# NDEWS National Drug Early Warning System

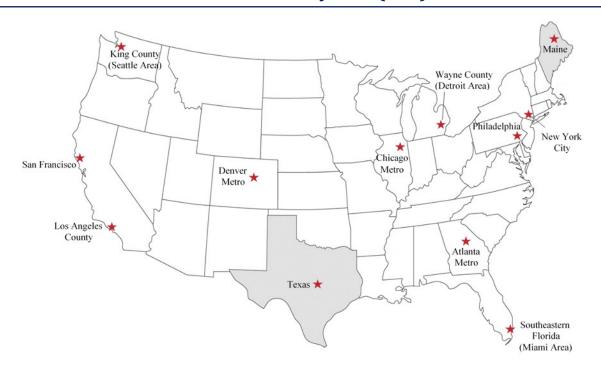
Funded at the Center for Substance Abuse Research by the National Institute on Drug Abuse

# New York City Sentinel Community Site (SCS) Drug Use Patterns and Trends, 2016

October 2016

**NDEWS Coordinating Center** 

# **Sentinel Community Site (SCS) Locations**



## **Sentinel Community Epidemiologists (SCEs)**

#### **Atlanta Metro**

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

#### **Chicago Metro**

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

#### **Denver Metro**

Cindy Laub, PhD
Office of Behavioral Health Strategies
City and County of Denver
Phone: 720-944-1148
cindy.laub@denvergov.org

#### **Wayne County (Detroit Area)**

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

#### **Los Angeles County**

Mary-Lynn Brecht, PhD Integrated Substance Abuse Programs University of California at Los Angeles Phone: 310-267-5275 Ibrecht@ucla.edu

#### Maine

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

#### Southeastern Florida (Miami Area)

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

#### **New York City**

Denise Paone, EdD Bureau of Alcohol and Drug Use Prevention, Care and Treatment New York City Department of Health and Mental Hygiene Phone: 347-396-7015

dpaone@health.nyc.gov

#### Philadelphia

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

#### San Francisco

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

#### King County (Seattle Area)

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

#### Texas

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

# National Drug Early Warning System (NDEWS) Sentinel Community Site (SCS) Drug Use Patterns and Trends, 2016

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.

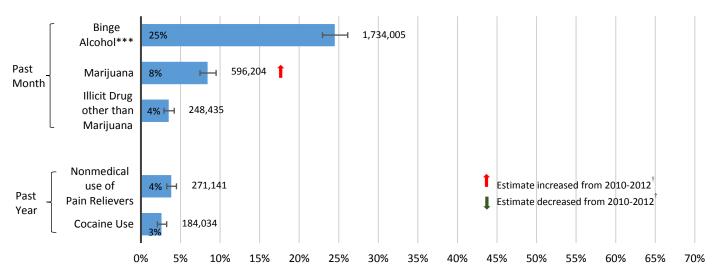
# **New York City SCS Snapshot, 2016**

#### **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\*\*



<sup>\*</sup>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.

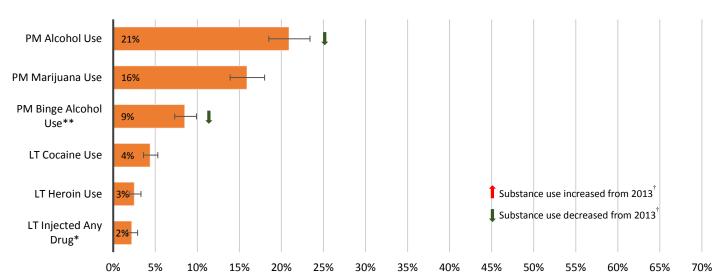
\*\*\*Binge Alcohol: Defined as drinking five or more drinks on the same occasion. †Statistically significant change: p<0.05.

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



<sup>\*</sup>LT Injected Drug: Defined as ever using a needle to inject any illegal drug into their body one or more times during their life.

See Sentinel Community Site (SCS) Data Tables and Overview & Limitations section for more information regarding the data.

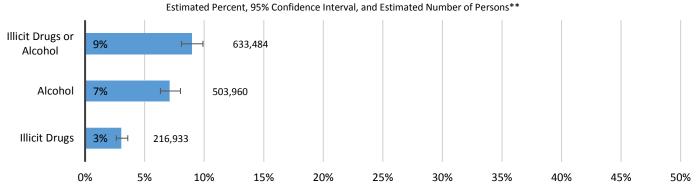
Source: Adapted by the NDEWS Coordinating Center from data provided by CDC, 1991-2015 High School YRBS data.

<sup>\*\*</sup>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.

### **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

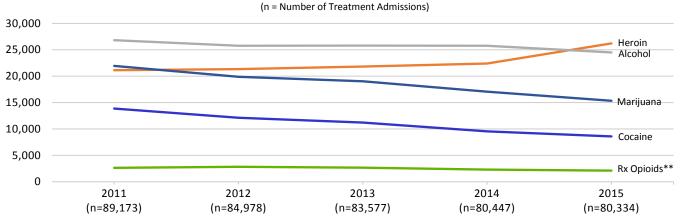


<sup>\*</sup>U.S. Population: U.S. civilian non-institutionalized population. \*\*Substance Use Disorders in Past Year: Persons are classified as having a substance use disorder in the past 12 months based on responses to questions that meet the criteria specified in the 4th edition of the *Diagnostic 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.

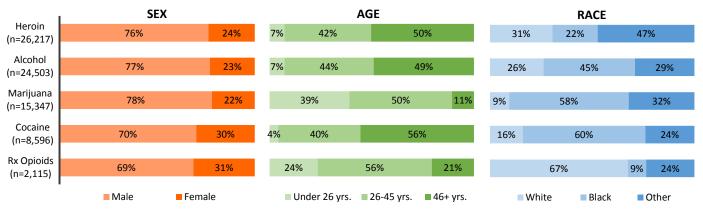
Source: Adapted by the NDEWS Coordinating Center from data provided by SAMHSA, NSDUH. Annual averages based on combined 2012 to 2014 NSDUH data.

## Treatment Admissions Data from Local Sources

### Trends in Non-Crisis Treatment Admissions\*, by Primary Substance of Abuse, New York City, 2011-2015



## Demographic Characteristics of Non-Crisis Treatment Admissions\*, New York City, 2015



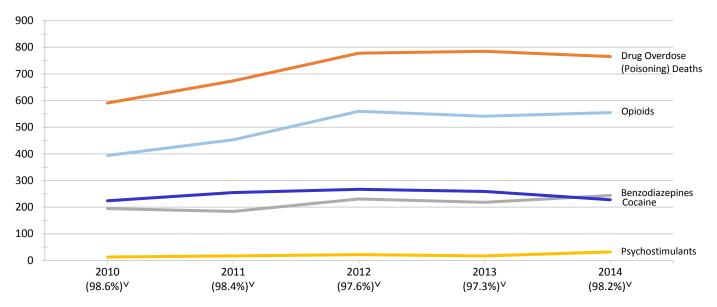
<sup>\*</sup>Non-Crisis Treatment Admissions: Includes non-crisis admissions to outpatient, inpatient, residential, and methadone maintenance treatment programs licensed in the State. \*\*Rx Opioids: Includes non-prescription methadone, buprenorphine, other synthetic opiates, and OxyContin. Percentages 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.

# **Drug Overdose (Poisoning) Deaths**

# National Vital Statistics System (NVSS) via CDC WONDER

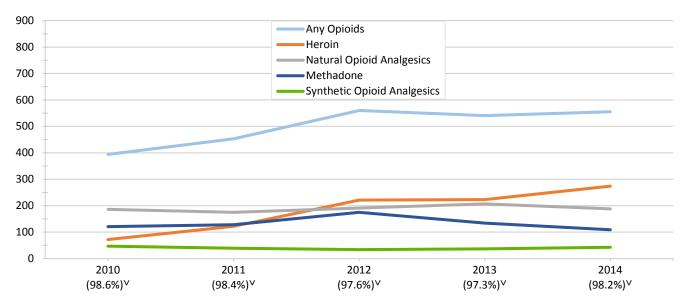
#### Trends in Drug Overdose (Poisoning) Deaths\*, by Drug\*\*, New York City^, 2010–2014

(Number of Deaths and Percent of Drug Overdose (Poisoning) Deaths with Drug(s) Specified<sup>v</sup>)



#### Trends in Opioid Overdose (Poisoning) Deaths\*, by Opioid, New York City^, 2010–2014

(Number of Deaths, by Drug\*\* and Percent of Drug Overdose (Poisoning) Deaths with Drug(s) SpecifiedV)



\*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 1999-2014, available on the CDC WONDER Online Database, released 2015. Data compiled in the Multiple cause of death 1999-2014 were provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Retrieved between December 2015 - May 2016, from http://wonder.cdc.gov/mcd-icd10.html

# **Law Enforcement Drug Seizures**

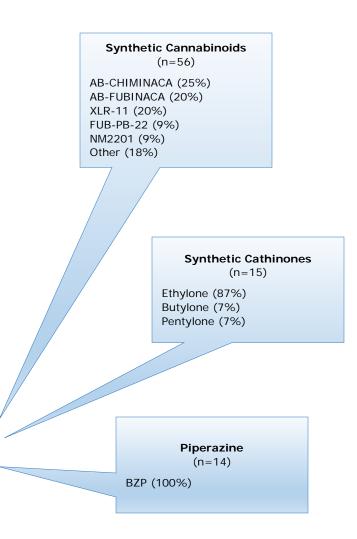
# National Forensic Laboratory Information System (NFLIS)

# Drug Reports\* for Items Seized by Law Enforcement in New York City^ in 2015 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	41,880	100%
Top 10 Drug Reports		
Cocaine	13,989	33.4%
Cannabis	12,333	29.4%
Heroin	6,680	16.0%
Oxycodone	1,744	4.2%
Alprazolam	1,660	4.0%
Buprenorphine	772	1.8%
Phencyclidine	569	1.4%
Methamphetamine	532	1.3%
Clonazepam	494	1.2%
Methadone	369	0.9%
Top 10 Total	39,142	93.5%
Selected Drugs/Drug Catego	ries	
Opioids	10,312	24.6%
Fentanyl	214	0.5%
Other Fentanyls***	6	<0.1%
Synthetic Cannabinoids	56	0.1%
Synthetic Cathinones	15	<0.1%
Piperazines	14	<0.1%
Tryptamines	3	<0.1%
2C Phenethylamines	0	0.0%

Top 5 Drugs, by Selected Drug Category (% of Category)\*\*



<sup>\*</sup>Drug Reports: 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.

