

NDEWS *National Drug Early Warning System*

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

King County (Seattle Area) 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.

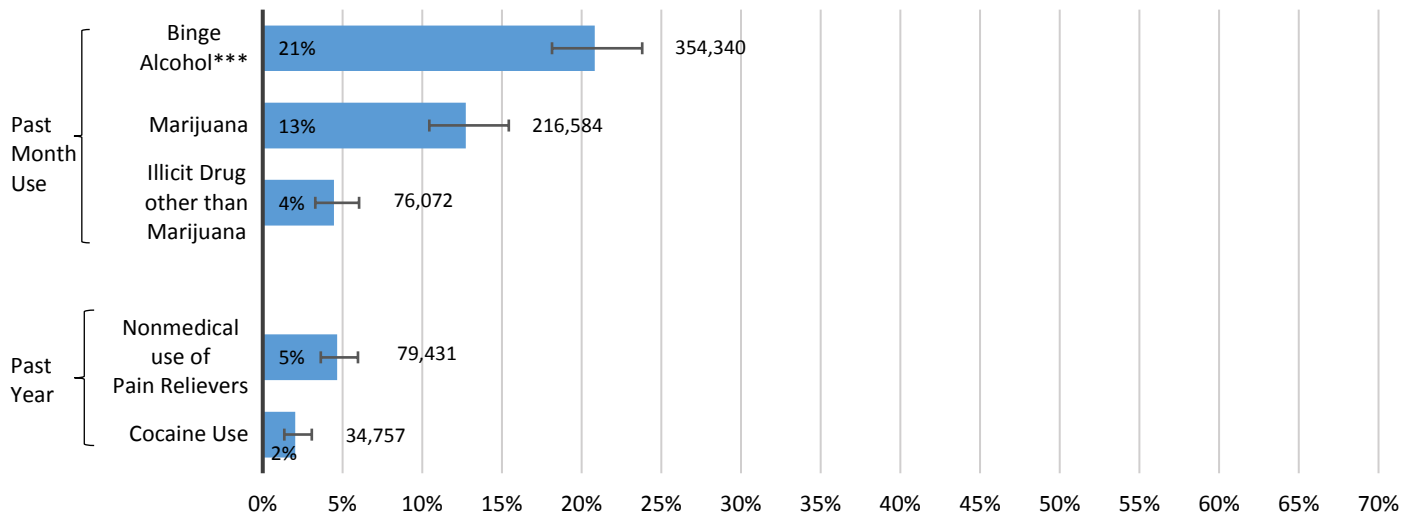
King County (Seattle Area) SCS Snapshot, 2016

Substance Use

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

Persons 12+ Years Reporting Selected Substance Use, King County (Seattle Area)^, 2012-2014

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



*U.S. Population: U.S. civilian non-institutionalized population. ^King County: NSDUH Region 2 (King County). **Estimated Number: Calculated by multiplying the prevalence rate and the population estimate of persons 12+ years (1,700,584) from Table C1 of the NSDUH Report.

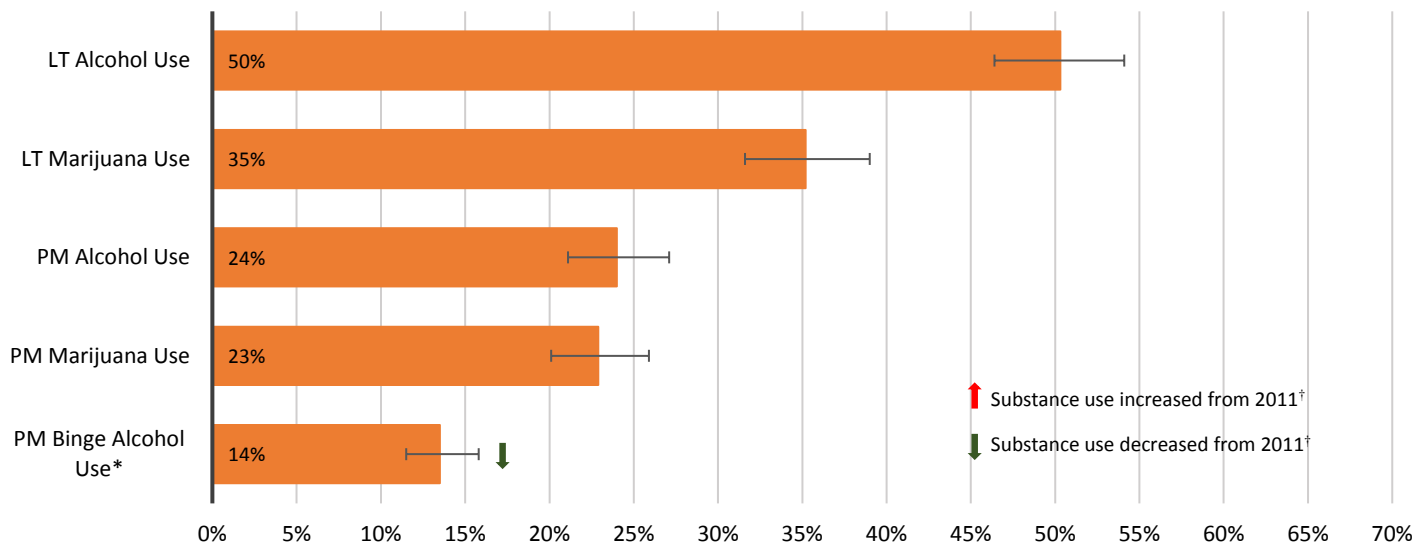
***Binge Alcohol: Defined as drinking five or more drinks on the same occasion.

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, Seattle, 2013¹

Estimated Percent and 95% Confidence Interval



¹2013: 2015 YRBS data not available for Seattle so 2013 YRBS data are presented.

*PM Binge Alcohol Use: Defined as had five or more drinks of alcohol in a row within a couple of hours.

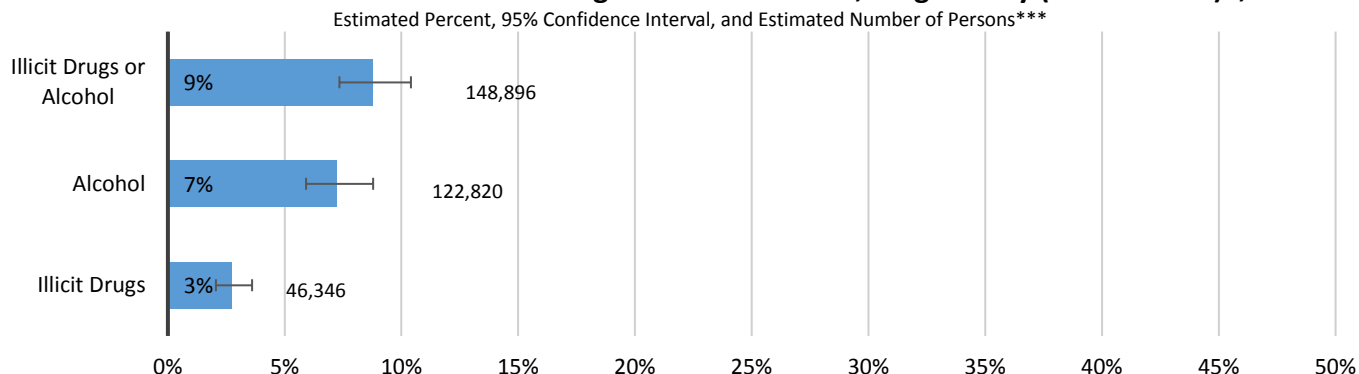
[†]Statistically significant change: $p < 0.05$ by t-test.

Source: Adapted by the NDEWS Coordinating Center from data provided by CDC, 2001-2013 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, King County (Seattle Area)^, 2012-2014

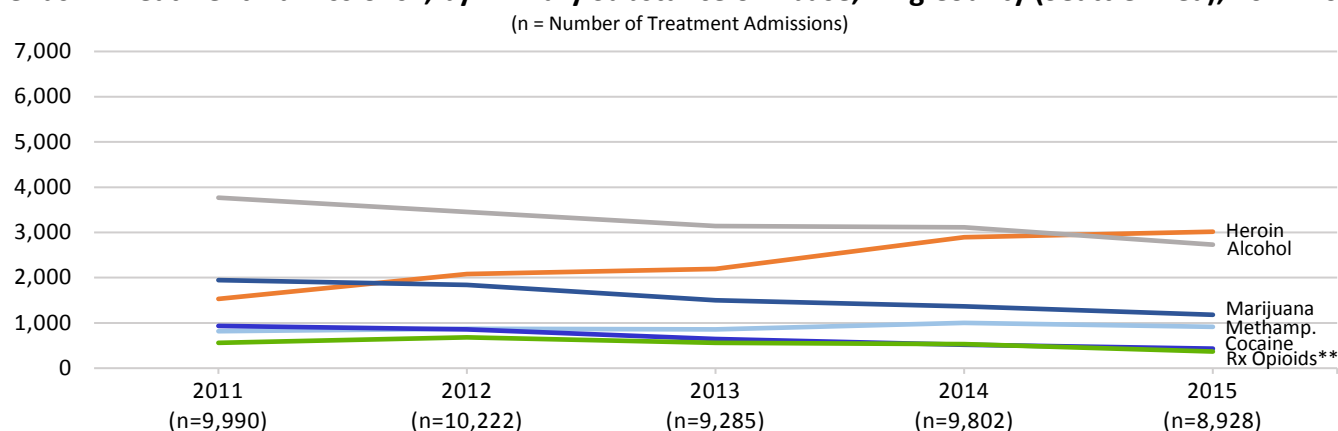


*U.S. Population: U.S. civilian non-institutionalized population. **Substance Use Disorders in Past Year: Persons are classified as having a substance use disorder in the past 12 months based on responses to questions that meet the criteria specified in the 4th edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)*. ^King County: NSDUH Region 2 (King County). ***Estimated Number: Calculated by multiplying the prevalence rate and the population estimate of persons 12+ years (1,700,584) from Table C1 of the NSDUH Report.

