treating Substance Use Disorders for All Opioids as the Primary Substance in CCSF, 2015–2019



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.

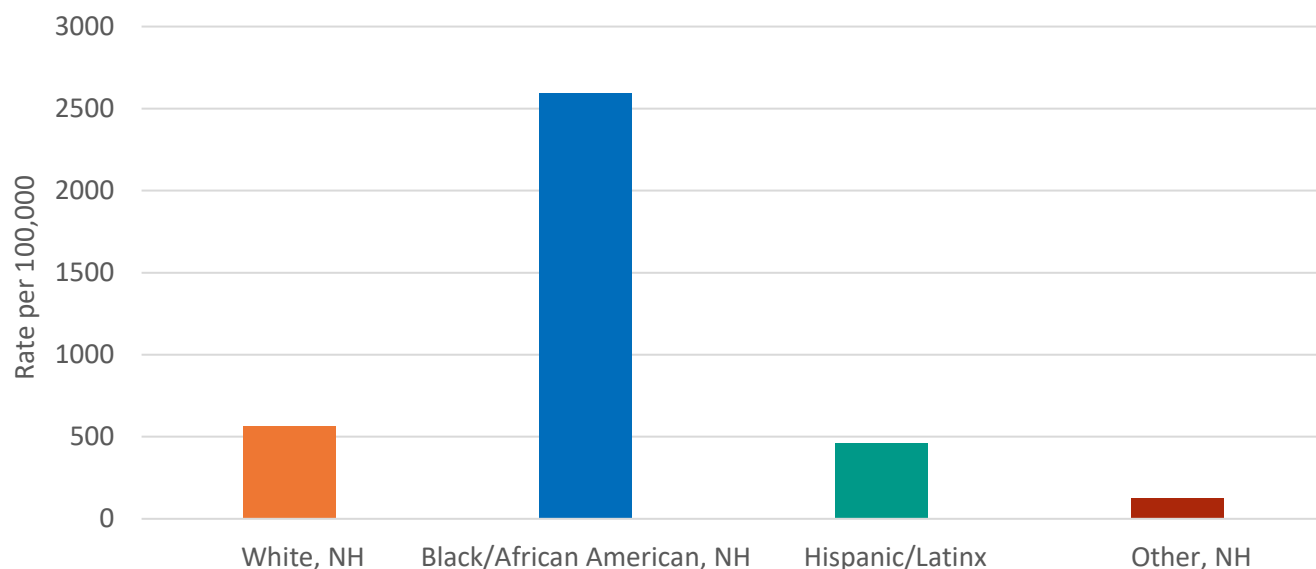
Figure 12: Rate of Admissions to Programs Treating Substance Use Disorders for Any Opioids by (a) Sex and (b) Age Group in CCSF, 2019



Rate is calculated per 100,000 CCSF 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, 2019



Rate is calculated per 100,000 CCSF 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.

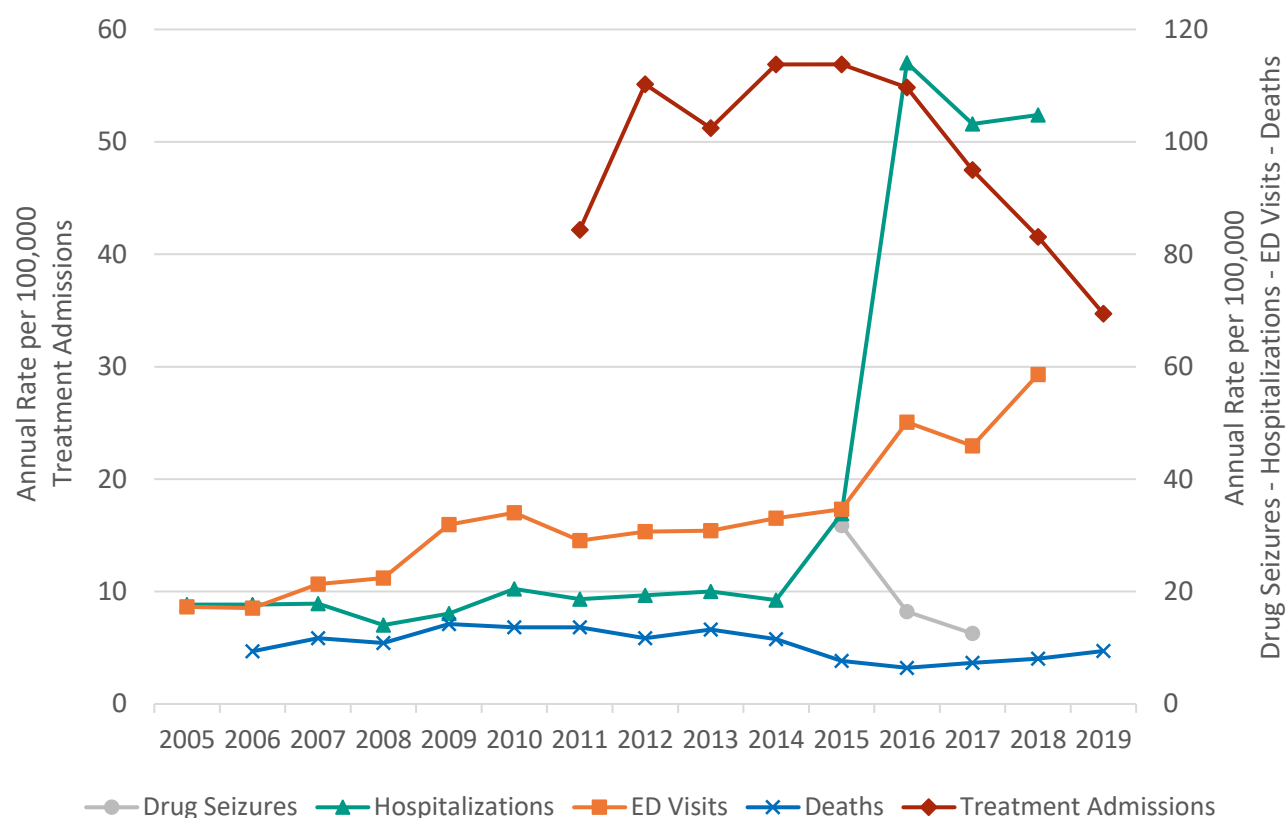
4.1.2 Prescription Opioids

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 41 deaths in 2019 (**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 83 overdose deaths caused by prescription opioids in 2019, 16% were exclusive to prescription opioids (meaning they did not involve heroin, fentanyl, cocaine, methamphetamine, or benzodiazepines), 46% involved fentanyl, 41% involved cocaine, 53% involved methamphetamine, 10% involved heroin, and 12% involved a benzodiazepine.

Figure 14: Rate of Prescription Opioid Health Indicators in CCSF, 2005–2019

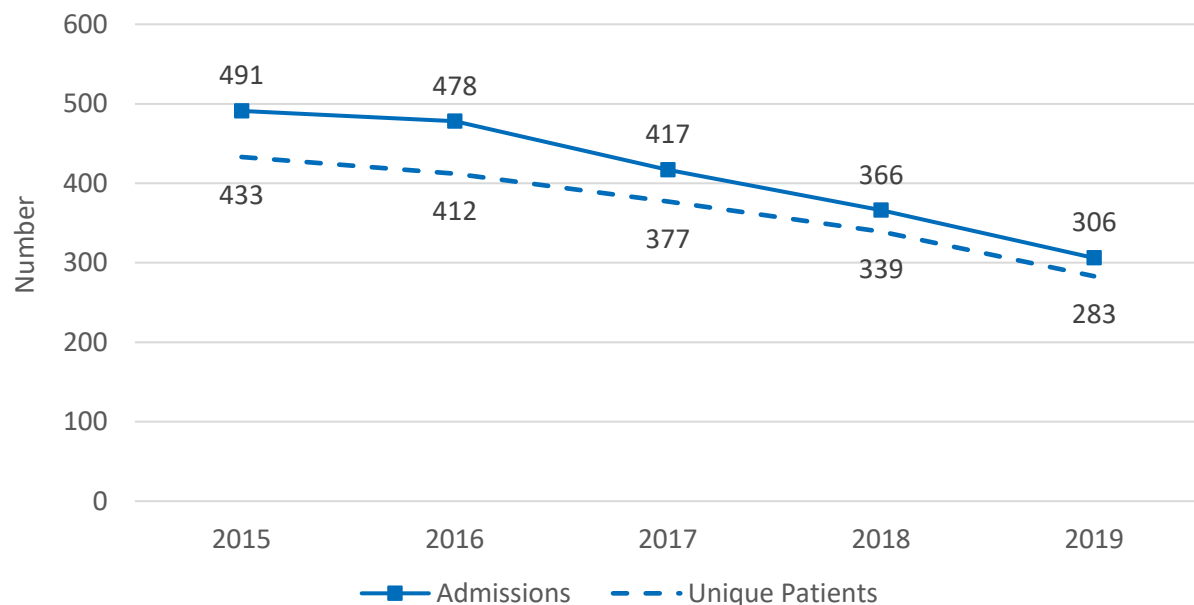


Rate is calculated per 100,000 CCSF population. Rate is calculated per 100,000 CCSF population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Emergency department visits and hospitalizations include primary or non-primary 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). Drug seizure data were provided by the National Forensic Laboratory Information System (NFLIS), Drug Enforcement Administration (DEA). Data were retrieved on Identified Drugs of Total Analyzed Drug Reports, San Francisco, 2015 and 2016, NFLIS, DEA. NFLIS methodology allows for the accounting of up to three drugs per item submitted for analysis; presented is a combined count including primary, secondary, and tertiary reports for each drug. 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 306 (3.7%) of all SUD treatment admissions in 2019. The number of admissions and unique patients continued to decrease (**Figure 15**). Admissions were more common among males (**Figure 16a**), people aged 30-39 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 (11%), heroin (11%), and cocaine/crack (9%).

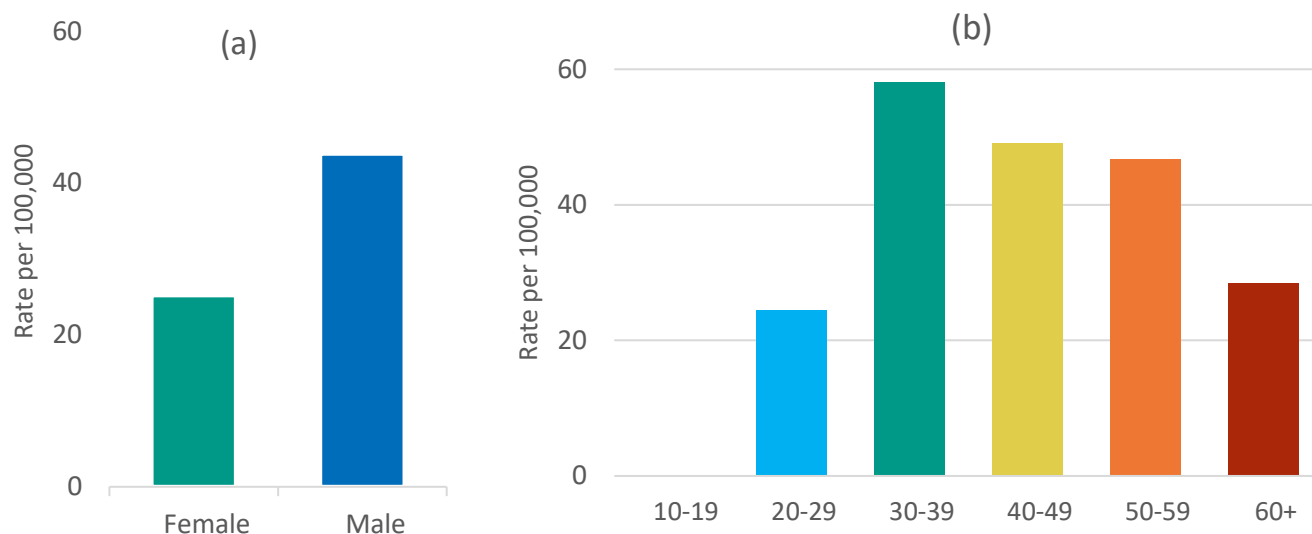
Figure 15: Number of Admissions and Unique Persons Admitted to Programs Treating Substance Use Disorders for Prescription Opioids as the Primary Substance in CCSF, 2015-2019



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 (SFPDH), Community Behavioral Health Services Division.

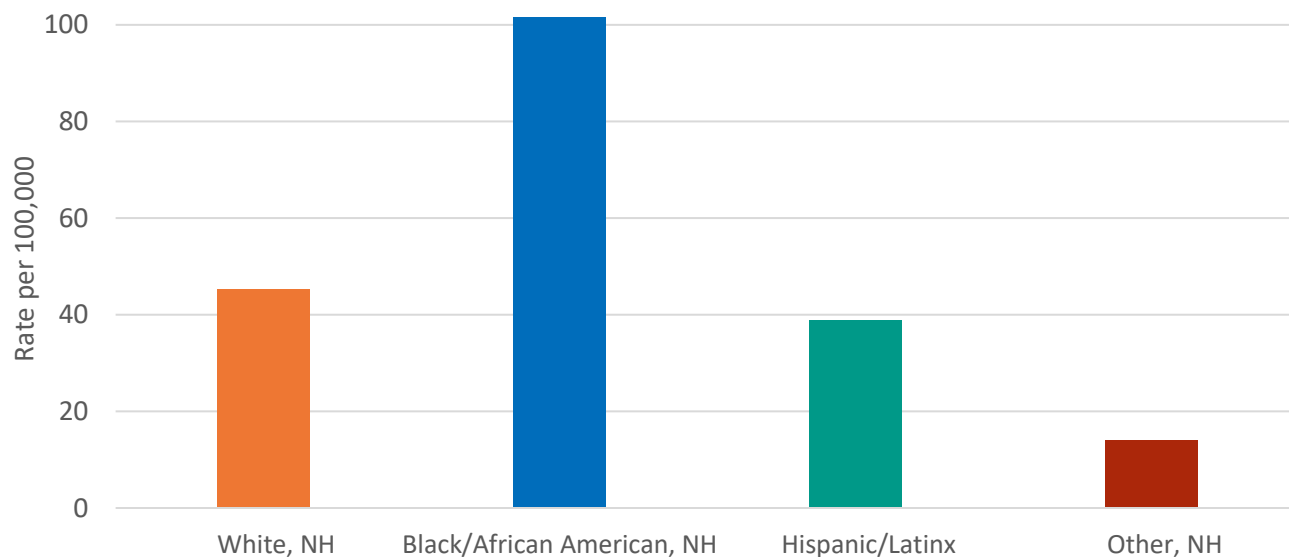
Figure 16: Rate of Admissions to Programs Treating Substance Use Disorders for Prescription Opioids by (a) Sex and (b) Age Group in CCSF, 2019



Rate is calculated per 100,000 CCSF 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 0 admissions among persons 10 to 19 years of age.

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

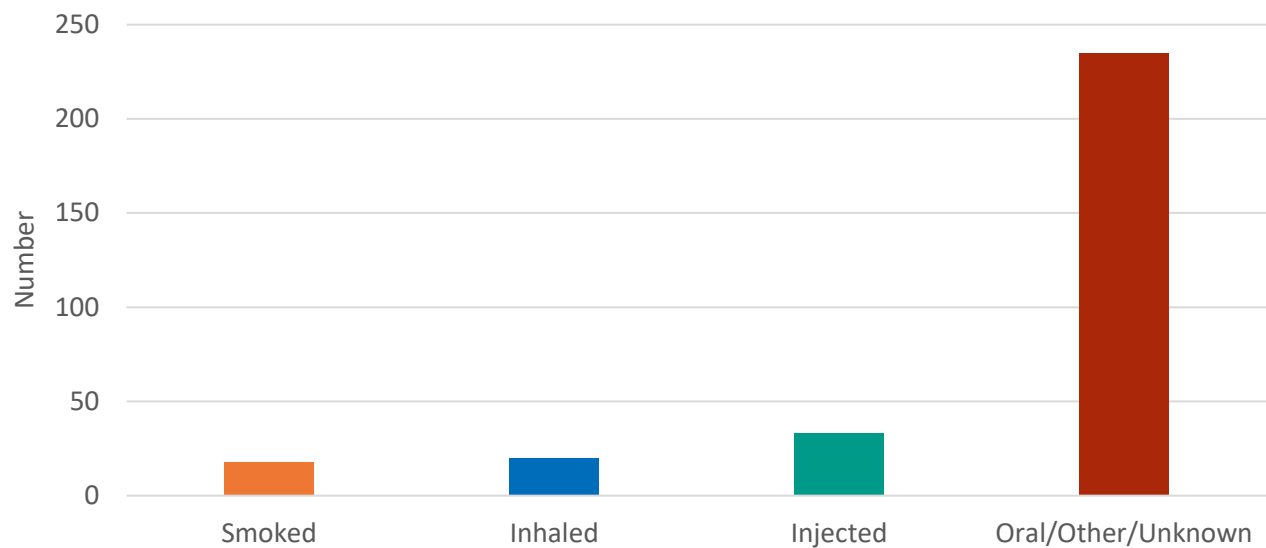
Figure 17: Rate of Admissions to Programs Treating Substance Use Disorders for Prescription Opioids by Race/Ethnicity in CCSF, 2019



Rate is calculated per 100,000 CCSF 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, 2019

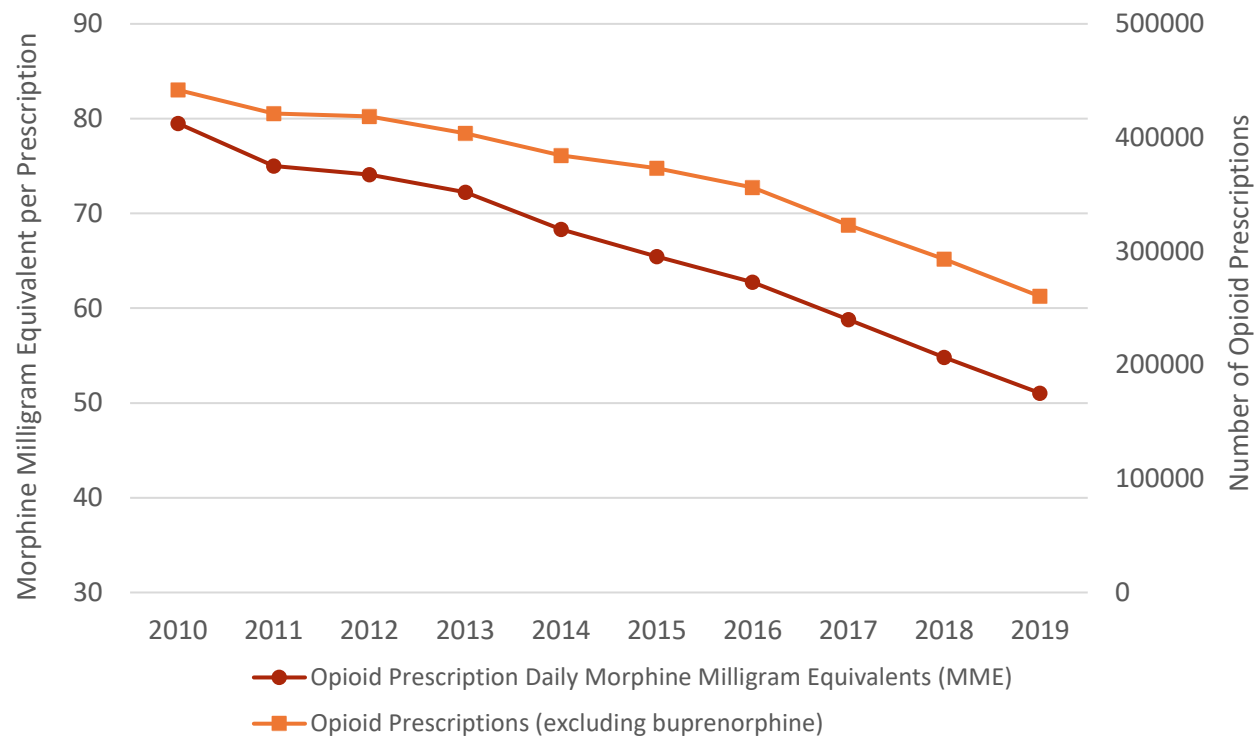


Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

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 41% and the daily morphine milligram equivalent (MME; excluding buprenorphine) in each prescription issued has declined by 36% (**Figure 19**).

Figure 19: Number of Opioid Prescriptions and Daily MMEs per Opioid Prescription in CCSF, 2010–2019



Data excludes prescriptions for buprenorphine.

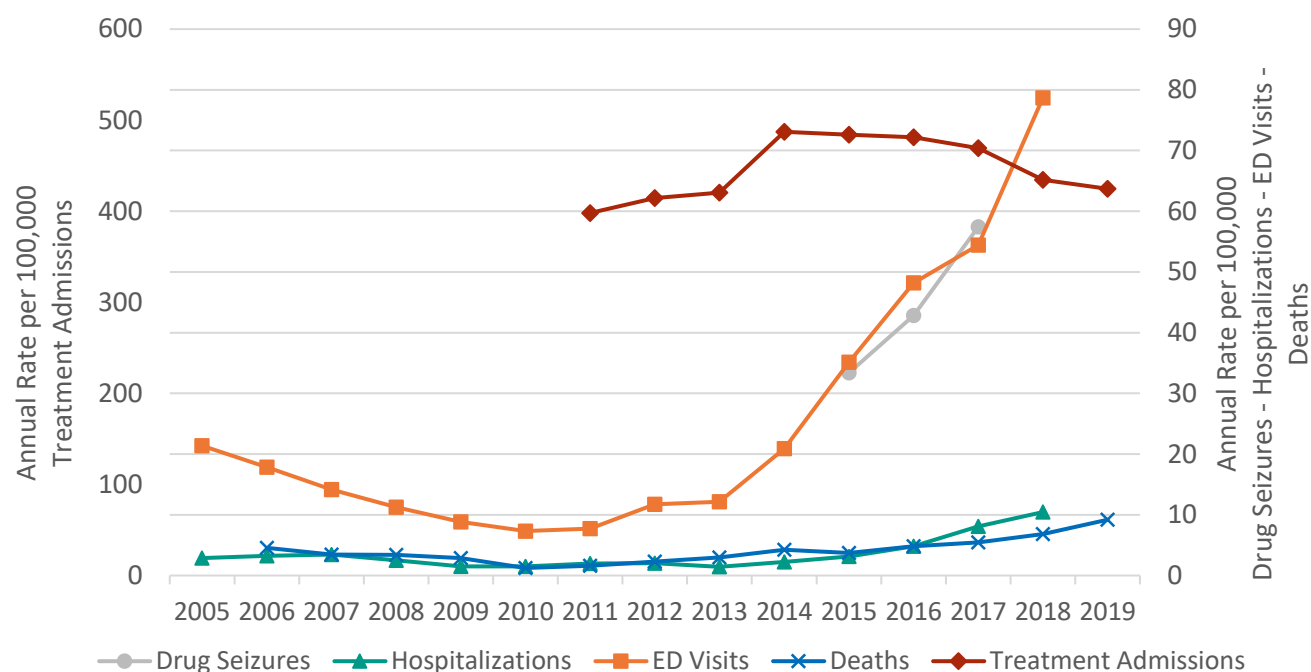
Source: California Controlled Substance Utilization Review and Evaluation System (CURES 2.0).

4.1.3 Heroin

Most indicators suggest increased heroin-related morbidity and mortality 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 9.2 deaths per 100,000 CCSF population in 2019, although most of these recent heroin deaths occurred in combination with, and may be attributable to, fentanyl (**Figure 6**). While the rate of treatment admission for heroin decreased slightly, both the rate and number of unique patients treated with buprenorphine increased in 2019 (**Figure 32**).

Among the 81 overdose deaths caused by heroin in 2019, 5% were exclusive to heroin, (meaning they did not involve prescription opioids, fentanyl, cocaine, methamphetamine, or benzodiazepines), 10% involved prescription opioids, 47% involved cocaine, 58% involved methamphetamine, 41% involved fentanyl, and 4% involved any benzodiazepine. There were 48 deaths due to heroin in the absence of fentanyl in 2019.

