

National Drug Early Warning System (NDEWS) Sentinel Community Site (SCS) Drug Use Patterns and Trends: SCE Narrative

The *SCE Narrative* is written by the Sentinel Community Epidemiologist (SCE) and provides their interpretation of important findings and trends based on available national data as well as sources specific to their area, such as data from local medical examiners or poison control centers. As a local expert, the SCE is able to provide context to the national and local data presented.

This *SCE Narrative* contains the following sections:

- ◇ Highlights
- ◇ Primary and Emerging Substance Use Problems
- ◇ Local Research Highlights (if available)
- ◇ Infectious Diseases Related to Substance Use (if available)
- ◇ Legislative and Policy Updates

The *SCE Narratives* for each of the 12 Sentinel Community Sites and detailed information about NDEWS can be found on the NDEWS website at www.ndews.org.

National Drug Early Warning System (NDEWS) San Francisco Sentinel Community Site (SCS) Drug Use Patterns and Trends, 2017: SCE Narrative

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Highlights

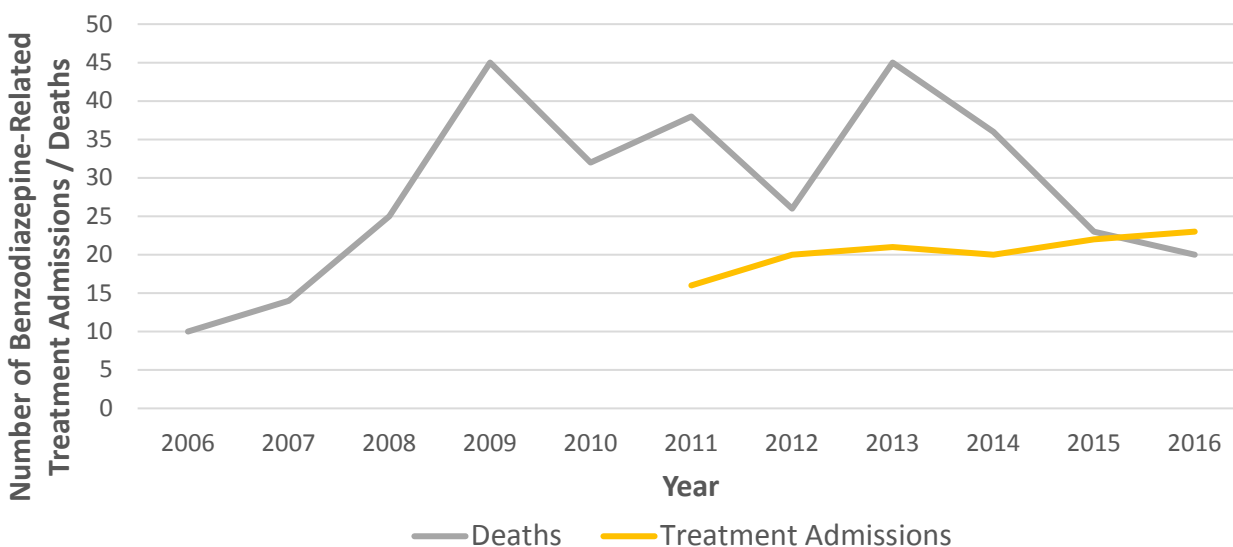
- Numerous indicators again suggest increasing **methamphetamine**-related morbidity and mortality in the City and County of San Francisco (CCSF). Substance use disorder (SUD) treatment admissions for methamphetamine continued to consistently rise, as did hospitalizations and emergency department visits involving methamphetamine and deaths including methamphetamine as a causal agent.
- Evidence also suggests an increase in **heroin** use in CCSF. The proportion of all SUD treatment admissions involving heroin continued to increase, and anecdotal reports suggest that, notwithstanding treatment-on-demand, there are many out-of-treatment heroin users in CCSF. Mortality from heroin remains low, although slowly it has been increasing since 2011, with 41 deaths from heroin in 2016.
- **Prescription opioids** remain an uncommon reason for SUD treatment admissions, and there is evidence to suggest declining street use of these agents. Data from the California State prescription drug monitoring program (CURES) show an ongoing decline in the monthly number of opioid prescription and the morphine milligram equivalent per patient in CCSF, and overdose deaths involving prescription opioids have steadily declined since 2010.
- **Fentanyl** has affected CCSF sporadically, although it may have become more established in 2016. In 2015, CCSF witnessed one episode of fentanyl sold as heroin and two episodes of counterfeit pills containing fentanyl that resulted in multiple overdoses and several deaths. In 2016, anecdotal reports suggest that fentanyl is becoming more common as its own product on the street, as counterfeit pills, and as a contaminant in stimulant drugs. Fentanyl deaths increased notably in 2016, accounting for 21 opioid deaths.
- Indicators for other substances in CCSF, including **alcohol**, **cocaine**, **benzodiazepines**, **marijuana**, and **synthetics**, suggest stable use.
- Long-term **homelessness** is an increasing concern for people who use substances in CCSF and a potential barrier to seeking help for SUD. In addition, the high rate of homelessness among people who use substances, which is a problem exacerbated by real estate development and limited housing options, has forced much drug use into the public eye. This trend continues to raise concerns and conflicts for both people who use substances and other community residents.
- Several pieces of **legislation** have altered legal and service delivery in California related to substance use, including regulation of asset forfeiture from drug arrest, legalization of recreational use of marijuana, mandatory checking of the prescription drug monitoring program by medical providers, funding for distribution of naloxone, and the establishment of Law Enforcement Assisted Diversion Pilot Programs.
- The number of people who **inject drugs** in CCSF may have increased from 10,158 in 2005 and to 22,500 in 2012, although estimates are imprecise and confidence intervals overlap.
- Numerous **research studies** have contributed to understanding substance use patterns in CCSF, and several initiatives, such as the citywide Hepatitis C Elimination Initiative, the San Francisco Department of Public Health Drug User Health Initiative, and several efforts to improve buprenorphine access, have been actively addressing substance user health issues.

Primary and Emerging Substance Use Problems

BENZODIAZEPINES

Benzodiazepines have remained a rare indication for admission to substance use disorder (SUD) treatment in CCSF, representing just 0.2% of admissions in 2016. Most patients were White/non-Hispanic and aged 26–44; the most common secondary drug was marijuana. Benzodiazepines accounted for a slightly smaller proportion of drug seizures in 2016 (3.4%) compared with 2015 (5.2%), which was also smaller than the U.S. proportion of 4.7% in 2016. Since 2008, benzodiazepines have been a causal agent in 20–50 deaths per year in CCSF, the majority of which also involve opioids (see Figure 1).