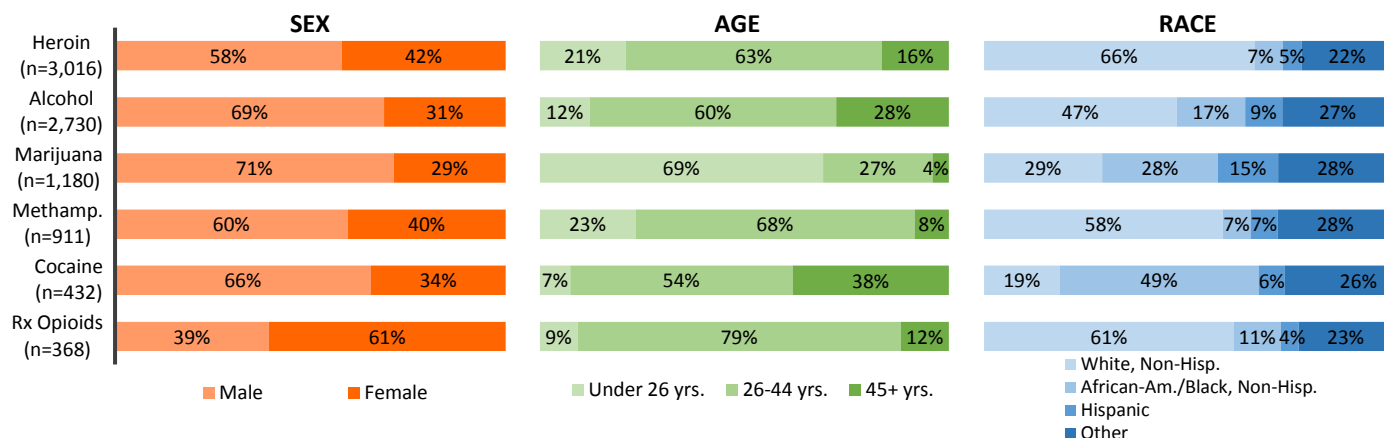
Source: Adapted by the NDEWS Coordinating Center from data provided by SAMHSA, NSDUH. Annual averages based on combined 2012 to 2014 NSDUH data.

Treatment Admissions Data from Local Sources

Trends in Treatment Admissions*, by Primary Substance of Abuse, King County (Seattle Area), 2011-2015



Demographic Characteristics of Treatment Admissions*, King County (Seattle Area), 2015



*Treatment Admissions: Includes admissions to all modalities of care in public-funded programs. **Rx Opioids: Includes oxycodone/hydrocodone, non-prescription methadone, and other opiates. 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.

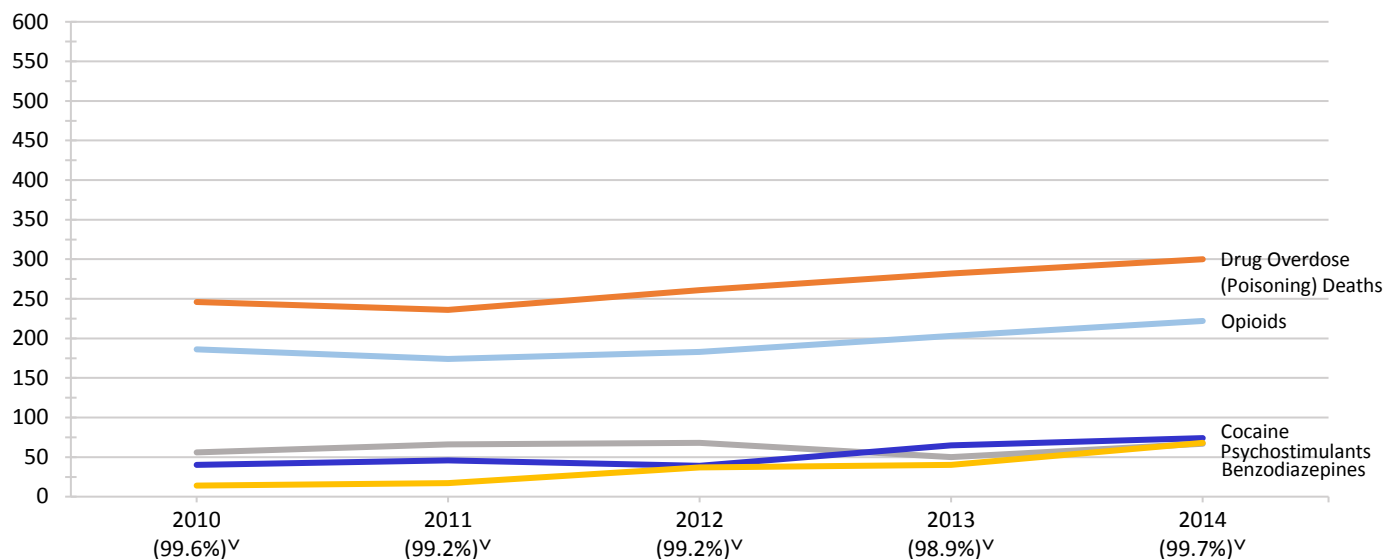
Source: Data provided to the King County (Seattle Area) NDEWS SCE by the Washington State Department of Social and Health Services (DSHS), Division Behavioral Health and Recovery, Treatment Report and Generation Tool (TARGET).

Drug Overdose (Poisoning) Deaths

National Vital Statistics System (NVSS) via CDC WONDER

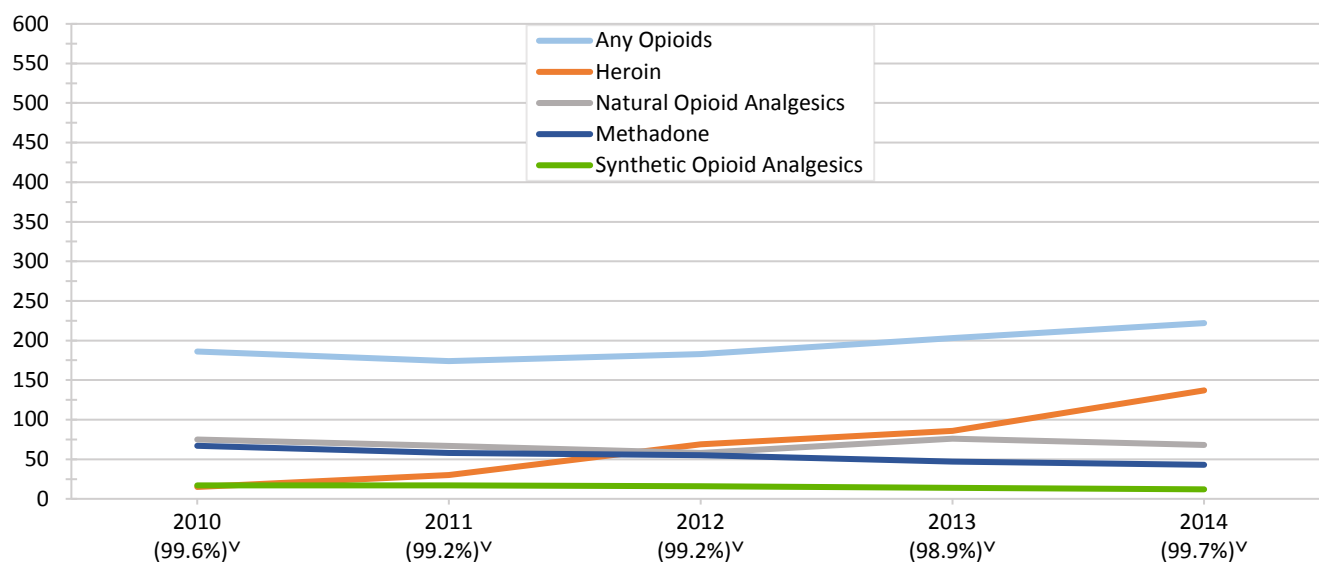
Trends in Drug Overdose (Poisoning) Deaths*, by Drug**, King County (Seattle Area), 2010–2014

(Number of Deaths and Percent of Drug Overdose (Poisoning) Deaths with Drug(s) Specified^Y)



Trends in Opioid Overdose (Poisoning) Deaths*, by Opioid, King County (Seattle Area), 2010–2014

(Number of Deaths, by Drug** and Percent of Drug Overdose (Poisoning) Deaths with Drug(s) Specified^Y)



*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). ^YPercent of Drug Overdose (Poisoning) Deaths with Drug(s) Specified: The percentage of drug overdose (poisoning) deaths with specific drugs mentioned varies considerably by state/catchment area. This statistic describes the annual percentage of drug overdose (poisoning) deaths that include at least one ICD-10 MCOD code in the range T36-T50.8. See *Sentinel Community Site (SCS) Data Tables and/or Overview & Limitations* for additional information on mortality data.