Figure 20: Rate of Heroin Health Indicators in CCSF, 2005–2019



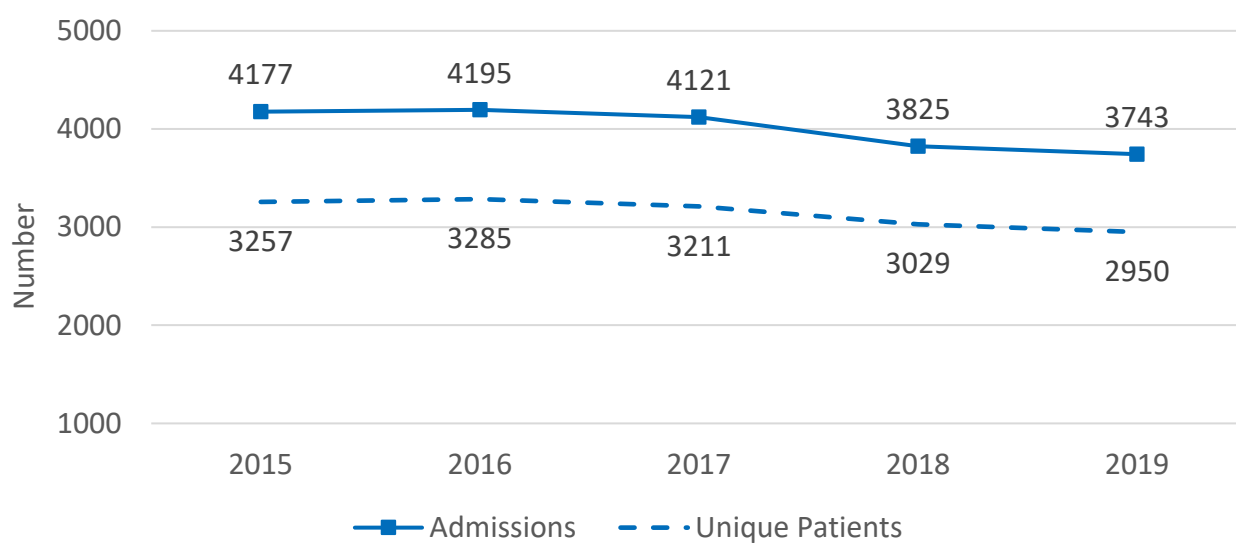
Rate is calculated per 100,000 CCSF population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Emergency department visits and hospitalizations include primary or non-primary ICD-9 codes: E850.0 (poisoning), 965.01 (poisoning) 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). Drug seizure data were provided by the National Forensic Laboratory Information System (NFLIS), Drug Enforcement Administration (DEA). Data were retrieved on Identified Drugs of Total Analyzed Drug Reports, San Francisco, NFLIS, DEA. NFLIS methodology allows for the accounting of up to three drugs per item submitted for analysis; presented is a combined count including primary, secondary, and tertiary reports for each drug. 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. This decline 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 2018 and 2019 and accounted for 45% of all admissions (**Figure 21**). Males accounted for 69% of the SUD admissions for heroin (**Figure 22a**), and the highest rate of admissions was among persons aged 50-59 years (**Figure 22b**) and Black/African Americans (**Figure 23**). The most common route of administration was injection (68%; **Figure 24**) and the most common secondary substances were methamphetamine (28%) and cocaine/crack (27%).

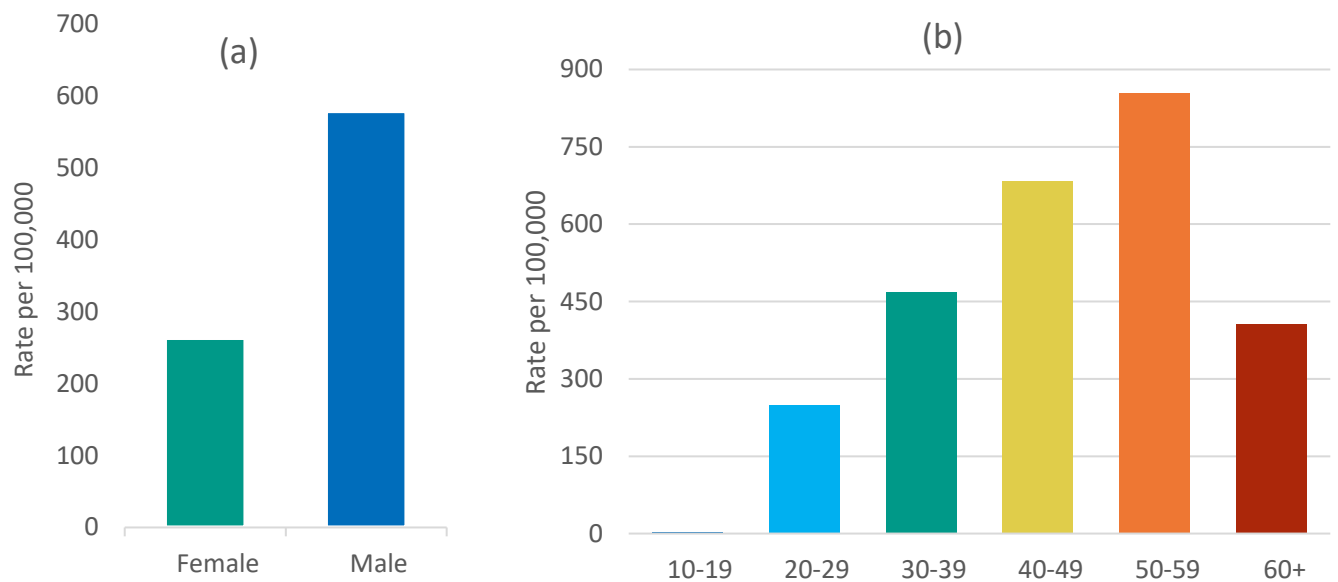
Figure 21: Number of Admissions and Unique Persons Admitted to Programs Treating Substance Use Disorders for Heroin as the Primary Substance in CCSF, 2015–2019



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.

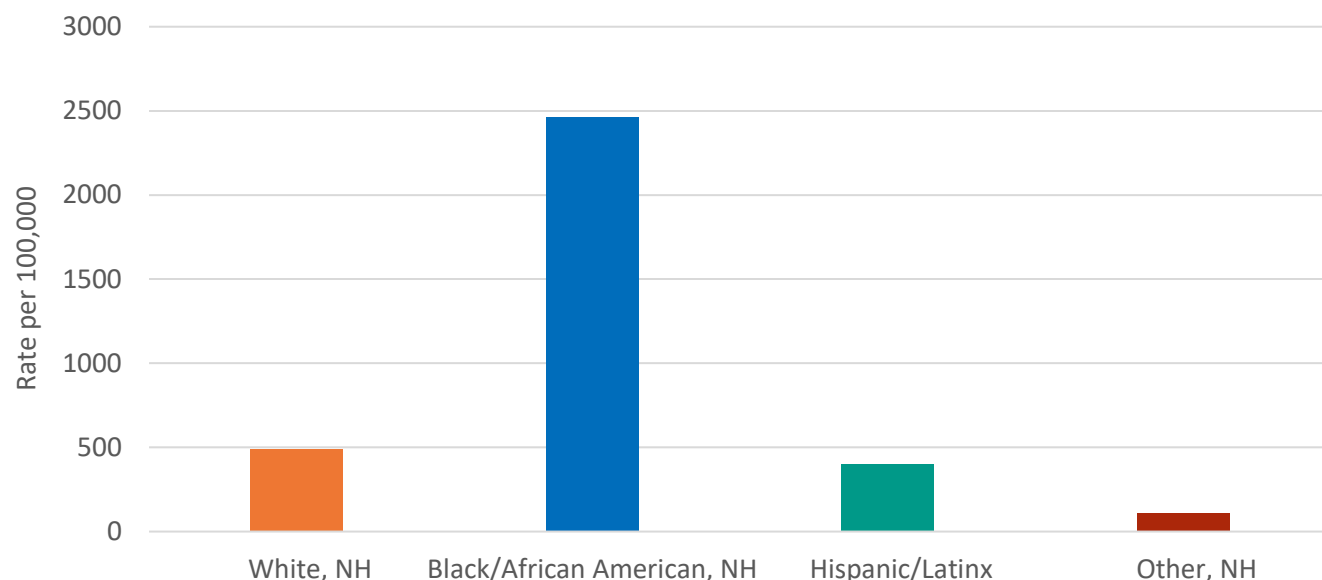
Figure 22: Rate of Admissions to Programs Treating Substance Use Disorders for Heroin by (a) Sex and (b) Age Group in CCSF, 2019



Rate is calculated per 100,000 CCSF 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.

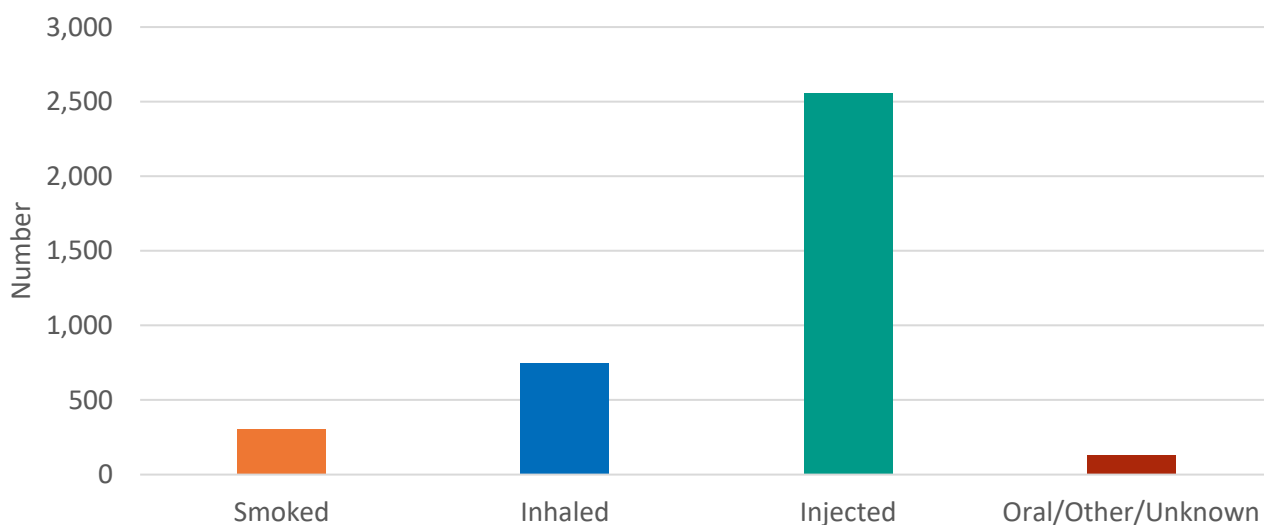
Figure 23: Rate of Admissions to Programs Treating Substance Use Disorders for Heroin by Race/Ethnicity in CCSF, 2019



Rate is calculated per 100,000 CCSF 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, 2019



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.

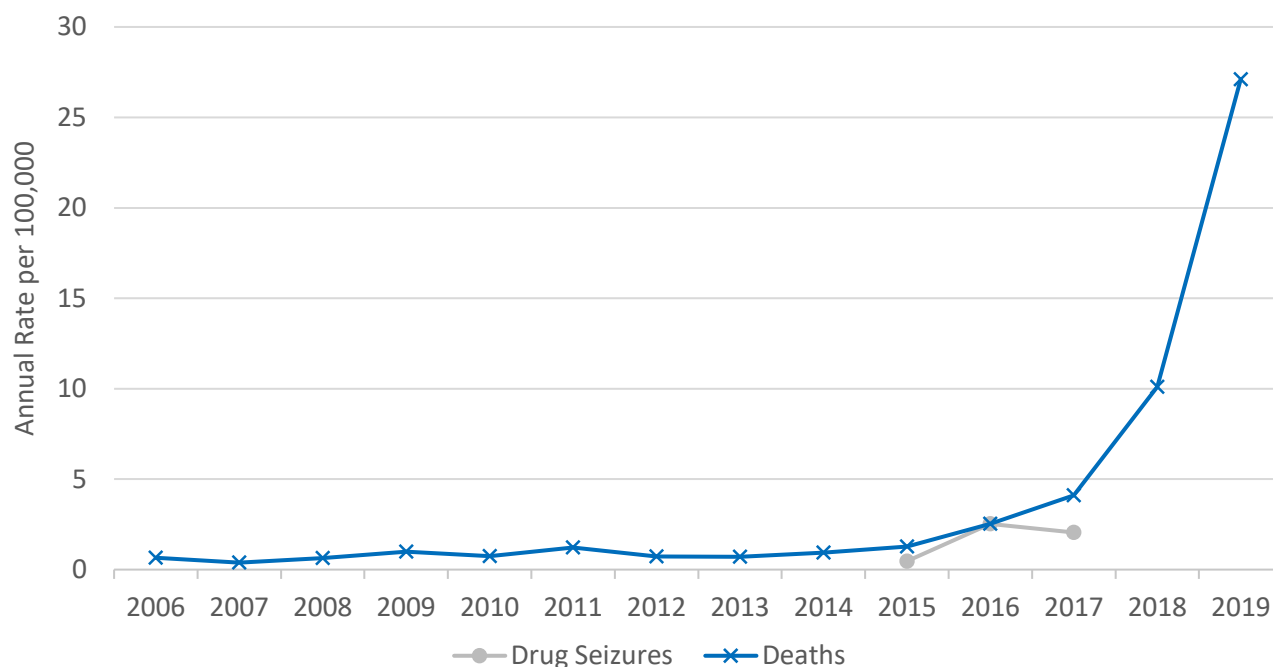
Source: San Francisco Department of Public Health (SFPDH), Community Behavioral Health Services Division.

4.1.4 Fentanyl

Fentanyl (including common analogues such as acetyl fentanyl) has impacted San Francisco substantially, and indicators suggest an increase of fentanyl in the local illicit drug supply (**Figure 25**). The rate of fentanyl overdose deaths began increasing in 2016, with a significant spike in the latter half of 2018 and a large increase from 89 deaths in 2018 to 239 in 2019. Among the 239 fentanyl-related overdose deaths in 2019, 14% were exclusive to fentanyl (meaning they did not involve prescription opioids, heroin, cocaine, methamphetamine, or benzodiazepines), 16% involved prescription opioids, 49% involved cocaine, 56% involved methamphetamine, 14% involved heroin, and 4% involved a benzodiazepine.

Since 2015, there have been scattered reports of counterfeit opioid or benzodiazepine pills, cocaine/crack, and methamphetamine containing fentanyl (see, e.g., www.sfcddcp.org/wp-content/uploads/2019/09/Health-Update-Fentanyl-FINAL-09.18.2019.pdf). Fentanyl is present in many forms, including white powders and “rocks” easily mistaken for methamphetamine, powder cocaine, or crack cocaine. Reports from people who use drugs and service providers suggest that fentanyl is commonly smoked to allow for dose titration.

Figure 25: Rate of Fentanyl Health Indicators in CCSF, 2006–2019

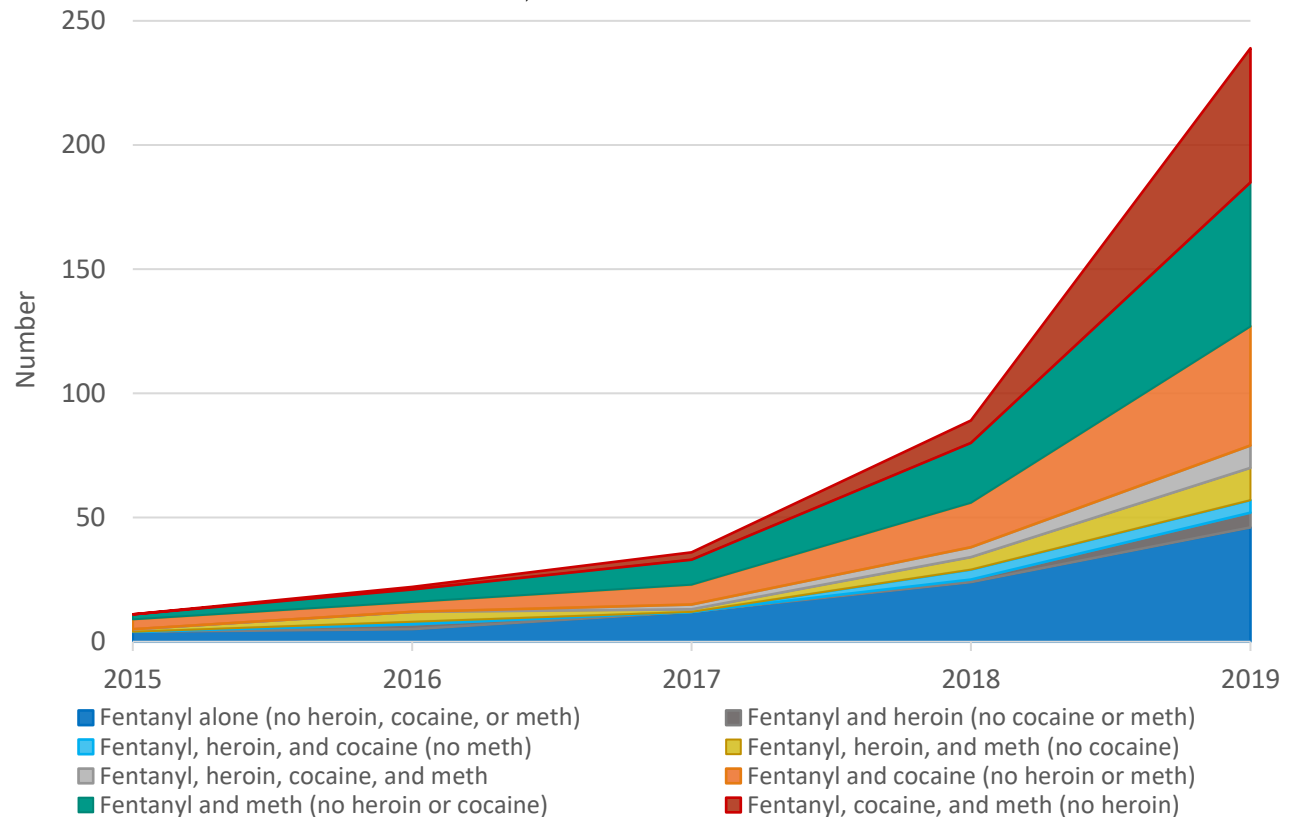


Rate is calculated per 100,000 CCSF population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Fentanyl includes fentanyl analogues.

Sources: *Overdose mortality* obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS). *Drug seizure* data were provided by the National Forensic Laboratory Information System (NFLIS), Drug Enforcement Administration (DEA). Data were retrieved on Identified Drugs of Total Analyzed Drug Reports, CCSF, NFLIS, DEA. NFLIS methodology allows for the accounting of up to three drugs per item submitted for analysis; presented is a combined count including primary, secondary, and tertiary reports for each drug.

From 2006 to 2014, overdose deaths related to fentanyl were low and constant (data not shown in figure below). Since 2015, the number of fentanyl related overdose deaths has risen. Fentanyl overdose deaths frequently involved cocaine or methamphetamine, while fentanyl deaths involving heroin have been less common (**Figure 26**).

Figure 26: Number of Fentanyl Overdose Deaths by Mutually Exclusive Involvement of Additional Causative Substance in CCSF, 2015–2019



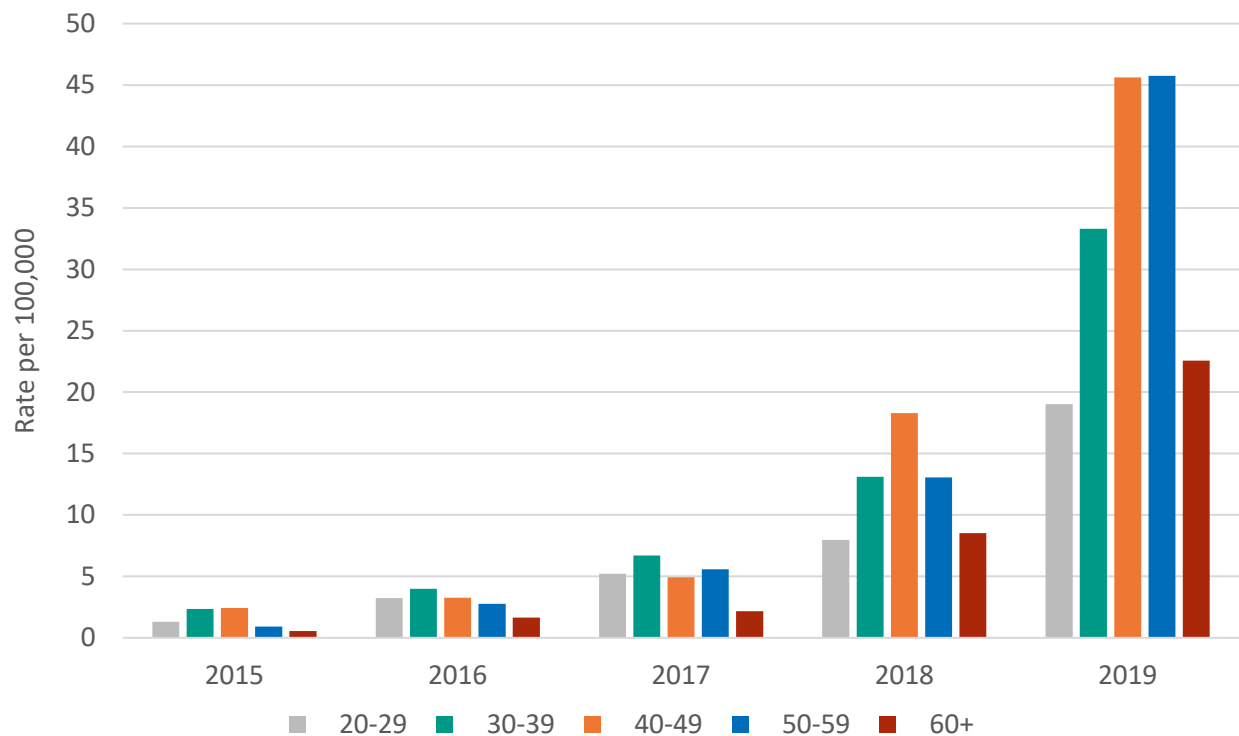
Fentanyl includes fentanyl analogues.

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 2019, the rate of fentanyl overdose deaths was highest among people aged 40-59 years (**Figure 27**), males (**Figure 28**), and among Black/African Americans (**Figure 29**).

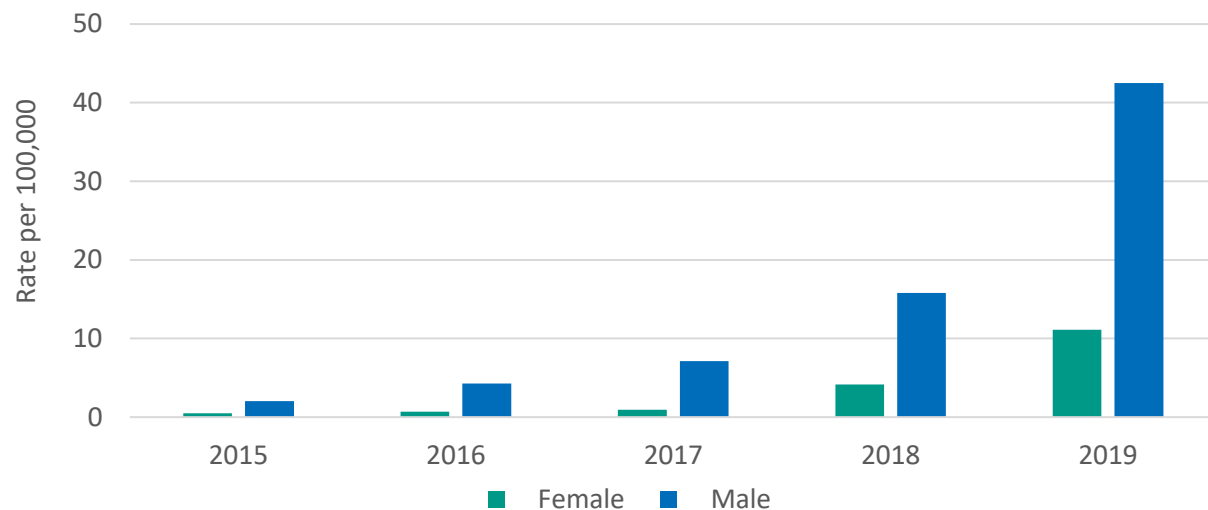
Figure 27: Rate of Fentanyl Overdose Deaths by Age Category in CCSF, 2015–2019



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. 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).

