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Maine
Sentinel Community Site (SCS)
Drug Use Patterns and Trends, 2016

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

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

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

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

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

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

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

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

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

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

The *SCS Snapshots* for each of the 12 Sentinel Community Sites and detailed information about NDEWS can be found on the NDEWS website at www.ndews.org.
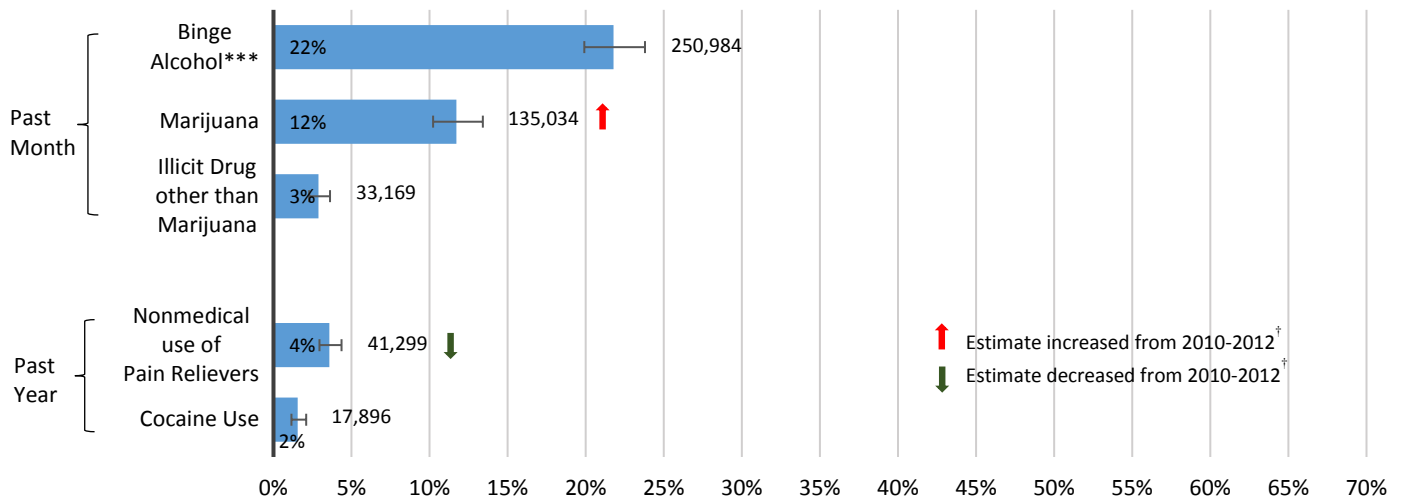
Maine SCS Snapshot, 2016

Substance Use

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

Persons 12+ Years Reporting Selected Substance Use, Maine, 2012-2014

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

Past Month	Binge Alcohol***	22% — 250,984
	Marijuana	12% — 135,034 ↑
	Illicit Drug other than Marijuana	3% — 33,169
Past Year	Nonmedical use of Pain Relievers	4% — 41,299 ↓
	Cocaine Use	2% — 17,896

↑ Estimate increased from 2010-2012[†]

↓ Estimate decreased from 2010-2012[†]

*U.S. Population: U.S. civilian non-institutionalized population. **Estimated Number: Calculated by multiplying the prevalence rate and the population estimate of persons 12+ years (1,151,999) from Table C1 of the NSDUH Report. ***Binge Alcohol: Defined as drinking five or more drinks on the same occasion.
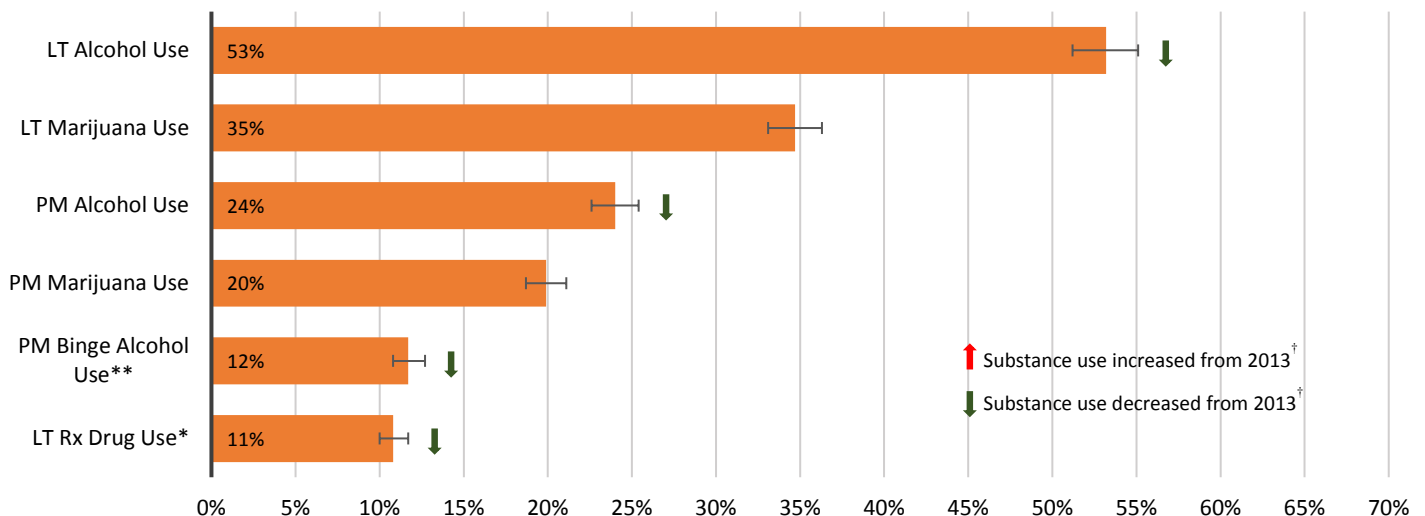[†]Statistically significant change: $p<0.05$.
Source: Adapted by the NDEWS Coordinating Center from data provided by SAMHSA, NSDUH. Annual averages based on combined 2012 to 2014 NSDUH data.

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

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

Estimated Percent and 95% Confidence Interval

LT Alcohol Use	53% ↓
LT Marijuana Use	35%
PM Alcohol Use	24% ↓
PM Marijuana Use	20%
PM Binge Alcohol Use**	12% ↓
LT Rx Drug Use*	11% ↓

↑ Substance use increased from 2013[†]

↓ Substance use decreased from 2013[†]

*LT Rx Drug Use: Defined as ever taking prescription drugs without a doctor's prescription one or more times during their life.
**PM Binge Alcohol Use: Defined as having five or more drinks of alcohol in a row (within a couple of hours on at least 1 day during the 30 days before the survey).
[†]Statistically significant change: $p<0.05$ by t-test.
See *Sentinel Community Site (SCS) Data Tables* and *Overview & Limitations* section for more information regarding the data.
**Source**: Adapted by the NDEWS Coordinating Center from data provided by CDC, 1991-2015 High School YRBS data.

Substance Use Disorders and Treatment

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

Substance Use Disorders** in Past Year Among Persons 12+ Years, Maine, 2012-2014
Estimated Percent, 95% Confidence Interval, and Estimated Number of Persons***
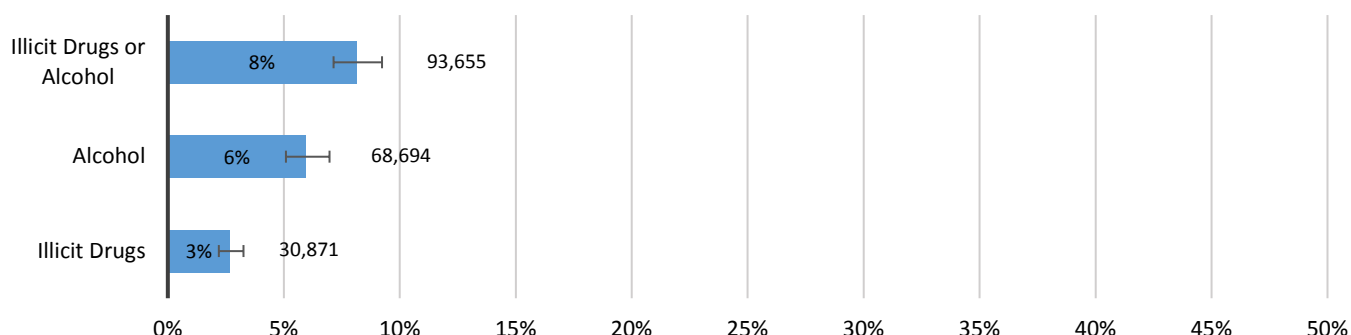
*U.S. Population: U.S. civilian non-institutionalized population. **Substance Use Disorders in Past Year: Persons are classified as having a substance use disorder in the past 12 months based on responses to questions that meet the criteria specified in the 4th edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)*. ***Estimated Number: Calculated by multiplying the prevalence rate and the population estimate of persons 12+ years (1,151,999) from Table C1 of the NSDUH Report.

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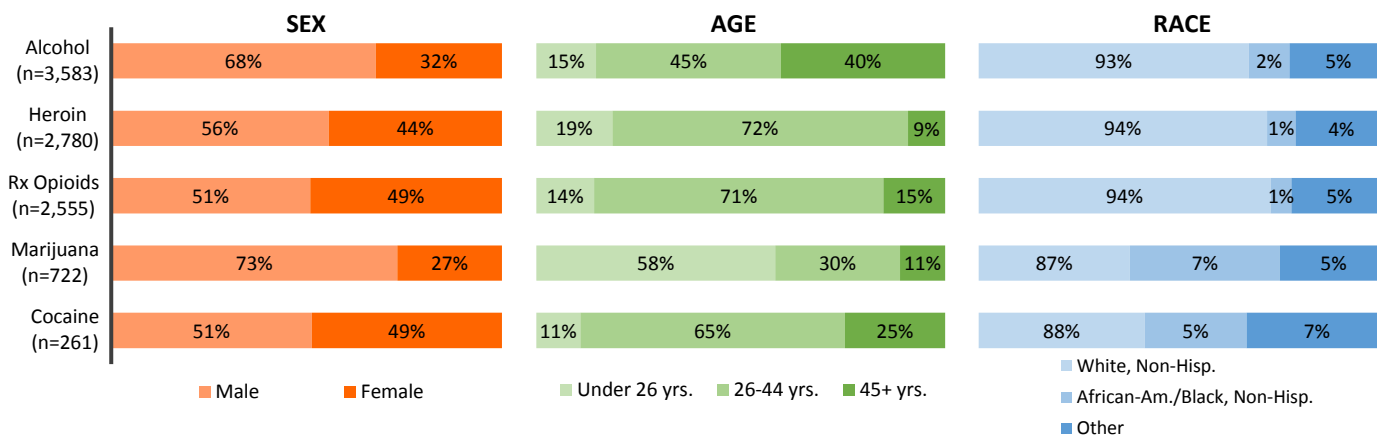
Treatment Admissions Data from Local Sources

Trends in Treatment Admissions*, by Primary Substance of Abuse, Maine, 2011-2015
(n = Number of Treatment Admissions)
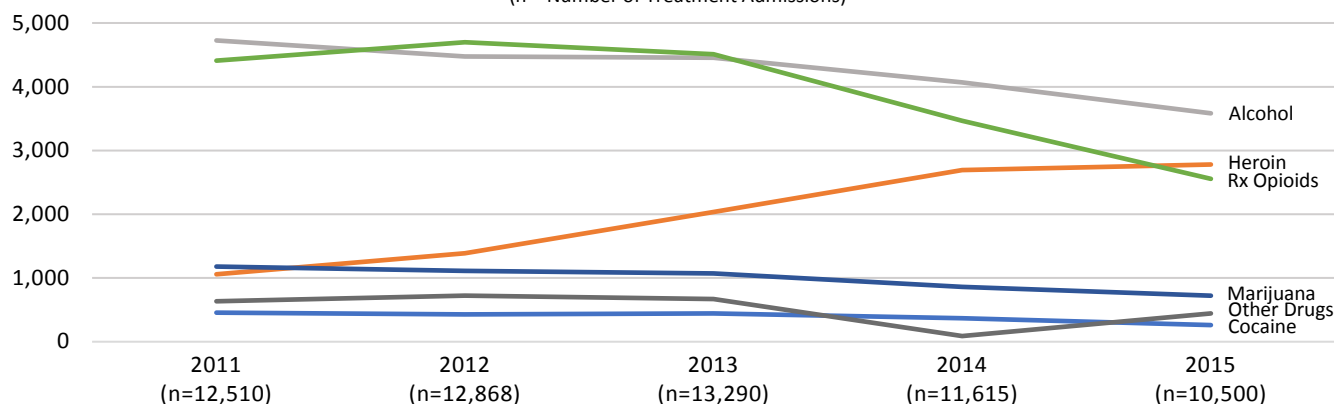
Demographic Characteristics of Treatment Admissions*, Maine, 2015