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 18, 2016.

<sup>^</sup>New York City: Includes data from 5 boroughs in the New York City MSA and data from the New York City Police Department Laboratory.

<sup>\*\*</sup>Percentages may not sum to 100 due to rounding. \*\*\*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 full list of Other Fentanyls that were reported to NFLIS during the January to December 2015 timeframe. See *Sentinel Community Site (SCS) Data Tables* and *Overview & Limitations* for more information regarding the data.

# 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:

- ♦ SCS Highlights
- ♦ Changes in Legislation
- ♦ Substance Use Patterns and Trends
- ♦ Local Research Highlights (if available)
- ♦ Infectious Diseases Related to Substance Use (if available)

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, 2016: SCE Narrative

Denise Paone, Ed.D., and Jaclyn Blachman-Forshay, M.P.H. Bureau of Alcohol and Drug Use Prevention, Care and Treatment New York City Department of Health and Mental Hygiene

# **Highlights**

- In 2014, there were 800 unintentional drug poisoning (overdose) deaths in New York City (NYC). Preliminary data show a dramatic increase in the number of overdose deaths in NYC, with 925 confirmed deaths to date in 2015. This represents a 15% increase in the number of overdose deaths from 2014.
- Of the 925 drug overdose deaths in 2015, 144 (16%) involved **fentanyl**.
- From 2000 to 2014, there was a 193% increase in benzodiazepine-involved overdose deaths.
- Compared with 2013, cocaine-involved overdose deaths decreased 13% in 2014.
- In 2015, 1 in 12 drug treatment admissions reported crack/cocaine as the primary substance (8.5%).
- In 2015, **marijuana** was the second most common primary drug (excluding alcohol) reported at admission to drug treatment (12.7%, *n* = 15,885).
- Beginning in July 2015, NYC coordinated a multi-agency response focused on controlling availability of synthetic cannabinoids. As a result, from July 2015 through March 2016, emergency department visits related to synthetic cannabinoids decreased by 85%.
- Heroin was involved in 57% of all overdose deaths in 2014, making it the most common substance involved in overdose deaths.
- In 2015, **heroin** was the most common primary drug (excluding alcohol) reported at admission to drug treatment (32.4%, n = 40,656).
- The rate of opioid-analgesic-involved overdose deaths stayed the same in both 2013 and 2014 (3.2 per 100,000 New Yorkers).
- In 2014, the rate of **methadone**-involved overdose deaths decreased by 57% decrease compared with 2006, the year in which methadone-involved overdose deaths peaked.

# **Changes in Legislation**

#### Naloxone in pharmacies

As the demographic 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 Health Commissioner Mary Bassett issued a standing order to authorize naloxone dispensing in pharmacies. As of June 1, 2016, New Yorkers at risk of opioid overdose, as well as concerned family members and friends, can access this life-saving medication upon request in 693 pharmacies citywide.

More information on naloxone in pharmacies, including a list of participating pharmacies, can be found at the NYC Department of Health and Mental Hygiene (DOHMH) website: <a href="https://www1.nyc.gov/site/doh/providers/health-topics/naloxone-and-overdose-prevention-in-pharmacies.page">https://www1.nyc.gov/site/doh/providers/health-topics/naloxone-and-overdose-prevention-in-pharmacies.page</a>

#### Suboxone expansion in primary care settings

The NYC DOHMH has developed a new initiative to expand access to buprenorphine in primary care safety net settings. This program supports the implementation of a nurse care manager (NCM) model in federally qualified health centers (FQHCs), FQHC look-alikes, and other safety net settings to increase buprenorphine-prescribing capacity and promote high-quality care. In this model, and consistent with the principles of the patient-centered medical home, a dedicated NCM will work with physicians to deliver team-based care for patients being treated for opioid use disorders. Together, the team will screen and assess patients, perform medication management and motivational counseling, and refer for more intensive treatment as necessary. The model also includes access to local mentors who are experienced in buprenorphine prescribing to provide additional support and case consultation as needed. The NCM model is adapted from a similar successful program in Massachusetts, and it will be piloted in seven NYC settings. The effort to expand access to buprenorphine for treatment of opioid use disorder in NYC is part of DOHMH's multipronged approach to reduce opioid overdose deaths in the City.

### **Substance Use Patterns and Trends**

#### **OVERVIEW**

#### Morbidity

#### Opioid-related hospitalizations, 2014

In 2014, there were approximately 60,000 drug-related hospitalizations among NYC residents 13–84 years of age, with a rate of 819.9 per 100,000 residents. Opioid-related hospitalizations accounted for approximately a 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 nearly twice 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, 2014

Cocaine-related hospitalizations accounted for more than a third of the approximately 60,000 drug-related hospitalizations in New York City in 2014 (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 DOHMH tracks opioid analgesic and benzodiazepine prescriptions by analyzing data for all New York City residents who fill opioid analgesic and/or benzodiazepine prescriptions. In 2014, 1,727,065 benzodiazepine prescriptions were filled by 441,513 residents and nearly 2-million (1,910,561) schedule II opioid analgesic prescriptions were filled by 645,706 NYC residents. Approximately two thirds of opioid analgesics filled by NYC residents were for oxycodone (total n = 1,293,062). Additionally, of the 645,706 NYC residents who filled an opioid analgesic prescription, less than 1% (n = 4959, or 0.8%) 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 2014, there were 800 unintentional drug poisoning (overdose) deaths in NYC, with a rate of 11.7 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 (16.5 per 100,000). The rate was double that of residents from medium-income neighborhoods (8.1 per 100,000). The rate among highest poverty neighborhoods and lowest poverty neighborhoods was 10.7 per 100,000 and 10.3 per 1000,000, respectively. In 2014, nearly all (97%) overdose deaths involved more than one substance and 79% of overdose deaths involved an opioid.

In 2015, there were 925 unintentional drug poisoning (overdose) deaths in NYC. Of those, 540 (58%) involved heroin. Based on preliminary data, there have been 125 more confirmed overdose deaths overall and 90 more involving heroin in 2015 compared with 2014.

Drug overdose data in NYC are 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.

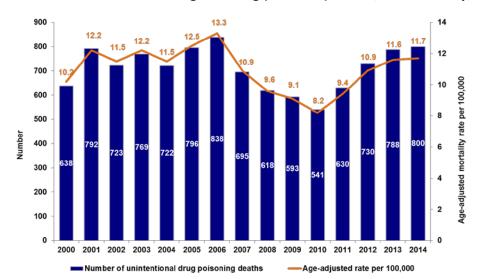


Exhibit 1. Unintentional Drug Poisoning (overdose) Deaths, New York City, 2000-2014

Source: NYC Office of the Chief Medical Examiner and NYC DOHMH Bureau of Vital Statistics

#### Fentanyl-involved overdoses, 2015

The drug-specific data presented in this section reflects 2014 overdose mortality in NYC. Nevertheless, preliminary data from 2015 necessitate the importance of highlighting an increase in fentanyl-related deaths in the City. Again, there were 925 confirmed overdose deaths in 2015, and 144 (16%) involved fentanyl. Previously, fentanyl was relatively uncommon in NYC, accounting for less than 3% of deaths in the last 10 years. Fentanyl-involved overdose deaths occurred among residents of all New York City boroughs: Bronx (n = 40, 3.5 per 100,000); Brooklyn (n = 37, 1.8 per 100,000); Queens (n = 30, 1.7 per 100,000); Manhattan (n = 16, 1.1 per 100,000); and Staten Island (n = 6, 1.3 per 100,000). The NYC DOHMH issued a Health Advisory to inform providers about fentanyl in April 2016. As part of its public health investigation, DOHMH also conducted interviews with syringe exchange directors and

participants and will soon initiate interviews with residents from neighborhoods with the highest rates of fentanyl-involved overdose deaths.

Fentanyl is sold illicitly for its heroin-like effects and may be mixed with heroin and/or cocaine as a combination product with or without the user's knowledge. In addition, 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.

#### **BENZODIAZEPINES**

From 2000 to 2014, there was a 193% increase in benzodiazepine-involved overdose deaths.

In 2014, there were 301 benzodiazepine-involved overdose deaths (4.4 per 100,000 New Yorkers). Compared with 2013, this rate stayed the same, although it represents a 193% increase from 2000 to 2014. 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 2014. Benzodiazepines were present in 53% of deaths involving opioid analgesics, 41% of deaths involving heroin, and 55% of deaths involving methadone.

In 2015, benzodiazepines (n = 2,027) were the primary drug in less than 2% of all drug treatment admissions. Benzodiazepines were more likely reported as the secondary drug at admission. Benzodiazepines were reported as the secondary drug in 17.2% (n = 524) of admissions when prescription opioids were the primary, and 9.5% (n = 3,877) of admissions when heroin was the primary.

Of 41,880 total National Forensic Laboratory Information System drug reports (NFLIS) samples in NYC in 2015, 4.0% (n = 1,660) tested positive for alprazolam, and alprazolam was the 5<sup>th</sup> most commonly seized substance. Compared with 2014, there was an 11.7% decrease in law enforcement seizures of alprazolam. Similarly, there were 494 seizures of clonazepam in 2015, representing a 20.3% decreased compared with 2014.

