Southeastern Florida (Miami Area) Sentinel Community Site (SCS) Drug Use Patterns and Trends, 2017

November 2017

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

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

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

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

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

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

The *Sentinel Community Site Drug Use Patterns and Trends* reports for each of the 12 Sentinel Community Sites and detailed information about NDEWS can be found on the NDEWS website at www.ndews.org.

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

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

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

The *SCS Snapshots* for each of the 12 Sentinel Community Sites and detailed information about NDEWS can be found on the NDEWS website at www.ndews.org.
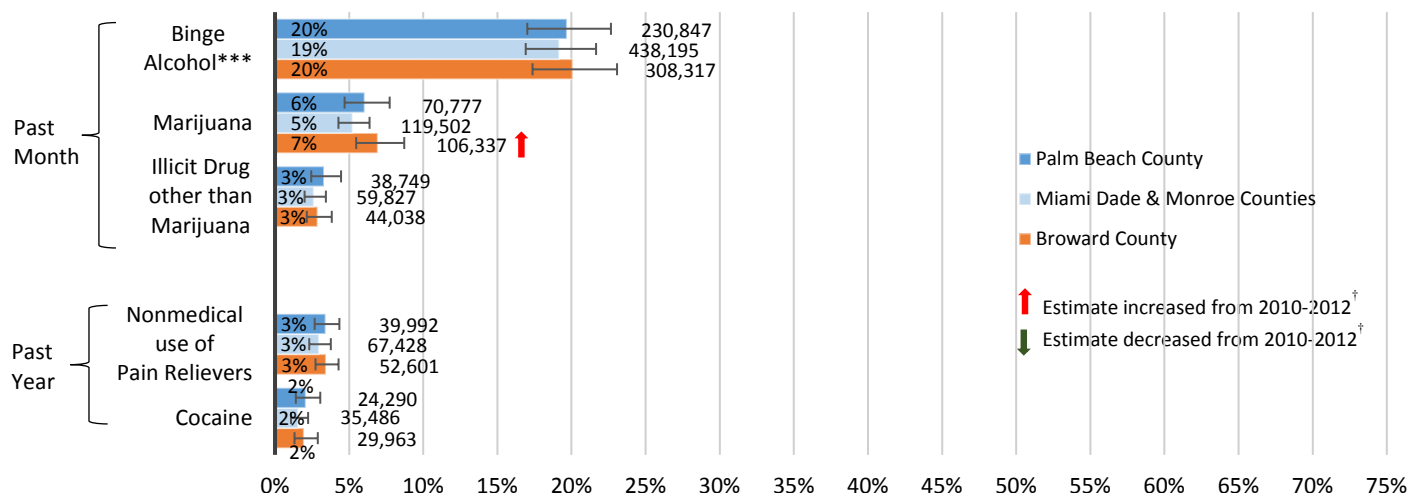
Southeastern FL (Miami Area) SCS Snapshot, 2017

Substance Use

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

Persons 12+ Years Reporting Selected Substance Use, Southeastern Florida Region^, 2012-2014

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

*U.S. Population: U.S. civilian non-institutionalized population. ^Southeastern Florida Region: NSDUH Regions Broward Circuit 17 (Broward County); Southeast Circuit 15 (Palm Beach County); and South Circuits 11 and 16 (Miami-Dade and Monroe Counties). **Estimated Number: Calculated by multiplying the prevalence rate and the population estimate of persons 12+ years (1,172,607 [Palm Beach County], 2,285,489 [Miami-Dade & Monroe Counties], and 1,536,230 [Broward County]) 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) Use of Selected Substances, Southeastern Florida^, 2015

Estimated Percent and 95% Confidence Interval
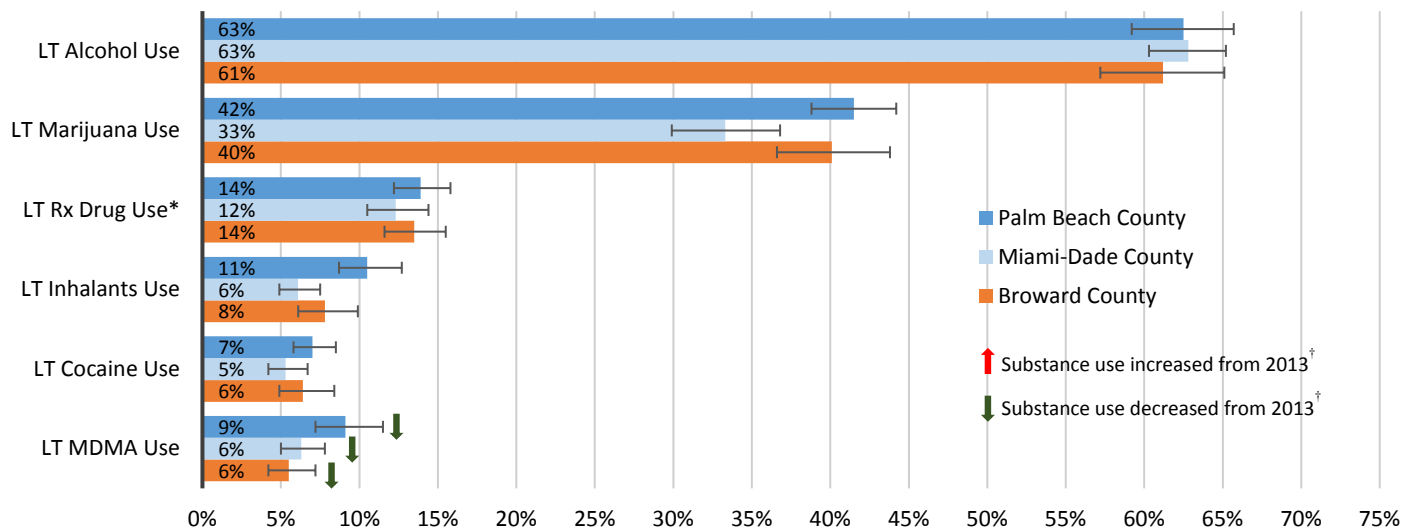
^Southeastern Florida: Data not available for region as a whole so data provided for each county separately.

*LT Rx Drug Use: Defined as ever taking prescription drugs without a doctor's prescription one or more times during their life.

†Statistically significant change: p<0.05 by t-test.

See *Sentinel Community Site (SCS) Data Tables* and *Overview & Limitations* section for more information regarding the data.
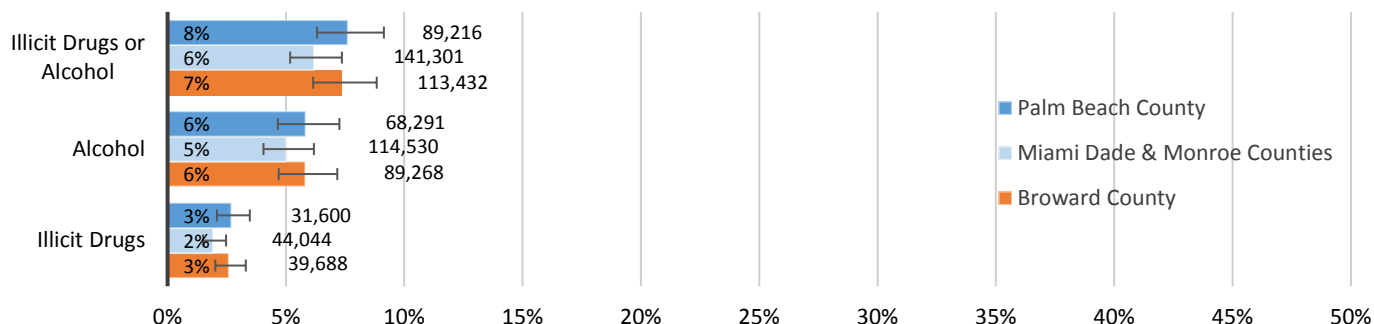
Source: Adapted by the NDEWS Coordinating Center from data provided by CDC, 1991-2015 High School YRBS data.

Substance Use Disorders and Treatment

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

Substance Use Disorders** in Past Year Among Persons 12+ Years, Southeastern Florida Region^, 2012-2014

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

Legend:
- Palm Beach County
- Miami Dade & Monroe Counties
- Broward County

Illicit Drugs or Alcohol:
- 8% — 89,216
- 6% — 141,301
- 7% — 113,432

Alcohol:
- 6% — 68,291
- 5% — 114,530
- 6% — 89,268
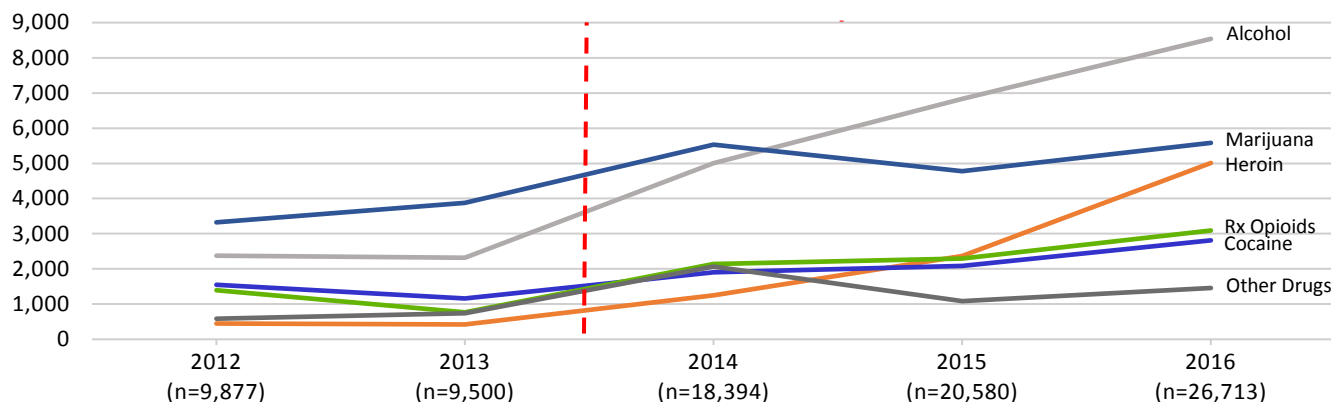
Illicit Drugs:
- 3% — 31,600
- 2% — 44,044
- 3% — 39,688

*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)*. ^Southeastern Florida Region: NSDUH Regions Broward Circuit 17 (Broward County); Southeast Circuit 15 (Palm Beach County); and South Circuits 11 and 16 (Miami-Dade and Monroe Counties). ***Estimated Number: Calculated by multiplying the prevalence rate and the population estimate of persons 12+ years (1,172,607 [Palm Beach County], 2,285,489 [Miami-Dade & Monroe Counties], and 1,536,230 [Broward County]) from Table C1 of the NSDUH Report.
Source: Adapted by the NDEWS Coordinating Center from data provided by SAMHSA, NSDUH. Annual averages based combined 2012 to 2014 NSDUH data.
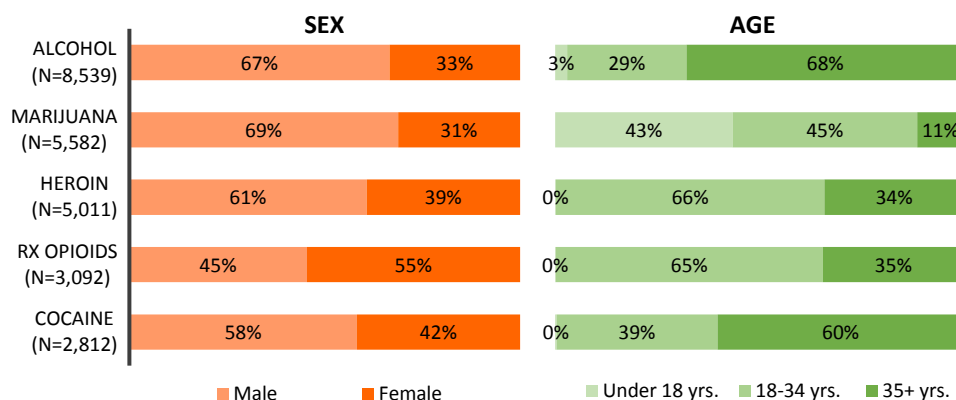
Treatment Admissions Data from Local Sources

Trends in Treatment Admissions*, by Primary Substance of Abuse, Southeastern Florida (Miami Area)^, 2012-2016

(n = Number of Treatment Admissions)

- 2012 (n=9,877)
- 2013 (n=9,500)
- 2014 (n=18,394)
- 2015 (n=20,580)
- 2016 (n=26,713)

Lines: Alcohol, Marijuana, Heroin, Rx Opioids, Cocaine, Other Drugs

Demographic Characteristics of Treatment Admissions*, Southeastern Florida (Miami Area)^, 2016

	SEX		AGE		
	Male	Female	Under 18 yrs.	18-34 yrs.	35+ yrs.
ALCOHOL (N=8,539)	67%	33%	3%	29%	68%
MARIJUANA (N=5,582)	69%	31%	43%	45%	11%
HEROIN (N=5,011)	61%	39%	0%	66%	34%
RX OPIOIDS (N=3,092)	45%	55%	0%	65%	35%
COCAINE (N=2,812)	58%	42%	0%	39%	60%

– – – *Treatment Admissions: Includes all admissions to programs receiving any public funds. Data for Palm Beach County is not available for 2012-2013, therefore 2012-2013 only includes data for Broward and Miami-Dade counties; 2014-2016 includes data for all three counties in the Miami MSA.
^Southeastern Florida (Miami Area): Includes the three counties of the Miami MSA – Broward, Miami-Dade, and Palm Beach counties. Percentages may not sum to 100 due to rounding. See *Sentinel Community Site (SCS) Data Tables* and *Overview & Limitations* section for more information regarding the data.
**Source**: Data provided to the Southeastern Florida NDEWS SCE by the Florida Department of Children and Families.

Drug Overdose (Poisoning) Deaths

National Vital Statistics System (NVSS) via CDC WONDER

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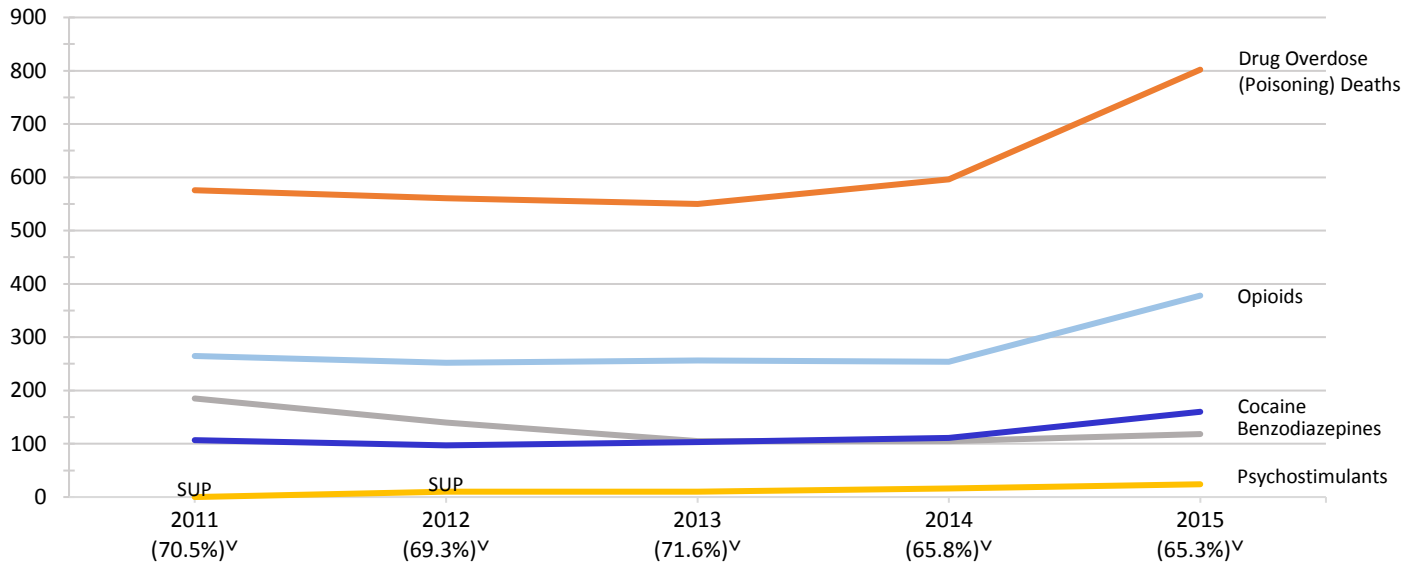
Trends in Opioid Overdose (Poisoning) Deaths*, by Opioid, Southeastern Florida (Miami Area)^, 2011–2015
(Number of Deaths, by Drug** and Percent of Drug overdose (Poisoning) Deaths with Drug(s) Specified^v)
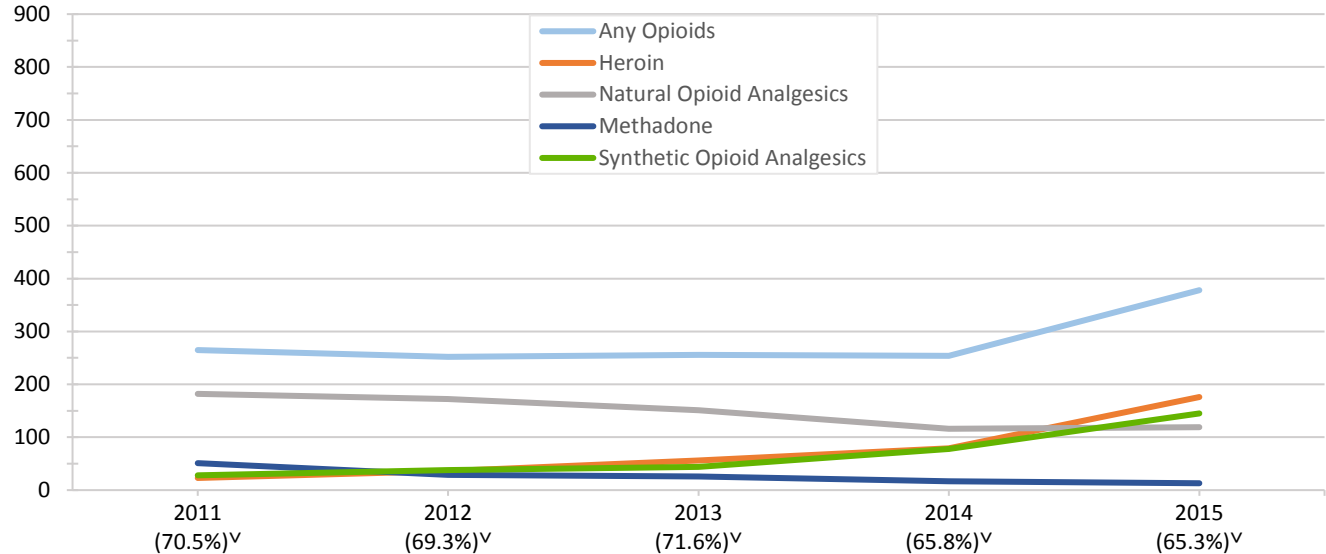
*Drug Overdose (Poisoning) Deaths: Defined as deaths with ICD-10 underlying cause-of-death (UCOD) codes: X40-X44, X60-X64, X85, and Y10-Y14. **Drug Overdose (Poisoning) Deaths, by Drug: Drug overdose (poisoning) deaths with ICD-10 multiple cause-of-death (MCOD) T-codes: Benzodiazepines (T42.4); Cocaine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

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

Law Enforcement Drug Seizures

National Forensic Laboratory Information System (NFLIS)

Drug Reports* for Items Seized by Law Enforcement in the Miami MSA^ in 2016
DEA National Forensic Laboratory Information System (NFLIS)

Top 10 Drug Reports and Selected Drug Categories

Drug Identified	Number (#)	Percent of Total Drug Reports (%)
TOTAL Drug Reports	21,306	100%
Top 10 Drug Reports		
Cocaine	7,794	36.6%
Cannabis	3,932	18.5%
Heroin	2,027	9.5%
Alprazolam	1,247	5.9%
No Controlled Drug Identified	1,192	5.6%
Fentanyl	612	2.9%
Oxycodone	574	2.7%
Methamphetamine	539	2.5%
Dibutylone (Beta-Keto-N,N-Dimethyl-1,3-Benzodioxolylbutanamine; Bk-Dmbdb)	249	1.2%
Amphetamine	235	1.1%
Top 10 Total	18,401	86.4%
New Psychoactive Substances (NPS) Drug Categories†		
Fentanyl and Other Fentanyls‡	829	3.9%
Synthetic Cathinones	664	3.1%
Synthetic Cannabinoids	118	0.6%
Tryptamines	16	<0.1%
2C Phenethylamines	9	<0.1%
Piperazines	7	<0.1%
Any Opioid†	4,001	18.8%

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

Fentanyl and Other Fentanyls‡
(n=829)

Fentanyl (74%)
Carfentanil (14%)
Furanyl Fentanyl (9%)
Acetylfentanyl (2%)
Fluoroisobutyrylfentanyl (1%)

Synthetic Cathinones
(n=664)

Dibutylone (38%)
alpha-PVP (28%)
N-Ethylpentylone (15%)
Ethylone (10%)
Pentylone (3%)

Synthetic Cannabinoids
(n=118)

FUB-AMB (26%)
5-Fluoro-ADB (19%)
AB-FUBINACA (17%)
XLR-11 (9%)
NM2201 (8%)

*Drug Report: Drug that is identified in law enforcement items, submitted to and analyzed by federal, state, or local forensic labs, and included in the NFLIS database. The NFLIS database allows for the reporting of up to three drugs per item submitted for analysis. The data presented are a total count of first, second, and third listed reports for each selected drug item seized and analyzed. The timeframe is January-December 2016.