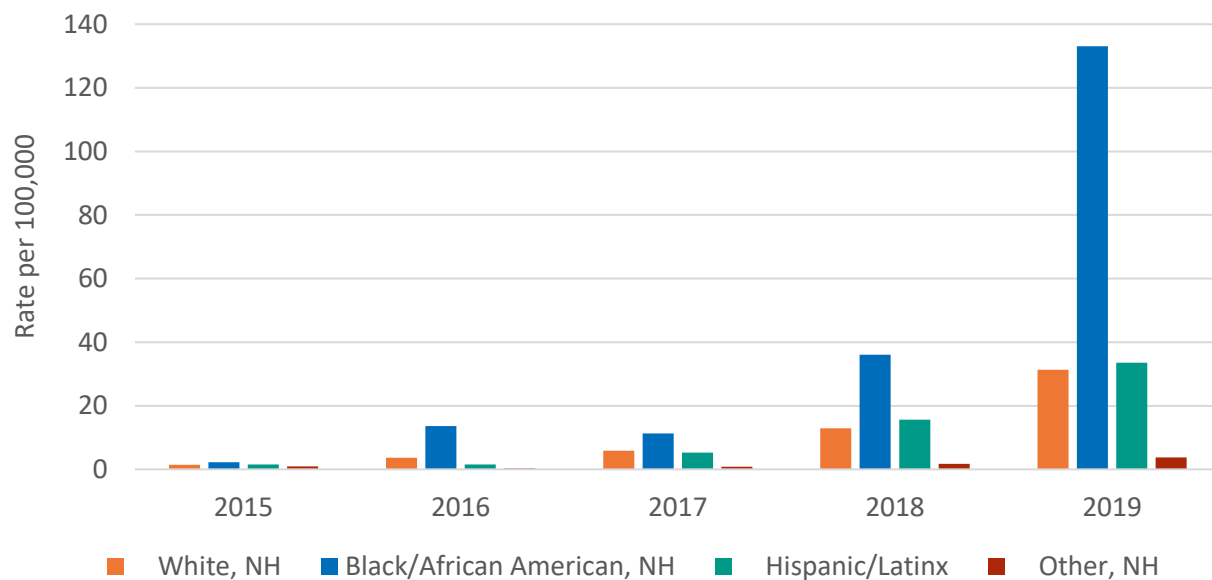
Figure 28: Rate of Fentanyl Overdose Deaths by Sex in CCSF, 2015–2019



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. 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, 2015–2019



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. 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

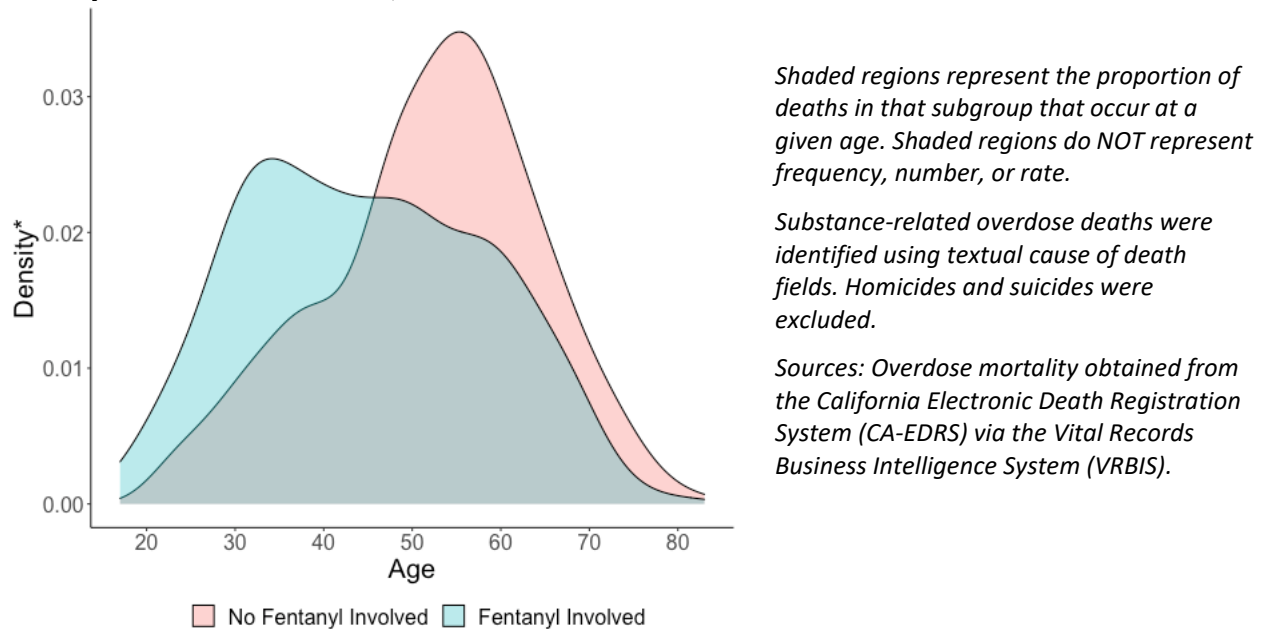
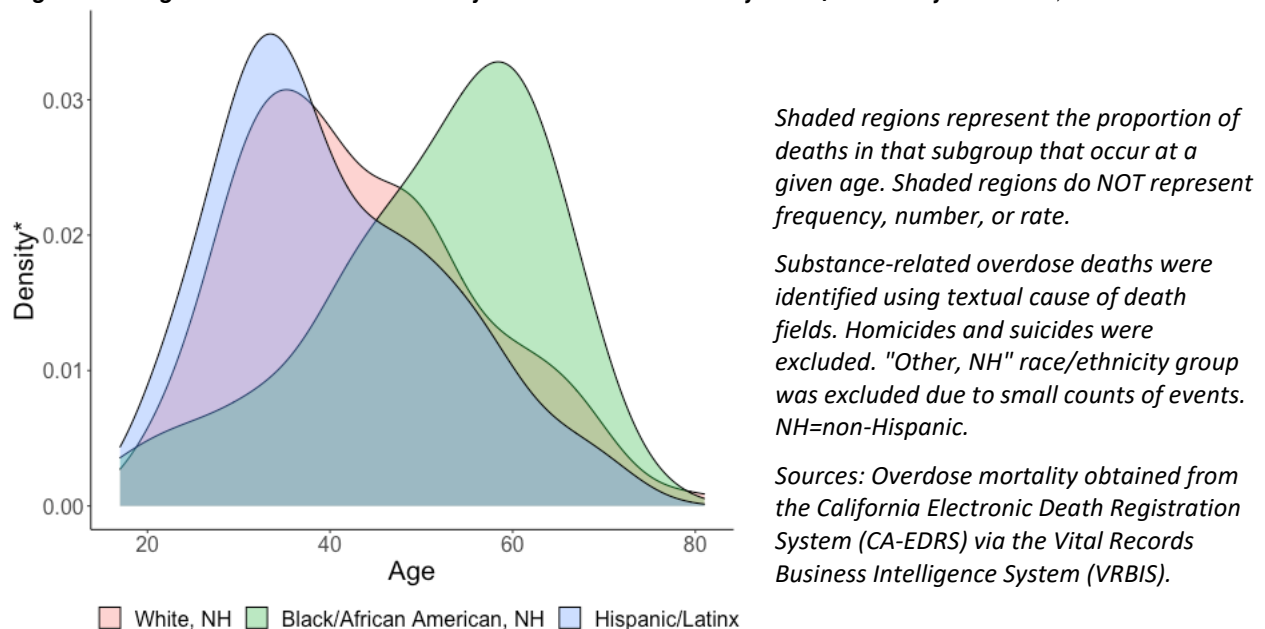


Figure 31: Age distribution of fentanyl overdose deaths by race/ethnicity in CCSF, 2018-2019

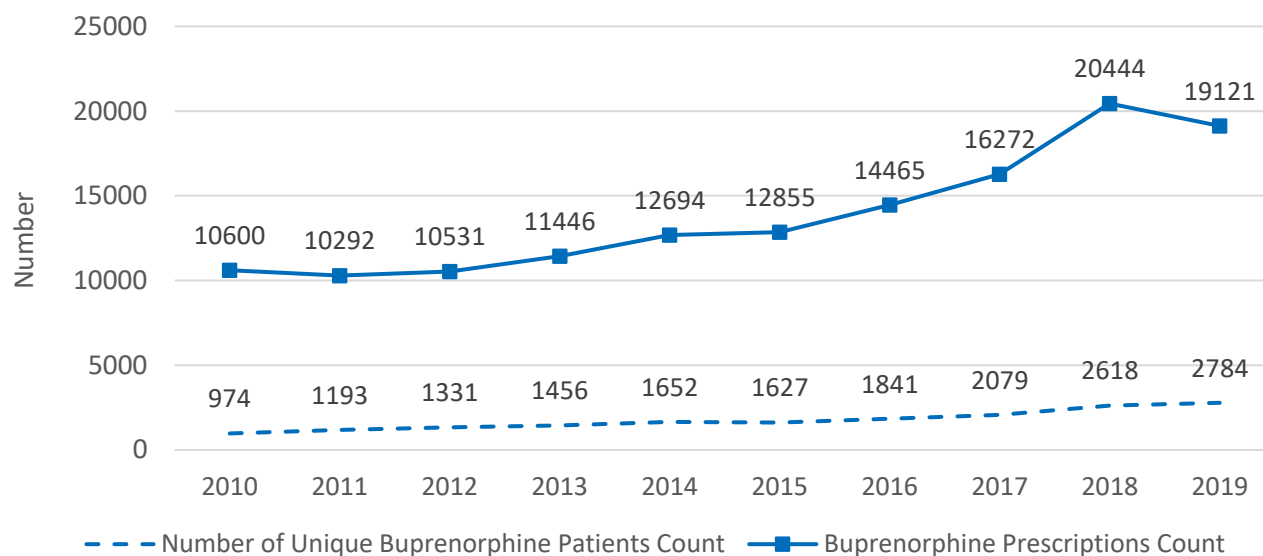


The number of admissions to SUD treatment programs for fentanyl as the primary drug was generally fewer than 10 per year through 2017. The number of admissions rose to 41 in 2018 and 159 in 2019, representing 1.9% of all SUD treatment admissions that year.

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 decreased somewhat in 2019, while the number of unique buprenorphine patients continued to increase in 2019 (**Figure 32**). From 2010 to 2019, the rate of buprenorphine prescriptions (per 1,000 residents) increased 65% and the number of unique buprenorphine patients per 1,000 residents more than doubled.

Figure 32: Annual Number of Buprenorphine Prescriptions and Number of Unique Patients Receiving Buprenorphine Prescriptions in CCSF, 2010–2019



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.

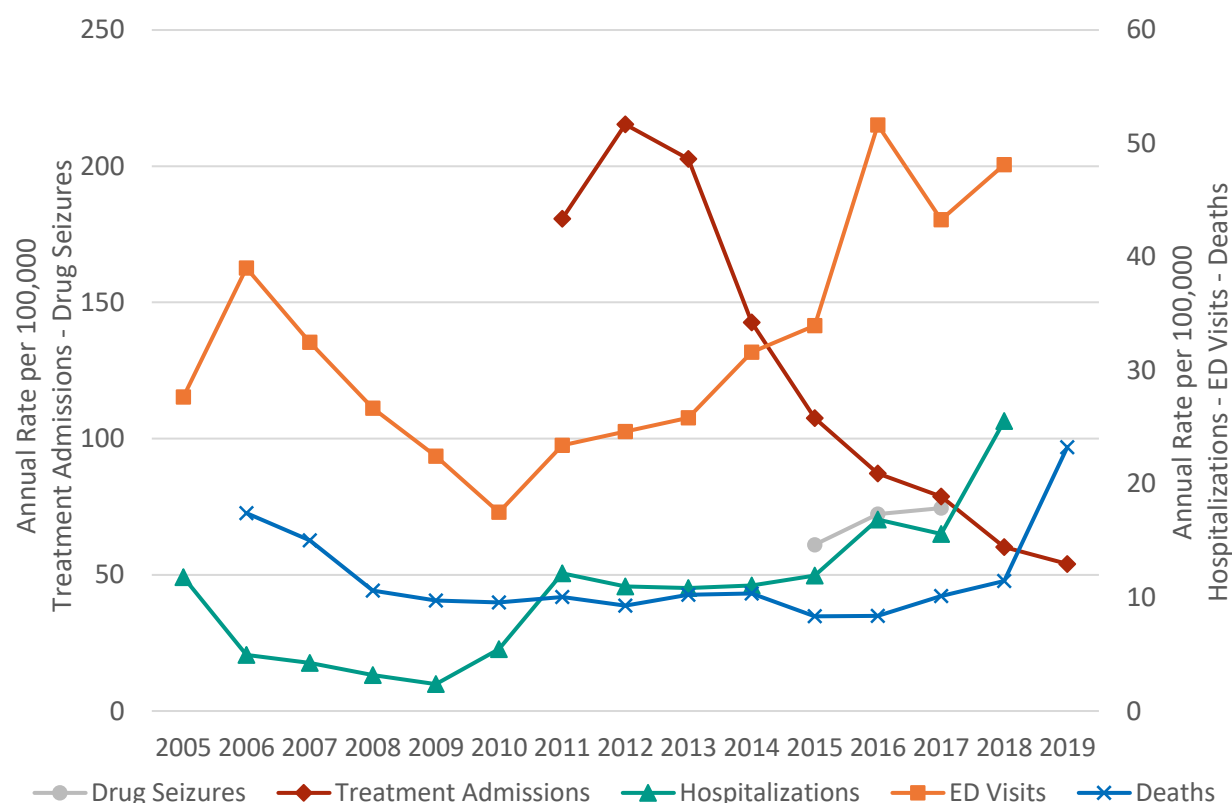
A prominent service in San Francisco is the SFDPH Street Medicine program of low-barrier buprenorphine for persons experiencing homelessness. From November 2016 to August 2019, 562 persons were started on buprenorphine; 130 remained in care as of August 2019. DPH Street Medicine can assess for and initiate buprenorphine at the 50 Ivy Street clinic, syringe access sites, health fairs, navigation centers, on the streets, and in parks. Since the Shelter-in-Place order started March 2020 in CCSF, the number of buprenorphine inductions started by DPH Street Medicine has increased three-fold. Low barrier delivery of medications for substance use disorders has also expanded to Shelter-in-Place hotels and safe sleeping sites during this time.

In addition, the Community Behavioral Health Pharmacy at 1380 Howard Street provides buprenorphine treatment, including observed dosing and urine drug screens. As of September 2019, buprenorphine access was provided to 150 to 200 patients per month, approximately 50 of whom were DPH Street Medicine patients.

4.2 COCAINE/CRACK

From 2018 to 2019, the rate of cocaine/crack related overdose deaths doubled—the largest year-to-year increase in the rate of overdose deaths due to cocaine/crack since 2010. However, deaths due to cocaine alone have remained low and most of 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 nearly 75% (**Figure 33**). 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 33: Rate of Cocaine Health Indicators in CCSF, 2005–2019



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.

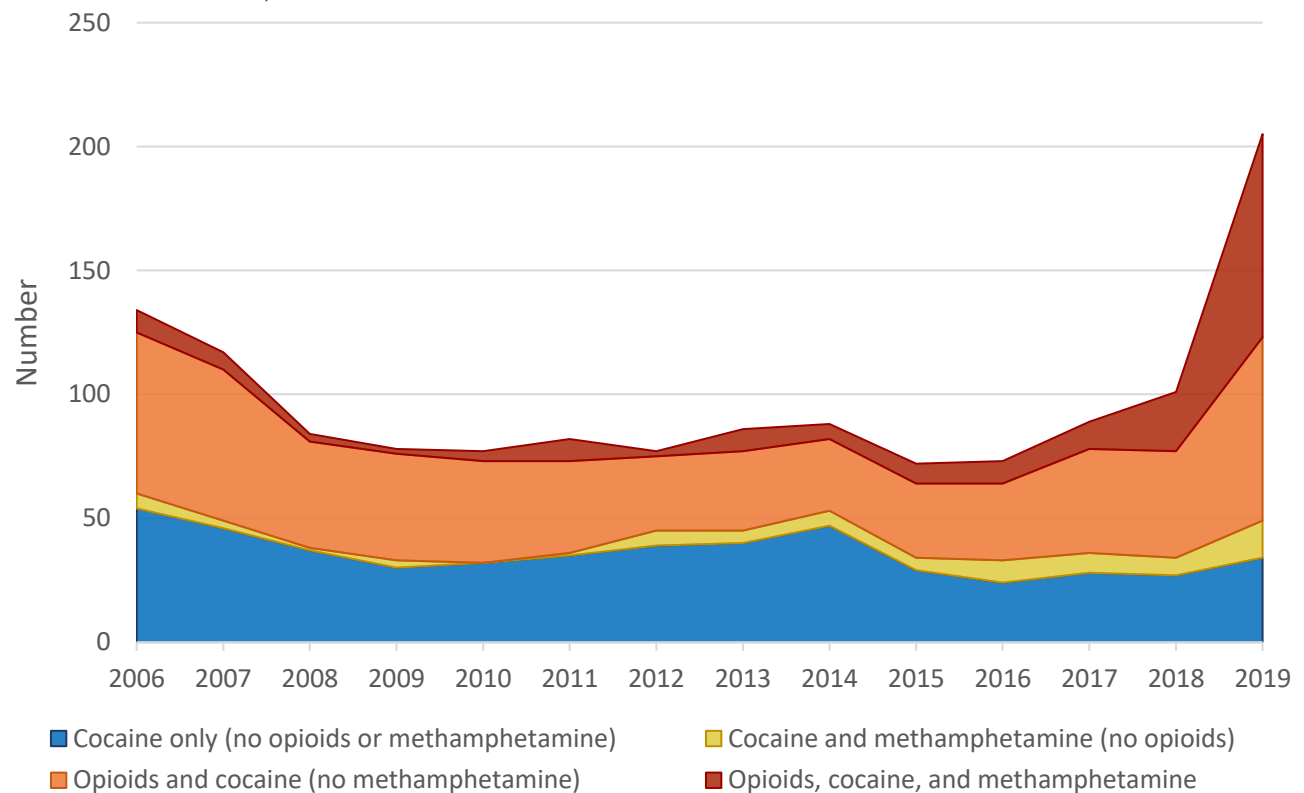
Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS). Drug seizure data provided by the National Forensic Laboratory Information System (NFLIS), Drug Enforcement Administration (DEA). Data were retrieved on Identified Drugs of Total Analyzed Drug Reports, CCSF, NFLIS, DEA. NFLIS methodology allows for the accounting of up to three drugs per item submitted for analysis; presented is a combined count including primary, secondary, and tertiary reports for each drug. 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. Among the 205 cocaine-related overdose deaths in San Francisco in 2019, 17% were exclusive to cocaine, 17% involved prescription opioids, 19% involved heroin, 57% involved fentanyl, 47% involved methamphetamine, and 1% involved a benzodiazepine.

The increase in cocaine overdose deaths beginning in 2016 is due to the involvement of opioids (Figure 34) and, specifically, fentanyl (Figure 35).

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.sfcddp.org/health-alerts-emergencies/health-alerts/).

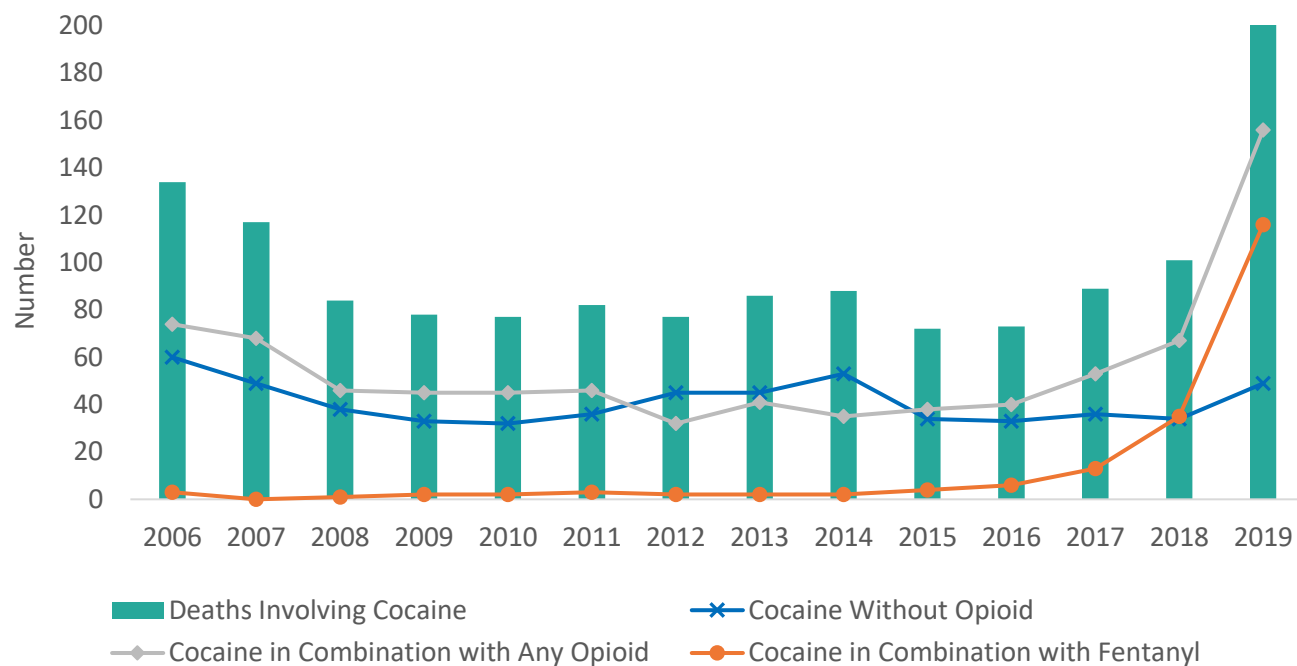
Figure 34: Number of Cocaine Overdose Deaths by Mutually Exclusive Additional Causative Substances in CCSF, 2006–2019



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 35: Number of Cocaine Overdose Deaths by Opioid/Fentanyl Involvement in CCSF, 2006–2019

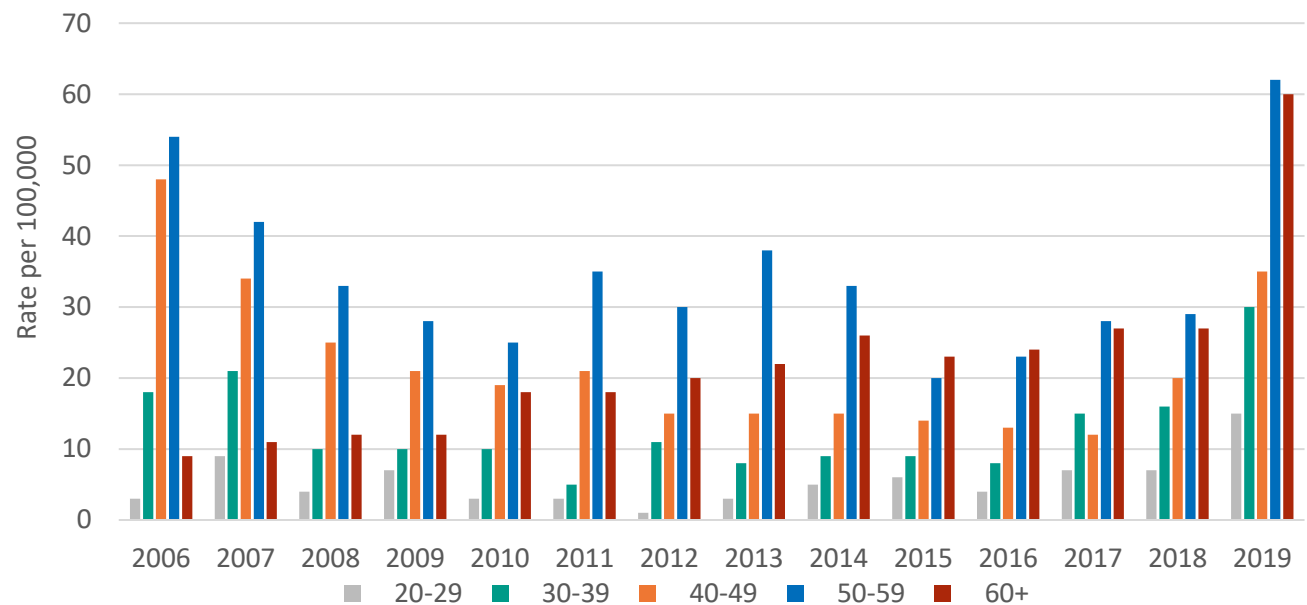


Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Fentanyl includes fentanyl analogues.