#### **COCAINE/CRACK**

- Compared with 2013, cocaine-involved overdose deaths decreased 13% in 2014.
- In 2015, 1 in 12 drug treatment admissions reported crack/cocaine as the primary substance (8.5%).

In 2014, there were 326 cocaine-involved overdose deaths (4.7 per 100,000 New Yorkers). This rate is a 13% decrease compared with 2013 (n = 364, 5.7 per 100,000 New Yorkers) and a 42% decrease compared with 2006, the year in which cocaine-related overdose deaths peaked (n = 508 deaths; 8.1 per 100,000 New Yorkers).

White New Yorkers had the highest rate of cocaine-related overdose deaths (5.8 per 100,000 New Yorkers), which was a change from prior years, in which Black New Yorkers historically represented the highest rates. In 2014, the rate of cocaine-related overdose death among Black New Yorkers was 5.6 per

100,000, which was a 16% decrease compared with 2013. Furthermore, 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 as were reported in 2013.

Cocaine was present in 40% of overdoses involving heroin, 37% of overdoses involving methadone, 33% of overdoses involving opioid analysesics, and 31% of overdoses involving benzodiazepines.

In 2015, approximately 1 in 12 treatment admissions reported crack/cocaine as the primary substance (8.5%, n = 10,634). When alcohol was the primary substance (n = 49,708), crack/cocaine was the secondary in 27.2% (n = 13,519) of admissions.

Of 41,880 total NFLIS seizures in NYC in 2015, 33.4% (n = 13,989) tested positive for cocaine, and cocaine was the most commonly seized substance. This represents a very small (0.7%) decrease compared with 2014 when there were 14,085 cocaine seizures.

Exhibit 2. Cocaine-involved Overdose Deaths, by Race, New York City, 2000-2014

Source: NYC Office of the Chief Medical Examiner and NYC DOHMH Bureau of Vital Statistics

#### **MARIJUANA**

• In 2015, marijuana was the second most common primary drug (excluding alcohol) reported at admission to drug treatment (12.7%, n = 15,885).

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

In 2015, marijuana was the second most common primary drug (excluding alcohol) reported upon admission to drug treatment (12.7%, n=15,885).

Of 41,880 total NFLIS seizures in NYC in 2015, 29.4% (n = 12,333) tested positive for cannabis, and cannabis was the 2<sup>nd</sup> most commonly seized substance. Compared with 2014 (n = 13,909), there was an 11.3% decrease in cannabis seizures.

#### **METHAMPHETAMINE**

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

Of 41,880 total NFLIS seizures in NYC in 2015, 1.3% (n = 532) tested positive for methamphetamine, which represents a 4.7% decrease compared with 2014, when there were 558 seizures of methamphetamine.

#### **NEW PSYCHOACTIVE SUBSTANCES (OTHER THAN OPIOIDS)**

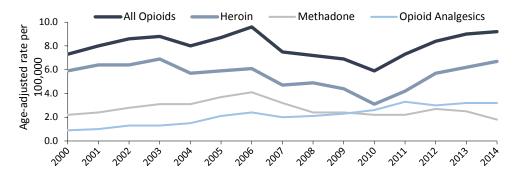
 Beginning in July 2015, NYC coordinated a multi-agency response focused on controlling availability of synthetic cannabinoids. As a result, from July 2015 through March 2016, emergency department visits related to synthetic cannabinoids decreased by 85%.

The NYC DOHMH does not report on the presence of synthetics in drug overdose deaths. However, a separate section of this report outlines the NYC DOHMH's approach toward addressing a synthetic cannabinoid (K2) outbreak.

#### **OPIOIDS**

- Heroin was involved in 57% of all overdose deaths in 2014, making it the most common substance involved in overdose deaths.
- In 2015, heroin was the most common primary drug (excluding alcohol) reported at admission to drug treatment (32.4%, n = 40,656).
- The rate of opioid-analgesic-involved overdose deaths stayed the same in both 2013 and 2014 (3.2 per 100,000 New Yorkers).
- In 2014, the rate of methadone-involved overdose deaths decreased by 57% decrease compared with 2006, the year in which methadone-involved overdose deaths peaked.

Exhibit 3. Unintentional Overdose Deaths by Opioid Type Involved (Not Mutually Exclusive), New York City, 2000–2014



Source: NYC Office of the Chief Medical Examiner and NYC DOHMH Bureau of Vital Statistics

#### Heroin

In 2014, there were 460 heroin-involved overdose deaths (6.7 per 100,000 New Yorkers). Heroin was involved in 57% of all overdose deaths in 2014, making it the most common substance involved in overdose deaths. The rate has more than doubled since 2010 when it was 3.1 per 100,000 New Yorkers (209 deaths).

Similar to prior years, 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 2014. Residents of the highest poverty neighborhoods had the highest rate of overdose deaths involving heroin (10.4 per 100,000 New Yorkers), the rate was more than double that of Black New Yorkers (4.9 per 100,000). The rate of heroin-involved overdose increased in all NYC boroughs except Queens. By race/ethnicity, the rate increased among White and Black New Yorkers (19% and 26% increases, respectively), but there was a decrease in heroin-involved overdose deaths among Hispanics compared with 2013 (13% decrease).

In 2015, heroin was the most common primary drug (excluding alcohol) reported at admission to drug treatment (32.4%, n = 40,656).

Of 41,880 total NFLIS seizures in NYC in 2015, 16.0% (n = 6,680) tested positive for heroin, and heroin was the  $3^{rd}$  most commonly seized substance. This is a 7.9% increase in heroin seizures increase compared with 2014.

#### **Prescription Opioids**

In 2014, there were 217 opioid-analgesic-involved overdose deaths, and the rate stayed the same in both 2013 and 2014 (3.2 per 100,000 New Yorkers). Rates were highest among White New Yorkers (5.7 per 100,000); the rate was more than double that of Hispanic and Black New Yorkers, 3.0 and 1.8 per 100,000, respectively. Rates were highest among New Yorkers 45–54 years of age, and residents living in the lowest poverty (wealthiest) neighborhoods (4.1 per 100,000).

In 2015, prescription opioids (n = 3,054) were the primary drug in less than 3% of all drug treatment admissions. Prescription opioids were reported as the secondary drug in 5.3% (n = 2,172) of admissions when heroin was the primary.

#### Methadone

There were 127 methadone-involved overdose deaths in 2014 (1.8 per 100,000 New Yorkers). This rate is a 57% decrease compared with 2006, the year in which methadone-involved overdose deaths peaked (4.1 per 100,000 New Yorkers).

The methadone maintenance population in NYC is 30,000–33,000 individuals, although it has decreased in recent years. In conjunction with this decrease, there has been a decline in methadone-involved overdose deaths as well.

Of 41,880 total NFLIS samples in NYC in 2015, less than 1% (n = 369) tested positive for methadone. Methadone seizures decreased by 33.6% compared with 2014.

# **Local Research Highlights**

#### Qualitative research on heroin initiates

Between August 2013 and January 2015, the Bureau of Alcohol and Drug Use Prevention, Care, and Treatment (BADUPCT) conducted in-depth interviews (n = 93) with individuals 18 years of age and older with a history of opioid analgesic misuse. "Misuse" was defined as using opioid analgesics (OAs) for the experience or feeling they caused; taking more than prescribed; or taking OAs to self-medicate for a different injury/health condition. Participants were recruited through ethnographic street recruitment and community health agencies, including outpatient drug treatment and harm reduction programs, and through snowball sampling.

A subsample of 31 participants initiated heroin use within the past five years directly after OA misuse. These users were primarily younger, more affluent, and more predominately Caucasian than those identified in previous samples of street-based drug users. The median age of first OA misuse was 16 years, and the median length of time between OA misuse and heroin use was 3 years, with nine participants initiating heroin within 1 year. Twenty-six reported they were physically dependent on OAs prior to first using heroin, ascertained through participants' self-report of physical withdrawal symptoms. After heroin initiation, 24 participants stated that it became their primary drug. At the time of interview, 25 participants had injected heroin and, for 19, injecting became their primary route of administration. For most of these participants, injection initiation followed first heroin use. Among those participants who reported injection drug use, the majority described obtaining syringes from pharmacies; only four noted contact with a syringe exchange program, indicating a disconnection from risk reduction services.

Findings indicated several key points of transition along participants' trajectories from OA misuse to heroin initiation, and many participants described similar patterns of increasing OA misuse, irrespective of whether they had begun to misuse recreationally or through medical treatment. Typically, initiation into OA misuse began with dual-entity pills ingested orally, followed by transition to higher strength, single-entity OA formulations, often coupled with a change to intranasal route of administration. Participants described the breaking down of heroin-related stigma across social networks throughout as its use permeated social groups. The sum of these experiences seemed to operate as a precursor to heroin initiation.

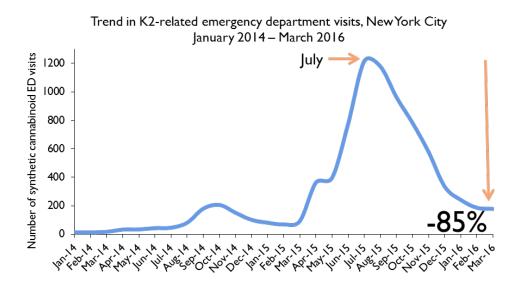
#### Synthetic cannabinoids

Emergency department visits related to synthetic cannabinoids increased in NYC in 2014. Increases continued through summer 2015, peaking in July 2015, with more than 1,200 synthetic-cannabinoid-related emergency department visits. During this time, the NYC DOHMH conducted two outbreak investigations and identified a subpopulation at high risk, released three Health Advisories, and developed educational materials geared toward individuals at high risk of health consequences of synthetic cannabinoid use.