*Treatment Admissions: Includes all admissions to programs receiving State funding. 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.
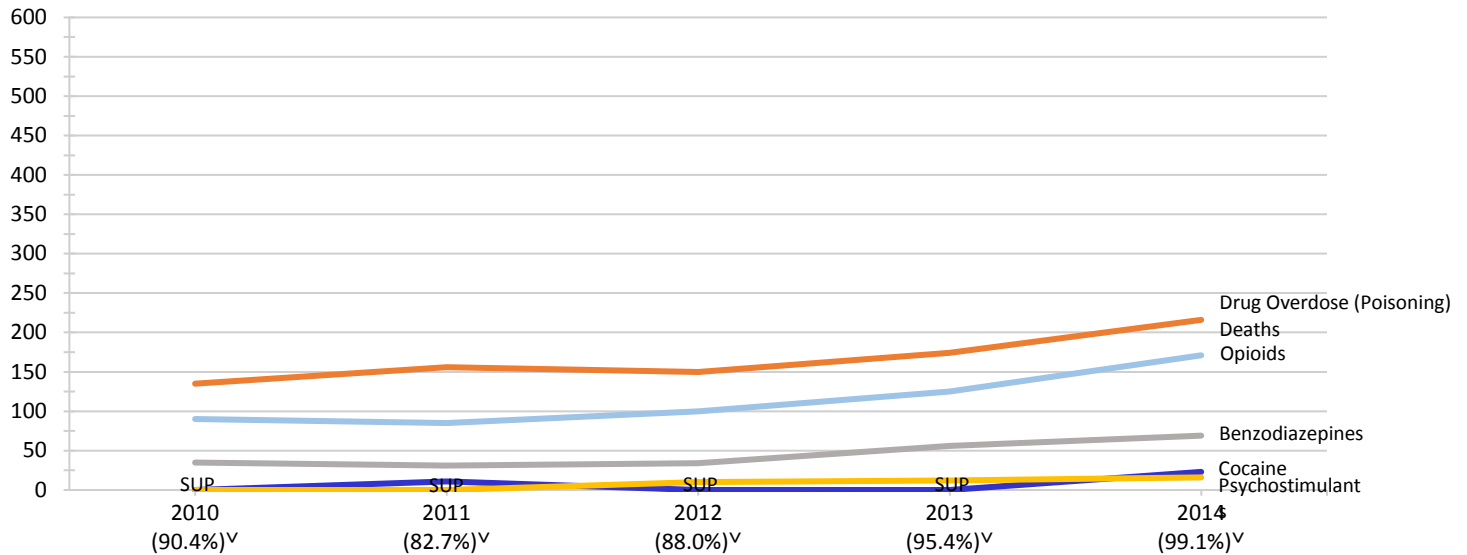
Source: Data provided to the Maine NDEWS SCE by the Maine Office of Substance Abuse.

Drug Overdose (Poisoning) Deaths

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

Trends in Drug Overdose (Poisoning) Deaths*, by Drug**, Maine, 2010–2014
(Number of Deaths and Percent of Drug Overdose (Poisoning) Deaths with Drug(s) Specified[v])

Trends in Opioid Overdose (Poisoning) Deaths*, by Opioid, Maine, 2010–2014
(Number of Deaths, by Drug** and Percent of Drug Overdose (Poisoning) Deaths with Drug(s) Specified[v])
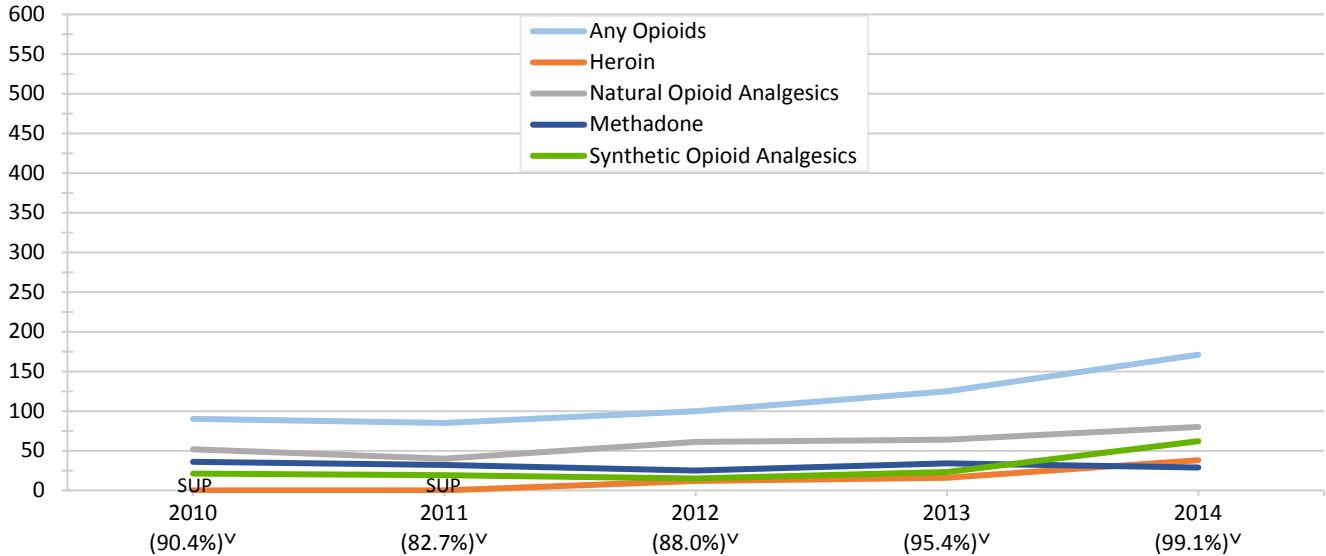
*Drug Overdose (Poisoning) Deaths: Defined as deaths with ICD-10 underlying cause-of-death (UCOD) codes: X40-X44, X60-X64, X85, and Y10-Y14. **Drug Overdose (Poisoning) Deaths, by Drug: Drug overdose (poisoning) deaths with ICD-10 multiple cause-of-death (MCOD) T-codes: Benzodiazepines (T42.4); Cocaine (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). [v]Percent 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. SUP=Suppressed: Counts are suppressed for subnational data representing 0–9 deaths. See *Sentinel Community Site (SCS) Data Tables* and/or *Overview & Limitations* for additional information on mortality data.

Source: Adapted by the NDEWS Coordinating Center from data provided by the Centers for Disease Control and Prevention (CDC), National Center for Health Statistics, Multiple cause of death 1999-2014, available on the CDC WONDER Online Database, released 2015. Data compiled in the Multiple cause of death 1999-2014 were provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Retrieved between December 2015 - May 2016, from http://wonder.cdc.gov/mcd-icd10.html

Law Enforcement Drug Seizures

National Forensic Laboratory Information System (NFLIS)

Drug Reports* for Items Seized by Law Enforcement in Maine in 2015
DEA National Forensic Laboratory Information System (NFLIS)

Top 10 Drug Reports and Selected Drug Categories

Drug Identified	Number (#)	Percent of Total Drug Reports (%)
TOTAL Drug Reports	**1,327**	**100%**
Top 10 Drug Reports		
Heroin	435	32.8%
Cocaine	331	24.9%
Fentanyl	92	6.9%
Methamphetamine	73	5.5%
Acetylfentanyl	52	3.9%
Oxycodone	49	3.7%
Caffeine	38	2.9%
Buprenorphine	38	2.9%
Phenylimidothiazole Isomer Undetermined	27	2.0%
Cannabis	23	1.7%
Top 10 Total	**1,158**	**87.3%**
Selected Drugs/Drug Categories		
Opioids	684	51.5%
Fentanyl	92	6.9%
Other Fentanyls***	52	3.9%
Synthetic Cathinones	39	2.9%
Tryptamines	2	0.2%
Synthetic Cannabinoids	1	<0.1%
2C Phenethylamines	0	0.0%
Piperazines	0	0.0%

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

Other Fentanyls
(n=52)

Acetylfentanyl (100%)

Synthetic Cathinones
(n=39)

alpha-PVP (54%)
Ethylone (26%)
alpha-PHP (10%)
PV8 (8%)
4-Fluoro-alpha-PVP (3%)

Tryptamines
(n=2)

5-MeO-DIPT (50%)
DMT (50%)

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

**Percentages may not sum to 100 due to rounding. ***Other Fentanyls are substances that are structurally related to fentanyl (e.g., acetylfentanyl and butyrl fentanyl). See *Notes About Data Terms* in *Overview and Limitations* section for full list of Other Fentanyls that were reported to NFLIS during the January to December 2015 timeframe. See *Sentinel Community Site (SCS) Data Tables* and *Overview & Limitations* for more information regarding the data.

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

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

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

This *SCE Narrative* contains the following sections:

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

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

National Drug Early Warning System (NDEWS)
Maine Sentinel Community Site (SCS)
Drug Use Patterns and Trends, 2016: SCE Narrative

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Highlights

- **Benzodiazepines** remain a key drug category involved in drug use and abuse. Although the proportion of deaths involving benzodiazepines as a cause of death declined from 34% to 29% in 2015, the percentage of impaired drivers testing positive for benzodiazepines in 2015 (38%) was similar to 2014 (39%).

- **Cocaine/crack** abuse indicators have risen sharply after a multiyear trough. The number of deaths involving cocaine rose from 24 in 2014 to 35 in 2015, a 46% increase, and the number of impaired drivers testing positive for cocaine rose from 22 to 51, a 132% increase.

- All of the **heroin** abuse indicators, including deaths, impaired driver toxicology tests, arrests, seizures, and treatment admissions, are very high and increasing dramatically, continuing an upward trend that began in 2012. Heroin was involved in 39% of 2015 deaths, 26% of impaired drivers, 39% of Maine State Drug Enforcement Agency (MDEA) arrests, 42% of law enforcement seizures, and 26% of primary admissions.

- Although arrests and primary admissions for **marijuana** are at fairly low levels, 4% and 7%, respectively, general use remains very high. The percentage of drug-impaired drivers with cannabis positive urine is 55% and has continued to rise.

- **MDMA** indicators are very low and appear to be stable.

- **Methamphetamine** indicators continue to show mixed trends at mostly low levels. There were 3 deaths in 2015, only 3% of impaired drivers with methamphetamine-positive urine, and the treatment admissions numbered only 47. Yet, the incidence of methamphetamine small lab incidents has been rising sharply over the last several years, going from 28 in 2014 to 56 in 2015. Early 2016 indicators suggest this number may double.

- Indicators of illicitly produced **fentanyl and its analogues**, remain very high and increased in 2015, contributing to 87 (32%) deaths, up dramatically from 38 (18%) deaths in 2014 and 10 (3%) in 2013. Illicitly produced fentanyl and its analogs were present in 22% of forensic laboratory items received in 2015.

- **Pharmaceutical opioid** indicators, primarily oxycodone and methadone, are stable or declining and constituted less than half of the total deaths, 41%, in 2015. The percentage of pharmaceutical opioid-positive urinalyses among impaired drivers declined substantially to 48% in 2015 for the first time since 2009 from a multiyear plateau of about 60%. The percentage of primary treatment admissions for pharmaceutical opioids continued a multiyear decline from 37% in 2012 to 24% in 2015.

- **Synthetic cathinone** abuse is at low levels and declining trends since 2011 and 2012. There was one death in 2015. Among law enforcement seizures, both the number and variety have decreased. For example, in 2014, there were 63 law enforcement items received representing 12 substances, but in 2015, there were 40 items representing 6 substances.

Changes in Legislation

- In response to the new surge in drug overdoses and influx of heroin and fentanyl trafficking, funding was provided by the legislature for ten new agents, which was an increase of 33%.

- Participation in the Maine Prescription Monitoring Program, already mandatory in Maine, was tightened by automatically registering physicians in the program.