Figure 1. Benzodiazepine Health Indicators



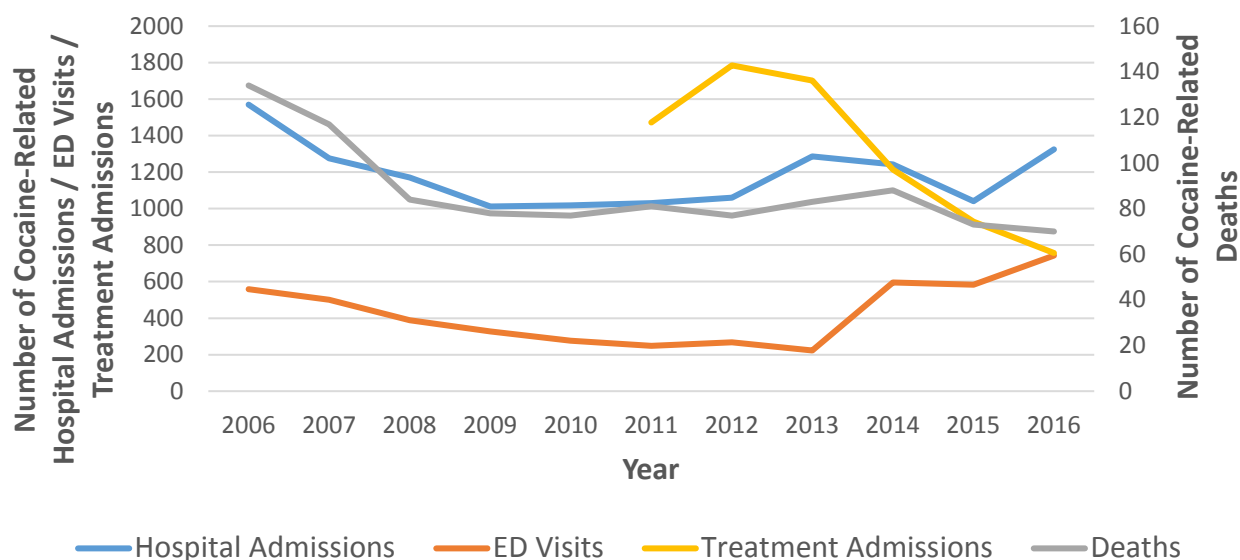
Source: Community Behavioral Health Services Electronic Health Record, San Francisco Department of Public Health, 2017; Office of the Chief Medical Examiner, San Francisco, 2017.

COCAINE/CRACK

SUD treatment admissions involving cocaine/crack as the primary drug have been continuously declining in CCSF from a peak of 15.6% of admissions in 2012 to 7.6% of admissions in 2016. Nearly two thirds of admissions for cocaine use were male, nearly three quarters were Black/African American, and 73.3% were older than age 45; 87.5% smoked the drug, and alcohol was the most common secondary drug. The number of hospitalizations at the county facility (Zuckerberg San Francisco General Hospital, ZSFG) has been fairly stable, and the number of deaths involving cocaine as a causal agent in CCSF may have slightly declined (see Figure 2). After a steady decline in cocaine-related emergency department (ED) visits at ZSFG, there has been an increase since 2013. Providers report that, among persons who use

stimulants and are homeless or marginally housed, cocaine/crack use is far less common than methamphetamine use, with the possible exception of those older than 60 years of age. Cocaine use was noted among just 5% of 6,704 visits to the Zuckerberg San Francisco General Psychiatric Emergency Services in fiscal year 2016–2017. Cocaine accounted for a slightly larger proportion of drug seizures in CCSF in 2016 (24.4%) compared with 2015 (20.9%); both years were notably larger than the proportion of national drug seizures involving cocaine (13.9%).

Figure 2. Cocaine Health Indicators

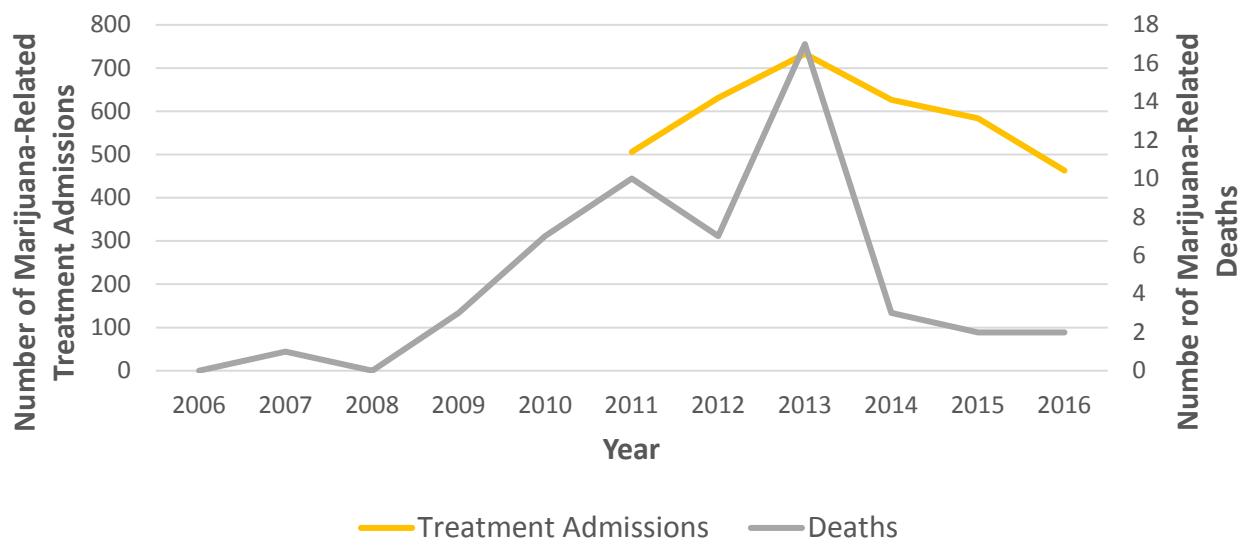


Source: Lifetime Clinical Record, San Francisco Department of Public Health, 2017 (Community Behavioral Health Services Electronic Health Record, San Francisco Department of Public Health, 2017; Office of the Chief Medical Examiner, San Francisco, 2017). Note that the transition from 2013 to 2014 involved a significant increase in the use of particular substance-use-related ICD-9 codes for ZSFG ED visits, which may represent an artificially large change in the number of substance-specific ED visits between those years.