^Miami MSA: Includes Broward, Miami-Dade, and Palm Beach Counties.   **Select NPS Drug Categories: The 3 most prevalent NPS drug categories.
Percentages may not sum to 100 due to either rounding, missing data and/or because not all possible categories are presented in the table.

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

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

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

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

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

This *SCE Narrative* contains the following sections:

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

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

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

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Highlights

- The number of **benzodiazepine** nonfatal hospital overdose poisoning cases (*N* = 1,047) exceeded those for either heroin (*N* = 759) or prescription opioids (*N* = 508) in the three counties of southeastern Florida during the first half of 2016.

- Rising numbers of **cocaine**-related deaths are attributed to its increased production and availability from Colombia as well as its use either knowingly or unknowingly with opioids and particularly nonpharmaceutical fentanyl analogs.

- **Marijuana** was the primary drug cited by 85% of addiction treatment patients younger than 18 years of age during calendar year 2016 across the southeastern Florida region.

- Indicators of **methamphetamine** abuse are low in the three-county region but have been steadily increasing since 2011 in the central part of Florida and in the counties of the Northwestern Panhandle and along the Gulf Coast.

- The decline of items seized by law enforcement in the Miami MSA and consequences from use of **synthetic cathinones** in 2016 seem to have been influenced by the ban of *alpha*-PVP ("flakka") and 115 other substances by China in October 2015.

- The number of **synthetic cannabinoid** crime lab cases in Florida as well as Poison Information Center exposure calls stabilized between 2015 and 2016 as use by high school students has continued to steadily decline since 2012.

- Deaths related to the nonmedical misuse of **prescription opioids** and particularly oxycodone have increased since their decline from 2011 to 2013 after Florida's crackdown on prescription drug diversion.

- All **heroin** deaths in the three-county region and across the state of Florida during 2016 involved at least one or more other drugs detected in the decedents demonstrating the intentional or unintentional polysubstance abuse patterns of the opioid epidemic.

- **Nonpharmaceutical fentanyl** from foreign clandestine labs is the major factor for the dramatic escalation in opiate deaths related to adulterated heroin and counterfeit medications.

Drug Use Patterns and Trends

BENZODIAZEPINES

- The number of benzodiazepine nonfatal hospital overdose poisoning cases (N = 1,047) exceeded those for either heroin (N = 759) or prescription opioids (N = 508) in the three counties of southeastern Florida during the first half of 2016.

The number of benzodiazepines detected in deceased persons in Florida peaked at 6,188 occurrences in 2010 prior to various efforts to reduce prescription drug diversion. That number then declined steadily to 4,304 in 2013 and modestly increased to 4,604 occurrences in 2015 and is projected to increase to 4,688 in 2016 based on the total from the first six months of that year (Figure 1). Alprazolam was the number one benzodiazepine detected representing 36% of the 2016 reports followed by nordiazepam (14%), diazepam (13%), clonazepam (10%), and temazepam (9%). County-level medical examiner data are not available for benzodiazepine-related deaths; nevertheless, in the three Southeast Florida counties (Broward, Miami-Dade, and Palm Beach), alprazolam was detected in 242 deceased persons in the first half of 2016 with 46% of those cases considered a cause of death and 95% found in combination with some other drug.

Figure 1. Number of Nonmedical Rx Benzodiazepine Reports Detected Among Deceased Persons in Florida, 2005–2016
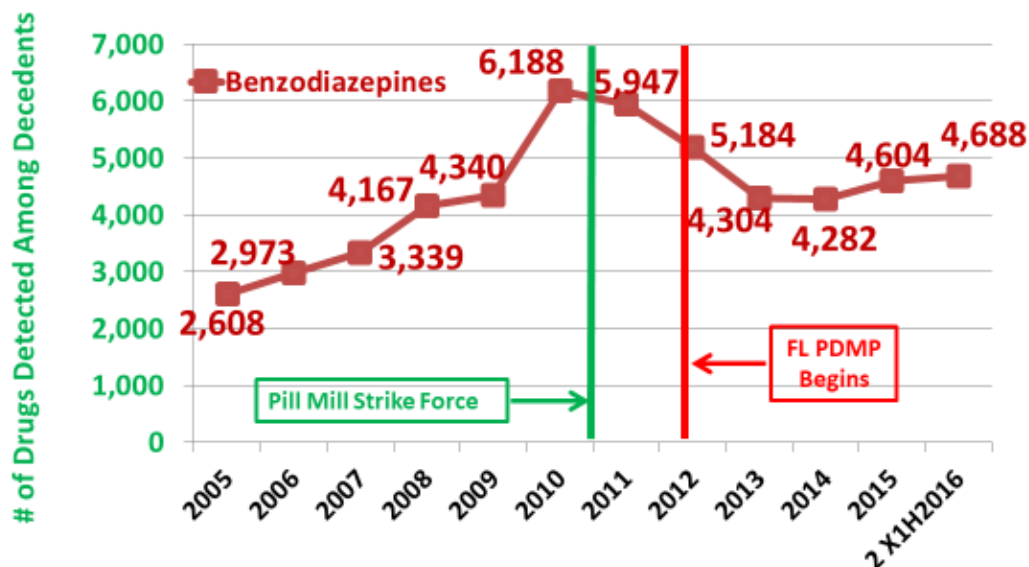
Source: FDLE – Drugs Identified In Deceased Persons by Florida Medical Examiners
Jan 2005 - Jun 2016 Reports

Across all of Florida, benzodiazepine hospital overdose poisonings totaled 4,130 in the first six months of 2016 with 37% of those overdoses having occurred among emergency department patients and 63% being admitted as inpatients. The three southeastern counties reported 1,047 of those cases with 40%

of those patients having been discharged from an emergency department and 60% being admitted as inpatients. Benzodiazepines were not categorized as a separate class of drugs in 2016 addiction treatment records for the three counties. In 2015, however, they were cited by 483 clients across the region as their primary drug problem accounting for 2% of all admissions, including those for alcohol.

According to the National Forensic Laboratory Information System (NFLIS) database (referred to hereafter as crime lab reports), there were 1,446 benzodiazepine reports for items seized by law enforcement in the Miami MSA in 2016, representing 7% of all substances analyzed. Alprazolam accounted for 86% of the benzodiazepine crime lab cases.

COCAINE/CRACK

- Rising numbers of cocaine-related deaths are attributed to its increased production and availability from Colombia as well as its use either knowingly or unknowingly with opioid and particularly nonpharmaceutical fentanyl analogs.

Cocaine-related deaths increased 42% between 2015 and 2016 in the Southeast Florida region with the sharpest rise reported in Palm Beach County (Figure 2). The drug was considered the cause of death in 40% of the Miami-Dade County cases during the first half of 2016 as well as in 76% of those in Broward and in 67% of those in Palm Beach County. Many deaths involved polydrug use with 89% of the 2016 cases having one or more other substances present at the time of death. There were only two cocaine-related decedents younger than 18 years of age, 14% were 18–25, 26% were 26–34, 37% were 35–50, and 22% were older than 50 years of age.

Figure 2. Number of Cocaine Reports Detected Among Decedents in Southeast Florida, 2001–2016
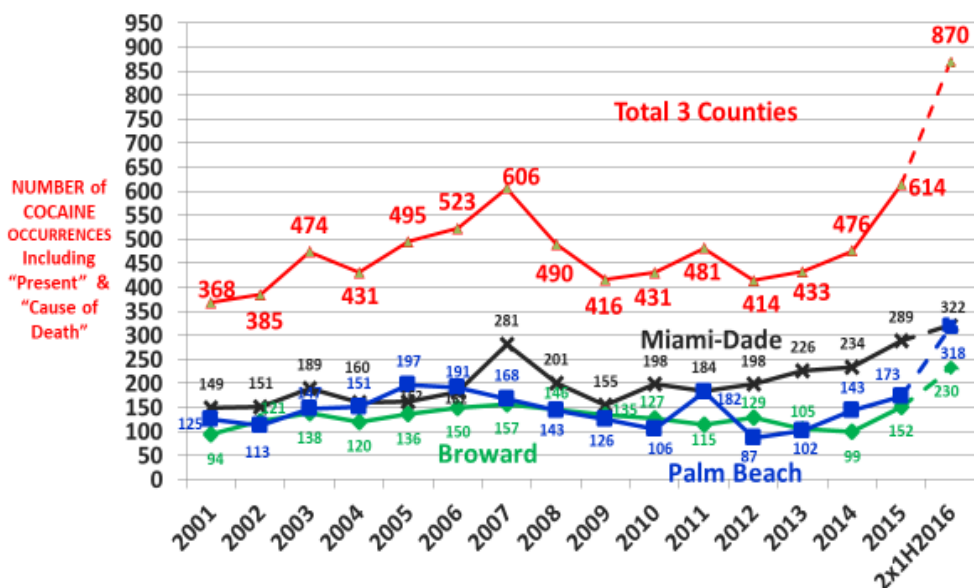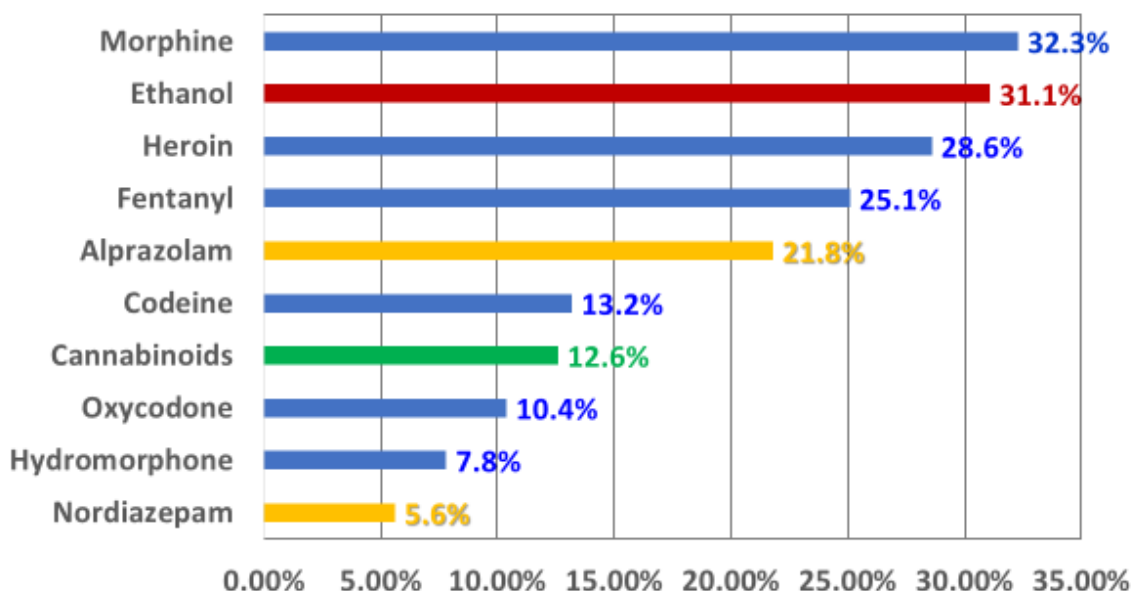

SOURCE: *Florida Medical Examiners Commission Reports Jan 2001-Jun 2016*

Polysubstance abuse of opioids with cocaine either knowingly or unintentionally with nonpharmaceutical fentanyl-adulterated cocaine is considered a key factor in the rise of cocaine-related

deaths nationally and in Florida. A review of deaths caused by cocaine in Florida during 2015 revealed 32% were also found with morphine, which most likely was heroin, along with another 29% where heroin itself was identified. Fentanyl was found in 25% of the 2015 Florida cocaine-induced deaths. Other opioids detected included codeine in 13% of the cases, oxycodone in 10%, and hydromorphone in 8%. Nonopioid drugs found present in the 2015 cocaine-caused deaths included ethanol in 31% of the cases, alprazolam in 22%, cannabinoids in 13%, and nordiazepam in 6% (Figure 3).

Figure 3. Top 10 Co-Occurring Substances Among Florida Cocaine-Caused Deaths in 2015

Sources: Florida Medical Examiners Commission 2015 Report and Florida drug-Related Outcomes Surveillance and Tracking (FROST) System

Primary addiction treatment admissions for cocaine totaled 2,812 patients in the three-county region during 2016 accounting for 10.5% of all admissions. Males accounted for 58% of these clients with crack cocaine specified by 59% of all cocaine patients. Only 10, or less than 1%, of the admissions were for someone younger than 18, 13% were 18–25, 26% were 26–34, and 60% were age 35 or older. Smoking was the route of administration reported by 49% of the clients with intranasal sniffing cited by 37% and injection cited by 5%. The remaining 10% reported oral or other/unknown routes of administration.

The 7,794 cocaine crime lab cases in the Southeast Florida counties during 2016 accounted for 37% of all drug reports in the three southeastern Florida counties with cocaine maintaining the number one ranking of crime lab reports it has held for more than three decades.

MARIJUANA

- Marijuana was the primary drug cited by 85% of addiction treatment patients younger than 18 years of age during calendar year 2016 across the southeastern Florida region.

Primary addiction treatment admissions for marijuana totaled 5,582 patients across the three-county region in 2016 accounting for 21% of all admissions. In 2014, marijuana was the primary drug cited by 30% of treatment clients in the three counties of the Southeast Florida region. Then in 2015, it accounted for 23% of clients. The declining proportion of marijuana treatment admissions is a result of increasing rates of primary heroin admissions and fewer adolescent clients referred by the juvenile justice system with the institution of civil citations in lieu of arrests. Males accounted for 69% of the 2016 clients. Youth younger than 18 years of age totaled 2,424 or 43% of the marijuana admissions, 28% were 18–25, 17% were 26–34, and 12% were age 35 or older.

The 3,932 cannabis crime lab cases in the Southeast Florida counties during 2016 accounted for 18% of all drug reports, which was ranked second among all other drugs.

Prevalence rates of current (past 30-day) marijuana use as reported to the Florida Youth Substance Abuse Survey (FYSAS) are shown in the graph below for the three Southeast Florida counties from 2004 to 2016. Palm Beach County students had reported the highest rates of marijuana use peaking in 2010 at 15.8% before declining in 2012 and increasing again in 2014 to 14.8% of middle and high school students then sharply declining to 10% in 2016. Miami-Dade and Broward counties had reported more similar findings across the 12-year period peaking in 2012 before declining to 8.6% for Miami-Dade by 2016 while stabilizing at 11.2% for Broward students (Figure 4).

Figure 4. Current (Past 30-Day) Marijuana Use Among Southeastern Florida Middle and High School Students, 2004–2016
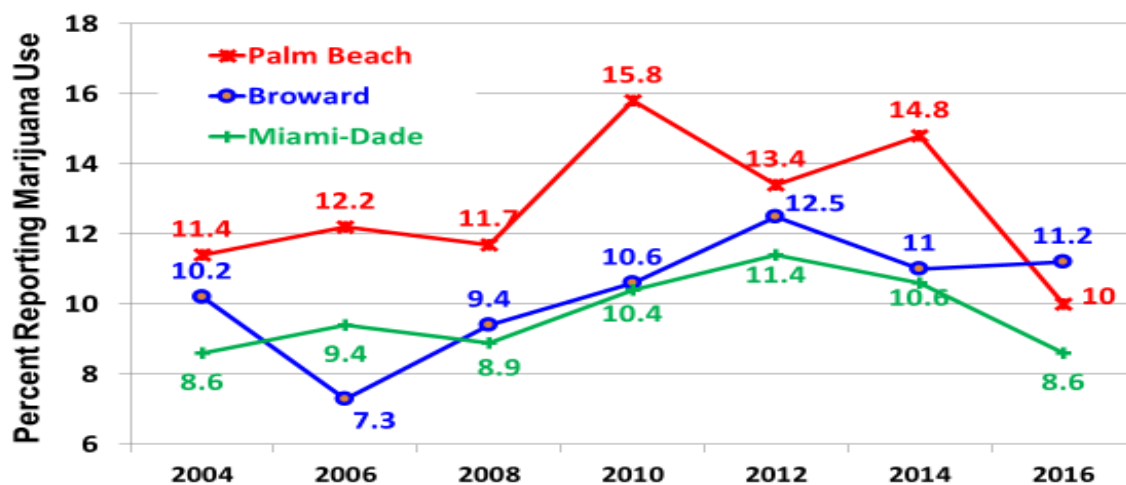
Source: Florida Youth Substance Abuse Surveys 2004-2016

METHAMPHETAMINE

- Indicators of methamphetamine abuse are low in the three-county region but have been steadily increasing since 2011 in the central part of Florida and in the counties of the Northwestern Panhandle and along the Gulf Coast.

Significantly higher rates of methamphetamine treatment admissions and crime lab cases are reported in other areas of Florida than in the southeastern region, particularly in the Tampa Bay, Western Panhandle, and Orlando areas. According to the Florida Department of Law Enforcement and the South Florida High Intensity Drug Trafficking Area, most methamphetamine being used in Florida is produced in Mexico. Domestic laboratory production in Florida primarily seems to be in the northern and central parts of the state where the 2-liter soda bottle "shake-and-bake" method is used to yield a small amount of methamphetamine for personal use by the "cook" and for sharing with those who may have helped supply the precursor, pseudoephedrine.

Methamphetamine was detected among 237 deceased persons during the first half of 2016 statewide in Florida, compared with 130 in the first half of 2015 and 305 for the full year of 2015 up from 217 in 2014 (Figure 5). Only the state totals of methamphetamine- and amphetamine-related deaths are available and are not reported for counties or regions. Methamphetamine was considered a cause of death in 114 (48%) of the cases during the first half of 2016. There were also 266 reports of amphetamine detected among decedents across Florida in the first six months of 201, compared with 179 such occurrences in the first half of 2015. Amphetamine was considered the cause of death in 73 (or 27%) of the cases in the first half of 2016.

Figure 5. Number of Methamphetamine-Related Deaths in Florida, 2000–2016
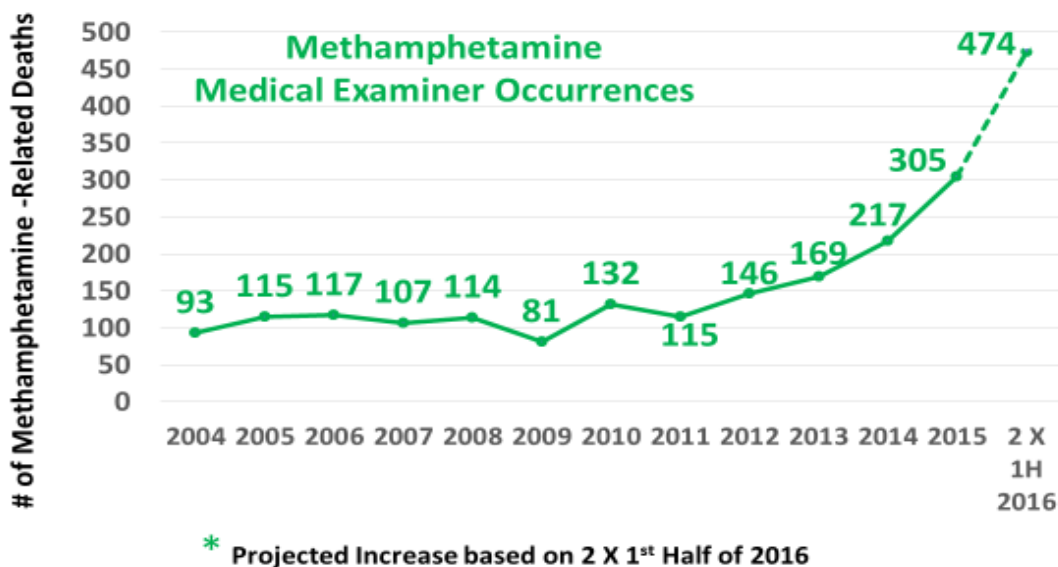
* Projected Increase based on 2 X 1ˢᵗ Half of 2016
Source: Florida Medical Examiners Commission Jan 2004-Jun 2016 Reports

There were 101 primary treatment admissions (1.3% of all admissions) for methamphetamine in Broward County, 62 in Miami-Dade County (0.8% of all admissions), and 53 in Palm Beach County (0.4% of all admissions) during 2016. Methamphetamine was the primary drug reported by 4% of all clients statewide in 2016. Males accounted for 65% of the 216 methamphetamine clients across the region, and 53% were between 18 and 34 years of age, whereas 46% were age 35 and older. Smoking methamphetamine was the route of administration reported by 47% of these clients with intranasal sniffing cited by 15% and injection cited by 25%. The remaining 13% reported oral or other/unknown routes of administration. Private treatment counselors continued to report serious methamphetamine abuse problems among men

who have sex with men and who are often not included in the number of clients from treatment programs receiving public funding. These clients are at high risk of infectious disease transmission related to both unprotected sexual activity and injecting drug use.

