NDEWS National Drug Early Warning System

Funded at the Center for Substance Abuse Research by the National Institute on Drug Abuse

San Francisco Sentinel Community Site (SCS) Drug Use Patterns and Trends, 2018

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NDEWS Coordinating Center

NDEWS National Drug Early Warning System

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Sentinel Community Epidemiologists (SCEs)

Atlanta Metro

Brian J. Dew, PhD
Dept of Counseling and Psychological Svcs
Georgia State University
Phone: 404-413-8168
bdew@gsu.edu

Chicago Metro

Lawrence J. Ouellet, PhD School of Public Health University of Illinois at Chicago Phone: 312-355-0145 lio@uic.edu

Denver Metro

Marion Rorke, MPH
Dept of Public Health and Environment
City and County of Denver
Phone: 720-865-5453
marion.rorke@denvergov.org

Wayne County (Detroit Area)

Cynthia L. Arfken, PhD
Dept of Psychiatry and Behavioral
Neurosciences
Wayne State University
Phone: 313-993-3490
cynthia.arfken@wayne.edu

Los Angeles County

Mary-Lynn Brecht, PhD Integrated Substance Abuse Programs University of California at Los Angeles Phone: 310-983-1196 Ibrecht@ucla.edu

Maine

Marcella H. Sorg, PhD, RN Rural Drug and Alcohol Research Program University of Maine Phone: 207-581-2596 mhsorg@maine.edu

Southeastern Florida (Miami Area)

James N. Hall, BA
Center for Applied Research on Substance Use
and Health Disparities
Nova Southeastern University
Phone: 786-547-7249
upfrontin@aol.com

New York City

Denise Paone, EdD
Bureau of Alcohol and Drug Use
Prevention, Care and Treatment
New York City Dept of Health & Mental

Phone: 347-396-7015 dpaone@health.nyc.gov

Philadelphia

Suet T. Lim, PhD
City of Philadelphia
Dept of Behavioral Health and Intellectual
disAbility Services
Community Behavioral Health
Phone: 215-413-7165
suet.lim@phila.gov

San Francisco

Phillip O. Coffin, MD, MIA San Francisco Dept of Public Health Phone: 415-437-6282 phillip.coffin@sfdph.org

King County (Seattle Area)

Caleb Banta-Green, PhD, MSW, MPH Alcohol and Drug Abuse Institute University of Washington Phone: 206-685-3919 calebbg@u.washington.edu

Texas

Jane C. Maxwell, PhD School of Social Work The University of Texas at Austin Phone: 512-656-3361 jcmaxwell@austin.utexas.edu

National Drug Early Warning System (NDEWS) San Francisco Sentinel Community Site (SCS) Drug Use Patterns and Trends, 2018

Phillip O. Coffin, M.D., and Christopher Rowe, M.P.H. San Francisco Department of Public Health

Highlights

- Numerous indicators 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 rise, as did hospitalizations, emergency department visits, and law enforcement seizures involving methamphetamine. Deaths involving methamphetamine increased from 2008 to 2016.
- The rates of SUD treatment admissions, hospitalizations, emergency department visits, and law
 enforcement seizures involving opioids continued to increase, yet opioid-related mortality
 remained stable. The distribution of naloxone by community-based organizations has continued
 to increase, with 5,499 naloxone kits distributed and 1,247 overdose reversals by lay persons
 reported in 2017.
- Evidence suggests a continued increase in heroin use in CCSF. The proportion of all SUD treatment admissions involving heroin remained steady after several years of consistent increases, rates of heroin-involved emergency department visits and hospitalizations have increased since 2013, and rates of law enforcement seizures for heroin have risen since 2015. Mortality from heroin remains low, although it has been increasing since 2011, with 41 deaths from heroin in 2017.
- Although fentanyl is not the dominant opioid affecting CCSF, the rate of fentanyl-involved overdose deaths has increased since 2013 and law enforcement seizures increased sharply from 2015 to 2016 but remained stable in 2017. There have been multiple suspected and confirmed episodes of nonfatal and fatal overdoses resulting from fentanyl-containing crack cocaine, methamphetamine, and counterfeit opioid and benzodiazepine pills since 2017. In response to these incidents, syringe access programs now routinely provide fentanyl test strips to clients.

- In 2017, CCSF began providing **buprenorphine inductions for homeless persons** at the site of encampments. At one year, 22% of recipients were still on buprenorphine and not using illicit opioids. In 2018, CCSF dedicated \$2 million to expand this service.
- CCSF is engaged in efforts to open two **supervised injection sites** in 2018, following the recommendations of a local government task force. A recent report estimated there were 24,492 people who inject drugs in CCSF in 2015.
- In 2016, California voters passed Proposition 64, which legalized the sale and distribution of
 cannabis products beginning in 2018. The rate of SUD treatment admissions and law
 enforcement seizures involving cannabis have declined since 2013, yet the rate of cannabisrelated emergency department visits has steadily increased since 2006. Tracking cannabisrelated health and safety indicators since legalization is a priority for CCSF.

