New York City
Sentinel Community Site (SCS)
Drug Use Patterns and Trends, 2017

November 2017

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National Drug Early Warning System (NDEWS) Sentinel Community Site (SCS) Drug Use Patterns and Trends, 2017

The National Drug Early Warning System (NDEWS) was launched in 2014 with the support of the National Institute on Drug Abuse (NIDA) to collect and disseminate timely information about drug trends in the United States. The Center for Substance Abuse Research (CESAR) at the University of Maryland manages the NDEWS Coordinating Center and has recruited a team of nationally recognized experts to collaborate on building NDEWS, including 12 Sentinel Community Epidemiologists (SCEs). The SCEs serve as the point of contact for their individual Sentinel Community Site (SCS), and correspond regularly with NDEWS Coordinating Center staff throughout the year to respond to queries, share information and reports, collect data and information on specific drug topics, and write an annual *SCE Narrative* describing trends and patterns in their local SCS.

This *Sentinel Community Site Drug Use Patterns and Trends* report contains three sections:

◊ The *SCS Snapshot*, prepared by Coordinating Center staff, contains graphics that display information on drug use, substance use disorders and treatment, drug poisoning deaths, and drug seizures. The *SCS Snapshots* attempt to harmonize data available for each of the 12 sites by presenting standardized graphics from local treatment admissions and four national data sources.

◊ The *SCE Narrative*, written by the SCE, 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.

◊ The *SCS Data Tables*, prepared by Coordinating Center staff, include information on demographic and socioeconomic characteristics of the population, drug use, substance use disorders and treatment, drug poisoning deaths, and drug seizures for the Sentinel Community Site. The *SCS Data Tables* attempt to harmonize data available for each of the 12 sites by presenting standardized information from local treatment admissions and five national data sources.

The *Sentinel Community Site Drug Use Patterns and Trends* reports 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) Sentinel Community Site (SCS) Drug Use Patterns and Trends: SCS Snapshot

The *SCS Snapshot* is prepared by NDEWS Coordinating Center staff and contains graphics that display information on drug use, substance use disorders and treatment, drug poisoning deaths, and drug seizures. The *SCS Snapshots* attempt to harmonize data available for each of the 12 sites by presenting standardized graphics from local treatment admissions and four national data sources:

◊ National Survey on Drug Use and Health;
◊ Youth Risk Behavior Survey;
◊ SCE-provided local treatment admissions data;
◊ National Vital Statistics System mortality data queried from CDC WONDER; and
◊ National Forensic Laboratory Information System.

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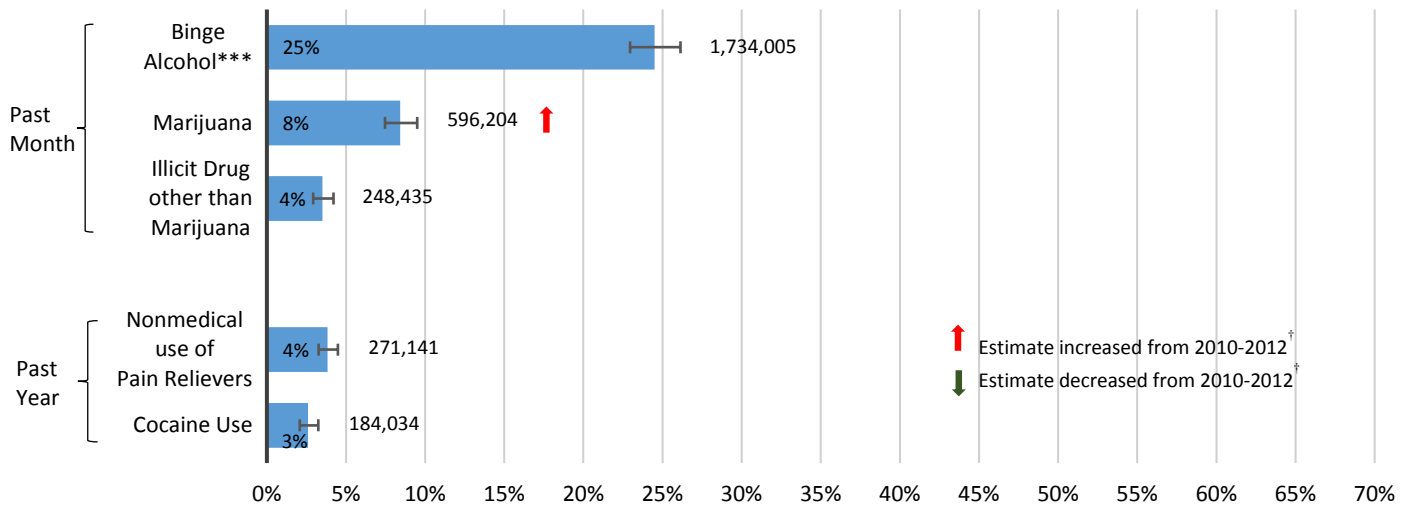
Substance Use

*National Survey on Drug Use and Health (NSDUH): Survey of U.S. Population**

Persons 12+ Years Reporting Selected Substance Use, New York City^, 2012-2014

Estimated Percent, 95% Confidence Interval, and Estimated Number of Persons**

*U.S. Population: U.S. civilian non-institutionalized population. ^New York City: NSDUH Region A (Bronx, Kings, New York, Queens, & Richmond counties). **Estimated Number: Calculated by multiplying the prevalence rate and the population estimate of persons 12+ years (7,075,349) from Table C1 of the NSDUH Report.
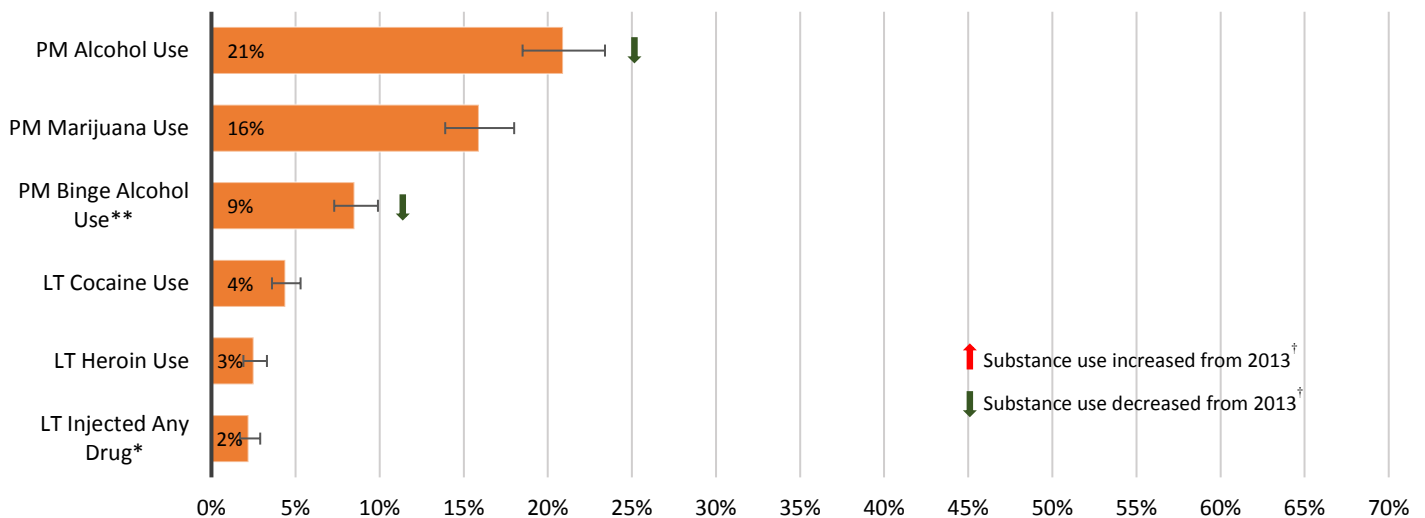***Binge Alcohol: Defined as drinking five or more drinks on the same occasion. [†]Statistically significant change: p<0.05.
Source: Adapted by the NDEWS Coordinating Center from data provided by SAMHSA, NSDUH. Annual averages based on combined 2012 to 2014 NSDUH data.

Youth Risk Behavior Survey (YRBS): Survey of Student Population

Public High-School Students Reporting Lifetime (LT) or Past Month (PM)
Use of Selected Substances, New York City, 2015

Estimated Percent and 95% Confidence Interval

*LT Injected Drug: Defined as ever using a needle to inject any illegal drug into their body one or more times during their life.
**PM Binge Alcohol Use: Defined as having five or more drinks of alcohol in a row (within a couple of hours on at least 1 day during the 30 days before the survey).
[†]Statistically significant change: p<0.05 by t-test.
See *Sentinel Community Site (SCS) Data Tables* and *Overview & Limitations* section for more information regarding the data.
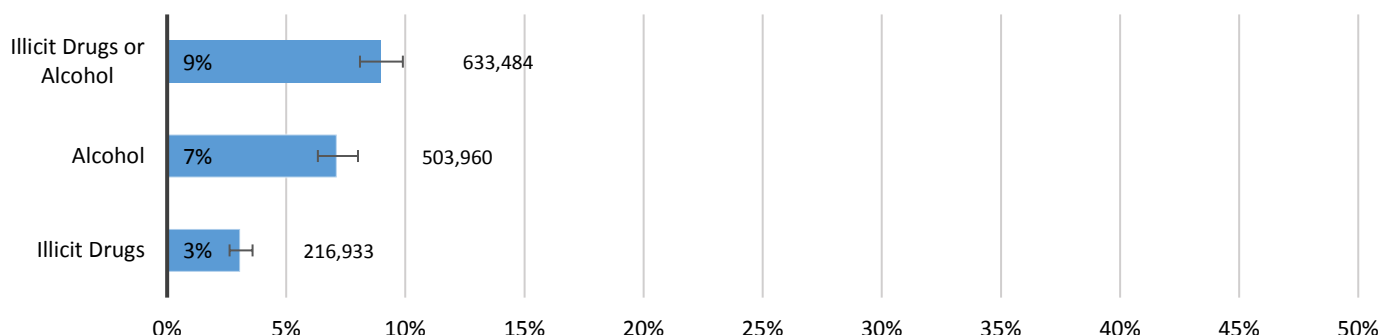**Source**: Adapted by the NDEWS Coordinating Center from data provided by CDC, 1991-2015 High School YRBS data.

Substance Use Disorders and Treatment

*National Survey on Drug Use and Health (NSDUH): Survey of U.S. Population**

Substance Use Disorders** in Past Year Among Persons 12+, New York City^, 2012-2014
Estimated Percent, 95% Confidence Interval, and Estimated Number of Persons**

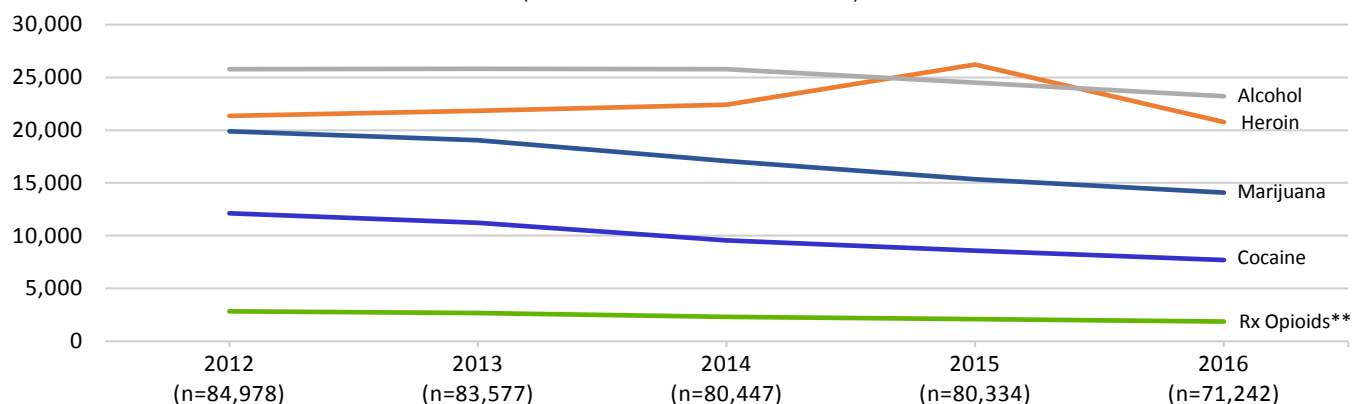| Category	Percent	Estimated Number
Illicit Drugs or Alcohol	9%	633,484
Alcohol	7%	503,960
Illicit Drugs	3%	216,933

*U.S. Population: U.S. civilian non-institutionalized population. **Substance Use Disorders in Past Year: Persons are classified as having a substance use disorder in the past 12 months based on responses to questions that meet the criteria specified in the 4th edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)*. ^New York City: NSDUH Region A (Bronx, Kings, New York, Queens, & Richmond counties). ***Estimated Number: Calculated by multiplying the prevalence rate and the population estimate of persons 12+ years (7,075,349) from Table C1 of the NSDUH Report.
Source: Adapted by the NDEWS Coordinating Center from data provided by SAMHSA, NSDUH. Annual averages based on combined 2012 to 2014 NSDUH data.
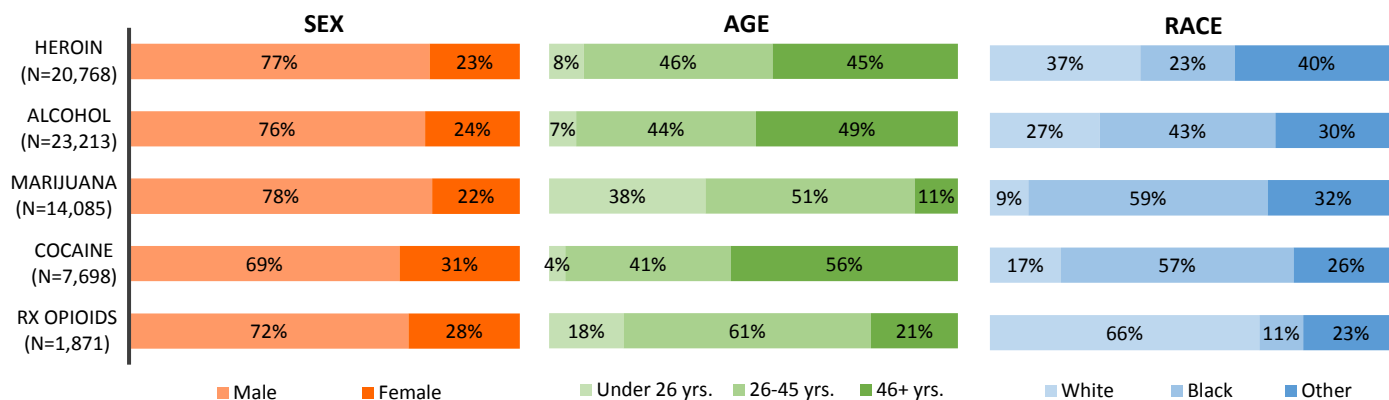
Treatment Admissions Data from Local Sources

Trends in Non-Crisis Treatment Admissions*, by Primary Substance of Abuse, New York City, 2012-2016
(n = Number of Treatment Admissions)

Years and totals: 2012 (n=84,978), 2013 (n=83,577), 2014 (n=80,447), 2015 (n=80,334), 2016 (n=71,242). Substances shown: Alcohol, Heroin, Marijuana, Cocaine, Rx Opioids**.

Demographic Characteristics of Non-Crisis Treatment Admissions*, New York City, 2016

	SEX (Male / Female)	AGE (Under 26 yrs. / 26-45 yrs. / 46+ yrs.)	RACE (White / Black / Other)
HEROIN (N=20,768)	77% / 23%	8% / 46% / 45%	37% / 23% / 40%
ALCOHOL (N=23,213)	76% / 24%	7% / 44% / 49%	27% / 43% / 30%
MARIJUANA (N=14,085)	78% / 22%	38% / 51% / 11%	9% / 59% / 32%
COCAINE (N=7,698)	69% / 31%	4% / 41% / 56%	17% / 57% / 26%
RX OPIOIDS (N=1,871)	72% / 28%	18% / 61% / 21%	66% / 11% / 23%

*Non-Crisis Treatment Admissions: Includes non-crisis admissions to outpatient, inpatient, residential, and methadone maintenance treatment programs licensed in the State. **Rx Opioids: Includes non-prescription methadone, buprenorphine, other synthetic opiates, and OxyContin. Percentages may not sum to 100 due to rounding. See *Sentinel Community Site (SCS) Data Tables* and *Overview & Limitations* section for more information regarding the data.
**Source**: Data provided to the New York City NDEWS SCE by the New York State Office of Alcoholism and Substance Abuse Services (OASAS), Client Data System accessed May 2016 from Local Governmental Unit (LGU) Inquiry Reports.