A total of 45 primary treatment admissions for amphetamine were reported in Broward County, 10 in Miami-Dade County, and 15 in Palm Beach County during 2016. Females accounted for 63% of the 70 amphetamine clients across the region in 2016, and 79% were between 18 and 34 years of age, whereas 21% were age 35 and older.

There were 539 methamphetamine crime laboratory reports, or 2.5% of the 21,306-total primary, secondary, and tertiary NFLIS reports for Miami-Dade, Broward, and Palm Beach counties combined in 2016. Methamphetamine ranked eighth among all substances analyzed in the three counties in 2016 as it had in 2015. Also, 235 amphetamine crime laboratory reports were filed, or 1% of the 2016 total ranking tenth among all substances.

NEW PSYCHOACTIVE SUBSTANCES (OTHER THAN OPIOIDS)

- The decline of crime lab reports and consequences from use of synthetic cathinones in 2016 seem to have been influenced by the ban of *alpha*-PVP ("flakka") and 115 other substances by China in October 2015.

- The number of synthetic cannabinoid crime lab cases in Florida as well as Poison Information Center exposure calls stabilized between 2015 and 2016 as use by high school students has continued to steadily decline since 2012.

Synthetic Cathinones

Substitute cathinones are potent stimulants with varying degrees of hallucinogenic properties. Cathinones are chemically designed to mimic but be more potent than the stimulant in the khat plant found in East Africa and the Middle East. The first substitute cathinones to appear were often referred to as "bath salts" and have been banned nationally and in Florida as well as in many other nations. The most prevalent substitute cathinones in Florida have been methylone, ethylone, and diButylone, all of which have been falsely sold as "pure MDMA" or "Mollys" for several years. The most dramatic problems associated with synthetic cathinones was with *alpha*-PVP or "flakka" particularly in Broward County from late 2014 and throughout 2015.

There were 132 synthetic cathinone deaths in all of Florida during 2013, 134 in 2014, and 223 in 2015. There were an additional 41 synthetic cathinone medical examiner occurrences statewide in the first half of 2016 with 20 attributed as being a cause of death (Figure 6).

Figure 6. Number of Synthetic Cathinone Deaths in Florida, January 2013–June 2016
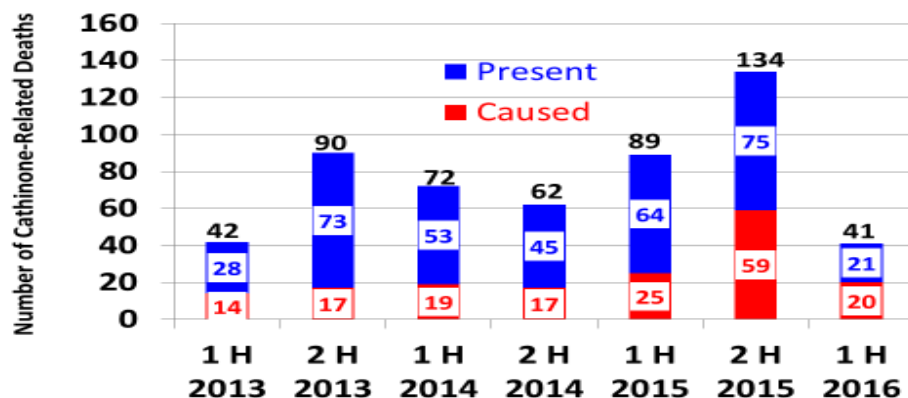
An epidemic of the synthetic cathinone, *alpha*-PVP, the drug sold as "flakka" erupted in Broward County in September 2014. Consequences of its abuse rapidly escalated in 2015 fueling the increase of cathinone deaths that year with the drug also linked to thousands of hospital emergency cases many from the excited delirium syndrome. Broward County had more crime lab cases of *alpha*-PVP than any other county in the nation.

In part because of worldwide negative media coverage about flakka as well as diplomatic efforts, the government of China banned *alpha*-PVP and 115 other novel psychoactive substances on October 1, 2015. By the end of 2015, hospital emergency department cases, arrests, and treatment admissions related to *alpha*-PVP abuse dramatically declined. By early 2016, it had practically disappeared from street drug sales.

Sold in quantities as small as 1/10th of a gram for as little as $3.00 to $5.00, it was highly profitable for the dealers whose actual cost was very low. *Alpha*-PVP was sold over the Internet from China for about $1,500 per kilogram and shipped by worldwide express services to local mid-level dealers in packages containing from 1 to 5 kilograms. A single kilogram provided up to 10,000 doses at a 1/10th of a gram, which sold for $5.00 each yielding up to $50,000 in sales or a profit of $48,500.

There were 63 *alpha*-PVP deaths in Broward County from September 27, 2014 to December 11, 2015 and none since that date. There were also 17 *alpha*-PVP deaths in Palm Beach County between May 5 and October 15, 2015. Miami-Dade had less *alpha*-PVP consequences than the two counties to its north but higher levels of ethylone cases sold as "Molly."

There were 70 Poison Information Center exposure calls for synthetic cathinones in Florida during 2016 compared with 145 in 2015 and only 5 in 2014. During the first four months of 2017, there were 11 exposure calls for cathinones statewide. Exposure calls involve cases usually from a hospital emergency department where a patient is experiencing adverse consequences after smoking or ingesting a substance. The 2016 total includes 11 calls from Miami-Dade County, 9 calls from Broward County, and

6 from Palm Beach County. During the first four months of 2017, there was one poison exposure call each from Miami-Dade and Broward counties and none from Palm Beach County.

There were 1,087 crime lab reports for synthetic cathinones during 2016 in Florida (not including MDMA as shown in Figure 7), a 72% decrease from 3,875 in 2015 compared with previous year totals of 3,530 in 2014, 3,104 in 2013, 1,310 in 2012, and 373 in 2011. Among the 2016 crime lab reports, there were 454 for DiButylone as well as 332 for *alpha*-PVP, 186 for ethylone, and 115 for N-Ethylpentylone. DiButylone, Ethylone, and N-Ethylpentylone were usually sold as "Molly" capsules or powder. There were also 236 crime lab cases for MDMA in 2016.

Figure 7 charts the ever changing synthetic cathinones detected in Florida crime labs from 2010 to 2016. MDMA was the major club drug sold as Ecstasy in 2010 with 1,071 Florida crime lab cases that year. By 2013, real MDMA had been largely replaced by Methylone, which was sold as Mollys and falsely promoted as "pure MDMA." In mid-2014, China banned Methylone, which then practically disappeared in Florida crime lab cases the following year as illustrated by the red portions of Figure 7. In 2014 and 2015, Ethylone had replaced Methylone as the major Molly drug and alpha-PVP or Flakka escalated to be the major cathinone in Florida. After their ban by China in October 2015, both Flakka and Ethylone dramatically declined in 2016 as both DiButylone and N-Ethylpentylone arrived as the new Mollys. Neither of those two new drugs had been included in the Chinese ban. These data offer some of the first evidence that demonstrates the success of China's action.

Figure 7. Numbers of Synthetic Cathinone and MDMA Crime Lab Reports in Florida, 2010–2016

	2010	2011	2012	2013	2014	2015	2016
☐ Dibutylone							454
■ Ethylone	0	1	5	4	1,426	1,827	186
■ Methylone	1	123	739	2,813	1,042	29	0
■ Alpha-PVP	0	1	82	46	781	2,012	332
⊠ Other Cathinones*	19	248	484	241	281	7	115
■ MDMA	1071	674	182	115	136	158	236
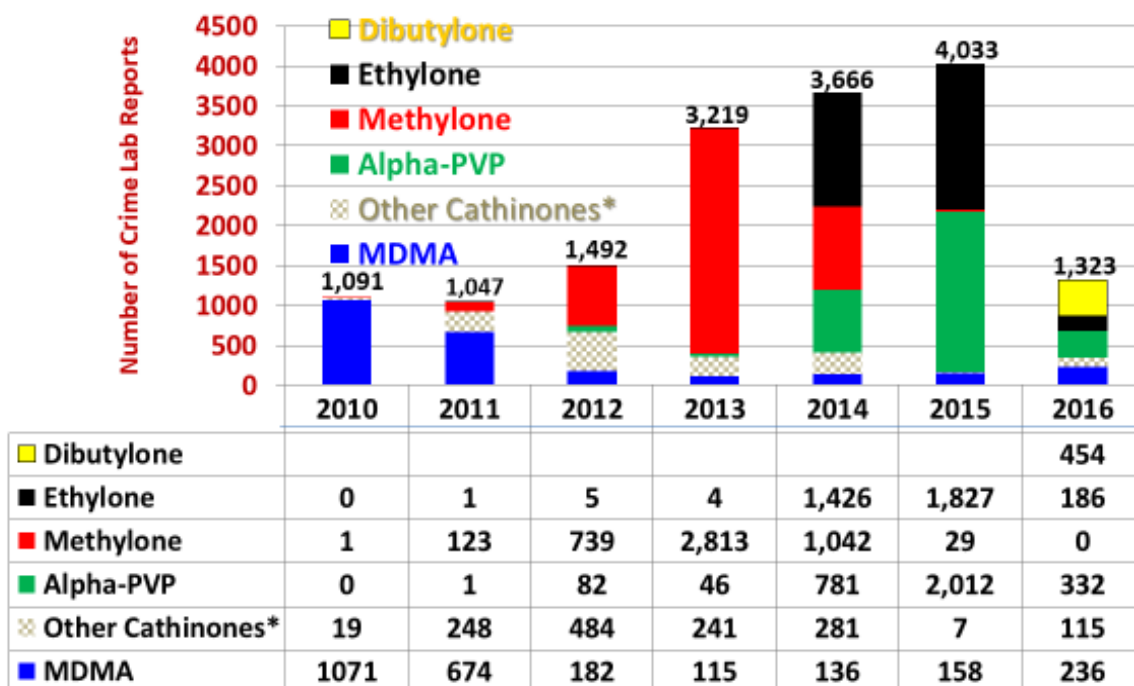
*Note: The 115 Other Cathinones in 2016 were all N-Ethylpentylone

Source: US DEA - National Forensic Laboratory System Data Queried May 22, 2017

Across all of Florida, there were 172 Poison Information Center exposure calls for hallucinogenic amphetamines during 2016 compared with 199 in 2015 and 321 in 2014. Hallucinogenic amphetamines include drugs sold as "Ecstasy." The 2016 total includes 45 calls from Miami-Dade County, 7 calls from Broward County, and 10 from Palm Beach County. During the first four months of 2017, there were 67 exposure calls for hallucinogenic amphetamines in Florida including 20 calls from Miami-Dade County, 6 calls from Broward County, and 1 from Palm Beach County.

Synthetic Cannabinoids

The availability of unregulated synthetic cannabinoids increased via retail sales throughout 2010 and 2011. Their use was mostly among those who were subject to frequent drug testing that did not identify these products. Nevertheless, drug tests are now available for the detection of some but not all of these ever-changing substances. Many synthetic cannabinoids are now illegal.

There were 193 exposure calls statewide to Florida Poison Information Centers in 2016 for various unspecified synthetic cannabinoids representing a 30% decline from the 276 calls in 2015. The 2016 total included 14 from Miami-Dade, 2 from Broward County, and none from Palm Beach County. There were 175 calls in 2014, which was fewer than the 194 calls in 2013, 537 calls in 2012, and 517 in 2011. During the first four months of 2017, there were 45 poison exposure calls for synthetic cannabinoids in all of Florida, including 3 from Miami-Dade, 2 from Broward, and none from Palm Beach County.

There were 10 synthetic cannabinoid deaths during the first half of 2016 in Florida with 7 occurrences being considered a cause of death compared with 23 total occurrences in the full calendar year 2015, of which 11 were considered to be "a cause of death."

There were 1,816 crime lab reports for synthetic cannabinoids during 2016 in Florida, which is a 55% increase from the 1,175 reports in 2015. Synthetic cannabinoid crime lab reports totaled 1,996 in 2014 after peaking in 2013 with 2,087 cases, up from 1,290 in 2012, 301 in 2011, and just 9 in 2010. Among the 1,816 synthetic cannabinoid reports in 2016, 1,177 or 65% were for 5-fluro-ABD, which appeared for the first time that year. There were also 230 crime lab reports for FUB-AMB in 2016, 228 for AB-Fubinaca, and 181 for XLR-11 representing a 76% decline for that substance from the 740 reports in 2015 (Figure 8).

There were 17 different synthetic cannabinoids detected by crime laboratories in the three southeastern Florida counties during calendar year 2016. Their specific chemical names and number of cases as reported by the U.S. DEA NFLIS are shown in Figure 9.

Figure 8. Number of Synthetic Cannabinoid Crime Lab Cases in Florida, 2010–2016

	2010	2011	2012	2013	2014	2015	2016
■ FUB-AMB							230
■ 5-Fluro-ABD							1,177
■ AM-2201		121	853	50	17	0	0
■ XLR-11			95	1219	862	740	181
■ AB-FUBINACA			0	125	537	152	228
■ PB-22			0	254	209		
■ UR-144			46	190	65		
■ AB-PINACA			0	55	194		
■ Various JWH	9	180	271	39	23		
░ AB-CHMINACA						283	
■ All Other Cannabinoids			25	155	89		
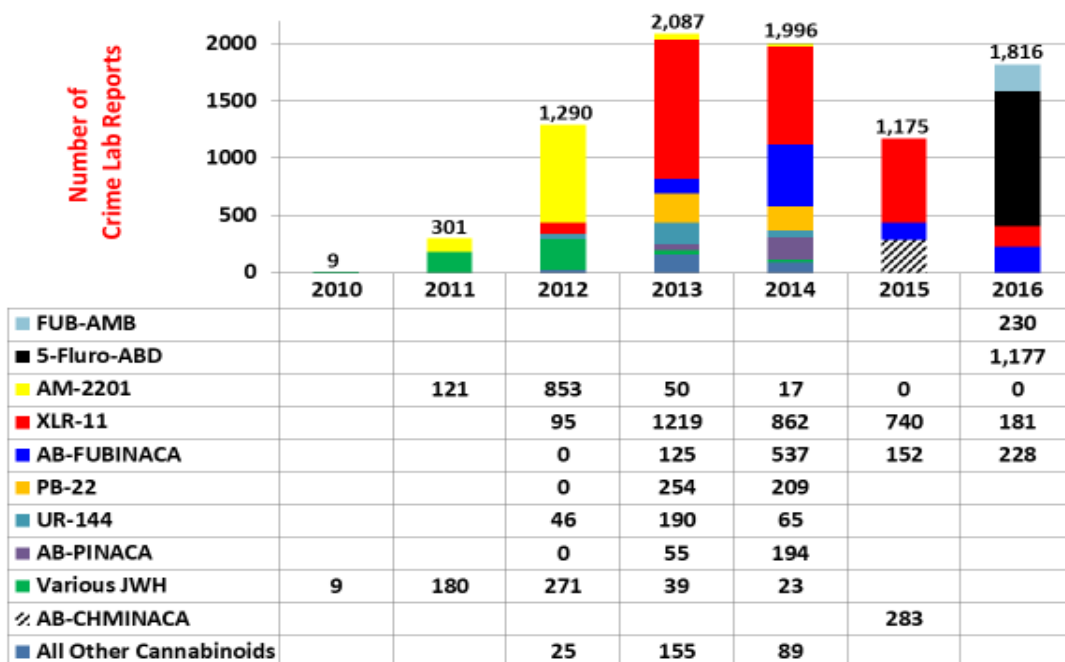
Source: US DEA - National Forensic Laboratory System Data Queried May 22, 2017

Figure 9. Number of NFLIS Synthetic Cannabinoid Crime Lab Cases in Southeastern Florida, 2016

Synthetic Cannabinoid Crime Lab Cases in Southeastern Florida in 2016	# of Cases
FUB-AMB	31
5-FLUORO-ADB	22
AB-FUBINACA	20
XLR-11 (1-(5-FLUOROPENTYL-1H-3-YL)(2,2,3,3-TETRAMETHYLCYCLOPROPYL)METHANONE)	10
NM2201 (NAPHTHALEN-1-YL 1-(5-FLUOROPENTYL)-1H-INDOLE-3-CARBOXYLATE)	9
AM-2201 (1-(5-FLUOROPENTYL)-3-(1-NAPHTHOYL)INDOLE)	5
JWH-018 (1-PENTYL-3-(1-NAPHTHOYL)INDOLE)	4
MMB2201	4
CANNABIDIOL	3
5-FLUORO AMB	2
AB-CHMINACA (N-[(1S)-1-[AMINOCARBONYL]-2-METHYLPROPYL]-1-(CYCLOHEXYLMETHYL)-1H-INDAZOLE-3-CARBOXAMIDE)	2
ADB-FUBINACA (N-(1-AMINO-3,3-DIMETHYL-1-OXOBUTAN-2-YL)-1-(4-FLUOROBENZYL)-1H-INDAZOLE-3-CARBOXAMIDE)	1
AKB48 N-(5-FLUOROPENTYL)	1
CANNABINOL	1
JWH-122 (1-PENTYL-3-(4-METHYL-1-NAPHTHOYL)INDOLE)	1
MAB-CHMINACA (ADB-CHMINACA)	1
SDB-005	1
Total	**119**

The FYSAS has tracked use of synthetic cannabinoids among Florida high school students since 2012. Past-30-day use declined significantly between 2012 and 2016 in the three southeastern Florida counties as well as across the state (Figure 10). The most common usual source of synthetic cannabinoid cited by 40% of high school students statewide who have used it was "a convenience store or gas station" followed by 33% who reported "someone gave it to me."

Figure 10. Past 30-Day Prevalence of Synthetic Cannabinoid Use by High School Students in Three Southeastern Florida Counties, 2011–2016
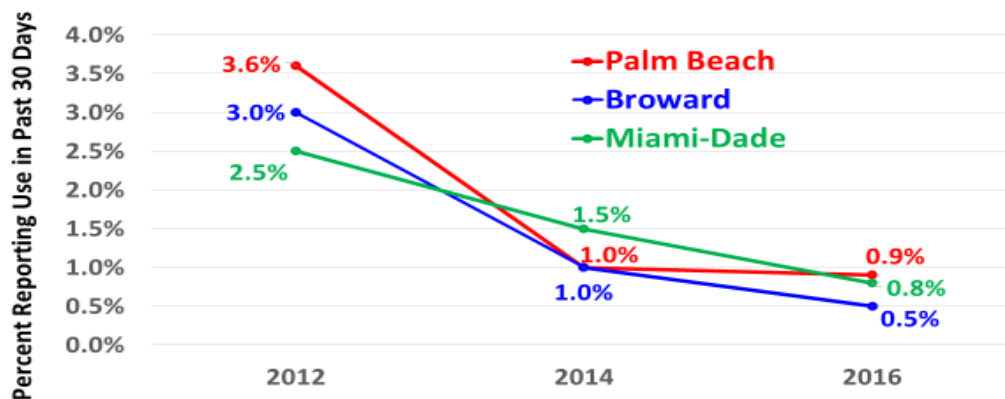
Source: Florida Youth Substance Abuse Survey 2012 - 2016

OPIOIDS

- Deaths related to the nonmedical misuse of prescription opioids and particularly oxycodone have increased since their decline from 2011 to 2013 after Florida's crackdown on prescription drug diversion.