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

Law Enforcement Drug Seizures

National Forensic Laboratory Information System (NFLIS)

Drug Reports* for Items Seized by Law Enforcement in King County (Seattle Area) 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	1,451	100%
Top 10 Drug Reports		
Heroin	431	29.7%
Methamphetamine	418	28.8%
Cocaine	214	14.7%
Cannabis	102	7.0%
Unknown	95	6.5%
Oxycodone	27	1.9%
Alprazolam	22	1.5%
No Controlled Drug Identified	11	0.8%
Phenylimidothiazole Isomer Undetermined	11	0.8%
3,4-methylenedioxymethamphetamine (MDMA)	10	0.7%
Top 10 Total	1,341	92.4%
Selected Drugs/Drug Categories		
Opioids	486	33.5%
Fentanyl	5	0.3%
Other Fentanyl***	0	0.0%
Synthetic Cannabinoids	7	0.5%
Synthetic Cathinones	2	0.1%
Tryptamines	1	<0.1%
2C Phenethylamines	0	0.0%
Piperazines	0	0.0%

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

Synthetic Cannabinoids (n=7)

AM-2201 (57%)
JWH-250 (14%)
RCS-4 (14%)
XLR-11 (14%)

Synthetic Cathinones (n=2)

Ethylone (100%)

Tryptamines (n=1)

DMT (100%)

*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 butyrfentanyl). 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) King County (Seattle Area) Sentinel Community Site (SCS) Drug Use Patterns and Trends, 2016: SCE Narrative

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Highlights

- **Heroin** continued to increase as a drug of abuse and was associated with substantial morbidity and mortality. Heroin has been the most common drug identified in overdose deaths for the past two years. Half of young adults 18 to 29 years of age admitted to treatment for the first time for heroin reported smoking and half reported injecting heroin, a substantial increase in smoking compared to 2009. Total drug treatment admissions for heroin surpassed alcohol for the first time in 2015.
- **Pharmaceutical** opioid problem indicators declined somewhat, but remained high.
- **Illicitly manufactured synthetic opioids**, such as acetyl fentanyl, have begun to be detected in some deaths as well as police evidence.
- **Methamphetamine** problem indicators persisted, and recently users began combining methamphetamine with heroin and deaths rates concomitantly increased substantially.
- **Cocaine** persisted as a drug of abuse associated with morbidity and mortality with modest declines in recent years. Injectors' use of cocaine and heroin together declined in recent years as use of methamphetamine and heroin together increased.
- **Marijuana** is a major drug used, it is legal for adults in Washington State, and treatment admissions have declined.
- **Interventions** including syringe and naloxone (opioid overdose antidote) distribution continued to increase.

Changes in Legislation

In 2015, an updated naloxone (opioid overdose antidote) law took effect that explicitly allowed prescribers in Washington State to issue a standing order so that a nonlicensed person (e.g., syringe exchange or social services staff or volunteer) could dispense naloxone. The law also allowed prescribing naloxone to an entity, such as a police department, to expand beyond prescribing to individuals. The intent of the law was to decrease barriers to naloxone distribution. State legislation passed in 2015 changed the tax structure on retail marijuana and integrated the medical market with the current regulated market in July 2016.

In 2015, the Washington State Interagency Opioid Workplan was created and is available at www.stopoverdose.org. Washington State's pain management guidelines were modified in 2015 to expand beyond the use of opioids for chronic pain to address opioid use for acute pain. The guidelines also added recommendations about treating opioid use disorder with methadone and buprenorphine as well as co-prescribing naloxone for those at risk for opioid overdose.

Drug Use Patterns and Trends

BENZODIAZEPINES

Benzodiazepines are a common secondary drug among opioid users in King County, but they are rarely misused in isolation. Benzodiazepines are the second most common class of drugs reported to the Washington Poison Center. Crime lab data for depressant drugs, which include benzodiazepines, remained low in 2015 when there were 29 cases. Benzodiazepines are rare as a primary drug at treatment entry, with the 21 admissions (0.2%) in 2015 similar to prior years. Benzodiazepine use was reported by 35% of syringe exchange clients in 2015, which remained unchanged from prior years. Benzodiazepines were detected in 61 overdose deaths in 2015, which was similar to the prior decade. Almost all cases involving benzodiazepines involved at least one other substance.

COCAINE

- Cocaine persisted as a drug of abuse associated with morbidity and mortality with modest declines in recent years. Injectors' use of cocaine and heroin together declined in recent years as use of methamphetamine and heroin together increased.

Cocaine use continued in King County, although most indicators show lower levels from 2010 onward. Washington Recovery Help Line calls about cocaine averaged 400 in 2015, which was the lowest number among the major drugs of abuse. Cocaine-positive police evidence cases totaled 168 in 2015, which was the lowest number since at least 2002 and below the peak of 1,578 in 2005 (these numbers are likely substantially impacted by court cases impacting police procedures for obtaining evidence). Testing of

municipal wastewater entering the treatment plant that serves most of Seattle indicated that the cocaine metabolite benzoylecgonine was present on each day of a two-week period in spring 2015 with the measured per capita load moderate compared with 66 cities in 26 other countries; no other location in the United States participated in this project (data not shown). Measured loads of benzoylecgonine in wastewater appeared to be somewhat higher on weekends, suggesting most use is regular or habitual with some additional recreational use on weekends.

Treatment admissions for cocaine totaled 432 in 2015 (5% of all admissions), which was the lowest number since at least 1999, and well below the peak of 1,957 in 2008. In 2015, 66% of cocaine primary treatment admissions were male, 49% were African American, 54% were 26–49 years of age and 38% were 50 years of age and older, 82% reported smoking cocaine, and 38% reported alcohol as their secondary drug of choice. Among drug injectors surveyed at Public Health-Seattle King County syringe exchanges, there was a significant decline in the proportion reporting using powder cocaine by itself from 31% in 2011 to 16% in 2015, whereas the proportion reporting using crack cocaine itself was statistically unchanged at about a third of respondents, while speedballs (heroin and cocaine used together) declined significantly from 38% to 21% of respondents (Exhibit 4). Cocaine-involved deaths totaled 56 in 2015, which was down somewhat from the prior two years (Exhibit 5).

MARIJUANA

- Marijuana is a major drug used, it is legal for adults in Washington State, and treatment admissions have declined.

Marijuana use is common in King County. Washington Recovery Help Line data indicated approximately 700 marijuana-related calls per year from 2012 through 2015, with marijuana being the fourth most common drug mentioned in 2015 (Exhibit 1). King County police evidence testing for marijuana peaked at 729 cases in 2005, and in 2015, there were 79 cases representative of lower levels seen from 2010 onward (Exhibit 2a). There are multiple factors underlying declines in police evidence testing including court cases impacting police procedures for obtaining evidence and changes in law enforcement priorities and practices. In 2012, Washington State legalized retail marijuana, although the declines in these crime cases were apparent in 2010. Publicly funded treatment admissions for which marijuana was the primary drug were at their lowest number and smallest proportion (13%) of treatment admissions in 2015 with larger proportions admitted for alcohol and heroin (Exhibit 3). In 2015, those admitted to treatment with marijuana as their primary were mostly male (71%), 29% were White, 28% were African American, 45% were younger than 18 years of age, 98% smoked the drug, and 50% reported alcohol as their secondary drug.

METHAMPHETAMINE

- Methamphetamine problem indicators persisted, and recently users began combining methamphetamine with heroin and deaths rates concomitantly increased substantially.

Methamphetamine indicators are increasing, particularly deaths. Calls to the Washington Recovery Help Line regarding methamphetamine totaled 1,216 in 2015, which was double the number in 2012, and it is now the second most common drug mentioned after heroin. A steady increase in police cases positive

for methamphetamine was observed from 2011 to 2014, with a plateauing in 2015 at 336 cases, just barely second to heroin; heroin and methamphetamine have been increasing in parallel in recent years even as cases for other drugs have been declining. Methamphetamine numbers remained well below the 902 police evidence cases in 2005. Seattle wastewater testing indicated that methamphetamine was present on all 14 days sampled and that the average load per capita was among the highest among all international cities tested. Measured loads appeared to have been somewhat higher on weekends, suggesting that most use is habitual/regular.

Treatment admissions involving methamphetamine have been in the range of 800 to 1000 per year since 2004. Among those entering treatment for the first time with methamphetamine as their primary drug, the ratio of those smoking to injecting has been relatively consistent at 3 to 1 for the past decade. The use of methamphetamine by itself among injectors responding to the syringe exchange survey increased significantly from 32% to 58% from 2011 to 2015, and use of goofballs (methamphetamine and heroin together) more than doubled from 14% to 37%. Methamphetamine-involved deaths totaled 86 in 2015, which was the highest number recorded for the drug after a relatively constant number of deaths, approximately 20 per year, from 2003 to 2011. In 2014 and 2015, half of the methamphetamine deaths also involved heroin. As described below in the *Infectious Diseases Related to Substance Abuse* section, HIV prevalence is higher among methamphetamine men who have sex with men (MSM) injectors than among other injectors.

NEW PSYCHOACTIVE SUBSTANCES (OTHER THAN OPIOIDS)

Other drugs have been less commonly identified, although some new drugs have emerged recently. MDMA persisted at low levels in drug-caused deaths with 2 in 2015 among the 23 MDMA deaths since 1997. Poison center calls for “hallucinogenic amphetamines” totaled 15 in 2015, ranking relatively low compared to other drugs. MDMA was detectable in Seattle wastewater on 14 consecutive days; levels were much higher on weekends and were moderate when compared internationally. Mitragynine, known as kratom, is a botanically-derived psychoactive drug reported to be used to attempt to self-treat opioid addiction. It was first identified in a death in 2015 in combination with oxycodone. A cannabimimetic, 5F-AMB, and a methcathinone, alpha-PVP, were each involved in a drug overdose in 2015.

OPIOIDS

- Heroin continued to increase as a drug of abuse and was associated with substantial morbidity and mortality. Heroin has been the most common drug identified in overdose deaths for the past two years. Half of young adults 18 to 29 years of age admitted to treatment for the first time for heroin reported smoking and half reported injecting heroin, a substantial increase in smoking compared to 2009. Total drug treatment admissions for heroin surpassed alcohol for the first time in 2015.
- Pharmaceutical opioid problem indicators declined somewhat, but remained high.
- Illicitly manufactured synthetic opioids, such as acetyl fentanyl, have begun to be detected in some deaths as well as police evidence.