Beginning in July 2015, NYC coordinated a multi-agency response focused on controlling product availability. From July 2015 through March 2015, emergency department visits related to synthetic cannabinoids decreased by 85%.

Although prevalence data on synthetic cannabinoids is lacking, daily synthetic cannabinoid use did not seem to be widespread among NYC residents. In NYC, daily synthetic cannabinoid use was confined to a subpopulation of individuals subjected to urine screening through either the criminal justice system or drug treatment programs. For these individuals, synthetic cannabinoids provide an inexpensive high that usually goes undetected on standard urine screens.

Exhibit 4. Trend in K2-related emergency department visits, New York City January 2014 - March 2016



#### Naloxone distribution projects

#### Rikers Island

NYC DOHMH, in partnership with Correctional Health Services, completed an evaluation of the overdose prevention training (OPT) and naloxone distribution to visitors of Rikers Island. The evaluation enrolled almost 300 people in August 2015 and completed a six-month follow-up survey with 80% of those enrolled. Outcomes of interest included numbers of witnessed overdoses in the six-month period, despite whether naloxone was used and whether the overdose victim was recently incarcerated. Eighteen percent of those reached for follow-up had seen at least one overdose (ranged from one to four), and 12% had used naloxone at least once. Of the 70 witnessed overdose events, 17% of the victims were recently released from jail or prison (within the last year). Correctional Health Services will continue to offer naloxone training and will use this evaluation to inform their program.

#### Enhanced naloxone distribution in six target neighborhoods

NYC DOHMH sought to ensure appropriate targeting of naloxone to heavily impacted neighborhoods and populations. In mid-2015, it developed a neighborhood-based approach to naloxone distribution to reach populations at highest risk for overdose. DOHMH identified six target NYC neighborhoods using 2013 and preliminary 2014 overdose data. Selected neighborhoods included three with highest 2013 rates: Hunts Point-Mott Haven and Highbridge-Morrisania (Bronx) and South Beach-Tottenville and Willowbrook (Staten Island). Additionally, preliminary 2014 data identified a doubling in the number and rate of opioid-involved overdoses in East Harlem (Manhattan) and Coney Island (Brooklyn) during 2014; therefore, these neighborhoods were also selected. In partnership with community-based opioid overdose prevention programs (OOPPs) located or working in the six selected neighborhoods, we convened workgroups to set naloxone distribution targets and plan targeted distribution. Because several neighborhoods were adjacent, we convened four workgroups to address distribution in the six selected neighborhoods.

Of 30 OOPPs invited to participate in the workgroups, 20 agreed. During initial meetings in the fall of 2015, DOHMH and OOPP staff established goals and discussed project objectives. DOHMH provided technical assistance to all OOPPs, including neighborhood-specific social service maps; letters stating the purpose of the project for community distribution; and assistance for each OOPP with planning upcoming activities. Although all OOPPs in NYC are required to complete an enrollment form for each individual receiving naloxone, participating OOPPs agreed to use revised forms that additionally included location of naloxone training, trainee's ZIP code of residence, and trainee's past-year receipt of naloxone. Implementation began February 2016. DOHMH will collect enrollment forms from participating OOPPs on a monthly basis until December 2017 to evaluate naloxone distribution patterns. Data will be analyzed quarterly; outcomes include the number of people trained, age, race, and gender of trainees, location of training, ZIP code of residence and whether trainee received naloxone in the prior year. Workgroups will be reconvened on a bimonthly basis. This project will expand naloxone distribution in a targeted fashion and assess the impact of naloxone expansion on neighborhood-level overdose mortality.

#### Naloxone distribution data

Table 1. Naloxone Kits Distributed, by Program Type, 2010–2015

Year	CBOs	DHS	Drug Tx	ронмн	Healthcare	Rikers	SEPs	TOTAL
2010	357	56	304	0	0	0	1742	2459
2011	541	280	406	0	0	0	1844	3071
2012	667	457	884	0	0	0	1713	3721
2013	392	200	1536	159	0	0	2086	4373
2014	311	433	2720	588	120	1070	2896	8138
2015	219	443	120	439	158	1389	4012	6780
TOTAL	2487	1869	5970	1186	276	2459	14293	28,542

<sup>\*</sup>Since 2014, 17,215 NYPD officers have been trained to use naloxone and 13,263 officers currently carry naloxone.

Table 2. Reported Administrations of Naloxone, by Program Type, 2010–2015

Year	CBOs	DHS	Drug Tx	ронмн	Healthcare	Rikers	SEPs	TOTAL
2010	0	1	0	0	0	0	44	45
2011	12	1	12	0	0	0	48	73
2012	8	11	4	0	0	0	94	117
2013	10	25	31	3	0	0	90	159
2014	10	41	41	0	3	8	76	179
2015	7	110	0	0	22	4	135	278
TOTAL	47	189	88	3	25	12	487	851

<sup>\*</sup>Since 2014, NYPD officers have reported 73 reversals using naloxone.

#### Youth and substance use

The 2014–2015 Youth Development Survey (YDS) data reported alcohol and marijuana as the top two most common drugs reported in lifetime use, with the highest rates in Staten Island for alcohol (54.5%)

and marijuana (26.9%). Past 30-day use is less than but proportional to borough-wide lifetime use, with the highest rates for alcohol (30.9%) and marijuana (18.4%) in Staten Island. Across NYC, male students show slightly higher rates than do female students for past 30-day marijuana and prescription drug use, except for alcohol use (males 27.2%, females 30.5%). Lifetime heroin use in Staten Island is low (0.3%), compared with Youth Risk Behavior Survey (YRBS) 2013 data showing lifetime heroin use at 6.3%. Marijuana is reported as the most commonly used drug at first drug use across all grades. Heroin lifetime use prevalence is low across NYC (mean prevalence 0.3%). Alcohol use and binge-drinking reported use almost doubles from 7<sup>th</sup> grade to 12<sup>th</sup> grade, except in Manhattan where lifetime alcohol use peaks in 11<sup>th</sup> grade (64%). Bullying behaviors are reported to occur mainly on school grounds reported mainly by 7<sup>th</sup>-8<sup>th</sup> graders.

### **Infectious Diseases Related to Substance Use**

New HIV diagnoses in NYC decreased by 54% from 2001 to 2014, with 5,862 and 2,718 cases reported in each year, respectively. Significant decreases were also reported among subpopulations by sex, race/ethnicity, age at diagnosis, borough of residence at diagnosis, and transmission risk. Among injection drug users (IDUs), there were 845 HIV diagnoses in 2001 and only 54 new diagnoses in 2014. As of December 31, 2014, there were 119,550 people living with HIV/AIDS (PLWHA) in NYC. Of these, 16,191 (13.5%) people reported a history of IDU and 2,635 (2.2%) were men who have sex with men/IDUs.

In 2014, 57 acute hepatitis B cases were reported (0.7 per 100,000 New Yorkers), and there were 7,459 people with chronic hepatitis B (88.7 per 100,000 New Yorkers). 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, 7,691 people were reported with chronic hepatitis C (91.5 per 100,000 New Yorkers). Among individuals 0–29 years of age, there were 839 newly reported hepatitis C cases in 2014. Data on the number of hepatitis B and C cases resulting from intravenous drug use are unavailable.

### **Data Sources**

Data for this report were drawn from the following sources:

#### Prevalence data:

- 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 YDS: The New York State Youth Development Survey (YDS) was conducted during the 2014-2015 school year among 7<sup>th</sup>-12<sup>th</sup> graders in public and private schools. Only NYC public school data are reported here.
- 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 data** were provided by The Statewide Planning and Research Cooperative System (SPARCS), which currently collects patient-level detail for each hospital inpatient stay and outpatient emergency department visits. Data on inpatient hospital stays are presented.

**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 2000–2014. Methadone is reported separately and not included in opioid analgesic analyses.

**Treatment admissions data** were collected through through the New York State Office of Alcoholism and Substance Abuse Services (OASAS): Client Data System for 2010–2015.

#### **HIV and Hepatitis data:**

- 2014 HIV surveillance data were collected from the NYC DOHMH HIV Epidemiology and Field Services Programs' annual report.
- Hepatitis data: 2014 hepatitis data were collected from the NYC DOHMH Bureau of Communicable Diseases' annual report.

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: <a href="mailto:dpaone@health.nyc.gov">dpaone@health.nyc.gov</a>.

# 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

2010–2014 ACS 5-Year Estimates

	Estimate	Margin of Error
Total Population (#)	8,354,889	**
Age		
18 years and over (%)	78.6%	+/-0.1
21 years and over (%)	74.7%	+/-0.1
65 years and over (%)	12.5%	+/-0.1
Median Age	35	5.7
Race (%)		
White, Not Hisp.	32.7%	+/-0.1
Black/African American, Not Hisp.	22.6%	+/-0.1
Hispanic/Latino (of any race)	28.8%	**
American Indian/Alaska Native	0.2%	+/-0.1
Asian	13.2%	+/-0.1
Native Hawaiian/Pacific Islander	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+ Yea	ars) (%)	
High School Graduate or Higher	80.1%	+/-0.1
Bachelor's Degree or Higher	35.0%	+/-0.2
Unemployment (Among Civilian Labor Force Population A	ged 16+ Years)	(%)
Percent Unemployed	10.3%	+/-0.1
Income (\$)		
Median Household Income (in 2014 inflation-adjusted dollars)	\$52,737	+/-254
Health Insurance Coverage (Among Civilian Noninstitutio	nalized Populat	ion) (%)
No Health Insurance Coverage	13.5%	+/-0.1
Poverty (%)		
All People Whose Income in Past Year 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.

**SOURCE:** Adapted by the NDEWS Coordinating Center from data provided by the U.S. Census Bureau, 2010–2014 American Community Survey (ACS) 5-Year Estimates.