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 36**), Black/African Americans (**Figure 37**), and males compared to females (**Figure 38**).

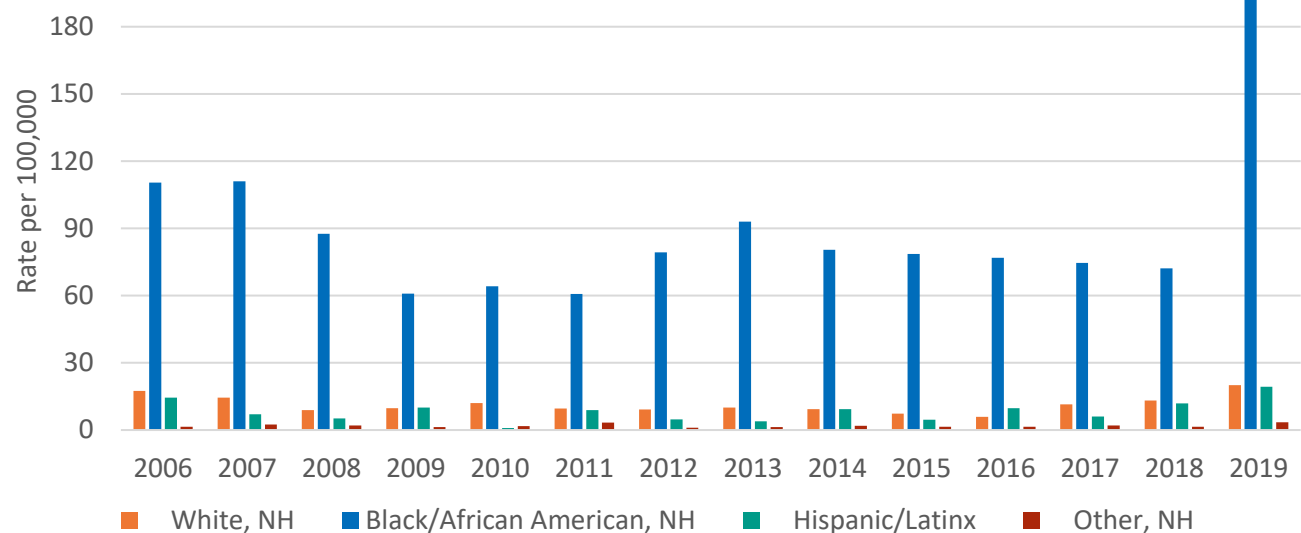
Figure 36: Rate of Cocaine Overdose Deaths by Age Category in CCSF, 2006–2019



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. Rates by age exclude <5 deaths due to cocaine overdose among individuals younger than 20 years of age.

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

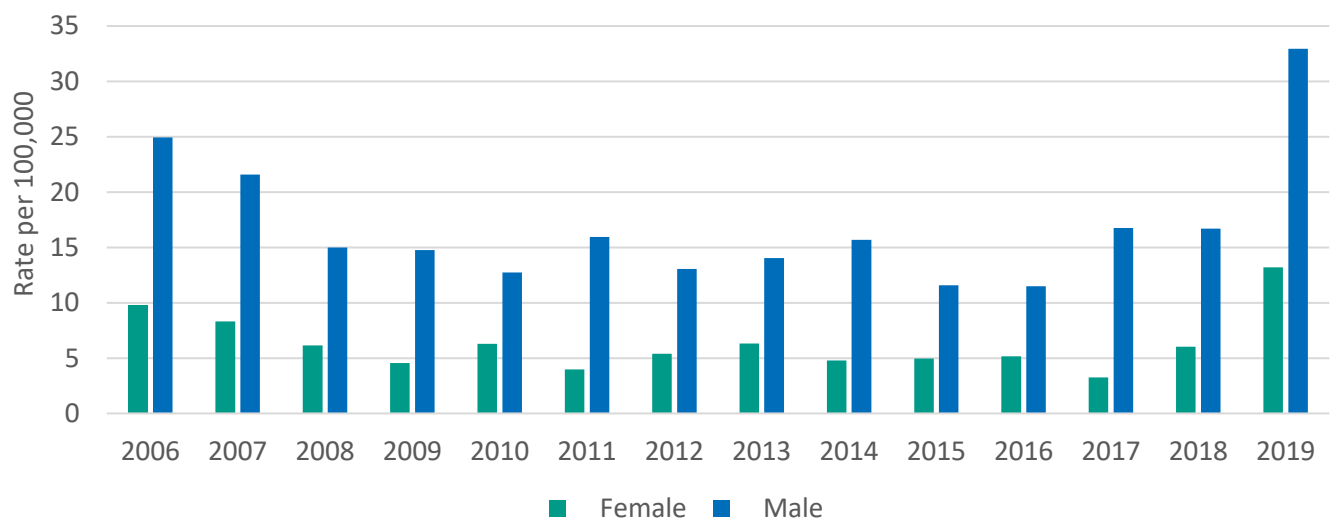
Figure 37: Rate of Cocaine Overdose Deaths by Race/Ethnicity in CCSF, 2006–2019



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 38: Rate of Cocaine Overdose Deaths by Sex in CCSF, 2006–2019



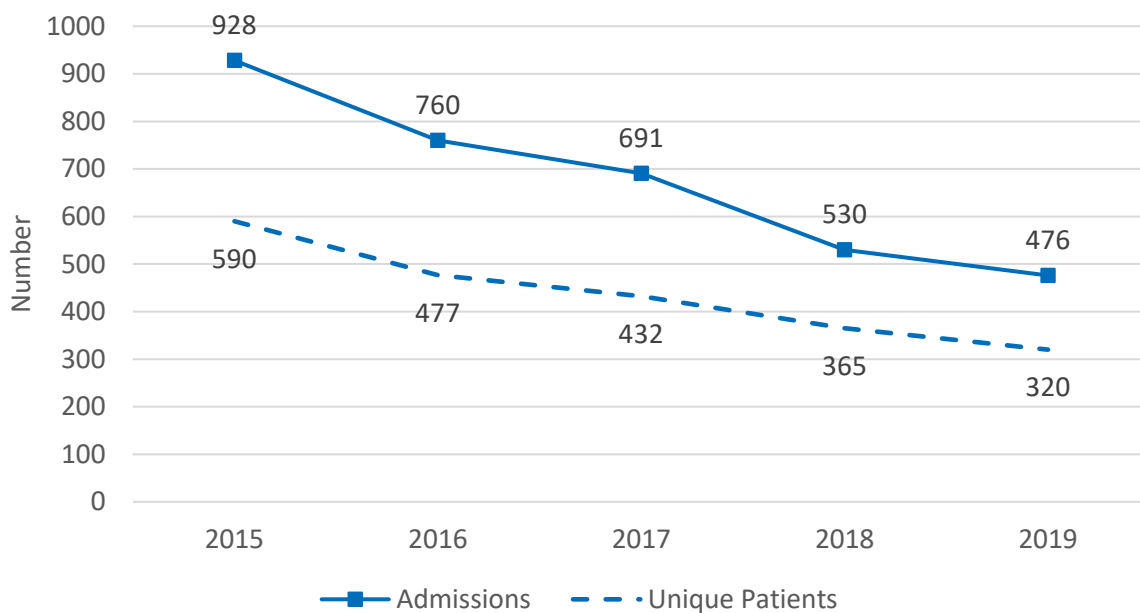
Rate is calculated per 100,000 CCSF population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. No other sex categories were noted.

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

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). This 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 2018 to 2019, SUD treatment admissions for cocaine/crack in San Francisco decreased 11% (**Figure 39**). Almost three quarters of admissions were male (**Figure 40a**). The highest rates of admissions were among persons aged 50–59 years (**Figure 40b**) and Black/African Americans (**Figure 41**). The most common route of administration was smoking (83%, **Figure 42**). The most common secondary substances included alcohol (26%), followed by heroin (13%), cannabis (11%), and methamphetamine (10%).

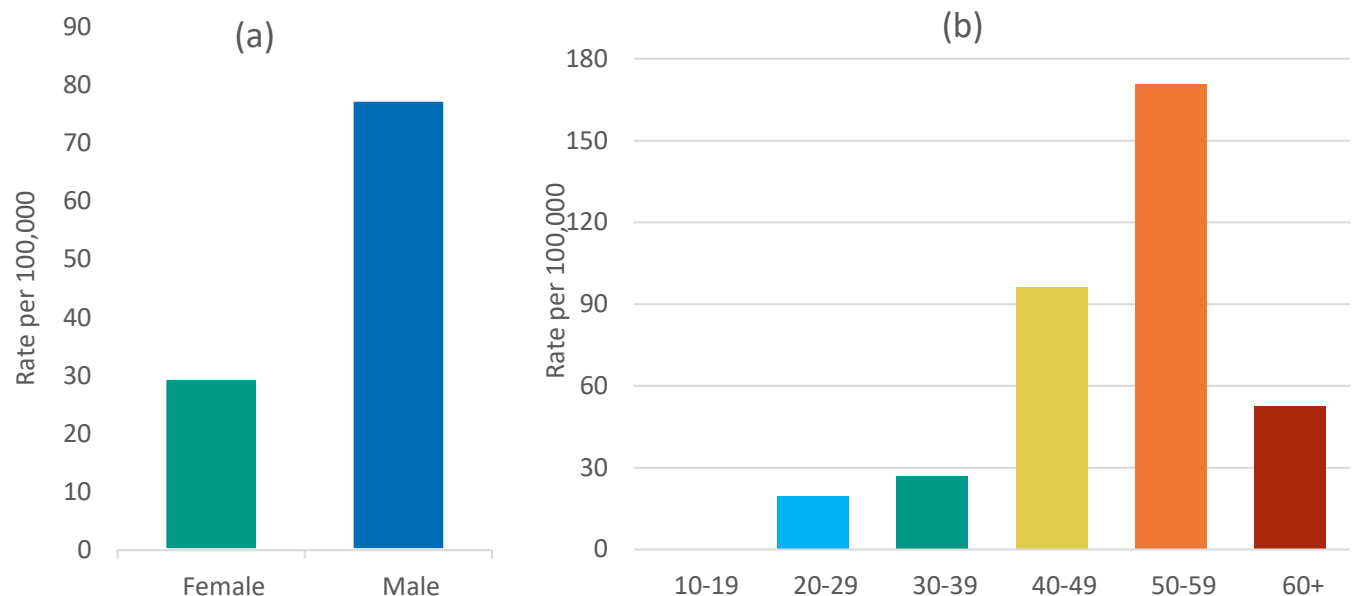
Figure 39: Number of Admissions and Unique Persons Admitted to Programs Treating Substance Use Disorders for Cocaine/Crack as the Primary Substance in CCSF, 2015–2019



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.

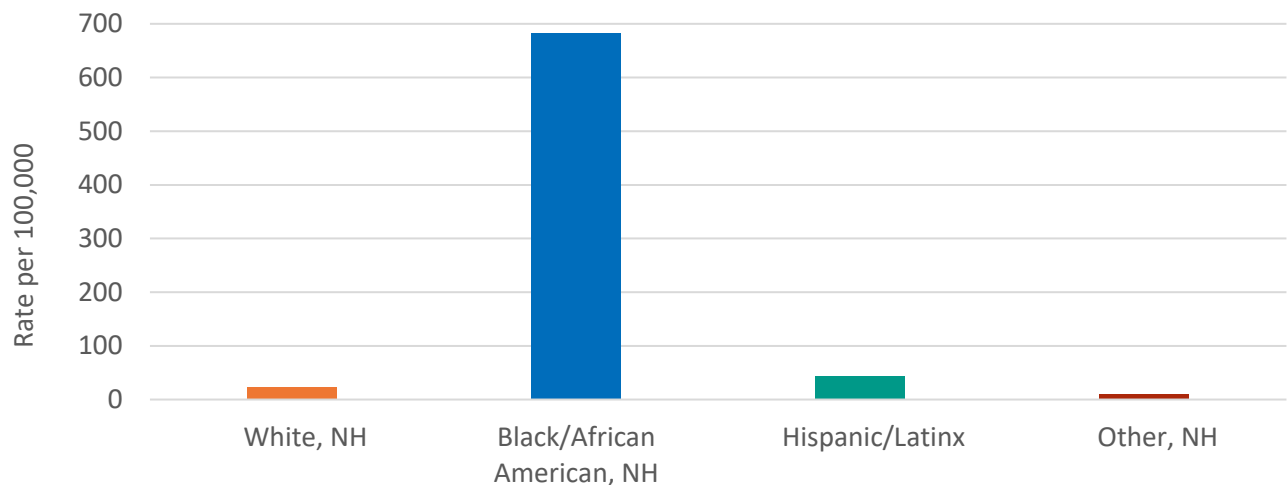
Figure 40: Rate of Admissions to Programs Treating Substance Use Disorders for Cocaine/Crack by (a) Sex and (b) Age Group in CCSF, 2019



Rate is calculated per 100,000 CCSF 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.

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

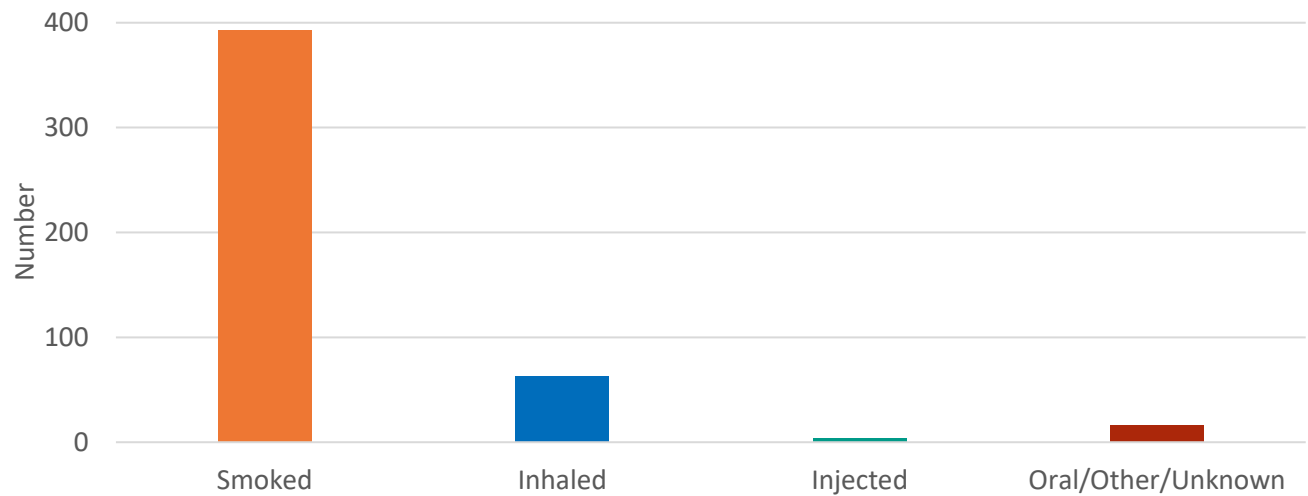
Figure 41: Rate of Admissions to Programs Treating Substance Use Disorders for Cocaine/Crack by Race/Ethnicity in CCSF, 2019



Rate is calculated per 100,000 CCSF 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 (SFPDH), Community Behavioral Health Services Division.

Figure 42: Number of Admissions to Programs Treating Substance Use Disorders for Cocaine/Crack by Route of Administration in CCSF, 2019



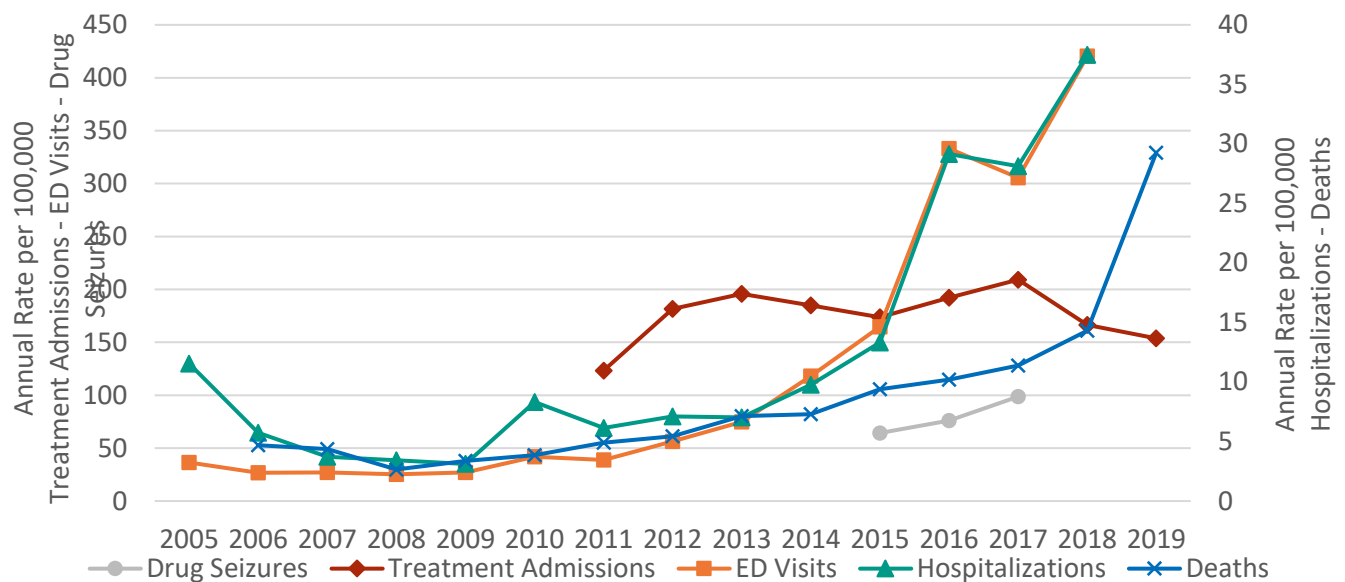
Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

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 more than doubled from 2018 to 2019. As is the case with cocaine/crack, most of the recent increase in methamphetamine overdose death can be attributed to fentanyl. SUD treatment admissions have decreased somewhat since a peak in 2017 (**Figure 43**). 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 43: Rate of Methamphetamine Health Indicators in CCSF, 2005–2019

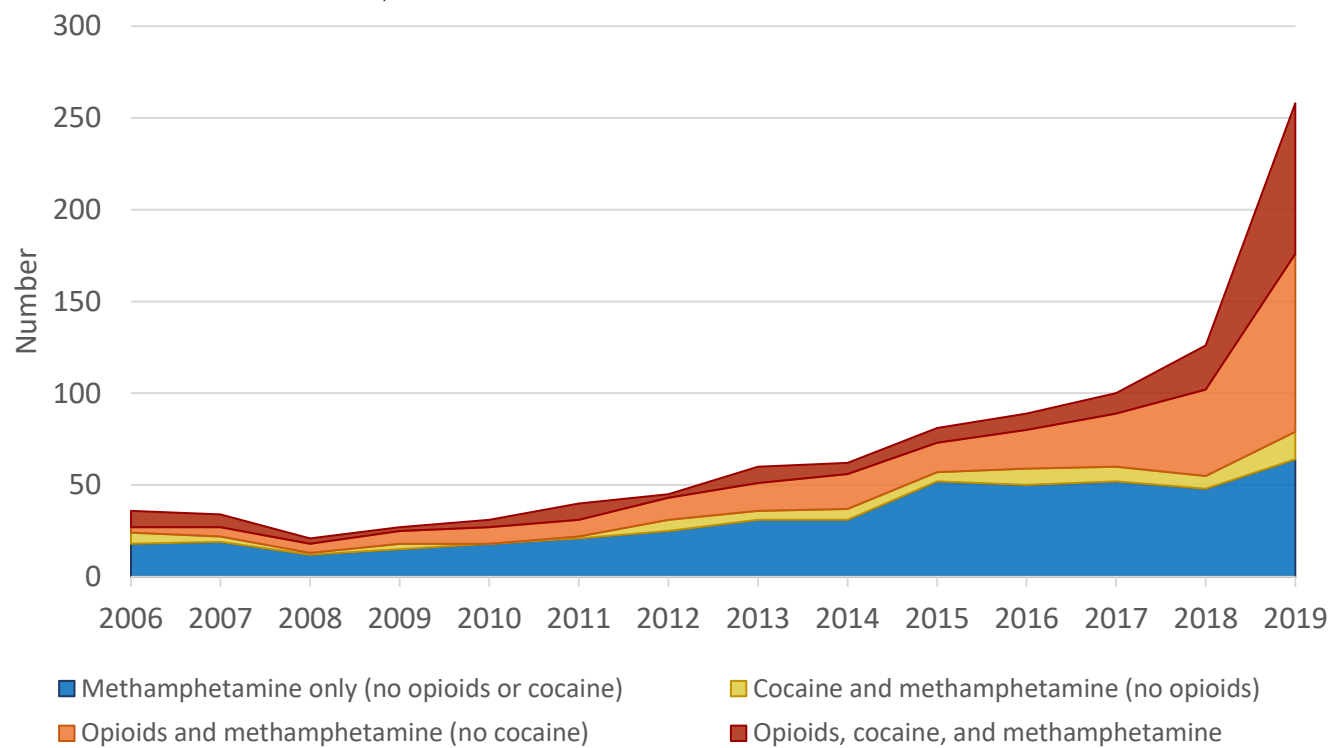


Rate is calculated per 100,000 CCSF population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Emergency department visits and hospitalizations include primary or non-primary ICD-9 codes: E854.2, 969.72 (poisoning), and ICD-10 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). Drug seizure data were provided by the National Forensic Laboratory Information System (NFLIS), Drug Enforcement Administration (DEA). Data were retrieved on Identified Drugs of Total Analyzed Drug Reports, San Francisco, NFLIS, DEA. NFLIS methodology allows for the accounting of up to three drugs per item submitted for analysis; presented is a combined count including primary, secondary, and tertiary reports for each drug. 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 258 overdose deaths caused by methamphetamine in San Francisco in 2019, 25% involved methamphetamine exclusively (meaning they did not involve any opioids, cocaine, or benzodiazepines), 17% involved prescription opioids, 18% involved heroin, 52% involved fentanyl, and 40% involved cocaine. 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 44 and 45**).