Drug Overdose (Poisoning) Deaths

## National Vital Statistics System (NVSS) via CDC WONDER

Trends in Drug Overdose (Poisoning) Deaths*, by Drug**, New York City^, 2011–2015
(Number of Deaths and Percent of Drug Overdose (Poisoning) Deaths with Drug(s) Specified^v)
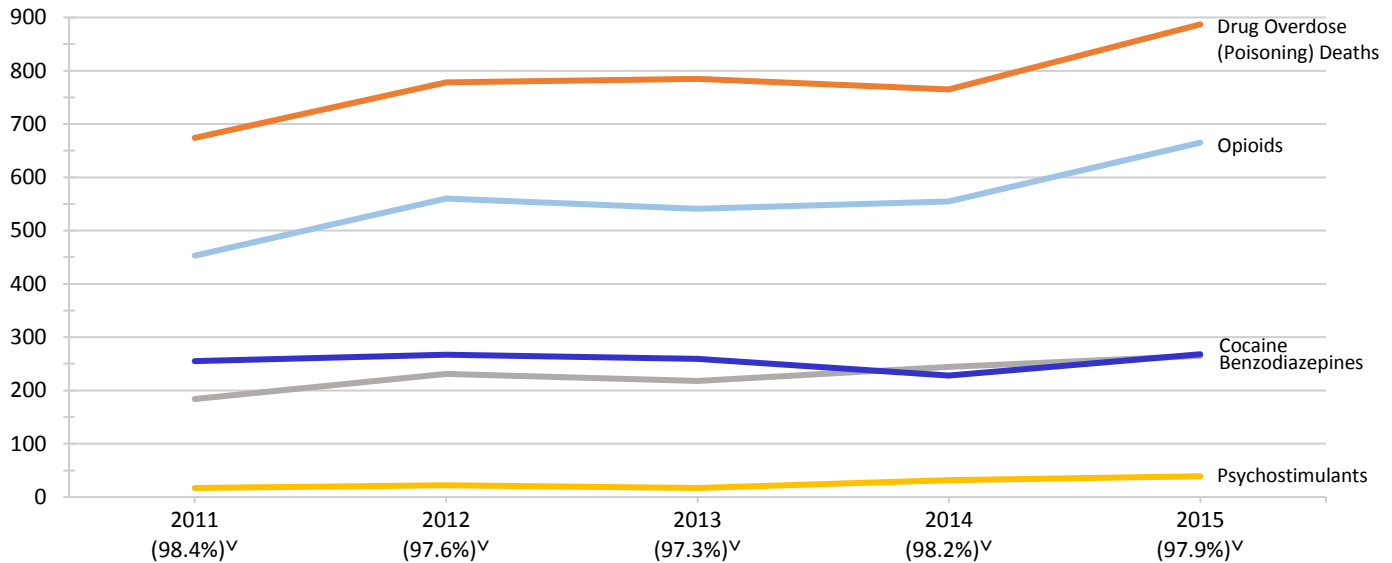
Trends in Opioid Overdose (Poisoning) Deaths*, by Opioid, New York City^, 2011–2015
(Number of Deaths, by Drug** and Percent of Drug Overdose (Poisoning) Deaths with Drug(s) Specified^v)
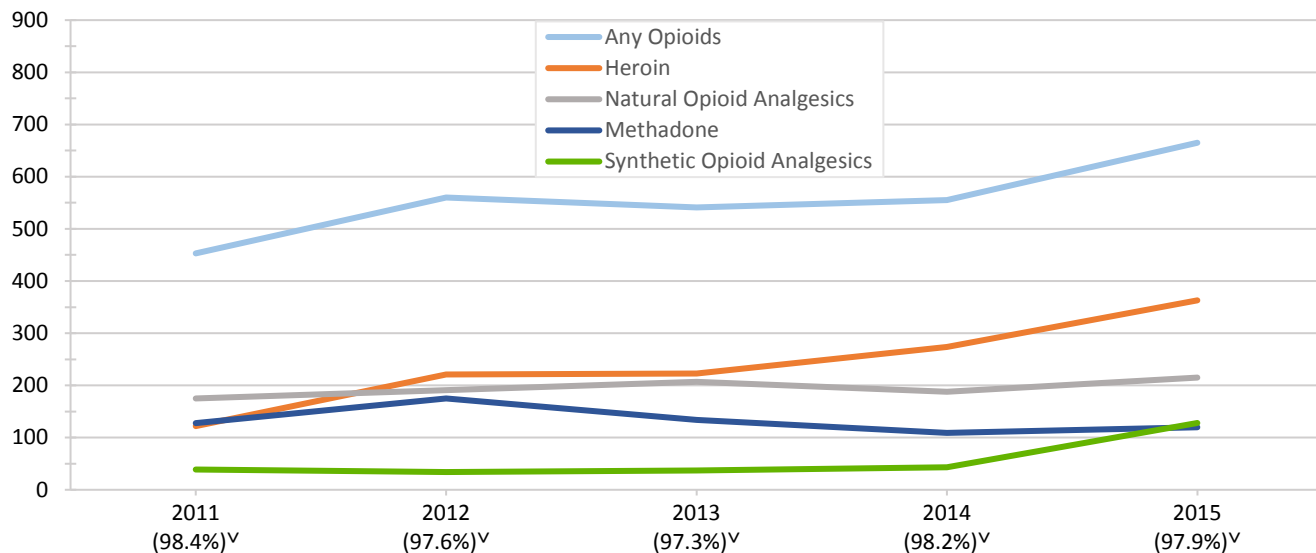
*Drug Overdose (Poisoning) Deaths: Defined as deaths with ICD-10 underlying cause-of-death (UCOD) codes: X40-X44, X60-X64, X85, and Y10-Y14. **Drug Overdose (Poisoning) Deaths, by Drug: Drug overdose (poisoning) deaths with ICD-10 multiple cause-of-death (MCOD) T-codes: Benzodiazepines (T42.4); Cocaine (T40.5); Psychostimulants with Abuse Potential [excluding cocaine] (T43.6)—may include amphetamines, caffeine, MDMA, methamphetamine, and/or methylphenidate; Any Opioids (T40.0-T40.4, OR T40.6). Specific opioids are defined: Opium (T40.0); Heroin (T40.1); Natural Opioid Analgesics (T40.2)—may include morphine, codeine, and semi-synthetic opioid analgesics, such as oxycodone, hydrocodone, hydromorphone, and oxymorphone; Methadone (T40.3); Synthetic Opioid Analgesics [excluding methadone] (T40.4)—may include drugs such as tramadol and fentanyl; and Other and Unspecified Narcotics (T40.6). ^New York City: Comprised of Bronx, Kings, New York, Queens, and Richmond Counties. ^vPercent of Drug Overdose (Poisoning) Deaths with Drug(s) Specified: The percentage of drug overdose (poisoning) deaths with specific drugs mentioned varies considerably by state/catchment area. This statistic describes the annual percentage of drug overdose (poisoning) deaths that include at least one ICD-10 MCOD code in the range T36-T50.8. See *Sentinel Community Site (SCS) Data Tables* and/or *Overview & Limitations* for additional information on mortality data.

Source: Adapted by the NDEWS Coordinating Center from data provided by the Centers for Disease Control and Prevention (CDC), National Center for Health Statistics, Multiple cause of death 1999-2015, available on the CDC WONDER Online Database, released 2016. Data compiled in the Multiple cause of death 1999-2015 were provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Retrieved between February-June 2017, from http://wonder.cdc.gov/mcd-icd10.html

Law Enforcement Drug Seizures

National Forensic Laboratory Information System (NFLIS)

Drug Reports* for Items Seized by Law Enforcement in New York City^ in 2016
DEA National Forensic Laboratory Information System (NFLIS)

Top 10 Drug Reports and Selected Drug Categories

Drug Identified	Number (#)	Percent of Total Drug Reports (%)
TOTAL Drug Reports	44,769	100%
Top 10 Drug Reports		
Cocaine	13,707	30.6%
Cannabis	13,123	29.3%
Heroin	7,276	16.3%
Alprazolam	1,921	4.3%
Oxycodone	1,738	3.9%
Fentanyl	1,699	3.8%
Methamphetamine	729	1.6%
Buprenorphine	673	1.5%
Phencyclidine	535	1.2%
Clonazepam	465	1.0%
Top 10 Total	**41,866**	**93.5%**
New Psychoactive Substances (NPS) Drug Categories†		
Fentanyl and Other Fentanyls‡	1,717	3.8%
Synthetic Cannabinoids	49	0.1%
Synthetic Cathinones	12	<0.1%
Piperazines	6	<0.1%
Tryptamines	4	<0.1%
2C Phenethylamines	0	0.0%
Any Opioid†	**12,225**	**27.3%**

Top Drug Reports Among Select ** **NPS Drug Categories†**
(% of Category)

Fentanyl and Other Fentanyls‡
(n=1,717)

Fentanyl (99%)
Furanyl Fentanyl (0.6%)
Acetylfentanyl (0.3%)
P-FBF (0.1%)
P-Fluoroisobutyryl Fentanyl (0.1%)

Synthetic Cannabinoids
(n=49)

MDMB-FUBINACA (29%)
AB-CHMINACA (25%)
AB-PINACA (25%)
FUB-AMB (10%)
ADB-FUBINACA (8%)

Synthetic Cathinones
(n=12)

N-Ethylpentylone (25%)
Ethylone (17%)
Dibutylone (17%)
Pentylone (17%)
4-Chloro-alpha-PVP (8%)
4-Chloro-N-Ethylcathinone (8%)
Brephedrone (8%)

*Drug Report: Drug that is identified in law enforcement items, submitted to and analyzed by federal, state, or local forensic labs, and included in the NFLIS database. The NFLIS database allows for the reporting of up to three drugs per item submitted for analysis. The data presented are a total count of first, second, and third listed reports for each selected drug item seized and analyzed. The timeframe is January-December 2016.   ^New York City: Includes data from 5 boroughs in the New York City, NY MSA, including the New York City Police Department Laboratory.   **Select NPS Drug Categories: The 3 most prevalent NPS drug categories. Percentages may not sum to 100 due to either rounding, missing data and/or because not all possible categories are presented in the table.

†Drug Categories/Any Opioid: See *Sentinel Community Site (SCS) Data Table 6b* for a full list of the drug reports for each NPS and Opioid category.

‡Other Fentanyls are substances that are structurally related to fentanyl (e.g., acetylfentanyl and butyrl fentanyl). See *Notes About Data Terms* in *Overview and Limitations* section for a list of Other Fentanyls that were reported to NFLIS from the 12 NDEWS sites.

Source: Adapted by the NDEWS Coordinating Center from data provided by the U.S. Drug Enforcement Administration (DEA), Diversion Control Division, Drug and Chemical Evaluation Section, Data Analysis Unit. Data were retrieved from the NFLIS Data Query System (DQS) on May 28, 2017.

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)
New York City Sentinel Community Site (SCS)
Drug Use Patterns and Trends, 2017: SCE Narrative

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Highlights

INCREASE IN OVERDOSE DEATHS IN 2016

- Every seven hours a New Yorker dies of an unintentional drug poisoning (overdose); in NYC, more deaths are now attributable to overdose than to motor vehicle crashes, homicides, and suicides combined.
- Overdose rates increased for the sixth consecutive year in New York City. Provisional data show a dramatic increase from 937 overdose deaths (13.6 per 100,000) in 2015, with 1,374 (19.9 per 100,000) confirmed deaths in 2016. This represents a 46% increase.
- Of the 1,374 drug overdose deaths in 2016, 44% involved fentanyl, whereas prior to 2015, not more than 4% of overdose deaths involved fentanyl.

BENZODIAZEPINES

- From 2010 to 2016, there was an 86% increase in benzodiazepine-involved overdose deaths.
- In 2016, 33% of all overdose deaths involved benzodiazepines.

COCAINE

- Cocaine-involved overdose deaths increased by 61% from 2015 to 2016.
- 37% of overdose deaths involved cocaine and fentanyl *without* heroin, up from 11% in 2015, raising additional concern and risk for recreational cocaine users who are likely opioid naïve.
- In 2016, 1 in 10 noncrisis drug treatment admissions reported crack/cocaine as the primary substance (10.8%, *n* = 7,698).

MARIJUANA

- In 2016, marijuana was the second most common primary drug (excluding alcohol) reported upon admission to drug treatment (19.8%, *n* = 14,085).

OPIOIDS (HEROIN, OPIOID ANALGESICS AND FENTANYL)

- Heroin was involved in 55% of all overdose deaths in 2016, making it the most common substance involved in overdose deaths.
- In 2016, heroin was the most common primary drug (excluding alcohol) reported upon admission to drug treatment (29%, *n* = 20,768).
- The rate of opioid-analgesic-involved overdose deaths increased from 2015 to 2016 (3.1 to 3.5 per 100,000); nevertheless, opioid analgesics were involved in only 18% of all overdose deaths, down from 31% in 2010.

LOCAL PUBLIC HEALTH RESPONSES

- In 2016, the NYC Department of Health and Mental Hygiene (DOHMH) issued multiple Health Alerts on the increased presence of fentanyl in NYC. Fentanyl "Health Alert" flyers were distributed to harm reduction programs, to drug treatment programs, and to people who use drugs (PWUD) to increase awareness about the risk of fentanyl and to encourage risk reduction practices.
- The DOHMH established a Rapid Assessment Response (RAR) initiative, based on an infectious disease outbreak model. RAR enables timely and targeted interventions on the discrete geographic or the discrete demographic level.
- In response to the increasing rate of fentanyl-involved overdose, the RAR team conducted interviews to assess knowledge of fentanyl among PWUD and program staff and explored the presence of an active nonpharmaceutical fentanyl market in NYC.
- As part of the Mayor's *HealingNYC* initiative, DOHMH aims to quadruple its naloxone distribution target of 15,000 kits per year to 65,000 by fiscal year 2019 (FY19).

Primary and Emerging Substance Use Problems

OVERVIEW

Morbidity

Opioid-Related Hospitalizations

In 2014 (the most recent year for which data are available), there were approximately 60,000 drug-related hospitalizations among New York City (NYC) residents 13–84 years of age, with a rate of 819.9 per 100,000 residents. Opioid-related hospitalizations accounted for approximately one third of drug-related hospitalizations in 2014 (n = 19,778), with a rate of 272.1 per 100,000 residents.

In 2014, nearly two thirds of opioid-related hospitalizations (n = 12,639) were among males. The rate of opioid-related hospitalizations among male New Yorkers was higher than the rate among female New Yorkers in 2014 (371.7 vs. 209.0 per 100,000 residents, respectively).

Black New Yorkers had the highest rate of opioid-related hospitalizations in 2014 (316.5 per 100,000 residents) followed closely by Hispanic New Yorkers (299.3 per 100,000 residents). The rate of opioid-related hospitalizations among Black New Yorkers in 2014 was nearly twice the rate among White New Yorkers (316.5 vs. 185.9 per 100,000 residents, respectively).

Rates of opioid-related hospitalization were highest among New Yorkers 55–64 years of age (644.3 per 100,000 residents), followed by New Yorkers 45–54 years of age (552.0 per 100,000 residents). Rates of opioid-related hospitalizations were also highest in highest poverty neighborhoods (591.4 per 100,000 residents), nearly four times higher than the rate in lowest poverty neighborhoods (152.8 per 100,000 residents).

Cocaine-Related Hospitalizations

Cocaine-related hospitalizations accounted for more than one third of the approximately 60,000 drug-related hospitalizations in NYC in 2014 (the most recent year for which data are available; n = 19,796), with a rate of 279.5 per 100,000 residents.

More than two thirds of cocaine-related hospitalizations were among male New Yorkers (n = 13,335). The rate of cocaine-related hospitalizations among male New Yorkers was nearly twice the rate among female New Yorkers (397.8 vs. 192.2 per 100,000 residents).

Black New Yorkers had the highest rate of cocaine-related hospitalizations in 2014 (585.8 per 100,000 residents), more than twice the rate among Hispanic New Yorkers (222.3 per 100,000 residents), and nearly six times the rate among White New Yorkers (98.4 per 100,000 residents). Furthermore, Black New Yorkers accounted for almost half of all cocaine-related hospitalizations in 2014 (n = 9,705).

Rates of cocaine-related hospitalizations were highest among New Yorkers 45–54 years of age (678.4 per 100,000 residents), followed by residents 55–64 years of age (468.9 per 100,000 residents). Rates of cocaine-related hospitalizations were highest in the highest poverty neighborhoods (657.8), more than ten times the rate in the lowest poverty neighborhoods (56.1 per 100,000 residents).

Prescription Monitoring Program (PMP)

The NYC Department of Health and Mental Hygiene (DOHMH) tracks opioid analgesic and benzodiazepine prescriptions by analyzing data for all NYC residents who fill opioid analgesic or benzodiazepine prescriptions. In 2016, 1,732,029 benzodiazepine prescriptions were filled by 430,803 residents, and nearly 2 million (1,767,699) schedule II opioid analgesic prescriptions were filled by 560,978 NYC residents. Almost 70% of schedule II opioid analgesic prescriptions filled by NYC residents were for oxycodone (*n* = 1,223,707). Additionally, of the 645,706 NYC residents who filled an opioid analgesic prescription, less than 1% (*n* = 2,203, or 0.4%) met the criteria of doctor shopping, which is defined by a history of filling an opioid analgesic prescription from four or more prescribers at four or more pharmacies.

Mortality

In 2016, there were 1,374 unintentional drug poisoning (overdose) deaths in NYC, with a rate of 19.9 per 100,000 New Yorkers. Drug overdose rates were highest among males, White New Yorkers, 45–54-year-olds, and residents of Staten Island. Residents of the highest poverty neighborhoods had the highest rate of drug poisoning deaths (25.9 per 100,000); the rate was nearly double that of residents from medium-income neighborhoods (13.9 per 100,000). The rates among the highest poverty neighborhoods and the lowest poverty neighborhoods were 20 per 100,000 and 14.9 per 100,000, respectively. In 2016, nearly all (97%) overdose deaths involved more than one substance and 82% of overdose deaths involved an opioid.

Figure 1. Unintentional Drug Poisoning (Overdose) Deaths, New York City, 2000–2016*
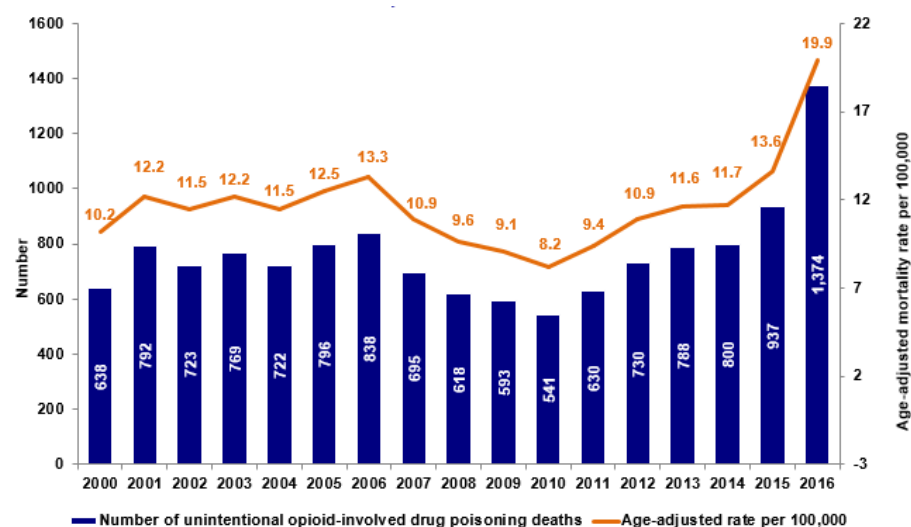
*Data for 2016 are provisional and subject to change.
Source: NYC Office of the Chief Medical Examiner and NYC DOHMH Bureau of Vital Statistics.

Drug overdose data in NYC were obtained by linking death certificates from the Bureau of Vital Statistics with medical examiner files and toxicology reports. The NYC DOHMH reports only unintentional drug poisoning deaths (X40-X44, F11-F16, and F19 codes); therefore, DOHMH does not report on suicide or undetermined manners of death. Additionally, because of a large methadone maintenance treatment population in NYC, methadone is reported separately from other opioids.

BENZODIAZEPINES

- From 2010 to 2016, there was an 86% increase in benzodiazepine-involved overdose deaths.

In 2016, there were 448 benzodiazepine-involved overdose deaths (6.5 per 100,000 New Yorkers). Compared with 2015, both the rate and the number of benzodiazepine-involved overdose deaths increased from 5.4 to 6.5 and from 370 to 448, respectively. White New Yorkers, New Yorkers 45–54 years of age, Staten Island residents, and residents of the lowest poverty (wealthiest) neighborhoods had the highest rates of unintentional benzodiazepine-involved deaths in 2016. Benzodiazepines were present in 59% of deaths involving opioid analgesics, 32% of deaths involving heroin, and 50% of deaths involving methadone.

In 2016, benzodiazepines (n = 1,033) were the primary drug in 1% of noncrisis drug treatment admissions. Benzodiazepines were more frequently reported as the secondary drug at admission. Benzodiazepines were reported as the secondary drug in nearly 15% (n = 277) of admissions when prescription opioids were the primary and in 7% (n = 1,550) of admissions when heroin was the primary.

Of 44,769 total National Forensic Laboratory Information System (NFLIS) drug report samples in NYC in 2016, 4.3% (n = 1,921) tested positive for alprazolam, and alprazolam was the fourth most commonly seized substance. Compared with 2015, there was a 15.7% increase in law enforcement seizures of alprazolam. In contrast, there were 465 seizures of clonazepam in 2016, representing a 5.9% decrease compared with 2015.

COCAINE/CRACK

- Cocaine-involved overdose deaths increased by 61% from 2015 to 2016.

- In 2016, 1 in 10 noncrisis drug treatment admissions reported crack/cocaine as the primary substance (10.8%).

In 2016, there were 630 cocaine-involved overdose deaths (9.2 per 100,000 New Yorkers). This rate represents a 61% increase compared with 2015 (N = 394, 5.7 per 100,000) and a 14% increase compared with 2006, the previous peak in cocaine-related overdose deaths (N = 508 deaths; 8.1 per 100,000 New Yorkers).

Black New Yorkers had the highest rate of cocaine-related overdose deaths (11.7 per 100,000 New Yorkers), which marked a change from prior years (2012–2015), in which White New Yorkers had slightly higher rates. New Yorkers 45–54 years of age, Bronx residents, and individuals living in the highest poverty neighborhoods had the highest rates of cocaine-involved overdose deaths. These subgroups are the same high-risk groups that were reported in 2015.

Cocaine was present in 50% of overdoses involving heroin, 11% of overdoses involving methadone, 15% of overdoses involving opioid analgesics, and 27% of overdoses involving benzodiazepines.