Heroin

Heroin indicators remained elevated, particularly in overdose deaths (132 in 2015), and treatment admissions for heroin peaked in 2015 and surpassed alcohol for the first time. Heroin was by far the most commonly mentioned drug among callers to the Washington Recovery Help Line, totaling 2,100 in 2015, which was almost double the number in 2012. Callers interested in opioid use disorder treatment with buprenorphine increased from 147 in 2013 to 363 in 2015. Heroin was the most common drug detected in police evidence, with 348 cases in 2015 following a steady increase since 2011. The unique metabolite of heroin, 6-monoacetylmorphine (6-MAM), was detectable in wastewater samples on each of the 14 days sampled, and the measured concentrations were low as is typical of this metabolite. Concentrations were too low to assess variability by day of week. Many international cities did not detect 6-MAM on any days, and among those that did, the levels in Seattle were comparably moderate. Little is known about the sensitivity, reliability, or validity of using wastewater to detect 6-MAM; the levels detected generally in municipal wastewater are relatively low and often near or below the level of quantification.

Heroin treatment admissions surpassed alcohol in 2015 for the first time in 2015 with a steady increase since 2010. The county has been increasing funding and capacity for methadone maintenance. In 2015, among those entering treatment for the first time and reporting heroin as their primary drug, the majority were 18–29 years of age (Exhibit 3b), and among this age group, half reported injecting and half reported smoking heroin, a pattern that began slowly emerging in 2009 (data not shown). In 2015, 58% of treatment admissions were male, 66% were White, and 30% reported their secondary drug was methamphetamine compared with 12% for cocaine. Among those surveyed at syringe exchange, 89% reported using heroin by itself in 2015, which was statistically unchanged from 2011 and 2013, and 21% reported using with cocaine, which was a significant decline, and 37% with methamphetamine, which was a significant increase. Heroin-involved deaths totaled 132 in 2015, compared with the peak of 156 in 2014, when heroin surpassed deaths involving pharmaceutical opioids for the first time since 2003.

Synthetic Opioids

Pharmaceutical¹ and non-pharmaceutical synthetic opioids had mixed indicators with pharmaceutical products declining somewhat and a few signs of non-pharmaceutical synthetic opioids (e.g., illicitly manufactured acetyl fentanyl). Pharmaceutical opioid calls to the Washington Recovery Help Line have been relatively steady in recent years, making it the third most common drug class mentioned in 2015. Pharmaceutical opioid exposure calls to the Poison Center have represented the most common class of drugs over the past decade, with oxycodone and hydrocodone products the most common types of opioids. Overall crime lab cases positive for pharmaceutical opioids were down substantially with 43 cases in 2015 compared with 241 in 2007 (Exhibit 2b). The most common opioid detected remained oxycodone. No fentanyl analogues were detected in 2015, although there were two cases in 2014 and 1 in 2013.

Treatment admissions involving pharmaceutical opioids have been declining and represented 4% of admissions in 2015. Among 2015 treatment admissions, 61% were female (the only other drug except

¹ Pharmaceutical refers to the type of opioid, not the source from which the user obtained the substance.

for benzodiazepines for which the majority of admissions were female), 61% were White, 79% were 26–44 years of age, and the most common secondary drug was heroin reported by 19%. Among those surveyed at syringe exchange, 41% reported using pharmaceutical opioids in 2015, which was a significant increase from 30% in 2011. The proportion of syringe exchange clients who reported they were “hooked on prescription-type opiates prior to using heroin” was 53% in 2015, which was a significant increase from 38% in 2011. Pharmaceutical-opioid-involved deaths totaled 97 in 2015, which was similar to 2014 and down from 164 in 2009. The first documented overdose involving acetyl-fentanyl occurred in King County in 2015 and preliminary data indicate two deaths involving acetyl-fentanyl in May of 2016.

Infectious Diseases Related to Substance Use

Public Health-Seattle and King County participates in the National HIV Behavioral Surveillance (NHBS) program of the Centers for Disease and Control and Prevention (CDC). The 2015 NHBS IDU cycle data indicate that 5% of injectors were positive for HIV based on a preliminary positive test result; the proportions were 3% among non-MSM IDUs, 9% among non-amphetamine-MSM/IDUs, and 38% among amphetamine-using-MSM-IDUs. Almost two thirds (64%) of all IDU were positive for hepatitis C. Among HIV cases diagnosed in King County between 2013 and 2015 with an identified risk category, 3% had an exposure risk category of IDU and another 7% had an exposure risk category of MDM-IDU (Exhibit 7).

INFECTIOUS DISEASE AND OVERDOSE INTERVENTIONS

- Interventions including syringe and naloxone (opioid overdose antidote) distribution continued to increase.

In 2015, syringe exchanges in King County combined to distribute 6,998,794 syringes, which was up from 5,940,908 in 2014. The People’s Harm Reduction Alliance reported distributing 3,023 take-home naloxone (opioid overdose antidote) kits with 1,981 self-reported reversals, while Public Health- Seattle & King County distributed 346 kits and had 73 self-reported reversals. The mobile homeless healthcare site distributed 54 kits and had 4 reversals reported. Two King County based pharmacies, Kelley Ross and Bellgrove, reported distributing 47 kits to customers at risk for witnessing an overdose (not including those who work in settings where they may reverse an overdose in the course of their work), and approximately 4 reversals were reported. Costco began stocking naloxone in November 2015 and dispensed one kit in 2015, with an additional 12 dispensed in the first half of 2016. Note that at present there is no standard mechanism for documenting or reporting naloxone distribution and use at the individual or population level and that these pharmacies dispensed naloxone kits via a collaborative drug therapy agreement that allows pharmacists to dispense without an outside prescriber writing a prescription.

Exhibits

Exhibit 1. Number of Calls to the Washington Recovery Help Line from King County Residents, 2012-2015

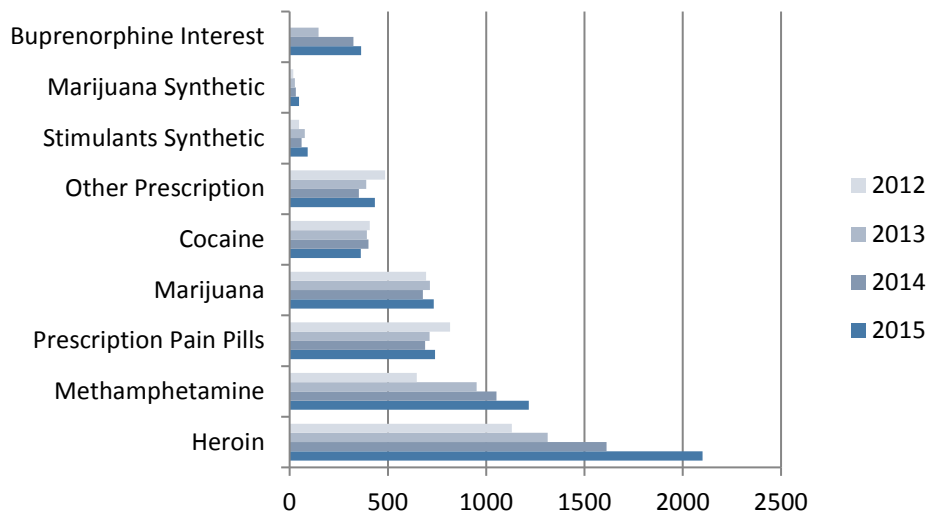
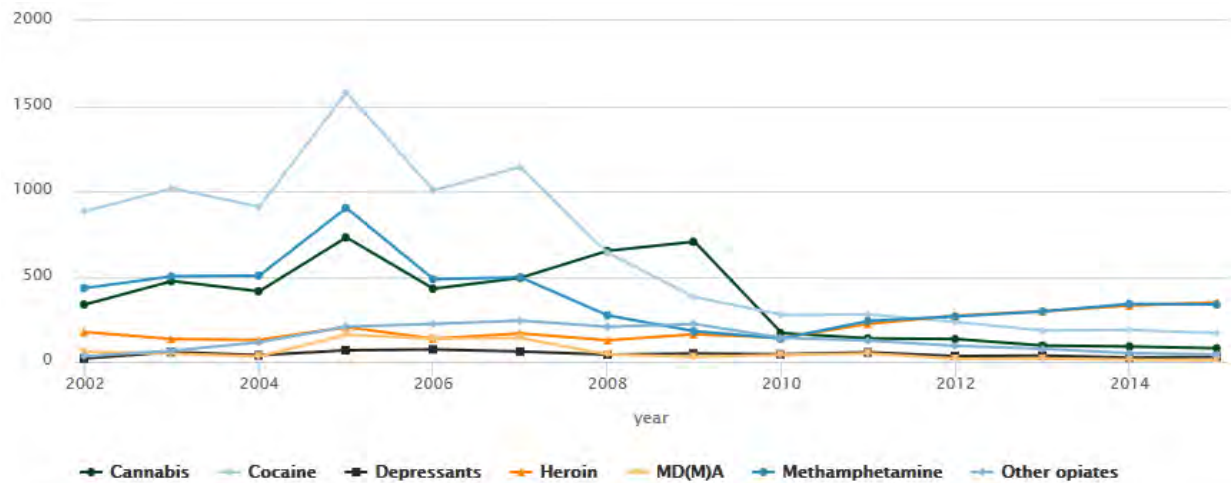
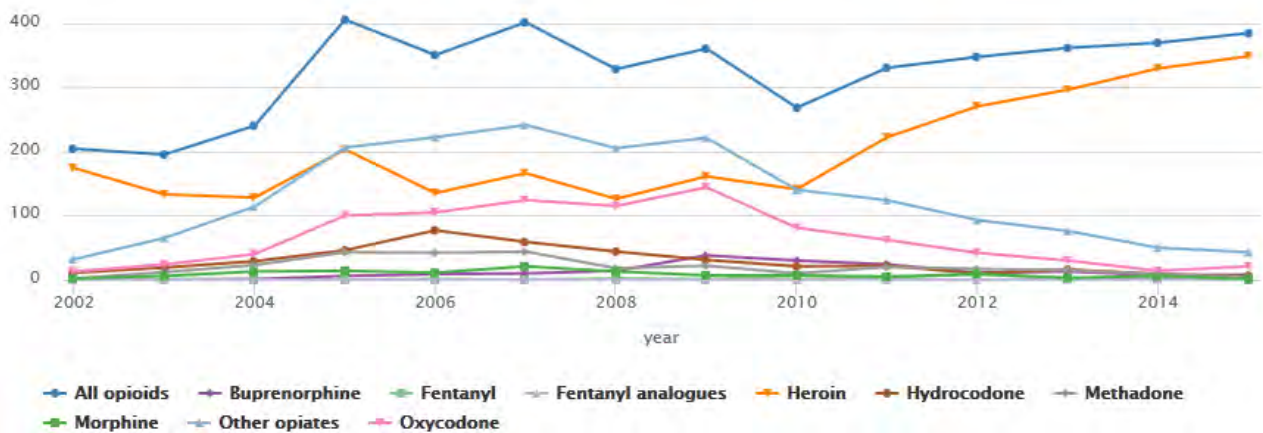