- Attention and collaborative work on the overdose epidemic was highlighted by the creation of the Statewide Opiate Collaborative, organized by the U.S. Attorney's office. This group completed its work with an interdisciplinary set of recommendations covering treatment, law enforcement, and harm reduction.

Substance Use Patterns and Trends

BENZODIAZEPINES

- Benzodiazepines remain a key drug category involved in drug use and abuse. Although the proportion of deaths involving benzodiazepines as a cause of death declined from 34% to 29% in 2015, the percentage of impaired drivers testing positive for benzodiazepines in 2015 (38%) was similar to 2014 (39%).

Benzodiazepines were named as a cause of death, generally in combination with other drugs and/or alcohol, in 79 (29%) of drug-induced deaths in 2015, which was down from 70 (34%) in 2014 and 63 (36%) in 2013. The proportion of benzodiazepine-induced deaths likely had increased from 20% in 2012 in part because of the changing practice standards of medical examiners, who are now encouraged to name all potentially involved drugs on the death certificate. In 2015, benzodiazepines were found in (38%) of impaired driver toxicology tests, which is similar to the 2014 percentage (39%). In 2015, benzodiazepines were found in only 1% of law enforcement items,[1] and in 1% of Maine State Drug Enforcement Agency (MDEA) arrests, the latter a substantial decrease compared with the multiyear period 2009–2011 when the percentage was approximately 17%.

The number of primary benzodiazepine treatment admissions peaked at 121 in 2011, but they declined to 91 in 2012. In 2014, they declined further to 68 in 2014, representing less than 1% of all admissions. After a change in data systems, the number of admissions in 2015 was 57, again less than 1% of admissions.

COCAINE

- Cocaine/crack abuse indicators have risen sharply after a multiyear trough. The number of deaths involving cocaine rose from 24 in 2014 to 35 in 2015, a 46% increase, and the number of impaired drivers testing positive for cocaine rose from 22 to 51, a 132% increase.

Cocaine/crack abuse indicators have risen after a multiyear trough. Deaths from cocaine have risen from only 10 statewide in 2013, to 24 in 2014, and to 35 in 2015, the latter an increase of 46%. Nine percent of impaired drivers tested positive for cocaine in both 2013 and in 2014, more than doubling to 17% in 2015. Cocaine was found in 26% of law enforcement items received for testing at the State lab in 2015, which was an increase from 21% in 2014. The National Forensic Laboratory Information System (NFLIS) correspondingly reported that cocaine was identified in 24.9% of items in 2015. After rising sharply in 2013 along with heroin, the number of arrests remained stable in 2014, at 113, but increased sharply again in 2015 to 151. Proportions of primary treatment admissions for cocaine stayed stable at 3% from 2013 to 2015. The proportion of primary admissions citing a smoking route of administration decreased to 31% in 2015 from 62% in 2014, whereas inhalation increased from 20% in 2014 to 26% in 2015, and injection remained stable at 15% in both 2014 and 2015.

MARIJUANA

- Although arrests and primary admissions for marijuana are at fairly low levels, 4% and 7%, respectively, general use remains very high. The percentage of drug-impaired drivers with cannabis positive urine is 55% and has continued to rise.

Marijuana indicators continue to show mixed levels and trends. Arrests continued to decline reaching 6% in 2014 and 4% in 2015. The percentage of drug-impaired drivers with cannabinoid-positive urine has increased since

[1] Beginning with the 2015 NDEWS report, we are reporting items tested in the year they were received, rather than in the year they were tested, if those years are different. All annual lab results going back to 2010 have been recalculated for the purpose of this report to represent the year received. This provides a more current picture of drug trafficking patterns.

2010, reaching 52% in 2014 and 55% in 2015. NFLIS reported that 1.7% of 1,327 items tested in 2015 were positive for cannabis, ranking 10th among drug frequencies; the percentage of items received in 2015 in this analysis was the same. Primary marijuana treatment admissions declined slightly from 8% in 2014 to 7% in 2015. The age and gender distribution of primary treatment admissions for marijuana has also remained fairly stable; in 2015, it was 73% male, 24% younger than 18, and 35% 18 to 25 years of age.

METHAMPHETAMINE

- Methamphetamine indicators continue to show mixed trends at mostly low levels. There were 3 deaths in 2015, only 3% of impaired drivers with methamphetamine-positive urine, and the treatment admissions numbered only 47. Yet, the incidence of methamphetamine small lab incidents has been rising sharply over the last several years, going from 28 in 2014 to 56 in 2015. Early 2016 indicators suggest this number may double.

Methamphetamine indicators continue at low levels and show mixed trends. Three methamphetamine deaths were identified in 2015. Among 308 drug-impaired drivers tested in 2015, 8 (3%) had a methamphetamine-positive urinalyses. The MDEA responded to 56 clandestine, small lab incidents in 2015, up from 28 in 2014, 20 in 2013 and 12 in 2013. Law enforcement indicators show a continual increase since 2012 in items received, peaking at 73 (6%) in 2014, and declining to 50 (4%) in 2015. NFLIS similarly reported 5.5% of items tested as methamphetamine in 2015. MDEA arrests for methamphetamine manufacture, trafficking or possession have risen since 2008. There were a total of 85 (12%) in 2015, up from 28 (9%) in 2014. Treatment admissions have remained stable at low levels. The number of primary methamphetamine treatment admissions plateaued in the 40s from 2010 to 2013. In 2014, the number of primary methamphetamine admissions increased to 68 but dropped to 47 in 2015.

NEW PYSCHOACTIVE SUBSTANCES (OTHER THAN OPIOIDS)

- MDMA indicators are very low and appear to be stable.

- Synthetic cathinone abuse is at low levels and declining trends since 2011 and 2012. There was one death in 2015. Among law enforcement seizures, both the number and variety have decreased. For example, in 2014, there were 63 law enforcement items received representing 12 substances, but in 2015, there were 40 items representing 6 substances.

MDMA

MDMA indicators are very low in number. There were no MDMA or MDA deaths in 2015. Two impaired drivers out of 308 had an MDMA/MDA-positive toxicology in 2015. NFLIS reported only 3 law enforcement items tested positive for MDMA in 2015, 0.2%. There were only 18 primary MDMA treatment admissions in 2015, up slightly from 5 the year before.

Synthetic Cathinones

Synthetic cathinone abuse is now at low levels and shows mixed trends, having declined somewhat since 2011 and 2012. Cathinones were involved in 9% of drug arrests in 2013, 8% in 2014, and 5% in 2015. Among law enforcement seizures received for testing, the number and variety of different compounds has

decreased from 63 items representing 12 substances in 2014 to 40 items representing 6 substances in 2015: Alpha-PVP (alpha-Pyrrolidinopentiophenone) was the most frequently found (n = 23), followed by bk-MDEA (n = 8), alpha-PHP (n = 4), PV8 (n = 3), and 4-fluoro-alpha-PVP and TH-PVP (each n = 1). Among 2015 treatment admissions, 26 were for a primary problem of "bath salts," also described as "other stimulants" and "other amphetamines." One death was attributed to alpha-PVP.

OPIOIDS

- All of the heroin abuse indicators, including deaths, impaired driver toxicology tests, arrests, seizures, and treatment admissions, are very high and increasing dramatically, continuing an upward trend that began in 2012. Heroin was involved in 39% of 2015 deaths, 26% of impaired drivers, 39% of Maine State Drug Enforcement Agency (MDEA) arrests, 42% of law enforcement seizures, and 26% of primary admissions.

- Indicators of illicitly produced fentanyl and its analogues, remain very high and increased in 2015, contributing to 87 (32%) deaths, up dramatically from 38 (18%) deaths in 2014 and 10 (3%) in 2013. Illicitly produced fentanyl and its analogs were present in 22% of forensic laboratory items received in 2015.

- Pharmaceutical opioid indicators, primarily oxycodone and methadone, are stable or declining and constituted less than half of the total deaths, 41%, in 2015. The percentage of pharmaceutical opioid-positive urinalyses among impaired drivers declined substantially to 48% in 2015 for the first time since 2009 from a multiyear plateau of about 60%. The percentage of primary treatment admissions for pharmaceutical opioids continued a multiyear decline from 37% in 2012 to 24% in 2015.

Heroin

Heroin/morphine abuse indicators increased rather dramatically beginning in 2012 and 2013. Deaths from heroin/morphine, alone or in combination with other drugs or alcohol, decreased to 4% during 2010 and 2011 but then rose sharply starting in 2012, and doubled in 2015, now constituting 39% of deaths. Approximately one year after the upsurge in heroin deaths, an associated outbreak of deaths from non-pharmaceutical fentanyl occurred. Presumed heroin deaths are identified methodologically, including cases with literal mentions of heroin or heroin/morphine on the death certificate along with an evaluation of data from the scene and the prescription monitoring program that rules out known pharmaceuticals. Non-pharmaceutical fentanyl deaths are identified using the same approach; fentanyl analogs are combined with the overall total of non-pharmaceutical fentanyl deaths and subtotaled.

Heroin/morphine-positive impaired driver urinalysis toxicology tests rose sharply from 8% in 2009 to 21% (n = 247) during 2014 and then to 26% (n = 308) in 2015. Of the 80 drivers who tested positive for heroin/morphine, 12 (15%) also tested positive for fentanyl and 18 (23%) for cocaine; 7 (9%) tested positive for both. Heroin arrests by the MDEA began increasing in 2011, and during 2015, they constituted 39% of arrests, compared with the 5% low in 2010. Arrestees are frequently from New York City and are often connected to street gangs. NFLIS reported that 32.8% of law enforcement 1,327 items tested in 2015 were positive for heroin, making it number one among all drug frequencies. We examined the percentage of law enforcement items

received in 2015[2], but were tested in 2015 or 2016, which was 29.6%. Of the 1,172 items received, 3.1% were positive for both heroin and fentanyl and 1.6% for heroin and acetyl fentanyl. A total of 1.5% of items were positive for both heroin and cocaine.

Primary heroin admissions rose from 6% in 2010 to 22% in 2014 and to 27% in 2015. Males (56%) outnumbered females (44%) in 2015 heroin admissions, with the 26–44 age group comprising 72%, which was up slightly from 67% in 2014.

Other Opioids

Indicators for illicitly produced fentanyl and its analogues remain very high in 2015, contributing to 87 (32%) of Maine's drug-induced deaths, up dramatically from 38 (18%) deaths in 2014 and 10 (3%) deaths in 2013. Fentanyl was known to be pharmaceutical in 6 cases in 2015, which were excluded from the number presumed to be non-pharmaceutical.

Pharmaceutical opioid-induced deaths totaled 112 (41% of drug overdoses), excluding those presumed to be from non-pharmaceutical fentanyl. Among the pharmaceutical opioid deaths, the most frequent remain from oxycodone, 37 (14%), and methadone, 38 (also 14%).

The WONDER data adapted for NDEWS, which extended from 2010 to 2014, differ from the data reported here in several ways. First, the medical examiner-based data include all "occurrent" deaths, that is, those deaths that occur in the state, whether or not the decedent was a resident; the WONDER data include all "resident" deaths only. Second, the medical examiner data as reported in this profile expand on the literal death certificate methodologically. In this analysis, pharmaceutical is segregated from non-pharmaceutical drugs, which affected the subtotals for fentanyl and heroin. For example, in cases where the literal cause of death is "heroin/morphine," known pharmaceutical morphine has been segregated out and scene investigation data have been used to allow a presumption of heroin. In addition, although Maine medical examiners infrequently use the terms "polydrug" or "multiple drug" toxicity as a cause, without mentioning a specific drug, toxicology and autopsy data have been used here to specify the presumptive drugs involved. Thus, the data in this profile extend the literal death certificate data methodologically to enable a finer grained report of drug abuse trends.

The percentage of pharmaceutical opioid-positive urinalyses among impaired drivers declined substantially in 2015 for the first time since 2009. They had been plateaued at 57% to 60% during the period 2009–2014 and dropped to 48% in 2015. Heroin/morphine, by contrast, continued a steady increase, rising from 8% in 2009 to 26% in 2015.

Pharmaceutical and illicitly produced opioids, including all forms of fentanyl, were present in 274 (22%) of forensic laboratory items received in 2015. A total of 84 (10%) were positive for fentanyl, 43 (5%) positive for acetyl fentanyl, and 14 (2%) positive for both fentanyl and acetyl fentanyl. No other fentanyl analogs were identified in 2015, and no fentanyl patches were included. Other opioids received in 2015 included 4 (0.5%) hydrocodone, 6 (0.7%) methadone, 32 (4%) buprenorphine, and 36 oxycodone. NFLIS reported that 6.9% of items received in 2015 were fentanyl, 3.9% were acetyl fentanyl, 0.4% were methadone, 0.3% hydrocodone,

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[2] Fentanyl patches were excluded. All items in which no drugs were found, or in which they were not ultimately tested, were removed from the denominator.