In 2016, 1 in 10 noncrisis treatment admissions reported **crack/cocaine** as the primary substance (10.8%, *n* = 7,698). For these admissions, alcohol was the most frequently reported secondary substance (34%, *n* = 2,645), followed by no secondary substance (26%, *n* = 1,972) and marijuana (21%, *n* = 1,643). When alcohol was reported as the primary substance, more than one in five admissions list crack/cocaine as the secondary substance (23%, *n* = 5,313).

Of 44,769 total NFLIS seizures in NYC in 2016, 30.6% (*n* = 13,707) tested positive for cocaine, and cocaine was the most commonly seized substance. This represents a small (2.0%) decrease compared with 2015, when there were 13,989 cocaine seizures.

Figure 2. Cocaine-Involved Overdose Deaths, by Race, New York City, 2000–2016*
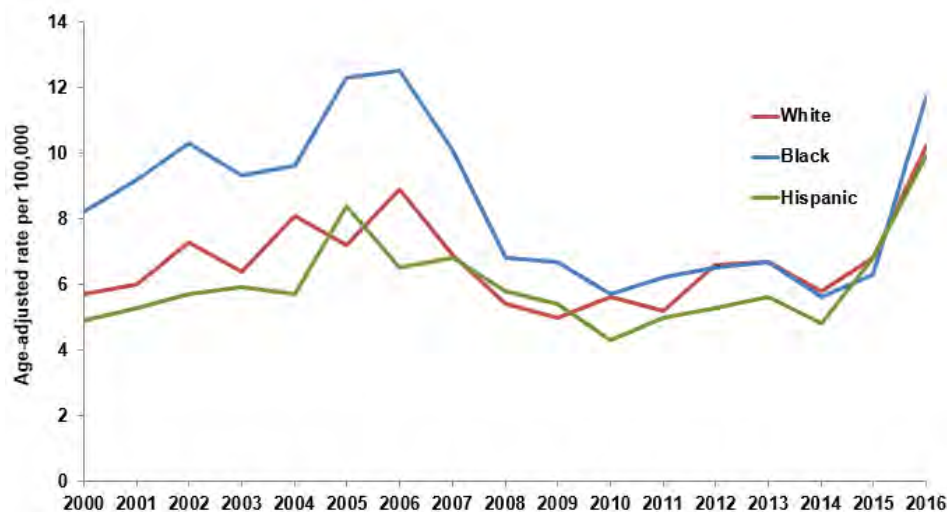
*Data for 2016 are provisional and subject to change.
Source: NYC Office of the Chief Medical Examiner and NYC DOHMH Bureau of Vital Statistics.

MARIJUANA

- In 2016, marijuana was the second most common primary drug (excluding alcohol) reported upon admission to drug treatment (19.8%, *n* = 14,085).

The NYC DOHMH does not report on the presence of marijuana in drug overdose deaths.

In 2016, marijuana was the second most common primary drug (excluding alcohol) reported upon admission to drug treatment (19.8%, *n* = 14,085).

Of 44,769 total NFLIS seizures in NYC in 2016, 29.3% (*n* = 13,123) tested positive for cannabis, and cannabis was the second most commonly seized substance. Compared with 2015 (*n* = 12,333), there was a 6.4% increase in cannabis seizures.

METHAMPHETAMINE

- Unlike other regions of the country, methamphetamine use in NYC remains confined to select populations. Health-related harms of methamphetamine use are not widespread.

Of 44,769 total NFLIS seizures in NYC in 2016, 1.6% (*n* = 729) tested positive for methamphetamine, which represents a 37% increase compared with 2015, when there were 532 seizures of methamphetamine.

NEW PYSCHOACTIVE SUBSTANCES (OTHER THAN OPIOIDS)

- During June 2017, there were 178 K2-related emergency department visits in New York City detected by syndromic surveillance. These numbers are similar to recent months and remain much lower than July 2015, when K2-ED visits peaked, exceeding 1,200 in a single month.

The NYC DOHMH does not report on the presence of synthetics in drug overdose deaths.

OPIOIDS

- Heroin was involved in 55% of all overdose deaths in 2016, making it the most common substance involved in overdose deaths.

- In 2016, heroin was the most common primary drug (excluding alcohol) reported upon admission to drug treatment (29%, *n* = 20,768).

- From 2015 to 2016, the percentage of overdose deaths involving opioid analgesics (*excluding fentanyl*) fell from 23% to 18%. The rate of opioid-analgesic-involved overdose deaths increased from 3.1 to 3.5 (per 100,000) during the same period.

- In 2016, the rate of methadone-involved overdose deaths increased by 27% (2.8 per 100,000) compared with 2015 (2.2 per 100,000). During this time, the percentage of overdose deaths involving methadone remained relatively constant (16% compared with 14%).

Figure 3. Unintentional Overdose Deaths by Opioid Type Involved (Not Mutually Exclusive), New York
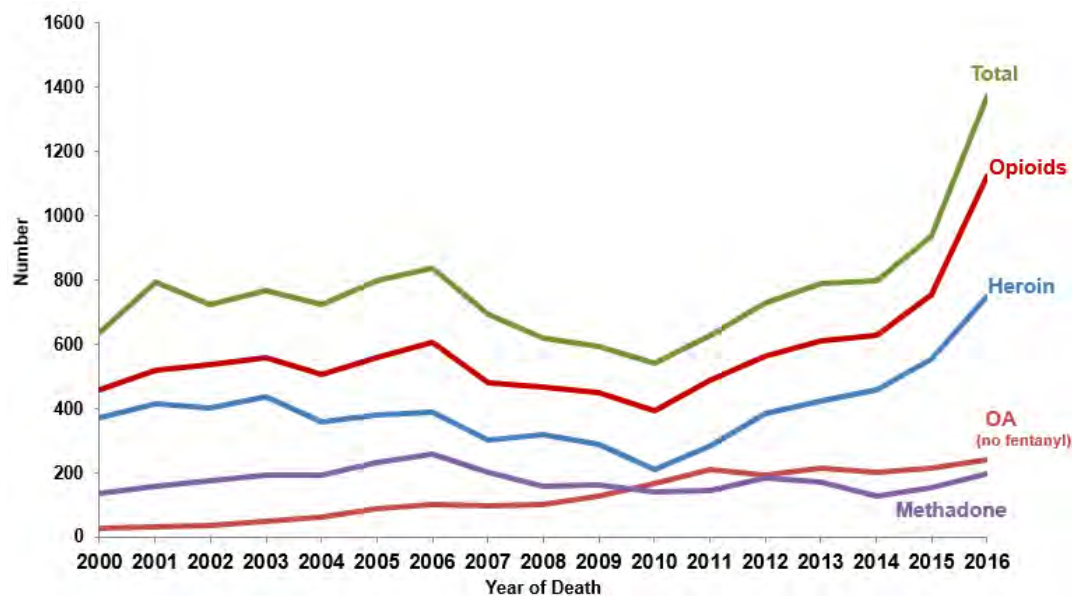
*Data for 2016 are provisional and subject to change.
Source: NYC Office of the Chief Medical Examiner and NYC DOHMH Bureau of Vital Statistics.

Heroin

In 2016, there were 751 heroin-involved overdose deaths (10.8 per 100,000 New Yorkers). This is more than triple the 2010 rate (3.1 per 100,000 New Yorkers). Heroin was involved in 55% of all overdose deaths in 2016, making it again the most common substance involved in overdose deaths.

Similar to data from 2010–2015, White New Yorkers, New Yorkers 45–54 years of age, and Bronx and Staten Island residents had the highest rates of heroin-involved overdose deaths in 2016. Residents of the highest poverty neighborhoods had the highest rate of overdose deaths involving heroin (15 per 100,000 New Yorkers), nearly double that of residents of wealthiest neighborhoods (7.7 per 100,000). The rate of heroin-involved overdose increased in all NYC boroughs. Rates also increased among all races/ethnic groups, particularly among Black New Yorkers (61% increase from 2015 to 2016).

In 2016, 42% of all heroin-involved deaths involved cocaine, compared with 44% in 2015. In addition, 39% of heroin-involved deaths involved alcohol, compared with 40% in 2015. A total of 32% of heroin-involved deaths also involved benzodiazepines, compared with 41% in 2015.

In 2016, heroin was the most common primary drug (excluding alcohol) reported upon admission to drug treatment (29%, *n* = 20,768).

Of 44,769 total NFLIS seizures in NYC in 2016, 16.3% (*n* = 7,276) tested positive for heroin, and heroin was the third most commonly seized substance. This is an 8.9% increase in heroin seizures increase compared with 2015, when there were 6,680 heroin seizures.

Fentanyl

Fentanyl, a semisynthetic opioid 50–100 times more potent then morphine, is sold illicitly for its heroin-like effects and may be mixed with heroin or cocaine as a combination product with or without the user's knowledge. Recent law enforcement seizures in several jurisdictions across the United States, including NYC, have identified fentanyl sold in powder and pill formulations, which may be marked as other substances, including benzodiazepines and opioids analgesics.

Fentanyl was involved in 44% of all overdose deaths during 2016 (n = 598), which was a dramatic increase from 16% in 2015. Prior to 2013, fentanyl was uncommon in NYC, accounting for less than 3% of overdose deaths.

Fentanyl has been most often present in heroin-involved deaths; nevertheless, fentanyl has been increasingly identified in overdose deaths involving cocaine, without heroin. In 2016, 37% of overdose deaths involved cocaine and fentanyl without heroin, up from 11% in 2015. Provisional 2017 data suggest that fentanyl is present in more than one third of overdose deaths involving cocaine without heroin. NYPD laboratory testing data have confirmed the presence of fentanyl mixed in with cocaine products.

Most fentanyl-involved deaths in 2016 also involved heroin (61%). After heroin, cocaine was the second most common co-involved substance (47%), followed by alcohol (38%) and benzodiazepines (32%). The rate of fentanyl/heroin-involved deaths increased by 253% from 2015 to 2016 (1.5 to 5.3 per 100,000), whereas the rate of fentanyl/cocaine-involved deaths increased by 356% over the same period (0.9 to 4.1 per 100,000).

The NYC DOHMH developed a Fentanyl "Health Alert" flyer to distribute to harm reduction programs, drug treatment programs, and people who use drugs to advise of the presence of fentanyl in NYC and provide harm reduction information. On June 1, the NYC DOHMH also released a Health Advisory alerting New Yorkers to the risk of fentanyl-involved overdose among recreational cocaine users.

Of 44,769 total NFLIS seizures in NYC in 2016, 3.8% (n = 1,699) tested positive for fentanyl, and fentanyl was the sixth most commonly seized substance (up from 12th in 2015). This represents a 694% increase from 2015 when there were 214 fentanyl seizures.

Figure 4. Number of Unintentional Drug Poisoning Deaths (Overdoses), by Quarter, and Percentage Involving Fentanyl, New York City, 2015–2016*
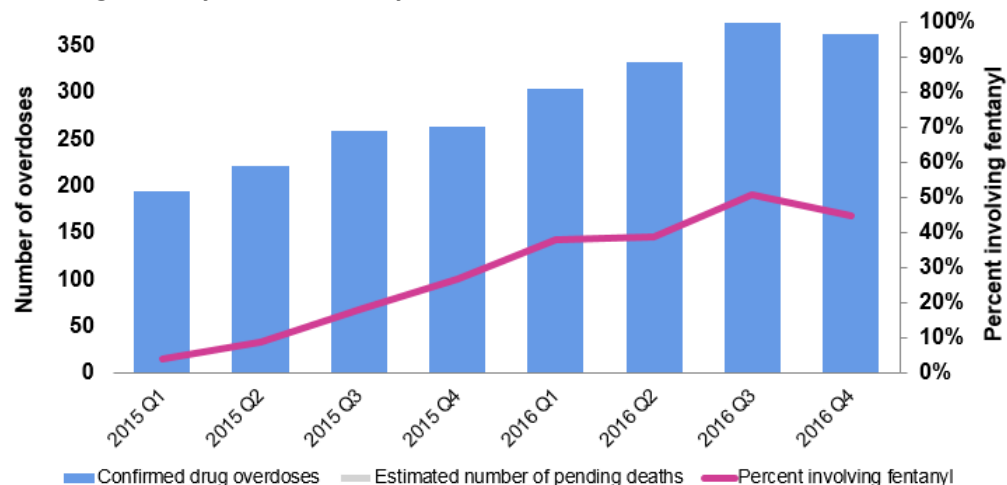
*Data for 2015 and 2016 are provisional and subject to change (June 13, 2017).
Source: New York City Office of the Chief Medical Examiner & New York City Department of Health and Mental Hygiene 2015–2016.

Opioid Analgesics (*excluding fentanyl*)

In 2016, there were 241 opioid-analgesic-involved overdose deaths (excluding fentanyl), with rate increases from 3.1 per 100,000 New Yorkers in 2015 to 3.5 in 2016. The rate was highest among White New Yorkers (6.2 per 100,000), which was almost four times higher than that for Black New Yorkers (1.6 per 100,000). The rate among Hispanic/Latino New Yorkers was 3.9 per 100,000. Unlike previous years, when rates were highest among the 45–54 age group, in 2016, rates of opioid analgesic-involved deaths were highest among New Yorkers 55–64 years of age (5.8 per 100,000). Also, in contrast to previous years, rates were highest among residents living in the highest poverty (poorest) neighborhoods (3.9 per 100,000); nevertheless, the rates among those living in the lowest poverty (wealthiest) neighborhoods were not far behind (3.8 per 100,000).

Most opioid analgesic-involved deaths in 2016 also involved benzodiazepines (59%). Heroin was the second most common co-involved substance (46%), followed by cocaine (39%) and alcohol (31%). These percentages were consistent with those seen in the previous four years.

In 2016, prescription opioids were listed as the primary drug in 2.6% (*n* = 1,871) of all drug treatment admissions. Among these admissions, there was most frequently no reported secondary substance (27%, *n* = 505), followed by marijuana (17%, *n* = 322) and benzodiazepines (15%, *n* = 277).

Methadone

There were 195 methadone-involved overdose deaths in 2016 (2.8 per 100,000 New Yorkers). This rate reflects a 27% increase from 2015, when 2.2 out of every 100,000 New Yorkers died of a methadone-involved overdose.

Nonprescription methadone was reported as the primary substance in 0.1% (*n* = 81) of drug treatment admissions. Nonprescription methadone was infrequently reported as the secondary substance of drug treatment admissions (0.4%, *n* = 275).

The methadone maintenance population in NYC is 30,000–33,000 individuals. The number (*n*) of methadone-involved overdose deaths has been steadily increasing since 2014.

Of 44,769 total NFLIS seizures in NYC in 2016, less than 1% (*n* = 298) tested positive for methadone. Methadone seizures decreased by 19.2% compared with 2015 (*n* = 369).

Local Research Highlights

Timely Response to Emerging Drug Issues

Emerging drug trends and associated risk behaviors often require a quicker response than more conventional scientific research methods allow for.[1] Rapid assessment and response (RAR) is a research method that can be used to investigate public health risk behaviors and associated consequences,[2] and it has been widely used to examine drug use.[3,4] Unlike traditional epidemiological studies designed to produce exact estimates and quantify relationships, RAR uses both qualitative and quantitative methods to gather data quickly in response to a question or crisis requiring a timely intervention. Public health surveillance data sources used by NYC DOHMH in support of RAR investigations include unintentional drug poisoning (overdose) mortality data and syndromic emergency department data. Qualitative data gathered in the course of ongoing research studies[5] and event reports from community-based organizations may also guide RAR investigations. RAR investigations focus on either a discrete geographic area or a discrete demographic group experiencing adverse health consequences associated with drug use.

In response to increasing rates of fentanyl-involved overdose, the RAR team conducted interviews with staff of programs interacting with substance users and persons who use drugs (PWUD) to assess their knowledge of fentanyl and to explore whether there was an active nonpharmaceutical fentanyl market in the city. Findings demonstrated that in many cases, PWUD and service providers lacked knowledge about nonpharmaceutical fentanyl and that PWUD were not deliberately seeking out fentanyl to use. The RAR team focused on two geographically defined areas where data indicated increased rates of opioid-involved mortality visiting all New York Office of Alcohol and Substance Abuse Services (OASAS)

[1] Trautmann, F., & Burrows, D. (2000). Conditions for the effective use of rapid assessment and response methods. *The International Journal of Drug Policy*, *11*, 59–61.

[2] Fitch, C., Stimson, G. V., Rhodes, T., & Poznyak, V. (2004). Rapid assessment: An international review of diffusion, practice and outcomes in the substance use field. *Social Science and Medicine*, *59*, 1819–1830.

[3] Rhodes, T., Stimson, G. V., Fitch, A., Ball, A., & Renton, A. (1999). Rapid assessment, injecting drug use, and public health. *Lancet*, *354*, 65–68.

[4] De Jong, W., Tsagarelli, T., & Schouten, E. (1999). Rapid assessment of injection drug use and HIV in the Republic of Georgia. *Journal of Drug Issues*, 29, 843–860.

[5] Data collected by the NYC Department of Health and Mental Hygiene, Bureau of Alcohol and Drug Use Prevention, Care and Treatment.

licensed substance use treatment providers to inform and educate staff about the emerging fentanyl issue.

Site visits (*N* = 25) were informal and involved presentation of the following materials: (a) overdose mortality data, including rates of fentanyl-involved drug overdose deaths, a borough-level fact sheet, and an Epi Data Brief on citywide heroin- and fentanyl-involved overdose mortality; (b) fentanyl education materials for providers and patients, including NYC DOHMH fentanyl alert posters and basic information on fentanyl and associated risks; (c) a list of pharmacies that dispense naloxone under the NYC DOHMH standing order in UHF 303; and (d) information on opioid overdose prevention program (OOPP) enrollment through NYS DOH. In addition to substance use treatment programs, pharmacies listed on the NYS DOH website as offering syringe access through the expanded syringe exchange program (ESAP) were visited and provided educational materials similar to those described earlier. These visits are ongoing. Buprenorphine providers listed on the SAMHSA website will also be targeted by RAR staff and provided with mortality data and fentanyl educational materials.

To date, a total of 52 programs and 56 ESAP pharmacies in two NYC UHF neighborhoods have been visited and provided with mortality data and educational materials. Information and materials were well received, and afterward, requests were made by some programs for further, more formal data presentations to both staff and clients. RAR activities to date have emphasized the importance of communicating directly with services that intersect with PWUD to ensure they have the appropriate knowledge and materials to inform and educate their clients about the risks of fentanyl and to encourage dispensation of naloxone.

Naloxone Initiatives

NYC DOHMH began distributing naloxone kits to community based organizations in 2009, and it has provided more than 56,000 naloxone kits to certified opioid overdose prevention programs (OOPPs) to date, with naloxone distribution increasing each year. As part of the Mayor's *HealingNYC* initiative, NYC DOHMH aims to quadruple its distribution target of 15,000 kits per year to 65,000 by fiscal year 2019.

Figure 5. Intranasal (IN) Naloxone Kits Dispensed by OOPPs* (*N* = 42,268) by Setting, Excluding NYPD: 2009–2016
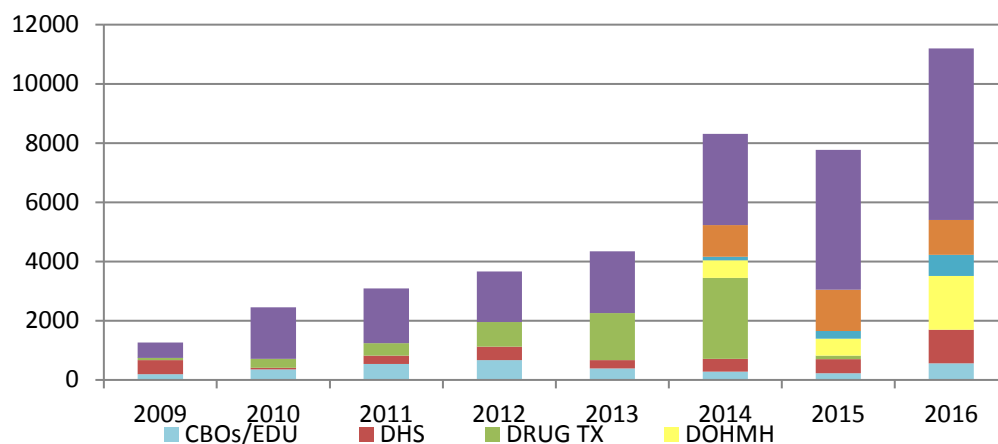
*Opioid overdose prevention programs.
Source: Data were collected by the DOHMH Bureau of Alcohol and Drug Use Prevention, Care and Treatment, in partnership with Opioid Overdose Prevention Programs.