NDEWS Priority Substances

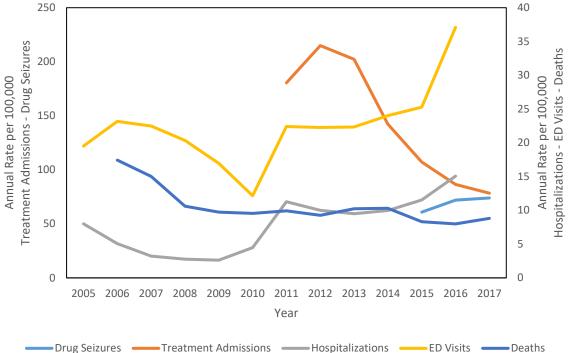
COCAINE/CRACK

Key Findings

Local indicators for cocaine/crack use and related morbidity and mortality in CCSF are mixed (Figure 1). The rate of SUD treatment admissions for cocaine/crack have been declining since 2012, and both overdose deaths and law enforcement seizures involving cocaine have been stable. However, there were increases in both emergency department visits and hospitalizations involving cocaine from 2015 to 2016. It should be noted that the U.S. healthcare system transitioned from ICD-9 to ICD-10 on October 1, 2015, so changes from 2015 to 2016 may reflect changes in diagnostic coding practices.

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Figure 1. San Francisco Cocaine/Crack Indicators, 2005-2017



SOURCES: See the Sources section for details. 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).

Polydrug Use

Among the 693 SUD treatment admissions for cocaine/crack in CCSF in 2017, the most common secondary substances were alcohol (10%), marijuana (5%), and methamphetamine (4%).

Among the 78 overdose deaths involving cocaine in CCSF in 2017, 59% involved an opioid (29% involved opioid analgesics; 24% involved heroin; 15% involved fentanyl), 22% involved methamphetamine, and 10% involved alcohol.

Additional Findings

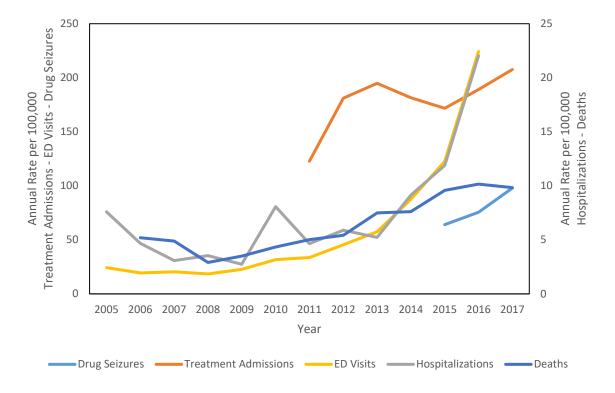
There have been several recent suspected and confirmed episodes of nonfatal and fatal overdose from fentanyl-containing cocaine/crack. See Fentanyl and Other Synthetic Opioids Additional Findings for details.

METHAMPHETAMINE

Key Findings

Local indicators suggest an increase in methamphetamine and related morbidity and mortality in CCSF (Figure 2). SUD treatment admissions for methamphetamine have increased since 2015, and methamphetamine-involved emergency department visits and hospitalizations have increased sharply since 2013, after longer gradual increases. Overdose deaths involving methamphetamine have increased steadily since 2008 but have remained stable since 2015. Law enforcement seizures have increased each year since at least 2015.

Figure 2: San Francisco Methamphetamine Indicators, 2005-2017



SOURCES: See the Sources section for details. Emergency department visits and hospitalizations include primary or nonprimary ICD-9 codes: E854.2 (poisoning), 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).

Polydrug Use

Among the 1,836 SUD treatment admissions for methamphetamine in CCSF in 2017, the most common secondary substances were alcohol (8%), heroin (4%), and cocaine/crack (3%).

Among the 87 overdose deaths involving methamphetamine in CCSF in 2017, 36% involved an opioid (14% involved opioid analgesics; 15% involved heroin; 10% involved fentanyl), 20% involved cocaine, and 5% involved alcohol.

Additional Findings

There have been several recent suspected and confirmed episodes of nonfatal and fatal overdose from fentanyl-containing methamphetamine. See Fentanyl and Other Synthetic Opioids Additional Findings for details.

An analysis of deaths from acute toxicity from cocaine/crack or methamphetamine in San Francisco found that stimulant deaths were more likely than opioid deaths to involve a cardiac or cerebrovascular cause of death (Turner et al., *Drug and Alcohol Dependence*, 2018).

A randomized controlled trial of extended-release naltrexone among men-who-have-sex-with-men who have methamphetamine use disorder found no effect on methamphetamine use (Coffin et al., *Addiction*, 2018).

A study of HIV-positive people who use stimulants in CCSF found recent use to be associated with inflammation, innate immune activation, neuroendocrine hormone regulation, and neurotransmitter synthesis (Carrico et al., *Brain, Behavior & Immunity*, 2018).