0.2% hydromorphone, and 0.2% morphine. As some of these items may have contained more than one drug, they cannot be summed.

The percentage of primary treatment admissions for pharmaceutical opioids rose every year for more than a decade to a peak of 37% in 2012, and they subsequently declined to 29% in 2014 and 24% in 2015. During this same time, heroin admissions remained rather stable at about 7% to 9% through 2011 and then rose to 15% in 2013, 22% in 2014, and 27% in 2015. The most common route of administration for admissions with a primary problem of pharmaceutical opioids was inhalation (41% in 2015); 19% were injecting, which was the same percentage as in 2014. Analysis of the age structure for opioid treatment admissions demonstrates that the 18–25-year-old cohort has declined slightly from 22% in 2013 to 19% in 2014 and to 14% in 2015. Primary oxycodone treatment admissions constituted the most frequent single drug of the non-heroin opiate/opioid admissions, representing 48% in 2015, which was down slightly from 52% in 2014.

Infectious Diseases Related to Substance Use

There were 48 new HIV infections reported in 2015, which was a decrease from 58 in 2014. This represents a rate of 3.6 per 100,000 for 2015. From 2010 to 2015, 49% of new infections were attributable to male-to-male sexual contact, 4% to intravenous drug use, and 1% to male-to-male sexual contact and intravenous drug use. From 2011 to 2014, the 40–54 age group made up the largest percentage of new infections; however, that fell from a high of 50% in 2011 to 33% in 2014, with a compensatory rise observed in the 20–24 age group, which increased from 4% in 2011 to 16% in 2014. In 2015, though, the 30–39 and 40–54 age groups both made up the largest percentage of new infections at 27% each, with the 20–24 age group declining slightly to 15%.

There were 9 cases of acute hepatitis B in Maine during 2015, with a rate of 0.7 cases per 100,000, compared with 12 cases in 2014. There were 107 cases of probable and confirmed cases of chronic hepatitis B in 2015, with a rate of 8.1 cases per 100,000, compared with 108 cases in 2014. In 2015, the most reported risk factor for acute infection was drug use (injection 44%; noninjection 56%).

There were 30 cases of acute hepatitis C in Maine during 2015, with a rate of 2.3 per 100,000. This represents a tripling of the rate from 2013 when there were 0.7 cases per 100,000. Maine has the fifth highest rate of acute hepatitis C nationwide. In 2015, there were 91 confirmed cases of chronic hepatitis C. A large spike in the number new infections in individuals younger than 30 years of age was also observed. Of 20 cases that were contacted for detailed follow-up, 15 reported use of street drugs and 11 reported intravenous drug use.

Exhibits

Exhibit 1. Number of Primary Admissions for Key Drugs, CY2009–2015

	2009	2010	2011	2012	2013	2014	2015
Cocaine	575	454	456	429	443	369	261
Heroin/Morphine	1,250	928	1,058	1,386	2,035	2,691	2,780
Other Opiates	4,185	4,372	4,409	4,698	4,509	3,468	2,555
Marijuana	1,303	1,275	1,179	1,113	1,071	862	722
Methamphetamine	33	41	44	46	43	68	47
Alcohol	6,481	5,904	4,726	4,473	4,453	4,068	3,583
Benzodiazepines	n/a	n/a	n/a	n/a	n/a	n/a	57
MDMA	n/a	n/a	n/a	n/a	n/a	n/a	18
Synthetic Stimulants	n/a	n/a	n/a	n/a	n/a	n/a	26
Synthetic Cannabinoids	n/a	n/a	n/a	n/a	n/a	n/a	6
Other	671	602	637	723	669	89	445
Total Admissions	**14,498**	**13,576**	**12,510**	**12,868**	**13,290**	**11,615**	**10,500**

Source: Maine Office Substance Abuse and Mental Health Services

Exhibit 2. Number of Arrests by the Maine Drug Enforcement Agency for Key Drug Categories, CY2009–2015

	2009	2010	2011	2012	2013	2014	2015
Cocaine/Crack	203	189	172	89	116	113	151
Heroin	45	40	58	63	103	219	265
Methamphetamine	25	30	23	32	51	63	85
Marijuana	160	197	69	96	33	38	29
Pharmaceuticals	305	327	236	222	226	163	147
Benzodiazepines	17	16	17	8	33	8	4
Total Arrests	**776**	**859**	**605**	**562**	**603**	**669**	**677**

Source: Maine Drug Enforcement Agency

NOTE: Individual drug category totals do not sum to the total number arrests because not all drug categories are included in this table.

Exhibit 3. Percent of Items Seized by Law Enforcement Statewide Testing for Key Drug Categories Identified by the Maine State Health and Environmental Testing Laboratory, CY2010–2015

	2010 (*n* = 811)	2011 (*n* = 995)	2012 (*n* = 999)	2013 (*n* = 1,128)	2014 (*n* = 974)	2015 (*n* = 826)
Cocaine	40.6	30.7	23.1	25.1	20.8	25.8
Pharmaceutical Opiates*	20.0	26.3	25.6	21.7	21.8	10.3
Heroin	10.1	12.2	13.4	28.0	27.8	42.4
Fentanyl Powder and residues & Acetyl Fentanyl (excludes fentanyl patches)	0.1	0.0	0.1	0.2	3.0	9.8
Marijuana	10.1	11.0	8.0	4.6	3.6	2.3
Benzodiazepines	3.6	3.3	3.2	2.7	4.9	1.0

Source: Maine Health and Environmental Testing Laboratory

*Includes items with fentanyl patches, powder, or residue but not acetyl fentanyl.

Exhibit 4. Number of Deaths Caused by Key Illicit Drugs Alone or in Combination with Other Drugs, CY2009–2015*

	2009	2010	2011	2012	2013	2014	2015
Heroin/Morphine	13	7	7	29	34	58	107
Fentanyl	5	6	10	7	10	38	87
Cocaine	9	10	13	13	10	24	35
Methamphetamine	0	0	0	1	0	1	3
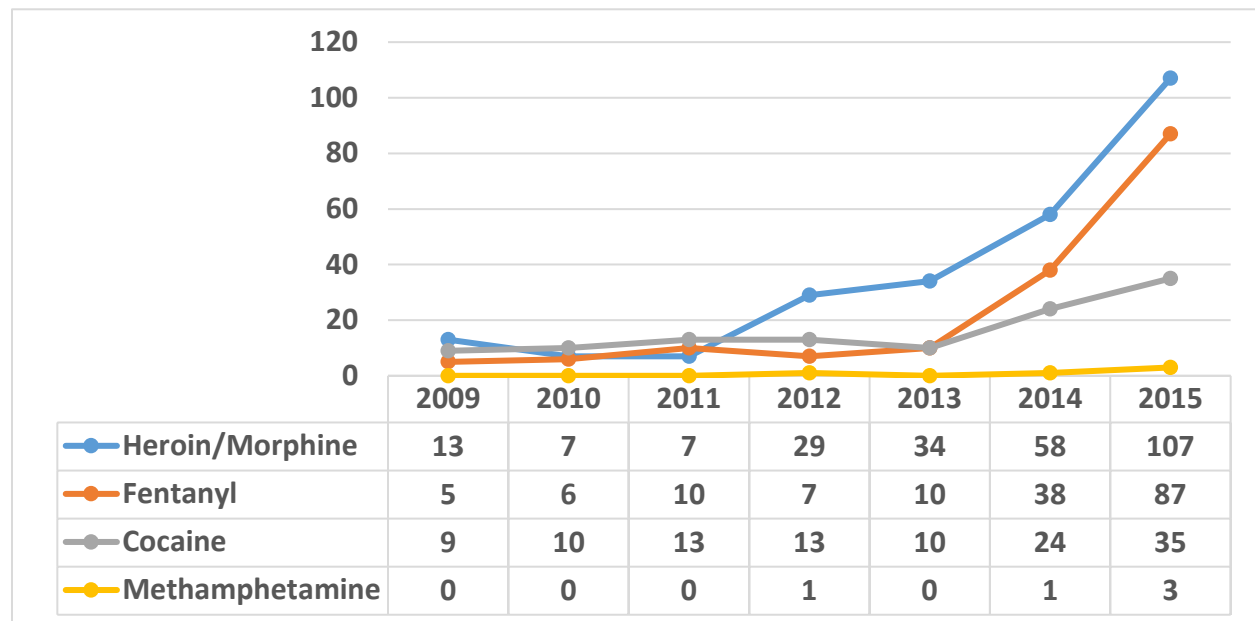
*Deaths from known pharmaceutical products of morphine, and fentanyl have been removed from these totals. Deaths attributed to amphetamine, a possible methamphetamine metabolite, have been excluded from the methamphetamine totals, pending a reanalysis to rule out a pharmaceutical source in those cases.

Source: Maine Office of Chief Medical Examiner

Exhibit 5. Number of Deaths Caused by Key Pharmaceutical Opioids Alone or in Combination with Other Drugs, CY2009–2015

	2009	2010	2011	2012	2013	2014	2015
Pharmaceutical Morphine*	18	16	13	8	14	6	4
Pharmaceutical Fentanyl**	4	4	5	3	4	4	6
Oxycodone	50	48	34	42	32	42	37
Methadone	48	50	41	31	37	30	38
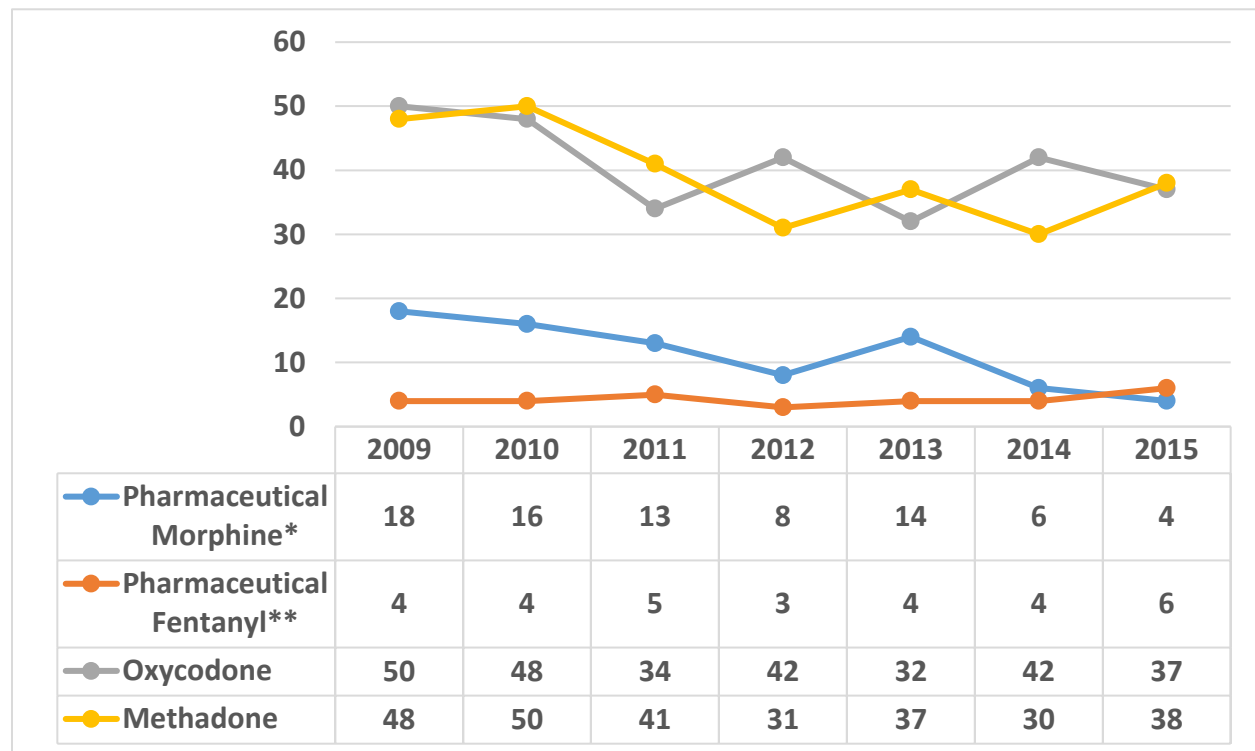
**Only known prescription sources are included.