NYC DOHMH is increasing staff capacity to maximize expansion efforts and make naloxone outreach and trainings more accessible to New Yorkers. As trends in overdose morbidity and mortality emerge, staff can quickly respond by providing naloxone kits in affected areas, while longer term systems are put in place to ensure more sustainable naloxone access once NYC DOHMH staff members have completed their outreach. DOHMH is simultaneously working to increase capacity at other community-based organizations interested in dispensing naloxone; a request for proposals (RFP) was released in late 2016 to fund staffing enhancements, and 12 organizations were selected.

Figure 6. Overdose Reversal/Naloxone Use Reports (*N* = 1,370) Submitted to DOHMH: 2010–2016
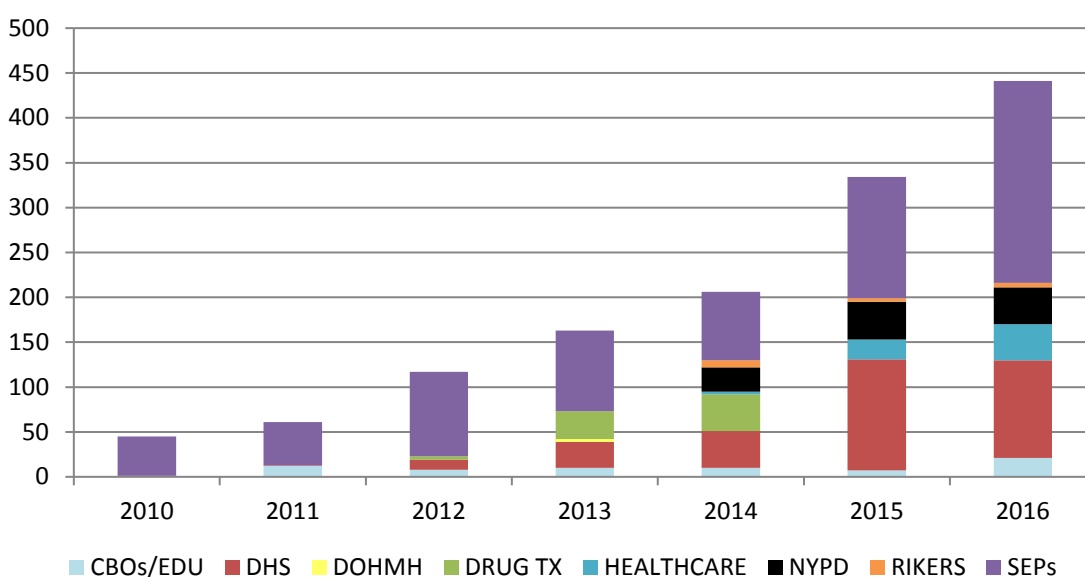
Source: Data were collected by the DOHMH Bureau of Alcohol and Drug Use Prevention, Care and Treatment.

Youth and Substance Use

The 2015 NYC Youth Risk Behavior Survey (YRBS) was administered to public high school students in NYC. Alcohol and marijuana were reported as the top two most common drugs used: 15.9% of students reported marijuana use and 20.9% of students reported alcohol consumption during the past 30 days. While Staten Island had the largest percentage of high school students reporting marijuana use (18.2%), Manhattan had the highest rate of high school students who use alcohol (25.6%). Male high school students reported a significantly higher use of prescription drugs (opioid analgesics, benzodiazepines, stimulants and others) and illicit drugs (cocaine, heroin, ecstasy and synthetic marijuana). Marijuana was the only drug whose use did not significantly differ between male and female students.

Reported lifetime heroin use has increased significantly among high school students over the past decade, from 1.8% of NYC high school students in 2005 to 2.5% in 2015. The proportion of 12th grade students having consumed alcohol during the past 30 days (31.9%) is nearly triple that of 9th grade

students (12.8%). Between 2011 and 2015, the percentage of high students who reported binge drinking during the past 30 days significantly decreased for 9th, 10th and 12th graders.

Infectious Diseases Related to Substance Use

New HIV diagnoses in NYC decreased by 54% from 2001 to 2015, from 5,862 to 2,493 cases reported. Significant decreases were also reported among subpopulations by sex, race/ethnicity, age at diagnosis, borough of residence at diagnosis, and transmission risk. Among injecting drug users (IDUs), there were 845 HIV diagnoses in 2001 and only 43 diagnoses in 2015. As of December 31, 2015, there were 121,616 people living with HIV/AIDS (PLWHA) in NYC. Of these, 15,918 (13.1%) people reported a history of IDU and 2,651 (2.2%) were men who have sex with men/IDUs.

In 2015, 48 acute hepatitis B cases were reported (0.6 per 100,000 New Yorkers), and there were 7,719 newly reported chronic hepatitis B cases (90.9 per 100,000 New Yorkers), with Brooklyn reporting the highest rate of infection (99.9), followed closely by Queens (97.5). Because it is difficult to identify at which time point an individual became acutely infected with hepatitis C, the NYC DOHMH does not report surveillance data of acute hepatitis C. Nevertheless, 7,328 people were newly reported with chronic hepatitis C in 2015 (86.3 per 100,000 New Yorkers). Among individuals 0–29 years of age, there were 796 newly reported hepatitis C cases in 2015. Data on the number of hepatitis B and C cases resulting from intravenous drug use are unavailable.

Legislative and Policy Updates

Naloxone in Pharmacies

As the demographic range of New Yorkers impacted by opioid misuse expands, the City has been exploring mechanisms to expand access to naloxone in innovative settings to reach emerging populations at high risk of opioid overdose. On December 7, 2015, NYC DOHMH Health Commissioner Mary Bassett issued a standing order to authorize naloxone dispensing in pharmacies. As of April 1, 2017, New Yorkers at risk of opioid overdose, as well as concerned family members and friends, can access this life-saving medication upon request in 748 pharmacies citywide.

More information on naloxone in pharmacies, including a list of participating pharmacies, can be found at the NYC DOHMH website: https://www1.nyc.gov/site/doh/providers/health-topics/naloxone-and-overdose-prevention-in-pharmacies.page

Increasing Access to Buprenorphine in NYC

Recent changes in federal legislation now allow for buprenorphine prescribing by nurse practitioners and physician assistants. The NYC DOHMH is expanding its buprenorphine training initiative to support these additional prescribers, with a goal of training 1,500 new prescribers in primary care settings over three years. NYC DOHMH has launched a buprenorphine nurse care manager model in seven federally qualified health centers (FQHCs), FQHC look-alikes, and other safety net settings; is developing and disseminating patient and provider-facing materials on buprenorphine; and is offering technical assistance to providers interested in prescribing buprenorphine. These initiatives will help the City connect 20,000 more New Yorkers to medication-assisted treatment by 2022.

Data Sources

Data for this report were drawn from the following sources:

Prevalence
- NYC YRBS: The NYC Youth Risk Behavior Survey (YRBS), conducted by the NYC Departments of Health and Education, is an anonymous, self-administered biennial study of NYC public high school students in grades 9 to 12.

- NYS PDMP: The Prescription Drug Monitoring Program (PDMP) managed by the New York State Department of Health collects data from drug dispenses on schedule II–IV controlled substances.

Morbidity
- SPARCS: The Statewide Planning and Research Cooperative System currently collects patient-level detail for each hospital inpatient stay and outpatient emergency department visits. Data on inpatient hospital stays are presented.

Mortality
- Bureau of Vital Statistics/Office of the Chief Medical Examiner: Mortality data were collected through an in-depth review of data and charts from the Health Department's Bureau of Vital Statistics and the Office of the Chief Medical Examiner for 2000–2016. Methadone is reported separately and not included in opioid analgesic analyses.

Treatment
- The New York State Office of Alcoholism and Substance Abuse Services (OASAS): Treatment admissions data were collected through the Client Data System for 2010–2016.

HIV and Hepatitis data
- HIV data: 2015 HIV surveillance data were collected from the NYC DOHMH HIV Epidemiology and Field Services Programs' annual report.

- Hepatitis data: 2015 hepatitis data were collected from the NYC DOHMH Bureau of Communicable Diseases' annual report.

Contact Information: For additional information about the drugs and drug use patterns discussed in this report, please contact Denise Paone, Ed.D., Director of Research and Surveillance, Bureau of Alcohol and Drug Use Prevention, Care and Treatment, New York City Department of Health and Mental Hygiene, 42-09 28th Street, 19th Floor, CN-14, Long Island City, NY 11101, Phone: 347–396–7015, E-mail: dpaone@nyc.health.gov.

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

The *SCS Data Tables* are prepared by NDEWS Coordinating Center staff and include information on demographic and socioeconomic characteristics of the population, drug use, substance use disorders and treatment, drug poisoning deaths, and drug seizures for the Sentinel Community Site. The *SCS Data Tables* attempt to harmonize data available for each of the 12 sites by presenting standardized information from local treatment admissions and five national data sources:

◊ American Community Survey;
◊ National Survey on Drug Use and Health;
◊ Youth Risk Behavior Survey;
◊ SCE-provided local treatment admissions data;
◊ National Vital Statistics System mortality data queried from CDC WONDER; and
◊ National Forensic Laboratory Information System.

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

Table 1: Demographic and Socioeconomic Characteristics
New York City, New York
2011–2015 ACS 5-Year Estimates

	Estimate	Margin of Error
Total Population (#)	**8,426,743**	**
Age		
18 years and over (%)	78.7%	+/-0.1
21 years and over (%)	74.9%	+/-0.1
65 years and over (%)	12.7%	+/-0.1
Median Age (years)	35.8	+/-0.1
Race (%)		
White, Not Hisp.	32.5%	+/-0.1
Black/African American, Not Hisp.	22.4%	+/-0.1
Hispanic/Latino (of any race)	28.9%	**
American Indian/Alaska Native, Not Hisp.	0.2%	+/-0.1
Asian, Not Hisp.	13.4%	+/-0.1
Native Hawaiian/Pacific Islander, Not Hisp.	0.0%	+/-0.1
Some Other Race	0.8%	+/-0.1
Two or More Races	1.7%	+/-0.1
Sex (%)		
Male	47.6%	+/-0.1
Female	52.4%	+/-0.1
Educational Attainment (*Among Population Aged 25+ Years***) (%)**		
High School Graduate or Higher	80.3%	+/-0.1
Bachelor's Degree or Higher	35.7%	+/-0.2
Unemployment (*Among Civilian Labor Force Population Aged 16+ Years***) (%)**		
Unemployment Rate	9.5%	+/-0.1
Income ($)		
Median Household Income (in 2015 inflation-adjusted dollars)	$53,373	+/-269
Health Insurance Coverage (*Among Civilian Noninstitutionalized Population***) (%)**		
No Health Insurance Coverage	12.4%	+/-0.1
Poverty (%)		
All People Whose Income in Past 12 Months Is Below Poverty Level	20.6%	+/-0.2

NOTES:

Margin of Error: Can be interpreted roughly as providing a 90% probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value.

**The estimate is controlled; a statistical test for sampling variability is not appropriate.

SOURCE: Adapted by the NDEWS Coordinating Center from data provided by the U.S. Census Bureau, 2011–2015 American Community Survey (ACS) 5-Year Estimates.

Table 2a: Self-Reported Substance Use Behaviors
Among Persons 12+ Years in *New York City*^, 2012–2014
Estimated Percent, 95% Confidence Interval, and Estimated Number*
Annual Averages Based on Combined 2012 to 2014 NSDUH Data

Substance Use Behaviors	Substate Region: New York City^	
	Estimated % (95% CI)*	Estimated #*
Used in Past Month		
Alcohol	53.64 (51.42 − 55.85)	3,795,497
Binge Alcohol**	24.51 (22.95 − 26.14)	1,734,005
Marijuana	8.43 (7.46 − 9.50)	596,204
Use of Illicit Drug Other Than Marijuana	3.51 (2.93 − 4.21)	248,435
Used in Past Year		
Cocaine	2.60 (2.08 − 3.25)	184,034
Nonmedical Use of Pain Relievers	3.83 (3.27 − 4.49)	271,141
Substance Use Disorders in Past Year*		
Illicit Drugs or Alcohol	**8.95 (8.09 − 9.89)**	**633,484**
Alcohol	7.12 (6.33 − 8.01)	503,960
Illicit Drugs	3.07 (2.62 − 3.58)	216,933

NOTES:

^New York City: Includes NSDUH Substate Region A. Region A comprises Bronx, Kings, New York, Queens, and Richmond counties.

*Estimated %: Substate estimates are based on a small area estimation methodology in which 2012–2014 substate level NSDUH data are combined with county and census block group/tract-level data from the state;

95% Confidence Interval (CI): Provides a measure of the accuracy of the estimate. It defines the range within which the true value can be expected to fall 95 percent of the time; **Estimated #:** The estimated number of persons aged 12 or older who used the specified drug or are dependent/abuse a substance was calculated by multiplying the prevalence rate and the population estimate of persons 12+ years (7,075,349) from Table C1 of the NSDUH report. The population estimate is the simple average of the 2012, 2013, and 2014 population counts for persons aged 12 or older.

**Binge Alcohol: Defined as drinking 5 or more drinks on the same occasion on at least 1 day in the past 30 days.

***Substance Use Disorders in Past Year: Persons are classified as having a substance use disorder in the past 12 months based on reponses to questions that meet the criteria specified in the 4th edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)*.

SOURCE: Adapted by the NDEWS Coordinating Center from data provided by the Substance Abuse and Mental Health Services Administration (SAMHSA), Substate Estimates of Substance Use and Mental Illness from the 2012–2014 National Surveys on Drug Use and Health. Available at: http://www.samhsa.gov/data/population-data-nsduh/reports?tab=38

Table 2b: Self-Reported Substance Use Behaviors Among Persons in *New York City^* , by Age Group, 2012–2014
Estimated Percent and 95% Confidence Interval (CI)*, Annual Averages Based on Combined 2012 to 2014 NSDUH Data

Substance Use Behaviors	Substate Region: New York City^					
	12–17		18–25		26+	
	Estimated Percent (95% CI)*		Estimated Percent (95% CI)*		Estimated Percent (95% CI)*	
Used in Past Month						
Binge Alcohol**	6.49	(5.52 – 7.62)	37.15	(34.54 – 39.84)	24.13	(22.28 – 26.09)
Marijuana	7.31	(6.21 – 8.59)	19.03	(16.99 – 21.26)	6.71	(5.64 – 7.96)
Use of Illicit Drug Other Than Marijuana	2.80	(2.19 – 3.57)	5.96	(4.93 – 7.20)	3.16	(2.50 – 3.99)
Used in Past Year						
Cocaine	0.62	(0.40 – 0.94)	5.32	(4.31 – 6.55)	2.33	(1.74 – 3.11)
Nonmedical Use of Pain Relievers	3.43	(2.74 – 4.28)	6.84	(5.79 – 8.06)	3.35	(2.72 – 4.13)
Substance Use Disorder in Past Year*						
Illicit Drugs or Alcohol	5.29	(4.41 – 6.35)	16.92	(15.05 – 18.98)	7.95	(6.97 – 9.04)
Alcohol	2.73	(2.21 – 3.38)	11.96	(10.46 – 13.64)	6.73	(5.80 – 7.80)
Illicit Drugs	3.5	(2.80 – 4.37)	7.28	(6.15 – 8.59)	2.3	(1.82 – 2.90)

NOTES:
^New York City: Includes NSDUH Substate Region A. Region A comprises Bronx, Kings, New York, Queens, and Richmond counties.
*Estimated %: Substate estimates are based on a small area estimation methodology in which 2012–2014 substate level NSDUH data are combined with county and census block group/tract-level data from the state; **95% Confidence Interval (CI):** Provides a measure of the accuracy of the estimate. It defines the range within which the true value can be expected to fall 95 percent of the time.
**Binge Alcohol: Defined as drinking 5 or more drinks on the same occasion on at least 1 day in the past 30 days.
***Substance Use Disorders in Past Year: Persons are classified as having a substance use disorder in the past 12 months based on responses to questions that meet the criteria specified in the 4th edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)* .

SOURCE: Adapted by the NDEWS Coordinating Center from data provided by the Substance Abuse and Mental Health Services Administration (SAMHSA), Substate Estimates of Substance Use and Mental Illness from the 2012–2014 National Surveys on Drug Use and Health. Available at: http://www.samhsa.gov/data/population-data-nsduh/reports?tab=38

Table 3: Self-Reported Substance Use-Related Behaviors Among *New York City* ^ Public High-School Students, 2015
Estimated Percent and 95% Confidence Interval (CI)
2013 and 2015 YRBS*

Substance Use Behaviors	2015 vs 2013			2015 by Sex			2015 by Race			
	2015 Estimate (95% CI)	2013 Estimate (95% CI)	*p* value	Male Estimate (95% CI)	Female Estimate (95% CI)	*p* value	White Estimate (95% CI)	Black Estimate (95% CI)	Hispanic Estimate (95% CI)	Asian Estimate (95% CI)
Used in Past Month										
Alcohol	20.9 (18.5 - 23.4)	24.7 (23.1 - 26.3)	**0.01**	17.6 (15.1 - 20.5)	23.8 (21.2 - 26.7)	**0.00**	30.2 (24.2 - 37.1)	18.6 (14.9 - 23.1)	24.3 (21.4 - 27.5)	10.5 (7.3 - 14.9)
Binge Alcohol**	8.5 (7.3 - 9.9)	10.8 (9.8 - 11.8)	**0.01**	7.8 (6.6 - 9.3)	9.1 (7.6 - 10.8)	0.11	14.9 (10.6 - 20.7)	6.4 (4.4 - 9.1)	10.1 (8.5 - 12.0)	3.2 (2.2 - 4.7)
Marijuana	15.9 (13.9 - 18.0)	16.2 (14.5 - 18.0)	0.82	15.7 (13.7 - 18.0)	15.8 (13.3 - 18.7)	0.96	18.9 (14.7 - 24.0)	17.4 (13.7 - 21.9)	18.3 (15.2 - 22.0)	5.4 (4.2 - 6.8)
Ever Used in Lifetime										
Alcohol	—	—	~	—	—	~	—	—	—	—
Marijuana	—	—	~	—	—	~	—	—	—	—
Cocaine	4.4 (3.6 - 5.3)	4.7 (3.8 - 5.6)	0.62	5.7 (4.6 - 6.9)	2.7 (2.0 - 3.7)	**0.00**	5.6 (3.7 - 8.6)	2.5 (1.5 - 4.3)	5.7 (4.4 - 7.2)	1.9 (1.0 - 3.5)
Hallucinogenic Drugs	—	—	~	—	—	~	—	—	—	—
Synthetic Marijuana	5.4 (4.6 - 6.3)	—	~	6.5 (5.2 - 8.3)	3.9 (3.1 - 4.8)	**0.01**	4.9 (3.5 - 6.8)	4.3 (3.1 - 6.0)	7.0 (5.4 - 9.0)	2.5 (1.5 - 4.3)
Inhalants	—	—	~	—	—	~	—	—	—	—
Ecstasy also called "MDMA"	—	4.8 (4.1 - 5.5)	~	—	—	~	—	—	—	—
Heroin	2.5 (1.9 - 3.3)	2.8 (2.1 - 3.6)	0.64	3.6 (2.7 - 4.8)	1.1 (0.8 - 1.6)	**0.00**	2.0 (1.3 - 3.3)	1.6 (1.1 - 2.3)	3.2 (2.2 - 4.5)	1.3 (0.6 - 2.8)
Methamphetamine	—	3.4 (2.7 - 4.2)	~			~				—
Rx Drugs without a Doctor's Prescription	—	—	~	—	—	~	—	—	—	—
Injected Any Illegal Drug	2.2 (1.7 - 2.9)	2.5 (1.9 - 3.2)	0.60	3.0 (2.1 - 4.3)	1.3 (0.9 - 1.9)	**0.01**	3.2 (1.1 - 9.0)	1.8 (1.0 - 3.2)	2.2 (1.6 - 2.9)	1.5 (0.8 - 3.0)

NOTES:

^New York City: Weighted data were available for New York City in 2013 and 2015; weighted results mean that the overall response rate was at least 60%. The overall response rate is calculated by multiplying the school response rate times the student response rate. Weighted results are representative of all students in grades 9–12 attending public schools in each jurisdiction.