HEROIN

Key Findings

Local indicators suggest an increase in heroin use and related morbidity in CCSF (Figure 3). Although the rate of SUD treatment admissions for heroin has been stable since 2014, heroin-involved emergency department visits and hospitalizations have both increased since 2013. The number and rate of law enforcement seizures of heroin have also increased since at least 2015. Despite increases in multiple indicators, overdose deaths involving heroin have remained stable since 2014.

Polydrug Use

Among the 4,077 SUD treatment admissions for heroin in in CCSF in 2017, the most common secondary substances were cocaine/crack (25%), methamphetamine (22%), and marijuana (5%).

It is very common for heroin overdose deaths to involve other substances in CCSF. Among the 41 overdose deaths involving heroin from in 2017, 46% involved cocaine, 32% involved methamphetamine, 15% involved another opioid (10% involved opioid analgesics; 5% involved fentanyl), and 7% involved alcohol.

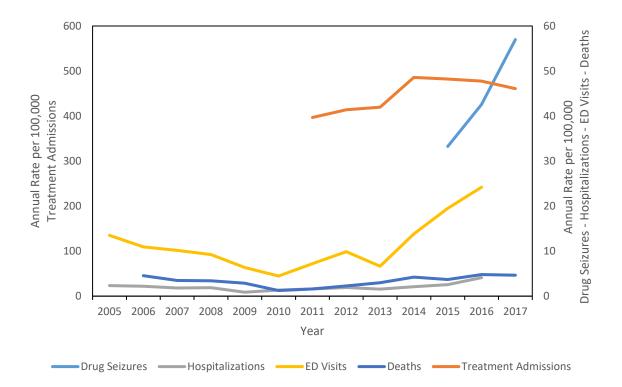


Figure 3: San Francisco Heroin Indicators, 2005-2017

SOURCES: See the Sources section for details. Emergency department visits and hospitalizations include primary or nonprimary ICD-9 codes: E850.0 (poisoning), 965.01 (poisoning) and ICD-10 code: T40.1 (poisoning).

Additional Findings

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. In 2017, the Drug Overdose Prevention and Education (DOPE) Project distributed 5,499 naloxone kits and program participants reported 1,247 overdose reversals in the community.

The overall number of buprenorphine prescriptions and the number of patients prescribed buprenorphine have increased steadily since at least 2010 (Figure 4).

A review of medical examiner case narratives for opioid overdose decedents in San Francisco noted that only 21% were attributed to heroin, but this proportion increased to 31% when evidence of injection was considered suggestive of heroin use (Hurstak et al., *International Journal of Drug Policy*, 2018).

A pilot randomized controlled trial of a behavioral intervention to reduce opioid overdose conducted in San Francisco demonstrated a significant reduction in opioid overdose events (Coffin et al., *Plos One*, 2017). A further analysis of trial data found that fluctuations in the quantity of illicit opioids used were positively associated with overdose risk (Rowe et al., *International Journal of Drug Policy*, 2018).

Figure 4. Buprenorphine Prescriptions in San Francisco, CA, 2010-2017

Year	Number of Prescriptions	Number of Unique Patients*
2010	10600	974
2011	10292	1193
2012	10531	1331
2013	11446	1456
2014	12694	1652
2015	12855	1627
2016	14456	1841
2017	16222	2073

^{*}Unique patients are per year, so a single patient may be included in multiple years. Source: See the Sources section for details.

PRESCRIPTION OPIOIDS

Key Findings

Local indicators for prescription opioid use and related morbidity and mortality in CCSF are mixed (Figure 5). The rates of SUD treatment admissions, overdose deaths, and law enforcement seizures involving prescription opioids have been declining since 2014. However, there were increases in both emergency department visits and hospitalizations involving prescription opioids from 2015 to 2016. It should be noted that the U.S. healthcare system transitioned from ICD-9 to ICD-10 on October 1, 2015, so changes from 2015 to 2016 may reflect changes in diagnostic coding.

Although opioid overdose mortality has remained stable, the proportion of opioid overdose deaths involving opioid analgesics has declined since 2011 as the proportion involving heroin and fentanyl have increased.

Polydrug Use

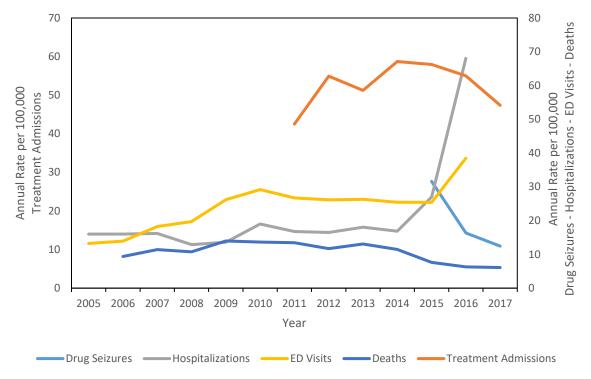
Among the 419 SUD treatment admissions for prescription opioids in CCSF in 2017, the most common secondary substances were heroin (12%), methamphetamine (10%), and cocaine/crack (8%).