<sup>\*\*</sup>The estimate is controlled; a statistical test for sampling variability is not appropriate.

# 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

	Subs	Substate Region: New York City^								
Substance Use Behaviors	Estimate	d % (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*<sup>^</sup>, by Age Group, 2012–2014 Estimated Percent and 95% Confidence Interval (CI)\*, Annual Averages Based on Combined 2012 to 2014 NSDUH Data

	Substate Region: New York City^											
		12–17		18–25		26+						
Substance Use Behaviors		nated Percent 95% CI)*		nated Percent (95% CI)*		nated 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)						

**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

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

<sup>\*</sup>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.

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

<sup>\*\*\*</sup>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)*.

#### 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\*

	201	5 vs 2013		20	15 by Sex			2015 b	y Race		
Substance Use	2015	2013	р	Male	Female	р	White	Black	Hispanic	Asian	
Behaviors	Estimate (95% CI)	Estimate (95% CI)	value	Estimate (95% CI)	Estimate (95% CI)	value	Estimate (95% CI)	Estimate (95% CI)	Estimate (95% CI)	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 Lifetim	e e										
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	_	_	1	_	_	ı	_	_	_	_	
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:

**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].

<sup>^</sup>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.

<sup>\*</sup>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.

<sup>\*\*</sup>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.

Table 4a1: Trends in Non-Crisis Admissions\* to Programs Treating Substance Use Disorders, *New York City* Residents, 2011-2015

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

					Calend	ar Year				
	20	11	20	112	20	13	20	14	20	15
	(#)	(%)	(#)	(%)	(#)	(%)	(#)	(%)	(#)	(%)
Total Admissions (#)	89,173	100%	84,978	100%	83,577	100%	80,447	100%	80,334	100%
Primary Substance of Ab	use (%)									
Alcohol	26,823	30.1%	25,780	30.3%	25,814	30.9%	25,762	32.0%	24,503	30.5%
Cocaine/Crack	13,872	15.6%	12,126	14.3%	11,225	13.4%	9,553	11.9%	8,596	10.7%
Heroin	21,138	23.7%	21,353	25.1%	21,833	26.1%	22,409	27.9%	26,217	32.6%
Prescription Opioids**	2,638	3.0%	2,839	3.3%	2,671	3.2%	2,310	2.9%	2,115	2.6%
Methamphetamine	323	0.4%	381	0.4%	422	0.5%	474	0.6%	471	0.6%
Marijuana	21,953	24.6%	19,891	23.4%	19,049	22.8%	17,082	21.2%	15,347	19.1%
Benzodiazepines**	751	0.8%	764	0.9%	702	0.8%	778	1.0%	793	1.0%
MDMA	95	0.1%	118	0.1%	74	0.1%	76	0.1%	52	0.1%
Synthetic Stimulants**	19	<0.1%	11	<0.1%	19	<0.1%	36	<0.1%	35	<0.1%
Synthetic Cannabinoids	0	0.0%	0	0.0%	0	0.0%	50	0.1%	312	0.4%
Other Drugs/Unknown	1,561	1.8%	1,715	2.0%	1,768	2.1%	1,917	2.4%	1,893	2.4%

unavail: Data not available.

<sup>\*</sup>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.

<sup>\*\*</sup>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).

Table 4b1: Demographic and Drug Use Characteristics of Non-Crisis Treament Admissions\* for Select Substances of Abuse, New York City Residents, 2015

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

		Primary Substance of Abuse																
	Alc	ohol	Cocain	e/Crack	He	roin	Prescriptio	n Opioids**	Metham	phetamine	Mari	juana		nzo- pines**		hetic ants**	,	thetic abinoids
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Number of Admissions (#)	24,503	100%	8,596	100%	26,217	100%	2,115	100%	471	100%	15,347	100%	793	100%	35	100%	312	100%
Sex (%)																		
Male	18,878	77.0%	6,014	70.0%	19,975	76.2%	1,449	68.5%	449	95.3%	11,968	78.0%	559	70.5%	27	77.1%	265	84.9%
Female	5,625	23.0%	2,582	30.0%	6,242	23.8%	666	31.5%	22	4.7%	3,379	22.0%	234	29.5%	8	22.9%	47	15.1%
Race/Ethnicity (%)																		
White, Non-Hisp	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail
African-Am/Black, Non-Hisp	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail
Hispanic/Latino	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail
Asian	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail
Other	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail
Age Group (%)																		
Under 18	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail
18-25	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail
26-44	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail
45+	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail
Route of Administration (%	6)																	
Smoked	0	0.0%	5,131	59.7%	160	0.6%	60	2.8%	241	51.2%	14,899	97.1%	0	0.0%	11	31.4%	288	92.3%
Inhaled	27	0.1%	3,153	36.7%	14,945	57.0%	390	18.4%	52	11.0%	209	1.4%	2	0.3%	2	5.7%	10	3.2%
Injected	30	0.1%	153	1.8%	10,872	41.5%	50	2.4%	148	31.4%	0	0.0%	3	0.4%	2	5.7%	2	0.6%
Oral/Other/Unknown	24,446	99.8%	159	1.8%	240	0.9%	1,615	76.4%	30	6.4%	239	1.6%	788	99.4%	20	57.1%	12	3.8%
Secondary Substance (%)																		
None	11,401	46.5%	2,290	26.6%	8,017	30.6%	594	28.1%	198	42.0%	7,574	49.4%	127	16.0%	10	28.6%	133	42.6%
Alcohol	3	<0.1%	3,039	35.4%	2,768	10.6%	235	11.1%	77	16.3%	5,077	33.1%	143	18.0%	5	14.3%	41	13.1%
Benzodiazepines	428	1.7%	106	1.2%	1,538	5.9%	324	15.3%	5	1.1%	187	1.2%	21	2.6%	3	8.6%	1	0.3%
Cocaine/Crack	5,772	23.6%	285	3.3%	9,250	35.3%	196	9.3%	50	10.6%	1,369	8.9%	76	9.6%	4	11.4%	26	8.3%
Heroin	1,193	4.9%	798	9.3%	6	<0.1%	255	12.1%	17	3.6%	231	1.5%	161	20.3%	0	0.0%	5	1.6%
Prescription Opioids**	287	1.2%	95	1.1%	1,472	5.6%	83	3.9%	1	0.2%	179	1.2%	112	14.1%	1	2.9%	2	0.6%
Methamphetamine	55	0.2%	42	0.5%	39	0.1%	3	0.1%	0	0.0%	23	0.1%	1	0.1%	0	0.0%	0	0.0%
Marijuana	4,949	20.2%	1,766	20.5%	2,738	10.4%	346	16.4%	55	11.7%	4	<0.1%	119	15.0%	8	22.9%	97	31.1%

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.

<sup>\*</sup>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.

<sup>\*\*</sup>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).

Table 4a2: Trends in Crisis (Detox) Admissions\* to Programs Treating Substance Use Disorders, New York City Residents, 2011-2015

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

					Calend	ar Year				
	20	11	20	112	20	13	20	14	20	15
	(#)	(%)	(#) (%)		(#)	(%)	(#)	(%)	(#)	(%)
Total Admissions (#)	58,330	100%	54,721	100%	47,107	100%	46,483	100%	45,018	100%
Primary Substance of Ab	use (%)									
Alcohol	37,093	63.6%	33,561	61.3%	27,637	58.7%	26,733	57.5%	25,205	56.0%
Cocaine/Crack	3,823	6.6%	4,020	7.3%	2,955	6.3%	2,230	4.8%	2,038	4.5%
Heroin	12,995	22.3%	12,971	23.7%	12,925	27.4%	13,825	29.7%	14,439	32.1%
Prescription Opioids**	1,680	2.9%	1,570	2.9%	1,231	2.6%	1,086	2.3%	939	2.1%
Methamphetamine	24	<0.1%	15	<0.1%	18	<0.1%	21	<0.1%	23	0.1%
Marijuana	963	1.7%	1,009	1.8%	693	1.5%	615	1.3%	538	1.2%
Benzodiazepines**	1,541	2.6%	1,402	2.6%	1,272	2.7%	1,448	3.1%	1,234	2.7%
MDMA	9	<0.1%	6	<0.1%	0	0.0%	2	<0.1%	4	<0.1%
Synthetic Stimulants**	1	<0.1%	1	<0.1%	5	<0.1%	2	<0.1%	7	<0.1%
Synthetic Cannabinoids	0	0.0%	0	0.0%	0	0.0%	30	0.1%	114	0.3%
Other Drugs/Unknown	201	0.3%	166	0.3%	371	0.8%	491	1.1%	477	1.1%

unavail: Data not available.

<sup>\*</sup>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.

<sup>\*\*</sup>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).