'**—**': Data not available; **~:** *p* value not available.

*Sample Frame for the 2013 and 2015 YRBS: Consisted of public schools with students in at least one of grades 9-12. The sample size for 2013 was 9,439 with an overall response rate of 71%; the 2015 sample size was 8,522 with a 70% overall response rate.

**Binge Alcohol: Defined as having had five or more drinks of alcohol in a row within a couple of hours on at least 1 day during the 30 days before the survey.

SOURCE: Adapted by the NDEWS Coordinating Center from data provided by the Centers for Disease Control and Prevention (CDC), 1991-2015 High School Youth Risk Behavior Survey Data. Available at http://nccd.cdc.gov/youthonline/. Accessed on [7/5/2016].

Table 4a1: Trends in Non-Crisis Admissions* to Programs Treating Substance Use Disorders, New York City, 2012-2016

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

	Calendar Year									
	2012		2013		2014		2015		2016	
	(#)	(%)	(#)	(%)	(#)	(%)	(#)	(%)	(#)	(%)
Total Admissions (#)	**84,978**	**100%**	**83,577**	**100%**	**80,447**	**100%**	**80,334**	**100%**	**71,242**	**100%**
Primary Substance of Abuse (%)										
Alcohol	25,780	30.3%	25,814	30.9%	25,762	32.0%	24,503	30.5%	23,213	32.6%
Cocaine/Crack	12,126	14.3%	11,225	13.4%	9,553	11.9%	8,596	10.7%	7,698	10.8%
Heroin	21,353	25.1%	21,833	26.1%	22,409	27.9%	26,217	32.6%	20,768	29.2%
Prescription Opioids**	2,839	3.3%	2,671	3.2%	2,310	2.9%	2,115	2.6%	1,871	2.6%
Methamphetamine	381	0.4%	422	0.5%	474	0.6%	471	0.6%	630	0.9%
Marijuana	19,891	23.4%	19,049	22.8%	17,082	21.2%	15,347	19.1%	14,085	19.8%
Benzodiazepines**	764	0.9%	702	0.8%	778	1.0%	793	1.0%	1,033	1.4%
MDMA	118	0.1%	74	<0.1%	76	<0.1%	52	<0.1%	70	<0.1%
Synthetic Stimulants**	11	<0.1%	19	<0.1%	36	<0.1%	35	<0.1%	43	<0.1%
Synthetic Cannabinoids	0	0.0%	0	0.0%	50	<0.1%	312	0.4%	142	0.2%
Other Drugs/Unknown	1,715	2.0%	1,768	2.1%	1,917	2.4%	1,893	2.4%	1,689	2.4%

NOTES:

*Non-Crisis Admissions: Includes non-crisis admissions to outpatient, inpatient, residential, and methadone maintenance treatment programs licensed in the State. Each admission does not necessarily represent a unique individual because some individuals are admitted to treatment more than once in a given period.

Substance Categories: Prescription opioids includes non-prescription methadone, buprenorphine, other synthetic opiates, and OxyContin; **Benzodiazepines includes benzodiazepines, alprazolam, and rohypnol. **Synthetic Stimulants** includes other stimulants and a newly created category, synthetic stimulants (created in 2014).

unavail: Data not available.

SOURCE: Data provided to the New York City NDEWS SCE by the New York State Office of Alcoholism and Substance Abuse Services (OASAS), Client Data System accessed May 24, 2017 from Local Governmental Unit (LGU) Inquiry Reports.

Table 4b1: Demographic and Drug Use Characteristics of Non-Crisis Treatment Admissions* for Select Substances of Abuse, New York City, 2016

Number of Admissions, by Primary Substance of Abuse 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 (#)	23,213	100%	7,698	100%	20,768	100%	1,871	100%	630	100%	14,085	100%	1,033	100%	43	100%	142	100%
Sex (%)																		
Male	17,595	75.8%	5,333	69.3%	15,984	77.0%	1,339	71.6%	594	94.3%	10,934	77.6%	727	70.4%	33	76.7%	125	88.0%
Female	5,618	24.2%	2,365	30.7%	4,784	23.0%	532	28.4%	36	5.7%	3,151	22.4%	306	29.6%	10	23.3%	17	12.0%
Race/Ethnicity*** (%)																		
Black	9,963	42.9%	4,381	56.9%	4,798	23.1%	200	10.7%	141	22.4%	8,243	58.5%	101	9.8%	10	23.3%	70	49.3%
White	6,239	26.9%	1,336	17.4%	7,643	36.8%	1,233	65.9%	310	49.2%	1,326	9.4%	584	56.5%	22	51.2%	23	16.2%
Other	7,011	30.2%	1,981	25.7%	8,327	40.1%	438	23.4%	179	28.4%	4,516	32.1%	348	33.7%	11	25.6%	49	34.5%
Age Group*** (%)																		
<26	1,533	6.6%	303	3.9%	1,758	8.5%	340	18.2%	52	8.3%	5,387	38.2%	380	36.8%	11	25.6%	36	25.4%
26-45	10,213	44.0%	3,118	40.5%	9,596	46.2%	1,133	60.6%	446	70.8%	7,203	51.1%	413	40.0%	24	55.8%	74	52.1%
46+	11,467	49.4%	4,277	55.6%	9,414	45.3%	398	21.3%	132	21.0%	1,495	10.6%	240	23.2%	8	18.6%	32	22.5%
Route of Administration (%)																		
Smoked	0	0.0%	4,465	58.0%	155	0.7%	43	2.3%	329	52.2%	13,636	96.8%	0	0.0%	16	37.2%	122	85.9%
Inhaled	28	0.1%	2,900	37.7%	11,483	55.3%	295	15.8%	80	12.7%	178	1.3%	10	1.0%	2	4.7%	10	7.0%
Injected	19	<0.1%	210	2.7%	8,934	43.0%	30	1.6%	187	29.7%	0	0.0%	3	0.3%	3	7.0%	5	3.5%
Oral/Other/Unknown	23,166	99.8%	123	1.6%	196	0.9%	1,503	80.3%	34	5.4%	271	1.9%	1,020	98.7%	22	51.2%	5	3.5%
Secondary Substance (%)																		
None	10,797	46.5%	1,972	25.6%	5,678	27.3%	505	27.0%	220	34.9%	7,368	52.3%	142	13.7%	19	44.2%	45	31.7%
Alcohol	3	<0.1%	2,645	34.4%	2,332	11.2%	204	10.9%	96	15.2%	4,195	29.8%	188	18.2%	7	16.3%	22	15.5%
Cocaine/Crack	5,313	22.9%	227	2.9%	7,266	35.0%	204	10.9%	73	11.6%	1,227	8.7%	116	11.2%	5	11.6%	19	13.4%
Heroin	1,295	5.6%	820	10.7%	2	<0.1%	214	11.4%	12	1.9%	220	1.6%	163	15.8%	0	0.0%	2	1.4%
Prescription Opioids**	267	1.2%	94	1.2%	1,223	5.9%	77	4.1%	6	1.0%	203	1.4%	121	11.7%	0	0.0%	1	0.7%
Methamphetamine	48	0.2%	30	0.4%	38	0.2%	4	0.2%	0	0.0%	38	0.3%	4	0.4%	0	0.0%	0	0.0%
Marijuana	4,576	19.7%	1,643	21.3%	2,402	11.6%	322	17.2%	101	16.0%	1	<0.1%	223	21.6%	5	11.6%	52	36.6%
Benzodiazepines**	464	2.0%	110	1.4%	1,550	7.5%	277	14.8%	11	1.7%	287	2.0%	27	2.6%	2	4.7%	1	0.7%
Synthetic Stimulants**	10	<0.1%	5	<0.1%	8	<0.1%	4	0.2%	2	0.3%	20	0.1%	3	0.3%	0	0.0%	0	0.0%
Synthetic Cannabinoids	52	0.2%	21	0.3%	22	0.1%	2	0.1%	2	0.3%	113	0.8%	0	0.0%	0	0.0%	0	0.0%

NOTES:

*Non-Crisis Admissions: Includes non-crisis admissions to outpatient, inpatient, residential, and methadone maintenance treatment programs licensed in the State. Each admission does not necessarily represent a unique individual because some individuals are admitted to treatment more than once in a given period.

Substance Categories: Prescription opioids includes non-prescription methadone, buprenorphine, other synthetic opiates, and OxyContin; **Benzodiazepines includes benzodiazepines, alprazolam, and rohypnol. **Synthetic Stimulants** includes other stimulants and a newly created category, synthetic stimulants (created in 2014).

***Race/Ethnicity and Age: Categories for New York City are not the same categories presented for other NDEWS sites.

unavail: Data not available; **Percentages** may not sum to 100 due to either rounding, missing data, and/or because not all possible categories are presented in the table.

SOURCE: Data provided to the New York City NDEWS SCE by the New York State Office of Alcoholism and Substance Abuse Services (OASAS), Client Data System accessed May 24, 2017 from Local Governmental Unit (LGU) Inquiry Reports.

Table 4a2: Trends in Crisis (Detox) Admissions* to Programs Treating Substance Use Disorders, New York City, 2012-2016

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

	Calendar Year									
	2012		2013		2014		2015		2016	
	(#)	(%)	(#)	(%)	(#)	(%)	(#)	(%)	(#)	(%)
Total Admissions (#)	**54,721**	**100%**	**47,107**	**100%**	**46,483**	**100%**	**45,018**	**100%**	**42,109**	**100%**
Primary Substance of Abuse (%)										
Alcohol	33,561	61.3%	27,637	58.7%	26,733	57.5%	25,205	56.0%	22,689	53.9%
Cocaine/Crack	4,020	7.3%	2,955	6.3%	2,230	4.8%	2,038	4.5%	2,024	4.8%
Heroin	12,971	23.7%	12,925	27.4%	13,825	29.7%	14,439	32.1%	14,425	34.3%
Prescription Opioids**	1,570	2.9%	1,231	2.6%	1,086	2.3%	939	2.1%	846	2.0%
Methamphetamine	15	<0.1%	18	<0.1%	21	<0.1%	23	<0.1%	28	<0.1%
Marijuana	1,009	1.8%	693	1.5%	615	1.3%	538	1.2%	452	1.1%
Benzodiazepines**	1,402	2.6%	1,272	2.7%	1,448	3.1%	1,234	2.7%	1,137	2.7%
MDMA	6	<0.1%	0	0.0%	2	<0.1%	4	<0.1%	4	<0.1%
Synthetic Stimulants**	1	<0.1%	5	<0.1%	2	<0.1%	7	<0.1%	2	<0.1%
Synthetic Cannabinoids	0	0.0%	0	0.0%	30	<0.1%	114	0.3%	50	0.1%
Other Drugs/Unknown	166	0.3%	371	0.8%	491	1.1%	477	1.1%	452	1.1%

NOTES:

*Crisis Admissions: Includes detox admissions to all licensed treatment programs in the State. Each admission does not necessarily represent a unique individual because some individuals are admitted to treatment more than once in a given period.

Substance Categories: Prescription opioids includes non-prescription methadone, buprenorphine, other synthetic opiates, and OxyContin; **Benzodiazepines includes benzodiazepines, alprazolam, and rohypnol. **Synthetic Stimulants** includes other stimulants and a newly created category, synthetic stimulants (created in 2014).

unavail: Data not available.

SOURCE: Data provided to the New York City NDEWS SCE by the New York State Office of Alcoholism and Substance Abuse Services (OASAS), Client Data System accessed May 24, 2017 from Local Governmental Unit (LGU) Inquiry Reports.

Table 4b2: Demographic and Drug Use Characteristics of Crisis (Detox) Treatment Admissions* for Select Substances of Abuse, New York City, 2016

Number of Admissions, by Primary Substance of Abuse 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 (#)	22,689	100%	2,024	100%	14,425	100%	846	100%	28	100%	452	100%	1,137	100%	2	100%	50	100%
Sex (%)																		
Male	19,153	84.4%	1,585	78.3%	11,988	83.1%	595	70.3%	26	92.9%	386	85.4%	842	74.1%	1	50.0%	44	88.0%
Female	3,536	15.6%	439	21.7%	2,437	16.9%	251	29.7%	2	7.1%	66	14.6%	295	25.9%	1	50.0%	6	12.0%
Race/Ethnicity*** (%)																		
Black	11,081	48.8%	1,370	67.7%	3,929	27.2%	96	11.3%	10	35.7%	232	51.3%	141	12.4%	1	50.0%	27	54.0%
White	5,187	22.9%	239	11.8%	4,676	32.4%	499	59.0%	8	28.6%	71	15.7%	631	55.5%	1	50.0%	9	18.0%
Other	6,421	28.3%	415	20.5%	5,820	40.3%	251	29.7%	10	35.7%	149	33.0%	365	32.1%	0	0.0%	14	28.0%
Age Group*** (%)																		
<26	464	2.0%	44	2.2%	1,259	8.7%	149	17.6%	2	7.1%	73	16.2%	175	15.4%	0	0.0%	11	22.0%
26-45	7,913	34.9%	718	35.5%	7,282	50.5%	474	56.0%	21	75.0%	221	48.9%	610	53.6%	2	100.0%	26	52.0%
46+	14,312	63.1%	1,262	62.4%	5,884	40.8%	223	26.4%	5	17.9%	158	35.0%	352	31.0%	0	0.0%	13	26.0%
Route of Administration (%)																		
Smoked	0	0.0%	1,419	70.1%	61	0.4%	17	2.0%	10	35.7%	450	99.6%	0	0.0%	1	50.0%	41	82.0%
Inhaled	35	0.2%	478	23.6%	7,489	51.9%	74	8.7%	3	10.7%	1	0.2%	5	0.4%	0	0.0%	4	8.0%
Injected	70	0.3%	95	4.7%	6,786	47.0%	10	1.2%	7	25.0%	0	0.0%	4	0.4%	1	50.0%	4	8.0%
Oral/Other/Unknown	22,584	99.5%	32	1.6%	89	0.6%	745	88.1%	8	28.6%	1	0.2%	1,128	99.2%	0	0.0%	1	2.0%
Secondary Substance (%)																		
None	8,699	38.3%	182	9.0%	3,132	21.7%	242	28.6%	5	17.9%	58	12.8%	213	18.7%	0	0.0%	8	16.0%
Alcohol	4	<0.1%	1,098	54.2%	3,515	24.4%	96	11.3%	6	21.4%	177	39.2%	260	22.9%	0	0.0%	11	22.0%
Cocaine/Crack	6,917	30.5%	68	3.4%	3,838	26.6%	55	6.5%	3	10.7%	103	22.8%	126	11.1%	2	100.0%	11	22.0%
Heroin	3,227	14.2%	298	14.7%	5	<0.1%	87	10.3%	0	0.0%	50	11.1%	300	26.4%	0	0.0%	4	8.0%
Prescription Opioids**	266	1.2%	16	0.8%	600	4.2%	54	6.4%	0	0.0%	10	2.2%	91	8.0%	0	0.0%	1	2.0%
Methamphetamine	35	0.2%	1	<0.1%	13	<0.1%	2	0.2%	0	0.0%	2	0.4%	2	0.2%	0	0.0%	0	0.0%
Marijuana	2,312	10.2%	276	13.6%	957	6.6%	74	8.7%	6	21.4%	0	0.0%	75	6.6%	0	0.0%	9	18.0%
Benzodiazepines**	932	4.1%	55	2.7%	2,258	15.7%	219	25.9%	6	21.4%	28	6.2%	47	4.1%	0	0.0%	3	6.0%
Synthetic Stimulants**	6	<0.1%	0	0.0%	2	<0.1%	3	0.4%	0	0.0%	1	0.2%	4	0.4%	0	0.0%	1	2.0%
Synthetic Cannabinoids	83	0.4%	11	0.5%	17	0.1%	0	0.0%	0	0.0%	9	2.0%	2	0.2%	0	0.0%	0	0.0%

NOTES:
*Crisis Admissions: Includes detox admissions to all licensed treatment programs in the State. Each admission does not necessarily represent a unique individual because some individuals are admitted to treatment more than once in a given period.
Substance Categories: Prescription opioids includes non-prescription methadone, buprenorphine, other synthetic opiates, and OxyContin; **Benzodiazepines includes benzodiazepines, alprazolam, and rohypnol. **Synthetic Stimulants** includes other stimulants and a newly created category, synthetic stimulants (created in 2014).
***Race/Ethnicity and Age: Categories for New York City are not the same categories presented for other NDEWS sites.
unavail: Data not available; **Percentages** may not sum to 100 due to either rounding, missing data, and/or because not all possible categories are presented in the table.

SOURCE: Data provided to the New York City NDEWS SCE by the New York State Office of Alcoholism and Substance Abuse Services (OASAS), Client Data System accessed May 24, 2017 from Local Governmental Unit (LGU) Inquiry Reports.

Table 5: Drug Poisoning Deaths*, by Drug** and Year, *New York City*^, 2011–2015
Number, Crude Rate, and Age-Adjusted Rate*** (per 100,000 population)

	2011			2012			2013			2014			2015		
	Number (#)	Crude Rate	Age-Adjusted Rate	Number (#)	Crude Rate	Age-Adjusted Rate	Number (#)	Crude Rate	Age-Adjusted Rate	Number (#)	Crude Rate	Age-Adjusted Rate	Number (#)	Crude Rate	Age-Adjusted Rate
Drug Poisoning Deaths	**674**	**8.2**	**7.7**	**778**	**9.3**	**8.9**	**785**	**9.3**	**8.9**	**765**	**9.0**	**8.5**	**887**	**10.4**	**9.9**
Opioids‡	**453**	**5.5**	**5.2**	**560**	**6.7**	**6.4**	**541**	**6.4**	**6.1**	**555**	**6.5**	**6.2**	**665**	**7.8**	**7.4**
Heroin	122	1.5	1.4	221	2.7	2.5	223	2.7	2.5	274	3.2	3.1	363	4.2	4.1
Natural Opioid Analgesics	175	2.1	2.0	191	2.3	2.2	207	2.5	2.3	188	2.2	2.1	215	2.5	2.4
Methadone	128	1.6	1.5	175	2.1	2.0	134	1.6	1.5	109	1.3	1.2	120	1.4	1.3
Synthetic Opioid Analgesics	39	0.5	0.4	34	0.4	0.4	37	0.4	0.4	43	0.5	0.5	128	1.5	1.4
Benzodiazepines	**184**	**2.2**	**2.1**	**231**	**2.8**	**2.7**	**218**	**2.6**	**2.5**	**244**	**2.9**	**2.7**	**265**	**3.1**	**2.9**
Benzodiazepines **AND** Any Opioids	152	1.8	1.8	206	2.5	2.4	187	2.2	2.2	216	2.5	2.4	234	2.7	2.6
Benzodiazepines **AND** Heroin	38	0.5	0.5	56	0.7	0.6	53	0.6	0.6	92	1.1	1.0	102	1.2	1.1
Psychostimulants															
Cocaine	255	3.1	2.9	267	3.2	3.1	259	3.1	3.0	228	2.7	2.6	268	3.1	2.9
Psychostimulants with Abuse Potential	17	UNR	UNR	22	0.3	0.3	17	UNR	UNR	32	0.4	0.4	39	0.5	0.5
Cannabis (derivatives)	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**
Percent with Drugs Specified‡	98.4%			97.6%			97.3%			98.2%			97.9%		

NOTES:

*Drug Poisoning Deaths: Drug poisoning deaths are defined as deaths with **underlying cause-of-death** codes from the World Health Organization's (WHO's) *International Classification of Diseases, Tenth Revision* (ICD-10) of X40-X44, X60-X64, X85, and Y10-Y14. See *Overview & Limitations* section for additional information on mortality data and definitions of the specific ICD-10 codes listed.