Among the 54 overdose deaths involving prescription opioids in 2017, 43% involved cocaine, 22% involved methamphetamine, 15% involved either heroin (7%) or fentanyl (7%), and 11% involved alcohol.

Additional Findings

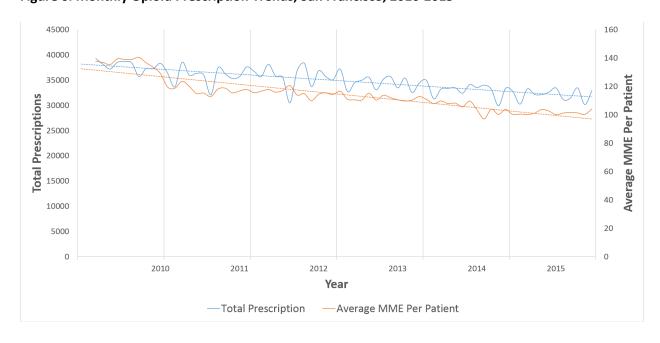
Opioid prescribing substantially declined from a peak in 2010 through at least 2015 according to data from the California State prescription drug monitoring program (CURES 2.0) (Figure 6).

Figure 5: San Francisco Prescription Opioid Indicators, 2005-2017



SOURCES: See the Sources section for details. Emergency department visits and hospitalizations include primary or nonprimary ICD-9 codes: E850.1, E850.2, 965.00, 965.02, 965.09 (all poisoning) and ICD-10 codes: T40.0, T40.2, T40.3, T40.6 (all poisoning).

Figure 6. Monthly Opioid Prescription Trends, San Francisco, 2010-2015



SOURCES: See the Sources section for details.

Qualitative research into opioid prescribing practices and patient experiences in the Bay Area explored the complexity of patient care in this era of changing opioid prescribing guidelines (Knight et al., *Social Science & Medicine*, 2017; Hurstak et al., *Substance Abuse*, 2017).

An analysis of drug use histories collected from PWID in CCSF and Los Angeles, CA, found that those initiating drug use during the prescription opioid era (1990s–2000s) had a shorter time to initiation of injection drug use (Bluthenthal et al., *Drug and Alcohol Dependence*, 2017).

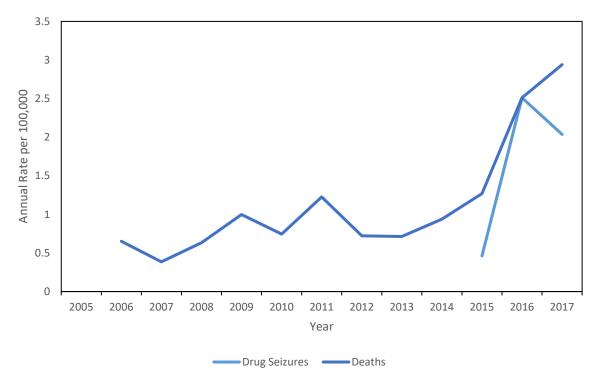
See the Heroin Additional Findings section for details regarding community distribution of naloxone and buprenorphine prescriptions in CCSF.

FENTANYL AND OTHER NONPRESCRIPTION SYNTHETIC OPIOIDS

Key Findings

Although the threat posed by fentanyl is not as severe in CCSF as in other regions in the United States, local indicators suggest an increase in the presence of fentanyl in the illicit drug supply in CCSF (Figure 7). The rate of fentanyl-involved overdose deaths has increased since 2013, and the rate of law enforcement seizures of fentanyl increased sharply from 2015 to 2016.

Figure 7: San Francisco Fentanyl Indicators, 2005-2017



SOURCES: See the Sources section for details.

Polydrug Use

Among the 26 overdose deaths involving fentanyl in CCSF in 2017, 46% involved cocaine, 35% involved methamphetamine, 23% involved either heroin (8%) or prescription opioids (15%), and 27% involved alcohol.

Additional Findings

In recent years, there have been several episodes of nonfatal and fatal overdose events involving fentanyl-containing cocaine/crack, methamphetamine, and counterfeit opioid and benzodiazepine pills. In an episode in February 2018, three overdose decedents tested positive for cocaine, methamphetamine, fentanyl, and acetyl fentanyl; traces of these substances were also found in a glass pipe found on the scene, suggesting that either the methamphetamine or the cocaine was laced with fentanyl and acetyl fentanyl. In another episode in May 2017, fentanyl was found in crack cocaine that was smoked and caused three overdoses requiring hospitalization and one death. In 2015, there was one confirmed episode of fentanyl sold as heroin and two episodes of counterfeit benzodiazepine pills containing fentanyl that resulted in multiple overdoses and several deaths. As a result of these incidents, syringe access programs are routinely providing fentanyl test strip to participants.