Exhibit 2a. Police Evidence Testing Results from Law Enforcement Agencies in King County, Major Drugs, 2002-2015



Source: WA State Patrol, Forensic Laboratory Services Bureau

Exhibit 2b. Police Evidence Testing Results from Law Enforcement Agencies in King County, Opioids, 2002-2015



Source: WA State Patrol, Forensic Laboratory Services Bureau

Exhibit 3a. Treatment Admissions, Primary Drug, King County Residents, Publicly Funded, 1999-2015

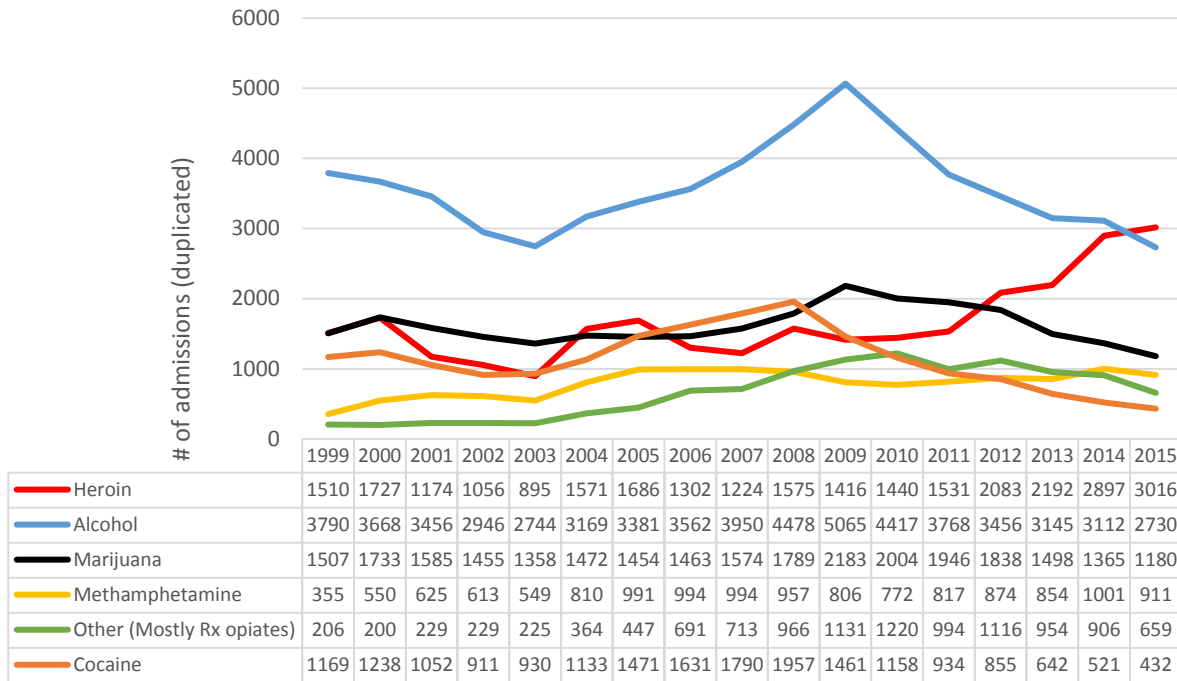


Exhibit 3b. Treatment Admissions, Heroin Primary, First Time in Treatment, King County Residents, Publicly Funded, 2002-2015

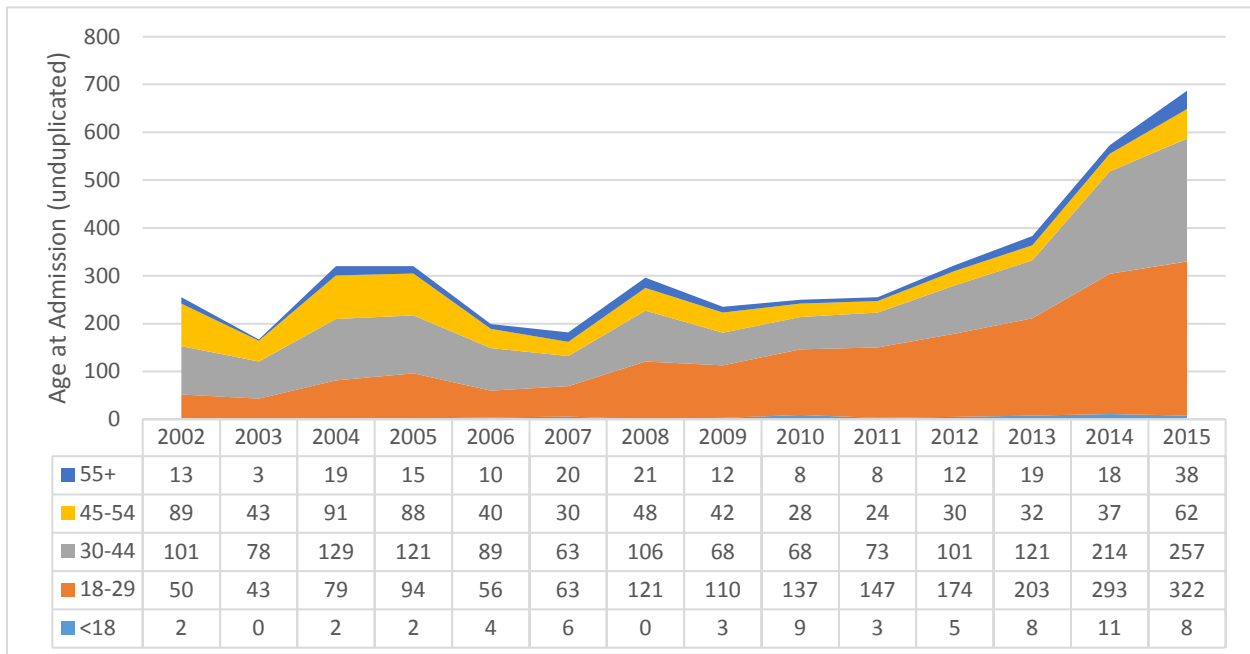


Exhibit 4. Syringe Exchange Surveys of Public Health—Seattle and King County Clients

	2011		2013		2015		<i>p</i> value
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
Total	401	—	475	—	409	—	
Drugs used (yes/no to each) *							
Powder cocaine by itself	116	31%	107	23%	66	16%	<.0001
Crack cocaine by itself	144	38%	154	33%	129	32%	NS
Speedball (cocaine & heroin)	144	38%	136	29%	85	21%	<.0001
Methamphetamine by itself	121	32%	246	53%	233	58%	<.0001
Goofball (meth & heroin)	53	14%	129	28%	150	37%	<.0001
Heroin by itself	333	88%	388	83%	357	89%	NS
Prescription opiates	112	30%	163	35%	167	41%	0.001
Benzodiazepines	144	38%	191	41%	141	35%	NS
Hooked on prescription-type opiates prior to using heroin							
Yes	127	38%	177	45%	188	53%	<.0001
Possessed Narcan®/naloxone past 3 months							
Yes	Not asked		112	28%	168	47%	<.0001

*Participants could report more than one drug; therefore, percentages do not add to 100%. Includes drugs used by any route. Categories may not add up to total because of missing data for individual variables. NS = not significant.