MARIJUANA

Marijuana remains a fairly uncommon reason for SUD treatment admission in CCSF, representing 4.6% of admissions in 2016. Approximately two thirds of treatment admissions for marijuana were male, and the majority were either Black/African American (28.5%) or Hispanic/Latino (41.9%); almost half were younger than age 18, and the most common secondary drug was alcohol. The proportion of drug seizures involving marijuana was fairly stable between 2015 (18.8%) and 2016 (16.1%). Cannabis was found in 24.7% of drug seizures nationally, higher than in CCSF. Marijuana is a rare cause of death in CCSF, implicated in only 2 deaths in 2016 based on a review of records of the California Electronic Death Reporting System (see Figure 3).

Figure 3. Marijuana Health Indicators



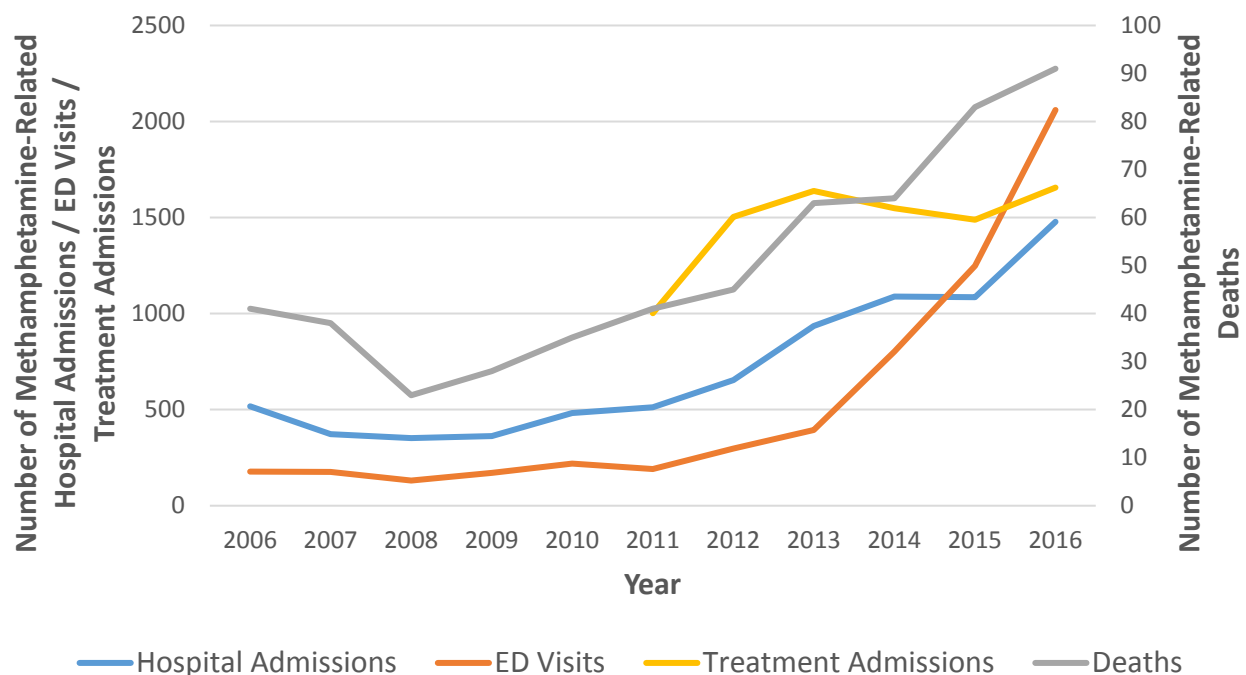
Source: Community Behavioral Health Services Electronic Health Record, San Francisco Department of Public Health, 2017; Office of the Chief Medical Examiner, San Francisco, 2017.

METHAMPHETAMINE

- Numerous indicators again suggest increasing **methamphetamine**-related morbidity and mortality in the City and County of San Francisco (CCSF). Substance use disorder (SUD) treatment admissions for methamphetamine continued to consistently rise, as did hospitalizations and emergency department visits involving methamphetamine and deaths including methamphetamine as a causal agent.

Methamphetamine remains a significant contributor to SUD treatment admissions in CCSF, involved in 16.6% of admissions in 2016. Nearly three quarters of admissions for methamphetamine were male, a plurality were White, most were aged 26–44 years, and nearly two thirds smoked the drug; the most common secondary drug was alcohol. The proportion of drug seizures involving methamphetamine has increased modestly, from 22.0% of seizures in 2015 to 25.7% in 2016, with both years exceeding the proportion of drug seizures including methamphetamine nationally (21.5%). These results are consistent with the steadily increasing number of deaths involving methamphetamine as a causal agent (see Figure 4). The number of ZSFG hospitalizations and ED visits involving methamphetamine have also increased consistently since 2009. Methamphetamine use is highly prevalent among homeless and marginally housed individuals in CCSF. Amphetamine-based stimulant use was noted among 47% of 6,704 visits to the Zuckerberg San Francisco General Psychiatric Emergency Services in fiscal year 2016–2017.

Figure 4. Methamphetamine Health Indicators



Source: Lifetime Clinical Record, San Francisco Department of Public Health, 2017; Community Behavioral Health Services Electronic Health Record, San Francisco Department of Public Health, 2017; Office of the Chief Medical Examiner, San Francisco, 2017. Note that the transition from 2013 to 2014 involved a significant increase in the use of particular substance-use-related ICD-9 codes for ZSFG ED visits, which may represent an artificially large change in the number of substance-specific ED visits between those years.

NEW PSYCHOACTIVE SUBSTANCES (NPS) AND SYNTHETICS OTHER THAN OPIOIDS

Synthetic stimulants continue to represent a rare cause for SUD treatment admissions in CCSF, including zero cases in 2016. Synthetic cathinones also continue to be rarely involved in drug seizures.