A report was published regarding the role of naloxone distribution programs in identifying the first episode of fentanyl being sold as heroin in 2015, noting that there was a substantial increase in naloxone dispensed and reversals reported in the Civic Center neighborhood of CCSF, without an increase in mortality (Rowe et al., *Journal of Urban Health*, 2018).

See the Heroin Additional Findings section for details regarding community distribution of naloxone and buprenorphine prescriptions in CCSF.

Other Priority Substances in San Francisco

ALCOHOL

Key Findings

Local indicators for alcohol use and related morbidity and mortality in CCSF are mixed (Figure 8). SUD treatment admissions for alcohol have declined since 2012, and deaths due to chronic alcohol use or acute alcohol effects have long been stable. However, both emergency department visits and hospitalizations for acute alcohol effects have increased steadily since at least 2009.

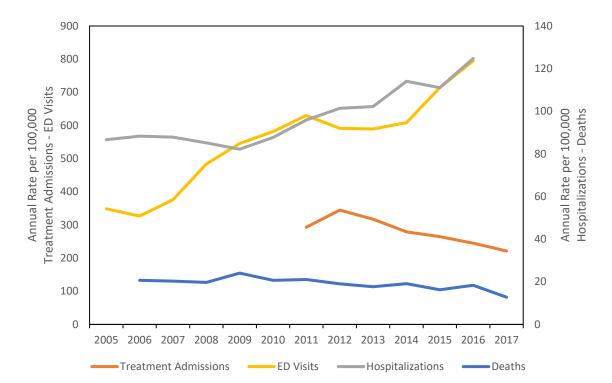


Figure 8: San Francisco Alcohol Indicators, 2005-2017

SOURCES: See the Sources section for details. Emergency department visits and hospitalizations include primary or nonprimary ICD-9 codes: E860.0, E860.1, E860.2, E860.9, 980.0, 980.1, 980.9 and ICD-10 codes: X45, Y15, T51.0, T51.1, T51.9; primary only ICD-9 codes: 291, 305.0, 303.0, 303.9, 790.3 and ICD-10 codes: F10, R78.0. Deaths involve both acute and chronic effects of alcohol.

Polydrug Use

Among SUD treatment admissions for alcohol in CCSF in 2017, the most common secondary substances were methamphetamine (7%), cocaine/crack (6%), and marijuana (5%).

It is common for alcohol to be implicated in overdose deaths involving other substances. See the Polydrug Use sections for other substances for details.

Additional Findings

Results of a pilot study of low-threshold extended-release naltrexone for homeless adults who are high utilizers of multiple emergency services in CCSF suggested that the intervention was effective for some individuals and was overall cost-effective (Smith-Bernadin et al., *Journal of Substance Abuse Treatment*, 2018).

MARIJUANA

Key Findings

Local indicators for marijuana use and related morbidity and mortality in CCSF are mixed (Figure 9). SUD treatment admissions for marijuana have declined since 2013, and drug seizures have declined since at least 2015. However, emergency department visits involving marijuana have increased steadily since 2006.

100 35 90 30 **Drug Seizures - Treatment Admissions** 80 Hospitalizations - ED Visits Annual Rate per 100,000 Annual Rate per 100,000 25 70 60 20 40 30 10 20 5 10 0 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 Year Hospitalizations Drug Seizures Treatment Admissions **ED** Visits

Figure 9: San Francisco Cannabis Indicators, 2005-2017

SOURCES: See the Sources section for details. Emergency department visits and hospitalizations include primary or nonprimary ICD-9 codes: E854.1 (poisoning), 969.6 (poisoning) and ICD-10 code: T40.7 (poisoning); primary only ICD-9 codes: 304.3 (dependence), 305.2 (abuse) and ICD-10 codes: F12 (dependence/abuse/use).

Additional Findings

In 2016, California voters passed Proposition 64, which legalized the sale and distribution of cannabis products beginning in 2018. Tracking cannabis-related health and safety indicators since legalization is a priority for CCSF.

Infectious Diseases Related to Substance Use

Annual new HIV diagnoses have been declining steadily for more than ten years. As of December 31, 2017, there were 202 new diagnoses in 2017; however, this is likely a slight underestimate because of delays in case reporting. The number and percentage of diagnoses among people who inject drugs (PWID), including gay or bisexual males who inject drugs and other PWID, declined steadily from 2010 through 2015 but increased modestly in 2017. The number and percentage of diagnoses among PWID other than gay or bisexual men, however, has remained stable and low since 2012. Among the 202 new HIV diagnoses reported in 2017, there were 52 (22%) among all PWID, including 29 (13%) among gay or bisexual male PWID and 23 (10%) among other PWID (Figure 10). Of the 16,011 individuals currently living with HIV in San Francisco, 3,104 (19.4%) are or were PWID, including 2,207 (13.8%) gay or bisexual male PWID and 897 (5.6%) other PWID.