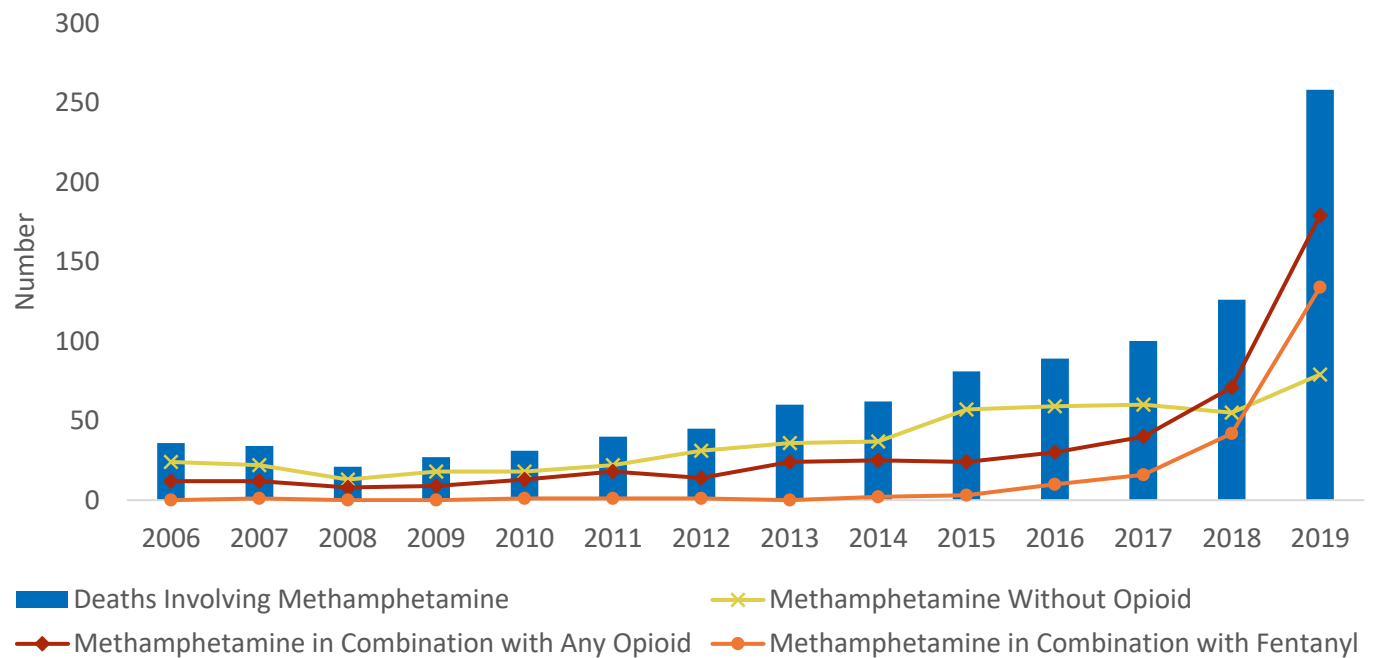
Figure 44: Number of Methamphetamine Overdose Deaths by Mutually Exclusive Additional Causative Substance in CCSF, 2006–2019



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 45: Number of Methamphetamine Overdose Deaths by Opioid/Fentanyl Involvement in CCSF, 2006–2019

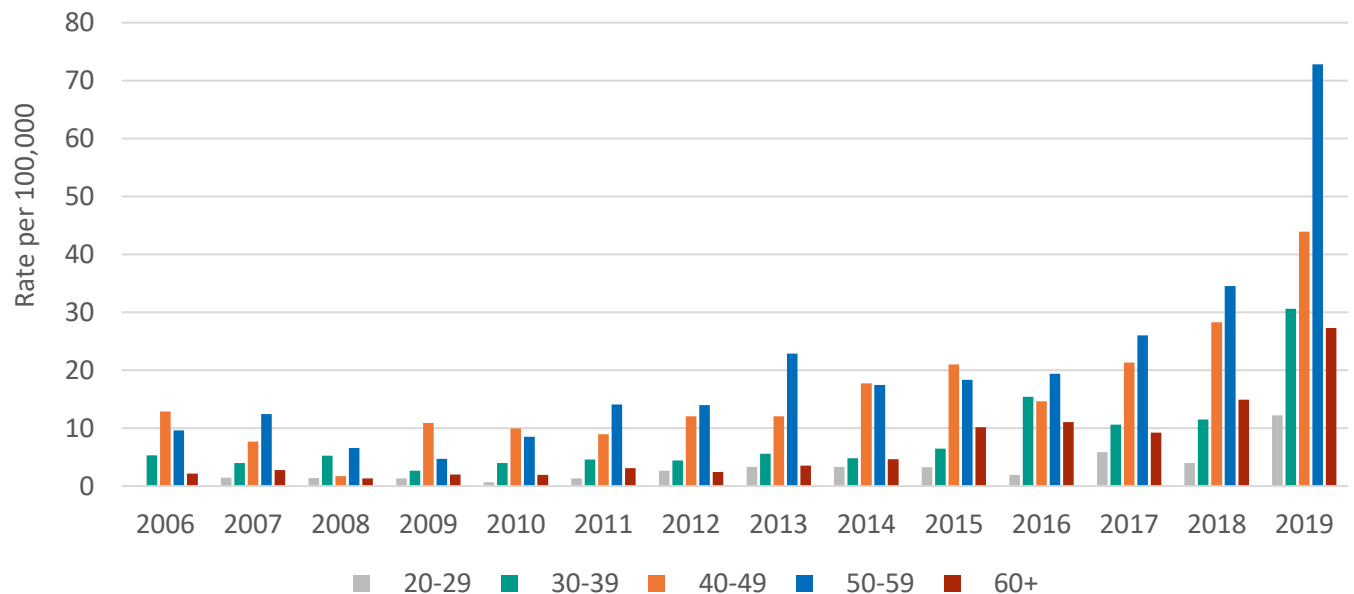


Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Fentanyl includes fentanyl analogues.

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 46**), Black/African Americans (**Figure 47**), and males compared to females (**Figure 48**).

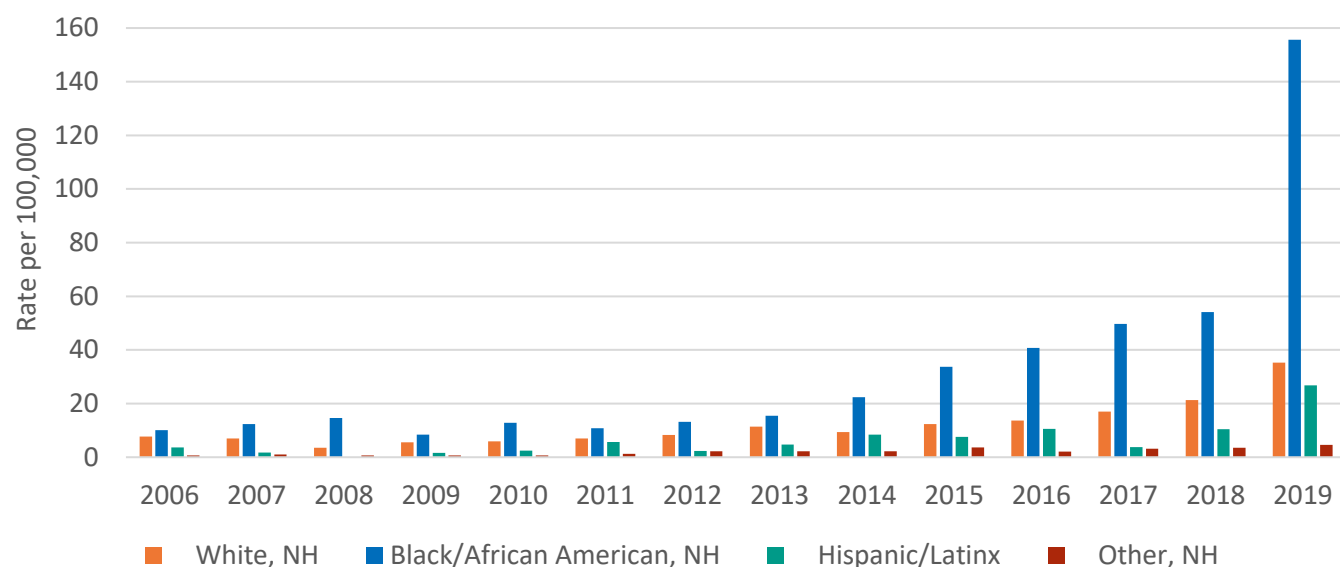
Figure 46: Rate of Methamphetamine Overdose Deaths by Age Category in CCSF, 2006–2019



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. Rate by age exclude <5 deaths due to methamphetamine overdose among individuals younger than 20 years of age.

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

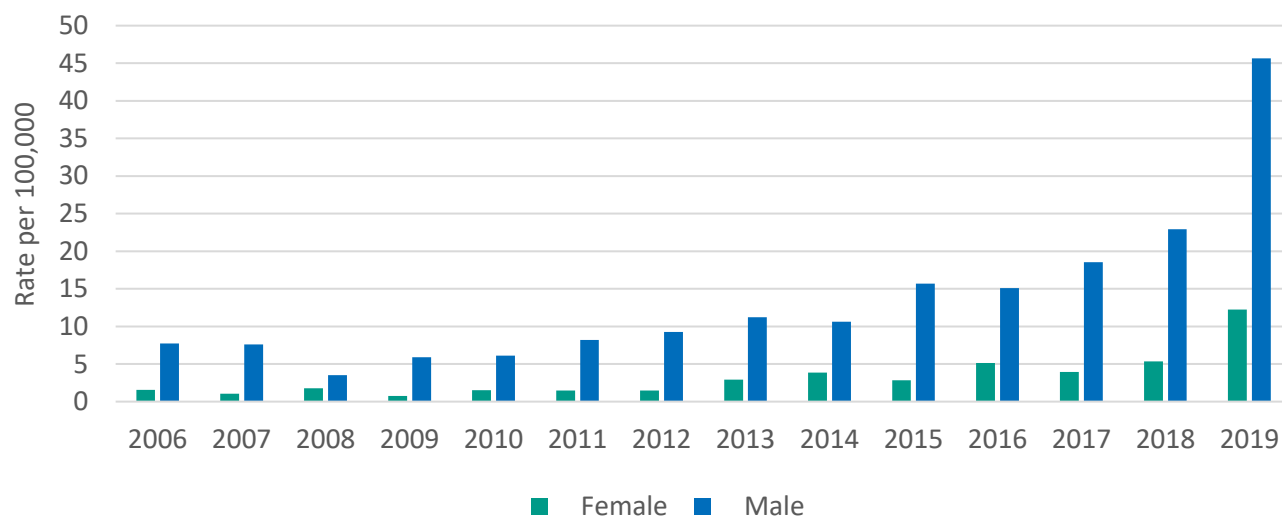
Figure 47: Rate of Methamphetamine Overdose Deaths by Race/Ethnicity in CCSF, 2006–2019



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. 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 48: Rate of Methamphetamine Overdose Deaths by Sex in CCSF, 2006–2019

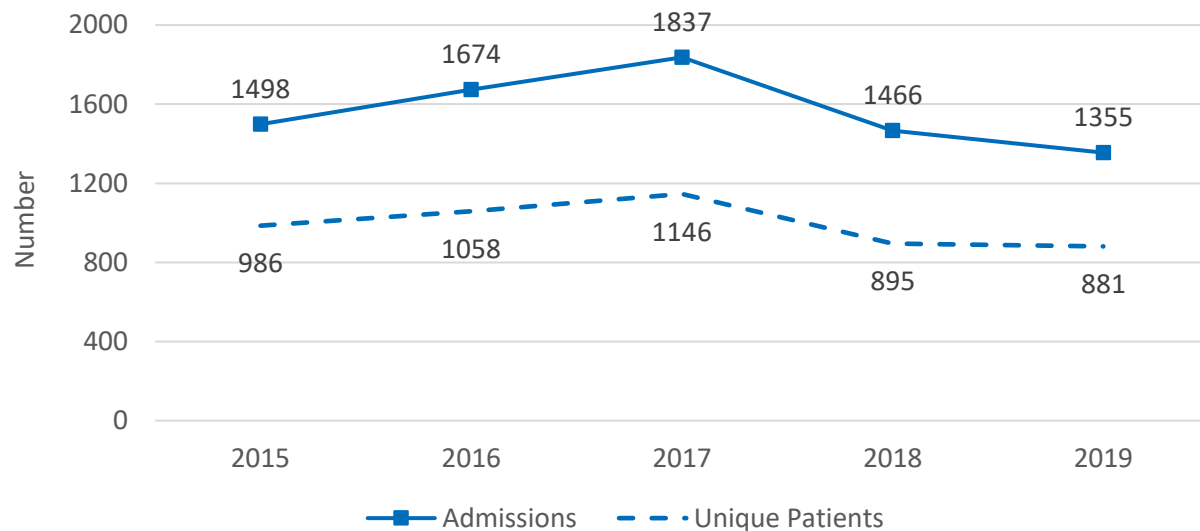


Rate is calculated per 100,000 CCSF population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. No other sex categories were noted.

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

While the number of SUD treatment admissions for methamphetamine decreased by 7.5% in 2019, the number of unique patients remained stable (**Figure 49**). The highest rates of SUD treatment admissions for methamphetamine were among males (**Figure 50a**), persons aged 40–49 years (**Figure 50b**), and Black/African Americans (**Figure 51**). The most common reported route of administration was smoking (**Figure 52**) and the most common secondary substances were alcohol (17%) and cannabis (15%).

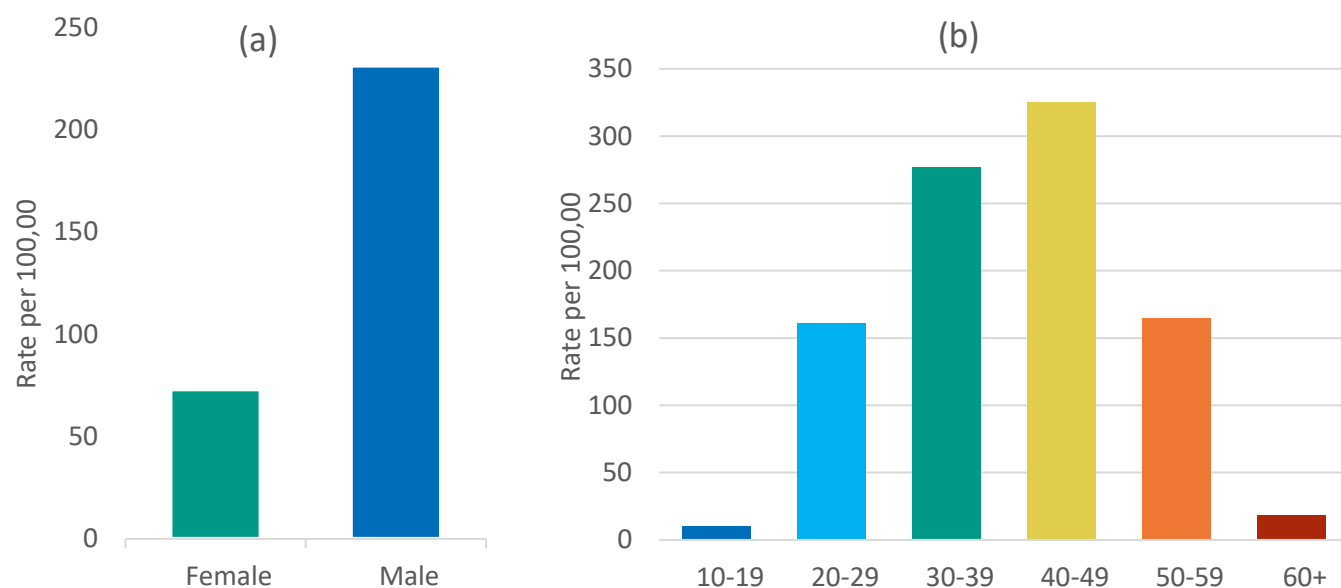
Figure 49: Number of Admissions and Unique Persons Admitted to Programs Treating Substance Use Disorders for Methamphetamine as the Primary Substance in CCSF, 2015–2019



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.

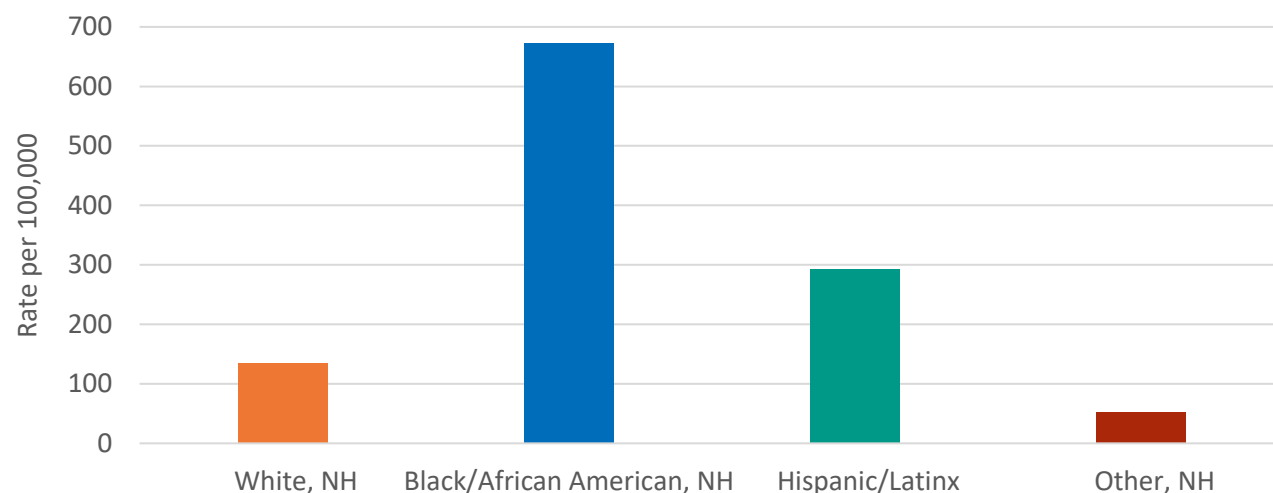
Figure 50: Rate of Admissions to Programs Treating Substance Use Disorders for Methamphetamine as the Primary Substance by (a) Sex and (b) Age Group in CCSF, 2019



Rate is calculated per 100,000 CCSF 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.

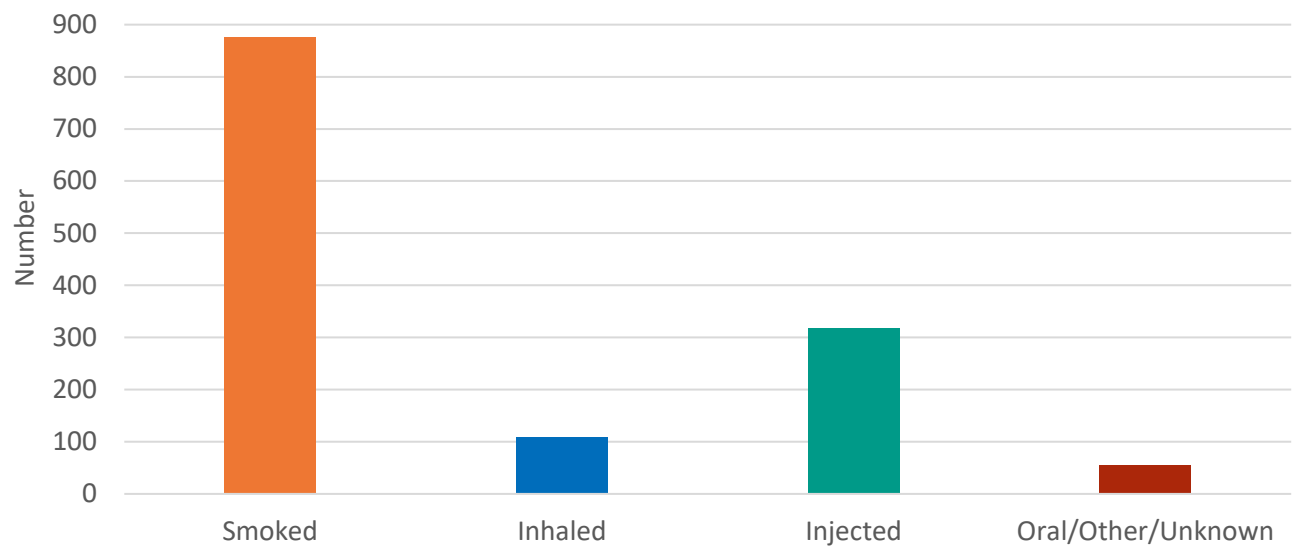
Figure 51: Rate of Admissions to Programs Treating Substance Use Disorders for Methamphetamine as the Primary Substance by Race/Ethnicity in CCSF, 2019



Rate is calculated per 100,000 CCSF 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 52: Number of Admissions to Programs Treating Substance Use Disorders for Methamphetamine as the Primary Substance by Route of Administration in CCSF, 2019



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.

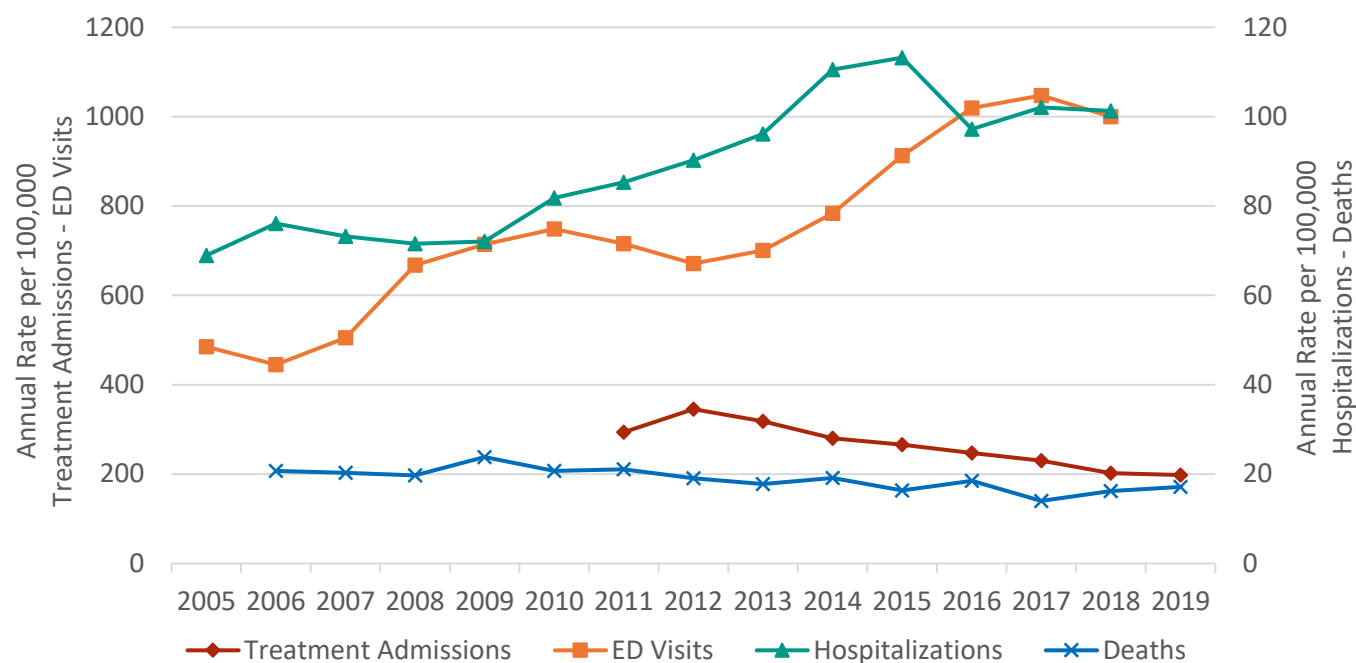
Source: San Francisco Department of Public Health (SFPDH), Community Behavioral Health Services Division.

4.4 ALCOHOL

While alcohol use has long been a prominent issue in San Francisco, current indicators suggest a stable contribution to morbidity and mortality. Alcohol-related deaths (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) have remained below their peak in 2009 (**Figure 53**). Alcohol was responsible for 21% of all SUD treatment admissions in 2019, making it the second-leading primary substance for SUD treatment admissions in 2019. 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 53: Rate of Alcohol Health Indicators in CCSF, 2005–2019

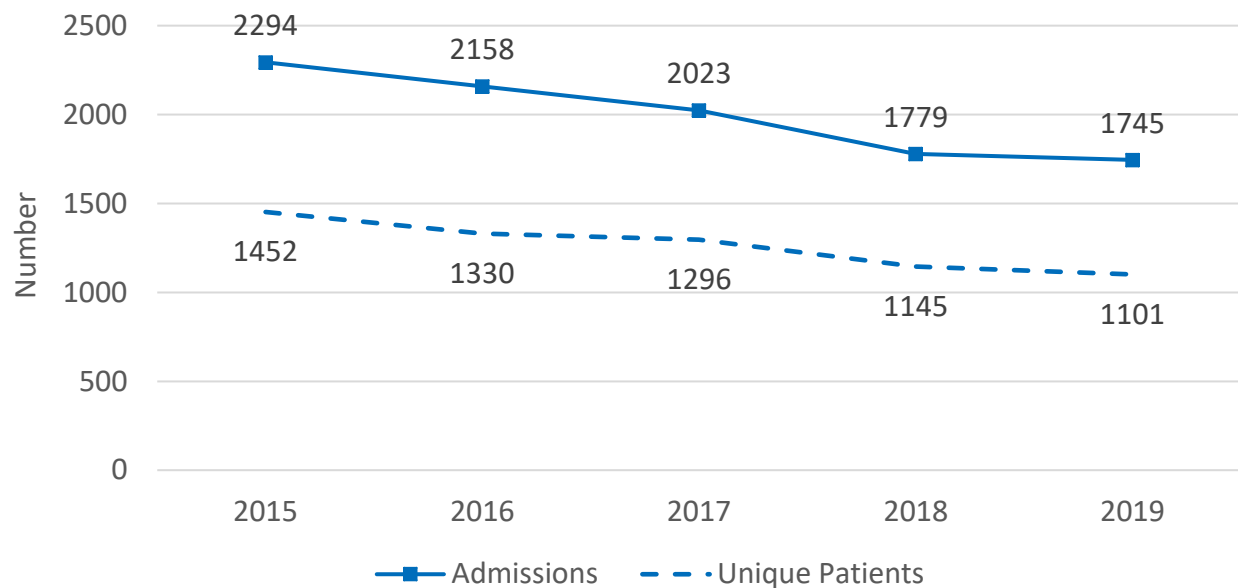


Alcohol-related deaths include both acute poisoning and other deaths involving acute or chronic use of alcohol (e.g., combined toxicity of heroin and ethanol, acute ethanol intoxication, complications of chronic ethanolism, end-stage liver disease due to alcoholism, complications of alcoholic cardiomyopathy). 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 54**). SUD treatment admissions for alcohol were far more likely among males (**Figure 55a**), persons aged 50–59 years (**Figure 55b**), and Black/African Americans (**Figure 56**). The most common secondary substances were methamphetamine (13%) and cocaine/crack (11%).