Source: Adapted from HIV/AIDS Epidemiology Unit, Public Health—Seattle & King County and the Infectious Disease Assessment Unit, Washington State Department of Health. HIV/AIDS Epidemiology Report 2015, Volume 84

Exhibit 5: Drugs Identified in Drug Caused Deaths, King County WA, 1997-2015

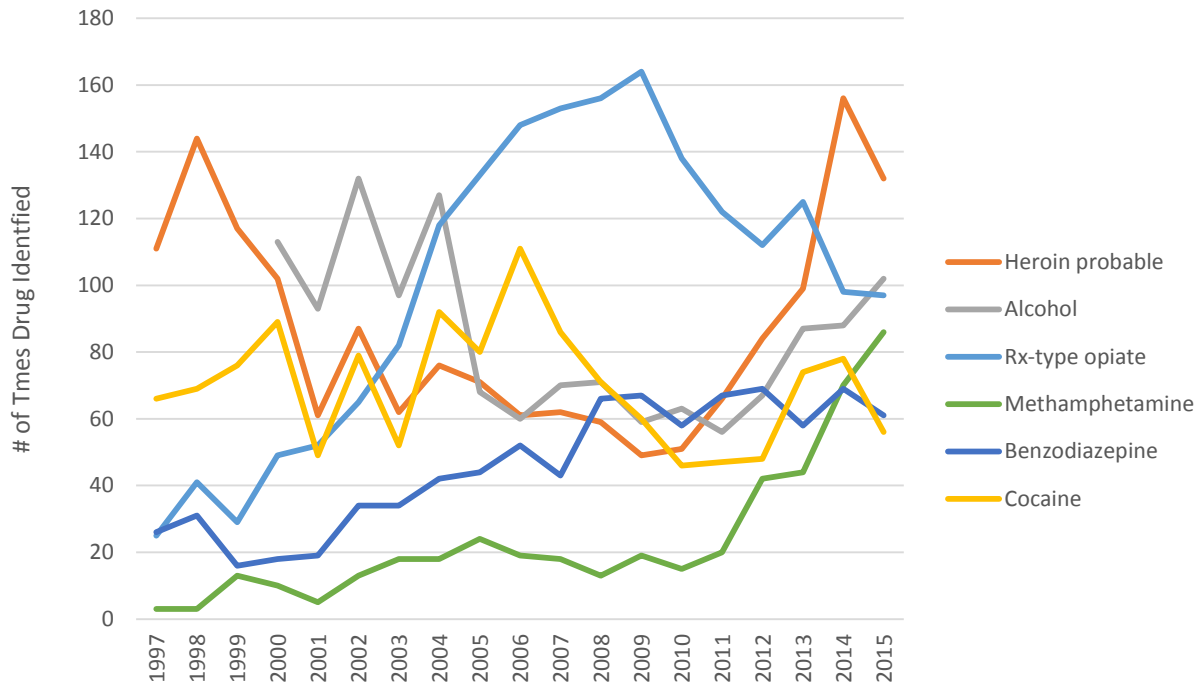


Exhibit 6. Washington Poison Center Exposure Calls from King County, Washington, 2006-2015

Drug	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<i>Pharmaceutical Opioids</i>	3,532	3,572	3,824	3,735	808	943	779	567	571	528
Benzodiazepines	2,071	2,200	2,521	2,403	541	536	495	437	395	385
Dextromethorphan	2,198	2,113	1,764	1,545	395	369	286	298	293	284
Oxycodone	1,032	1,113	1,208	1,278	294	351	261	179	168	164
Hydrocodone	1,192	1,146	1,212	1,113	222	235	210	172	149	140
Cannabinoids/Marijuana/THC	119	150	152	155	57	111	83	80	115	112
Amphetamine e.g. Adderall	526	473	486	410	106	108	123	113	104	95
Methylphenidate e.g. Ritalin, Concerta	286	324	342	316	81	72	66	62	52	70
Heroin	39	40	63	58	21	34	40	49	75	60
Tramadol	234	302	392	331	74	85	68	57	56	52
Methamphetamine	64	48	103	110	24	55	60	60	46	52
Codeine	429	348	379	382	80	69	59	48	57	51
Buprenorphine	0	0	0	0	5	48	50	30	30	33
Methadone	398	430	396	407	88	77	62	40	46	33
Morphine	226	209	217	211	43	43	35	22	29	29
Cocaine	154	133	132	102	39	93	50	23	30	27
Carisoprodol e.g. Soma	0	0	0	0	0	0	0	0	23	25
Hallucinogenic amphetamine e.g. MDMA	114	81	87	65	21	25	24	37	28	15
Hydromorphone	0	0	0	0	0	18	21	10	24	14
Cyclobenzaprine e.g. Flexeril	123	157	156	168	37	15	15	11	10	12
LSD	11	11	7	10	1	1	6	10	6	10
GHB and analog/precursor	19	10	18	16	9	1	6	7	7	9
Fentanyl	0	0	0	0	1	14	10	8	10	7
Ketamine and analogs	8	1	5	5	5	5	1	5	5	5
Meperidine	21	24	20	13	1	0	2	1	0	3
Oxymorphone	0	0	0	0	0	3	1	0	2	2

**Exhibit 7. HIV Exposure Category Among Newly Diagnosed Infections in King County—Preliminary Data
(Diagnosed Through December 2015 and Reported Through May 31, 2016)**

HIV exposure category	1982-2006	% with NIR	% without NIR		2007-2009	% with NIR	% without NIR	2010-2012	% with NIR	% without NIR	2013-2015	% with NIR	% without NIR
MSM	7320	72	75		594	64	74	582	66	76	483	63	82
IDU	575	6	6		30	3	4	35	4	5	20	3	3
MSM-IDU	1066	10	11		69	7	9	76	9	10	40	5	7
Hetero	680	7	7		103	11	13	61	7	8	41	5	7
Other	133	1	1		6	1	1	11	1	1	6	1	1
No identified risk (NIR)	407	4			130	14	16	114	13	15	171	22	29
TOTAL	10181	100	100		932			879	100	100	761	99	100
Total minus NIR	9774				802			765			590		

Data Sources

Data for this report were drawn from the following sources:

Washington Recovery Help Line data for King County callers from 2012 to 2015 are presented in Exhibit 1.

Washington State Patrol Crime Laboratory evidence testing data received at the laboratory between 2001 and 2015 from law enforcement in King County are presented in Exhibits 2a and 2b. Data are based on cases tested through April 2016 and are presented by the year the evidence was received at the laboratory. These data serve as the basis for the data submitted to the Drug Enforcement Administration National Forensic Laboratory Information System (NFLIS). Note that the data used in this report will vary somewhat from NFLIS data because the data presented here are reported at the case level, not at the drug level; that is, if a single case had multiple pieces of evidence, the data presented here would count the cocaine once as a single case positive for cocaine.

Treatment admissions data for King County residents to publicly funded treatment are included for admissions from 1999 to 2015 in Exhibit 3a. Data are duplicated and are for all modalities of care. Exhibit 3b includes first-time admissions, heroin primary, by age, and are de-duplicated. Data were obtained from the Washington State Department of Social and Health Services (DSHS), Division of Behavioral Health and Recovery, Treatment Report and Generation Tool.

King County Medical Examiner data on drug-caused deaths from 1997 through 2015 are presented in Exhibit 5. Most deaths involved multiple drugs, so discussion of drug-specific deaths should be interpreted in the context of understanding that most also involved other drugs or alcohol.

Syringe exchange client survey and HIV/AIDS and Hepatitis C data were provided by Public Health—Seattle & King County (PHSKC) and are presented in Exhibits 4 and 7. HIV cases diagnosed through December 2015 and reported through May 31, 2016 are included, and data should be considered to be preliminary. PHSKC participates in the National HIV Behavioral Surveillance (NHBS) program of the Centers for Disease Control and Prevention. In the 2015 NHBS, IDU cycle, participants were recruited using respondent-driven sampling, a form of coupon-based peer recruitment. Participants were required to be older than 18 years old, residents of King or Snohomish counties, and to have injected drugs in the previous 12 months, established either by physical evidence or by convincing knowledge of injection practices.

Wastewater testing for drugs was directed by Caleb Banta-Green at the University of Washington Alcohol and Drug Abuse Institute; samples were collected by staff at the Westpoint Treatment Plan, Wastewater Treatment Division, King County Department of Natural Resources and Parks, and analyzed by Dan Burgard at the University of Puget Sound. The data were collected as part of an international collaboration described here: <http://www.emcdda.europa.eu/topics/pods/waste-water-analysis>. Note that these data have not had complete confidence intervals calculated, so tests of statistical significance were not conducted.

Poison center exposure calls were provided by the Washington Poison Center for calls regarding drug exposures occurring in King County between January 2006 and December 2015. Reporting of exposures to the poison center is voluntary and not mandated by law. As such, the data most likely is an underrepresentation of the true occurrence of any one substance. Exposures do not necessarily represent a poisoning or overdose. Data are presented for the 25 most common drugs mentioned in 2015; combined, these substances represent more than 99% of the abuse-able drugs mentioned. Benzodiazepines are documented as a single class of drugs; opioids are documented separately; an aggregate category is also reported.

For additional information about the drugs and drug use patterns discussed in this report, please contact Caleb Banta-Green, M.S.W., M.P.H., Ph.D., Alcohol and Drug Abuse Institute, University of Washington, 1107 N.E. 45th Street, Suite 120, Seattle, WA 98105, Phone: 206-685-3919, E-mail: calebbg@u.washington.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
King County (Seattle Area), Washington
 2010–2014 ACS 5-Year Estimates

	Estimate	Margin of Error
Total Population (#)	2,008,997	**
Age		
18 years and over (%)	78.9%	**
21 years and over (%)	75.3%	+/-0.1
65 years and over (%)	11.6%	**
Median Age	37.2	
Race (%)		
White, Not Hisp.	63.5%	+/-0.1
Black/African American, Not Hisp.	6.0%	+/-0.1
Hispanic/Latino (of any race)	9.2%	**
American Indian/Alaska Native	0.6%	+/-0.1
Asian	15.2%	+/-0.1
Native Hawaiian/Pacific Islander	0.7%	+/-0.1
Some Other Race	0.2%	+/-0.1
Two or More Races	4.6%	+/-0.2
Sex (%)		
Male	49.9%	**
Female	50.1%	**
Educational Attainment (Among Population Aged 25+ Years) (%)		
High School Graduate or Higher	92.1%	+/-0.2
Bachelor's Degree or Higher	47.1%	+/-0.3
Unemployment (Among Civilian Labor Force Population Aged 16+ Years) (%)		
Percent Unemployed	7.2%	+/-0.2
Income (\$)		
Median Household Income (in 2014 inflation-adjusted dollars)	\$73,035	+/-697
Health Insurance Coverage (Among Civilian Noninstitutionalized Population) (%)		
No Health Insurance Coverage	11.1%	+/-0.2
Poverty (%)		
All People Whose Income in Past Year Is Below Poverty Level	11.8%	+/-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 King County (Seattle Area)^, 2012–2014
 Estimated Percent, 95% Confidence Interval, and Estimated Number*
 Annual Averages Based on Combined 2012 to 2014 NSDUH Data