Figure 10. New HIV Diagnoses by Transmission Type, San Francisco, 2010-2017

Transmission	2011		2012		2013		2014		2015		2016		2017	
Category	n	(%)												
Total new diagnoses	424		457		391		314		270		232		202	
Any injection drug user (IDU)	87	(20.5)	67	(14.7)	67	(17.1)	64	(20.4)	41	(15.2)	42	(18.1)	52	(22.4)
IDU only	28	(6.6)	20	(4.4)	21	(5.4)	23	(7.3)	17	(6.3)	20	(8.6)	23	(9.9)
Gay or bisexual male IDU	59	(13.9)	47	(10.3)	46	(11.8)	41	(13.1)	24	(8.9)	22	(9.5)	29	(12.5)

An analysis of men-who-have-sex-with-men and their partners found that any drug use in a partnership was significantly associated with sexual HIV risk behaviors (Brown et al., *Drug and Alcohol Dependence*, 2017).

The most up-to-date data regarding HCV in San Francisco come from the HCV Elimination Initiative, a local coalition of individuals and organizations that coordinates efforts to eliminate HCV in CCSF. The HCV Elimination Initiative estimated that approximately 22,000 (2.5%) San Francisco residents are HCV seropositive, compared with a national seroprevalence estimate of 1.4%. Of all HCV seropositive individuals in San Francisco, 16,408 are estimated to be viremic, with up to 11,922 viremic cases untreated as of the end of 2016. 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.

New Substance-Related Legislative and Policy Updates

• In 2016, California voters passed Proposition 64, which legalized the sale and distribution of cannabis products beginning in 2018.

- In 2017, CCSF began providing buprenorphine inductions for homeless persons at the site of encampments. At the end of one year, 22% of recipients were still on buprenorphine and not using illicit opioids. In 2018, CCSF dedicated \$2 million to expand this service.
- CCSF is engaged in efforts to open two supervised injection sites in 2018, following the recommendations of a government task force. A recent report estimated there were 24,492 people who inject drugs in CCSF in 2015.¹

¹ Facente, S. N. et al. (2018). Estimated hepatitis C prevalence and key population sizes in San Francisco: A foundation for elimination. PLoS ONE, 13(4), e0195575. http://doi.org/10.1371/journal.pone.0195575

Treatment Tables

Table 1: Trends in Admissions* to Programs Treating Substance Use Disorders, San Francisco Residents, 2013-2017

Number of Admissions and Percentage of Admissions with Selected Substances Cited as Primary Substance at Admission, by Year and Substance

		Calendar Year												
	20	13	20	14	20)15	20	16	2017					
	(#)	(%)	(#)	(%)	(#)	(%)	(#)	(%)	(#)	(%)				
Total Admissions (#)	11,257	100%	10,830	100%	10,270	100%	9,958	100%	9,660	100%				
Primary Substance of Abuse (%)														
Alcohol	2,670	23.7%	2,384	22.0%	2,293	22.3%	2,144	21.5%	1,959	20.3%				
Cocaine/Crack	1,702	15.1%	1,214	11.2%	928	9.0%	757	7.6%	693	7.2%				
Heroin	3,531	31.4%	4,145	38.3%	4,177	40.7%	4,183	42.0%	4,077	42.2%				
Prescription Opioids	431	3.8%	501	4.6%	502	4.9%	482	4.8%	419	4.3%				
Methamphetamine	1,639	14.6%	1,549	14.3%	1,488	14.5%	1,656	16.6%	1,836	19.0%				
Marijuana	733	6.5%	627	5.8%	584	5.7%	463	4.6%	390	4.0%				
Benzodiazepines	21	0.2%	20	0.2%	22	0.2%	23	0.2%	14	0.1%				
MDMA	21	0.2%	19	0.2%	12	0.1%	5	0.1%	5	0.1%				
Synthetic Stimulants	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%				
Synthetic Cannabinoids	2	0.0%	1	0.0%	1	0.0%	0	0.0%	0	0.0%				
Other Drugs/Unknown	507	4.5%	370	3.4%	263	2.6%	245	2.5%	267	2.8%				

NOTES:

Source: Data provided to the San Francisco SCE by the San Francisco Department of Public Health (SFDPH), Community Behavioral Health Services Division.

^{*}Admissions: Each admission does not necessarily represent a unique individual because some individuals are admitted to treatment more than once in a given period. unavail: Data not available.