Source: Maine Office of Chief Medical Examiner

Exhibit 6. Pharmaceutical Status of Fentanyl in CY2009–2015 Fentanyl-induced Deaths

	2009	2010	2011	2012	2013	2014	2015
■ Fentanyl: no patch or known Rx	5	6	10	7	6	38	87
■ Fentanyl: patch or Rx was identified	4	4	5	3	4	4	6
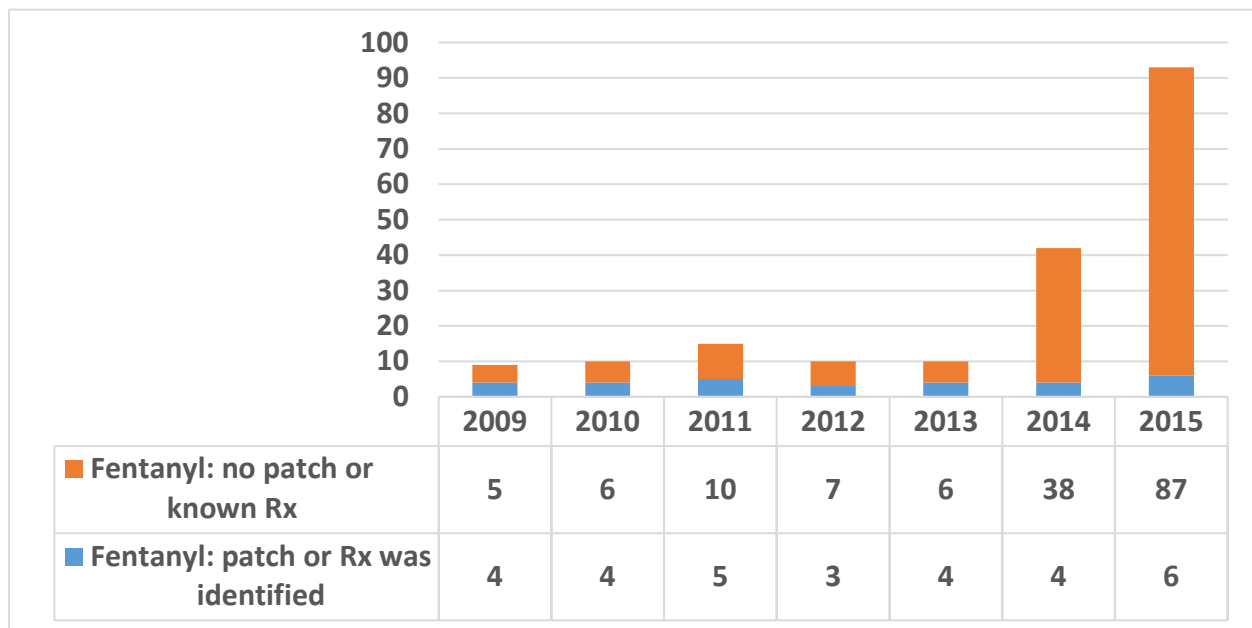
Source: Maine Office of Chief Medical Examiner

Exhibit 7. Percentage of Urine Tests of Impaired Drivers Testing Positive for Key Drugs, CY2009–2015

	THC	Cocaine	Heroin/Morphine	One or more BZD	One or more Rx Opioid
2009	26%	7%	8%	40%	59%
2010	21%	8%	9%	40%	59%
2011	35%	9%	12%	45%	59%
2012	36%	12%	11%	60%	60%
2013	51%	9%	15%	40%	58%
2014	52%	9%	21%	39%	57%
2015	55%	17%	26%	38%	48%
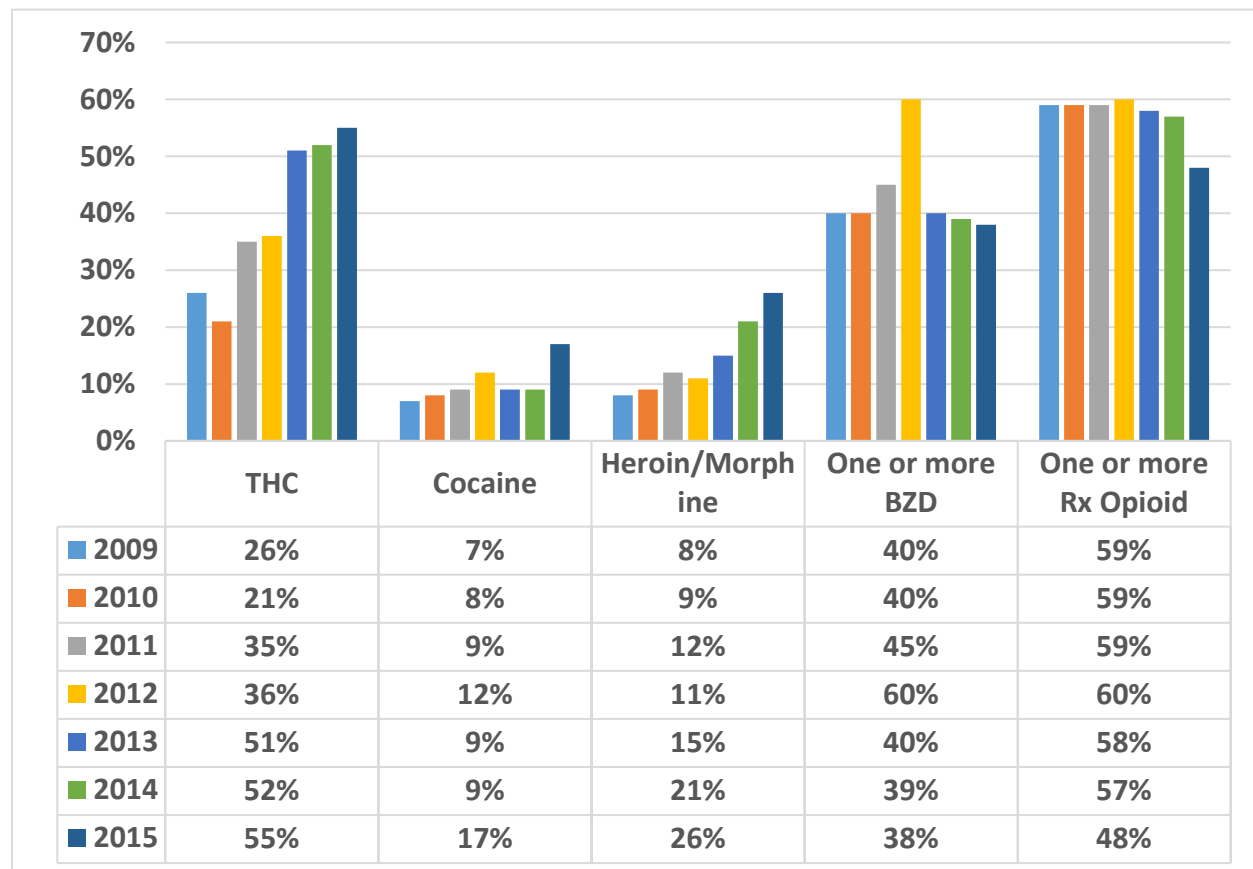
Source: Maine State Health and Environmental Testing Laboratory

Exhibit 8. Percentage of Primary Treatment Admissions for Heroin/Morphine and for Pharmaceutical Opiates, CY2000–2015

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Heroin/Morphine	4%	6%	8%	7%	8%	8%	8%	7%	8%	9%	7%	8%	11%	15%	23%	27%
Opiates	6%	9%	10%	11%	13%	18%	19%	22%	27%	29%	32%	35%	37%	34%	29%	24%
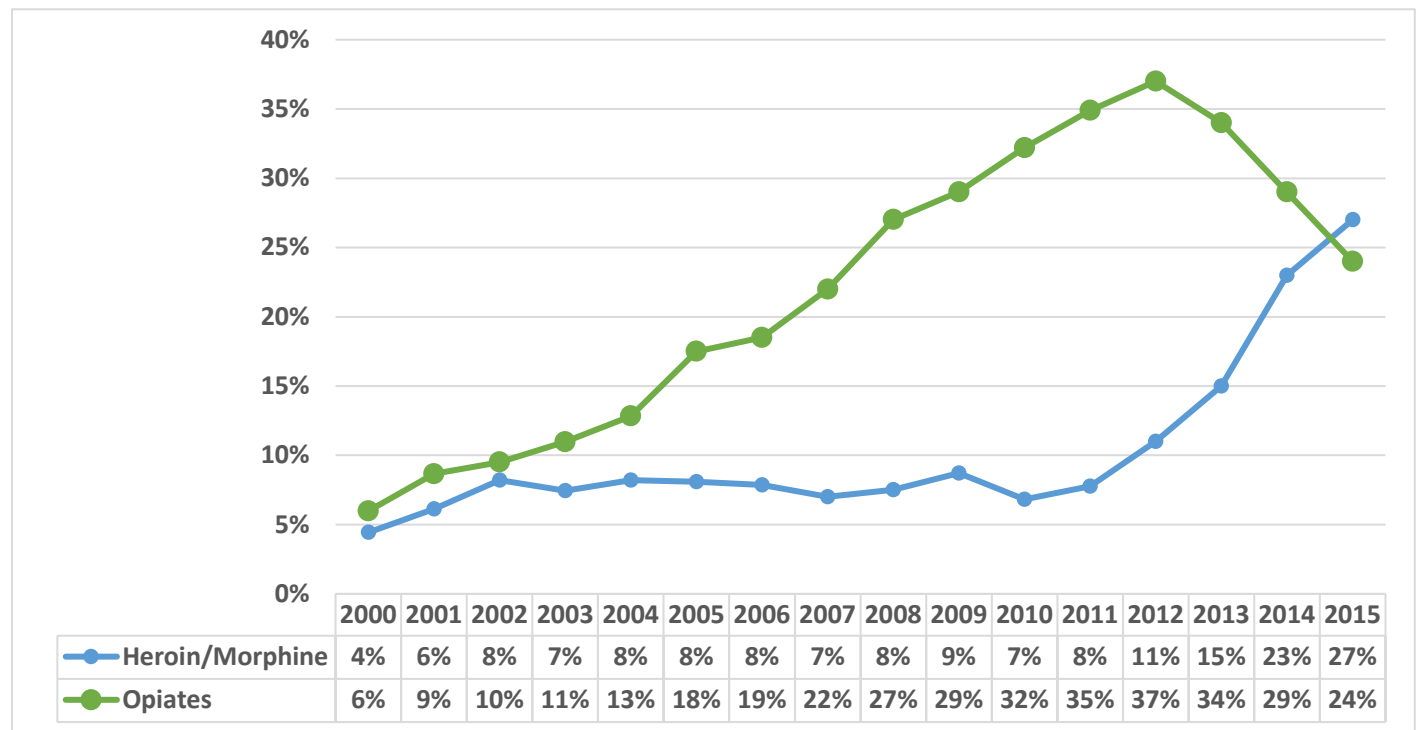
Source: Maine Office Substance Abuse and Mental Health Services

Data Sources

Data for this report were drawn from the following sources:

Treatment admissions data were provided by the Maine Center for Disease Control and include all admissions to programs receiving State funding. This report includes all 2015 treatment admissions, including admissions for methadone clinics, and makes comparisons with prior calendar years. In March of 2015, data were migrated to a new information system; the migrated data are still being validated, and caution is urged comparing 2015 with prior years. Totals include alcohol admissions (Exhibits 1 and 8).

Mortality data were generated by analysis of State of Maine Office of Chief Medical Examiner case files for all drug-induced cases through December 2015. That office investigates all drug-related cases statewide (Exhibits 4, 5, and 6).

Arrest data were provided by the Maine State Drug Enforcement Agency (MDEA), which directs eight multijurisdictional task forces covering the entire State, generating approximately 60% of all Uniform Crime Report (UCR) drug arrests statewide. Data totals include arrests for possession or trafficking, extending through the end of 2015 (Exhibit 2).

Forensic laboratory data on drug seizures were provided by the Maine State Health and Environmental Testing Laboratory, which tests all samples of drugs seized by the MDEA, as well as by other police and sheriff departments. Data were updated for 2010 to 2015 changing from "date tested" to "date received." Data were provided for 2015 (Exhibit 3).