- All heroin deaths in the three-county region and across the state of Florida during 2016 involved at least one or more other drugs detected in the decedents demonstrating the intentional or unintentional polysubstance abuse patterns of the opioid epidemic.

- Nonpharmaceutical fentanyl from foreign clandestine labs is the major factor for the dramatic escalation in opiate deaths related to adulterated heroin and counterfeit medications.

Nonmedical Use of Prescription Opioids

In the first decade of the 21st century, there was a dramatic increase in the availability of diverted pharmaceutical opioids and deaths linked to their nonmedical misuse as well as primary addiction treatment admissions for prescription opioids. Numerous new laws and regulations took effect beginning in 2010 along with the abuse-deterrent reformulation of high-dose extended release opioids. The collective impact of these supply-reduction strategies as well as a pill mill law enforcement strike force and funding of the state's PDMP (House Bill 7095) are seen in declining opioid deaths beginning in 2011.

In 2010, there were 6,608 opioids detected in deceased person in Florida. That toll steadily declined 23% to 5,085 by 2013 and then increased to 5,624 opioid occurrences in 2014 and then to 6,514 in 2015. The projected number of opioid occurrences (not including heroin) among deceased persons in 2016 is 8,162 based on the first six months of the year (Figure 11). The projected total includes 1,756 occurrences for morphine, many of which are believed to actually be heroin, and 1,976 fentanyl occurrences including most that are considered to be nonpharmaceutical fentanyl from foreign clandestine labs used to adulterate street heroin or sold as counterfeit medications.

Figure 11. Number of Rx Opioid Occurrences Among Deceased Persons in Florida, 2005–2016
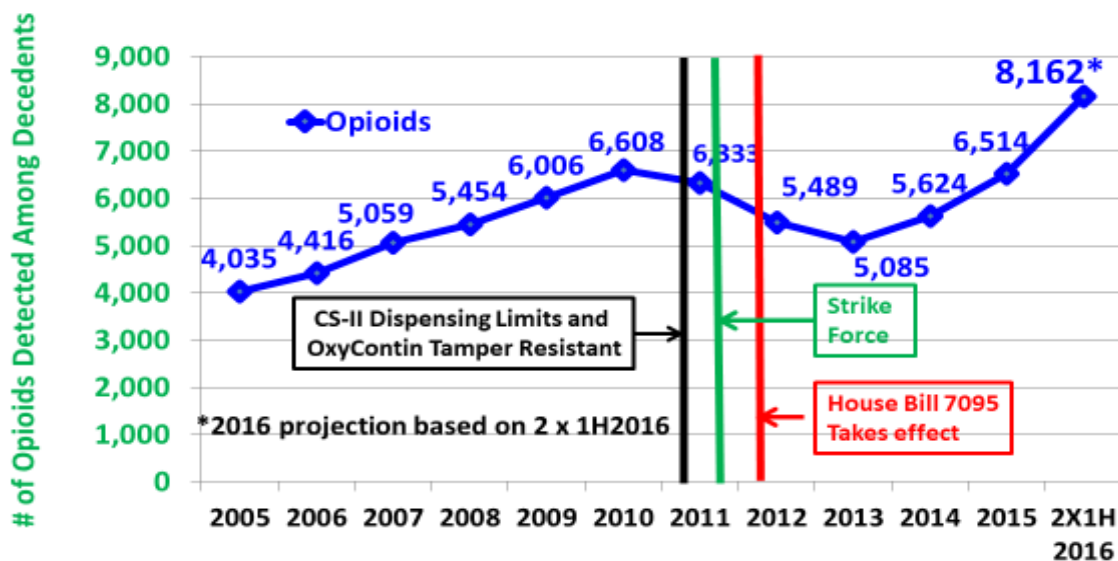
Source: FDLE – Drugs Identified In Deceased Persons by Florida Medical Examiners
Jan 2005 - June 2016 Reports

Seventy-five percent of the 2016 opioid deaths (not including heroin) are related to 5 of the 11 opioids tracked by the Florida Medical Examiners Commission. Those 5 are morphine, oxycodone, hydrocodone, methadone, and fentanyl totaling 3,063 medical examiner occurrences in just the first six months of 2016 in all of Florida. Most of the fentanyl reports from 2014 to 2016 are believed to be nonpharmaceutical fentanyl analogues from foreign labs and that most of the morphine cases are considered to be heroin. The state total for occurrences of those five opioids during the first half of 2016 includes 827 reports in the three Southeast Florida counties representing a 99% increase from the 416 occurrences for the same five opioids during the first half of 2015. The total opioid occurrences for the first six months of 2016 include 368 in Palm Beach County, 242 in Miami-Dade, and 217 in Broward County. Seventy-seven percent of these occurrences were considered to be a cause of death.

Figure 12 tracks the number of lethal opioid occurrences in Florida where the named drugs were considered to be "a cause of death" for the five most prevalent opioids (not including heroin) by semi-annual reporting periods. The total for the first half of 2016 for the state of Florida was 2,005, which includes 640 lethal reports from the three Southeast Florida counties composed of 306 in Palm Beach County, 172 in Broward, and 162 in Miami-Dade County.

Figure 12. Number of Lethal Selected Opioid Occurrences in Florida, 2008–2016

CS-II Dispensing Limits & Abuse Deterrent OxyContin

Strike Force

House Bill 7095 Takes effect

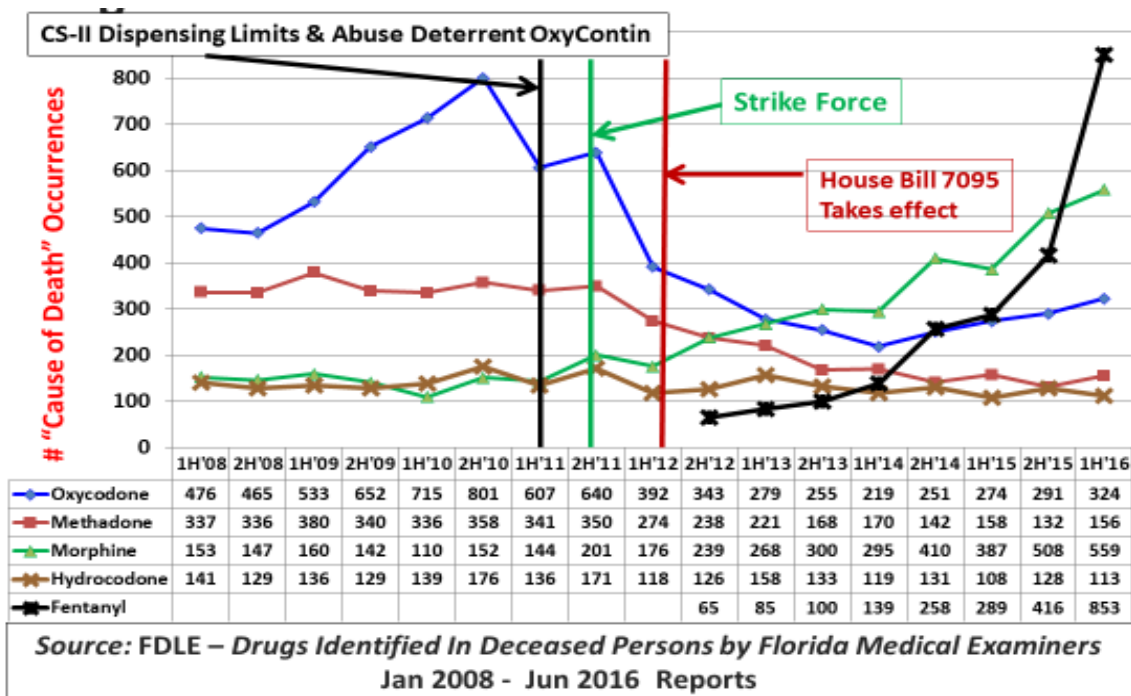|	1H'08	2H'08	1H'09	2H'09	1H'10	2H'10	1H'11	2H'11	1H'12	2H'12	1H'13	2H'13	1H'14	2H'14	1H'15	2H'15	1H'16
Oxycodone	476	465	533	652	715	801	607	640	392	343	279	255	219	251	274	291	324
Methadone	337	336	380	340	336	358	341	350	274	238	221	168	170	142	158	132	156
Morphine	153	147	160	142	110	152	144	201	176	239	268	300	295	410	387	508	559
Hydrocodone	141	129	136	129	139	176	136	171	118	126	158	133	119	131	108	128	113
Fentanyl										65	85	100	139	258	289	416	853

Source: FDLE – Drugs Identified In Deceased Persons by Florida Medical Examiners Jan 2008 - Jun 2016 Reports

In the three southeastern Florida counties, opioid occurrences (not including heroin) detected in deceased persons during the first half of 2016 totaled 827 including 131 for oxycodone, 34 for hydrocodone, 23 for methadone, 268 for morphine, and 371 for fentanyl including nonpharmaceutical fentanyl analogues (Figures 13, 14, and 15).

Figure 13. Number of Heroin and Opioid Occurrences Among Deceased Persons in Southeastern Florida

Source: FDLE - Florida Medical Examiners Commission
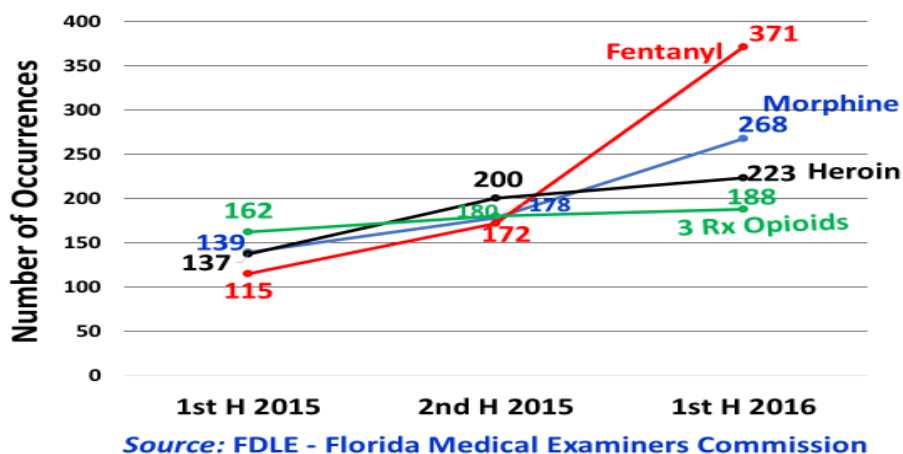
Figure 14. Number of Selected Rx Opioid Occurrences Among Deceased Persons in Southeastern Florida, January 2015–June 2016
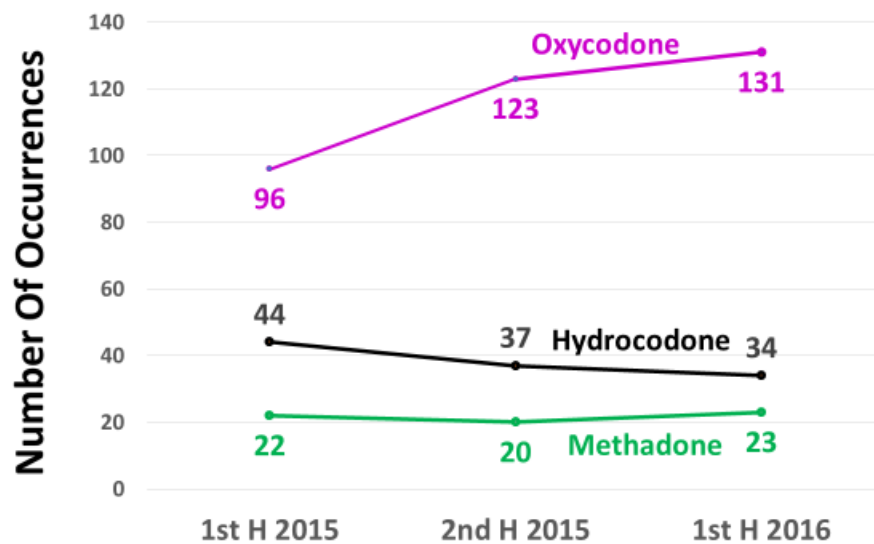
Source: FDLE - Florida Medical Examiners Commission

Figure 15. Table of Heroin and Selected Opioid Occurrences Among Deceased Person in Southeastern Florida, January 2015–June 2016

Opioid	1st H 2015	2nd H 2015	1st H 2016
Fentanyl	115	172	371
Morphine	139	178	268
Heroin	137	200	137
Oxycodone	96	123	131
Hydrocodone	44	37	34
Methadone	22	20	23

Source: FDLE - Florida Medical Examiners Commission

Figure 16 tracks (1) the number of drug occurrences during the first half of 2016 from the three Southeastern Florida counties in Figure 15 for the various opioids shown in the blue bars, (2) the number of those cases considered to be "a cause of death in the green bars, and (3) the percentage of each opioid's occurrences that are "a cause of death" on the red line graph.

Figure 16. Percentage of Lethal Heroin and Opioid Occurrences in Southeastern Florida, January–June 2016
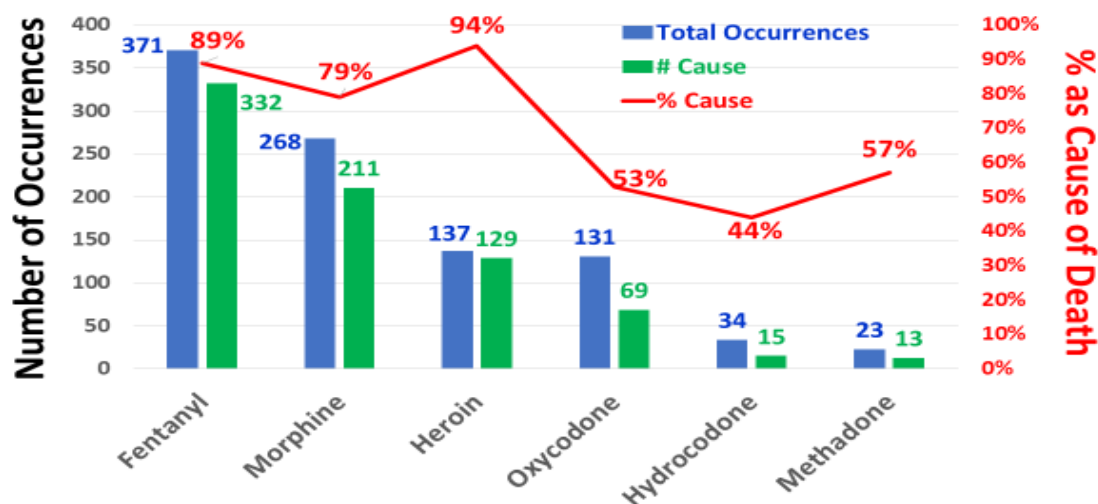
Source: 2016 FL Medical Examiners Commission Interim Report

The most currently available data on hospital overdose cases are from the first half of 2016 when there were 508 hospital prescription opioid overdose poisonings in the three southeastern counties, including 225 emergency room discharges and 283 admitted as inpatients. The 508 total overdoses included 137 in Miami-Dade, 200 in Broward, and 171 in Pam Beach County (Figure 17).

Figure 17. Hospital Rx Opioid Overdose Cases in Florida and Three Southeastern Counties, January–June 2016

	Florida	3 SE Counties
Inpatient	1,791	283
ED	1,134	225
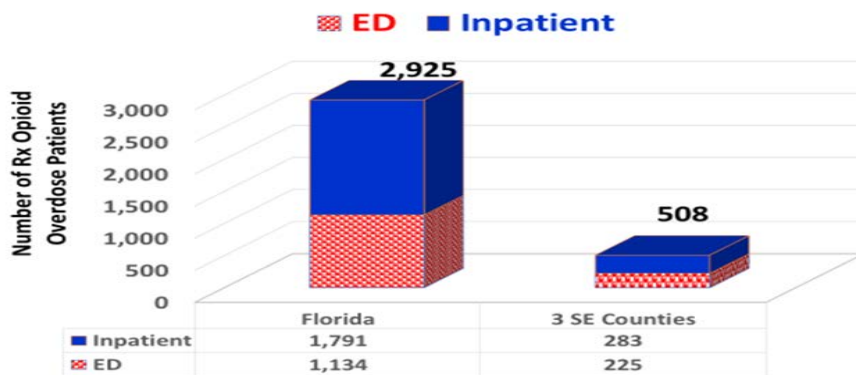
Source: Florida Agency for Health Care Administration

In 2016, there were 3,092 admissions for opioids other than heroin reported as primary treatment admissions in the three southeastern Florida counties representing a 35% increase from the 2,298 such admissions in 2015. Included in the 2016 total were 1,800 clients in Palm Beach County, 991 in Broward County, and 301 in Miami-Dade County. Females accounted for 55% of the 2016 opioid clients across the region, and 65% were between 18 and 34 years of age and 35% were aged 35 or older. Injecting Drug use was reported by 42% of the prescription opioid clients.

A total of 1,716 prescription opioid primary, secondary, and tertiary NFLIS crime laboratory reports were filed in the three southeastern Florida counties during 2016 representing 8% of all substances analyzed. This category of drugs ranked fourth among all crime lab reports from the three counties in 2016. The number of prescription opioid crime laboratory reports increased 48% between 2015 and 2016. Fentanyl was the most frequently reported prescription opioid as shown in Figure 18; nevertheless, it is not known how many of those items may have been nonpharmaceutical opiate analogues from foreign clandestine laboratories.

Figure 18. Number of NFLIS Pharmaceutical Opioid Crime Lab Cases in Southeastern Florida, 2016

Pharmaceutical Opioid Crime Lab Cases in Southeastern Florida in 2016	# of Cases
FENTANYL	612
OXYCODONE	574
HYDROMORPHONE	154
BUPRENORPHINE	99
HYDROCODONE	86
MORPHINE	85
CODEINE	37
METHADONE	27
TRAMADOL	26
OXYMORPHONE	15
MEPERIDINE	1
TOTAL	1,716

Source: US DEA - National Forensic Laboratory System Data Queried May 28, 2017

Heroin

The number of heroin-related deaths increased sharply from 2011 to 2016 across Florida, rising 1,423% from 57 in 2011 to a projected 868 in 2016 based on the first half of that year (Figure 19). Heroin was considered "a cause of death" in 94% of the fatalities in which it was detected in 2016. In the three Southeast Florida counties, heroin deaths increased 1,387% from 30 in 2011 to a projected 446 for 2016 (Figure 20). The sharp escalations of heroin use, treatment admission, and deaths in Florida along with stable and high levels of prescription opioid indicators constitute an opiate epidemic.

Heroin-related deaths increased 32% rising from 337 in 2015 to a projected 446 in 2016 across the Southeast Florida region with the sharpest rise reported in Broward County (Figure 20). Heroin was considered the cause of death in 96% of the heroin-related cases in Southeast Florida in 2016. Many deaths involved polydrug use with 97% of the 2016 cases having one or more other substances present at the time of death. There was no heroin-related decedent younger than 18 years of age in the region, 22% were 18–25, 30% were 26–34, 32% were 35–50, and 16% were older than 50 years of age.