Table 2: Demographic and Drug Use Characteristics of Treament Admissions* for Select Primary Substances, San Francisco Residents, 2017

Number of Admissions, by Primary Substance and Percentage of Admissions with Selected Demographic and Drug Use Characteristics

	Primary Substance																	
	Alcohol		Cocaine/Crack		Heroin		Prescription Opioids		Methamphetamine		Marijuana		Benzo- diazepines		Synthetic Stimulants		Synthetic Cannabinoids	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Number of Admissions (#)	1,959	100%	693	100%	4,077	100%	419	100%	1,836	100%	390	100%	14	100%	0	100%	0	100%
Sex (%)																		
Male	1,498	76.5%	484	69.8%	2,767	67.9%	266	63.5%	1,357	73.9%	250	64.1%	8	57.1%	na	na	na	na
Female	461	23.5%	209	30.2%	1,310	32.1%	153	36.5%	479	26.1%	140	35.9%	6	42.9%	na	na	na	na
Race/Ethnicity (%)																		
White, Non-Hisp.	730	37.3%	118	17.0%	2,011	49.3%	239	57.0%	654	35.6%	40	10.3%	5	35.7%	na	na	na	na
African-Am/Black, Non-Hisp	422	21.5%	432	62.3%	1,043	25.6%	51	12.2%	376	20.5%	120	30.8%	1	7.1%	na	na	na	na
Hispanic/Latino	539	27.5%	86	12.4%	554	13.6%	71	16.9%	541	29.5%	171	43.8%	2	14.3%	na	na	na	na
Asian	65	3.3%	31	4.5%	101	2.5%	14	3.3%	99	5.4%	19	4.9%	2	14.3%	na	na	na	na
Other	203	10.4%	26	3.8%	368	9.0%	44	10.5%	166	9.0%	40	10.3%	4	28.6%	na	na	na	na
Age Group (%)																		
Under 18	9	0.5%	3	0.4%	0	0.0%	1	0.2%	4	0.2%	143	36.7%	0	0.0%	na	na	na	na
18-25	102	5.2%	26	3.8%	216	5.3%	20	4.8%	220	12.0%	93	23.8%	6	42.9%	na	na	na	na
26-44	755	38.5%	184	26.6%	1,738	42.6%	244	58.2%	1,119	60.9%	104	26.7%	6	42.9%	na	na	na	na
45+	1,093	55.8%	480	69.3%	2,123	52.1%	153	36.5%	493	26.9%	50	12.8%	2	14.3%	na	na	na	na
Route of Administration (%)																		
Smoked	0	0.0%	593	85.6%	215	5.3%	21	5.0%	1,207	65.7%	379	97.2%	0	0.0%	na	na	na	na
Inhaled	0	0.0%	78	11.3%	647	15.9%	36	8.6%	130	7.1%	1	0.3%	0	0.0%	na	na	na	na
Injected	0	0.0%	9	1.3%	3,101	76.1%	36	8.6%	432	23.5%	0	0.0%	1	7.1%	na	na	na	na
Oral/Other/Unknown	1,959	100.0%	13	1.9%	114	2.8%	326	77.8%	67	3.6%	10	2.6%	13	92.9%	na	na	na	na
Secondary Substance (%)															na	na	na	na
None	1,560	79.6%	514	74.2%	1,608	39.4%	180	43.0%	1,381	75.2%	225	57.7%	2	14.3%	na	na	na	na
Alcohol	0	0.0%	72	10.4%	124	3.0%	18	4.3%	145	7.9%	92	23.6%	3	21.4%	na	na	na	na
Cocaine/Crack	125	6.4%	0	0.0%	1,025	25.1%	33	7.9%	47	2.6%	25	6.4%	1	7.1%	na	na	na	na
Heroin	22	1.1%	47	6.8%	0	0.0%	49	11.7%	71	3.9%	3	0.8%	1	7.1%	na	na	na	na
Prescription Opioids	8	0.4%	2	0.3%	167	4.1%	43	10.3%	12	0.7%	2	0.5%	1	7.1%	na	na	na	na
Methamphetamine	130	6.6%	24	3.5%	885	21.7%	41	9.8%	0	0.0%	33	8.5%	2	14.3%	na	na	na	na
Marijuana	92	4.7%	33	4.8%	205	5.0%	32	7.6%	135	7.4%	0	0.0%	4	28.6%	na	na	na	na
Benzodiazepines	4	0.2%	1	0.1%	53	1.3%	19	4.5%	3	0.2%	3	0.8%	0	0.0%	na	na	na	na
Synthetic Stimulants	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	na	na	na	na
Synthetic Cannabinoids	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	na	na	na	na

NOTES

SOURCE: Data provided to the San Francisco SCE by the San Francisco Department of Public Health (SFDPH), Community Behavioral Health Services Division.

^{*}Admissions: Each admission does not necessarily represent a unique individual because some individuals are admitted to treatment more than once in a given period.

unavail: Data not available; na: Not applicable; Percentages may not sum to 100 due to missing data, rounding, and/or because not all possible categories are presented in the table. Category frequencies may not sum to drug total due to missing data and/or not all possible categories are presented in the table.

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 California Office of Statewide Health Planning and Development.

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).

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.

Buprenorphine Prescription data were provided by the California Controlled Substance Utilization Review and Evaluation System (CURES 2.0).

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 2017, accessed at https://www.sfdph.org/dph/comupg/oprograms/hivepisec/HIVepiSecReports.asp.

Viral hepatitis data was obtained from Facente SN, Grebe E, Burk K, et al. Estimated hepatitis C prevalence and key population sizes in San Francisco: A foundation for elimination. *PLoS One*. 2018; 13(4): e0195575.