Forensic laboratory data on urinalyses of drug-impaired drivers were provided by the Maine State Health and Environmental Testing Laboratory, which tests urine samples of drivers suspected of driving under the influence of drugs. Data were provided for 2015 (Exhibit 7).

Infections Disease Related to Drug Abuse. Data were provided by the MAINE Center for Disease Control for HIV/AIDS, Hepatitis B and Hepatitis C**.**

For additional information about the drugs and drug use patterns discussed in this report, please contact Marcella H. Sorg, Ph.D., R.N., D-ABFA, Director, Rural Drug and Alcohol Research Program, Margaret Chase Smith Policy Center, University of Maine, Building 4, 5784 York Complex, Orono, ME 04469, Phone: 207–581–2596, E-mail: mhsorg@maine.edu.

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
State of Maine
2010–2014 ACS 5-Year Estimates

	Estimate	Margin of Error
Total Population (#)	**1,328,535**	******
Age		
18 years and over (%)	80.0%	+/-0.1
21 years and over (%)	76.0%	+/-0.1
65 years and over (%)	17.0%	+/-0.1
Median Age	43.5	
Race (%)		
White, Not Hisp.	94.0%	+/-0.1
Black/African American, Not Hisp.	1.1%	+/-0.1
Hispanic/Latino (of any race)	1.4%	**
American Indian/Alaska Native	0.5%	+/-0.1
Asian	1.1%	+/-0.1
Native Hawaiian/Pacific Islander	0.0%	+/-0.1
Some Other Race	0.1%	+/-0.1
Two or More Races	1.8%	+/-0.1
Sex (%)		
Male	48.9%	+/-0.1
Female	51.1%	+/-0.1
Educational Attainment (*Among Population Aged 25+ Years*) (%)		
High School Graduate or Higher	91.3%	+/-0.2
Bachelor's Degree or Higher	28.4%	+/-0.3
Unemployment (*Among Civilian Labor Force Population Aged 16+ Years*) (%)		
Percent Unemployed	7.4%	+/-0.2
Income ($)		
Median Household Income (in 2014 inflation-adjusted dollars)	$48,804	+/-481
Health Insurance Coverage (*Among Civilian Noninstitutionalized Population*) (%)		
No Health Insurance Coverage	10.4%	+/-0.2
Poverty (%)		
All People Whose Income in Past Year Is Below Poverty Level	13.9%	+/-0.3

NOTES:

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

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

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

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

Substance Use Behaviors	Maine	
	Estimated % (95% CI)*	Estimated #*
Used in Past Month		
Alcohol	57.01 (54.33 − 59.66)	656,811
Binge Alcohol**	21.79 (19.91 − 23.79)	250,984
Marijuana	11.72 (10.22 − 13.41)	135,034
Use of Illicit Drug Other Than Marijuana	2.88 (2.29 − 3.62)	33,169
Used in Past Year		
Cocaine	1.55 (1.15 − 2.09)	17,896
Nonmedical Use of Pain Relievers	3.59 (2.94 − 4.36)	41,299
Substance Use Disorders in Past Year*		
Illicit Drugs or Alcohol	**8.13 (7.15 − 9.24)**	**93,655**
Alcohol	5.96 (5.09 − 6.97)	68,694
Illicit Drugs	2.68 (2.20 − 3.26)	30,871

NOTES:
*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 (1,151,999) 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 *Maine*, by Age Group, 2012–2014

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

Substance Use Behaviors	Maine					
	12–17		18–25		26+	
	Estimated Percent (95% CI)*		Estimated Percent (95% CI)*		Estimated Percent (95% CI)*	
Used in Past Month						
Binge Alcohol**	7.20	(5.95 – 8.67)	42.88	(39.87 – 45.95)	20.34	(18.17 – 22.69)
Marijuana	9.75	(8.21 – 11.55)	27.16	(24.38 – 30.14)	9.77	(8.11 – 11.72)
Use of Illicit Drug Other Than Marijuana	2.77	(2.02 – 3.79)	7.63	(6.25 – 9.29)	2.23	(1.62 – 3.06)
Used in Past Year						
Cocaine	0.59	(0.35 – 0.98)	5.11	(3.92 – 6.63)	1.16	(0.75 – 1.77)
Nonmedical Use of Pain Relievers	4.18	(3.22 – 5.40)	8.29	(6.88 – 9.94)	2.87	(2.21 – 3.71)
Substance Use Disorder in Past Year*						
Illicit Drugs or Alcohol	5.07	(4.03 – 6.36)	18.88	(16.61 – 21.39)	6.94	(5.85 – 8.21)
Alcohol	3.00	(2.31 – 3.89)	13.63	(11.65 – 15.89)	5.19	(4.25 – 6.33)
Illicit Drugs	3.35	(2.52 – 4.44)	8.65	(7.09 – 10.50)	1.78	(1.31 – 2.41)

NOTES:

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

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

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

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

Table 3: Self-Reported Substance Use-Related Behaviors Among *Maine^* 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	Asian
	Estimate (95% CI)	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	24.0 (22.6 - 25.4)	26.6 (24.8 - 28.5)	**0.02**	22.3 (20.9 - 23.7)	25.7 (23.8 - 27.6)	**0.00**	24.3 (22.8 - 25.8)	19.3 (13.2 - 27.4)	29.6 (23.7 - 36.2)	11.6 (7.3 - 17.9)
Binge Alcohol**	11.7 (10.8 - 12.7)	14.4 (13.2 - 15.8)	**0.00**	12.1 (11.2 - 13.2)	11.1 (9.7 - 12.6)	0.20	11.5 (10.6 - 12.6)	12.2 (7.2 - 20.1)	18.4 (13.4 - 24.6)	6.3 (3.1 - 12.3)
Marijuana	19.9 (18.7 - 21.1)	21.3 (19.5 - 23.2)	0.18	20.2 (18.7 - 21.7)	19.4 (17.9 - 21.0)	0.40	19.8 (18.6 - 21.1)	19.4 (10.9 - 32.3)	25.6 (21.2 - 30.5)	8.9 (5.3 - 14.5)
Ever Used in Lifetime										
Alcohol	53.2 (51.2 - 55.1)	56.6 (54.5 - 58.7)	**0.02**	50.1 (48.1 - 52.2)	56.2 (53.9 - 58.5)	**0.00**	53.6 (51.5 - 55.7)	42.3 (31.0 - 54.5)	57.0 (51.5 - 62.4)	47.6 (41.1 - 54.1)
Marijuana	34.7 (33.1 - 36.3)	—	~	33.5 (31.4 - 35.7)	35.6 (33.7 - 37.5)	0.09	34.7 (33.0 - 36.4)	33.2 (18.0 - 53.0)	42.1 (37.3 - 47.0)	16.6 (11.1 - 24.2)
Cocaine	—	—	~	—	—	~	—	—	—	—
Hallucinogenic Drugs	—	—	~	—	—	~	—	—	—	—
Synthetic Marijuana	—	—	~	—	—	~	—	—	—	—
Inhalants	7.8 (7.1 - 8.5)	9.1 (8.3 - 10.1)	**0.02**	8.1 (7.1 - 9.2)	7.1 (6.4 - 7.8)	0.12	7.0 (6.4 - 7.7)	12.0 (7.0 - 19.6)	18.3 (13.5 - 24.3)	6.9 (4.0 - 11.6)
Ecstasy also called "MDMA"	—	—	~	—	—	~	—	—	—	—
Heroin	—	—	~	—	—	~	—	—	—	—
Methamphetamine	—	—	~	—	—	~	—	—	—	—
Rx Drugs without a Doctor's Prescription	10.8 (10.0 - 11.7)	12.4 (11.6 - 13.3)	**0.01**	11.8 (10.5 - 13.2)	9.4 (8.4 - 10.5)	**0.01**	10.4 (9.6 - 11.3)	14.5 (8.7 - 23.2)	21.5 (16.9 - 26.9)	8.3 (6.1 - 11.2)
Injected Any Illegal Drug	—	2.4 (2.0 - 2.8)	~	—	—	~	—	—	—	—

NOTES:

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

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

*Sample Frame for the 2013 and 2015 YRBS: Consisted of public schools with students in at least one of grades 9-12. The sample size for 2013 was 9,017 with an overall response rate of 64%; the 2015 sample size was 9,605 with a 66% 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 [7/1/2016].

Table 4a: Trends in Admissions* to Programs Treating Substance Use Disorders, *Maine* Residents, 2011-2015
Number of Admissions and Percentage of Admissions with Selected Substances
Cited as Primary Substance of Abuse at Admission, by Year and Substance

	Calendar Year									
	2011		2012		2013		2014		2015	
	(#)	(%)	(#)	(%)	(#)	(%)	(#)	(%)	(#)	(%)
Total Admissions (#)	**12,510**	**100%**	**12,868**	**100%**	**13,290**	**100%**	**11,615**	**100%**	**10,500**	**100%**
Primary Substance of Abuse (%)										
Alcohol	4,726	37.8%	4,473	34.8%	4,453	33.5%	4,068	35.0%	3,583	34.1%
Cocaine/Crack	456	3.6%	429	3.3%	443	3.3%	369	3.2%	261	2.5%
Heroin	1,058	8.5%	1,386	10.8%	2,035	15.3%	2,691	23.2%	2,780	26.5%
Prescription Opioids	4,409	35.2%	4,698	36.5%	4,509	33.9%	3,468	29.9%	2,555	24.3%
Methamphetamine	44	0.4%	46	0.4%	43	0.3%	68	0.6%	47	0.4%
Marijuana	1,179	9.4%	1,113	8.6%	1,071	8.1%	862	7.4%	722	6.9%
Benzodiazepines	0	0.0%	0	0.0%	0	0.0%	0	0.0%	57	0.5%
MDMA	0	0.0%	0	0.0%	0	0.0%	0	0.0%	18	0.2%
Synthetic Stimulants	0	0.0%	0	0.0%	0	0.0%	0	0.0%	26	0.2%
Synthetic Cannabinoids	0	0.0%	0	0.0%	0	0.0%	0	0.0%	6	0.1%
Other Drugs/Unknown	638	5.1%	723	5.6%	736	5.5%	89	0.8%	445	4.2%

NOTES:
*Admissions: Includes all admissions to programs receiving State funding. 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 Maine NDEWS SCE and the Maine Office of Substance Abuse.

Table 4b: Demographic and Drug Use Characteristics of Primary Treament Admissions* for Select Substances of Abuse, *Maine* Residents, 2015
Number of Admissions, by Primary Substance of Abuse and Percentage of Admissions with Selected Demographic and Drug Use Characteristics