Figure 19. Number of Heroin-Related Deaths in Florida, 2000–2016

* Projected Increase based on 2 X 1st Half of 2016
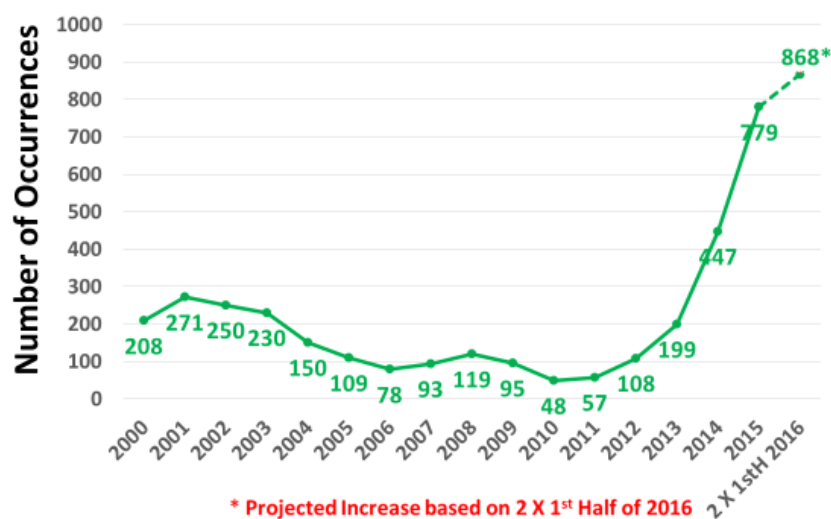
Source: **Florida Medical Examiners Commission Reports**

Figure 20. Number of Heroin Deaths in Three Southeast Florida Counties, 2000–2016

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2 X 1H 2016
Palm Beach	15	57	36	27	26	17	8	10	6	6	4	12	6	20	51	165	194
Broward	17	53	50	49	35	17	13	4	17	8	5	3	9	11	28	80	144
Miami-Dade	61	39	46	32	18	22	20	26	38	30	26	15	33	40	60	92	108
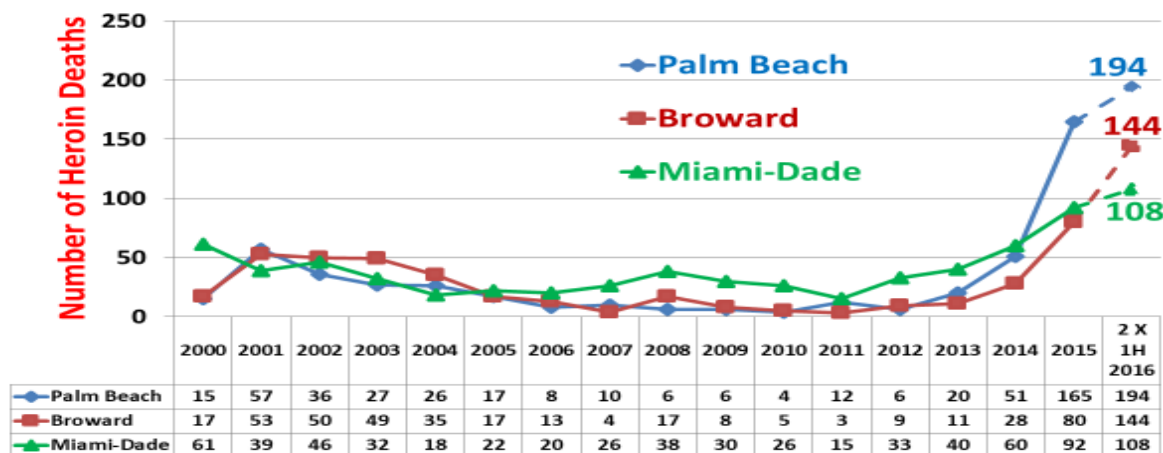
SOURCE: **Florida Medical Examiners Commission Reports 2000-2016**

Hospital overdose cases are from the first half of 2016 when there were 759 hospital heroin overdose poisonings in the three southeastern counties including 529 emergency room discharges and 230 admitted as inpatients. The 759 heroin overdoses included 147 in Miami-Dade, 221 in Broward, and 391 in Pam Beach County (Figure 21).

Figure 21. Hospital Heroin Overdose Cases in Florida and Three Southeastern Counties, January–June 2016

ED   Inpatient

	Florida	3 SE Counties
Inpatient	631	230
ED	1,370	529
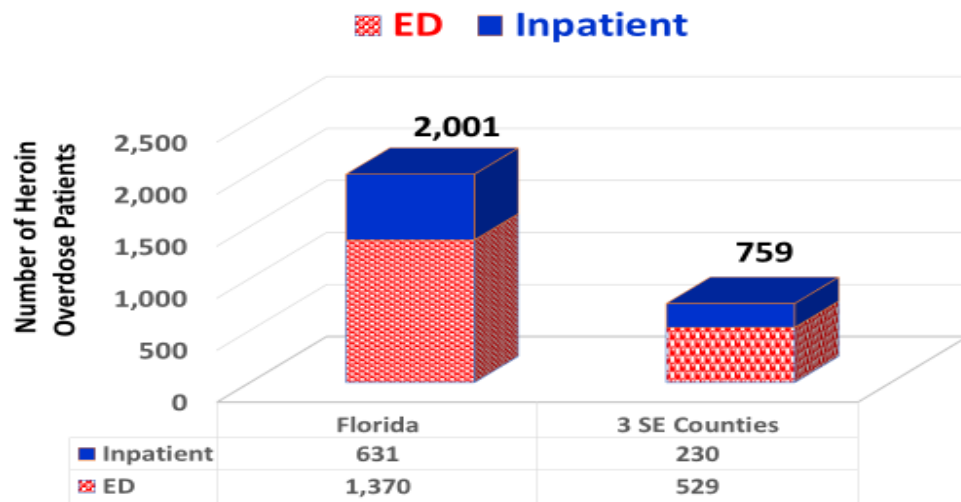
Source: **Florida Agency for Health Care Administration**

Primary addiction treatment admissions for heroin totaled 5,011 patients across the three-county region in 2016 accounting for 18.8% of all admissions. In 2014, heroin was the primary drug cited by 6.8% of treatment clients in the region and by 11.5% in 2015 (Figure 22). Males accounted for 61% of the 2016 clients. There were 11 heroin treatment clients younger than 18 years of age, 15% were 18–25, 51% were 26–34, and 34% were age 35 or older. Injecting heroin was reported by 51% of clients, but that rate is probably higher because the route of administration was recorded as unknown for 38%. Intranasal snorting was reported by 6% of clients, and 1.4% reported smoking heroin. The county totals for heroin treatment primary admissions were 556 for Miami-Dade, 1,791 for Broward, and 2,664 for Palm Beach County.

Figure 22. Percentage of Treatment Admissions by Primary Drug in Three Southeastern Florida Counties, 2014–2016
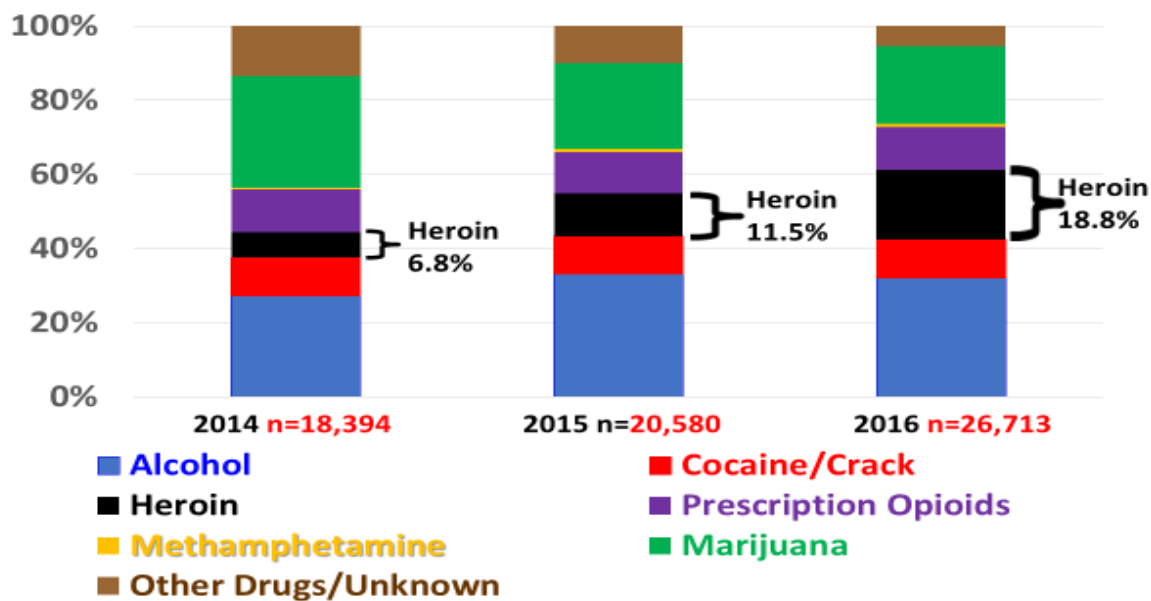
Source: Florida Department of Children and Families

There were 2,027 heroin crime laboratory reports, or 9.5% of the 21,306-total primary, secondary, and tertiary NFLIS reports for Miami-Dade, Broward, and Palm Beach counties combined in 2016. Heroin ranked third among all substances analyzed in the three counties in 2016. The number of heroin crime laboratory reports increased 45% between 2015 and 2016 and rose from fourth to third place among all substances.

Nonpharmaceutical Opioids

The increasing availability of poisonous fentanyl analogues and their distribution are critical issues related to the escalation of deaths from the opiate epidemic. These novel psychoactive opiates are found not only as adulterated street heroin and cocaine but also as counterfeit medications including fake "Xanax®" pills and as oxycodone and hydrocodone tablets. There were at least 9 deaths in Pinellas County, Florida, attributed to counterfeit medications laced with fentanyl during early 2016. Other opiate analogues include U-47700, which also has been reported in Florida.

The key measure of fentanyl consequences is the number of deaths attributed to it. In previous years, medical examiner reports in Florida included both pharmaceutical fentanyl as well as its nonpharmaceutical analogues from clandestine labs mostly produced in China, Mexico, and Canada. Beginning in early 2016, some Florida medical examiner officers have been able to identify specific fentanyl analogues in their toxicology reports. Figure 23 illustrates the escalation of fentanyl-related deaths in Florida beginning in 2014 with the introduction of the drug's analogues into the illicit drug market. Between 2007 and 2013, fentanyl deaths total from 200 to nearly 300 per year. Most of those deaths are believed to have been related to nonmedical use of pharmaceutical fentanyl. Yet the sharp rise in fentanyl occurrences detected in deceased persons in Florida from 2014 to 2016 is a result of nonpharmaceutical fentanyl analogues. The projected 1,976 fentanyl deaths for all of 2016 is based on

doubling the 988 occurrences in the first six months of that year, which includes 183 reports of substances specifically identified as fentanyl analogues (Figure 23). Nevertheless, several Florida medical examiners warn that the most dramatic rise of opioid deaths and particularly those from poisonous fentanyl analogues will be seen in the second half of 2016 in part as a result of the arrival of carfentanil, the most toxic of opioids considered to be 10,000 more potent than morphine.

Figure 23. Number of Fentanyl-Related Deaths in Florida, 2007–2016

* Projected Increase based on 2 X 1st Half of 2016
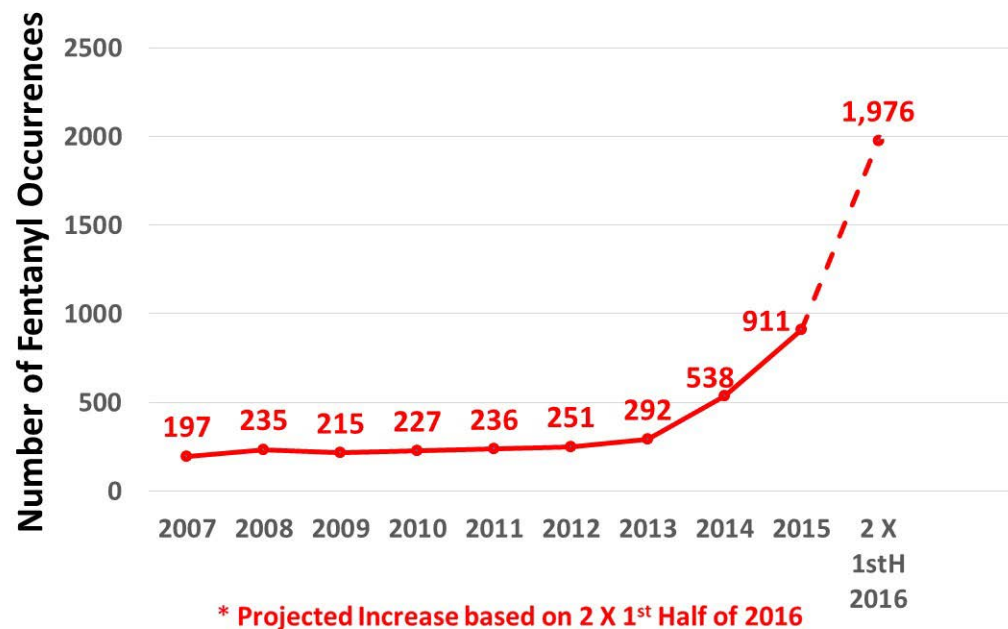
Source: **Florida Medical Examiners Commission Reports**

Local Research Highlights

Investigators at the Center for Applied Research on Substance Use and Health Disparities (ARSH) at Nova Southeastern University have completed several studies of drug abuse trends.

LAW ENFORCEMENT-DERIVED DATA ON GABAPENTIN DIVERSION AND MISUSE, 2002–2015: DIVERSION RATES AND QUALITATIVE RESEARCH FINDINGS

Recent limited epidemiologic and case reports suggest that gabapentin is being misused, especially among prescription opioid misusers. Case report data were drawn from a quarterly survey of prescription drug diversion completed by a national sample of law enforcement and regulatory agencies who engage in drug diversion investigations. Rates of gabapentin diversion per 100,000 population were calculated for each quarter from 2002 through 2015. Survey respondents also completed a brief

qualitative questionnaire. In total, 407 new cases of diverted gabapentin were reported during the time period, with diversion rates steadily increasing from zero cases in the first two quarters of 2002 to a high of 0.027 cases per 100,000 population in the fourth quarter of 2015. Qualitative data suggest that gabapentin is being misused in conjunction with prescription opioids and that gabapentin and heroin are being combined and consumed together. Law enforcement reporters found these drug use trends to be contributing to gabapentin diversion.

HEROIN USE ONSET AMONG NONMEDICAL PRESCRIPTION OPIOID USERS IN MIAMI'S CLUB SCENE

Nonmedical prescription opioid use (NMPOU) is well documented among participants in the club scene, yet prior studies have not examined transition to heroin use. ARSH researchers prospectively examined heroin initiation among a sample of young adults with extensive drug involvement associated with participation in the Miami club scene, to understand the factors that may drive transitions from NMPOU to heroin and to identify opportunities for intervention. Data were drawn from a randomized controlled trial that enrolled 750 Miami-based club and prescription drug users through respondent driven sampling, and tested the efficacy of low-intensity assessment interventions in reducing risk behaviors. Participants reported current substance use at baseline, 3, 6, and 12-month follow-ups. We examined predictors of heroin initiation among participants reporting NMPOU at baseline, with no lifetime history of heroin use (N = 323). The sample had a median age of 24.0 years; 67.5% met DSM-IV criteria for substance dependence. Nearly one out of ten participants initiated heroin use at follow-up. In bivariable models, frequent LSD use, history of drug overdose, high-frequency NMPOU, taking prescription opioids by oral tampering methods, and endorsing a primary medical source for prescription opioids were all associated with higher odds of heroin initiation. In a multivariable Cox model, LSD use, oral tampering, and primary medical source were significant predictors. Heroin initiation occurred among 9.6% of NMPO users in one year, suggesting a high level of vulnerability for transition to heroin among young adult NMPO users in the club scene. The importance of oral tampering methods in the trajectory of NMPOU may indicate a need to further examine the role of abuse deterrent formulations in prevention efforts.

FROST SYSTEM

The Florida drug-Related Outcomes Surveillance and Tracking (FROST) System is an online tool developed by the University of Florida College of Medicine and funded by the U.S. Bureau of Justice Assistance. It is an interactive website that provides a user-friendly data source to explore Florida and national drug-related indicators. The FROST system is available online at www.frost.med.ufl.edu.

Legislative and Policy Updates

REPORTING ON DRUG OVERDOSES

Allows Emergency Responders and paramedics who provide basic and advanced live support services to report controlled substances overdoses to the Florida Department of Health. The report must state

whether naloxone was administered, and whether the overdose was fatal or nonfatal. The law requires a hospital with an emergency department to develop best practices connecting patients who have experienced unintentional overdoses with substance abuse treatment services.

MANDATORY MINIMUM SENTENCING FOR FENTANYL TRAFFICKING

Creates a first-degree felony offense for the possession of 4 grams or more of fentanyl. The mandatory minimum sentence for this amount is 3 years imprisonment and a $50,000 fine. The bill also adds certain fentanyl derivatives and five substances that were originally developed for legitimate research, but that have emerged in the illegal drug market, to Schedule I status. The law states that a person 18 years of age or older commits felony murder if he or she unlawfully distributes any specified controlled substance, including a specified fentanyl, and the distribution is proven to be the cause of death of the user.

REPORTING DISPENSING OF A CONTROLLED SUBSTANCE

Reduces the amount of time a dispenser should report the dispensing of a controlled substance to the Prescription Drug Monitoring Program (PDMP) database from seven days to the close of the next business day after the controlled substance is dispensed. Dispensing and administering controlled substances are exempt from PDMP reporting in certain health care settings where the risk of controlled substances being overprescribed or diverted is low.

MARKETING PRACTICE FOR TREATMENT PROVIDERS

Implements several task force recommendations to address abusive practices in the substance abuse treatment industry. The bill prohibits referrals between licensed treatment providers and uncertified recovery residences. The bill also prohibits service providers from providing false or misleading information about their identity, products, goods, services, or geographical location to persuade a person to seek treatment with them. Service providers, recovery residence operators, and third parties that provide marketing services must be licensed. The law strengthens the prohibition of patient brokering.

Data Sources

Data for this report were drawn from the following sources:

Data on drug-related deaths are from the Florida Department of Law Enforcement: Florida Medical Examiners Commission Interim and Annual reports on Drugs Detected in Deceased Persons in Florida January 2010–June 2016. The Florida Medical Examiners Commission uses a statewide classification of drugs detected among deceased persons as being either (1) "a cause of death" determined by one the State's 24 local medical examiners or (2) merely found as "present at the time of death." Thus, the terms "drug-related," "drug reports detected," "number of drug occurrences," and "drugs identified in," all refer to the total number of both drugs determined to be "a cause of death" and found as "present in a decedent." The number of drug occurrences exceeds the number of drug deaths for a specific drug because of multiple drugs detected in most decedents.

Treatment data are for primary drug admissions in calendar year 2106 of all clients in programs receiving any public funding located in Miami-Dade, Broward and Palm Beach counties as provided by the Florida Department of Children and Families Office of Substance Abuse and Mental Health. Each admission does not necessarily represent a unique individual as some persons are admitted to treatment more than once in the same calendar year.

Poison exposure call data are from the Florida Poison Information Center exposure calls for calendar year 2016 and January–April 2017.

Data on crime lab cases are from the U.S. Drug Enforcement Administration: National Forensic Laboratory Information System: Southeast Florida crime lab cases 2016 data. Queried: May 28, 2017.

Trends of prevalence data on drug use among middle and high school students are from the Florida Department of Children and Families: *Florida Youth Substance Abuse Surveys* (FYSAS) 2000–2016.

Poisoning overdose hospitalization cases data for opioids, heroin, and benzodiazepines January–June 2016 are from Florida Agency for Health Care Administration.

Information on emerging drug issues are from the United Way of Broward County Commission on Substance Abuse—Surveillance Support Committee.

Data on drug-related deaths and from the Florida Prescription Drug Monitoring Program are from the University of Florida College of Medicine's Florida drug-Related Outcomes Surveillance and Tracking (FROST) System.

The reports on increased **production and availability of Colombian cocaine** are from personal communications with the US DEA, South Florida High Intensity Drug Trafficking Area (HIDTA), and the Office of National Drug Control Policy (ONDCP).

Confirmation of **cocaine** being sold **mixed with some fentanyl analogues** (including carfentanil) are from NFLIS data on combinations of primary, secondary, and tertiary substances found in individual crime lab items from Miami-Dade, Broward, and Palm Beach counties. The sources for cocaine found in combination with fentanyl analogues among decedents are the local medical examiners in the three county Southeastern Florida region and are also confirmed by the raw data files of drugs detected among deceased persons in Florida from the State's Medical Examiners Commission.

Data on **methamphetamine use in areas of Florida other than the southeastern region** are based on a comparison of NFLIS methamphetamine crime lab cases across 14 regions in Florida as well as a review of primary methamphetamine treatment admission in the 7 managing entity regions of the State from the Florida Department of Children and Families Substance Abuse and Mental Health Office. These findings are also confirmed by regional Drug Epidemiology Networks (DENs) in Florida's Western Panhandle, Tampa Bay Area, Duval (Jacksonville), Palm Beach, and Broward Counties.

Contact Information: For additional information about the drugs and drug use patterns discussed in this report, please contact James N. Hall, Epidemiologist, Center for Applied Research on Substance Use and Health Disparities, Nova Southeastern University, 7255 NE 4th Avenue, Suite 112, Miami, FL 33138, Phone: 786–547–7249, E-mail: upfrontin@aol.com.