OPIOIDS

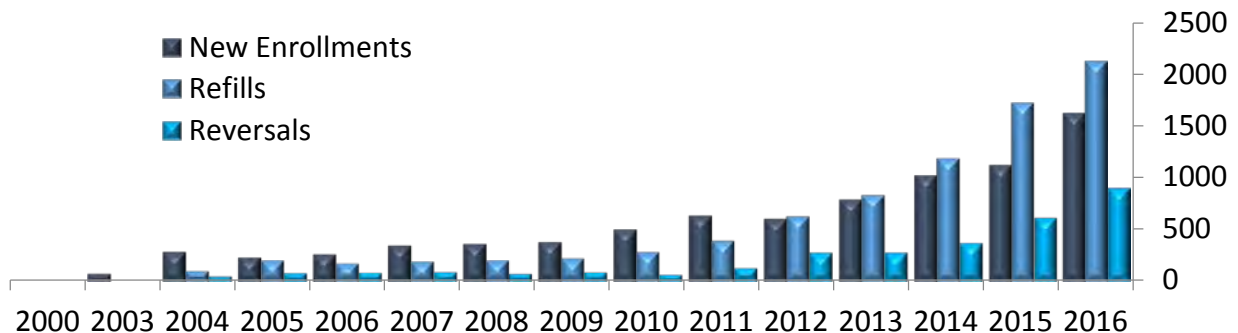
- Evidence also suggests an increase in heroin use in CCSF. The proportion of all SUD treatment admissions involving heroin continued to increase, and anecdotal reports suggest that, notwithstanding treatment-on-demand, there are many out-of-treatment heroin users in CCSF. Mortality from heroin remains low, although slowly it has been increasing since 2011, with 41 deaths from heroin in 2016.
- Prescription opioids remain an uncommon reason for SUD treatment admissions, and there is evidence to suggest declining street use of these agents. Data from the California State prescription drug monitoring program (CURES) show an ongoing decline in the monthly number of opioid prescription and the morphine milligram equivalent per patient in CCSF, and overdose deaths involving prescription opioids have steadily declined since 2010.

- Fentanyl has affected CCSF sporadically, although it may have become more established in 2016. In 2015, CCSF witnessed one episode of fentanyl sold as heroin and two episodes of counterfeit pills containing fentanyl that resulted in multiple overdoses and several deaths. In 2016, anecdotal reports suggest that fentanyl is becoming more common as its own product on the street, as counterfeit pills, and as a contaminant in stimulant drugs. Fentanyl deaths increased notably in 2016, accounting for 21 opioid deaths.

Opioid use continues to be prominent in CCSF, with ongoing evidence of increased heroin use. Heroin was the primary drug involved in 42.0% of SUD treatment admissions in 2016, a substantial increase from 30.1% of admissions in 2012. In contrast, prescription opioids were the primary drug involved in just 4.8% of SUD treatment admissions in 2016, which was relatively stable from 4.0% in 2012. More than two thirds of admissions involving heroin were male, nearly half were White, most were older than 45 years of age, and most injected the drug; cocaine was the most frequently cited secondary drug. For prescription opioids, most persons admitted were male, White, aged 26–44, and consumed the drug orally; heroin was the most frequently cited secondary drug. Opioid use was noted among 15% of 6,704 visits to the Zuckerberg San Francisco General Psychiatric Emergency Services in fiscal year 2016–2017. Opioids were involved in a similar proportion of drug seizures in 2016 (20.9%) as in 2015 (22.4%), which was also similar to the proportion of seizures involving opioids nationally (21.0%). There were increases in the proportions of seizures involving heroin (2015: 11.4%, 2016: 14.5%) and fentanyl (2015: 0.2%, 2016: 0.9%) from 2015 to 2016 but decreases in the proportions of seizures involving other prescription opioids. In 2016, there were more heroin-involved seizures and fewer fentanyl-involved seizures in CCSF compared with the nation as a whole (heroin: 11.5% nationally, fentanyl: 2.4% nationally).

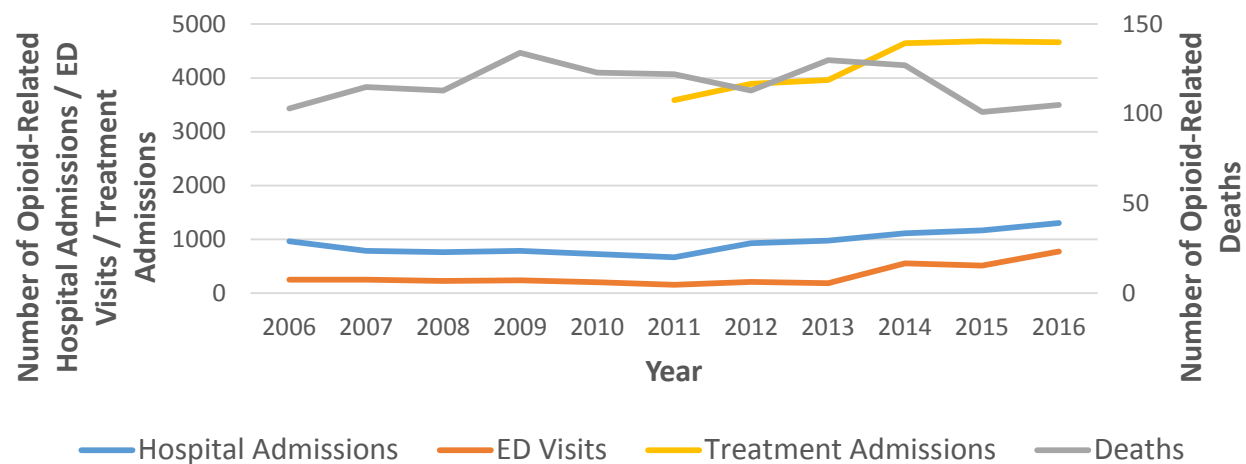
CCSF has a robust program of community distribution of naloxone as well as a co-prescribing initiative for patients in safety net primary care clinics. The community distribution program has substantially increased naloxone distribution in recent years and has reported a growing number of overdose reversals by program clients (see Figure 5). In addition, the number of ZSFG hospitalizations involving opioids has increased modestly since 2011 and the number of ZSFG ED visits involving opioids has increased since 2013 (see Figure 6). Nevertheless, the number of deaths involving opioids as a causal agent has been relatively stable. The number of deaths caused by heroin reached a nadir of 10 cases in 2010 and has since slowly risen to 41 in 2016, whereas deaths involving prescription opioids declined from 111 in 2010 to 76 in 2016. Deaths caused by fentanyl jumped to 21 in 2016.

Figure 5. Naloxone Enrollments, Refills, and Reversal Reports to the Drug Overdose Prevention and Education Project, 2003–2016



Source: Drug Overdose Prevention and Education Project, 2016.