Drug Poisoning Deaths, by Drug: Among the deaths with drug poisoning identified as the underlying cause, the specific drugs are identified by ICD-10 **multiple cause-of-death (MCOD) T-codes (see below). Each death certificate may contain up to 20 causes of death indicated in the MCOD field. Thus, the total count across drugs may exceed the actual number of dead persons in the selected population. Some deaths involve more than one drug; these deaths are included in the rates for each drug category.

^New York City: Comprised of Bronx, Kings, New York, Queens, and Richmond Counties.

***Age-Adjusted Rate: Age-adjusted rates are weighted averages of the age-specific death rates, where the weights represent a fixed population by age (2000 U.S. Population). Age adjustment is a technique for removing the effects of age from crude rates, so as to allow meaningful comparisons across populations with different underlying age structures. Age-adjusted rates should be viewed as relative indexes rather than as direct or actual measures of mortality risk. See http://wonder.cdc.gov/wonder/help/mcd.html for more information.

‡Opioids: Includes any of these MCOD codes T40.0-T40.4, or T40.6
  Heroin (T40.1); *Natural Opioid Analgesics* (T40.2) - Including morphine and codeine, and semi-synthetic opioid analgesics, including drugs such as oxycodone, hydrocodone, hydromorphone, and oxymorphone; *Methadone* (T40.3); *Synthetic Opioid Analgesics* (T40.4) - Other than methadone, including drugs such as tramadol and fentanyl; *Other and Unspecified Narcotics* (T40.6)

Benzodiazepines: (T42.4)
  Benzodiazepines AND *Any Opioids* (T42.4 AND T40.0-T40.4, or T40.6)
    Benzodiazepines AND *Heroin* (T42.4 AND T40.1)

Psychostimulants:
  Cocaine (T40.5); Psychostimulants with Abuse Potential [excludes cocaine] *(T43.6)*

Cannabis (derivatives): (T40.7)

‡Percent of Drug Poisoning Deaths with Drug(s) Specified: Among drug poisoning deaths, deaths that mention the type of drug(s) involved are defined as those including at least one ICD-10 MCOD in the range T36-T50.8. See *Overview & Limitations* section for more information about this statistic.

SUP=Suppressed: Counts and Rates are suppressed for subnational data representing 0–9 deaths. **UNR=Unreliable:** Rates are Unreliable when the death count <20.

SOURCE: Adapted by the NDEWS Coordinating Center from data taken from the Centers for Disease Control and Prevention, National Center for Health Statistics, Multiple cause of death 1999-2015, available on the CDC WONDER Online Database, released December 2016. Data compiled in the Multiple cause of death 1999-2015 were provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Retrieved between February 2017 - June 2017, from http://wonder.cdc.gov/mcd-icd10.html

Table 6a: Drug Reports* for Items Seized by Law Enforcement in New York City^ in 2016
DEA National Forensic Laboratory Information System (NFLIS)
Number of Drug-Specific Reports and Percent of Total Analyzed Drug Reports

Drug Identified	Number (#)	Percent of Total Drug Reports* (#)
Total Drug Reports	**44,769**	**100.0%**
COCAINE	13,707	30.6%
CANNABIS	13,123	29.3%
HEROIN	7,276	16.3%
ALPRAZOLAM	1,921	4.3%
OXYCODONE	1,738	3.9%
FENTANYL	1,699	3.8%
METHAMPHETAMINE	729	1.6%
BUPRENORPHINE	673	1.5%
PHENCYCLIDINE	535	1.2%
CLONAZEPAM	465	1.0%
KETAMINE	355	0.8%
METHADONE	298	0.7%
AMPHETAMINE	221	0.5%
BENZPHETAMINE	142	0.3%
CODEINE	136	0.3%
PHENYLIMIDOTHIAZOLE ISOMER UNDETERMINED	132	0.3%
CAFFEINE	122	0.3%
HYDROCODONE	120	0.3%
3,4-METHYLENEDIOXYMETHAMPHETAMINE (MDMA)	111	0.2%
ZOLPIDEM	105	0.2%
MORPHINE	104	0.2%
CATHINE/CATHINONE	81	0.2%
MONOACETYLMORPHINE	80	0.2%
ANABOLIC STEROIDS	69	0.2%
PSILOCYBINE	61	0.1%
DIAZEPAM	57	0.1%
PHENACETIN	52	0.1%
PSILOCIN	50	0.1%
LYSERGIC ACID DIETHYLAMIDE (LYSERGIDE)	47	0.1%
NO CONTROLLED DRUG IDENTIFIED	47	0.1%
OXYMORPHONE	33	< 0.1%
LORAZEPAM	31	< 0.1%
QUININE	29	< 0.1%
METHYLPHENIDATE	27	< 0.1%
LIDOCAINE	26	< 0.1%
3,4-METHYLENEDIOXYAMPHETAMINE (MDA)	24	< 0.1%
HYDROMORPHONE	24	< 0.1%
PROCAINE	19	< 0.1%
ACETAMINOPHEN	18	< 0.1%
GAMMA HYDROXY BUTYL LACTONE	18	< 0.1%
MODAFINIL	18	< 0.1%
DILTIAZEM	15	< 0.1%
MDMB-FUBINACA	14	< 0.1%
PEYOTE	13	< 0.1%
AB-CHMINACA (N-[(1S)-1-(AMINOCARBONYL)-2-METHYLPROPYL]-1-(CYCLOHEXYLMETHYL)-1H-INDAZOLE-3-CARBOXAMIDE)	12	< 0.1%
AB-PINACA	12	< 0.1%
HYDROXYZINE	12	< 0.1%
FURANYL FENTANYL	11	< 0.1%
MANNITOL	10	< 0.1%
DIPYRONE	9	< 0.1%
GLUTETHIMIDE	9	< 0.1%
METHAQUALONE	9	< 0.1%
5-METHOXY-3,4-METHYLENEDIOXYAMPHETAMINE (MMDA)	8	< 0.1%
NOSCAPINE	7	< 0.1%
METHANDRIOL	6	< 0.1%
N-BENZYLPIPERAZINE (BZP)	6	< 0.1%
PHENTERMINE	6	< 0.1%
6-MONOACETYLMORPHINE	5	< 0.1%
ACETYLFENTANYL	5	< 0.1%

Drug Identified	Number (#)	Percent of Total Drug Reports* (#)
CHLORDIAZEPOXIDE	5	< 0.1%
FUB-AMB	5	< 0.1%
ADB-FUBINACA (N-(1-AMINO-3,3-DIMETHYL-1-OXOBUTAN-2-YL)-1-(4-FLUOROBENZYL)-1H-INDAZOLE-3-CARBOXAMIDE)	4	< 0.1%
BUTALBITAL	4	< 0.1%
DIHYDROMORPHINE	4	< 0.1%
DIMETHYLTRYPTAMINE (DMT)	4	< 0.1%
N-ETHYLPENTYLONE	3	< 0.1%
PHENDIMETRAZINE	3	< 0.1%
TRAMADOL	3	< 0.1%
3,4-METHYLENEDIOXYETHYLCATHINONE (ETHYLONE)	2	< 0.1%
AMINOPYRINE	2	< 0.1%
BARBITURATES, OTHER	2	< 0.1%
DIBUTYLONE (BETA-KETO-N,N-DIMETHYL-1,3-BENZODIOXOLYLBUTANAMINE; BK-DMBDB)	2	< 0.1%
DIMETHYLSULFONE	2	< 0.1%
MEPROBAMATE	2	< 0.1%
METHORPHAN	2	< 0.1%
PENTYLONE (ß-KETO-METHYLBENZODIOXOLYLPENTANAMINE)	2	< 0.1%
TEMAZEPAM	2	< 0.1%
U-47700	2	< 0.1%
ZALEPLON	2	< 0.1%
1,4-BUTANEDIOL	1	< 0.1%
4-ANILINO-1-PHENETHYLPIPERIDINE	1	< 0.1%
4-CHLORO-ALPHA-PYRROLIDINOVALEROPHENONE (4-CHLORO-ALPHA-PVP)	1	< 0.1%
4-CHLORO-N-ETHYLCATHINONE	1	< 0.1%
5-FLUORO-ADB	1	< 0.1%
BREPHEDRONE (4-BROMOMETHCATHINONE) (4-BMC)	1	< 0.1%
DEPRESSANTS	1	< 0.1%
DIPHENHYDRAMINE	1	< 0.1%
ETIZOLAM	1	< 0.1%
GUAIFENESIN	1	< 0.1%
LACTOSE	1	< 0.1%
MITRAGYNINE	1	< 0.1%
NALOXONE	1	< 0.1%
NARCOTIC DRUG MIX. SCHEDULE III E 1	1	< 0.1%
PARAPHENALIA	1	< 0.1%
P-FLUOROBUTYRYL FENTANYL (P-FBF)	1	< 0.1%
P-FLUOROISOBUTYRYL FENTANYL	1	< 0.1%
SDB-005	1	< 0.1%
TESTOSTERONE	1	< 0.1%
TOCOPHEROL	1	< 0.1%

NOTES:

^New York City: Includes data from 5 boroughs in the New York City, NY MSA, including New York City Police Department Laboratory.

*Drug Report: Drug that is identified in law enforcement items, submitted to and analyzed by federal, state, or local forensic labs, and included in the NFLIS database. The time frame is January - December 2016.

The NFLIS database allows for the reporting of up to three drugs per item submitted for analysis. The data presented are a total count of first, second, and third listed reports for each selected drug item seized and analyzed.

Source: Adapted by the NDEWS Coordinating Center from data provided by the U.S. Drug Enforcement Administration (DEA), Diversion Control Division, Drug and Chemical Evaluation Section, Data Analysis Unit. Data were retrieved from the NFLIS Data Query System (DQS) on May 28, 2017.

Table 6b: Drug Reports* for Items Seized by Law Enforcement in New York City^ in 2016
DEA National Forensic Laboratory Information System (NFLIS)

Drug Reports* by Selected Drug Categories** of Interest, Number of Drug-Specific Reports,
Percent of Analyzed Drug Category Reports, & Percent of Total Analyzed Drug Reports

Drug Identified, by Selected Drug Category**	Number (#)	Percent of Drug Category (%)	Percent of Total Reports (%)
Total Drug Reports*	**44,769**	**100.0%**	**100.0%**
Opioids Category	**12,225**	**100.0%**	**27.3%**
Heroin	**7,276**	**59.5%**	**16.3%**
Narcotic Analgesics	**4,853**	**39.7%**	**10.8%**
OXYCODONE	1,738	14.2%	3.9%
FENTANYL	1,699	13.9%	3.8%
BUPRENORPHINE	673	5.5%	1.5%
METHADONE	298	2.4%	0.7%
CODEINE	136	1.1%	0.3%
HYDROCODONE	120	1.0%	0.3%
MORPHINE	104	0.9%	0.2%
OXYMORPHONE	33	0.3%	< 0.1%
HYDROMORPHONE	24	0.2%	< 0.1%
FURANYL FENTANYL	11	< 0.1%	< 0.1%
ACETYLFENTANYL	5	< 0.1%	< 0.1%
DIHYDROMORPHINE	4	< 0.1%	< 0.1%
TRAMADOL	3	< 0.1%	< 0.1%
U-47700	2	< 0.1%	< 0.1%
MITRAGYNINE	1	< 0.1%	< 0.1%
P-FLUOROBUTYRYL FENTANYL (P-FBF)	1	< 0.1%	< 0.1%
P-FLUOROISOBUTYRYL FENTANYL	1	< 0.1%	< 0.1%
Narcotics	**96**	**0.8%**	**0.2%**
MONOACETYLMORPHINE	80	0.7%	0.2%
NOSCAPINE	7	< 0.1%	< 0.1%
6-MONOACETYLMORPHINE	5	< 0.1%	< 0.1%
METHORPHAN	2	< 0.1%	< 0.1%
NALOXONE	1	< 0.1%	< 0.1%
NARCOTIC DRUG MIX. SCHEDULE III E 1	1	< 0.1%	< 0.1%
Synthetic Cannabinoids Category	**49**	**100.0%**	**0.1%**
MDMB-FUBINACA	14	28.6%	< 0.1%
AB-CHMINACA (N-[(1S)-1-(AMINOCARBONYL)-2-METHYLPROPYL]-1-(CYCLOHEXYLMETHYL)-1H-INDAZOLE-3-CARBOXAMIDE)	12	24.5%	< 0.1%
AB-PINACA	12	24.5%	< 0.1%
FUB-AMB	5	10.2%	< 0.1%
ADB-FUBINACA (N-(1-AMINO-3,3-DIMETHYL-1-OXOBUTAN-2-YL)-1-(4-FLUOROBENZYL)-1H-INDAZOLE-3-CARBOXAMIDE)	4	8.2%	< 0.1%
5-FLUORO-ADB	1	2.0%	< 0.1%
SDB-005	1	2.0%	< 0.1%
Synthetic Cathinones Category	**12**	**100.0%**	**< 0.1%**
Synthetic Cathinones	**12**	**100.0%**	**< 0.1%**
N-ETHYLPENTYLONE	3	25.0%	< 0.1%
3,4-METHYLENEDIOXYETHYLCATHINONE (ETHYLONE)	2	16.7%	< 0.1%
DIBUTYLONE (BETA-KETO-N,N-DIMETHYL-1,3-BENZODIOXOLYLBUTANAMINE; BK-DMBDB)	2	16.7%	< 0.1%
PENTYLONE (ß-KETO-METHYLBENZODIOXOLYLPENTANAMINE)	2	16.7%	< 0.1%
4-CHLORO-ALPHA-PYRROLIDINOVALEROPHENONE (4-CHLORO-ALPHA-PVP)	1	8.3%	< 0.1%
4-CHLORO-N-ETHYLCATHINONE	1	8.3%	< 0.1%
BREPHEDRONE (4-BROMOMETHCATHINONE) (4-BMC)	1	8.3%	< 0.1%
Piperazines Category	**6**	**100.0%**	**< 0.1%**
Piperazines (Stimulant)	**6**	**100.0%**	**< 0.1%**
N-BENZYLPIPERAZINE (BZP)	6	100.0%	< 0.1%
Tryptamines Category	**4**	**100.0%**	**< 0.1%**
DIMETHYLTRYPTAMINE (DMT)	4	100.0%	< 0.1%

NOTES:

^New York City: Includes data from 5 boroughs in the New York City, NY MSA, including New York City Police Department Laboratory.

*Drug Report: Drug that is identified in law enforcement items, submitted to and analyzed by federal, state, or local forensic labs, and included in the NFLIS database. The time frame is January - December 2016.

**Selected Drug Categories: Opioids, Synthetic Cannabinoids, Synthetic Cathinones, 2C Phenethylamines, Piperazines, and Tryptamines are drug categories of current interest to the NDEWS Project because of the recent increase in their numbers, types, and availability.

The NFLIS database allows for the reporting of up to three drugs per item submitted for analysis. The data presented are a total count of first, second, and third listed reports for each selected drug item seized and analyzed.

Source: Adapted by the NDEWS Coordinating Center from data provided by the U.S. Drug Enforcement Administration (DEA), Diversion Control Division, Drug and Chemical Evaluation Section, Data Analysis Unit. Data were retrieved from the NFLIS Data Query System (DQS) on May 28, 2017.

National Drug Early Warning System (NDEWS) Sentinel Community Site (SCS) Drug Use Patterns and Trends, 2017: Overview and Limitations About Data Sources

The *Overview and Limitations About Data Sources,* written by Coordinating Center staff, provides a summary and a detailed description of the limitations of some of the national data sources used this report, including indicators of substance use, treatment, consequences, and availability.

Overview and Limitations of American Community Survey (ACS) Data

Data on demographic, social, and economic characteristics are based on 2011–2015 American Community Survey (ACS) 5-Year Estimates, collected between January 1, 2011 and December 31, 2015. The U.S. Census Bureau's ACS is a nationwide survey designed to provide communities with reliable and timely demographic, social, economic, and housing data on an annual basis. Although the main function of the decennial census is to provide counts of people for the purpose of congressional apportionment and legislative redistricting, the primary purpose of the ACS is to measure the changing social and economic characteristics of the U.S. population. As a result, the ACS does not provide official counts of the population in between censuses. Instead, the Census Bureau's Population Estimates Program will continue to be the official source for annual population totals, by age, race, Hispanic origin, and sex.[a]

The ACS selects approximately 3.5 million housing unit addresses from every county across the nation to survey. Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error (MOE). The values shown in the table are the margin of errors. The MOE can be interpreted roughly as providing a 90% probability that the interval defined by the estimate minus the MOE and the estimate plus the MOE (the lower and upper confidence bounds) contains the true value.[a]

Sources

Data Sources: Adapted by the NDEWS Coordinating Center from data from the American Community Survey; *2011–2015 American Community Survey 5-Year Estimates;* Tables DP02, DP03, and DP05; using American FactFinder; http://factfinder.census.gov; Accessed April 2017; U.S. Census Bureau.

Overview/Methods/Limitations Sources: [a]Adapted by the NDEWS Coordinating Center from U.S. Census Bureau, *A Compass for Understanding and Using American Community Survey Data: What General Data Users Need to Know.* U.S. Government Printing Office, Washington, DC, 2008. Available at: https://www.census.gov/library/publications/2008/acs/general.html

Overview and Limitations of National Survey of Drug Use and Health (NSDUH) Data

NSDUH is an annual survey of the civilian, noninstutionalized population of the United States aged 12 years or older that is planned and managed by the Substance Abuse and Mental Health Administration's (SAMHSA) Center for Behavioral Health Statistics and Quality (CBHSQ). Data is collected from individuals residing in households, noninstitutionalized group quarters (e.g., shelters, rooming houses, dormitories) and civilians living on military bases. In 2012–2014, NSDUH collected data from 204,048 respondents aged 12 years or older; this sample was designed to obtain representative samples from the 50 states and the District of Columbia.[a]

The **substate estimates** are produced from a hierarchical Bayes model-based small area estimation (SAE) procedure in which 2012–2014 NSDUH data at the substate level are combined with local area county and census block group/tract-level data from the area. The goal of this method is to enhance statistical power and analytic capability, and to provide more precise estimates of substance use and mental health outcomes within and across states. [See 2012–2014 NSDUH Methods Report for more information about the methodolgy used to generate substate estimates]. Comparable estimates derived from the small area estimation procedure were also produced for the 50 states and the District of Columbia. We present these estimates for Maine and Texas. Because these data are based on 3 consecutive years of data, they are not directly comparable with the annually published state estimates that are based on only 2 consecutive years of NSDUH data.[a]

Substate regions, also referred to as planning regions or substate areas, were defined by officials from each of the 50 states and the District of Columbia and were typically based on the treatment planning regions specified by the states in their applications for the Substance Abuse Prevention and Treatment Block Grant (SABG) administered by SAMHSA. There has been extensive variation in the size and use of substate regions across states. In some states, the substate regions have been used more for administrative purposes than for planning purposes. The goal of the project was to provide substate-level estimates showing the geographic distribution of substance use prevalence for regions that states would find useful for planning and reporting purposes. The final substate region boundaries were based on the state's recommendations, assuming that the NSDUH sample sizes were large enough to provide estimates with adequate precision. Most states defined regions in terms of counties or groups of counties, while some defined them in terms of census tracts. Estimates for 384 substate regions were generated using the 2012–2014 NSDUH data. Substate regions used for each Sentinel Community Site (SCS) are defined in the Notes sections of Tables 2a and 2b.[a]

Notes about Data Terms

Estimated percentages are based on a survey-weighted hierarchical Bayes estimation approach, and the 95% prediction (credible) intervals are generated by Markov Carlo techniques.