Table 4b2: Demographic and Drug Use Characteristics of Crisis (Detox) Treament Admissions\* for Select Substances of Abuse, New York City Residents, 2015

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

								Prin	nary Subs	tance of Al	buse							
	Alc	cohol	Cocain	e/Crack	He	roin	Prescriptio	n Opioids**	Methamp	ohetamine	Mari	juana	Benzo- diazepines**		Synthetic Stimulants**		. ,	thetic ibinoids
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Number of Admissions (#)	25,205	100%	2,038	100%	14,439	100%	939	100%	23	100%	538	100%	1,234	100%	7	100%	114	100%
Sex (%)																		
Male	21,426	85.0%	1,579	77.5%	11,914	82.5%	704	75.0%	18	78.3%	453	84.2%	949	76.9%	7	100.0%	106	93.0%
Female	3,779	15.0%	459	22.5%	2,525	17.5%	235	25.0%	5	21.7%	85	15.8%	285	23.1%	0	0.0%	8	7.0%
Race/Ethnicity (%)																		
White, Non-Hisp	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail						
African-Am/Black, Non-Hisp	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail						
Hispanic/Latino	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail						
Asian	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail						
Other	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail						
Age Group (%)																		
Under 18	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail						
18-25	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail						
26-44	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail						
45+	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail						
Route of Administration (%)																		
Smoked	0	0.0%	1,377	67.6%	37	0.3%	40	4.3%	12	52.2%	523	97.2%	0	0.0%	5	71.4%	96	84.2%
Inhaled	34	0.1%	531	26.1%	7,293	50.5%	107	11.4%	1	4.3%	3	0.6%	5	0.4%	0	0.0%	5	4.4%
Injected	188	0.7%	88	4.3%	7,008	48.5%	14	1.5%	5	21.7%	0	0.0%	6	0.5%	1	14.3%	3	2.6%
Oral/Other/Unknown	24,983	99.1%	42	2.1%	101	0.7%	778	82.9%	5	21.7%	12	2.2%	1,223	99.1%	1	14.3%	10	8.8%
Secondary Substance (%)																		
None	9,539	37.8%	210	10.3%	3,144	21.8%	285	30.4%	7	30.4%	71	13.2%	253	20.5%	1	14.3%	40	35.1%
Alcohol	3	<0.1%	1,125	55.2%	3,764	26.1%	105	11.2%	4	17.4%	229	42.6%	283	22.9%	3	42.9%	24	21.1%
Benzodiazepines	1,110	4.4%	47	2.3%	2,339	16.2%	200	21.3%	1	4.3%	21	3.9%	41	3.3%	0	0.0%	1	0.9%
Cocaine/Crack	7,747	30.7%	88	4.3%	3,384	23.4%	55	5.9%	1	4.3%	127	23.6%	113	9.2%	0	0.0%	17	14.9%
Heroin	3,813	15.1%	257	12.6%	4	<0.1%	120	12.8%	1	4.3%	47	8.7%	303	24.6%	0	0.0%	4	3.5%
Prescription Opioids**	316	1.3%	18	0.9%	700	4.8%	52	5.5%	0	0.0%	5	0.9%	133	10.8%	0	0.0%	1	0.9%
Methamphetamine	21	0.1%	2	0.1%	22	0.2%	1	0.1%	0	0.0%	2	0.4%	7	0.6%	0	0.0%	0	0.0%
Marijuana	2,327	9.2%	253	12.4%	933	6.5%	87	9.3%	5	21.7%	0	0.0%	83	6.7%	3	42.9%	27	23.7%

\*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.

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.

<sup>\*\*</sup>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).

Table 5: Drug Overdose (Poisoning) Deaths\*, by Drug\*\* and Year, New York City^, 2010–2014

Number, Crude Rate, and Age-Adjusted Rate\*\*\* (per 100,000 population)

		2010			2011			2012			2013		2014			
	Number (#)	Crude Rate	Age- Adjusted Rate	Number (#)	Crude Rate	Age- Adjusted Rate										
Drug Overdose (Poisoning) Deaths	591	7.2	7.0	674	8.2	7.7	778	9.3	8.9	785	9.3	8.9	765	9.0	8.5	
Opioids <sup>±</sup>	394	4.8	4.7	453	5.5	5.2	560	6.7	6.4	541	6.4	6.1	555	6.5	6.2	
Heroin	72	0.9	0.8	122	1.5	1.4	221	2.7	2.5	223	2.7	2.5	274	3.2	3.1	
Natural Opioid Analgesics	186	2.3	2.2	175	2.1	2.0	191	2.3	2.2	207	2.5	2.3	188	2.2	2.1	
Methadone	121	1.5	1.4	128	1.6	1.5	175	2.1	2.0	134	1.6	1.5	109	1.3	1.2	
Synthetic Opioid Analgesics	47	0.6	0.6	39	0.5	0.4	34	0.4	0.4	37	0.4	0.4	43	0.5	0.5	
Benzodiazepines	195	2.4	2.3	184	2.2	2.1	231	2.8	2.7	218	2.6	2.5	244	2.9	2.7	
Benzodiazepines AND Any Opioids	168	2.1	2.0	152	1.8	1.8	206	2.5	2.4	187	2.2	2.2	216	2.5	2.4	
Benzodiazepines AND Heroin	21	0.3	0.2	38	0.5	0.5	56	0.7	0.6	53	0.6	0.6	92	1.1	1.0	
Psychostimulants																
Cocaine	224	2.7	2.7	255	3.1	2.9	267	3.2	3.1	259	3.1	3.0	228	2.7	2.6	
Psychostimulants with Abuse Potential	13	UNR	UNR	17	UNR	UNR	22	0.3	0.3	17	UNR	UNR	32	0.4	0.4	
Cannabis (derivatives)	SUP	SUP	SUP	SUP	SUP	SUP										
Percent with Drugs Specified <sup>‡</sup>		98.6%			98.4%			97.6%			97.3%			98.2%		

#### NOTES:

Opium (T40.0); Heroin (T40.1); Natural Opioid Analgesics (T40.2)—may include morphine, codeine, and semi-synthetic opioid analgesics, such as oxycodone, hydrocodone, hydrocod

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 [excluding cocaine] (T43.6) (e.g., amphetamines, caffeine, MDMA, methamphetamine, and methylphenidate)

Cannabis (derivatives): (T40.7)

\*Percent of Drug Overdose (Poisoning) Deaths with Drug(s) Specified: Among drug overdose (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 1999-2014, available on the CDC WONDER Online Database, released 2015. Data compiled in the Multiple cause of death 1999-2014 were provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Retrieved between December 2015 - May 2016, from http://wonder.cdc.gov/mcd-icd10.html

<sup>\*</sup>Drug Overdose (Poisoning) Deaths: 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.

<sup>\*\*</sup>Drug Overdose (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. This is not a complete list of all drugs that may have been involved with these drug poisoning deaths.

<sup>^</sup>New York City: Comprised of Bronx, Kings, New York, Queens, and Richmond Counties.

<sup>\*\*\*</sup>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 <a href="http://wonder.cdc.gov/wonder/help/mcd.html">http://wonder.cdc.gov/wonder/help/mcd.html</a> for more information.

<sup>\*</sup>Opioids: Includes any of these MCOD codes T40.0-T40.4, or T40.6

# Table 6a: Drug Reports\* for Items Seized by Law Enforcement in *New York City*^ in 2015 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*	41,880	100.0%
COCAINE	13,989	33.4%
CANNABIS	12,333	29.4%
HEROIN	6,680	16.0%
OXYCODONE	1,744	4.2%
ALPRAZOLAM	1,660	4.0%
BUPRENORPHINE	772	1.8%
PHENCYCLIDINE	569	1.4%
METHAMPHETAMINE	532	1.3%
CLONAZEPAM	494	1.2%
METHADONE	369	0.9%
KETAMINE	358	0.9%
FENTANYL	214	0.5%
AMPHETAMINE	212	0.5%
HYDROCODONE	150	0.4%
ZOLPIDEM	147	0.4%
CODEINE	146	0.3%
PHENYLIMIDOTHIAZOLE ISOMER UNDETERMINED	146	0.3%
CAFFEINE	125	0.3%
BENZPHETAMINE	122	0.3%
MORPHINE	98	0.2%
DIAZEPAM	86	0.2%
3,4-METHYLENEDIOXYMETHAMPHETAMINE (MDMA)	69	0.2%
ANABOLIC STEROIDS	57	0.1%
MONOACETYLMORPHINE	54	0.1%
QUININE	48	0.1%
CATHINE/CATHINONE	42	0.1%
NO CONTROLLED DRUG IDENTIFIED	37	< 0.1%
METHAQUALONE	33	< 0.1%
OXYMORPHONE	33	< 0.1%
ACETAMINOPHEN	30	< 0.1%
HYDROMORPHONE	29	< 0.1%
LORAZEPAM	29	< 0.1%
LIDOCAINE	28	< 0.1%
METHYLPHENIDATE	27	< 0.1%
PHENACETIN	27	< 0.1%
PSILOCYBINE	26	< 0.1%
LYSERGIC ACID DIETHYLAMIDE (LYSERGIDE)	25	< 0.1%
DILTIAZEM	20	< 0.1%
3,4-METHYLENEDIOXYAMPHETAMINE (MDA)	19	< 0.1%
PEYOTE	19	< 0.1%
GAMMA HYDROXY BUTYL LACTONE	18	< 0.1%
PSILOCIN	16	< 0.1%