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
Broward, Miami-Dade, and Palm Beach Counties and Miami MSA^, Florida
2011–2015 ACS 5-Year Estimates

| | Southeastern Florida Counties | | | | | | Miami MSA^ | |
| | Broward | | Miami-Dade | | Palm Beach | | | |
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Total Population (#)	**1,843,152**	******	**2,639,042**	******	**1,378,806**	******	**5,861,000**	******
Age								
18 years and over (%)	78.3%	**	79.1%	**	80.2%	+/-0.1	79.1%	+/-0.1
21 years and over (%)	74.7%	+/-0.1	75.2%	+/-0.1	76.8%	+/-0.1	75.4%	+/-0.1
65 years and over (%)	15.0%	+/-0.1	14.9%	+/-0.1	22.4%	+/-0.1	16.7%	+/-0.1
Median Age (years)	40.0	+/-0.1	39.0	+/-0.1	44.1	+/-0.2	40.4	+/-0.1
Race (%)								
White, Not Hisp.	40.4%	+/-0.1	15.1%	+/-0.1	57.6%	+/-0.1	33.1%	+/-0.1
Black/African American, Not Hisp.	26.9%	+/-0.1	16.8%	+/-0.1	17.5%	+/-0.1	20.2%	+/-0.1
Hispanic/Latino (of any race)	27.0%	**	65.6%	**	20.4%	**	42.8%	**
American Indian/Alaska Native, Not Hisp.	0.2%	+/-0.1	0.1%	+/-0.1	0.1%	+/-0.1	0.1%	+/-0.1
Asian, Not Hisp.	3.4%	+/-0.1	1.5%	+/-0.1	2.5%	+/-0.1	2.3%	+/-0.1
Native Hawaiian/Pacific Islander, Not Hisp.	0.0%	+/-0.1	0.0%	+/-0.1	0.0%	+/-0.1	0.0%	+/-0.1
Some Other Race	0.5%	+/-0.1	0.2%	+/-0.1	0.4%	+/-0.1	0.3%	+/-0.1
Two or More Races	1.7%	+/-0.1	0.6%	+/-0.1	1.5%	+/-0.1	1.1%	+/-0.1
Sex (%)								
Male	48.5%	+/-0.1	48.5%	+/-0.1	48.3%	+/-0.1	48.5%	+/-0.1
Female	51.5%	+/-0.1	51.5%	+/-0.1	51.7%	+/-0.1	51.5%	+/-0.1
Educational Attainment (*Among Population Aged 25+ Years***) (%)**								
High School Graduate or Higher	88.2%	+/-0.3	80.1%	+/-0.3	87.8%	+/-0.3	84.5%	+/-0.2
Bachelor's Degree or Higher	30.8%	+/-0.4	26.9%	+/-0.3	33.6%	+/-0.4	29.7%	+/-0.2
Unemployment (*Among Civilian Labor Force Population Aged 16+ Years***) (%)**								
Unemployment Rate	10.0%	+/-0.3	10.0%	+/-0.3	9.5%	+/-0.3	9.9%	+/-0.2
Income ($)								
Median Household Income (in 2015 inflation-adjusted dollars)	$51,968	+/-429	$43,129	+/-454	$53,363	+/-511	$48,745	+/-320
Insurance Coverage *(Among Civilian Noninstutionalized Population)* **(%)**								
No Health Insurance Coverage	19.8%	+/-0.4	25.6%	+/-0.3	17.5%	+/-0.3	21.9%	+/-0.2
Poverty (%)								
All People Whose Income in Past 12 Months Is Below Poverty Level	14.5%	+/-0.4	20.4%	+/-0.4	14.5%	+/-0.4	17.2%	+/-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.
^Miami MSA: The Miami-Ft. Lauderdale-West Palm Beach MSA comprises Broward, Miami-Dade, and Palm Beach counties. The principal cities of the Miami MSA include Miami, Fort Lauderdale, West Palm Beach, Pompano Beach, Miami Beach, Boca Raton, Kendall, Deerfield Beach, Delray Beach, and Jupiter.
**The estimate is controlled; a statistical test for sampling variability is not appropriate.

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

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

Substance Use Behaviors	Substate Region: Broward (Circuit 17) Broward County		Substate Region: South (Circuits 11 & 16) Miami-Dade & Monroe Counties		Substate Region: Southeast (Circuit 15) Palm Beach County	
	Estimated % (95% CI)*	Estimated #*	Estimated % (95% CI)*	Estimated #*	Estimated % (95% CI)*	Estimated #*
Used in Past Month						
Alcohol	51.58 (47.43 − 55.72)	792,451	47.70 (44.38 − 51.04)	1,090,085	54.16 (49.75 − 58.50)	635,028
Binge Alcohol**	20.07 (17.37 − 23.07)	308,317	19.17 (16.91 − 21.66)	438,195	19.69 (17.02 − 22.66)	230,847
Marijuana	6.92 (5.47 − 8.72)	106,337	5.23 (4.28 − 6.38)	119,502	6.04 (4.69 − 7.73)	70,777
Use of Illicit Drug Other Than Marijuana	2.87 (2.14 − 3.83)	44,038	2.62 (1.99 − 3.43)	59,827	3.30 (2.44 − 4.45)	38,749
Used in Past Year						
Cocaine	1.95 (1.31 − 2.89)	29,963	1.55 (1.08 − 2.23)	35,486	2.07 (1.40 − 3.05)	24,290
Nonmedical Use of Pain Relievers	3.42 (2.73 − 4.29)	52,601	2.95 (2.31 − 3.76)	67,428	3.41 (2.67 − 4.34)	39,992
Substance Use Disorders in Past Year*						
Illicit Drugs or Alcohol	**7.38 (6.15 − 8.84)**	**113,432**	**6.18 (5.18 − 7.37)**	**141,301**	**7.61 (6.32 − 9.14)**	**89,216**
Alcohol	5.81 (4.70 − 7.17)	89,268	5.01 (4.05 − 6.18)	114,530	5.82 (4.66 − 7.26)	68,291
Illicit Drugs	2.58 (2.02 − 3.31)	39,688	1.93 (1.50 − 2.47)	44,044	2.69 (2.09 − 3.48)	31,600

NOTES:
^**Southeastern Florida (Miami Area):** Includes NSDUH Substate Regions: Broward Circuit 17 = Broward County; Southeast Circuit 15 = Palm Beach County; and Southern Circuits 11 and 16 = Miami-Dade and Monroe counties. Note the 2012-2014 substate regions are different from the regions defined in the 2010-2012 definitions.
*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 (Circuit 17 = 1,536,230; Circuit 15 = 1,172,607; and Circuits 11 & 16 = 2,285,489 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 *Southeastern Florida (Miami Area)^*, by Age Group and Region, 2012–2014

Estimated Percent and 95% Confidence Interval (CI)*, Annual Averages Based on Combined 2012 to 2014 NSDUH Data

Substance Use Behaviors	Broward County			Miami-Dade and Monroe Counties			Palm Beach County		
	12–17	18–25	26+	12–17	18–25	26+	12–17	18–25	26+
	Estimated Percent (95% CI)*	Estimated Percent (95% CI)*	Estimated Percent (95% CI)*	Estimated Percent (95% CI)*	Estimated Percent (95% CI)*	Estimated Percent (95% CI)*	Estimated Percent (95% CI)*	Estimated Percent (95% CI)*	Estimated Percent (95% CI)*
Used in Past Month									
Binge Alcohol**	5.85 (4.46 – 7.63)	30.69 (26.02 – 35.80)	20.15 (17.05 – 23.66)	5.06 (3.85 – 6.62)	25.27 (21.89 – 28.98)	19.68 (16.99 – 22.68)	6.36 (4.86 – 8.27)	33.95 (29.22 – 39.03)	19.18 (16.11 – 22.67)
Marijuana	6.88 (5.32 – 8.86)	18.21 (14.48 – 22.64)	5.32 (3.84 – 7.34)	6.38 (4.96 – 8.16)	16.81 (13.93 – 20.14)	3.31 (2.39 – 4.57)	6.80 (5.19 – 8.86)	17.11 (13.71 – 21.13)	4.54 (3.17 – 6.47)
Use of Illicit Drug Other Than Marijuana	3.24 (2.31 – 4.51)	6.61 (4.70 – 9.20)	2.29 (1.57 – 3.35)	3.23 (2.32 – 4.48)	6.20 (4.69 – 8.15)	2.00 (1.36 – 2.92)	3.17 (2.23 – 4.48)	8.25 (6.04 – 11.18)	2.68 (1.81 – 3.95)
Used in Past Year									
Cocaine	0.61 (0.34 – 1.08)	6.03 (4.03 – 8.92)	1.52 (0.89 – 2.59)	0.72 (0.43 – 1.22)	4.33 (2.99 – 6.23)	1.21 (0.74 – 1.98)	0.64 (0.37 – 1.10)	6.64 (4.48 – 9.73)	1.63 (0.97 – 2.71)
Nonmedical Use of Pain Relievers	4.85 (3.61 – 6.47)	7.57 (5.84 – 9.76)	2.67 (1.95 – 3.66)	4.14 (3.07 – 5.56)	5.66 (4.33 – 7.35)	2.41 (1.70 – 3.38)	4.32 (3.20 – 5.81)	8.46 (6.54 – 10.88)	2.67 (1.91 – 3.73)
Substance Use Disorder in Past Year*									
Illicit Drugs or Alcohol	5.80 (4.42 – 7.58)	14.55 (11.59 – 18.12)	6.54 (5.21 – 8.18)	5.39 (4.13 – 7.00)	11.51 (9.35 – 14.09)	5.44 (4.34 – 6.78)	5.83 (4.43 – 7.64)	16.35 (13.12 – 20.19)	6.66 (5.29 – 8.36)
Alcohol	2.51 (1.81 – 3.47)	10.06 (7.74 – 12.97)	5.57 (4.33 – 7.15)	2.47 (1.78 – 3.41)	9.49 (7.50 – 11.93)	4.58 (3.53 – 5.92)	2.80 (2.02 – 3.88)	11.63 (8.99 – 14.92)	5.37 (4.12 – 6.98)
Illicit Drugs	4.57 (3.40 – 6.13)	7.70 (5.78 – 10.18)	1.64 (1.11 – 2.41)	3.75 (2.74 – 5.11)	5.37 (4.04 – 7.10)	1.20 (0.81 – 1.80)	4.32 (3.19 – 5.85)	8.39 (6.37 – 10.96)	1.81 (1.22 – 2.66)

NOTES:

^**Southeastern Florida (Miami Area):** Includes NSDUH Substate Regions: Broward Circuit 17 = Broward County; Southeast Circuit 15 = Palm Beach County; and Southern Circuits 11 and 16) = Miami-Dade and Monroe counties. Note the 2012-2014 substate regions are different from the regions defined in the 2010-2012 definitions.

*Estimated %:** Substate estimates are based on a small area estimation methodology in which 2012–2014 substate level NSDUH data are combined with county and census block group/tract-level data from the state; **95% Confidence Interval (CI):** Provides a measure of the accuracy of the estimate. It defines the range within which the true value can be expected to fall 95 percent of the time.

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

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

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

Table 3.1: Self-Reported Substance Use-Related Behaviors Among *Broward County* ^ Public High-School Students, 2015
Estimated Percent and 95% Confidence Interval (CI)
2013 and 2015 YRBS*

Substance Use Behaviors	2015 vs 2013			2015 by Sex			2015 by Race		
	2015 Estimate (95% CI)	2013 Estimate (95% CI)	*p* value	Male Estimate (95% CI)	Female Estimate (95% CI)	*p* value	White Estimate (95% CI)	Black Estimate (95% CI)	Hispanic Estimate (95% CI)
Used in Past Month									
Alcohol	30.6 (27.1 - 34.3)	29.7 (26.6 - 33.1)	0.72	28.0 (23.1 - 33.5)	32.9 (28.4 - 37.8)	0.17	43.5 (37.1 - 50.1)	18.9 (15.6 - 22.7)	36.1 (31.1 - 41.4)
Binge Alcohol**	11.6 (9.6 - 13.9)	13.8 (11.5 - 16.5)	0.17	11.3 (8.8 - 14.5)	11.6 (9.1 - 14.7)	0.87	15.3 (10.9 - 21.0)	5.9 (4.0 - 8.7)	15.8 (12.4 - 19.8)
Marijuana	24.0 (21.5 - 26.6)	22.9 (20.1 - 26.1)	0.60	25.2 (21.3 - 29.6)	22.6 (19.1 - 26.6)	0.39	27.3 (21.0 - 34.6)	22.9 (19.0 - 27.3)	23.6 (19.2 - 28.5)
Ever Used in Lifetime									
Alcohol	61.2 (57.2 - 65.1)	64.4 (61.2 - 67.5)	0.21	58.2 (53.5 - 62.8)	64.2 (59.3 - 68.8)	**0.03**	70.0 (63.7 - 75.6)	53.2 (46.5 - 59.7)	65.4 (59.6 - 70.7)
Marijuana	40.1 (36.6 - 43.8)	38.0 (34.3 - 41.9)	0.42	39.8 (35.0 - 44.7)	40.6 (36.5 - 45.0)	0.76	42.4 (35.1 - 50.2)	38.9 (34.4 - 43.7)	41.3 (35.2 - 47.7)
Cocaine	6.4 (4.9 - 8.4)	4.9 (3.8 - 6.4)	0.17	7.0 (4.5 - 10.5)	5.6 (4.0 - 7.8)	0.44	6.2 (3.6 - 10.6)	5.4 (3.5 - 8.3)	7.2 (4.8 - 10.8)
Hallucinogenic Drugs	—	—	~	—	—	~	—	—	—
Synthetic Marijuana	7.1 (5.6 - 9.0)	—	~	8.6 (6.1 - 11.9)	5.3 (3.8 - 7.4)	0.06	7.5 (4.3 - 12.5)	5.6 (3.7 - 8.3)	8.0 (5.3 - 11.9)
Inhalants	7.8 (6.1 - 9.9)	6.5 (5.2 - 8.3)	0.30	7.3 (5.2 - 10.2)	7.7 (5.7 - 10.3)	0.80	6.9 (5.1 - 9.3)	7.6 (5.1 - 11.3)	7.2 (4.6 - 11.2)
Ecstasy also called "MDMA"	5.5 (4.2 - 7.2)	7.7 (6.3 - 9.3)	**0.04**	5.9 (4.3 - 8.0)	4.6 (3.2 - 6.6)	0.20	5.9 (3.4 - 10.1)	4.2 (2.5 - 6.9)	6.5 (4.4 - 9.6)
Heroin	4.0 (2.9 - 5.6)	2.3 (1.3 - 4.3)	0.08	4.9 (3.2 - 7.5)	2.4 (1.4 - 3.8)	**0.04**	2.3 (0.9 - 5.4)	2.9 (1.7 - 5.1)	6.8 (4.5 - 10.2)
Methamphetamine	4.5 (3.3 - 6.0)	3.0 (2.1 - 4.3)	0.09	5.4 (3.6 - 8.1)	3.1 (2.0 - 4.7)	0.08	2.8 (1.2 - 6.6)	3.1 (1.7 - 5.6)	6.0 (3.9 - 9.0)
Rx Drugs without a Doctor's Prescription	13.5 (11.6 - 15.5)	12.2 (10.4 - 14.3)	0.36	14.3 (11.7 - 17.4)	12.4 (9.6 - 15.7)	0.36	17.7 (13.1 - 23.4)	10.5 (7.8 - 13.9)	13.4 (10.3 - 17.3)
Injected Any Illegal Drug	3.0 (2.1 - 4.4)	2.2 (1.3 - 3.7)	0.28	2.7 (1.6 - 4.7)	3.2 (2.0 - 5.0)	0.66	1.7 (0.7 - 4.4)	2.3 (1.2 - 4.2)	4.2 (2.7 - 6.6)

NOTES:

^Broward County: Weighted data were available for Broward County in 2013 and 2015; weighted results mean that the overall response rate was at least 60%. The overall response rate is calculated by multiplying the school response rate times the student response rate. Weighted results are representative of all students in grades 9–12 attending public schools in each jurisdiction.
'—': Data not available; ~: *p* value not available.
Sample Frame for the 2013 and 2015 YRBS: Consisted of public schools with students in at least one of grades 9-12. The sample size for 2013 was 1,443 with an overall response rate of 69%; the 2015 sample size was 1,413 with a 72% overall response rate.
****Binge Alcohol:** Defined as having had five or more drinks of alcohol in a row within a couple of hours on at least 1 day during the 30 days before the survey.

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

Table 3.2: Self-Reported Substance Use-Related Behaviors Among *Miami-Dade County* ^ Public High-School Students, 2015
Estimated Percent and 95% Confidence Interval (CI)
2013 and 2015 YRBS*

Substance Use Behaviors	2015 vs 2013			2015 by Sex			2015 by Race		
	2015 Estimate (95% CI)	2013 Estimate (95% CI)	p value	Male Estimate (95% CI)	Female Estimate (95% CI)	p value	White Estimate (95% CI)	Black Estimate (95% CI)	Hispanic Estimate (95% CI)
Used in Past Month									
Alcohol	38.2 (35.2 - 41.4)	38.5 (34.5 - 42.6)	0.92	35.4 (32.4 - 38.4)	41.0 (36.7 - 45.6)	**0.01**	41.2 (30.7 - 52.5)	29.0 (24.1 - 34.5)	41.3 (37.4 - 45.4)
Binge Alcohol**	16.0 (14.0 - 18.4)	17.8 (15.6 - 20.2)	0.28	16.4 (14.0 - 19.2)	15.7 (13.2 - 18.7)	0.65	16.0 (10.4 - 23.8)	9.4 (7.2 - 12.1)	18.3 (15.7 - 21.3)
Marijuana	19.2 (16.9 - 21.7)	19.8 (17.5 - 22.3)	0.71	22.5 (19.5 - 25.7)	16.0 (13.2 - 19.2)	**0.00**	26.7 (18.0 - 37.5)	20.8 (16.9 - 25.2)	18.1 (15.8 - 20.7)
Ever Used in Lifetime									
Alcohol	62.8 (60.3 - 65.2)	64.6 (60.0 - 69.0)	0.48	62.3 (59.2 - 65.3)	63.5 (60.1 - 66.7)	0.57	63.4 (52.3 - 73.2)	56.6 (51.6 - 61.4)	65.3 (62.5 - 68.1)
Marijuana	33.3 (29.9 - 36.8)	34.6 (30.9 - 38.6)	0.60	36.2 (31.9 - 40.8)	30.4 (26.4 - 34.7)	**0.03**	31.4 (22.1 - 42.5)	34.1 (28.7 - 40.0)	33.4 (29.8 - 37.2)
Cocaine	5.3 (4.2 - 6.7)	5.3 (4.2 - 6.7)	1.00	7.2 (5.4 - 9.4)	3.4 (2.5 - 4.6)	**0.00**	2.5 (0.8 - 7.4)	4.0 (2.3 - 6.7)	5.9 (4.6 - 7.7)
Hallucinogenic Drugs	—	—	~	—	—	~	—	—	—
Synthetic Marijuana	6.5 (5.4 - 8.0)	N/A	~	8.0 (6.3 - 10.1)	5.1 (3.8 - 6.9)	**0.02**	3.2 (1.0 - 9.6)	4.0 (1.9 - 8.0)	7.6 (6.3 - 9.3)
Inhalants	6.1 (4.9 - 7.5)	6.0 (4.8 - 7.4)	0.89	6.6 (4.9 - 8.8)	5.5 (4.2 - 7.2)	0.35	3.1 (1.1 - 8.4)	7.4 (5.5 - 9.9)	5.8 (4.6 - 7.4)
Ecstasy also called "MDMA"	6.3 (5.0 - 7.8)	10.3 (8.5 - 12.5)	**0.00**	8.8 (6.9 - 11.2)	3.7 (2.7 - 5.1)	**0.00**	6.6 (3.1 - 13.4)	4.2 (2.3 - 7.5)	6.8 (5.4 - 8.7)
Heroin	2.8 (1.9 - 4.1)	1.9 (1.2 - 2.8)	0.14	4.2 (2.8 - 6.2)	1.4 (0.9 - 2.2)	**0.00**	1.3 (0.3 - 5.8)	3.5 (1.8 - 6.7)	2.6 (1.7 - 4.0)
Methamphetamines	3.2 (2.2 - 4.6)	2.4 (1.7 - 3.4)	0.26	4.2 (2.9 - 6.2)	2.1 (1.4 - 3.2)	**0.00**	2.1 (0.6 - 6.7)	3.0 (1.4 - 6.3)	3.3 (2.3 - 4.9)
Rx Drugs without a Doctor's Prescription	12.3 (10.5 - 14.4)	11.3 (9.7 - 13.2)	0.47	14.5 (12.1 - 17.3)	10.1 (8.0 - 12.8)	**0.01**	15.9 (9.3 - 25.9)	8.2 (5.9 - 11.2)	13.3 (11.2 - 15.7)
Injected Any Illegal Drug	2.4 (1.7 - 3.5)	1.6 (1.1 - 2.5)	0.16	4.0 (2.7 - 5.9)	0.9 (0.5 - 1.7)	**0.00**	0.4 (0.1 - 2.8)	3.2 (1.5 - 6.4)	2.2 (1.5 - 3.4)

NOTES:
^Miami-Dade County: Weighted data were available for Miami-Dade County 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; **N/A:** <100 respondents for the subgroup.
***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 2,426 with an overall response rate of 83%; the 2015 sample size was 2,728 with a 78% overall response rate.
**Binge Alcohol: Defined as having had five or more drinks of alcohol in a row within a couple of hours on at least 1 day during the 30 days before the survey.