95% Confidence Interval (CI) provides a measure of the accuracy of the estimate. It defines the range within which the true value can be expected to fall 95% of the time.

Estimated # is the estimated number of persons aged 12 years or older in the civilian, noninstitutionalized population who used the specified drug or are dependent on/abuse a substance; the estimated number of persons using/dependent on a particular drug was calculated by multiplying the prevalence rate and the population estimate from Table C1 of the NSDUH report. The population estimate is the simple average of the 2012, 2013, and 2014 population counts for persons aged 12 years or older.

Binge Alcohol is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days.

Use of Illicit Drug Other Than Marijuana is defined as any illicit drug other than marijuana and includes cocaine (including crack), heroin, hallucinogens, inhalants, or any prescription-type psychotherapeutic used nonmedically.

Substance Use Disorder in Past Year: Persons are classified as having a substance use disorder in the past 12 months based on responses to questions that meet the criteria specified in the 4th edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV).

Sources

*Data Sources***:** Adapted by the NDEWS Coordinating Center from data provided by the Substance Abuse and Mental Health Services Administration (SAMHSA), Substate Estimates of Substance Use and Mental Disorders from the *2012–2014 National Surveys on Drug Use and Health: Results and Detailed Tables.* Rockville, MD. 2014. Available at: http://www.samhsa.gov/data/population-data-nsduh/reports?tab=38; Accessed on August 2016.

*Overview/Methods/Limitations Sources***:** [a]Adapted by the NDEWS Coordinating Center from Substance Abuse and Mental Health Services Administration (SAMHSA), *2012–2014 National Surveys on Drug Use and Health: Guide to Substate Tables and Summary of Small Area Estimation Methodology.* Rockville, MD 2016. Available at: http://www.samhsa.gov/data/sites/default/files/NSDUHsubstateMethodology2014/NSDUHsubstateMethodology2014.html; Accessed August 2016.

Overview and Limitations of Youth Risk Behavioral Survey (YRBS) Data

The Youth Risk Behavior Surveillance System (YRBSS) was established in 1991 by the Centers for Disease Control and Prevention (CDC) to monitor six priority health-risk behaviors that contribute to the leading causes of morbidity and mortality among youth and young adults in the United States.[a] The YRBSS was designed to enable public health professionals, educators, policy makers, and researchers to 1) describe the prevalence of health-risk behaviors among youths, 2) assess trends in health-risk behaviors over time, and 3) evaluate and improve health-related policies and programs.[a] One component of the surveillance system is the biennial school-based Youth Risk Behavior Survey (YRBS). Survey results are based on representative samples of high school students in the nation, States, tribes, and select large urban school district across the country.[a] Weighted survey estimates of alcohol and drug use are presented for the nation and the YRBS state and large urban school district catchment areas that most closely represent each NDEWS SCS.

The national YRBS estimates are representative of all students in grades 9–12 attending **public <u>and</u> private** schools in the 50 states and the District of Columbia. Public schools in the national sample might include charter schools and public alternative, special education, or vocational schools. Private schools in the national sample might include religious and other private schools, but they do not include private alternative, special education, or vocational schools.[a]

The estimates for the NDEWS Sentinel Community Sites (SCS) catchment areas are represented by state and large urban school districts. Only jurisdictions with an overall response rate $\geq$60% are presented. See Table A for sample size and overall response rate for each SCS. The weighted estimates for state and large urban school districts are representative of all students in grades 9–12 attending **public** schools in each of their respective jurisdictions.[b] State and substate public schools might include charter schools; public alternative, special education, or vocational schools; and schools overseen by the Bureau of Indian Education.[b] In 2015, data were not available for 5 NDEWS sites and YRBS regions did not correspond exactly to the catchment areas of each NDEWS SCS:

- 2015 YRBS survey results were unavailable for the following 5 SCSs: Chicago Metro, Atlanta Metro, Texas, Denver Metro, and King County.
- The Detroit YRBS is used to represent the Wayne County SCS; Detroit does not represent the entire Wayne County catchment area.
- The Southeastern Florida (Miami Area) SCS reporting area includes separate results for each of the 3 counties making up the SCS reporting area.

Thus, results for 9 YRBS reporting areas representing 7 of the 12 NDEWS SCSs are presented in the YRBS Cross-Site Data Presentation. See Figures and Tables for description of the YRBS catchment areas, where available, used to represent each NDEWS SCS. For more information about the YRBSS and 2015 YRBS survey methodology, see *Youth Risk Behavior Surveillance—United States, 2015*.

Table A: Sample Sizes and Overall Response Rates, United States and Selected YRBS Sites, YRBS, 2015

NDEWS SCS	YRBS Site	Student Sample Size (#)	Overall Response Rate (%)
United States	**National Sample**	**15,624**	**60%**
Maine	Maine	9,605	66%
Los Angeles County	Los Angeles	2,336	81%
New York City	New York City	8,522	70%
Philadelphia	Philadelphia	1,717	68%
San Francisco	San Francisco	2,181	82%
Southeastern Florida (Miami Area)	Broward County	1,413	72%
	Miami-Dade County	2,728	78%
	Palm Beach County	2,490	71%
Wayne County (Detroit Area)	Detroit	1,699	67%

Limitations. All YRBS data are self-reported, and the extent of underreporting or overreporting of behaviors cannot be determined, although there have been studies that demonstrate that the data are of acceptable quality.

The data apply only to youths who attend school and, therefore, are not representative of all persons in this age group. Nationwide, in 2012, approximately 3% of persons aged 16–17 years were not enrolled in a high-school program and had not completed high school.[c] The NHIS and Youth Risk Behavior Supplement conducted in 1992 demonstrated that out-of-school youths are more likely than youths attending school to engage in the majority of health-risk behaviors.[d]

Local parental permission procedures are not consistent across school-based survey sites. However, in a 2004 study, the CDC demonstrated that the type of parental permission typically does not affect prevalence estimates as long as student response rates remain high.[e]

Notes about Data Terms

Lifetime Prescription Drug Misuse is defined as "*taken prescription drugs (e.g., Oxycontin, Percocet, Vicodin, codeine, Adderall, Ritalin, or Xanax) without a doctor's prescription one or more times during their life*".

Lifetime Inhalant Use is defined as "*sniffed glue, breathed the contents of aerosol spray cans, or inhaled any paints or sprays to get high one or more times during their life*".

Lifetime Synthetic Cannabinoid Use is defined as "*used "synthetic marijuana" (also called "K2," "Spice," "fake weed," "King Kong," "Yucatan Fire," "Skunk," or "Moon Rocks") one or more times during their life*".

Past Month Binge Alcohol Use is defined as "*having five or more drinks of alcohol in a row within a couple of hours on at least 1 day during the 30 days before the survey*".

Sources

Data Sources: Adapted by the NDEWS Coordinating Center from data provided by Centers for Disease Control and Prevention (CDC), 1991–2015 High School Youth Risk Behavior Survey Data. Available at http://nccd.cdc.gov/youthonline/. Accessed on [10/11/2016].

Overview/Methods/Limitations Sources: Adapted by the NDEWS Coordinating Center from:

[a]Brener N, Kann L, Shanklin S, et al. Methodology of the Youth Risk Behavior Surveillance System—*2013.* MMWR Recomm Rep; 2013, 62(No. RR-1);1–20. Available at http://www.cdc.gov/mmwr/pdf/rr/rr6201.pdf. Accessed on [4/10/2015].

[b]Kann L, McManus T, Harris WA, et al. Youth Risk Behavior Surveillance—United States, 2015. MMWR Surveill Summ 2016; 65(No. SS-6);1–174. Available at https://www.cdc.gov/mmwr/volumes/65/ss/ss6506a1.htm Accessed on [10/11/2016].

[c]Stark P, Noel AM. Trends in high school dropout and completion rates in the United States: 1972–2012 (NCES 2015-015). US Department of Education. Washington, DC: National Center for Education Statistics; 2015. Available at http://nces.ed.gov/pubs2015/2015015.pdf

[d]CDC. Health risk behaviors among adolescents who do and do not attend school—United States, 1992. MMWR 1994;43(08):129–32.

[e]Eaton DK, Lowry R, Brener ND, et al. Passive versus active parental permission in school-based survey research: does type of permission affect prevalence estimates of self-reported risk behaviors? Evaluation Review 2004;28:564–77.

Overview and Limitations of Treatment Admissions Data from Local Sources

Treatment admissions data provide indicators of the health consequences of drug use and their impact on the treatment system.[a] The data can provide some indication of the types of drugs being used in geographic areas and can show patterns of use over time. However, it is important to note that treatment data only represent use patterns of individuals entering treatment programs and the availability of particular types of treatment in a geographic area will influence the types of drugs being reported. Also, most sites report only on admissions to publicly funded treatment programs; thus, information on individuals entering private treatment programs may not be represented by the data. It should also be noted that each admission does not necessarily represent a unique individual because some individuals are admitted to treatment more than once in a given period.[b]

Treatment admissions data are reported to the NDEWS Coordinating Center by the NDEWS Sentinel Community Epidemiologist for each SCS, when available. Calendar year 2016 data were available for 10 of 12 NDEWS SCSs; data were not available for the Atlanta Metro and Chicago SCSs. See below for site-specific information about the data.

Site-Specific Notes about 2016 Treatment Data and Sources of the Data

❖ **Atlanta Metro**

Data Availability: Calendar year 2015 and 2016 data are not available; therefore data for 2012–2014 are presented in the Atlanta Metro SCS Data Tables and Snapshot.

Catchment Area: Includes residents of: Barrow, Bartow, Butts, Carroll, Cherokee, Clayton, Cobb, Coweta, Dawson, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Haralson, Heard, Henry, Jasper, Lamar, Meriwether, Morgan, Newton, Paulding, Pickens, Pike, Rockdale, Spalding, and Walton counties.

Notes & Definitions:
Admissions: includes admissions to publicly-funded programs.
Marijuana/Synthetic Cannabinoids: the data do not differentiate between marijuana and synthetic cannabinoids.

Source: Data provided to the Atlanta Metro NDEWS SCE by the Georgia Department of Human Resources.

❖ **Chicago Metro**

Data Availability: Calendar Year (CY) data are not available for the Chicago SCS so fiscal year data are presented. Data for 2016 were also not available at this time so FY2012-2015 are presented.

Catchment Area: Data were only available for residents of Chicago, not for the entire Chicago MSA.

Notes & Definitions:
Admissions: Includes admissions to publicly funded programs. Each admission does not necessarily represent a unique individual because some individuals are admitted to treatment more than once in a given period.
Declines in overall treatment admissions are due to several factors, including budget cuts and changes in providers and payers that affect the reporting of these data (e.g., the expansion of Medicaid under the ACA to cover some forms of drug treatment).
Prescription Opioids: Includes oxycodone/hydrocodone, nonprescription methadone, and other opiates.

Source: Data provided to the NDEWS Chicago SCE by the Illinois Department of Human Services, Division of Alcoholism and Substance Abuse (DASA).

❖ **Denver Metro**

Catchment Area: Includes admissions data for residents of Adams, Arapahoe, Boulder, Broomfield, Clear Creek, Denver, Douglas, Gilpin, and Jefferson counties.

Notes & Definitions:
Admissions: Includes admissions (excluding detox and DUI) to all Colorado alcohol and drug treatment agencies licensed by the Colorado Department of Human Services, Office of Behavioral Health (OBH). Each admission does not necessarily represent a unique individual because some individuals are admitted to treatment more than once in a given period. Treatment data presented in this year's report differ from data presented in previous SCS reports due to a change in access to treatment data and/or a change in query search terms.
Prescription Opioids: Includes nonprescription methadone and other opiates and synthetic opiates.
MDMA: Coded as "club drugs," which are mostly MDMA.
Other Drugs/Unknown: Includes inhalants, over-the-counter, and other drugs not specified.

Source: Data provided to the Denver Metro NDEWS SCE by the Colorado Department of Human Services, Office of Behavioral Health (OBH), Drug/Alcohol Coordinated Data System (DACODS).

❖ **King County (Seattle Area)**

Notes & Definitions:

Data Availability: 2016 figures are estimates based on doubling preliminary numbers reported for July-December 2016.
Treatment authorizations: Includes admissions to outpatient, opioid treatment programs and residential modalities of care in publicly funded programs. Each admission does not necessarily represent a unique individual because some individuals are admitted to treatment more than once in a given period.
Prescription Opioids: Includes hydromorphine, other opiates and synthetics, and oxycodone.

Source: Data provided to the King County (Seattle Area) NDEWS SCE by the Washington State Department of Social and Health Services (DSHS) and King County Behavioral Health and Recovery Division for July-Dec 2016.

❖ **Los Angeles County**

Notes & Definitions:
Admissions: Includes all admissions to programs receiving any public funds or to programs providing narcotic replacement therapy, as reported to the California Outcomes Monitoring System (CalOMS). An admission is counted only after all screening, intake, and assessment processes have been completed, and all of the following have occurred: 1) the provider has determined that the client meets the program admission criteria; 2) if applicable, the client has given consent for treatment/recovery services; 3) an individual recovery or treatment plan has been started; 4) a client file has been opened; 5) the client has received his/her first direct recovery service in the facility and is expected to continue participating in program activities; and 6) in methadone programs, the client has received his/her first dose. Each admission does not necessarily represent a unique individual because some individuals are admitted to treatment more than once in a given period.
Prescription Opioids: Includes drug categories labeled "oxycodone/OxyContin" and "other opiates or synthetics."

Source: Data provided to the Los Angeles NDEWS SCE by the California Department of Health Care Services, Mental Health Services Division, Office of Applied Research and Analysis, CalOMS (2013–2016 data) and the California Department of Drug and Alcohol Programs (2012 data).

❖ **Maine**

Notes & Definitions:
Admissions*:* includes all admissions to programs receiving state funding.

Source: Data provided to the Maine NDEWS SCE by the Maine Office of Substance Abuse.

❖ **New York City**

Notes & Definitions:
Non-Crisis Admissions: Includes non-crisis admissions to outpatient, inpatient, residential, and methadone maintenance treatment programs licensed in the state.
Crisis Admissions: Includes detox admissions to all licensed treatment programs in the state
Each admission does not necessarily represent a unique individual because some individuals are admitted to treatment more than once in a given period.
Prescription Opioids: Includes nonprescription methadone, buprenorphine, other synthetic opiates, and OxyContin.
Benzodiazepines: Includes benzodiazepines, alprazolam, and rohypnol.
Synthetic Stimulants: Includes other stimulants and a newly created category, synthetic stimulants (created in 2014).

Source: Data provided to the New York City NDEWS SCE by the New York State Office of Alcoholism and Substance Abuse Services (OASAS), Client Data System accessed May 24, 2017 from Local Governmental Unit (LGU) Inquiry Reports.

❖ **Philadelphia**

Notes & Definitions:
Admissions: Includes admissions for uninsured and underinsured individuals admitted to any licensed treatment programs funded through the Philadelphia Department of Behavioral Health and Intellectual disAbility Services (DBHIDS). Each admission does not necessarily represent a unique individual because some individuals are admitted to treatment more than once in a given period.
2015 and 2016 Data: Pennsylvania expanded Medicaid coverage under the Affordable Care Act and more than 100,000 additional individuals became eligible in 2015. As individuals who historically have been uninsured become insured, the number of individuals served through the BHSI (Behavioral Health Special Initiative) program has declined; thus treatment admissions reported by BHSI declined from 8,363 in 2014 to 3,507 in 2016. However, similar patterns of substance use were observed among those seeking treatment in 2014 and in 2015.
Beginning in FY2015, services funded by the Pennsylvania Department of Drug and Alcohol Programs and tracked by BHSI for OAS are required to report through an Internet portal. This new reporting system does not require drug of choice in the data collection. The impact of this change in reporting protocol resulted in an increase in the proportion of "unknown" drug of choice in subsequent years.
Methamphetamine: Includes both amphetamines and methamphetamine.
Other Drugs: May include synthetics, barbiturates, and over-the-counter drugs. Synthetic Stimulants and Synthetic Cannabinoids are not distinguishable from "Other Drugs" in the reporting source.

Source: Data provided to the Philadelphia NDEWS SCE by the Philadelphia Department of Behavioral Health and Intellectual disAbility Services (DBHIDS), Office of Addiction Services, Behavioral Health Special Initiative.

❖ **San Francisco County**

Notes & Definitions

Admissions: Treatment episodes include clients admitted in prior years who are still receiving services in a particular year (e.g., methadone maintenance clients). Each admission does not necessarily represent a unique individual because some individuals are admitted to treatment more than once in a given period.

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

❖ **Southeastern Florida (Miami Area)**

Catchment Area: Includes the three counties of the Miami MSA—Broward, Miami-Dade, and Palm Beach counties.

Notes & Definitions:

Admissions: Includes admissions of all clients in programs receiving any public funding located in Miami-Dade, Broward and Palm Beach counties as provided by the Florida Department of Children and Families Office of Substance Abuse and Mental Health. Each admission does not necessarily represent a unique individual because some individuals are admitted to treatment more than once in a given period.

2012–2013: Data for Palm Beach County is not available for 2012–2013, therefore, data for 2012–2013 only includes data for Broward and Miami-Dade counties.

Source: Data provided to the Southeastern Florida NDEWS SCE by the Florida Department of Children and Families, Office of Substance Abuse and Mental Health.

❖ **Texas**

Notes & Definitions:

Admissions: Includes all admissions reported to the Clinical Management for Behavioral Health Services (CMBHS) of the Texas Health and Human Services Commission, Behavioral Health Services (HHSC BHS). Each admission does not necessarily represent a unique individual because some individuals are admitted to treatment more than once in a given period.

Methamphetamine: Includes amphetamines and methamphetamine.

Please Note: Treatment data presented in this year's report differ from data presented in previous NDEWS reports because the treatment data for Texas have been revised.

Source: Data provided to the Texas NDEWS SCE by the Texas Health and Human Services Commission, Behavioral Health Services (HHSC BHS).

❖ **Wayne County (Detroit Area)**

Notes & Definitions:

Admissions: Admissions whose treatment was covered by Medicaid or Block Grant funds; excludes admissions covered by private insurance, treatment paid for in cash, and admissions funded by the Michigan Department of Corrections. Each admission does not necessarily represent a unique individual because some individuals are admitted to treatment more than once in a given period.

Synthetic Stimulants: Includes amphetamines and synthetic stimulants; data suppressed to protect confidentiality.

Source: Data provided to the Wayne County (Detroit Area) NDEWS SCE by the Michigan Department of Health and Human Services, Bureau of Behavioral Health and Developmental Disabilities, Division of Quality Management and Planning, Performance Measurement and Evaluation Section.

Sources

Data Sources: Adapted by the NDEWS Coordinating Center from data provided by NDEWS SCEs listed above.