		1
Drug I dentified	Number (#)	Percent of Total Drug Reports* (#)
PROCAINE	15	< 0.1%
AB-CHMINACA (N-[(1S)-1-(AMINOCARBONYL)-2-METHYLPROPYL]-1- (CYCLOHEXYLMETHYL)-1H-INDAZOLE-3-CARBOXAMIDE)	14	< 0.1%
GLUTETHIMIDE	14	< 0.1%
N-BENZYLPIPERAZINE (BZP)	14	< 0.1%
3,4-METHYLENEDIOXYETHYLCATHINONE (ETHYLONE)	13	< 0.1%
AB-FUBINACA	11	< 0.1%
XLR-11 (1-(5-FLUOROPENTYL-1H-3-YL)(2,2,3,3- TETRAMETHYLCYCLOPROPYL)METHANONE)	11	< 0.1%
5-METHOXY-3,4-METHYLENEDIOXYAMPHETAMINE (MMDA)	10	< 0.1%
DIMETHYLSULFONE	8	< 0.1%
PHENTERMINE	8	< 0.1%
HYDROXYZINE	7	< 0.1%
ACETYLFENTANYL	6	< 0.1%
ESZOPICLONE	6	< 0.1%
MODAFINIL	6	< 0.1%
SIBUTRAMINE	6	< 0.1%
ZALEPLON	6	< 0.1%
1,4-BUTANEDIOL	5	< 0.1%
6-MONOACETYLMORPHINE	5	< 0.1%
FUB-PB-22 (QUINOLIN-8-YL-1-(4-FLUOROBENZYL)-1H-INDOLE-3- CARBOXYLATE)	5	< 0.1%
NM2201 (NAPHTHALEN-1-YL 1-(5-FLUOROPENTYL)-1H-INDOLE-3- CARBOXYLATE)	5	< 0.1%
DEXTROMETHORPHAN	4	< 0.1%
DIPHENHYDRAMINE	4	< 0.1%
METHANDRIOL	4	< 0.1%
METHORPHAN	4	< 0.1%
PHENDIMETRAZINE	4	< 0.1%
5F-AB-PINACA	3	< 0.1%
AB-PINACA	3	< 0.1%
BENZOCAINE	3	< 0.1%
DIHYDROMORPHINE	3	< 0.1%
DIMETHYLTRYPTAMINE (DMT)	3	< 0.1%
5-FLUORO AMB	2	< 0.1%
BARBITURATES, OTHER	2	< 0.1%
CHLORDIAZEPOXIDE	2	< 0.1%
DIHYDROCODEINE	2	< 0.1%
EPHEDRINE	2	< 0.1%
NOSCAPINE	2	< 0.1%
TEMAZEPAM	2	< 0.1%
TESTOSTERONE	2	< 0.1%
TRIAZOLAM	2	< 0.1%
ADB-PINACA	1	< 0.1%
ADD'L SUBSTAN.BELVD.PRESNT-NOT IDEN	1	< 0.1%
AMINOPYRINE	1	< 0.1%
BARBITAL	1	< 0.1%
BUTYLONE (B-KETO-N-METHYLBENZO-DIOXYLPROPYLAMINE)	1	< 0.1%

Drug Identified	Number (#)	Percent of Total Drug Reports* (#)
DIPYRONE	1	< 0.1%
GAMMA HYDROXY BUTYRATE	1	< 0.1%
IBUPROFEN	1	< 0.1%
MANNITOL	1	< 0.1%
MDMB-FUBINACA	1	< 0.1%
MEPROBAMATE	1	< 0.1%
METHOXETAMINE (MXE; 2-(3-METHOXYPHENYL)-2- (ETHYLAMINO)CYCLOHEXANONE)	1	< 0.1%
MIDAZOLAM	1	< 0.1%
PAPAVERINE	1	< 0.1%
PARAPHENALIA	1	< 0.1%
PENTYLONE (B-KETO-METHYLBENZODIOXOLYLPENTANAMINE)	1	< 0.1%
PROMETHAZINE	1	< 0.1%
STANOZOLOL	1	< 0.1%
THIAMINE	1	< 0.1%
TRENBOLONE	1	< 0.1%

#### NOTES:

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 18, 2016.

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

<sup>\*</sup>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 to December 2015.

# Table 6b: Drug Reports\* for Items Seized by Law Enforcement in New York City^ in 2015 DEA National Forensic Laboratory Information System (NFLIS) Drug Reports\* by Select Drug Categories of Interest Number of Drug-Specific Reports, Percent of Analyzed Drug Category Reports\*\*, & Percent of Total Analyzed Drug Reports

NPS Category Drug Identified	Number (#)	Percent of Drug Category** (%)	Percent of Total Reports (%)
Total Drug Reports*	41,880	100.0%	100.0%
Opioids Category	10,312	100.0%	24.6%
Heroin	6,680	64.8%	16.0%
Narcotic Analgesics	3,566	34.6%	8.5%
OXYCODONE	1,744	16.9%	4.2%
BUPRENORPHINE	772	7.5%	1.8%
METHADONE	369	3.6%	0.9%
FENTANYL	214	2.1%	0.5%
HYDROCODONE	150	1.5%	0.4%
CODEINE	146	1.4%	0.3%
MORPHINE	98	1.0%	0.2%
OXYMORPHONE	33	0.3%	< 0.1%
HYDROMORPHONE	29	0.3%	< 0.1%
ACETYLFENTANYL	6	< 0.1%	< 0.1%
DIHYDROMORPHINE	3	< 0.1%	< 0.1%
DIHYDROCODEINE	2	< 0.1%	< 0.1%
Narcotics	66	0.6%	0.2%
MONOACETYLMORPHINE	54	0.5%	0.1%
6-MONOACETYLMORPHINE	5	< 0.1%	< 0.1%
METHORPHAN	4	< 0.1%	< 0.1%
NOSCAPINE	2	< 0.1%	< 0.1%
PAPAVERINE	1	< 0.1%	< 0.1%
Synthetic Cannabinoids Category	56	100.0%	0.1%
AB-CHMINACA (N-[(1S)-1-(AMINOCARBONYL)-2-METHYLPROPYL]-1- (CYCLOHEXYLMETHYL)-1H-INDAZOLE-3-CARBOXAMIDE)	14	25.0%	< 0.1%
AB-FUBINACA	11	19.6%	< 0.1%
XLR-11 (1-(5-FLUOROPENTYL-1H-3-YL)(2,2,3,3- TETRAMETHYLCYCLOPROPYL)METHANONE)	11	19.6%	< 0.1%
FUB-PB-22 (QUINOLIN-8-YL-1-(4-FLUOROBENZYL)-1H-INDOLE-3-CARBOXYLATE)	5	8.9%	< 0.1%
NM2201 (NAPHTHALEN-1-YL 1-(5-FLUOROPENTYL)-1H-INDOLE-3- CARBOXYLATE)	5	8.9%	< 0.1%
5F-AB-PINACA	3	5.4%	< 0.1%
AB-PINACA	3	5.4%	< 0.1%
5-FLUORO AMB	2	3.6%	< 0.1%
ADB-PINACA	1	1.8%	< 0.1%
MDMB-FUBINACA	1	1.8%	< 0.1%
Synthetic Cathinones Category	15	100.0%	< 0.1%
Synthetic Cathinones	15	100.0%	< 0.1%
3,4-METHYLENEDIOXYETHYLCATHINONE (ETHYLONE)	13	86.7%	< 0.1%
BUTYLONE (ß-KETO-N-METHYLBENZO-DIOXYLPROPYLAMINE)	1	6.7%	< 0.1%
PENTYLONE (B-KETO-METHYLBENZODIOXOLYLPENTANAMINE)	1	6.7%	< 0.1%

NPS Category Drug Identified	Number (#)	Percent of Drug Category** (%)	Percent of Total Reports (%)
Piperazines Category	14	100.0%	< 0.1%
N-BENZYLPIPERAZINE (BZP)	14	100.0%	< 0.1%
Tryptamines Category	3	100.0%	< 0.1%
DIMETHYLTRYPTAMINE (DMT)	3	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 to December 2015.
- \*\*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 18, 2016.

# National Drug Early Warning System (NDEWS) Sentinel Community Site (SCS) Drug Use Patterns and Trends, 2016: 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.

# **Area Description Indicators**

American Community Survey (ACS): Population Estimates, by Demographic and Socioeconomic Characteristics

#### **Overview and Limitations**

Data on demographic, social, and economic characteristics are based on 2010–2014 American Community Survey (ACS) 5-Year Estimates. 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.<sup>a</sup>

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.<sup>a</sup>

#### Sources

**Data Sources:** Adapted by the NDEWS Coordinating Center from data from the American Community Survey; 2010–2014 American Community Survey 5-Year Estimates; Tables DP02, DP03, and DP05; using American FactFinder; http://factfinder2.census.gov; Accessed on [5/24/2016]; U.S. Census Bureau.

Overview/Methods/Limitations Sources: <sup>a</sup>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: <a href="https://www.census.gov/library/publications/2008/acs/general.html">https://www.census.gov/library/publications/2008/acs/general.html</a>

# **Substance Use Indicators**

National Survey on Drug Use and Health (NSDUH): Substance Use Among Population 12 Years or Older

#### **Overview and Limitations**

NSDUH is an ongoing 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.<sup>a</sup>

The **substate estimates** are derived from a hierarchical Bayes model-based small area estimation 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 to provide more precise estimates of substance use and mental health outcomes. [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.<sup>a</sup>

**Substate regions** 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 but 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 SCS are defined in the Notes sections of Tables 2a and 2b.<sup>a</sup>

#### **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 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: <a href="http://www.samhsa.gov/data/population-data-nsduh/reports?tab=38">http://www.samhsa.gov/data/population-data-nsduh/reports?tab=38</a>; Accessed on [8/5/2016].

**Overview/Methods/Limitations Sources:** <sup>a</sup>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 on [8/5/2016].

#### Youth Risk Behavioral Survey (YRBS): Substance Use Among Student Populations

#### **Overview and Limitations**

The Youth Risk Behavior Surveillance System (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. YRBSS also was developed to provide comparable national, State, territorial, and large urban school district data as well as comparable data among subpopulations of youths (e.g., racial/ethnic subgroups) and to monitor progress toward achieving national health objectives. The YRBSS monitors six categories of priority health risk behaviors among youth and young adults: 1) behaviors that contribute to unintentional injuries and violence; 2) tobacco use; 3) alcohol and other drug use; 4) sexual behaviors that contribute to unintended pregnancy and sexually transmitted infections; 5) unhealthy dietary behaviors; and 6) physical inactivity. We have included selected drug and alcohol survey questions from the YRBSS.

One component of the Surveillance System is the school-based Youth Risk Behavior Survey (YRBS) which includes representative samples of high school students in the nation, States, tribes, and select large urban school district across the country. The ongoing surveys are conducted biennially; each cycle begins in July of the preceding even-numbered year (e.g., in 2010 for the 2011 cycle) when the questionnaire for the upcoming year is released and continues until the data are published in June of the following even-numbered year (e.g., in 2012 for the 2011 cycle).<sup>3</sup>

For States and large urban school districts, the YRBSs are administered by State and local education or health agencies. Each State, territorial, tribal, and large urban school district YRBS employs a two-stage, cluster sample design to produce a representative sample of students in grades 9–12 in its jurisdiction. All the data presented in these tables area based on weighted data. Weighted results are representative of all students in grades 9–12 attending public schools in each jurisdiction. According to CDC, "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."