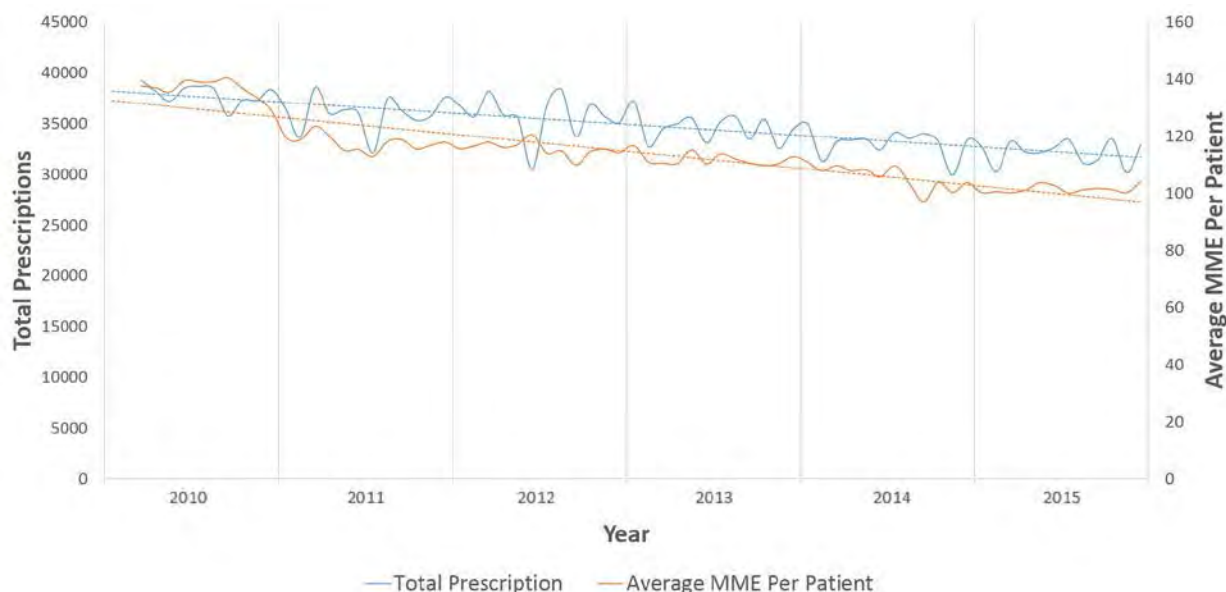
Figure 6. Opioid Health Indicators



Source: Lifetime Clinical Record, San Francisco Department of Public Health, 2017; Community Behavioral Health Services Electronic Health Record, San Francisco Department of Public Health, 2017; Office of the Chief Medical Examiner, San Francisco, 2017. Note that the transition from 2013 to 2014 involved a significant increase in the use of particular substance-use-related ICD-9 codes for ZSFG ED visits, which may represent an artificially large change in the number of substance-specific ED visits between those years.

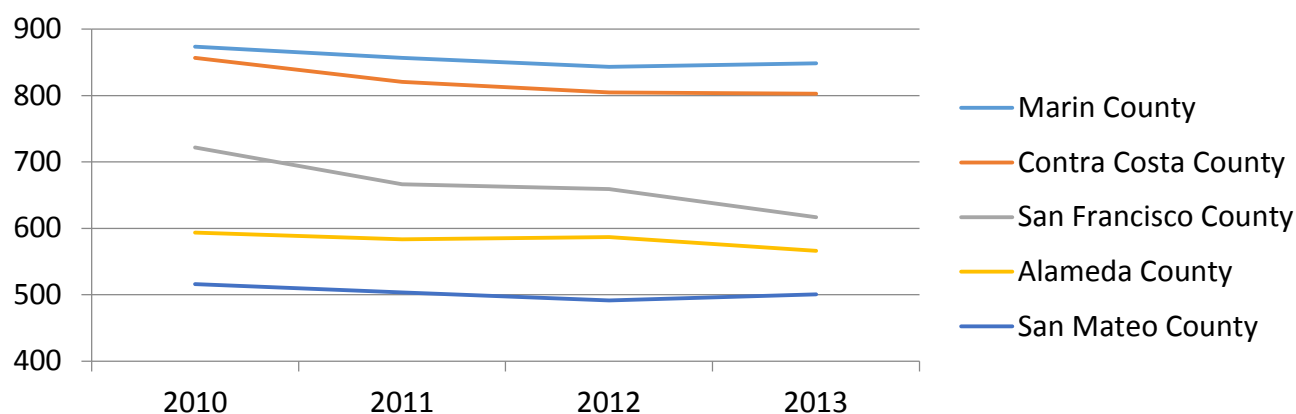
Several shifts continue to occur in the local opioid market. First, opioid prescribing substantially declined from a peak in 2010 according to data from the California State prescription drug monitoring program (CURES; see Figure 7). The decline in CCSF has been steeper than in surrounding counties, which generally maintained a similar level of prescribing during this period (Figure 8).

Figure 7. Monthly Opioid Prescription Trends, San Francisco, 2010–2015



Source: California State prescription drug monitoring program (CURES), 2016.

Figure 8. Morphine Milligram Equivalents of Opioids Prescribed Per Capita in Bay Area California Counties



Source: California State Prescription Drug Monitoring Program (CURES), 2015.

Second, the illicit drug market continues to evolve. In addition to the three episodes of fentanyl overdoses in 2015 and 2016, there was a substantial increase in fentanyl-involved deaths in 2016. This is consistent with reports from people who use drugs and harm reduction service providers that fentanyl is increasingly present in San Francisco. Fentanyl is present as both a contaminant in other products and as a powder. On May 8, 2017, the San Francisco Department of Public Health issued a health advisory in response to four fentanyl overdoses that occurred after using crack cocaine, one of which resulted in death. Review of the 21 fentanyl-involved deaths from 2016 found that 52% also listed methamphetamine as a cause of death, 29% also listed cocaine, and 33% also listed another opioid (24% heroin, 10% other opioid analgesic). Compared with other opioid deaths, fentanyl-involved deaths were of significantly younger individuals and more likely to involve methamphetamine.

At least some deaths involving fentanyl as a causal agent occurred among persons intending to use a different class of drugs, suggesting that efforts to prevent fentanyl overdose should target people who access any street drugs, not just opioids. Nonetheless, anecdotal reports of fentanyl increasingly present in the street opioid market suggest that the barriers to fentanyl entering San Francisco (black tar heroin being more difficult to adulterate and producing a very distinct high from fentanyl) may be falling to market processes.