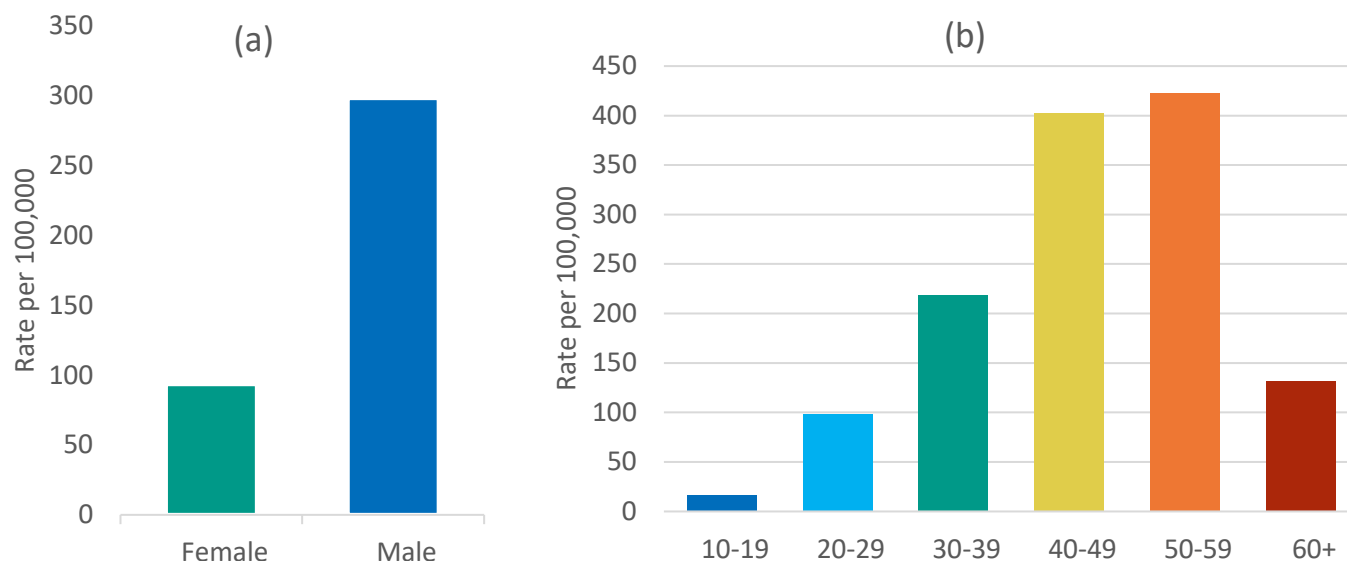
Figure 54: Number of Admissions and Unique Persons Admitted to Programs Treating Substance Use Disorders for Alcohol as the Primary Substance in CCSF, 2015–2019



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.

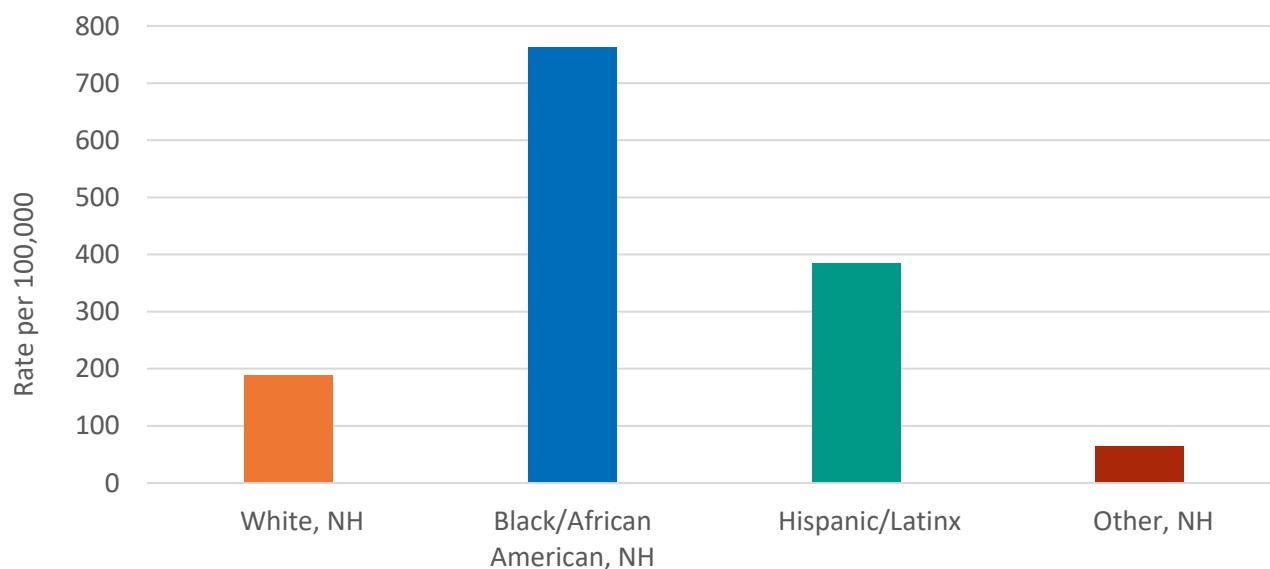
Figure 55: Rate of Admissions to Programs Treating Substance Use Disorders for Alcohol by (a) Sex and (b) Age Group in CCSF, 2019



Rate is calculated per 100,000 CCSF 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 56: Rate of Admissions to Programs Treating Substance Use Disorders for Alcohol by Race/Ethnicity in CCSF, 2019



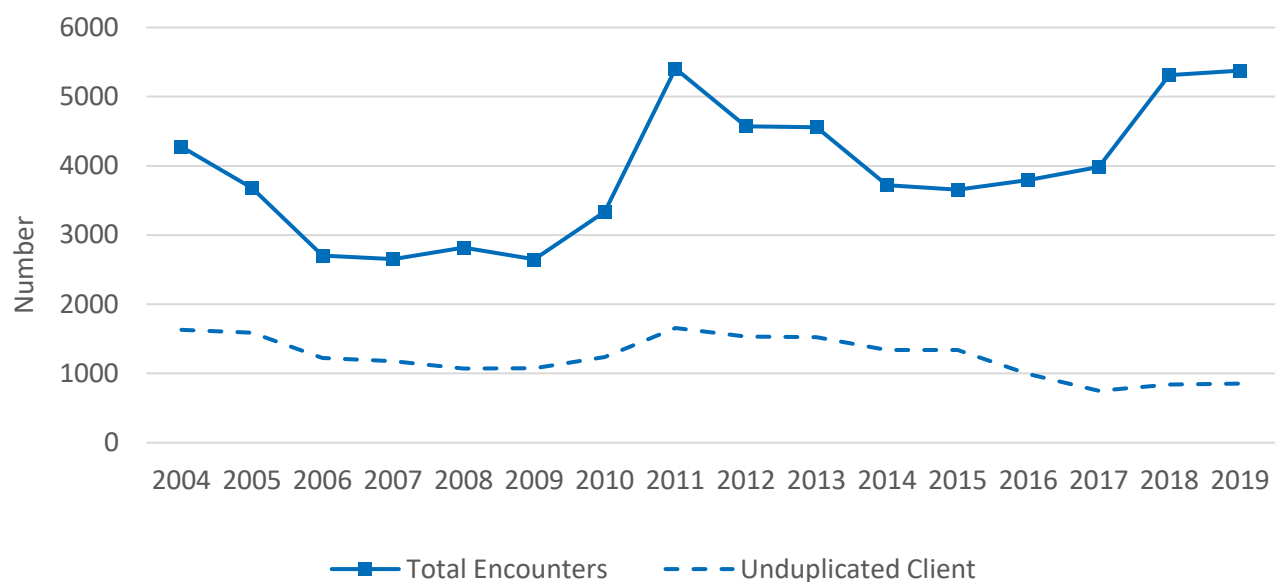
Rate is calculated per 100,000 CCSF population. Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. NH=non-Hispanic.

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

4.4.1 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 nearly 1,000 unique individuals and over 5,000 encounters in 2019, stable since 2018 (**Figure 57**).

Figure 57: Annual Number of Sobering Center Visits and Unduplicated Clients in CCSF, 2004–2019

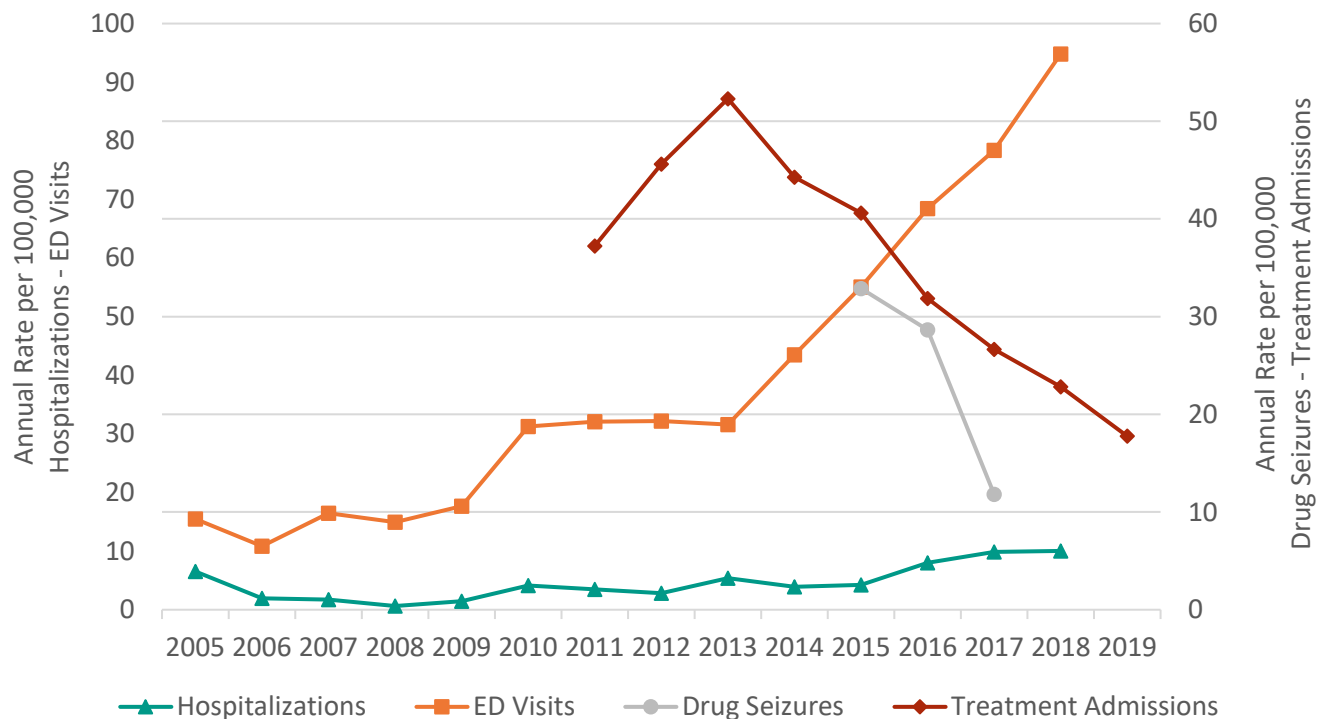


Source: Sobering Center, San Francisco Department of Public Health.

4.5 CANNABIS

Local indicators for cannabis in San Francisco were mixed. Emergency department visits involving cannabis continued to increase, while hospitalizations remained stable, through 2018. SUD treatment admissions for cannabis continued to decrease in 2019 (**Figure 58**).

Figure 58: Rate of Cannabis Health Indicators in CCSF, 2005–2019

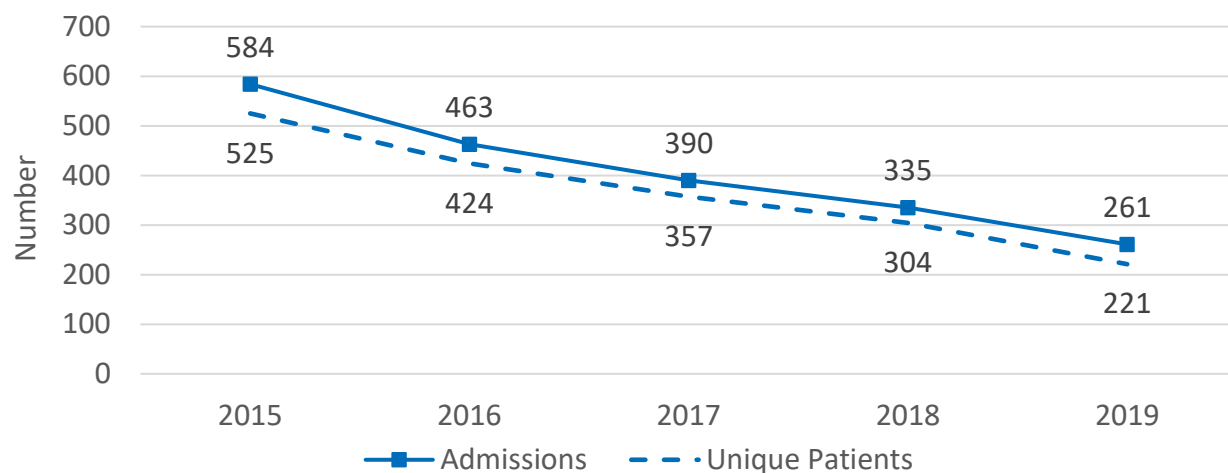


Emergency department visits and hospitalizations include primary or non-primary ICD-9 codes: E854.1.0, (poisoning), 969.6 (poisoning) and ICD-10 code: T40.7(poisoning); primary only ICD-9 codes: 304.3, 305.2 (dependence) (abuse) and ICD-10 codes: F12 (dependence/abuse/use). For ICD-10 code: T40.7, a 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: Drug seizure data provided by the National Forensic Laboratory Information System (NFLIS), Drug Enforcement Administration (DEA). Data were retrieved on Identified Drugs of Total Analyzed Drug Reports, CCSF, NFLIS, DEA. NFLIS methodology allows for the accounting of up to three drugs per item submitted for analysis; presented is a combined count including primary, secondary, and tertiary reports for each drug. 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 2019 (**Figure 59**). SUD admissions for cannabis were more likely among males (**Figure 60a**), persons aged 10–19 years (**Figure 60b**), and Black/African Americans (**Figure 61**). The most common secondary substances were alcohol (25%) and methamphetamine (21%).

Figure 59: Number of Admissions and Unique Persons Admitted to Programs Treating Substance Use Disorders for Cannabis as the Primary Substance in CCSF, 2015–2019

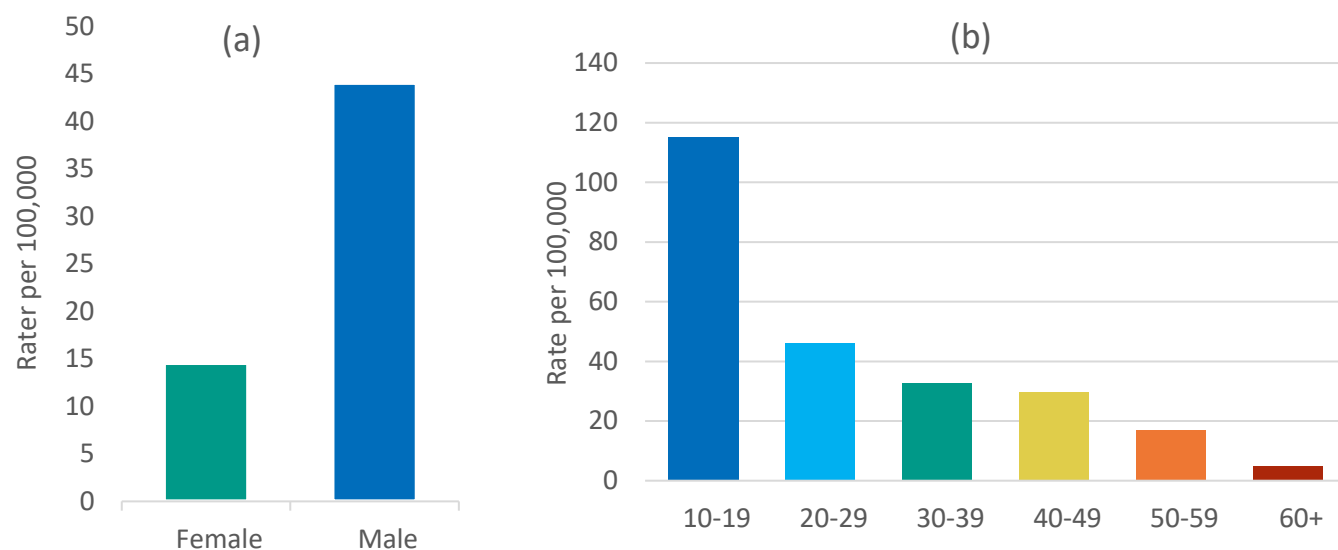


Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

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

- 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.
- **Vaping:** As of November 13, 2019, 49 states, the District of Columbia, and 2 U.S. territories had reported 2,172 cases of lung injury associated with vaping. Analyses of 29 lung fluid samples from 10 states identified vitamin E acetate in all of the samples, as well as tetrahydrocannabinol in 82% and nicotine in 62% of samples. Cases reported in California as of September 2019 were all from unlicensed, “pop-up” cannabis sellers. No cases had occurred as of November 19, 2019 in CCSF. For more information, see: www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html

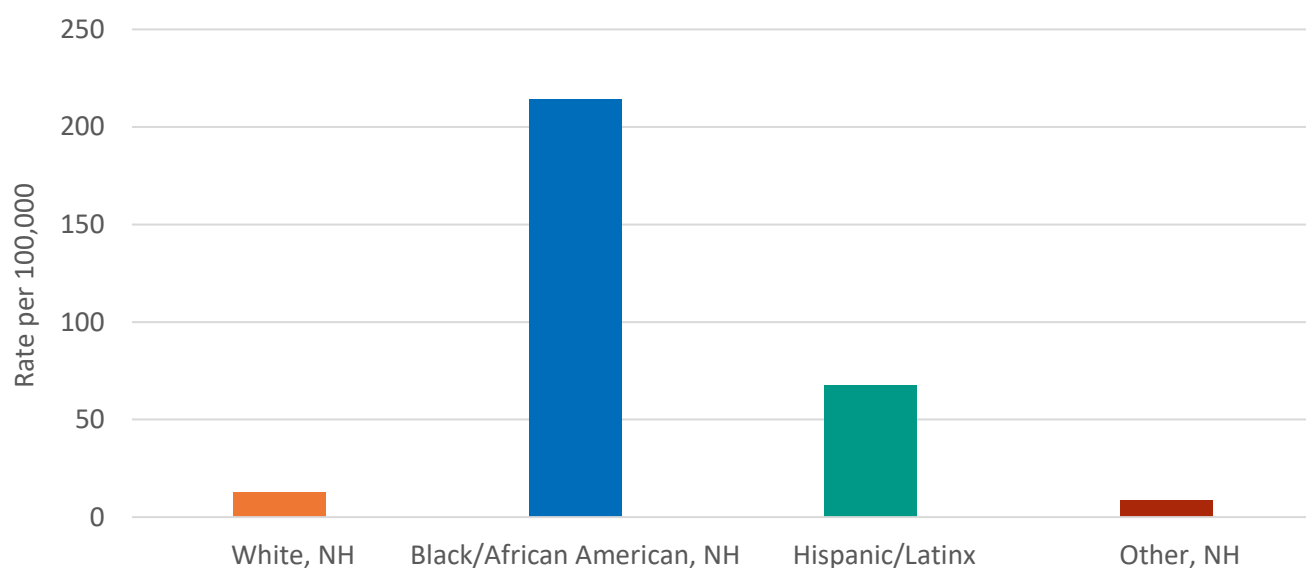
Figure 60: Rate of Admissions to Programs Treating Substance Use Disorders for Cannabis by (a) Sex and (b) Age Group in CCSF, 2019



Rate is calculated per 100,000 CCSF 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 61: Rate of Admissions to Programs Treating Substance Use Disorders for Cannabis by Race/Ethnicity in CCSF, 2019



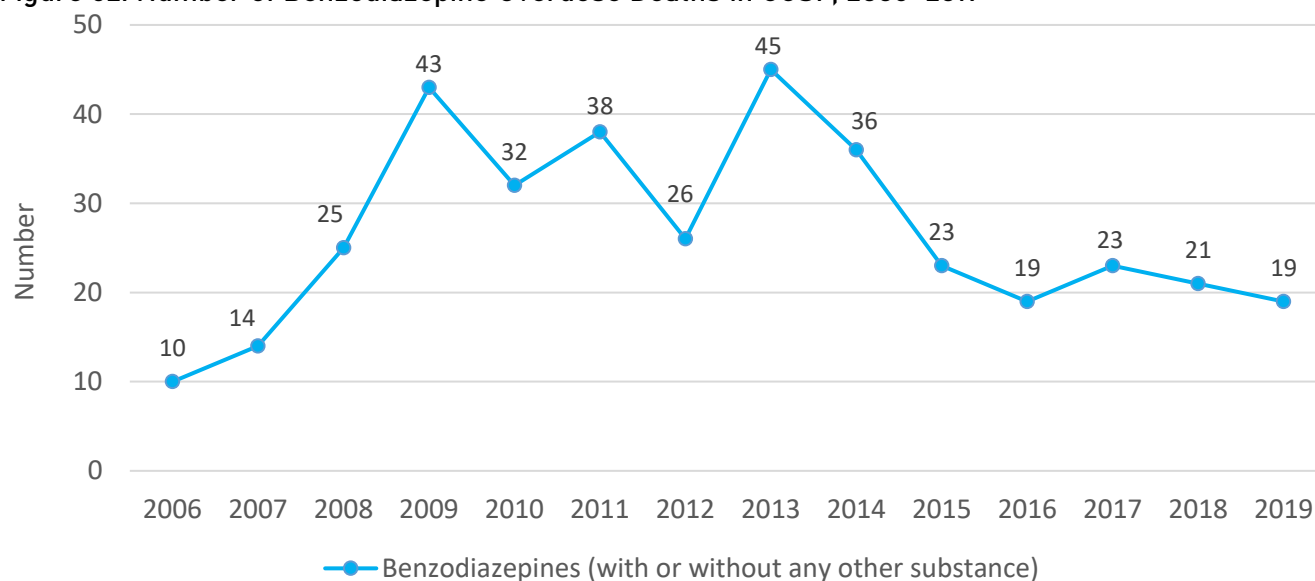
Rate is calculated per 100,000 CCSF population. Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. NH=non-Hispanic.

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

4.6 BENZODIAZEPINES

In recent years, the number of overdose deaths due to benzodiazepines has continued to decline (**Figure 62**). Benzodiazepines alone rarely cause overdose deaths; the majority of benzodiazepine-related overdose deaths involved opioids (**Figure 63**). In 2019, only one death was caused by benzodiazepines in the absence of opioids.