	Primary Substance of Abuse																	
	Alcohol		Cocaine/Crack		Heroin		Prescription Opioids		Methamphetamines		Marijuana		Benzo-diazepines		Synthetic Stimulants**		Synthetic Cannabinoids	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Number of Admissions (#)	3,583	100%	261	100%	2,780	100%	2,555	100%	47	100%	722	100%	57	100%	44	100%	6	100%
Sex (%)																		
Male	2,427	67.7%	134	51.3%	1,548	55.7%	1,302	51.0%	30	63.8%	529	73.3%	24	42.1%	23	52.3%	4	66.7%
Female	1,156	32.3%	127	48.7%	1,232	44.3%	1,253	49.0%	17	36.2%	193	26.7%	33	57.9%	21	47.7%	2	33.3%
Race/Ethnicity (%)																		
White, Non-Hisp.	3,340	93.2%	230	88.1%	2,616	94.1%	2,409	94.3%	43	91.5%	631	87.4%	51	89.5%	43	97.7%	6	100.0%
African-Am/Black, Non-Hisp	71	2.0%	13	5.0%	39	1.4%	26	1.0%	0	0.0%	53	7.3%	1	1.8%	0	0.0%	0	0.0%
Hispanic/Latino	68	1.9%	10	3.8%	53	1.9%	33	1.3%	2	4.3%	16	2.2%	0	0.0%	0	0.0%	0	0.0%
Asian	11	0.3%	2	0.8%	10	0.4%	1	0.0%	0	0.0%	5	0.7%	0	0.0%	0	0.0%	0	0.0%
Other	93	2.6%	6	2.3%	62	2.2%	86	3.4%	2	4.3%	17	2.4%	5	8.8%	1	2.3%	0	0.0%
Age Group (%)																		
Under 18	39	1.1%	2	0.8%	6	0.2%	8	0.3%	0	0.0%	171	23.7%	0	0.0%	0	0.0%	0	0.0%
18-25	485	13.5%	26	10.0%	510	18.3%	354	13.9%	9	19.1%	251	34.8%	9	15.8%	12	27.3%	1	16.7%
26-44	1,620	45.2%	169	64.8%	2,011	72.3%	1,807	70.7%	32	68.1%	220	30.5%	41	71.9%	28	63.6%	5	83.3%
45+	1,439	40.2%	64	24.5%	253	9.1%	386	15.1%	6	12.8%	80	11.1%	7	12.3%	4	9.1%	0	0.0%
Route of Administration (%)																		
Smoked	0	0.0%	82	31.4%	82	2.9%	113	4.4%	25	53.2%	699	96.8%	2	3.5%	19	43.2%	5	83.3%
Inhaled	0	0.0%	67	25.7%	664	23.9%	1,048	41.0%	9	19.1%	7	1.0%	9	15.8%	4	9.1%	1	16.7%
Injected	0	0.0%	40	15.3%	1,967	70.8%	496	19.4%	8	17.0%	0	0.0%	1	1.8%	13	29.5%	0	0.0%
Oral/Other/Unknown	3,583	100.0%	72	27.6%	67	2.4%	898	35.1%	5	10.6%	16	2.2%	45	78.9%	8	18.2%	0	0.0%
Secondary Substance (%)																		
None	2,181	60.9%	62	23.8%	472	17.0%	571	22.3%	6	12.8%	257	35.6%	11	19.3%	5	11.4%	1	16.7%
Alcohol	1	0.0%	43	16.5%	187	6.7%	202	7.9%	6	12.8%	325	45.0%	12	21.1%	8	18.2%	2	33.3%
Cocaine/Crack	111	3.1%	6	2.3%	58	2.1%	126	4.9%	7	14.9%	21	2.9%	4	7.0%	4	9.1%	0	0.0%
Heroin	66	1.8%	57	21.8%	5	0.2%	492	19.3%	2	4.3%	23	3.2%	8	14.0%	8	18.2%	0	0.0%
Prescription Opioids	183	5.1%	35	13.4%	962	34.6%	416	16.3%	11	23.4%	65	9.0%	11	19.3%	8	18.2%	0	0.0%
Methamphetamines	9	0.3%	3	1.1%	13	0.5%	12	0.5%	0	0.0%	2	0.3%	1	1.8%	2	4.5%	0	0.0%
Marijuana	941	26.3%	38	14.6%	514	18.5%	520	20.4%	11	23.4%	0	0.0%	9	15.8%	6	13.6%	3	50.0%

NOTES:
*Admissions: Includes all admissions to programs receiving State funding. 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 MDMA.
unavail: Data not available; **Percentages** may not sum to 100 due to either rounding and/or because not all possible categories are presented in the table.

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

Table 5: Drug Overdose (Poisoning) Deaths*, by Drug** and Year, *Maine*, 2010–2014
Number, Crude Rate, and Age-Adjusted Rate*** (per 100,000 population)

	2010			2011			2012			2013			2014		
	Number (#)	Crude Rate	Age-Adjusted Rate	Number (#)	Crude Rate	Age-Adjusted Rate	Number (#)	Crude Rate	Age-Adjusted Rate	Number (#)	Crude Rate	Age-Adjusted Rate	Number (#)	Crude Rate	Age-Adjusted Rate
Drug Overdose (Poisoning) Deaths	**135**	**10.2**	**10.4**	**156**	**11.7**	**11.8**	**150**	**11.3**	**11.5**	**174**	**13.1**	**13.2**	**216**	**16.2**	**16.8**
Opioids‡	**90**	**6.8**	**7.1**	**85**	**6.4**	**6.7**	**100**	**7.5**	**7.9**	**125**	**9.4**	**9.9**	**171**	**12.9**	**13.7**
Heroin	SUP	SUP	SUP	SUP	SUP	SUP	12	UNR	UNR	16	UNR	UNR	38	2.9	3.1
Natural Opioid Analgesics	52	3.9	4.0	40	3.0	3.2	61	4.6	4.7	64	4.8	4.9	80	6.0	6.1
Methadone	36	2.7	3.0	32	2.4	2.7	25	1.9	1.9	34	2.6	2.6	29	2.2	2.2
Synthetic Opioid Analgesics	21	1.6	1.7	19	UNR	UNR	15	UNR	UNR	23	1.7	1.8	62	4.7	5.2
Benzodiazepines	**35**	**2.6**	**2.7**	**31**	**2.3**	**2.4**	**34**	**2.6**	**2.6**	**56**	**4.2**	**4.2**	**69**	**5.2**	**5.5**
Benzodiazepines **AND** Any Opioids	26	2.0	2.1	25	1.9	2.0	27	2.0	2.1	46	3.5	3.4	58	4.4	4.7
Benzodiazepines **AND** Heroin	SUP	SUP	SUP	SUP	SUP	SUP	SUP	SUP	SUP	SUP	SUP	SUP	10	UNR	UNR
Psychostimulants															
Cocaine	SUP	SUP	SUP	11	UNR	UNR	SUP	SUP	SUP	SUP	SUP	SUP	23	1.7	1.9
Psychostimulants with Abuse Potential	SUP	SUP	SUP	SUP	SUP	SUP	10	UNR	UNR	12	UNR	UNR	16	UNR	UNR
Cannabis (derivatives)	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**	**SUP**
Percent with Drugs Specified‡	90.4%			82.7%			88.0%			95.4%			99.1%		

NOTES:

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

****Drug Overdose (Poisoning) Deaths, by Drug:** Among the deaths with drug poisoning identified as the underlying cause, the specific drugs are identified by ICD-10 **multiple cause-of-death (MCOD)** T-codes (see below). Each death certificate may contain up to 20 causes of death indicated in the MCOD field. Thus, the total count across drugs may exceed the actual number of dead persons in the selected population. Some deaths involve more than one drug; these deaths are included in the rates for each drug category. This is not a complete list of all drugs that may have been involved with these drug poisoning deaths.

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

Cannabis (derivatives): (T40.7)

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

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

SOURCE: Adapted by the NDEWS Coordinating Center from data taken from the Centers for Disease Control and Prevention, National Center for Health Statistics, Multiple cause of death 1999-2014, available on the CDC WONDER Online Database, released 2015. Data compiled in the Multiple cause of death 1999-2014 were provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Retrieved between December 2015 - May 2016, from http://wonder.cdc.gov/mcd-icd10.html

Table 6a: Drug Reports* for Items Seized by Law Enforcement in *Maine* in 2015
DEA National Forensic Laboratory Information System (NFLIS)
Number of Drug-Specific Reports and Percent of Total Analyzed Drug Reports

Drug Identified	Number (#)	Percent of Total Drug Reports* (#)
Total Drug Reports*	**1,327**	**100.0%**
HEROIN	435	32.8%
COCAINE	331	24.9%
FENTANYL	92	6.9%
METHAMPHETAMINE	73	5.5%
ACETYLFENTANYL	52	3.9%
OXYCODONE	49	3.7%
BUPRENORPHINE	38	2.9%
CAFFEINE	38	2.9%
PHENYLIMIDOTHIAZOLE ISOMER UNDETERMINED	27	2.0%
CANNABIS	23	1.7%
ALPHA-PYRROLIDINOPENTIOPHENONE (ALPHA-PVP)	21	1.6%
PHENACETIN	12	0.9%
3,4-METHYLENEDIOXYETHYLCATHINONE (ETHYLONE)	10	0.8%
ALPRAZOLAM	9	0.7%
METHYLPHENIDATE	9	0.7%
DILTIAZEM	7	0.5%
PROCAINE	6	0.5%
CLONAZEPAM	5	0.4%
METHADONE	5	0.4%
6-MONOACETYLMORPHINE	4	0.3%
ALPHA-PYRROLIDINOHEXANOPHENONE (ALPHA-PHP)	4	0.3%
HYDROCODONE	4	0.3%
LYSERGIC ACID DIETHYLAMIDE (LYSERGIDE)	4	0.3%
PSEUDOEPHEDRINE	4	0.3%
UNKNOWN	4	0.3%
3,4-METHYLENEDIOXYMETHAMPHETAMINE (MDMA)	3	0.2%
ACETAMINOPHEN	3	0.2%
ALPHA-PYRROLIDINOHEPTAPHENONE (PV8)	3	0.2%
CYCLOBENZAPRINE	3	0.2%
DIAZEPAM	3	0.2%
GABAPENTIN	3	0.2%
LISDEXAMFETAMINE	3	0.2%
QUININE	3	0.2%
DIPYRONE	2	0.2%
HYDROMORPHONE	2	0.2%
KETAMINE	2	0.2%
LIDOCAINE	2	0.2%
MORPHINE	2	0.2%
PSILOCIN	2	0.2%
3,4-METHYLENEDIOXYAMPHETAMINE (MDA)	1	< 0.1%
4-FLUORO-ALPHA-PYRROLIDINOPENTIOPHENONE (4-FLUORO-ALPHA-PVP)	1	< 0.1%

Drug Identified	Number (#)	Percent of Total Drug Reports* (#)
5-MAPB (1-(BENZOFURAN-5-YL)-N-METHYLPROPAN-2-AMINE)	1	< 0.1%
5-METHOXY-N,N-DIISOPROPYLTRYPTAMINE (5-MEO-DIPT)	1	< 0.1%
BENZOCAINE	1	< 0.1%
BUSPIRONE	1	< 0.1%
CARBAMAZEPINE	1	< 0.1%
CARISOPRODOL	1	< 0.1%
CLINDAMYCIN	1	< 0.1%
DIMETHYLTRYPTAMINE (DMT)	1	< 0.1%
FLUOXETINE	1	< 0.1%
GUAIFENESIN	1	< 0.1%
HYDROXYZINE	1	< 0.1%
LACTOSE	1	< 0.1%
LORAZEPAM	1	< 0.1%
METHAQUALONE	1	< 0.1%
MIRTAZAPINE	1	< 0.1%
QUETIAPINE	1	< 0.1%
SALICYLIC ACID	1	< 0.1%
SERTRALINE	1	< 0.1%
STANOZOLOL	1	< 0.1%
TESTOSTERONE	1	< 0.1%
TRAMADOL	1	< 0.1%
VENLAFAXINE	1	< 0.1%
XLR-11 (1-(5-FLUOROPENTYL-1H-3-YL)(2,2,3,3-TETRAMETHYLCYCLOPROPYL)METHANONE)	1	< 0.1%

NOTES:

*Drug Report: Drug that is identified in law enforcement items, submitted to and analyzed by federal, state, or local forensic labs, and included in the NFLIS database. The time frame is January to December 2015.

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

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

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

NPS Category Drug Identified	Number (#)	Percent of Drug Category** (%)	Percent of Total Reports (%)
Total Drug Reports*	**1,327**	**100.0%**	**100.0%**
Opioids Category	**684**	**100.0%**	**51.5%**
Heroin	**435**	**63.6%**	**32.8%**
Narcotic Analgesics	**245**	**35.8%**	**18.5%**
FENTANYL	92	13.5%	6.9%
ACETYLFENTANYL	52	7.6%	3.9%
OXYCODONE	49	7.2%	3.7%
BUPRENORPHINE	38	5.6%	2.9%
METHADONE	5	0.7%	0.4%
HYDROCODONE	4	0.6%	0.3%
HYDROMORPHONE	2	0.3%	0.2%
MORPHINE	2	0.3%	0.2%
TRAMADOL	1	0.1%	< 0.1%
Narcotics	**4**	**0.6%**	**0.3%**
6-MONOACETYLMORPHINE	4	0.6%	0.3%
Synthetic Cathinones Category	**39**	**100.0%**	**2.9%**
Synthetic Cathinones	**39**	**100.0%**	**2.9%**
ALPHA-PYRROLIDINOPENTIOPHENONE (ALPHA-PVP)	21	53.8%	1.6%
3,4-METHYLENEDIOXYETHYLCATHINONE (ETHYLONE)	10	25.6%	0.8%
ALPHA-PYRROLIDINOHEXANOPHENONE (ALPHA-PHP)	4	10.3%	0.3%
ALPHA-PYRROLIDINOHEPTAPHENONE (PV8)	3	7.7%	0.2%
4-FLUORO-ALPHA-PYRROLIDINOPENTIOPHENONE (4-FLUORO-ALPHA-PVP)	1	2.6%	< 0.1%
Tryptamines Category	**2**	**100.0%**	**0.2%**
5-METHOXY-N,N-DIISOPROPYLTRYPTAMINE (5-MEO-DIPT)	1	50.0%	< 0.1%
DIMETHYLTRYPTAMINE (DMT)	1	50.0%	< 0.1%
Synthetic Cannabinoids Category	**1**	**100.0%**	**< 0.1%**
XLR-11 (1-(5-FLUOROPENTYL-1H-3-YL)(2,2,3,3-TETRAMETHYLCYCLOPROPYL)METHANONE)	1	100.0%	< 0.1%

NOTES:
*Drug Report: Drug that is identified in law enforcement items, submitted to and analyzed by federal, state, or local forensic labs, and included in the NFLIS database. The time frame is January to December 2015.
**Selected Drug Categories: Opioids, Synthetic Cannabinoids, Synthetic Cathinones, 2C Phenethylamines, Piperazines, and Tryptamines are drug categories of current interest to the NDEWS Project because of the recent increase in their numbers, types, and availability.