Substance Use Behaviors	Substate Region: King County^	
	Estimated % (95% CI)*	Estimated #*
Used in Past Month		
Alcohol	59.16 (55.22 – 62.98)	1,006,038
Binge Alcohol**	20.84 (18.15 – 23.81)	354,340
Marijuana	12.74 (10.45 – 15.44)	216,584
Use of Illicit Drug Other Than Marijuana	4.47 (3.30 – 6.04)	76,072
Used in Past Year		
Cocaine	2.04 (1.35 – 3.08)	34,757
Nonmedical Use of Pain Relievers	4.67 (3.64 – 5.97)	79,431
Substance Use Disorders in Past Year***		
Illicit Drugs or Alcohol	8.76 (7.34 – 10.41)	148,896
Alcohol	7.22 (5.92 – 8.79)	122,820
Illicit Drugs	2.73 (2.06 – 3.61)	46,346

NOTES:

^King County: NSDUH Substate Region 2 which comprises King County.

***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 (1,700,584) 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 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 2b: Self-Reported Substance Use Behaviors Among Persons in King County (Seattle Area)^, by Age Group, 2012–2014
Estimated Percent and 95% Confidence Interval (CI)*, Annual Averages Based on Combined 2012 to 2014 NSDUH Data

Substance Use Behaviors	Substate Region: King County^					
	12–17		18–25		26+	
	Estimated Percent (95% CI)*		Estimated Percent (95% CI)*		Estimated Percent (95% CI)*	
Used in Past Month						
Binge Alcohol**	5.76	(4.27 – 7.71)	36.40	(31.16 – 41.98)	20.06	(17.04 – 23.48)
Marijuana	9.36	(7.05 – 12.33)	27.13	(22.25 – 32.62)	10.96	(8.50 – 14.03)
Use of Illicit Drug Other Than Marijuana	4.03	(2.69 – 6.01)	9.19	(6.61 – 12.65)	3.82	(2.58 – 5.63)
Used in Past Year						
Cocaine	0.64	(0.35 – 1.18)	5.80	(3.80 – 8.74)	1.63	(0.94 – 2.82)
Nonmedical Use of Pain Relievers	5.91	(4.23 – 8.19)	8.34	(6.34 – 10.90)	4.01	(2.89 – 5.53)
Substance Use Disorder in Past Year***						
Illicit Drugs or Alcohol	5.04	(3.67 – 6.88)	17.08	(13.66 – 21.16)	7.90	(6.37 – 9.77)
Alcohol	3.05	(2.14 – 4.33)	12.94	(9.99 – 16.61)	6.80	(5.36 – 8.59)
Illicit Drugs	3.54	(2.45 – 5.11)	6.91	(5.00 – 9.47)	2.03	(1.37 – 3.00)

NOTES:

^**King County:** NSDUH Substate Region 2 which comprises King County.

***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 *Seattle* ^ Public High School Students, 2013¹
 Estimated Percent and 95% Confidence Interval (CI)
 2011 and 2013 YRBS*

Substance Use Behaviors	2013 vs 2011			2013 by Sex			2013 by Race					
	2013		2011	p-value	Male		Female	p-value	White		Black	Hispanic
	Percent				Percent				Percent			
	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 (21.1 - 27.1)		27.2 (24.1 - 30.6)	0.14	23.2 (19.7 - 27.2)		24.6 (21.3 - 28.3)	0.51	33.2 (27.6 - 39.4)		16.7 (11.6 - 23.4)	30.1 (23.2 - 37.9)
Binge Alcohol**	13.5 (11.5 - 15.8)		17.4 (15.0 - 20.2)	0.02	13.3 (10.6 - 16.4)		13.9 (11.5 - 16.6)	0.70	19.5 (15.3 - 24.5)		6.9 (4.3 - 11.0)	19.5 (14.2 - 26.2)
Marijuana	22.9 (20.1 - 25.9)		20.8 (18.2 - 23.7)	0.31	24.4 (21.0 - 28.3)		21.2 (17.8 - 25.0)	0.13	27.1 (22.2 - 32.5)		22.4 (16.5 - 29.6)	32.1 (25.9 - 39.1)
Ever Used in Lifetime												
Alcohol	50.3 (46.4 - 54.1)		—	~	48.2 (43.5 - 53.0)		52.0 (47.3 - 56.6)	0.18	61.3 (54.9 - 67.3)		35.3 (27.6 - 43.9)	60.5 (51.7 - 68.7)
Marijuana	35.2 (31.6 - 39.0)		—	~	36.5 (31.9 - 41.3)		33.3 (28.9 - 38.1)	0.26	40.1 (33.6 - 46.9)		33.2 (25.5 - 41.8)	49.5 (41.7 - 57.4)
Cocaine	—		—	~	—		—	~	—		—	—
Hallucinogenic Drugs	—		—	~	—		—	~	—		—	—
Inhalants	—		8.1 (6.8 - 9.6)	~	—		—	~	—		—	—
Ecstasy also called "MDMA"	—		—	~	—		—	~	—		—	—
Heroin	—		—	~	—		—	~	—		—	—
Methamphetamine	—		5.2 (4.0 - 6.6)	~	—		—	~	—		—	—
Rx Drugs without a Doctors Prescription	—		—	~	—		—	~	—		—	—
Injected Any Illegal Drug	2.7 (1.8 - 4.2)		3.5 (2.7 - 4.7)	0.30	3.1 (1.7 - 5.4)		2.1 (1.1 - 4.0)	0.36	1.7 (1.0 - 3.0)		4.4 (1.6 - 11.6)	2.6 (1.1 - 6.3)

NOTES:

¹**2013:** 2015 YRBS data not available for Seattle so 2013 data is presented.

‘—’ = Data not available; ~ = P-value not available; **N/A** = < 100 respondents for the subgroup.

^ **Seattle:** weighted data were available for Seattle in 2011 and 2013; 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.

* **Sample Frame for the 2011 and 2013 YRBS:** sampling frame consisted of public schools with students in at least one of grades 9-12. The sample size for 2011 was 1,896 with an overall response rate of 84%; the 2013 sample size was 1,773 with a 83% overall response rate.

** **Binge Alcohol:** defined as 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), 1991-2013 High School Youth Risk Behavior Survey Data. Available at <http://nccd.cdc.gov/youthonline/>. Accessed on [3/12/2015].

Table 4a: Trends in Admissions*to Programs Treating Substance Use Disorders, King County (Seattle Area) 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 (#)	9,990	100%	10,222	100%	9,285	100%	9,802	100%	8,928	100%
Primary Substance of Abuse (%)										
Alcohol	3,768	37.7%	3,456	33.8%	3,145	33.9%	3,112	31.7%	2,730	30.6%
Cocaine/Crack	934	9.3%	855	8.4%	642	6.9%	521	5.3%	432	4.8%
Heroin	1,531	15.3%	2,083	20.4%	2,192	23.6%	2,897	29.6%	3,016	33.8%
Prescription Opioids**	563	5.6%	681	6.7%	559	6.0%	532	5.4%	368	4.1%
Methamphetamine	817	8.2%	874	8.6%	854	9.2%	1,001	10.2%	911	10.2%
Marijuana	1,946	19.5%	1,838	18.0%	1,498	16.1%	1,365	13.9%	1,180	13.2%
Benzodiazepines	32	0.3%	16	0.2%	16	0.2%	19	0.2%	21	0.2%
MDMA	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail
Synthetic Stimulants	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail
Synthetic Cannabinoids	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail	unavail
Other Drugs/Unknown	399	4.0%	419	4.1%	379	4.1%	355	3.6%	270	3.0%

NOTES:

***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, non-prescription methadone, and other opiates.

unavail: Data not available.

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).