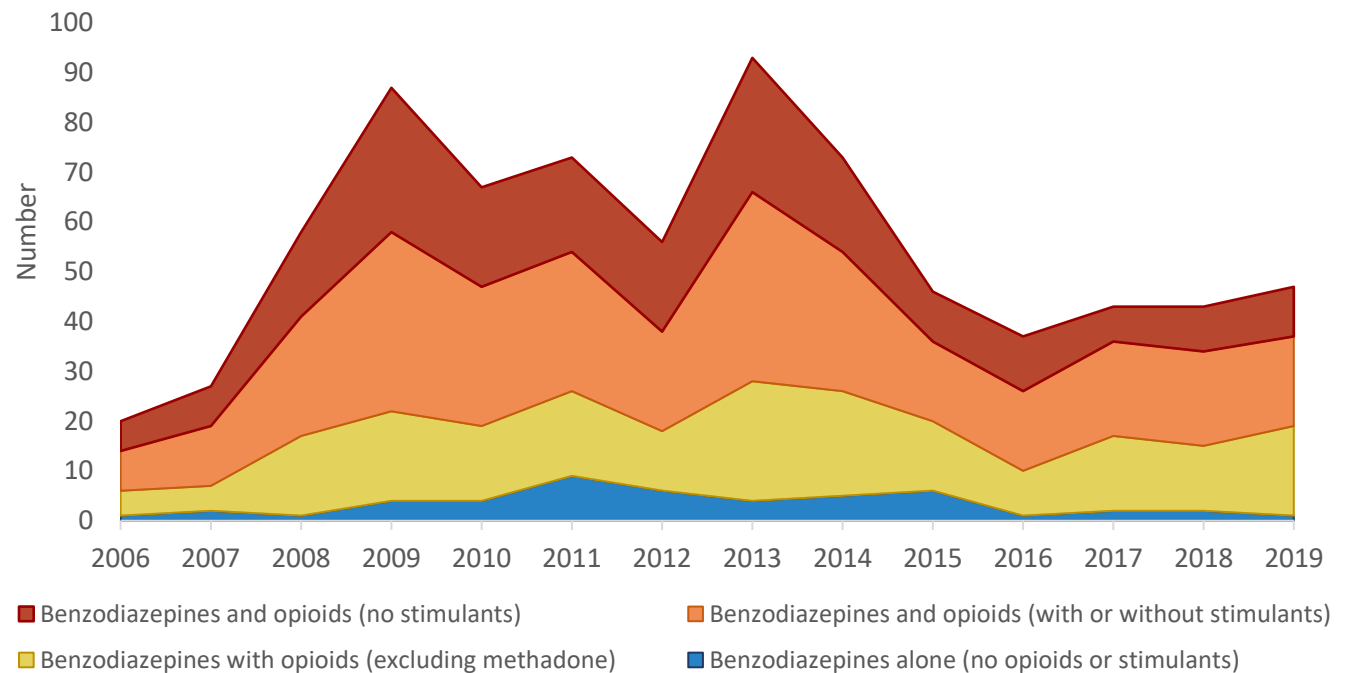
Figure 62: Number of Benzodiazepine Overdose Deaths in CCSF, 2006–2019



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 63: Number of Benzodiazepines Overdose Deaths by Mutually Exclusive Involvement of Opioids and Stimulants as Cause of Death in CCSF, 2006–2019

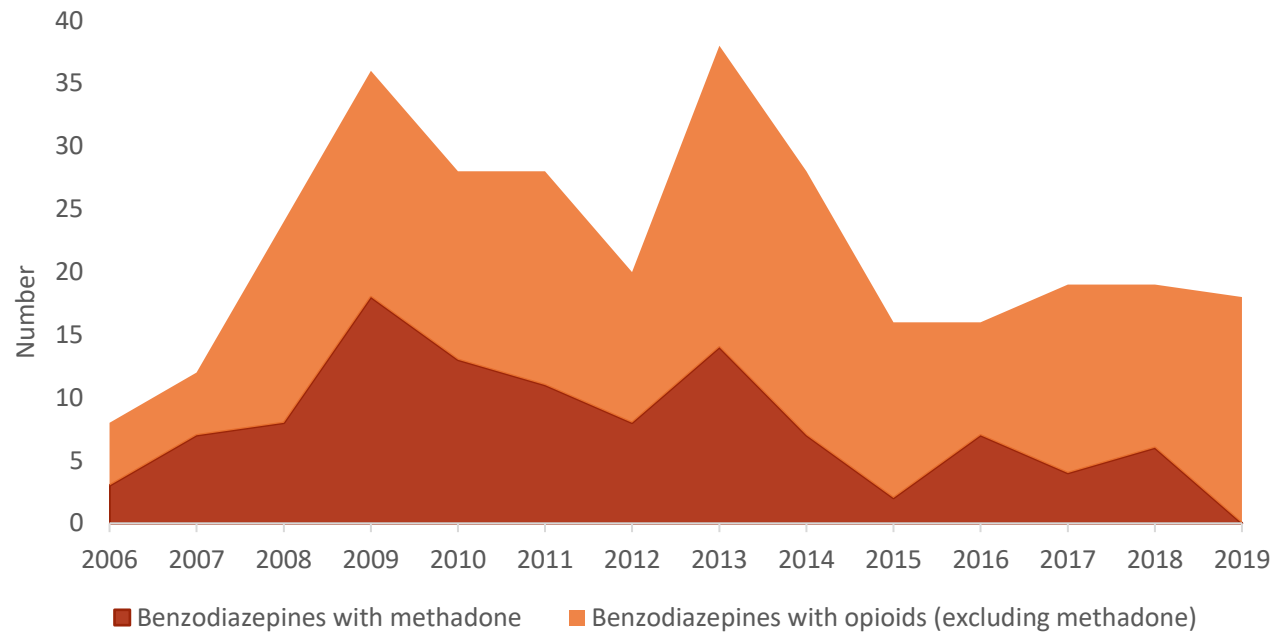


The height of each band corresponds to the number of events in that category. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded.

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 none occurring in 2019. Deaths involving other opioids are now more common (**Figure 64**).

Figure 64: Number of Overdose Deaths Due to Benzodiazepines and Opioids, by Mutually Exclusive Involvement of Methadone or Other Opioids in CCSF, 2006–2019

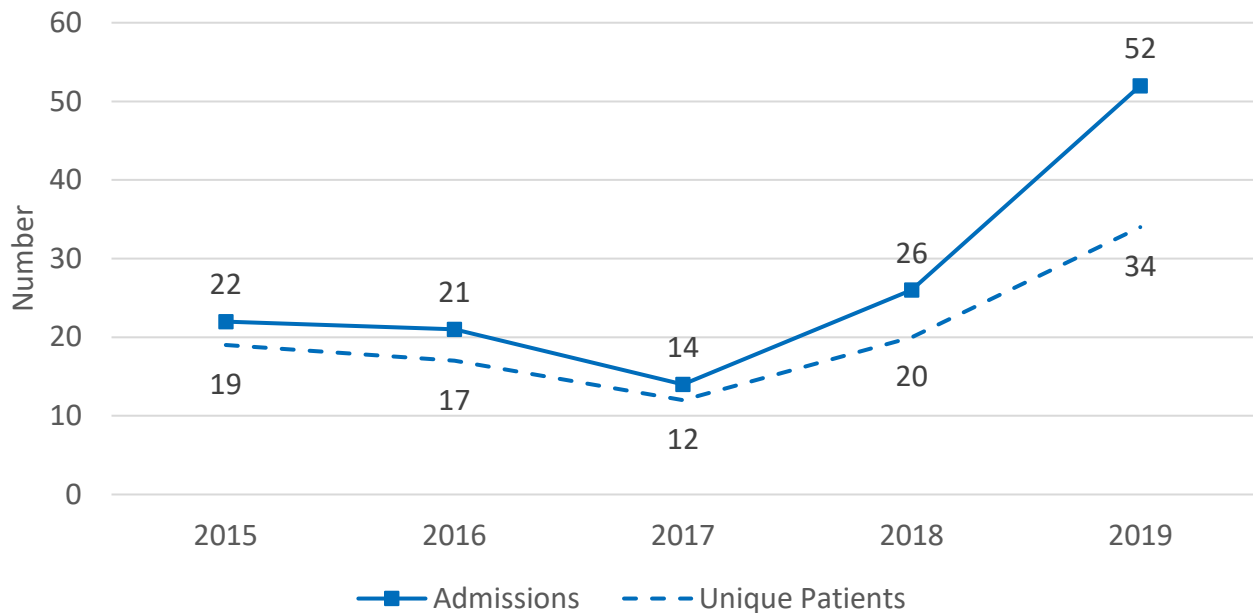


The height of each band corresponds to the number of events in that category. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded.

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 doubled from 2018 to 2019 but represented less than 1% of all SUD admissions in San Francisco in 2019 (**Figure 65**).

Figure 65: Number of Admissions and Unique Persons Admitted to Programs Treating Substance Use Disorders for Benzodiazepines as the Primary Substance in CCSF, 2015–2019



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.

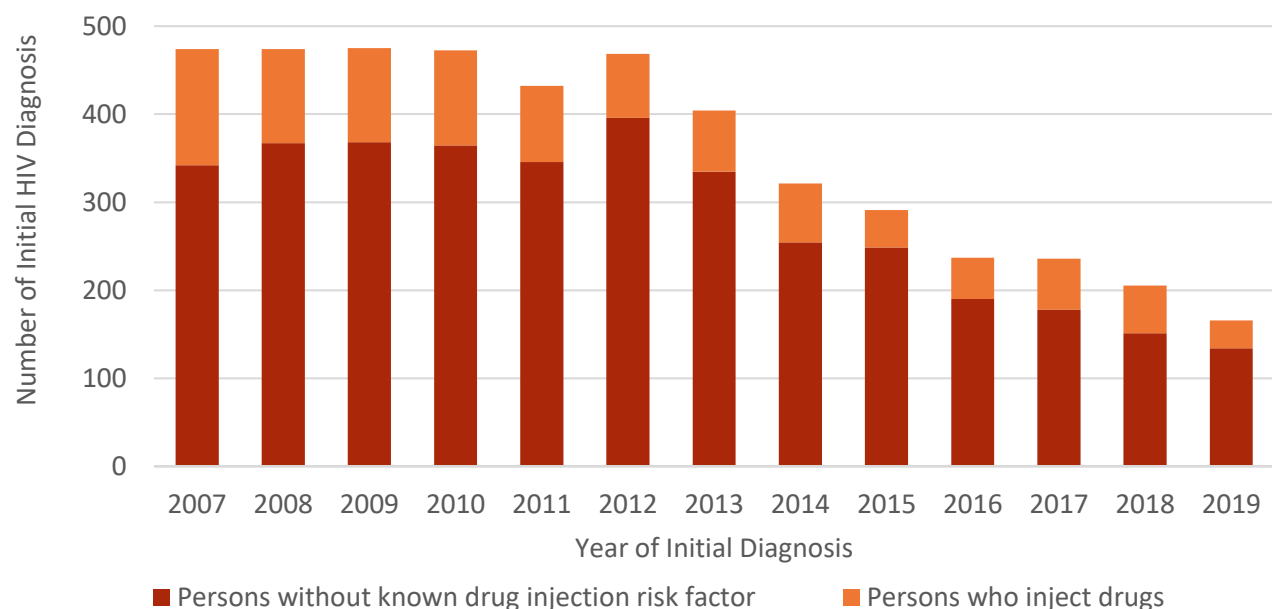
Source: San Francisco Department of Public Health (SFPDH), Community Behavioral Health Services Division.

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 66**). In 2019, there were 166 new HIV diagnoses; however, due to delays in case reporting, this number could be underestimated. Among the 166 new diagnoses in 2019, 67% were among men who have sex with men (MSM); 7% were among PWID; 12% were among MSM-PWID; and 14% were among heterosexual and those with other or unidentified risk category. Of the approximately 15,890 individuals living with HIV in San Francisco as of June 2020, 19% were people who inject drugs.

Figure 66: HIV Infection by Transmission Category of Initial HIV Diagnosis in CCSF, 2007–2019



Source: SFPD HIV Epidemiology Annual Report, September 2019.

For more information on HIV in San Francisco, see:

2018 Annual Report:

www.sfdph.org/dph/files/reports/RptsHIVAIDS/HIV-Epidemiology-Annual-Report-2018.pdf

2020 Semi-Annual Report:

www.sfdph.org/dph/files/reports/RptsHIVAIDS/semi_annual_report20200630.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 69**).

SFDPH has recently funded or expanded funding to support low-threshold HCV-treatment for PWID and people experiencing homelessness through services including the UCSF DeLive 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 2016, 1,961 new HCV cases were reported to SFDPH. 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, 2016

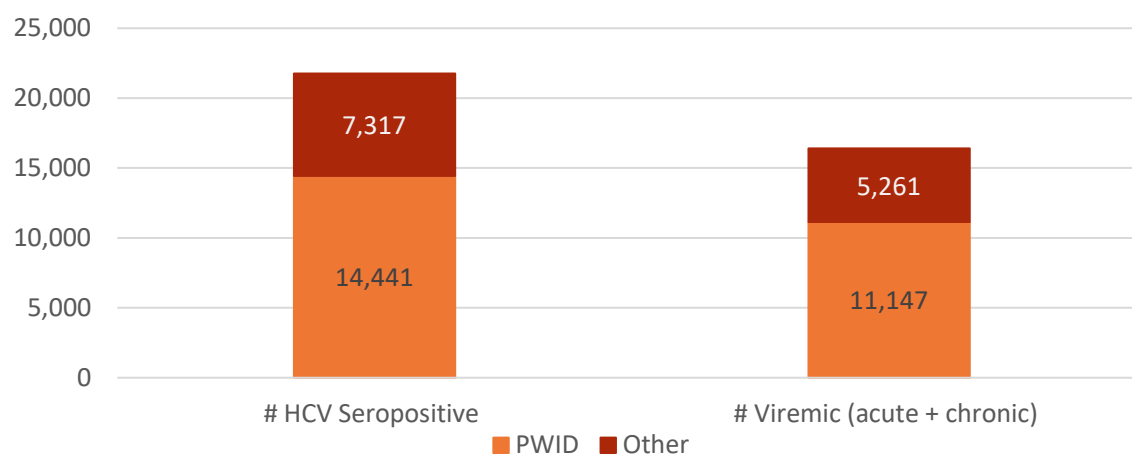
Race/Ethnicity of HCV cases newly reported to SFDPH in 2016 (N=1961)	%
White	49.7
Black/African American	24.2
Asian/Pacific Islander	8.1
American Indian/Alaska Native	0.9
Hispanic/Latinx	13.3
Other	3.8

Race/ethnicity data is missing for 43% of cases.

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 67**). MSM, baby boomers, and transgender women also experienced a disproportionate burden of HCV in CCSF.

Figure 67: Estimated Number of HCV Seropositive and Viremic Individuals in CCSF, 2017



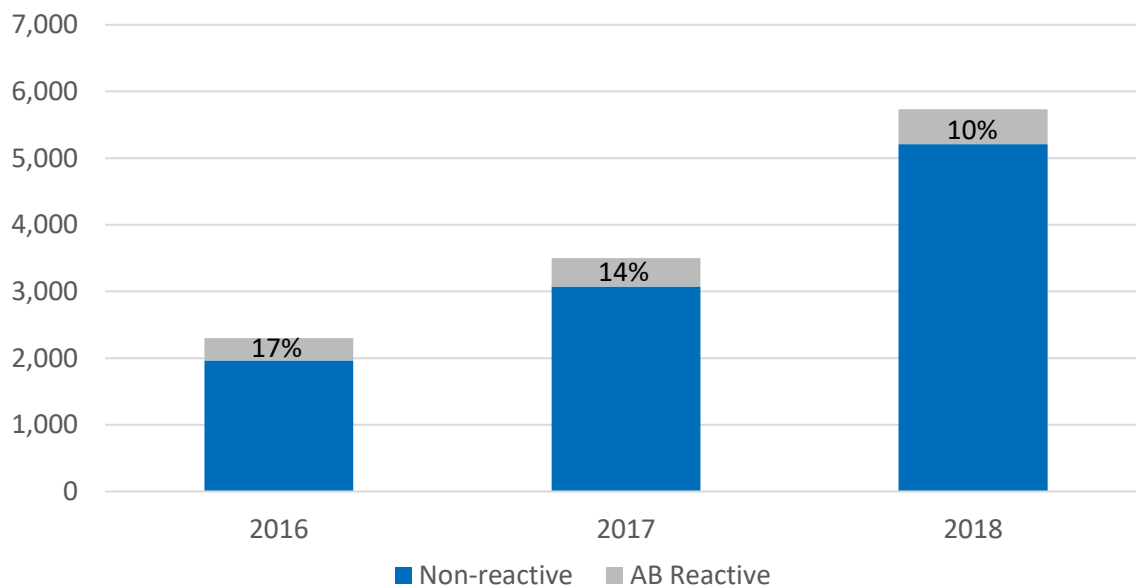
Estimated number of HCV viremic includes those who have been treated and cured of HCV since becoming chronically infected

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 were also 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 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 Microlamination 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 68**) 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 68: 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*).

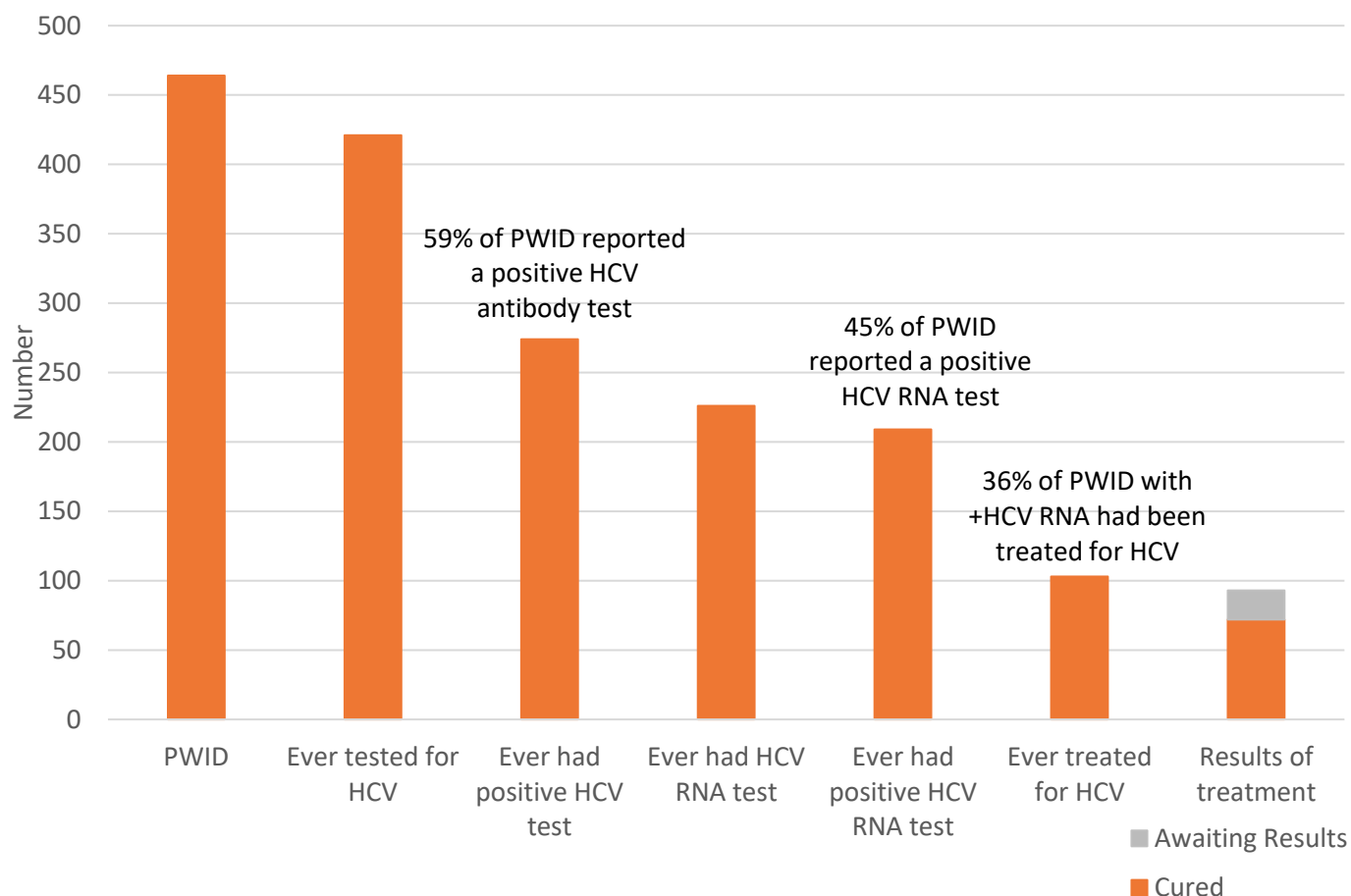
In NHBS, HCV was evaluated both through self-report and, in a subsample, through serology and RNA testing.

5.2.3.1 HCV by Self-Report in NHBS

Among the 464 PWID sampled, 90.7% had been 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, 36.0% reported ever receiving HCV treatment, 72.0% of whom had been cured and 21.0% of whom were still awaiting results. (**Figure 69**).

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 69: 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.

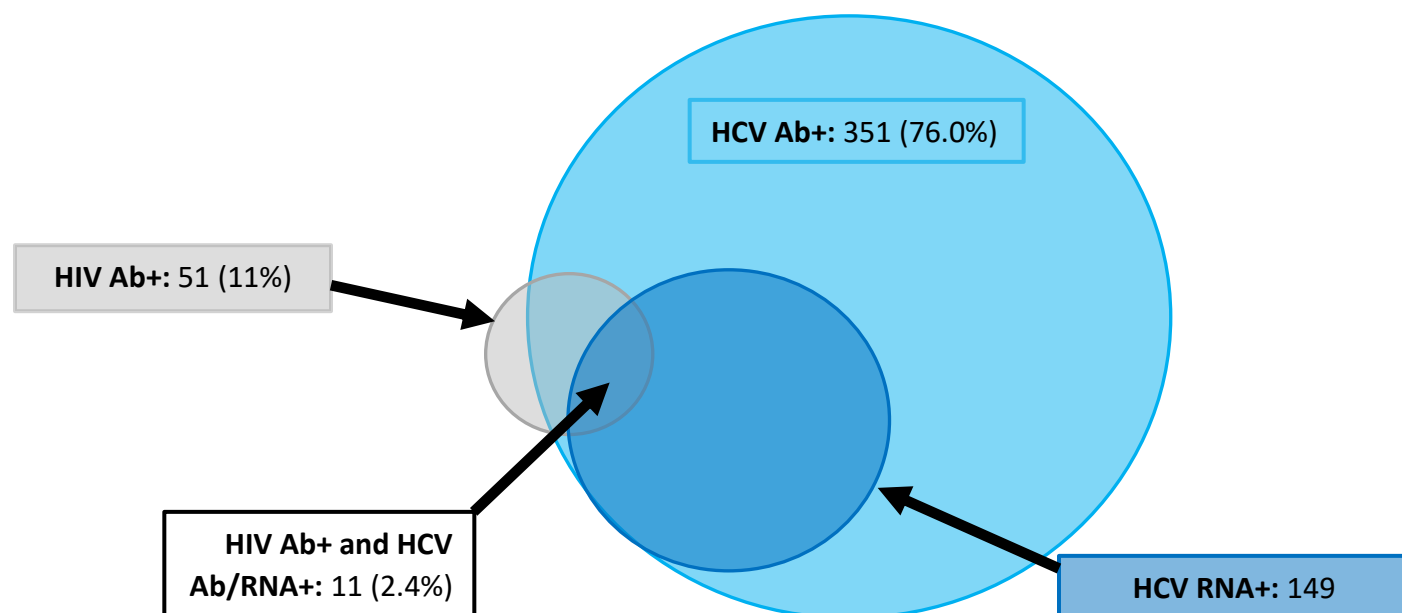
Source: Hep C Health Project, San Francisco AIDS Foundation.

5.2.3.2 HCV by Testing in NHBS

HCV status by self-report in NHBS was supplemented by HCV status 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% of 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 70**).

Figure 70: 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: SFPD 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*).