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

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

National Drug Early Warning System (NDEWS) Sentinel Community Site (SCS) Drug Use Patterns and Trends, 2016: Overview and Limitations About Data Sources

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

Area Description Indicators

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

Overview and Limitations

Data on demographic, social, and economic characteristics are based on 2010–2014 American Community Survey (ACS) 5-Year Estimates. The U.S. Census Bureau's ACS is a nationwide survey designed to provide communities with reliable and timely demographic, social, economic, and housing data on an annual basis. Although the main function of the decennial census is to provide counts of people for the purpose of congressional apportionment and legislative redistricting, the primary purpose of the ACS is to measure the changing social and economic characteristics of the U.S. population. As a result, the ACS does not provide official counts of the population in between censuses. Instead, the Census Bureau's Population Estimates Program will continue to be the official source for annual population totals, by age, race, Hispanic origin, and sex.[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; *2010–2014 American Community Survey 5-Year Estimates;* Tables DP02, DP03, and DP05; using American FactFinder; http://factfinder2.census.gov; Accessed on [5/24/2016]; U.S. Census Bureau.

Overview/Methods/Limitations Sources: [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

Substance Use Indicators

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

Overview and Limitations

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

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

Substate regions were defined by officials from each of the 50 states and the District of Columbia and were typically based on the treatment planning regions specified by the states in their applications for the Substance Abuse Prevention and Treatment Block Grant (SABG) administered by SAMHSA. There has been extensive variation in the size and use of substate regions across states. In some states, the substate regions have been used more for administrative purposes than for planning purposes. The goal of the project was to provide substate-level estimates showing the geographic distribution of substance use prevalence for regions that states would find useful for planning and reporting purposes. The final substate region boundaries were based on the state's recommendations, assuming that the NSDUH sample sizes were large enough to provide estimates with adequate precision. Most states defined regions in terms of counties but some defined them in terms of census tracts. Estimates for 384 substate regions were generated using the 2012–2014 NSDUH data. Substate regions used for each SCS are defined in the Notes sections of Tables 2a and 2b.[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 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 [8/5/2016].

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 on [8/5/2016].

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

Overview and Limitations

The Youth Risk Behavior Surveillance System (YRBSS) was designed to enable public health professionals, educators, policy makers, and researchers to 1) describe the prevalence of health-risk behaviors among youths, 2) assess trends in health-risk behaviors over time, and 3) evaluate and improve health-related policies and programs. YRBSS also was developed to provide comparable national, State, territorial, and large urban school district data as well as comparable data among subpopulations of youths (e.g., racial/ethnic subgroups) and to monitor progress toward achieving national health objectives. The YRBSS monitors six categories of priority health risk behaviors among youth and young adults: 1) behaviors that contribute to unintentional injuries and violence; 2) tobacco use; 3) alcohol and other drug use; 4) sexual behaviors that contribute to unintended pregnancy and sexually transmitted infections; 5) unhealthy dietary behaviors; and 6) physical inactivity.[a] We have included selected drug and alcohol survey questions from the YRBSS.

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

For States and large urban school districts, the YRBSs are administered by State and local education or health agencies. Each State, territorial, tribal, and large urban school district YRBS employs a two-stage, cluster sample design to produce a representative sample of students in grades 9–12 in its jurisdiction. All the data presented in these tables area based on weighted data. Weighted results are representative of all students in grades 9–12 attending public schools in each jurisdiction. According to CDC, "weighted results mean that the overall response rate was at least 60%. The overall response rate is calculated by multiplying the school response rate times the student response rate."[a]

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

The data apply only to youths who attend school and, therefore, are not representative of all persons in this age group. Nationwide, in 2009, approximately 4% of persons aged 16–17 years were not enrolled in a high-school program and had not completed high school.[b] 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.[c]

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.[d]

Notes about Data Terms

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

Sources

Data Sources: Adapted by the NDEWS Coordinating Center from data provided by Centers for Disease Control and Prevention (CDC), 1991–2013 High School Youth Risk Behavior Survey Data. Available at http://nccd.cdc.gov/youthonline/. Accessed on [3/12/2015].

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

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

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

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

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

Treatment for Substance Use Disorders

Treatment Admissions Data from Local Data Sources

Overview and Limitations

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

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

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

❖ **Atlanta Metro**

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

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

Notes & Definitions:
Admissions: includes admissions to publicly-funded programs.
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: Only fiscal year data are available at this time.

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

Notes & Definitions:
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 Substance Use.

❖ **Denver Metro**

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

Notes & Definitions:
Admissions: Includes admissions to all Colorado alcohol and drug treatment agencies licensed by the Colorado Department of Human Services, Office of Behavioral Health (OBH). Each admission does not necessarily represent a unique individual because some individuals are admitted to treatment more than once in a given period.
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:
Admissions: Includes admissions to all modalities of care in publicly funded programs. Each admission does not necessarily represent a unique individual because some individuals are admitted to treatment more than once in a given period.
Prescription Opioids: Includes oxycodone/hydrocodone, nonprescription methadone, and other opiates.

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

❖ **Los Angeles County**

Notes & Definitions:

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

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 and 2014 data) and the California Department of Drug and Alcohol Programs (2011 and 2012 data).

❖ **Maine**

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

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

❖ **New York City**

Notes & Definitions:

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 2016 from Local Governmental Unit (LGU) Inquiry Reports.

❖ **Philadelphia**

Notes & Definitions:
Admissions: Includes admissions for uninsured and underinsured individuals admitted to any licensed treatment programs funded through the Philadelphia Department of Behavioral Health and Intellectual disAbility Services (DBHIDS). Each admission does not necessarily represent a unique individual because some individuals are admitted to treatment more than once in a given period.
2015 Data: Pennsylvania expanded Medicaid coverage under the Affordable Care Act and more than 100,000 additional individuals became eligible in 2015. As individuals who historically have been uninsured become insured, the number of individuals served through the BHSI (Behavioral Health Special Initiative) program has declined; thus treatment admissions reported by BHSI declined from 8,363 in 2014 to 4,810 in 2015. However, similar patterns of substance use were observed among those seeking treatment in 2014 and in 2015.
Methamphetamine: Includes both amphetamines and methamphetamine.
Other Drugs: May include synthetics, barbiturates, and over-the-counter drugs. Synthetic Stimulants and Synthetic Cannabinoids are not distinguishable from "Other Drugs" in the reporting source.

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

❖ **San Francisco County**

Notes & Definitions
Admissions: Each admission does not necessarily represent a unique individual because some individuals are admitted to treatment more than once in a given period.

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

❖ **Southeastern Florida (Miami Area)**

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

Notes & Definitions:
Admissions: 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.
2011–2013: Data for Palm Beach County is not available for 2011-2013, therefore, 2011–2013 only includes data for Broward and Miami-Dade counties.

Source: Data provided to the Southeastern Florida NDEWS SCE by the Florida Department of Children and Families and the Broward Behavioral Health Coalition.

❖ **Texas**

Notes & Definitions:
Admissions: Includes all admissions reported to the Clinical Management for Behavioral Health Services (CMBHS) of the Department of State Health Services (DSHS). Each admission does not necessarily represent a unique individual because some individuals are admitted to treatment more than once in a given period.
Methamphetamine: Includes amphetamines and methamphetamine.
Synthetic Cannabinoids: DSHS collects data on "other Cannabinoids," which may not include all the synthetic cannabinoids.
Females: Calculated using formula "1 minus Male %."

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

❖ **Wayne County (Detroit Area)**

Notes & Definitions:
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

Consequences of Drug Use Indicators

Drug Overdose (Poisoning) Deaths

Overview and Limitations

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

The drug-specific poisoning deaths presented in the 2016 National Drug Early Warning System (NDEWS) reports are deaths that have been certified "as due to acute exposure to a drug, either alone or in combination with other drugs or other substances" (Goldberger, Maxwell, Campbell, & Wilford, p. 234)[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:

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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.

Several factors related to death investigation and reporting may affect measurement of death rates involving specific drugs. At autopsy, toxicological lab tests may be performed to determine the type of legal and illegal drugs present. The substances tested for and circumstance in which tests are performed vary by jurisdiction. Increased attention to fatal poisonings associated with prescription pain medication may have led to changes in reporting practices over time such as increasing the level of substance specific detail included on the death certificates. Substance-specific death rates are more susceptible to measurement error related to these factors than the overall poisoning death rate. ([The Safe States Alliance, p. 63](#))[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%. 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., state, and county resident populations. The year 2010 populations are April 1 modified census counts. The year 2011–2014 population estimates are bridged-race postcensal estimates of the July 1 resident population. Click here for more information about CDC WONDER Multiple Cause of Death data)

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

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

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

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

Sources

Data Sources: Adapted by the NDEWS Coordinating Center from data taken from the Centers for Disease Control and Prevention, National Center for Health Statistics, *Multiple cause of death 1999–2014*, available on the CDC WONDER Online Database, released 2015. Data compiled in the *Multiple cause of death 1999–2014*

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

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

[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*.

Availability Indicators

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

Overview and Limitations

NFLIS systematically collects results from drug analyses conducted by state and local forensic laboratories. These laboratories analyze controlled and noncontrolled substances secured in law enforcement operations across the United States. The DEA describes NFLIS as:

> "a comprehensive information system that includes data from forensic laboratories that handle the Nation's drug analysis cases. The NFLIS participation rate, defined as the percentage of the national drug caseload represented by laboratories that have joined NFLIS, is currently over 97%. Currently, NFLIS includes 50 State systems and 101 local or municipal laboratories/laboratory systems, representing a total of 277 individual laboratories. The NFLIS database also includes Federal data from DEA and U.S. Customs and Border Protection (CBP) laboratories."[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 2015 and are described below:

- ❖ **Denver Metro Area:** The Aurora Police Department laboratory's last reported data are from July 2014, following the migration to a new laboratory information management system (LIMS).
- ❖ **San Francisco County:** The San Francisco Police Department (SFPD) laboratory has been closed since 2010; however, beginning in January 2012, the Alameda Sheriff Department laboratory began reporting their SFPD cases to NFLIS. All available data from the SFPD were included in the counts.
- ❖ **Texas:** The Austin Police Department laboratory closed, and no data were provided for 2015. The Houston Forensic Science Government Corporation (formerly Houston Police Department Crime Lab) lab was added in April 2014 and has been reporting data since then.

Notes about Data Terms

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

For each site, the NFLIS drug reports are based on submissions of items seized in the site's catchment area. The catchment area for each site is described in the Notes section below each table. The time frame is January–December 2015. Data were queried from the DEA's NFLIS Data Query System (DQS) on May 18, 2016 using drug item submission date.

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

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

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

3-METHYLFENTANYL

ACETYL-ALPHA-METHYLFENTANYL

ACETYLFENTANYL

Beta-HYDROXYTHIOFENTANYL

BUTYRYL FENTANYL

P-FLUOROBUTYRYL FENTANYL (P-FBF)

P-FLUOROFENTANYL

Sources

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

*Overview/Methods/Limitations Sources***:** [a]Adapted by the NDEWS Coordinating Center from U.S. Drug Enforcement Administration (DEA), Office of Diversion Control. (2016) *National Forensic Laboratory Information System: Midyear Report 2015.* Springfield, VA: U.S. Drug Enforcement Administration. Available at: https://www.nflis.deadiversion.usdoj.gov/DesktopModules/ReportDownloads/Reports/NFLIS_MidYear2015.pdf