Table 4b: Demographic and Drug Use Characteristics of Primary Treatment Admissions* for Select Substances of Abuse, King County (Seattle Area) 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**		Methamphetamine		Marijuana		Benzo-diazepines	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Number of Admissions (#)	2,730	100%	432	100%	3,016	100%	368	100%	911	100%	1,180	100%	21	100%
Sex (%)														
Male	1,881	68.9%	283	65.5%	1,750	58.0%	145	39.4%	543	59.6%	842	71.4%	9	42.9%
Female	849	31.1%	149	34.5%	1,266	42.0%	223	60.6%	368	40.4%	338	28.6%	12	57.1%
Race/Ethnicity (%)														
White, Non-Hisp.	1,287	47.1%	80	18.5%	1,994	66.1%	225	61.1%	532	58.4%	341	28.9%	14	66.7%
African-Am/Black, Non-Hisp	457	16.7%	210	48.6%	210	7.0%	42	11.4%	62	6.8%	334	28.3%	1	4.8%
Hispanic/Latino	247	9.0%	28	6.5%	137	4.5%	16	4.3%	60	6.6%	174	14.7%	0	0.0%
Asian/Pacific Islander	132	4.8%	28	6.5%	50	1.7%	8	2.2%	43	4.7%	44	3.7%	1	4.8%
Other	607	22.2%	86	19.9%	625	20.7%	77	20.9%	214	23.5%	287	24.3%	5	23.8%
Age Group (%)														
Under 18	83	3.0%	6	1.4%	44	1.5%	1	0.3%	50	5.5%	536	45.4%	4	19.0%
18-25	251	9.2%	26	6.0%	588	19.5%	33	9.0%	163	17.9%	281	23.8%	3	14.3%
26-44	1,645	60.3%	235	54.4%	1,890	62.7%	291	79.1%	622	68.3%	316	26.8%	11	52.4%
45+	751	27.5%	165	38.2%	494	16.4%	43	11.7%	76	8.3%	47	4.0%	3	14.3%
Route of Administration (%)														
Smoked	4	0.1%	356	82.4%	793	26.3%	77	20.9%	586	64.3%	1,150	97.5%	0	0.0%
Inhaled	2	<0.1%	60	13.9%	118	3.9%	32	8.7%	58	6.4%	9	0.8%	0	0.0%
Injected	1	<0.1%	10	2.3%	2,085	69.1%	18	4.9%	251	27.6%	2	0.2%	0	0.0%
Oral/Other/Unknown	2,723	99.7%	6	1.4%	20	0.7%	241	65.5%	16	1.8%	19	1.6%	21	100.0%
Secondary Substance (%)														
None	738	27.0%	40	9.3%	229	7.6%	43	11.7%	96	10.5%	249	21.1%	2	9.5%
Alcohol	0	0.0%	162	37.5%	256	8.5%	58	15.8%	202	22.2%	585	49.6%	4	19.0%
Benzodiazepines	21	0.8%	1	0.2%	129	4.3%	26	7.1%	6	0.7%	6	0.5%	0	0.0%
Cocaine/Crack	302	11.1%	0	0.0%	359	11.9%	10	2.7%	67	7.4%	54	4.6%	1	4.8%
Heroin	67	2.5%	50	11.6%	0	0.0%	70	19.0%	161	17.7%	22	1.9%	3	14.3%
Prescription Opioids**	58	2.1%	7	1.6%	296	9.8%	13	3.5%	37	4.1%	25	2.1%	5	23.8%
Methamphetamine	152	5.6%	45	10.4%	891	29.5%	37	10.1%	0	0.0%	88	7.5%	2	9.5%
Marijuana	879	32.2%	81	18.8%	317	10.5%	48	13.0%	233	25.6%	0	0.0%	1	4.8%

NOTES:

***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, non-prescription methadone, and other opiates.

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

SOURCE: Data provided to the 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).

Table 5: Drug Overdose (Poisoning) Deaths*, by Drug and Year, King County (Seattle Area), 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	246	12.7	11.7	236	12.0	11.0	261	13.0	12.0	282	13.8	12.6	300	14.4	13.1
Opioids[†]	186	9.6	8.8	174	8.8	8.1	183	9.1	8.4	203	9.9	9.0	222	10.7	9.7
Heroin	15	UNR	UNR	30	1.5	1.4	69	3.4	3.3	86	4.2	3.9	137	6.6	6.0
Natural Opioid Analgesics	75	3.9	3.5	67	3.4	3.0	58	2.9	2.6	76	3.7	3.3	68	3.3	2.9
Methadone	67	3.5	3.2	58	2.9	2.7	55	2.7	2.4	47	2.3	2.1	43	2.1	1.8
Synthetic Opioid Analgesics	17	UNR	UNR	17	UNR	UNR	16	UNR	UNR	14	UNR	UNR	12	UNR	UNR
Benzodiazepines	56	2.9	2.6	66	3.4	3.1	68	3.4	3.2	50	2.4	2.3	67	3.2	2.9
Benzodiazepines AND Any Opioids	46	2.4	2.1	61	3.1	2.8	59	2.9	2.8	43	2.1	1.9	57	2.7	2.5
Benzodiazepines AND Heroin	SUP	SUP	SUP	SUP	SUP	SUP	15	UNR	UNR	11	UNR	UNR	28	1.3	1.2
Psychostimulants															
Cocaine	40	2.1	1.9	46	2.3	2.0	39	1.9	1.8	65	3.2	2.9	74	3.6	3.3
Psychostimulants with Abuse Potential	14	UNR	UNR	17	UNR	UNR	37	1.8	1.7	40	2.0	1.8	68	3.3	3.0
Cannabis (derivatives)	SUP	SUP	SUP	SUP	SUP	SUP	SUP	SUP	SUP	SUP	SUP	SUP	SUP	SUP	SUP
Percent with Drugs Specified[†]	99.6%			99.2%			99.2%			98.9%			99.7%		

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 *King County (Seattle Area)* 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*	1,451	100.0%
HEROIN	431	29.7%
METHAMPHETAMINE	418	28.8%
COCAINE	214	14.7%
CANNABIS	102	7.0%
UNKNOWN	95	6.5%
OXYCODONE	27	1.9%
ALPRAZOLAM	22	1.5%
NO CONTROLLED DRUG IDENTIFIED	11	0.8%
PHENYLIMIDOTHIAZOLE ISOMER UNDETERMINED	11	0.8%
3,4-METHYLENEDIOXYMETHAMPHETAMINE (MDMA)	10	0.7%
PHENCYCLIDINE	9	0.6%
BUPRENORPHINE	8	0.6%
CLONAZEPAM	8	0.6%
DIMETHYLSULFONE	8	0.6%
HYDROCODONE	7	0.5%
AMPHETAMINE	6	0.4%
CAFFEINE	6	0.4%
FENTANYL	5	0.3%
AM-2201 (1-(5-FLUOROPENTYL)-3-(1-NAPHTHOYL)INDOLE)	4	0.3%
LACTOSE	4	0.3%
METHADONE	4	0.3%
SOME OTHER SUBSTANCE	4	0.3%
CARISOPRODOL	3	0.2%
DIACETAMIDE	3	0.2%
1,4-BUTANEDIOL	2	0.1%
3,4-METHYLENEDIOXYETHYLCATHINONE (ETHYLONE)	2	0.1%
ACETAMINOPHEN	2	0.1%
DIAZEPAM	2	0.1%
LORAZEPAM	2	0.1%
PSILOCIN	2	0.1%
SUCROSE	2	0.1%
3,4-METHYLENEDIOXYAMPHETAMINE (MDA)	1	< 0.1%
6-MONOACETYLMORPHINE	1	< 0.1%
BOLDENONE	1	< 0.1%
DIMETHYLTRYPTAMINE (DMT)	1	< 0.1%
JWH-250 (1-PENTYL-3-(2-METHOXYPHENYLACETYL)INDOLE)	1	< 0.1%
LIDOCAINE	1	< 0.1%
LISDEXAMFETAMINE	1	< 0.1%
MONOACETYLMORPHINE	1	< 0.1%
MORPHINE	1	< 0.1%
NANDROLONE	1	< 0.1%
PSEUDOEPHEDRINE	1	< 0.1%

Drug Identified	Number (#)	Percent of Total Drug Reports* (#)
PSILOCYBINE	1	< 0.1%
RCS-4 (1-PENTYL-3-(4-METHOXYBENZOYL)INDOLE)	1	< 0.1%
TESTOSTERONE	1	< 0.1%
TRAMADOL	1	< 0.1%
TRIPROLIDINE	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 *King County (Seattle Area)* 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*	1,451	100.0%	100.0%
Opioids Category	486	100.0%	33.5%
Heroin	431	88.7%	29.7%
Narcotic Analgesics	53	10.9%	3.7%
OXYCODONE	27	5.6%	1.9%
BUPRENORPHINE	8	1.6%	0.6%
HYDROCODONE	7	1.4%	0.5%
FENTANYL	5	1.0%	0.3%
METHADONE	4	0.8%	0.3%
MORPHINE	1	0.2%	< 0.1%
TRAMADOL	1	0.2%	< 0.1%
Narcotics	2	0.4%	0.1%
6-MONOACETYLMORPHINE	1	0.2%	< 0.1%
MONOACETYLMORPHINE	1	0.2%	< 0.1%
Synthetic Cannabinoids Category	7	100.0%	0.5%
AM-2201 (1-(5-FLUOROPENTYL)-3-(1-NAPHTHOYL)INDOLE)	4	57.1%	0.3%
JWH-250 (1-PENTYL-3-(2-METHOXYPHENYLACETYL)INDOLE)	1	14.3%	< 0.1%
RCS-4 (1-PENTYL-3-(4-METHOXYBENZOYL)INDOLE)	1	14.3%	< 0.1%
XLR-11 (1-(5-FLUOROPENTYL-1H-3-YL)(2,2,3,3-TETRAMETHYLCYCLOPROPYL)METHANONE)	1	14.3%	< 0.1%
Synthetic Cathinones Category	2	100.0%	0.1%
Synthetic Cathinones	2	100.0%	0.1%
3,4-METHYLENEDIOXYETHYLCATHINONE (ETHYLONE)	2	100.0%	0.1%
Tryptamines Category	1	100.0%	< 0.1%
DIMETHYLTRYPTAMINE (DMT)	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: ^aAdapted 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, noninstitutionalized 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 methodology 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: ^aAdapted 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 YRBSSs 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 are 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].

^bChapman 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].

^cCDC. Health risk behaviors among adolescents who do and do not attend school—United States, 1992. *MMWR* 1994;43:129–32.

^dEaton 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, Pickens, Pike, Rockdale, Spalding, and Walton counties.

Notes & Definitions:

Admissions: includes admissions to publicly-funded programs.

Marijuana/Synthetic Cannabinoids: the data do not differentiate between marijuana and synthetic cannabinoids.

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

❖ **Chicago Metro**

Data Availability: 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:

^aNational 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>

^bNational 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:

^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:

¹Center 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>

²Goldberger, 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.

³World 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>

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

⁵Warner, 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 Fentanyl 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 Fentanyl 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: ^aAdapted 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