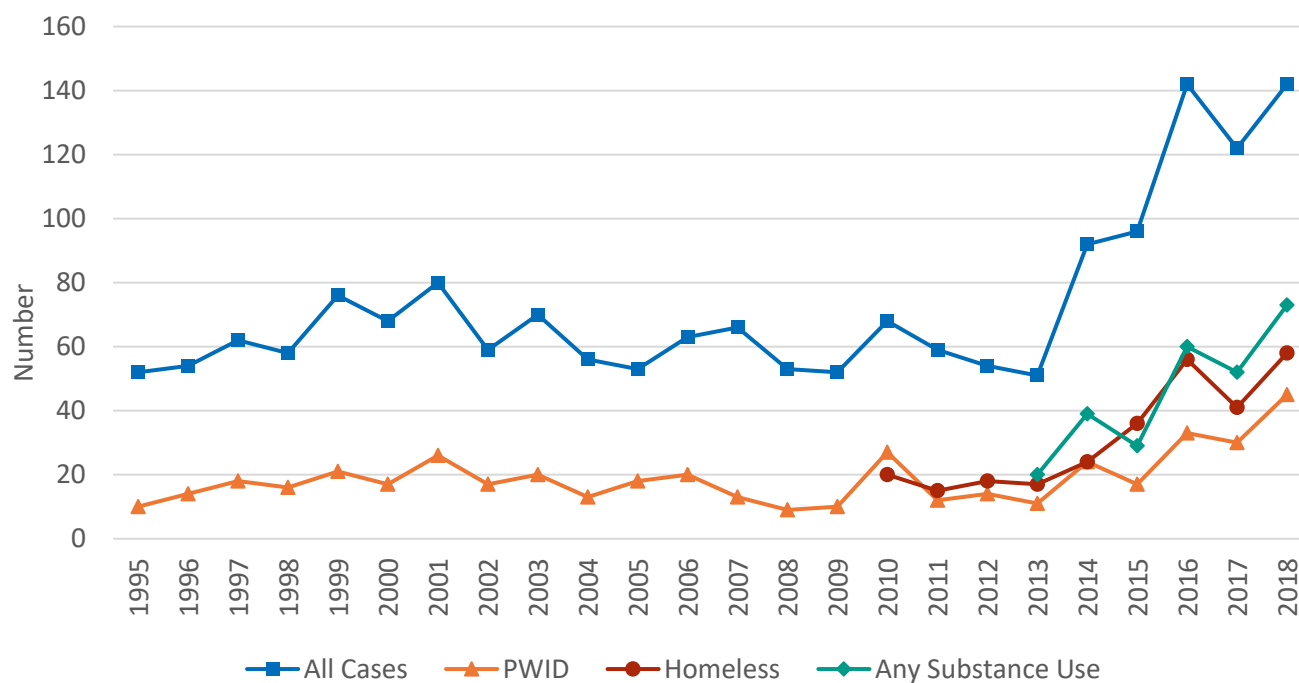
5.2.5 Hep C Health Program

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 about 2014 (**Figure 71**). 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 71: Annual Number of Invasive Group A Streptococcus Cases in CCSF, 1995–2018



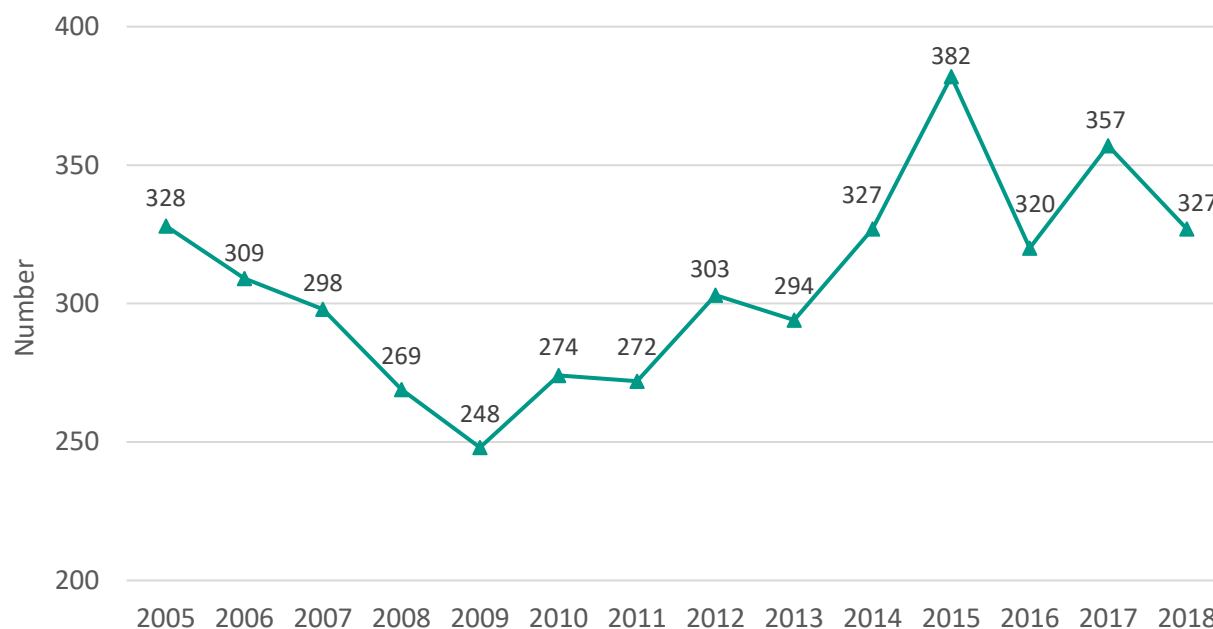
Due to inconsistent data entry, case classification by these characteristics (substance use and homelessness) is not comprehensive. For cases that were not affirmatively identified as individuals who injected drugs, were experiencing homelessness, or used any substance, their status for these characteristics 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 72**) 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 but has been relatively stable since.

Figure 72: Number of Hospitalizations for Endocarditis in CCSF, 2005-2018



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.

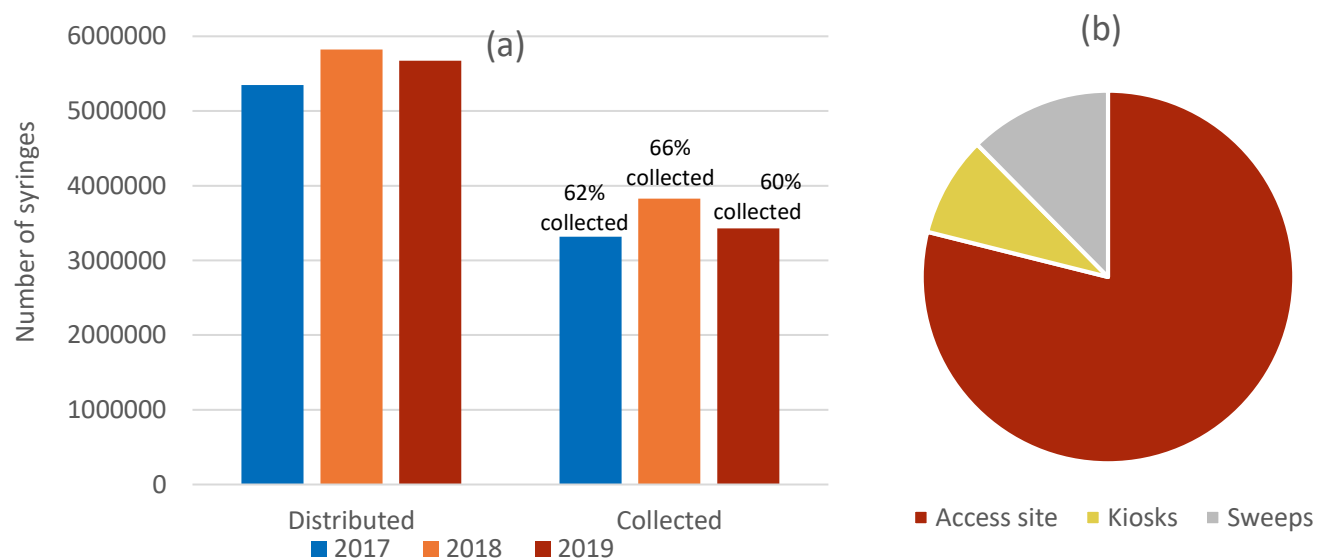
6 ADDITIONAL INTERVENTIONS

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 a syringe 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 percent of distributed syringes were collected through dedicated syringe collection activities in 2019 (**Figure 73**). The main source of syringe collection is syringe access sites, followed by kiosks placed in key locations of San Francisco, as well as manual sweeps conducted by SFDPH. In 2019, there was a 96% increase in the number of syringes collected from sweeps and clean-up efforts compared to 2018.

The data below represent a collaboration of 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 SFDPH.

Figure 73: (a) Number of Syringes Dispensed and Collected, 2017–2019 and (b) Sources of Collected Syringes, 2019 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.

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

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

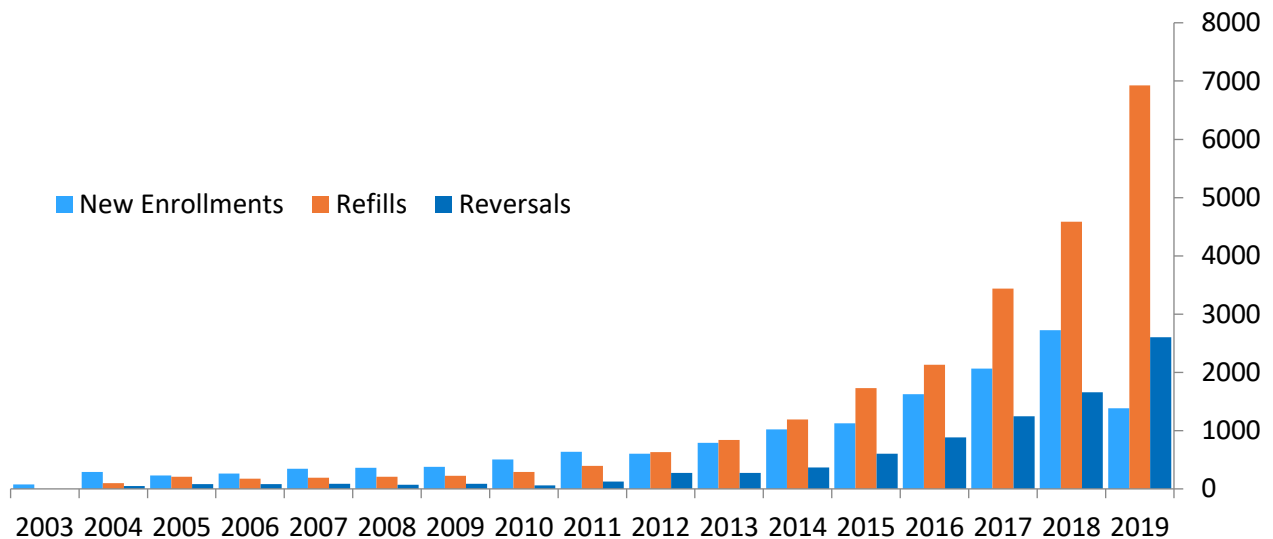
- www.sfdph.org/dph/alerts/syringe.asp
- www.sfaf.org/services/syringe-access-disposal/syringe-pick-up-crew/

6.2 NALOXONE

The distribution of naloxone by community-based organizations continued to increase, with 2,604 overdose reversals reported in 2019 (**Figure 74**). This represents a substantial increase over 1,658 reversals in 2018.

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 74: Naloxone Enrollments, Refills, and Reversal Reports to the Drug Overdose Prevention and Education Project, 2003–2019



Source: Drug Overdose Prevention and Education Project

In 2019, the DOPE Project provided over 47,000 doses of injectable naloxone to 19 community partners in the Bay Area, who distributed it onward, as well as over 5,000 nasal naloxone kits to organizations to have on hand in the event of an overdose. Approximately 500 overdose reversals were reported by San Francisco service providers while at work, nearby, or on their commute in 2019.

Naloxone is also provided through several other venues, including primary care and pharmacy furnishing, at the Community Behavioral Health Services Pharmacy at 1380 Howard Street (990 furnishings 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.

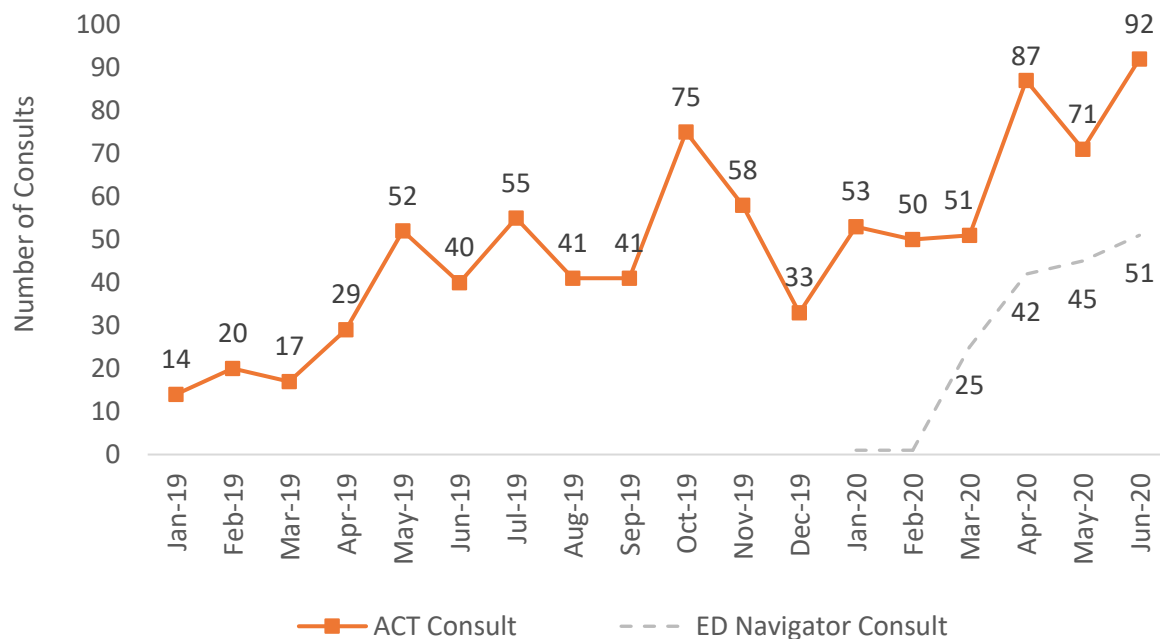
6.3 ADDICTION CARE TEAM

The Addiction Care Team (ACT), an addiction medicine consult service at Zuckerberg San Francisco General Hospital, was started in January 2019. ACT is a collaboration with the University of California San Francisco (UCSF). UCSF also directs the Addiction Medicine Fellowship Program, for which service on the ACT is a key element of training physicians in addiction medicine.

ACT provides clinical care, withdrawal management, initiation of medications for substance use disorders, linkage to care and support with transitions from acute to community care settings, with the goals of reducing substance use-related emergency department (ED) visits and hospitalizations, as well as reducing the severity and health sequelae of substance use disorders.

ACT has increased staffing from 50% time of one attending physician, one patient navigator, and two fellows in 2019, to 100% time of one attending physician, three patient navigators, and four fellows in 2020. Demand for and services provided by the ACT have steadily increased (Figure 70).

Figure 69: Monthly consults completed by the Addiction Care Team (ACT) at Zuckerberg San Francisco General Hospital from 2019 through June 2020.



6.4 METHAMPHETAMINE TASK FORCE

San Francisco Mayor London Breed and District 8 Supervisor Rafael Mandelman initiated a Methamphetamine Task Force in April 2019 to review the surge in methamphetamine-related morbidity and mortality. The task force was co-chaired by Director of Health Dr. Grant Colfax and Supervisor Mandelman, and its report was released in October 2019. Recommendations are listed below. (The COVID-19 pandemic has delayed implementation of certain recommendations in 2020.)

- 1) Create a trauma-informed sobering site with integrated harm reduction services for individuals who are under the influence of methamphetamine.
- 2) Strengthen the city's interdisciplinary mental health crisis response.
- 3) Increase the availability of safe indoor spaces that provide low-threshold harm reduction and other basic services.
- 4) Expand low-threshold case management and wrap-around services.
- 5) Expand availability and duration of treatment models across the continuum of harm reduction services.
- 6) Expand the use of proven treatment approaches for stimulant use disorder, including contingency management and medications to support reducing or stopping use.
- 7) Ensure services are culturally and linguistically appropriate, particularly for communities that may be at greater risk of marginalization or injury.
- 8) Establish overdose prevention programs.
- 9) Include peers in the planning and staffing of harm reduction services and treatment programs.
- 10) Prioritize and protect housing for people seeking treatment.
- 11) Ensure that high-priority unhoused people in treatment are assessed for housing priority.
- 12) Simplify processes to facilitate timely admission into treatment programs for individuals in the community and those exiting jail.
- 13) Increase capacity and use of alternatives to incarceration and alternative sentencing.
- 14) Advocate for state and federal policies that expand access to low-threshold and long-term treatment options.
- 15) Ensure provider training is trauma-informed and rooted in harm reduction principles.
- 16) Ensure law enforcement staff are trained to use an integrated crisis intervention approach.
- 17) Strengthen collaboration among city agencies and service providers.

For more information, see the San Francisco Department of Public Health Methamphetamine Task Force at: www.sfdph.org/dph/comupg/knowlcol/MethTaskForce/default.asp

7 APPENDICES

Table 2 (page 1 of 3): Rate per 100,000 Population of Drug Seizures, 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, 2005–2019

Substance	Measure	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Cocaine/Crack	Drug Seizures											61.07	72.29	74.48		
	Treatment Admissions							180.71	215.35	202.72	142.70	107.53	87.20	78.70	60.18	54.00
	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	15.60	25.55	
	ED Visits	27.65	39.03	32.49	26.67	22.45	17.50	23.42	24.61	25.85	31.62	33.95	51.63	43.28	48.14	
	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	11.47	23.25
Methamphetamine	Drug Seizures											64.31	75.96	98.63		
	Treatment Admissions							123.34	181.45	195.81	184.78	173.58	192.08	209.22	166.46	153.71
	Hospitalizations	11.53	5.72	3.72	3.41	3.12	8.32	6.13	7.12	7.03	9.76	13.33	29.14	28.13	37.47	
	ED Visits	36.30	26.80	27.10	25.28	27.06	41.96	38.74	56.34	74.80	118.13	164.77	332.98	305.57	420.35	
	Deaths		4.68	4.37	2.65	3.37	3.85	4.90	5.43	7.15	7.29	9.39	10.21	11.39	14.31	29.27
All Opioids	Drug Seizures											65.58	61.73	71.98		
	Treatment Admissions							440.51	469.55	471.79	544.46	541.48	537.34	517.86	480.53	477.34
	Hospitalizations	40.10	37.99	38.27	36.15	36.91	43.20	38.99	40.42	39.19	36.91	51.91	124.61	117.99	126.15	
	ED Visits	51.51	51.00	51.75	53.34	55.12	53.38	45.49	57.91	61.34	74.99	102.66	145.38	151.25	221.19	
	Deaths		13.40	14.77	14.28	16.71	15.27	14.96	13.63	15.72	14.93	11.70	12.05	15.38	20.21	37.21

Table 2 (page 2 of 3): Rate per 100,000 Population of Drug Seizures, 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, 2005–2019

Substance	Measure	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Heroin	Drug Seizures											33.37	42.80	57.40		
	Treatment Admissions							398.09	414.42	420.45	487.22	484.00	481.35	469.34	434.32	424.59
	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	10.45	
	ED Visits	21.36	17.82	14.13	11.25	8.85	7.32	7.72	11.70	12.15	20.92	35.11	48.19	54.44	78.69	
	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	6.81	9.19
Prescription Opioids	Drug Seizures											31.75	16.41	12.53		
	Treatment Admissions							42.17	55.13	51.22	56.89	56.89	54.85	47.49	41.56	34.71
	Hospitalizations	17.69	17.69	17.85	14.03	16.09	20.48	18.64	19.30	20.01	18.45	33.84	114.05	103.18	104.80	
	ED Visits	17.30	17.04	21.32	22.37	31.92	34.02	29.06	30.64	30.85	33.03	34.65	50.14	45.90	58.59	
	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	8.06	9.42
Fentanyl and Other Synthetic Opioids	Drug Seizures											0.46	2.52	2.05		
	Treatment Admissions															
	Hospitalizations												4.02	5.69	8.86	
	ED Visits												2.52	4.21	16.12	

Table 2 (page 3 of 3): Rate per 100,000 Population of Drug Seizures, 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, 2005–2019

Substance	Measure	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Cannabis	Drug Seizures											54.81	47.73	19.70		
	Treatment Admissions							62.04	76.01	87.19	73.82	67.67	53.13	44.42	38.04	29.61
	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	5.92	6.02	
	ED Visits	9.31	6.50	9.89	8.97	10.60	18.75	19.25	19.30	18.94	26.09	33.02	41.08	47.04	56.89	
	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	0.79
Alcohol	Drug Seizures															
	Treatment Admissions							293.63	345.41	318.14	280.34	265.81	247.62	230.40	202.00	197.95
	Hospitalizations	68.94	76.11	73.20	71.54	72.08	81.81	85.33	90.24	96.12	110.49	113.21	97.19	102.05	101.28	
	ED Visits	485.31	444.94	505.22	667.38	714.28	748.60	715.63	671.51	700.36	783.54	912.62	1019.03	1047.45	1000.00	
	Deaths		20.69	20.29	19.72	23.82	20.73	21.09	19.06	17.75	19.16	16.34	18.47	14.01	16.24	17.13
Endocarditis	Hospitalizations	42.99	40.20	38.27	34.00	30.93	34.02	33.35	36.56	35.02	38.44	44.26	36.72	40.66	37.13	

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. Drug seizure data were provided by the National Forensic Laboratory Information System (NFLIS), Drug Enforcement Administration (DEA). Data were retrieved on Identified Drugs of Total Analyzed Drug Reports, San Francisco, 2015 and 2016, NFLIS, DEA. NFLIS methodology allows for the accounting of up to three drugs per item submitted for analysis. The data presented is a combined count including primary, secondary, and tertiary reports for each drug. 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 3: Number of Opioid, Cocaine, and Methamphetamine Overdose Deaths by Mutually Exclusive Substance Category in CCSF, 2006–2019

Substance	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Opioids only (no cocaine or methamphetamine)	26	42	62	82	69	67	69	76	73	47	44	53	64	75
Opioids and cocaine (no methamphetamine)	65	61	43	43	41	37	30	32	29	30	31	42	43	74
Opioids and methamphetamine (no cocaine)	*	*	*	*	*	*	12	15	19	16	21	29	47	97
Opioids, cocaine, and methamphetamine	*	*	*	*	*	*	*	*	*	*	*	11	24	82
Cocaine only (no opioids or methamphetamine)	54	46	37	30	32	35	39	40	47	29	24	28	27	34
Cocaine and methamphetamine (no opioids)	*	*	*	*	*	*	*	*	*	*	*	*	*	15
Methamphetamine only (no opioids or cocaine)	18	19	12	15	18	21	25	31	31	52	50	52	48	64

*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, 2014–2019

	2015		2016		2017		2018		2019	
	(#)	(%)	(#)	(%)	(#)	(%)	(#)	(%)	(#)	(%)
Total Admissions (#)	10,273		10,004		9,719		8,626		8,309	
Primary Substance										
Alcohol	2,294	22.3%	2,158	21.6%	2,023	20.8%	1,779	20.6%	1,745	21.0%
Cocaine/Crack	928	9.0%	760	7.6%	691	7.1%	530	6.1%	476	5.7%
Heroin	4,177	40.7%	4,195	41.9%	4,121	42.4%	3,825	44.3%	3,743	45.0%
Prescription Opioids	491	4.8%	478	4.8%	417	4.3%	366	4.2%	306	3.7%
Fentanyl	*	*	10	0.1%	*	*	41	0.5%	159	1.9%
Methamphetamine	1,498	14.6%	1,674	16.7%	1,837	18.9%	1,466	17.0%	1,355	16.3%
Cannabis	584	5.7%	463	4.6%	390	4.0%	335	3.9%	261	3.1%
Benzodiazepines	22	0.2%	21	0.2%	14	0.1%	26	0.3%	52	0.6%
MDMA	13	0.1%	*	*	*	*	*	*	11	0.1%
Other Drugs/Unknown	261	2.5%	240	2.4%	210	2.2%	251	2.9%	201	2.4%

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.

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.
Drug Seizures	National Forensic Laboratory Information System (NFLIS), Drug Enforcement Administration (DEA). Data were retrieved on Identified Drugs of Total Analyzed Drug Reports, CCSF, 2015 - 2017, NFLIS, DEA. NFLIS methodology allows for the accounting of up to three drugs per item submitted for analysis. The data presented are a combined count including primary, secondary, and tertiary reports for each drug.
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	SFDPH National HIV Behavioral Surveillance, Center for Public Health Research, Population Health Division <p>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</p> <p>End Hep C SF Annual Evaluation Report, Year 3 (http://www.endhepcsf.org/end-hep-c-sf-year-3-evaluation/)</p> <p>End Hep C SF: HIV/HCV Microlamination Planning (http://www.endhepcsf.org/end-hep-c-sf-micro-elimination-plan/)</p> <p>SFDPH National HIV Behavioral Surveillance, Center for Public Health Research, Population Health Division</p> <p>Hep C Health Project, San Francisco AIDS Foundation</p> <p>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</p>
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