Overview/Methods/Limitations Sources: Adapted by the NDEWS Coordinating Center from:

[a]National Institute on Drug Abuse; National Institutes of Health; U.S. Department of Health and Human Services, *Assessing Drug Abuse Within and Across Communities, 2nd Edition*. 2006. Available at: https://www.drugabuse.gov/publications/assessing-drug-abuse-within-across-communities

[b]National Institute on Drug Abuse; National Institutes of Health; U.S. Department of Health and Human Services, *Epidemiologic Trends in Drug Abuse, Proceedings of the Community Epidemiology Work Group, Highlights and Executive Summary, June 2014*. Available at: https://www.drugabuse.gov/sites/default/files/cewgjune2014.pdf

Overview and Limitations of CDC WONDER Multiple Cause of Death Data

The multiple cause-of-death mortality files from the National Vital Statistics System (NVSS) (queried from the CDC WONDER Online Database) were used to identify drug overdose (poisoning) deaths. Mortality data are based on information from all death certificates for U.S. residents filed in the 50 states and the District of Columbia. Deaths of nonresidents and fetal deaths are excluded. The death certificates are either 1) coded by the states or provided to the CDC's National Center for Health Statistics (NCHS) through the Vital Statistics Cooperative Program; or 2) coded by NCHS from copies of the original death certificates provided to NCHS by the respective state registration office. Each death certificate contains a single underlying cause of death, up to 20 additional multiple causes, and demographic data.[1] ([Click here for more information about CDC WONDER Multiple Cause of Death data](#))

The drug-specific poisoning deaths presented in the National Drug Early Warning System (NDEWS) reports are deaths that have been certified "as due to acute exposure to a drug, either alone or in combination with other drugs or other substances" (Goldberger, Maxwell, Campbell, & Wilford, p. 234)[2] and are identified by using the World Health Organization's (WHO's) *International classification of diseases, 10th Revision* (ICD-10)[3] **underlying cause-of-death** codes X40–X44, X60–X64, X85, and Y10–Y14. Drug-specific poisoning deaths are the subset of drug overdose (poisoning) deaths with drug-specific **multiple cause-of-death** codes (i.e., T-codes). For the definitions of specific ICD-10 codes, see the section titled *Notes About Data Terms*. Each death certificate may contain up to 20 causes of death indicated in the multiple cause-of-death (MCOD) field. Thus, the total count across drugs may exceed the actual number of dead persons in the selected population. Some deaths involve more than one drug; these deaths are included in the rates for each drug category.

As stated in its report, *Consensus Recommendations for National and State Poisoning Surveillance,* the Safe States Injury Surveillance Workgroup on Poisoning (ISW7)[a] identified the limitations of using mortality data from NVSS to measure drug poisoning deaths:

> Several factors related to death investigation and reporting may affect measurement of death rates involving specific drugs. At autopsy, toxicological lab tests may be performed to determine the type of legal and illegal drugs present. The substances tested for and circumstance in which tests are performed vary by jurisdiction. Increased attention to fatal poisonings associated with prescription pain medication may have led to changes in reporting practices over time such as increasing the level of substance specific detail included on the death certificates. Substance-

[a] The Safe States Alliance, a nongovernmental membership association, convened the Injury Surveillance Workgroup on Poisoning (ISW7) to improve the surveillance of fatal and nonfatal poisonings. Representation on the ISW7 included individuals from the National Center for Injury Prevention and Control (NCIPC), the National Center for Health Statistics (NCHS) at the Centers for Disease Control and Prevention (CDC), the Substance Abuse and Mental Health Services Administration (SAMHSA), the Council of State and Territorial Epidemiologists (CSTE), the American Association of Poison Control Centers (AAPCC), the Association of State and Territorial Health Officials (ASTHO), the Society for the Advancement of Injury Research (SAVIR), state health departments, academic centers, the occupational health research community, and private research organizations.

specific death rates are more susceptible to measurement error related to these factors than the overall poisoning death rate. ([The Safe States Alliance, p. 63](#))[4]

Warner et al.[5] found that there was considerable variation in certifying the manner of death and the percentage of drug intoxication deaths with specific drugs identified on death certificates and that these variations across states can lead to misleading cross-state comparisons. Based on 2008–2010 data, Warner et al.[5] found that the percentage of deaths with an "undetermined" manner of death ranged from 1% to 85%. Thus, comparing state-specific rates of *unintentional* or *suicidal* drug intoxication deaths would be problematic because the "magnitude of the problem will be underestimated in States with high percentages of death in which the manner is *undetermined*."[5] The drug overdose (poisoning) deaths presented in the NDEWS tables include the various manner of death categories: unintentional (X40–X44); suicide (X60–X64); homicide (X85); or undetermined (Y10–Y14).

Based on 2008–2010 data, Warner et al.[5] found that the percentage of drug overdose (poisoning) deaths with specific drugs mentioned varied considerably by state and type of death investigation system. The authors found that in some cases, deaths without a specific drug mentioned on the death certificate may indicate a death involving multiple drug toxicity. The **Percent of Drug Overdose (Poisoning) Deaths with Drug(s) Specified** statistic is calculated for each NDEWS SCS catchment area so the reader can assess the thoroughness of the data for the catchment area. This statistic is defined as drug poisoning deaths with at least one ICD-10 multiple cause of death in the range T36–T50.8.

Notes About Data Terms

Underlying Cause of Death (UCOD): The CDC follows the WHO's definition of *underlying cause of death*: "[T]he disease or injury which initiated the train of events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury." Underlying cause of death is selected from the conditions entered by the physician on the cause-of-death section of the death certificate. When more than one cause or condition is entered by the physician, the underlying cause is determined by the sequence of condition on the certificate, provisions of the ICD, and associated selection rules and modifications. ([Click here for more information about CDC WONDER Multiple Cause of Death data](#))

Specific ICD-10 codes for *underlying cause of death*[3] ([Click here to see full list of WHO ICD-10 codes](#))

X40: Accidental poisoning by and exposure to nonopioid analgesics, antipyretics, and antirheumatics.

X41: Accidental poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism, and psychotropic drugs, not elsewhere classified.

X42: Accidental poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified.

X43: Accidental poisoning by and exposure to other drugs acting on the autonomic nervous system.

X44: Accidental poisoning by and exposure to other and unspecified drugs, medicaments, and biological substances.

X60: Intentional self-poisoning (suicide) by and exposure to nonopioid analgesics, antipyretics, and antirheumatics.

X61: Intentional self-poisoning (suicide) by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism, and psychotropic drugs, not elsewhere classified.

X62: Intentional self-poisoning (suicide) by, and exposure to, narcotics and psychodysleptics [hallucinogens], not elsewhere classified.

X63: Intentional self-poisoning (suicide) by and exposure to other drugs acting on the autonomic nervous system.

X64: Intentional self-poisoning (suicide) by and exposure to other and unspecified drugs, medicaments, and biological substances.

X85: Assault (homicide) by drugs, medicaments, and biological substances.

Y10: Poisoning by and exposure to nonopioid analgesics, antipyretics, and antirheumatics, undetermined intent.

Y11: Poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism, and psychotropic drugs, not elsewhere classified, undetermined intent.

Y12: Poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified, undetermined intent.

Y13: Poisoning by and exposure to other drugs acting on the autonomic nervous system, undetermined intent.

Y14: Poisoning by and exposure to other and unspecified drugs, medicaments, and biological substances, undetermined intent.

Multiple Cause of Death: Each death certificate may contain up to 20 *multiple causes of death*. Thus, the total count by "any mention" of cause in the *multiple cause of death* field may exceed the actual number of dead persons in the selected population. Some deaths involve more than one drug; these deaths are included in the rates for each drug category. (Click here for more information about CDC WONDER Multiple Cause of Death data)

Drug-specific ICD-10 T-codes for *multiple cause of death*[3]
(Click here to see full list of WHO ICD-10 codes)

Any Opioids (T40.0–T40.4 or T40.6) [T40.0 (Opium) and T40.6 (Other and Unspecified Narcotics)]

Heroin (T40.1)

Methadone (T40.3)

Natural Opioid Analgesics (T40.2)
     Please note the ICD-10 refers to T40.2 as *Other Opioids*; CDC has revised the wording for clarity:
     http://www.cdc.gov/drugoverdose/data/analysis.html

Synthetic Opioid Analgesics (T40.4)
     Please note the ICD-10 refers to T40.4 as *Other Synthetic Narcotics*; CDC has revised the wording for clarity:
     http://www.cdc.gov/drugoverdose/data/analysis.html

Cocaine (T40.5)

Psychostimulants with Abuse Potential [excludes cocaine] (T43.6)

Cannabis (derivatives) (T40.7)

Benzodiazepines (T42.4)

Percentage of Drug Overdose (Poisoning) Deaths with Drug(s) Specified: Percentage of drug overdose (poisoning) deaths that mention the type of drug(s) involved, by catchment area. This statistic is defined as drug poisoning deaths with at least one ICD-10 multiple cause of death in the range T36–T50.8.

Population (used to calculate rates): The population estimates used to calculate the crude rates are bridged-race estimates based on Bureau of the Census estimates of total U.S. national, state, and county resident populations. The year 2010 populations are April 1 modified census counts. The year 2011–2015 population estimates are bridged-race postcensal estimates of the July 1 resident population. Click here for more information about CDC WONDER Multiple Cause of Death data)

Age-Adjusted Rate: Age-adjusted death rates are weighted averages of the age-specific death rates, where the weights represent a fixed population by age. They are used to compare relative mortality risk among groups and over time. An age-adjusted rate represents the rate that would have existed had the age-specific rates of the particular year prevailed in a population whose age distribution was the same as that of the fixed population. Age-adjusted rates should be viewed as relative indexes rather than as direct or actual measures of mortality risk. The rate is adjusted based on the age distribution of a standard population allowing for comparison of rates across different sites. The year "2000 U.S. standard" is the default population selection for the calculation of age-adjusted rates. (Click here for more information about CDC WONDER Multiple Cause of Death data)

Suppressed Data: As of May 23, 2011, all subnational data representing 0–9 deaths are suppressed (privacy policy). Corresponding subnational denominator population figures are also suppressed when the population represents fewer than 10 persons. (Click here for more information about CDC WONDER Multiple Cause of Death data)

Unreliable Data: Estimates based on fewer than 20 deaths are considered unreliable and are not displayed. (Click here for more information about CDC WONDER Multiple Cause of Death data

Sources

Data Sources: Adapted by the NDEWS Coordinating Center from data taken from the Centers for Disease Control and Prevention, National Center for Health Statistics, *Multiple cause of death 1999–2015*, available on the CDC WONDER Online Database, released December 2016. Data compiled in the *Multiple cause of death 1999–2015* were provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Retrieved between February 2017 - June 2017, from http://wonder.cdc.gov/mcd-icd10.html

Overview/Methods/Limitations Sources: Adapted by the NDEWS Coordinating Center from:

[1]Center from Centers for Disease Control and Prevention, National Center for Health Statistics. (2015). *Multiple cause of death 1999–2014*. Retrieved December 16, 2015, from http://wonder.cdc.gov/wonder/help/mcd.html

[2]Goldberger, B. A., Maxwell, J. C., Campbell, A., & Wilford, B. B. (2013). Uniform standards and case definitions for classifying opioid-related deaths: Recommendations by a SAMHSA consensus panel. *Journal of Addictive Diseases*, *32*, 231–243.

[3]World Health Organization (WHO). (2016). *International statistical classification of diseases and related health problems 10th Revision*. Retrieved March 14, 2016, from http://apps.who.int/classifications/icd10/browse/2016/en

[4]The Safe States Alliance. (2012). *Consensus recommendations for national and state poisoning surveillance*. Atlanta, GA: Injury Surveillance Workgroup 7.

[5]Warner, M., Paulozzi, L. J., Nolte, K. B., Davis, G. G., & Nelson, L.S. (2013). State variation in certifying manner of death and drugs involved in drug intoxication deaths. *Acad Forensic Pathol,* 3(2),231–237*.*

Overview and Limitations of National Forensic Laboratory Information System (NFLIS) Data

The Drug Enforcement Administration's (DEA) National Forensic Laboratory Information System (NFLIS) systematically collects results from drug analyses conducted by State and local forensic laboratories. These laboratories analyze controlled and noncontrolled substances secured in law enforcement operations across the United States. The NFLIS participation rate, defined as the percentage of the national drug caseload represented by laboratories that have joined NFLIS, is currently over 98%. NFLIS includes 50 State systems and 101 local or municipal laboratories/laboratory systems, representing a total of 277 individual laboratories. The NFLIS database also includes Federal data from DEA and U.S. Customs and Border Protection (CBP) laboratories.[a]

Limitations. NFLIS includes results from completed analyses only. Drug evidence secured by law enforcement but not analyzed by laboratories is not included in the NFLIS database.

State and local policies related to the enforcement and prosecution of specific drugs may affect drug evidence submissions to laboratories for analysis.

Laboratory policies and procedures for handling drug evidence vary. Some laboratories analyze all evidence submitted to them, whereas others analyze only selected case items. Many laboratories do not analyze drug evidence if the criminal case was dismissed from court or if no defendant could be linked to the case.[a]

Notes about Reporting Labs

Reporting anomalies were identified in several NDEWS SCSs in 2016 and are described below:

- ❖ **Denver Metro Area:** The Aurora Police Department laboratory's last reported data are from July 2014, following the migration to a new laboratory information management system (LIMS).
- ❖ **San Francisco County:** The San Francisco Police Department (SFPD) laboratory has been closed since 2010; however, beginning in January 2012, the Alameda Sheriff Department laboratory began reporting their SFPD cases to NFLIS. All available data from the SFPD are included in the counts. Please note that previously published 2014 and 2015 San Francisco County NDEWS reports did not include SFPD cases analyzed by the Alameda Sheriff Department laboratory. The dramatic increases in this year's 2016 data, compared to 2014 and 2015, are a result of the inclusion of SFPD data analyzed by the Alameda laboratory.
- ❖ **Texas:** The Austin Police Department laboratory resumed reporting for 2016. Dallas Institute of Forensic Science is a new lab reporting all 2016 data to date.
- ❖ **Wayne County (Detroit Area):** The Michigan State Police began reporting data from a lab in Detroit starting in March 2016.

Notes about Data Terms

SCS Drug Report: Drug that is identified in law enforcement items, submitted to and analyzed by Federal, State, or local forensic labs and included in the NFLIS database. This database allows for the reporting of up to three drug reports per item submitted for analysis.

For each site, the NFLIS drug reports are based on submissions of items seized in the site's catchment area. The catchment area for each site is described in the Notes section below each table. The time frame is January through December 2016. Data were retrieved from the NFLIS Data Query System (DQS) on May 28, 2017. Please note that

the data are subject to change; data queried on different dates may reflect differences in the time of data analyses and reporting.

National Estimates in Table 5a of the Cross-Site Data Presentation of NFLIS data: The top 10 most frequently identified drugs in the United States are included in Table 5a; this list comes from the DEA's *National Forensic Laboratory Information System (NFLIS) Annual 2016 Report* and is based on national estimates of drug reports using the NEAR (National Estimates Based on All Reports) approach. The NEAR estimates are based on cases and items submitted to laboratories from January through December 2016 that were analyzed by March 31, 2017. A national sampling frame of all State and local forensic laboratories that routinely perform drug chemistry analyses has been developed based on laboratory-specific information, such as annual caseloads, ascertained from a 1998 survey (updated in 2002, 2004, 2008, and 2013).[a] A probability proportional to size (PPS) sample was drawn on the basis of annual cases analyzed per laboratory resulting in a NFLIS national sample of 29 State laboratory systems and 31 local or municipal laboratories, and a total of 168 individual laboratories.[a] Over the years, the number of non-sampled laboratories reporting to NFLIS has increased, so the DEA sought ways to use the data submitted by these "volunteer" laboratories. Since 2011, data from the "volunteer" laboratories have been included and assigned a weight of one. Estimates are more precise, especially for recent years, due to this inclusion of a large number of volunteer laboratories. This precision allows for more power to detect trends and fewer suppressed estimates."[a]

Since 2011, for each drug item (exhibit) analyzed by a laboratory in the NFLIS program, up to three drugs were reported to NFLIS and counted in the estimation process. A further enhancement to account for multiple drugs per item was introduced in 2017 for the 2016 Annual Report. All drugs reported in an item are now counted in the estimation process. This change ensures that the estimates will take into consideration all reported substances including emerging drugs of interest that may typically be reported as the fourth or fifth drug within an item. This change was implemented in the 2016 data processing cycle and for future years.[a] (See *National Forensic Laboratory Information System (NFLIS): Statistical Methodology* report for more information about how the national estimates are derived).

NPS Categories: Five new psychoactive substance (NPS) drug categories and Fentanyls are of current interest to the NDEWS Project because of the recent increase in their numbers, types, and availability. The five NPS categories are: synthetic cannabinoids, synthetic cathinones, piperazines, tryptamines, and 2C Phenethylamines.

Other Fentanyls are substances that are structurally related to fentanyl (e.g., acetylfentanyl and butyryl fentanyl).

A complete list of drugs included in the Other Fentanyls category that were reported to NFLIS during the January to December 2016 timeframe includes:

3-METHYLFENTANYL
3-METHYLTHIOFENTANYL
4-METHOXY-BUTYRYL FENTANYL
ACETYL-ALPHA-METHYLFENTANYL
ACETYLFENTANYL
ACRYL-ALPHA-METHYLFENTANYL
ACRYLFENTANYL
ALFENTANIL
ALPHA-METHYLFENTANYL
ALPHA-METHYLTHIOFENTANYL
BENZYLFENTANYL
BETA-HYDROXY-3-METHYLFENTANYL

BETA-HYDROXYFENTANYL
Beta-HYDROXYTHIOFENTANYL
BUTYRYL FENTANYL
CARFENTANIL
CIS-3-METHYLFENTANYL
DESPROPIONYL FENTANYL
FLUOROFENTANYL
FLUOROISOBUTYRYLFENTANYL
FURANYL FENTANYL
LOFENTANIL
ORTHO-FLUOROFENTANYL
P-FLUOROBUTYRYL FENTANYL (P-FBF)
P-FLUOROFENTANYL
P-FLUOROISOBUTYRYL FENTANYL
REMIFENTANIL
SUFENTANIL
THENYLFENTANYL
THIOFENTANYL
TRANS-3-METHYLFENTANYL
VALERYL FENTANYL

Sources

Data Sources: SCS Drug Report data adapted by the NDEWS Coordinating Center from data provided by the U.S. Drug Enforcement Administration (DEA), Diversion Control Division, Drug and Chemical Evaluation Section, Data Analysis Unit. Data were retrieved from NFLIS Data Query System (DQS) May 28, 2017.

National estimates adapted by the NDEWS Coordinating Center from data provided by the U.S. Drug Enforcement Administration (DEA), Diversion Control Division. (2017) *National Forensic Laboratory Information System: 2016 Annual Report.* Springfield, VA: U.S. Drug Enforcement Administration. Available at: https://www.nflis.deadiversion.usdoj.gov/DesktopModules/ReportDownloads/Reports/NFLIS2016AR.pdf

Overview/Methods/Limitations Sources: [a]Adapted by the NDEWS Coordinating Center from U.S. Drug Enforcement Administration (DEA), Diversion Control Division. (2017) *National Forensic Laboratory Information System: 2016 Annual Report.* Springfield, VA: U.S. Drug Enforcement Administration. Available at: https://www.nflis.deadiversion.usdoj.gov/DesktopModules/ReportDownloads/Reports/NFLIS2016AR.pdf

U.S. Drug Enforcement Administration (DEA), Diversion Control Division. (2017) *National Forensic Laboratory Information System: Statistical Methodology Revised September 2017.* Springfield, VA: U.S. Drug Enforcement Administration. Available at: https://www.nflis.deadiversion.usdoj.gov/DesktopModules/ReportDownloads/Reports/NFLIS-2017-StatMethodology.pdf