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

Table 3.3: Self-Reported Substance Use-Related Behaviors Among *Palm Beach County*^ Public High-School Students, 2015
Estimated Percent and 95% Confidence Interval (CI)
2013 and 2015 YRBS*

Substance Use Behaviors	2015 vs 2013			2015 by Sex			2015 by Race		
	2015	2013	*p* value	Male	Female	*p* value	White	Black	Hispanic
	Estimate (95% CI)	Estimate (95% CI)		Estimate (95% CI)	Estimate (95% CI)		Estimate (95% CI)	Estimate (95% CI)	Estimate (95% CI)
Used in Past Month									
Alcohol	34.5 (31.4 - 37.7)	38.7 (34.8 - 42.7)	0.11	32.5 (29.1 - 36.2)	36.1 (32.2 - 40.1)	0.10	41.9 (37.5 - 46.4)	22.6 (18.9 - 26.8)	33.4 (28.9 - 38.2)
Binge Alcohol**	16.5 (14.5 - 18.7)	19.6 (16.8 - 22.7)	0.09	15.6 (13.4 - 18.2)	16.8 (14.2 - 19.7)	0.45	21.3 (18.2 - 24.9)	6.9 (5.1 - 9.3)	16.9 (13.9 - 20.4)
Marijuana	23.0 (20.9 - 25.4)	27.8 (24.8 - 31.1)	**0.01**	24.9 (21.9 - 28.1)	20.5 (17.7 - 23.6)	**0.04**	25.3 (21.6 - 29.3)	17.7 (14.6 - 21.4)	23.3 (20.2 - 26.7)
Ever Used in Lifetime									
Alcohol	62.5 (59.2 - 65.7)	65.9 (61.9 - 69.8)	0.18	59.1 (55.0 - 63.0)	65.1 (61.0 - 69.0)	**0.01**	69.1 (63.5 - 74.2)	55.6 (51.2 - 59.8)	60.6 (55.4 - 65.6)
Marijuana	41.5 (38.8 - 44.2)	44.2 (40.2 - 48.2)	0.28	42.4 (38.9 - 45.9)	40.2 (36.9 - 43.7)	0.32	43.8 (39.7 - 48.0)	34.5 (30.6 - 38.6)	43.3 (39.1 - 47.6)
Cocaine	7.0 (5.8 - 8.5)	7.8 (6.1 - 9.8)	0.53	8.3 (6.5 - 10.5)	4.5 (3.3 - 6.1)	**0.00**	5.8 (4.3 - 8.0)	6.3 (4.4 - 9.0)	6.5 (4.8 - 8.9)
Hallucinogenic Drugs	—	—	~	—	—	~	—	—	—
Synthetic Marijuana	10.7 (9.0 - 12.6)	—	~	12.1 (9.7 - 14.8)	7.6 (5.8 - 9.8)	**0.01**	9.0 (6.5 - 12.4)	8.0 (5.5 - 11.5)	10.2 (7.8 - 13.3)
Inhalants	10.5 (8.7 - 12.7)	10.1 (7.9 - 13.0)	0.82	11.1 (9.1 - 13.5)	8.3 (6.2 - 11.2)	0.09	8.9 (6.3 - 12.5)	10.8 (7.9 - 14.6)	8.7 (6.5 - 11.5)
Ecstasy also called "MDMA"	9.1 (7.2 - 11.5)	14.5 (11.8 - 17.8)	**0.00**	9.4 (7.2 - 12.2)	7.0 (4.9 - 9.8)	0.14	8.1 (5.8 - 11.1)	5.8 (3.7 - 9.0)	8.4 (5.9 - 12.0)
Heroin	5.7 (4.2 - 7.8)	5.7 (3.9 - 8.2)	0.99	6.4 (4.4 - 9.3)	3.2 (1.9 - 5.5)	**0.03**	2.8 (1.5 - 5.3)	5.6 (3.4 - 9.0)	5.5 (3.4 - 8.6)
Methamphetamines	5.8 (4.4 - 7.7)	7.2 (5.1 - 10.1)	0.34	6.2 (4.5 - 8.5)	3.9 (2.5 - 6.2)	0.08	4.7 (3.0 - 7.4)	3.9 (2.7 - 5.7)	4.3 (2.5 - 7.2)
Rx Drugs without a Doctor's Prescription	13.9 (12.2 - 15.8)	14.6 (12.5 - 17.1)	0.60	14.6 (12.4 - 17.1)	12.2 (10.1 - 14.6)	0.11	15.3 (12.3 - 18.7)	8.1 (6.0 - 10.8)	14.2 (11.5 - 17.4)
Injected Any Illegal Drug	4.9 (3.8 - 6.4)	6.1 (4.5 - 8.2)	0.29	5.5 (4.0 - 7.7)	3.2 (2.2 - 4.6)	**0.04**	3.4 (2.0 - 5.7)	5.1 (3.4 - 7.5)	4.3 (2.8 - 6.8)

NOTES:

^**Palm Beach County:** Weighted data were available for Palm Beach County in 2013 and 2015; weighted results mean that the overall response rate was at least 60%. The overall response rate is calculated by multiplying the school response rate times the student response rate. Weighted results are representative of all students in grades 9–12 attending public schools in each jurisdiction.
'—': Data not available; ~: *p* value not available.
*Sample Frame for the 2013 and 2015 YRBS:** Consisted of public schools with students in at least one of grades 9-12. The sample size for 2013 was 1,836 with an overall response rate of 77%; the 2015 sample size was 2,490 with a 71% overall response rate.
Binge Alcohol: Defined as having had five or more drinks of alcohol in a row within a couple of hours on at least 1 day during the 30 days before the survey.

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

Table 4a: Trends in Admissions* to Programs Treating Substance Use Disorders, Southeastern Florida (Miami Area) ^, 2012-2016**

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

	Calendar Year									
	2012		2013		2014		2015		2016	
	(#)	(%)	(#)	(%)	(#)	(%)	(#)	(%)	(#)	(%)
Total Admissions (#)	**9,877**	**100%**	**9,500**	**100%**	**18,394**	**100%**	**20,580**	**100%**	**26,713**	**100%**
Primary Substance of Abuse (%)										
Alcohol	2,375	24.0%	2,318	24.4%	5,006	27.2%	6,830	33.2%	8,539	32.0%
Cocaine/Crack	1,548	15.7%	1,161	12.2%	1,906	10.4%	2,088	10.1%	2,812	10.5%
Heroin	453	4.6%	422	4.4%	1,249	6.8%	2,366	11.5%	5,011	18.8%
Prescription Opioids	1,399	14.2%	767	8.1%	2,142	11.6%	2,298	11.2%	3,092	11.6%
Methamphetamine	27	0.3%	45	0.5%	76	0.4%	166	0.8%	216	0.8%
Marijuana	3,324	33.7%	3,875	40.8%	5,532	30.1%	4,779	23.2%	5,582	20.9%
Benzodiazepines	151	1.5%	154	1.6%	343	1.9%	483	2.3%	0	0.0%
MDMA	14	0.1%	18	0.2%	50	0.3%	17	<0.1%	0	0.0%
Synthetic Stimulants	0	0.0%	2	<0.1%	23	0.1%	464	2.3%	0	0.0%
Synthetic Cannabinoids	0	0.0%	0	0.0%	0	0.0%	2	<0.1%	0	0.0%
Other Drugs/Unknown	586	5.9%	738	7.8%	2,067	11.2%	1,087	5.3%	1,461	5.5%

NOTES:

^Southeastern Florida: Includes the three counties of the Miami MSA—Broward, Miami-Dade, and Palm Beach counties.

*Admission: 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.

2012-2013: Data for Palm Beach County is not available for 2012-2013, therefore 2012-2013 only includes data for Broward and Miami-Dade counties; **2014-2016 includes data for all three counties in the Miami MSA.

SOURCE: Data provided to the Southeastern Florida NDEWS SCE by the Florida Department of Children and Families.

Table 4b: Demographic and Drug Use Characteristics of Primary Treatment Admissions* for Select Substances of Abuse, Southeastern Florida (Miami Area)^, 2016

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

	Primary Substance of Abuse																	
	Alcohol		Cocaine/Crack		Heroin		Prescription Opioids		Methamphetamine		Marijuana		Benzo-diazepines		Synthetic Stimulants		Synthetic Cannabinoids	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Number of Admissions (#)	8,539	100%	2,812	100%	5,011	100%	3,092	100%	216	100%	5,582	100%	0	n/a	0	n/a	0	n/a
Sex (%)																		
Male	5,689	66.6%	1,639	58.3%	3,044	60.7%	1,405	45.4%	140	64.8%	3,841	68.8%	n/a	n/a	n/a	n/a	n/a	n/a
Female	2,850	33.4%	1,173	41.7%	1,967	39.3%	1,687	54.6%	76	35.2%	1,741	31.2%	n/a	n/a	n/a	n/a	n/a	n/a
Race/Ethnicity (%)																		
White, Non-Hisp.	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	n/a	n/a	n/a	n/a	n/a	n/a
African-Am/Black, Non-Hisp	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	n/a	n/a	n/a	n/a	n/a	n/a
Hispanic/Latino	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	n/a	n/a	n/a	n/a	n/a	n/a
Asian	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	n/a	n/a	n/a	n/a	n/a	n/a
Other	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	n/a	n/a	n/a	n/a	n/a	n/a
Age Group** (%)																		
Under 18	253	3.0%	10	0.4%	11	0.2%	4	0.1%	3	1.4%	2,424	43.4%	n/a		n/a		n/a	
18-25	608	7.1%	363	12.9%	756	15.1%	447	14.5%	16	7.4%	1,544	27.7%	n/a		n/a		n/a	
26-34	1,884	22.1%	743	26.4%	2,532	50.5%	1,574	50.9%	98	45.4%	973	17.4%	n/a		n/a		n/a	
35+	5,794	67.9%	1,696	60.3%	1,712	34.2%	1,067	34.5%	99	45.8%	641	11.5%	n/a		n/a		n/a	
Route of Administration (%)																		
Smoked	26	0.3%	1,363	48.5%	70	1.4%	89	2.9%	102	47.2%	5,190	93.0%	n/a		n/a		n/a	
Inhaled	5	<0.1%	1,028	36.6%	304	6.1%	271	8.8%	32	14.8%	23	0.4%	n/a		n/a		n/a	
Injected	16	0.2%	141	5.0%	2,549	50.9%	1,292	41.8%	53	24.5%	12	0.2%	n/a		n/a		n/a	
Oral/Other/Unknown	8,492	99.4%	280	10.0%	2,088	41.7%	1,440	46.6%	29	13.4%	357	6.4%	n/a		n/a		n/a	
Secondary Substance (%)																		
None	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	n/a	n/a	n/a	n/a	n/a	n/a
Alcohol	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	n/a	n/a	n/a	n/a	n/a	n/a
Cocaine/Crack	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	n/a	n/a	n/a	n/a	n/a	n/a
Heroin	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	n/a	n/a	n/a	n/a	n/a	n/a
Prescription Opioids	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	n/a	n/a	n/a	n/a	n/a	n/a
Methamphetamine	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	n/a	n/a	n/a	n/a	n/a	n/a
Marijuana	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	n/a	n/a	n/a	n/a	n/a	n/a
Benzodiazepines	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	n/a	n/a	n/a	n/a	n/a	n/a
Synthetic Stimulants	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	n/a	n/a	n/a	n/a	n/a	n/a
Synthetic Cannabinoids	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	n/a	n/a	n/a	n/a	n/a	n/a

NOTES:

^Southeastern Florida: Includes the three counties of the Miami MSA—Broward, Miami-Dade, and Palm Beach counties.

*Admission: 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.

**Age Group: Categories for Southeastern Florida are not the same categories presented for other NDEWS sites.

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

SOURCE: Data provided to the Southeastern Florida NDEWS SCE by the Florida Department of Children and Families.

Table 5: Drug Poisoning Deaths*, by Drug and Year, *Southeastern Florida (Miami Area)* ^, 2011–2015**
Number, Crude Rate, and Age-Adjusted Rate* (per 100,000 population)**

	2011			2012			2013			2014			2015		
	Number (#)	Crude Rate	Age-Adjusted Rate	Number (#)	Crude Rate	Age-Adjusted Rate	Number (#)	Crude Rate	Age-Adjusted Rate	Number (#)	Crude Rate	Age-Adjusted Rate	Number (#)	Crude Rate	Age-Adjusted Rate
Drug Poisoning Deaths	**576**	**10.2**	**9.7**	**561**	**9.7**	**9.1**	**550**	**9.4**	**9.0**	**596**	**10.1**	**9.7**	**802**	**13.3**	**13.2**
Opioids‡	**265**	**4.7**	**4.5**	**252**	**4.4**	**4.2**	**256**	**4.4**	**4.3**	**254**	**4.3**	**4.2**	**378**	**6.3**	**6.4**
Heroin	23	0.4	0.4	36	0.6	0.6	56	1.0	1.0	79	1.3	1.4	176	2.9	3.1
Natural Opioid Analgesics	182	3.2	3.1	172	3.0	2.8	151	2.6	2.5	116	2.0	1.8	119	2.0	1.9
Methadone	51	0.9	0.9	29	0.5	0.5	26	0.4	0.4	17	UNR	UNR	13	UNR	UNR
Synthetic Opioid Analgesics	28	0.5	0.5	38	0.7	0.6	44	0.8	0.7	78	1.3	1.3	145	2.4	2.4
Benzodiazepines	**185**	**3.3**	**3.2**	**140**	**2.4**	**2.3**	**105**	**1.8**	**1.7**	**105**	**1.8**	**1.7**	**118**	**2.0**	**1.9**
Benzodiazepines **AND** Any Opioids	150	2.6	2.6	109	1.9	1.8	86	1.5	1.4	82	1.4	1.4	84	1.4	1.4
Benzodiazepines **AND** Heroin	SUP	SUP	SUP	SUP	SUP	SUP	13	UNR	UNR	21	0.4	0.4	29	0.5	0.5
Psychostimulants															
Cocaine	107	1.9	1.8	97	1.7	1.6	103	1.8	1.8	111	1.9	1.9	160	2.7	2.7
Psychostimulants with Abuse Potential	SUP	SUP	SUP	10	UNR	UNR	10	UNR	UNR	16	UNR	UNR	24	0.4	0.4
Cannabis (derivatives)	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**
Percent with Drugs Specified‡	70.5%			69.3%			71.6%			65.8%			65.3%		

NOTES:
*Drug Poisoning Deaths: Drug poisoning deaths are defined as deaths with **underlying cause-of-death** codes from the World Health Organization's (WHO's) *International Classification of Diseases, Tenth Revision* (ICD-10) of X40-X44, X60-X64, X85, and Y10-Y14. See *Overview & Limitations* section for additional information on mortality data and definitions of the specific ICD-10 codes listed.
Drug Poisoning Deaths, by Drug: Among the deaths with drug poisoning identified as the underlying cause, the specific drugs are identified by ICD-10 **multiple cause-of-death (MCOD) T-codes (see below). Each death certificate may contain up to 20 causes of death indicated in the MCOD field. Thus, the total count across drugs may exceed the actual number of dead persons in the selected population. Some deaths involve more than one drug; these deaths are included in the rates for each drug category.
^Southeastern Florida: Comprised of Broward, Miami-Dade, and Palm Beach Counties.
***Age-Adjusted Rate: Age-adjusted rates are weighted averages of the age-specific death rates, where the weights represent a fixed population by age (2000 U.S. Population). Age adjustment is a technique for removing the effects of age from crude rates, so as to allow meaningful comparisons across populations with different underlying age structures. Age-adjusted rates should be viewed as relative indexes rather than as direct or actual measures of mortality risk. See http://wonder.cdc.gov/wonder/help/mcd.html for more information.
‡Opioids: Includes any of these MCOD codes T40.0-T40.4, or T40.6
  Heroin (T40.1); *Natural Opioid Analgesics* (T40.2) - Including morphine and codeine, and semi-synthetic opioid analgesics, including drugs such as oxycodone, hydrocodone, hydromorphone, and oxymorphone; *Methadone* (T40.3); *Synthetic Opioid Analgesics* (T40.4) - Other than methadone, including drugs such as tramadol and fentanyl; *Other and Unspecified Narcotics* (T40.6)
Benzodiazepines: (T42.4)
  Benzodiazepines AND *Any Opioids* (T42.4 AND T40.0-T40.4, or T40.6)
    Benzodiazepines AND *Heroin* (T42.4 AND T40.1)
Psychostimulants:
  Cocaine (T40.5); *Psychostimulants with Abuse Potential* [excludes cocaine](T43.6)
Cannabis (derivatives): (T40.7)
‡Percent of Drug Poisoning Deaths with Drug(s) Specified: Among drug poisoning deaths, deaths that mention the type of drug(s) involved are defined as those including at least one ICD-10 MCOD in the range T36-T50.8. See *Overview & Limitations* section for more information about this statistic.