**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 2009, approximately 4% of persons aged 16–17 years were not enrolled in a high-school program and had not completed high school.<sup>b</sup> 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.<sup>c</sup>

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.<sup>d</sup>

#### **Notes about Data Terms**

**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), 1991–2013 High School Youth Risk Behavior Survey Data. Available at <a href="http://nccd.cdc.gov/youthonline/">http://nccd.cdc.gov/youthonline/</a>. Accessed on [3/12/2015].

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

<sup>a</sup>Methodology of the Youth Risk Behavior Surveillance System— 2013 Report in the Centers for Disease Control and Prevention (CDC) March 1, 2013 Morbidity and Mortality Weekly Report (MMWR); 62(1). Available at <a href="http://www.cdc.gov/mmwr/pdf/rr/rr6201.pdf">http://www.cdc.gov/mmwr/pdf/rr/rr6201.pdf</a>. Accessed on [4/10/2015].

<sup>b</sup>Chapman C, Laird J, Ifill N, KewalRamani A. Trends in high school dropout and completion rates in the United States: 1972–2009 (NCES 2012–006). Available at <a href="http://nces.ed.gov/pubs2012/2012006.pdf">http://nces.ed.gov/pubs2012/2012006.pdf</a>. Accessed on [2/11/2013].

<sup>c</sup>CDC. Health risk behaviors among adolescents who do and do not attend school—United States, 1992. MMWR 1994;43:129–32.

<sup>d</sup>Eaton DK, Lowry R, Brener ND, Grunbaum JA, Kann L. 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.

### **Treatment for Substance Use Disorders**

#### Treatment Admissions Data from Local Data Sources

#### **Overview and Limitations**

Drug treatment admissions data provide indicators of the health consequences of substance misuse and their impact on the treatment system. Treatment admissions 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 also 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.

Treatment admissions data are made available to the NDEWS Coordinating Center by the NDEWS Sentinel Community Epidemiologist for each SCS. Calendar year 2015 treatment admissions data were available for 10 of 12 SCSs. Calendar Year 2015 data were not available for the Chicago Metro SCS; Fiscal Year 2015 for Chicago (not entire Chicago metro area) is provided. No treatment data for the Atlanta Metro SCS was available for 2015. See below for site-specific information about the data.

#### Site-Specific Notes about 2015 Treatment Data and Sources of the Data

#### Atlanta Metro

Data Availability: Calendar year 2015 treatment data are not available for the Atlanta Metro SCS.

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, Pickents, Pike, Rockdale, Spalding, and Walton counties.

*Notes & Definitions:* 

Admissions: includes admissions to publicly-funded programs.

<u>Marijuana/Synthetic Cannabinoids:</u> 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: Only fiscal year data are available at this time.

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

**Notes & Definitions:** 

<u>Admissions</u>: 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).

<u>Prescription Opioids</u>: Includes oxycodone/hydrocodone, nonprescription methadone, and other opiates.

Source: Data provided to the NDEWS Chicago SCE by the Illinois Department of Substance Use.

#### Denver Metro

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

#### Notes & Definitions:

<u>Admissions</u>: Includes admissions 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.

<u>Prescription Opioids</u>: Includes nonprescription methadone and other opiates and synthetic opiates. <u>MDMA</u>: 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:** 

<u>Admissions</u>: Includes admissions to all 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.

<u>Prescription Opioids</u>: Includes oxycodone/hydrocodone, nonprescription methadone, and other opiates.

Source: Data provided to the King County (Seattle Area) NDEWS SCE by the Washington State Department of Social and Health Services (DSHS), Division Behavioral Health and Recovery, Treatment Report and Generation Tool (TARGET).

#### 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.

<u>Prescription Opioids</u>: 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 and 2014 data) and the California Department of Drug and Alcohol Programs (2011 and 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:

<u>Non-Crisis Admissions</u>: Includes non-crisis admissions to outpatient, inpatient, residential, and methadone maintenance treatment programs licensed in the state.

<u>Crisis Admissions</u>: 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.

<u>Prescription Opioids</u>: Includes nonprescription methadone, buprenorphine, other synthetic opiates, and OxyContin.

Benzodiazepines: Includes benzodiazepines, alprazolam, and rohypnol.

<u>Synthetic Stimulants</u>: 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 2016 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 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 4,810 in 2015. However, similar patterns of substance use were observed among those seeking treatment in 2014 and in 2015.

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** 

<u>Admissions</u>: 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, 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:

<u>Admissions</u>: Includes all admissions to programs receiving any public funds. Each admission does not necessarily represent a unique individual because some individuals are admitted to treatment more than once in a given period.

<u>2011–2013</u>: Data for Palm Beach County is not available for 2011–2013, therefore, 2011–2013 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 and the Broward Behavioral Health Coalition.

#### Texas

Notes & Definitions:

<u>Admissions</u>: Includes all admissions reported to the Clinical Management for Behavioral Health Services (CMBHS) of the Department of State Health Services (DSHS). 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.

<u>Synthetic Cannabinoids</u>: DSHS collects data on "other Cannabinoids," which may not include all the synthetic cannabinoids.

Females: Calculated using formula "1 minus Male %."

*Source:* Data provided to the Texas NDEWS SCE by the Texas Department of State Health Services (DSHS).

#### ❖ Wayne County (Detroit Area)

Notes & Definitions:

<u>Admissions</u>: 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. <u>Synthetic Stimulants</u>: 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:

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

<sup>b</sup>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

# **Consequences of Drug Use Indicators**

# **Drug Overdose (Poisoning) Deaths**

#### **Overview and Limitations**

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.<sup>1</sup> (Click here for more information about CDC WONDER Multiple Cause of Death data)

The drug-specific poisoning deaths presented in the 2016 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)<sup>2</sup> and are identified by using the World Health Organization's (WHO's) *International classification of diseases, 10th Revision* (ICD-10)<sup>3</sup> **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)<sup>a</sup> identified the limitations of using mortality data from NVSS to measure drug poisoning deaths:

<sup>a</sup> 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.

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-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)<sup>4</sup>

Warner et al.<sup>5</sup> 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.<sup>5</sup> found that the percentage of deaths with an "undetermined" manner of death ranged from 1% to 85%. 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." 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.<sup>5</sup> 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<sup>3</sup> (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<sup>3</sup>

(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: <a href="http://www.cdc.gov/drugoverdose/data/analysis.html">http://www.cdc.gov/drugoverdose/data/analysis.html</a>

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., state, and county resident populations. The year 2010 populations are April 1 modified census counts. The year 2011–2014 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)

5-Year Percent Change: Change in age-adjusted rate between 2010 and 2014.

**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 1999–2014*, available on the CDC WONDER Online Database, released 2015. Data compiled in the *Multiple cause of death 1999–2014* 

were provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Retrieved between December 16, 2015 and February 9, 2016, from http://wonder.cdc.gov/mcd-icd10.html

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

<sup>1</sup>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 <a href="http://wonder.cdc.gov/wonder/help/mcd.html">http://wonder.cdc.gov/wonder/help/mcd.html</a>

<sup>2</sup>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.

<sup>3</sup>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

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

<sup>5</sup>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.

# **Availability Indicators**

## **Drug Reports from the National Forensic Laboratory Information System (NFLIS)**

#### **Overview and Limitations**

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 DEA describes NFLIS as:

"a comprehensive information system that includes data from forensic laboratories that handle the Nation's drug analysis cases. The NFLIS participation rate, defined as the percentage of the national drug caseload represented by laboratories that have joined NFLIS, is currently over 97%. Currently, 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."

**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.<sup>a</sup>

#### **Notes about Reporting Labs**

Reporting anomalies were identified in several NDEWS SCSs in 2015 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 were included in the counts.
- ❖ Texas: The Austin Police Department laboratory closed, and no data were provided for 2015. The Houston Forensic Science Government Corporation (formerly Houston Police Department Crime Lab) lab was added in April 2014 and has been reporting data since then.

#### **Notes about Data Terms**

**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. The data presented are a total count of first, second, and third listed reports for each selected drug item seized and analyzed.

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—December 2015. Data were queried from the DEA's NFLIS Data Query System (DQS) on May 18, 2016 using drug item submission date.

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 butyrl fentanyl).

A complete list of drugs included in the Other Fentanyls category that were reported to NFLIS during the January to December 2015 timeframe includes:

3-METHYLFENTANYL

ACETYL-ALPHA-METHYLFENTANYL

**ACETYLFENTANYL** 

Beta-HYDROXYTHIOFENTANYL

**BUTYRYL FENTANYL** 

P-FLUOROBUTYRYL FENTANYL (P-FBF)

P-FLUOROFENTANYL

#### Sources

**Data Sources:** Adapted by the NDEWS Coordinating Center from data provided by the U.S. Drug Enforcement Administration (DEA), Office of Diversion Control, Drug and Chemical Evaluation Section, Data Analysis Unit. Data were retrieved from NFLIS Data Query System (DQS) May 18, 2016.

Overview/Methods/Limitations Sources: <sup>a</sup>Adapted by the NDEWS Coordinating Center from U.S. Drug Enforcement Administration (DEA), Office of Diversion Control. (2016) National Forensic Laboratory Information System: Midyear Report 2015. Springfield, VA: U.S. Drug Enforcement Administration. Available at: <a href="https://www.nflis.deadiversion.usdoj.gov/DesktopModules/ReportDownloads/Reports/NFLIS\_MidYear2015.p">https://www.nflis.deadiversion.usdoj.gov/DesktopModules/ReportDownloads/Reports/NFLIS\_MidYear2015.p</a>