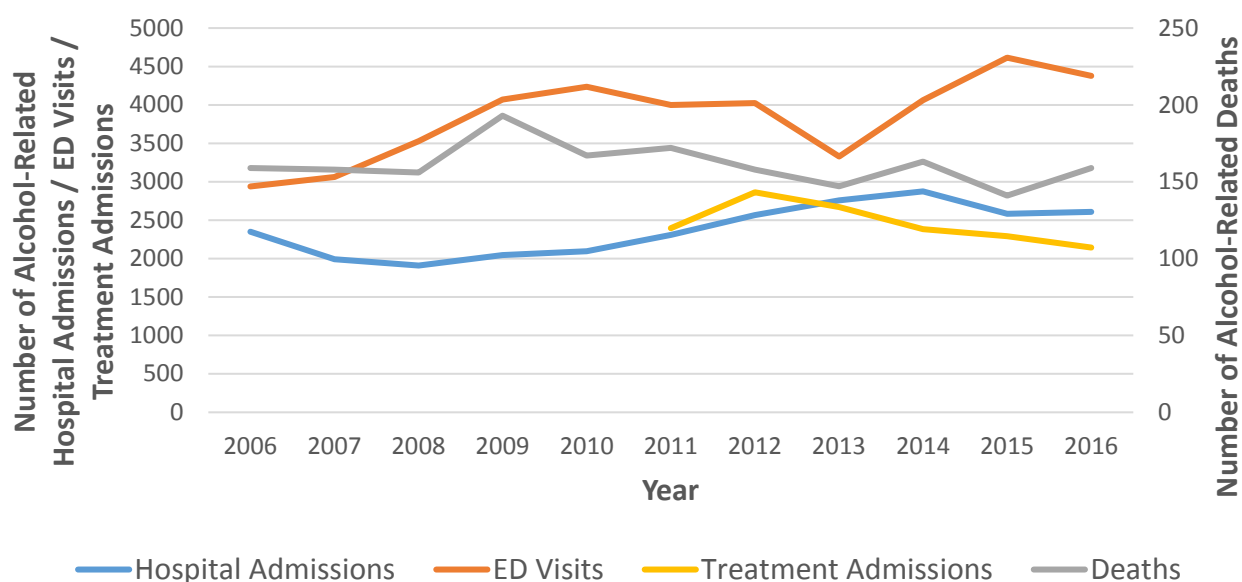
Notwithstanding opioid use disorder treatment-on-demand, providers anecdotally report a large and growing number of out-of-treatment heroin users who are homeless or marginally housed, with a notable proportion using both heroin and methamphetamine. The use of both heroin and methamphetamine adds challenges in accessing SUD treatment and other health care services, particularly for those who are homeless or marginally housed. The limited supply of affordable housing and the elimination of places such as vacant lots and squats has led to more heroin and other substance use by injection and smoking on streets and has increased its public visibility. The chronicity of homelessness raises additional challenges for those with SUDs, and some providers believe this may impact motivation to seek or sustain abstinence. The San Francisco Department of Public Health has begun providing low-barrier buprenorphine treatment among high-risk homeless persons. They

assessed more than 100 individuals and initiated buprenorphine treatment in 60, one third of whom have remained in treatment and have experienced improvements at three months. Furthermore, in January 2017, the Zuckerberg San Francisco General Hospital began initiating buprenorphine treatment in the emergency department.

ALCOHOL

Alcohol use remains a major issue in CCSF and the second leading cause of SUD treatment admissions. Alcohol was the primary drug for 21.5% of SUD treatment admissions in CCSF in 2016, which was a stable figure compared with prior years. More than three quarters of SUD treatment admissions for alcohol were male, a plurality were White, and most were older than 45 years of age; the most common secondary substances were cocaine/crack and methamphetamine. Alcohol remained the most common substance resulting in hospital admissions at ZSFG, with evidence of increasing ED visits in recent years but fairly stable numbers of alcohol-related hospitalizations and deaths (see Figure 9). Alcohol use was noted among 34% of 6,704 visits to the Zuckerberg San Francisco General Psychiatric Emergency Services in fiscal year 2017–2017.

Figure 9. Alcohol Health Indicators



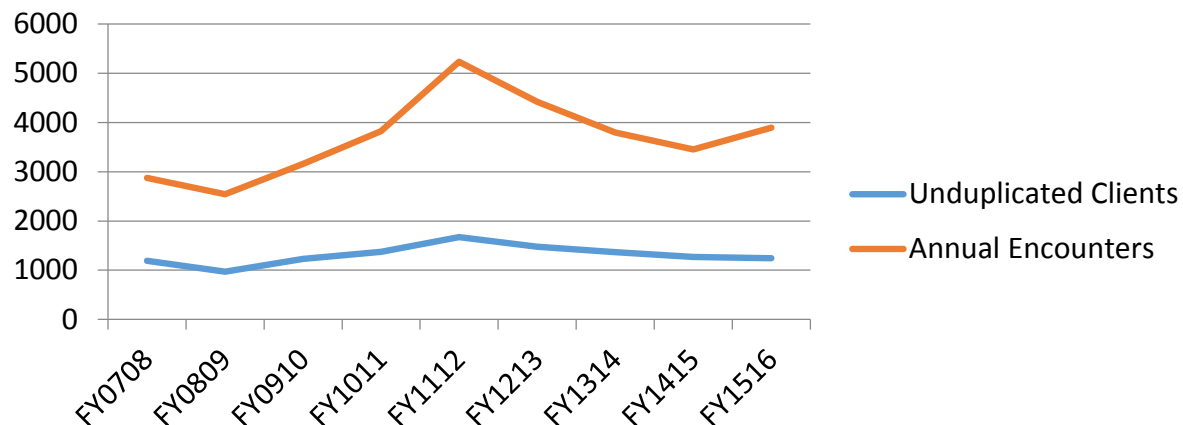
Source: Lifetime Clinical Record, San Francisco Department of Public Health, 2017; Community Behavioral Health Services Electronic Health Record, San Francisco Department of Public Health, 2017; Office of the Chief Medical Examiner, San Francisco, 2017. Note that the transition from 2013 to 2014 involved a significant increase in the use of particular substance-use-related ICD-9 codes for ZSFG ED visits, which may represent an artificially large change in the number of substance-specific ED visits between those years.

CCSF also has the Sobering Center, a 24/7 nurse-managed program providing support to individuals who are actively intoxicated on alcohol. A team including registered nurses, medical assistants, health workers, and respite workers serves clients through a pre-hospital diversion unit accepting clients aged

18+ both from ambulance and police services. The Sobering Center has seen a high and fairly consistent number of clients in recent years (see Figure 10).

Among homeless persons in CCSF, the most frequent causes of death are alcohol related.

Figure 10. CCSF Sobering Center Care by Fiscal Year (FY)



Source: San Francisco Sobering Center Annual Report 2016. San Francisco Department of Public Health. San Francisco CA. 2017.

Local Research Highlights

- Numerous **research studies** have contributed to understanding substance use patterns in CCSF, and several initiatives, such as the citywide Hepatitis C Elimination Initiative, the San Francisco Department of Public Health Drug User Health Initiative, and several efforts to improve buprenorphine access, have been actively addressing substance user health issues.

CCSF has a robust cadre of researchers focusing on substance use. The following includes a selection of relevant research performed in CCSF that was conducted or published since early 2016. This is not a comprehensive list.