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

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

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

Drug Identified	Number (#)	Percent of Total Drug Reports* (#)
Total Drug Reports	**21,306**	**100.0%**
COCAINE	7,794	36.6%
CANNABIS	3,932	18.5%
HEROIN	2,027	9.5%
ALPRAZOLAM	1,247	5.9%
NO CONTROLLED DRUG IDENTIFIED	1,192	5.6%
FENTANYL	612	2.9%
OXYCODONE	574	2.7%
METHAMPHETAMINE	539	2.5%
DIBUTYLONE (BETA-KETO-N,N-DIMETHYL-1,3-BENZODIOXOLYLBUTANAMINE; BK-DMBDB)	249	1.2%
AMPHETAMINE	235	1.1%
ACETAMINOPHEN	226	1.1%
PHENYLIMIDOTHIAZOLE ISOMER UNDETERMINED	222	1.0%
ALPHA-PYRROLIDINOPENTIOPHENONE (ALPHA-PVP)	185	0.9%
HYDROMORPHONE	154	0.7%
CAFFEINE	134	0.6%
CARFENTANIL	118	0.6%
3,4-METHYLENEDIOXYMETHAMPHETAMINE (MDMA)	113	0.5%
CLONAZEPAM	108	0.5%
N-ETHYLPENTYLONE	101	0.5%
BUPRENORPHINE	99	0.5%
HYDROCODONE	86	0.4%
MORPHINE	85	0.4%
FURANYL FENTANYL	71	0.3%
3,4-METHYLENEDIOXYETHYLCATHINONE (ETHYLONE)	65	0.3%
TESTOSTERONE	64	0.3%
3,4-METHYLENEDIOXYAMPHETAMINE (MDA)	53	0.2%
CODEINE	37	0.2%
LORAZEPAM	36	0.2%
DIAZEPAM	35	0.2%
LYSERGIC ACID DIETHYLAMIDE (LYSERGIDE)	35	0.2%
QUININE	34	0.2%
FUB-AMB	31	0.1%
KETAMINE	27	0.1%
METHADONE	27	0.1%
TRAMADOL	26	0.1%
BENZOCAINE	23	0.1%
PSILOCIN	23	0.1%
5-FLUORO-ADB	22	0.1%
BENOCYCLIDINE (1-[1-(1-BENZOTHIOPHEN-2-YL)CYCLOHEXYL]PIPERIDINE)	22	0.1%
NALOXONE	22	0.1%
PROMETHAZINE	21	< 0.1%
SILDENAFIL CITRATE (VIAGRA)	21	< 0.1%
AB-FUBINACA	20	< 0.1%
CARISOPRODOL	20	< 0.1%
PENTYLONE (ß-KETO-METHYLBENZODIOXOLYLPENTANAMINE)	20	< 0.1%
PHENACETIN	19	< 0.1%
QUETIAPINE	18	< 0.1%
ACETYLFENTANYL	16	< 0.1%
HYDROXYZINE	16	< 0.1%
LIDOCAINE	16	< 0.1%
STANOZOLOL	16	< 0.1%
TEMAZEPAM	16	< 0.1%
OXYMORPHONE	15	< 0.1%
1,4-BUTANEDIOL	14	< 0.1%
DIMETHYLTRYPTAMINE (DMT)	14	< 0.1%
OXANDROLONE	12	< 0.1%

Drug Identified	Number (#)	Percent of Total Drug Reports* (#)
TRENBOLONE	11	< 0.1%
ASPIRIN	10	< 0.1%
PROCAINE	10	< 0.1%
PSILOCYBIN/PSILOCYN	10	< 0.1%
PSILOCYBINE	10	< 0.1%
XLR-11 (1-(5-FLUOROPENTYL-1H-3-YL)(2,2,3,3-TETRAMETHYLCYCLOPROPYL)METHANONE)	10	< 0.1%
FLUOROISOBUTYRYLFENTANYL	9	< 0.1%
METHANDROSTENOLONE (METHANDIENONE)	9	< 0.1%
NM2201 (NAPHTHALEN-1-YL 1-(5-FLUOROPENTYL)-1H-INDOLE-3-CARBOXYLATE)	9	< 0.1%
PHENTERMINE	9	< 0.1%
3',4'-TETRAMETHYLENE-ALPHA-PYRROLIDINOVALEROPHENONE (TH-PVP)	7	< 0.1%
AMINOPYRINE	7	< 0.1%
METHYLPHENIDATE	7	< 0.1%
N-METHYL-3,4-METHYLENEDIOXYCATHINONE (METHYLONE)	7	< 0.1%
TETRACAINE	7	< 0.1%
ZOLPIDEM	7	< 0.1%
4-CHLORO-ALPHA-PYRROLIDINOVALEROPHENONE (4-CHLORO-ALPHA-PVP)	6	< 0.1%
U-47700	6	< 0.1%
AM-2201 (1-(5-FLUOROPENTYL)-3-(1-NAPHTHOYL)INDOLE)	5	< 0.1%
DIMETHYLONE (3,4-METHYLENEDIOXYDIMETHYLCATHINONE; bk-MDDMA)	5	< 0.1%
GABAPENTIN	5	< 0.1%
METHYLENEDIOXYPYROVALERONE (MDPV)	5	< 0.1%
1-(3-TRIFLUOROMETHYL)PHENYL-PIPERAZINE (TFMPP)	4	< 0.1%
4-CHLOROMETHCATHINONE (4-CMC; CLEPHEDRONE)	4	< 0.1%
6-MONOACETYLMORPHINE	4	< 0.1%
BUTALBITAL	4	< 0.1%
ETIZOLAM	4	< 0.1%
FLUOROAMPHETAMINE	4	< 0.1%
JWH-018 (1-PENTYL-3-(1-NAPHTHOYL)INDOLE)	4	< 0.1%
MMB2201	4	< 0.1%
2-(4-IODO-2,5-DIMETHOXYPHENYL)-N-(2-METHOXYBENZYL)ETHANAMINE (25-I-NBOME)	3	< 0.1%
4-METHYL-ALPHA-ETHYLAMINOPENTIOPHENONE	3	< 0.1%
BUSPIRONE	3	< 0.1%
CANNABIDIOL	3	< 0.1%
DILTIAZEM	3	< 0.1%
DIPHENHYDRAMINE	3	< 0.1%
GAMMA HYDROXY BUTYL LACTONE	3	< 0.1%
MESCALINE	3	< 0.1%
MIDAZOLAM	3	< 0.1%
N-BENZYLPIPERAZINE (BZP)	3	< 0.1%
TADALAFIL	3	< 0.1%
TRAZODONE	3	< 0.1%
2-(4-BROMO-2,5-DIMETHOXYPHENYL)-N-(2-METHOXYBENZYL)ETHANAMINE (25-B-NBOMe)	2	< 0.1%
4-BROMO-2,5-DIMETHOXYAMPHETAMINE (DOB)	2	< 0.1%
5-FLUORO AMB	2	< 0.1%
AB-CHMINACA (N-[(1S)-1-(AMINOCARBONYL)-2-METHYLPROPYL]-1-(CYCLOHEXYLMETHYL)-1H-INDAZOLE-3-CARBOXAMIDE)	2	< 0.1%
ALPHA-PYRROLIDINOBUTIOPHENONE (ALPHA-PBP)	2	< 0.1%
AMITRIPTYLINE	2	< 0.1%
BACLOFEN	2	< 0.1%
BOLDENONE	2	< 0.1%
BROMAZEPAM	2	< 0.1%
BUPROPION	2	< 0.1%
BUTYLONE (ß-KETO-N-METHYLBENZO-DIOXYLPROPYLAMINE)	2	< 0.1%

Drug Identified	Number (#)	Percent of Total Drug Reports* (#)
CREATINE	2	< 0.1%
DEXTROMETHORPHAN	2	< 0.1%
DIHYDRONORMORPHINONE	2	< 0.1%
DIMETHYLSULFONE	2	< 0.1%
ETHYLPHENIDATE	2	< 0.1%
GAMMA HYDROXY BUTYRATE	2	< 0.1%
IBUPROFEN	2	< 0.1%
LISDEXAMFETAMINE	2	< 0.1%
MESTEROLONE	2	< 0.1%
MITRAGYNINE	2	< 0.1%
N,N-DIMETHYLAMPHETAMINE	2	< 0.1%
NALTREXONE	2	< 0.1%
NAPROXEN	2	< 0.1%
NIACINAMIDE	2	< 0.1%
NICOTINAMIDE	2	< 0.1%
P-FLUOROISOBUTYRYL FENTANYL	2	< 0.1%
SUCROSE	2	< 0.1%
THJ 2201(1-(5-FLUOROPENTYL)-1H-INDAZOL-3-YL)(NAPHTHALEN-1-YL)METHANONE	2	< 0.1%
2,5-DIMETHOXY-4-ETHYLPHENETHYLAMINE (2C-E)	1	< 0.1%
2,5-DIMETHOXY-4-IODOPHENETHYLAMINE (2C-I)	1	< 0.1%
2,5-DIMETHOXY-N-(2-METHOXYBENZYL)PHENETHYLAMINE (25-H-NBOME)	1	< 0.1%
4-ACETOXY-N,N-DIMETHYLTRYPTAMINE (4-ACO-DMT)	1	< 0.1%
4-ANILINO-1-PHENETHYLPIPERIDINE	1	< 0.1%
4-BROMO-2,5-DIMETHOXYPHENETHYLAMINE (2C-B)	1	< 0.1%
4-CHLORO-ALPHA-PYRROLIDINOPROPIOPHENONE (4-CHLORO-ALPHA-PPP)	1	< 0.1%
4-FLUOROAMPHETAMINE (4-FA)	1	< 0.1%
4-FLUOROMETHCATHINONE (4-FMC; FLEPHEDRONE)	1	< 0.1%
4-HYDROXY-19-NORTESTOSTERONE (4,17ß-DIHYDROXY-ESTR-4-EN-3-ONE)	1	< 0.1%
4-METHYL-N-ETHYLCATHINONE (4-MEC)	1	< 0.1%
5-METHOXY-N-METHYL-N-ISOPROPYLTRYPTAMINE (5-MEO-MIPT)	1	< 0.1%
ADB-FUBINACA (N-(1-AMINO-3,3-DIMETHYL-1-OXOBUTAN-2-YL)-1-(4-FLUOROBENZYL)-1H-INDAZOLE-3-CARBOXAMIDE)	1	< 0.1%
AKB48 N-(5-FLUOROPENTYL)	1	< 0.1%
AMOXICILLIN	1	< 0.1%
BARBITAL	1	< 0.1%
CANNABINOL	1	< 0.1%
CHLORDIAZEPOXIDE	1	< 0.1%
CLORAZEPATE	1	< 0.1%
CLOSTEBOL (4-CHLOROTESTOSTERONE)	1	< 0.1%
CYCLOBENZAPRINE	1	< 0.1%
CYPROHEPTADINE	1	< 0.1%
DICLOFENAC	1	< 0.1%
DIPYRONE	1	< 0.1%
DROSTANOLONE	1	< 0.1%
EG 018 (NAPHTHALEN-1-YL(9-PENTYL-9H-CARBAZOL-3-YL)METHANONE)	1	< 0.1%
ESCITALOPRAM	1	< 0.1%
ETHYLENE GLYCOL	1	< 0.1%
INOSITOL	1	< 0.1%
JWH-122 (1-PENTYL-3-(4-METHYL-1-NAPHTHOYL)INDOLE)	1	< 0.1%
LACTOSE	1	< 0.1%
MAB-CHMINACA (ADB-CHMINACA)	1	< 0.1%
MANNITOL	1	< 0.1%
MEPERIDINE	1	< 0.1%
METHORPHAN	1	< 0.1%
METHYLPREDNISOLONE	1	< 0.1%
MIRTAZAPINE	1	< 0.1%

Table 6a (cont'd): Drug Reports* for Items Seized by Law Enforcement in Miami MSA^ in 2016 DEA National Forensic Laboratory Information System (NFLIS)

Drug Identified	Number (#)	Percent of Total Drug Reports* (#)
NICOTINE	1	< 0.1%
NORTESTOSTERONE DECANOATE	1	< 0.1%
NOSCAPINE	1	< 0.1%
OXAZEPAM	1	< 0.1%
OXYMETHOLONE	1	< 0.1%
PAPAVERINE	1	< 0.1%
PENICILLIN	1	< 0.1%
P-FLUOROFENTANYL	1	< 0.1%
PHENDIMETRAZINE	1	< 0.1%
SDB-005	1	< 0.1%
SERTRALINE	1	< 0.1%
TRIAZOLAM	1	< 0.1%
URB597 (3-(AMINOCARBONYL)[1,1-BIPHENYL]-3-YL)-CYCLOHEXYLCARBAMATE)	1	< 0.1%

NOTES:

^Miami MSA: Includes Broward, Miami-Dade, and Palm Beach Counties.

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

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

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

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

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

Drug Identified, by Selected Drug Category**	Number (#)	Percent of Drug Category (%)	Percent of Total Reports (%)
Total Drug Reports*	**21,306**	**100.0%**	**100.0%**
Opioids Category	**4,001**	**100.0%**	**18.8%**
Heroin	**2,027**	**50.7%**	**9.5%**
Narcotic Analgesics	**1,823**	**45.6%**	**8.6%**
FENTANYL	612	15.3%	2.9%
OXYCODONE	574	14.3%	2.7%
HYDROMORPHONE	154	3.8%	0.7%
BUPRENORPHINE	99	2.5%	0.5%
HYDROCODONE	86	2.1%	0.4%
MORPHINE	85	2.1%	0.4%
FURANYL FENTANYL	71	1.8%	0.3%
CODEINE	37	0.9%	0.2%
METHADONE	27	0.7%	0.1%
TRAMADOL	26	0.6%	0.1%
ACETYLFENTANYL	16	0.4%	< 0.1%
OXYMORPHONE	15	0.4%	< 0.1%
FLUOROISOBUTYRYLFENTANYL	9	0.2%	< 0.1%
U-47700	6	0.1%	< 0.1%
MITRAGYNINE	2	< 0.1%	< 0.1%
P-FLUOROISOBUTYRYL FENTANYL	2	< 0.1%	< 0.1%
MEPERIDINE	1	< 0.1%	< 0.1%
P-FLUOROFENTANYL	1	< 0.1%	< 0.1%
Narcotics	**151**	**3.8%**	**0.7%**
CARFENTANIL	118	2.9%	0.6%
NALOXONE	22	0.5%	0.1%
6-MONOACETYLMORPHINE	4	< 0.1%	< 0.1%
DIHYDRONORMORPHINONE	2	< 0.1%	< 0.1%
NALTREXONE	2	< 0.1%	< 0.1%
METHORPHAN	1	< 0.1%	< 0.1%
NOSCAPINE	1	< 0.1%	< 0.1%
PAPAVERINE	1	< 0.1%	< 0.1%
Synthetic Cathinones Category	**664**	**100.0%**	**3.1%**
Synthetic Cathinones	**652**	**98.2%**	**3.1%**
DIBUTYLONE (BETA-KETO-N,N-DIMETHYL-1,3-BENZODIOXOLYLBUTANAMINE; BK-DMBDB)	249	37.5%	1.2%
ALPHA-PYRROLIDINOPENTIOPHENONE (ALPHA-PVP)	185	27.9%	0.9%
N-ETHYLPENTYLONE	101	15.2%	0.5%
3,4-METHYLENEDIOXYETHYLCATHINONE (ETHYLONE)	65	9.8%	0.3%
PENTYLONE (ß-KETO-METHYLBENZODIOXOLYLPENTANAMINE)	20	3.0%	< 0.1%
3',4'-TETRAMETHYLENE-ALPHA-PYRROLIDINOVALEROPHENONE (TH-PVP)	7	1.1%	< 0.1%
4-CHLORO-ALPHA-PYRROLIDINOVALEROPHENONE (4-CHLORO-ALPHA-PVP)	6	0.9%	< 0.1%
DIMETHYLONE (3,4-METHYLENEDIOXYDIMETHYLCATHINONE; bk-MDDMA)	5	0.8%	< 0.1%
4-CHLOROMETHCATHINONE (4-CMC; CLEPHEDRONE)	4	0.6%	< 0.1%
4-METHYL-ALPHA-ETHYLAMINOPENTIOPHENONE	3	0.5%	< 0.1%
ALPHA-PYRROLIDINOBUTIOPHENONE (ALPHA-PBP)	2	0.3%	< 0.1%
BUTYLONE (ß-KETO-N-METHYLBENZO-DIOXYLPROPYLAMINE)	2	0.3%	< 0.1%
4-CHLORO-ALPHA-PYRROLIDINOPROPIOPHENONE (4-CHLORO-ALPHA-PPP)	1	0.2%	< 0.1%
4-FLUOROMETHCATHINONE (4-FMC; FLEPHEDRONE)	1	0.2%	< 0.1%
4-METHYL-N-ETHYLCATHINONE (4-MEC)	1	0.2%	< 0.1%
Synthetic Cathinones (Hallucinogen)	**12**	**1.8%**	**< 0.1%**
N-METHYL-3,4-METHYLENEDIOXYCATHINONE (METHYLONE)	7	1.1%	< 0.1%
METHYLENEDIOXYPYROVALERONE (MDPV)	5	0.8%	< 0.1%
Synthetic Cannabinoids Category	**118**	**100.0%**	**0.6%**
FUB-AMB	31	26.3%	0.1%
5-FLUORO-ADB	22	18.6%	0.1%
AB-FUBINACA	20	16.9%	< 0.1%

Drug Identified, by Selected Drug Category**	Number (#)	Percent of Drug Category (%)	Percent of Total Reports (%)
XLR-11 (1-(5-FLUOROPENTYL-1H-3-YL)(2,2,3,3-TETRAMETHYLCYCLOPROPYL)METHANONE)	10	8.5%	< 0.1%
NM2201 (NAPHTHALEN-1-YL 1-(5-FLUOROPENTYL)-1H-INDOLE-3-CARBOXYLATE)	9	7.6%	< 0.1%
AM-2201 (1-(5-FLUOROPENTYL)-3-(1-NAPHTHOYL)INDOLE)	5	4.2%	< 0.1%
JWH-018 (1-PENTYL-3-(1-NAPHTHOYL)INDOLE)	4	3.4%	< 0.1%
MMB2201	4	3.4%	< 0.1%
5-FLUORO AMB	2	1.7%	< 0.1%
AB-CHMINACA (N-[(1S)-1-(AMINOCARBONYL)-2-METHYLPROPYL]-1-(CYCLOHEXYLMETHYL)-1H-INDAZOLE-3-CARBOXAMIDE)	2	1.7%	< 0.1%
THJ 2201(1-(5-FLUOROPENTYL)-1H-INDAZOL-3-YL)(NAPHTHALEN-1-YL)METHANONE	2	1.7%	< 0.1%
ADB-FUBINACA (N-(1-AMINO-3,3-DIMETHYL-1-OXOBUTAN-2-YL)-1-(4-FLUOROBENZYL)-1H-INDAZOLE-3-CARBOXAMIDE)	1	0.8%	< 0.1%
AKB48 N-(5-FLUOROPENTYL)	1	0.8%	< 0.1%
EG 018 (NAPHTHALEN-1-YL(9-PENTYL-9H-CARBAZOL-3-YL)METHANONE)	1	0.8%	< 0.1%
JWH-122 (1-PENTYL-3-(4-METHYL-1-NAPHTHOYL)INDOLE)	1	0.8%	< 0.1%
MAB-CHMINACA (ADB-CHMINACA)	1	0.8%	< 0.1%
SDB-005	1	0.8%	< 0.1%
URB597 (3-(AMINOCARBONYL)[1,1-BIPHENYL]-3-YL)-CYCLOHEXYLCARBAMATE)	1	0.8%	< 0.1%
Tryptamines Category	**16**	**100.0%**	**< 0.1%**
DIMETHYLTRYPTAMINE (DMT)	14	87.5%	< 0.1%
4-ACETOXY-N,N-DIMETHYLTRYPTAMINE (4-ACO-DMT)	1	6.3%	< 0.1%
5-METHOXY-N-METHYL-N-ISOPROPYLTRYPTAMINE (5-MEO-MIPT)	1	6.3%	< 0.1%
Phenethylamines (2C Series) (H) Category	**9**	**100.0%**	**< 0.1%**
2-(4-IODO-2,5-DIMETHOXYPHENYL)-N-(2-METHOXYBENZYL)ETHANAMINE (25-I-NBOME)	3	33.3%	< 0.1%
2-(4-BROMO-2,5-DIMETHOXYPHENYL)-N-(2-METHOXYBENZYL)ETHANAMINE (25-B-NBOMe)	2	22.2%	< 0.1%
2,5-DIMETHOXY-4-ETHYLPHENETHYLAMINE (2C-E)	1	11.1%	< 0.1%
2,5-DIMETHOXY-4-IODOPHENETHYLAMINE (2C-I)	1	11.1%	< 0.1%
2,5-DIMETHOXY-N-(2-METHOXYBENZYL)PHENETHYLAMINE (25-H-NBOME)	1	11.1%	< 0.1%
4-BROMO-2,5-DIMETHOXYPHENETHYLAMINE (2C-B)	1	11.1%	< 0.1%
Piperazines Category	**7**	**100.0%**	**< 0.1%**
Piperazines (Hallucinogen)	**4**	**57.1%**	**< 0.1%**
1-(3-TRIFLUOROMETHYL)PHENYL-PIPERAZINE (TFMPP)	4	57.1%	< 0.1%
Piperazines (Stimulant)	**3**	**42.9%**	**< 0.1%**
N-BENZYLPIPERAZINE (BZP)	3	42.9%	< 0.1%

NOTES:

^Miami MSA: Includes Broward, Miami-Dade, and Palm Beach Counties.

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

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

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

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

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

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

Overview and Limitations of American Community Survey (ACS) Data

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

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

Sources

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

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

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

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

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

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

Notes about Data Terms

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

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

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

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

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

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

Sources

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

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

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

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

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

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

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

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

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

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

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

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

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

Notes about Data Terms

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

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

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

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

Sources

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

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

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

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

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

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

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

Overview and Limitations of Treatment Admissions Data from Local Sources

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

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

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

❖ **Atlanta Metro**

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

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

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

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

❖ **Chicago Metro**

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

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

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

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

❖ **Denver Metro**

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

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

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

❖ **King County (Seattle Area)**

Notes & Definitions:

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

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

❖ **Los Angeles County**

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

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

❖ **Maine**

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

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

❖ **New York City**

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

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

❖ **Philadelphia**

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

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

❖ **San Francisco County**

Notes & Definitions

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

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

❖ **Southeastern Florida (Miami Area)**

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

Notes & Definitions:

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

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

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

❖ **Texas**

Notes & Definitions:

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

Methamphetamine: Includes amphetamines and methamphetamine.

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

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

❖ **Wayne County (Detroit Area)**

Notes & Definitions:

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

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

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

Sources

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

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

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

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

Overview and Limitations of CDC WONDER Multiple Cause of Death Data

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

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

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

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

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

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

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

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

Notes About Data Terms

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Heroin (T40.1)

Methadone (T40.3)

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

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

Cocaine (T40.5)

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

Cannabis (derivatives) (T40.7)

Benzodiazepines (T42.4)

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

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

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

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

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

Sources

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

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

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

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

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

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

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

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

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

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

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

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

Notes about Reporting Labs

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

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

Notes about Data Terms

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

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

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

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

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

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

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

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

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

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

Sources

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

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

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

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https://www.nflis.deadiversion.usdoj.gov/DesktopModules/ReportDownloads/Reports/NFLIS-2017-StatMethodology.pdf