OTHER REFERENCES CITED:

- 1. Turner C, Chandrakumar D, Rowe C, Santos GM, Riley ED, Coffin PO. Cross-sectional cause of death comparisons for stimulant and opioid mortality in San Francisco, 2005-2015. *Drug Alcohol Depend*. 2018 Apr 1;185:305-312. doi: 10.1016/j.drugalcdep.2017.12.030. Epub 2018 Feb 21.
- 2. Coffin PO, Santos GM, Hern J, Vittinghoff E, Santos D, Matheson T, Colfax G, Batki SL. Extended-release naltrexone for methamphetamine dependence among men who have sex with men: a randomized placebo-controlled trial. *Addiction*. 2018 Feb;113(2):268-278. doi: 10.1111/add.13950. Epub 2017 Aug 29.

- 3. Carrico AW, Flentje A, Kober K, Lee S, Hunt P, Riley ED, Shoptaw S, Flowers E, Dilworth SE, Pahwa S, Aouizerat BE. Recent stimulant use and leukocyte gene expression in methamphetamine users with treated HIV infection. *Brain Behav Immun*. 2018 Jul;71:108-115. doi: 10.1016/j.bbi.2018.04.004. Epub 2018 Apr 18.
- 4. Hurstak E, Rowe C, Turner C, Behar E, Cabugao R, Lemos NP, Burke C, Coffin P. Using medical examiner case narratives to improve opioid overdose surveillance. *Int J Drug Policy*. 2018 Apr;54:35-42. doi: 10.1016/j.drugpo.2017.12.017. Epub 2018 Jan 30.
- 5. Coffin PO, Santos GM, Matheson T, Behar E, Rowe C, Rubin T, Silvis J, Vittinghoff E. Behavioral intervention to reduce opioid overdose among high-risk persons with opioid use disorder: A pilot randomized controlled trial. *PLoS One*. 2017 Oct 19;12(10):e0183354. doi: 10.1371/journal.pone.0183354. eCollection 2017.
- Knight KR, Kushel M, Chang JS, Zamora K, Ceasar R, Hurstak E, Miaskowski C. Opioid pharmacovigilance: A clinical-social history of the changes in opioid prescribing for patients with cooccurring chronic non-cancer pain and substance use. *Soc Sci Med*. 2017 Aug;186:87-95. doi: 10.1016/j.socscimed.2017.05.043. Epub 2017 May 23.
- 7. Rowe C, Wheeler E, Vittinghoff E, Santos GM, Behar E, Coffin PO. Quantity fluctuations of illicitly used opioids and overdose risk. *Int J Drug Policy*. 2018 May 25;58:64-70. doi: 10.1016/j.drugpo.2018.05.004. [Epub ahead of print].
- 8. Hurstak EE, Kushel M, Chang J, Ceasar R, Zamora K, Miaskowski C, Knight K. The risks of opioid treatment: Perspectives of primary care practitioners and patients from safety-net clinics. *Subst Abus*. 2017 Apr-Jun;38(2):213-221. doi: 10.1080/08897077.2017.1296524. Epub 2017 Apr 10.
- 9. Bluthenthal RN, Wenger L, Chu D, Bourgois P, Kral AH. Drug use generations and patterns of injection drug use: Birth cohort differences among people who inject drugs in Los Angeles and San Francisco, California. *Drug Alcohol Depend*. 2017 Jun 1;175:210-218. doi: 10.1016/j.drugalcdep.2017.04.001. Epub 2017 Apr 19.
- 10. Rowe C, Wheeler E, Stephen Jones T, Yeh C, Coffin PO. Community-Based Response to Fentanyl Overdose Outbreak, San Francisco, 2015. *J Urban Health*. 2018 May 3. doi: 10.1007/s11524-018-0250-x. [Epub ahead of print].
- 11. Smith-Bernardin S, Rowe C, Behar E, Geier M, Washington S, Santos GM, Euren J, Martin J, Gleghorn A, Coffin PO. Low-threshold extended-release naltrexone for high utilizers of public services with severe alcohol use disorder: A pilot study. *J Subst Abuse Treat*. 2018 Feb;85:109-115. doi: 10.1016/j.jsat.2017.11.005. Epub 2017 Nov 8.
- 12. Brown RE, Turner C, Hern J, Santos GM. Partner-level substance use associated with increased sexual risk behaviors among men who have sex with men in San Francisco, CA. *Drug Alcohol Depend*. 2017 Jul 1;176:176-180. doi: 10.1016/j.drugalcdep.2017.02.016. Epub 2017 Apr 21.

For additional information about the substances and substance use patterns discussed in this report, please contact Phillip Coffin, M.D., Director, Substance Use Research Unit, San Francisco Department of Public Health, 25 Van Ness, Suite 500, San Francisco, CA 94102, Phone: 415-437-6282, E-mail: phillip.coffin@sfdph.org.