- A) An analysis of the National HIV Behavioral Surveillance results for CCSF, and related data, found that the point estimates for the number of PWID in CCSF was 10,158 in 2005, 15,554 in 2009, and 22,500 in 2012. Although the estimates are imprecise, resulting in wide confidence intervals, the point estimates suggest a growth in the population of PWID. PMID: 26721246.
- B) A study found high rates of food insecurity among PWID in CCSF. See PMID: 26956477.
- C) A study of people without known cardiac disease who use cocaine found high levels of troponin I, further supporting the cardiac toxicity of cocaine. See PMID: 28157591.

- D) A study of HIV care adherence found that methamphetamine use was the strongest predictor of missing visits. See PMID: 26654093.
- E) A clinical trial of extended-release naltrexone for methamphetamine dependence among men who have sex with men found no benefit. See PMID: 28734107.
- F) A pilot clinical trial of intermittent naltrexone for binge-drinking and methamphetamine-using men who have sex with men found the intervention to be feasible, acceptable, and well-tolerated. See PMID: 26674372.
- G) Qualitative research has attempted to elucidate the complex relationship between providers and patients seeking care for chronic pain who have comorbid substance use. See PMIDs: 28599142, 28394752, 27754719, 26682471.
- H) Several publications assessing a naloxone co-prescribing initiative at safety net primary care clinics in CCSF reported that co-prescribing naloxone to patients treated with opioids long term for chronic pain was widely acceptable to patients and providers and may result in ancillary benefits such as reduced opioid-related emergency department visits. See PMIDs: 28218937, 27815762, 27621159, 27366987.
- I) A related publication found that using opioid poisoning billing codes to identify visits to the emergency department for opioid overdose is highly insensitive, detecting just 26% of events. See PMID: 27763703.

Infectious Diseases Related to Substance Use

Annual HIV diagnoses have been declining steadily for more than ten years. As of December 31, 2016, there were 212 new diagnoses in 2016; nevertheless, this is likely an underestimate because of delays in case reporting. The end-of-year numbers for 2014 and 2015 ultimately increased by 28 and 29, respectively, when incorporating cases that were reported after the end of each calendar year. Assuming a similar increase for 2016, it is probable that the number of new HIV diagnoses in 2016 will continue the declining trend in San Francisco, from 264 diagnoses in 2015. The number and percentage of diagnoses among PWID, including gay or bisexual males who inject drugs and other PWID, have also been declining steadily; the number and percentage of diagnoses among PWID other than gay or bisexual men, however, has remained stable and low since 2012. Although 2016 data are incomplete, among the 212 new HIV diagnoses, there were 38 (18%) among all PWID, including 19 (9%) among gay or bisexual male PWID and 19 (9%) among other PWID. Of the 16,009 individuals currently living with HIV in San Francisco, 3112 (19.4%) are or were PWID, including 2,203 (13.8%) gay or bisexual male PWID and 909 (5.7%) other PWID.

Figure 11. New HIV Diagnoses by Transmission Type, San Francisco, CA 2010–2016

Transmission Category	2010		2011		2012		2013		2014		2015		2016	
	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)
Total new diagnoses	457		422		452		390		307		264		212	
Any injection drug user (IDU)	106	(23.2)	82	(19.4)	65	(14.4)	65	(16.7)	59	(19.2)	42	(15.9)	38	(17.9)
IDU only	37	(8.1)	28	(6.6)	19	(4.2)	21	(5.4)	22	(7.2)	18	(6.8)	19	(9.0)
Gay or bisexual male IDU	69	(15.1)	54	(12.8)	46	(10.2)	44	(11.3)	37	(12.1)	24	(9.1)	19	(9.0)

The most up-to-date data regarding HCV in San Francisco comes from the HCV Elimination Initiative described earlier in the Local Activities subsection of the New Drug-Related Legislation/Changes in Drug-Related Legislation section. Through the use of available local data, the HCV Elimination Initiative estimates that approximately 23,000 (2.7%) San Francisco residents have HCV antibodies, compared with a national percentage of 1.7%. Of those with HCV antibodies, it is estimated that approximately 13,000 individuals (1.5%) are carrying an active virus; the remainder have naturally cleared the virus or have been treated for the infection. It is also estimated that PWID make up approximately 70% of active HCV infections in San Francisco, whereas they make up less than 3% of the city's population.

Legislative and Policy Updates

LEGISLATION

- Several pieces of **legislation** have altered legal and service delivery in California related to substance use, including regulation of asset forfeiture from drug arrest, legalization of recreational use of marijuana, mandatory checking of the prescription drug monitoring program by medical providers, funding for distribution of naloxone, and the establishment of Law Enforcement Assisted Diversion Pilot Programs.

In 2016, Governor Brown signed Senate Bill 443, which regulated asset forfeiture in drug cases by, for example, requiring a conviction for forfeiture of property in most cases.

In November 2016, California voters approved Proposition 64, which legalized recreational possession and use of marijuana for persons aged 21 and older and created taxes for cultivation and sale of marijuana.

Beginning July 1, 2017, California State Senate Bill 482 requires that all medical providers check the state prescription drug monitoring program (CURES) when initiating opioid therapy and every four months thereafter if opioids are continued. CURES is not integrated into medical records, and restrictions remain on who can access CURES.

Senate Bill 833, effective January 1, 2017, authorized \$3 million for a one-time allocation of naloxone to communities for naloxone distribution systems.

Senate Bill 1110, effective in 2016, established the Law Enforcement Assisted Diversion Pilot Program, in which selected local counties received support to implement pre-booking diversion programs to local health resources for offenders with substance use disorders. CCSF was one of the selected counties.

LOCAL ACTIVITIES

SFDPH has continued the Drug User Health Initiative (DUHI), initiated in 2015 to address health issues related to substance use in CCSF. DUHI is a collaborative, department-wide effort to align services and systems to consistently support the health of people who use drugs and alcohol in San Francisco. It was developed through a broad-based community engagement and strategic planning process that included input from substance use treatment experts, community service providers, and drug users. The DUHI strategic plan identifies four priority areas: (1) harm reduction education and systems capacity building; (2) overdose prevention, education, and naloxone distribution; (3) syringe access and disposal; and (4) HIV/HCV prevention, screening, and treatment. HIV/HCV prevention guides the initiative's activities and provides a common set of performance measures and outcomes. DUHI's accomplishments include establishment of a Harm Reduction Training Institute; incorporation of harm reduction objectives into service provider contracts; expanded overdose prevention education and naloxone access via collaborations with SFDPH Primary Care, Police Department, Jail Health, and other partners; building community support for syringe access and disposal by combatting stigma around public drug use and homelessness; funding a community-based HIV prevention binge-drinking intervention for gay men and transgender women; and strengthening community and clinical capacity for HCV prevention, screening, and treatment.

Multiple stakeholders in CCSF also created the HCV Elimination Initiative of San Francisco aiming to eliminate HCV in CCSF. The long-term goal of the HCV Elimination Initiative is to establish (1) city-wide HCV community-based testing coverage for highly impacted populations and augmented surveillance infrastructure to track the progress of the HCV Initiative, (2) linkage to care and treatment access for all people living with HCV infection, and (3) prevention of infection for those at risk of HCV and reinfection in those cured of HCV. The Initiative will use existing services and attempt to coordinate city-wide efforts. Current Medi-Cal guidelines allow for liberal access to HCV treatment, including treatment of active persons who inject drugs (PWID), which is essential for reducing incident infections. In 2016, HCV linkage programs were established at the San Francisco AIDS Foundation, HealthRIGHT 360, and Glide Foundation, which were designed to support marginalized persons with HCV. HCV linkage has also been provided at the CCSF Jail.

Data Sources

Data for this report were drawn from the following sources:

Treatment admissions data for San Francisco County 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 are still receiving services in a particular year (e.g., methadone maintenance clients).

Hospital admission and emergency department visit data for San Francisco County were provided by the San Francisco Department of Public Health Lifetime Clinical Record.

Drug mortality data were taken from the National Vital Statistics System-Mortality data, with additional information provided by the California Electronic Death Record System (CA-EDRS).

Psychiatric emergency services data were provided by the San Francisco Department of Public Health Psychiatric Emergency Services (PES).

Lay naloxone participant registration, refill and reversal data were provided by Eliza Wheeler of the San Francisco Drug Overdose Prevention Education (DOPE) Project, a program of the Harm Reduction Coalition.

Opioid prescription data were provided by California Department of Justice, Law Enforcement Support Program, Bureau of Criminal Identification and Investigative Services, from the Controlled Substance Utilization Review and Evaluation System (CURES), California Prescription Drug Monitoring Program (<http://oag.ca.gov/cures-pdmp>).

Low-barrier buprenorphine treatment pilot data was provided by Dr. Barry Zevin of the San Francisco Department of Public Health.

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 are a combined count including primary, secondary, and tertiary reports for each drug.

Acquired immunodeficiency syndrome (AIDS) surveillance and human immunodeficiency virus (HIV) data were provided by the San Francisco Department of Public Health, *Population Health Division, Applied Research, Community Health Epidemiology, and Surveillance Branch, HIV Semi-Annual Surveillance Report, HIV/AIDS Cases Reported Through December 2016*, accessed at <https://www.sfdph.org/dph/comupg/oprograms/hivepise/HIVepiSecReports.asp>.

Viral hepatitis data were provided by HCV Elimination Initiative of San Francisco (End Hep C SF), *Prevalence Estimate*, accessed at <https://endhepcsf.org/>.

Other Sources:

1. Behar E, Rowe C, Santos GM, et al. Acceptability of Naloxone Co-Prescription Among Primary Care Providers Treating Patients on Long-Term Opioid Therapy for Pain. *Journal of general internal medicine*. Mar 2017;32(3):291-295.
2. Behar E, Rowe C, Santos GM, Murphy S, Coffin PO. Primary Care Patient Experience with Naloxone Prescription. *Annals of family medicine*. Sep 2016;14(5):431-436.
3. Behar E, Rowe C, Santos GM, Santos N, Coffin PO. Academic Detailing Pilot for Naloxone Prescribing Among Primary Care Providers in San Francisco. *Family medicine*. Feb 2017;49(2):122-126.
4. Ceasar R, Chang J, Zamora K, et al. Primary care providers' experiences with urine toxicology tests to manage prescription opioid misuse and substance use among chronic noncancer pain patients in safety net health care settings. *Substance abuse*. 2016;37(1):154-160.
5. Chang JS, Kushel M, Miaskowski C, et al. Provider Experiences With the Identification, Management, and Treatment of Co-occurring Chronic Noncancer Pain and Substance Use in the Safety Net. *Substance use & misuse*. Jan 28 2017;52(2):251-255.
6. Chen YH, McFarland W, Raymond HF. Estimated Number of People Who Inject Drugs in San Francisco, 2005, 2009, and 2012. *AIDS and behavior*. Dec 2016;20(12):2914-2921.
7. Coffin PO, Behar E, Rowe C, et al. Nonrandomized Intervention Study of Naloxone Coprescription for Primary Care Patients Receiving Long-Term Opioid Therapy for Pain. *Annals of internal medicine*. Aug 16 2016;165(4):245-252.
8. Coffin PO, Santos GM, Hern J, et al. Extended-release naltrexone for methamphetamine dependence among men who have sex with men: a randomized placebo-controlled trial. *Addiction*. Jul 22 2017.
9. Cohen JK, Santos GM, Moss NJ, Coffin PO, Block N, Klausner JD. Regular clinic attendance in two large San Francisco HIV primary care settings. *AIDS care*. 2016;28(5):579-584.
10. Hurstak EE, Kushel M, Chang J, et al. The risks of opioid treatment: Perspectives of primary care practitioners and patients from safety-net clinics. *Substance abuse*. Apr-Jun 2017;38(2):213-221.
11. Knight KR, Kushel M, Chang JS, et al. Opioid pharmacovigilance: A clinical-social history of the changes in opioid prescribing for patients with co-occurring chronic non-cancer pain and substance use. *Social science & medicine*. Aug 2017;186:87-95.

12. Riley ED, Hsue PY, Vittinghoff E, et al. Higher prevalence of detectable troponin I among cocaine-users without known cardiovascular disease. *Drug and alcohol dependence*. Mar 01 2017;172:88-93.
13. Rowe C, Vittinghoff E, Santos GM, Behar E, Turner C, Coffin PO. Performance Measures of Diagnostic Codes for Detecting Opioid Overdose in the Emergency Department. *Academic emergency medicine : official journal of the Society for Academic Emergency Medicine*. Apr 2017;24(4):475-483.
14. Santos GM, Coffin P, Santos D, et al. Feasibility, acceptability and tolerability of targeted naltrexone for non-dependent methamphetamine-using and binge-drinking men who have sex with men. *Journal of acquired immune deficiency syndromes*. Dec 15 2015.
15. Schmitz J, Kral AH, Chu D, Wenger LD, Bluthenthal RN. Food insecurity among people who inject drugs in Los Angeles and San Francisco. *Public health nutrition*. Aug 2016;19(12):2204-2212.

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