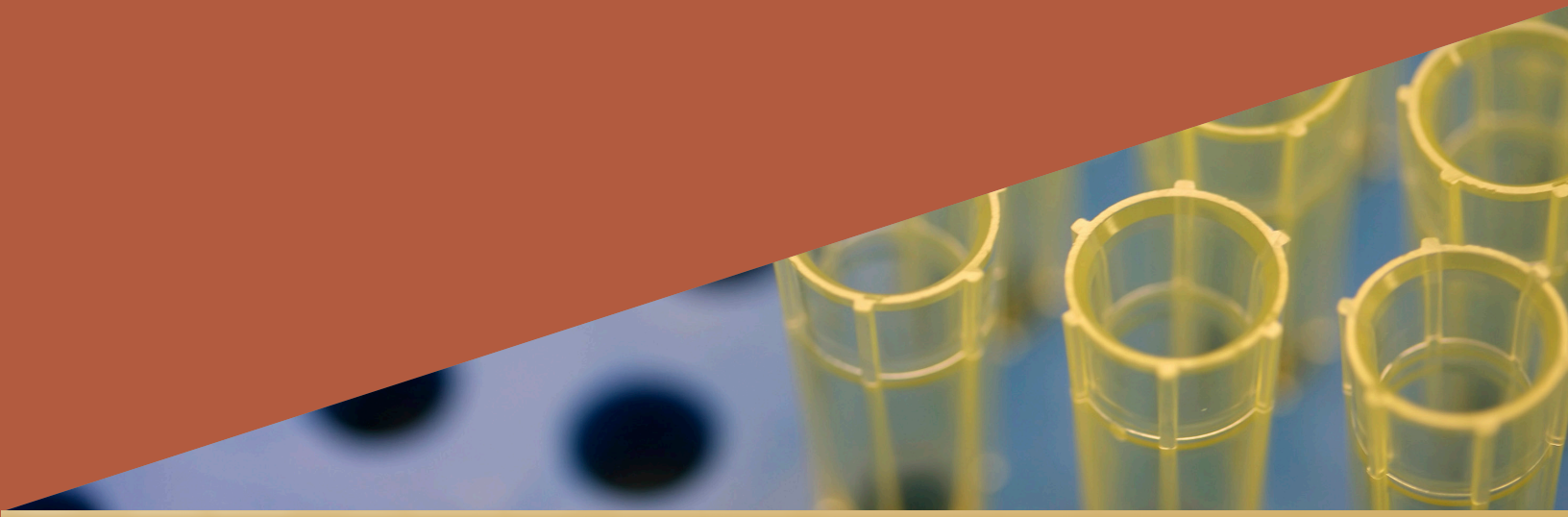
2014 MIDYEAR REPORT



NFLIS

NATIONAL FORENSIC LABORATORY INFORMATION SYSTEM

U.S. DEPARTMENT OF JUSTICE
DRUG ENFORCEMENT ADMINISTRATION
OFFICE OF DIVERSION CONTROL

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Highlights

- From January through June 2014, an estimated 495,836 distinct drug cases were submitted to State and local laboratories in the United States and analyzed by September 30, 2014. From these cases, an estimated 813,071 drug reports were identified.
- Cannabis/THC was the most frequently reported drug (241,057), followed by methamphetamine (121,109), cocaine (119,014), and heroin (84,962). The four most frequently reported drugs accounted for 70% of all drug reports.
- Nationally, dramatic increases in reports of oxycodone, hydrocodone, and alprazolam occurred from 2002 to 2010, followed by decreases from 2011 to 2014. The upward trend for buprenorphine was similar, but occurred a few years later. Clonazepam reports showed a more subtle S-shaped trend, with a more pronounced increase from 2005 to 2010. Amphetamine reports decreased slightly from 2001 to 2004, but increased since then.
- Regionally, oxycodone and hydrocodone reports for all regions showed S-shaped trends, with dramatic increases generally occurring from 2002 to 2010, followed by decreases from 2011 to 2014. For alprazolam, the West and Midwest regions showed linear increasing trends, while the South and Northeast regions showed S-shaped trends with downward trends beginning in 2010 and 2012. For clonazepam, the West, Midwest, and Northeast regions showed linear increasing trends, while the South showed an upward S-shaped trend. For buprenorphine, the West, Midwest, and South regions showed upward curving trends, while the Northeast showed a downward S-shaped trend. For amphetamine, the Midwest, South, and Northeast regions showed upward-curving trends, while the trend in the West region was more U-shaped.
- Approximately 63% of narcotic analgesic reports were for oxycodone and hydrocodone. Alprazolam accounted for 53% of tranquilizer and depressant reports. Among identified synthetic cannabinoids, XLR11 and AB-FUBINACA accounted for 55% of reports.
- For cannabis/THC reports, the Midwest and South showed linear decreasing trends, while in the West and Northeast the trend decreased sharply from 2009 to 2014. Cocaine reports showed decreasing trends for all four regions since about 2004. Methamphetamine trends generally increased since about 2010, while MDMA trends decreased since about 2009. For heroin, all regions showed U-shaped trends, with the lowest point occurring in 2006 in the West, Northeast, and South, and in 2004 for the Midwest.
- Cannabis/THC was the most frequently reported drug in the Midwest (39%), Northeast (30%), and South (28%), and methamphetamine was the most frequently reported drug in the West (39%).
- Nationwide, cocaine reports decreased between 2005 and 2014. Methamphetamine reports increased from 2001 through 2004, decreased through 2010, and increased since then. MDMA reports showed the opposite pattern in which they decreased from 2001 through 2003, increased from 2003 through 2009, and decreased from 2009 to 2014. Heroin reports decreased from 2001 to 2005, but increased since 2005. Cannabis/THC reports decreased between 2009 and 2014.

Introduction

The National Forensic Laboratory Information System (NFLIS) is a program of the Drug Enforcement Administration (DEA), Office of Diversion Control. 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 country, making NFLIS an important resource for monitoring illicit drug use and trafficking, including the diversion of legally manufactured drugs into illegal markets. NFLIS includes information on the specific substance and the characteristics of drug evidence, such as purity, quantity, and drug combinations. These data are used to support drug scheduling efforts and to inform drug policy and drug enforcement initiatives.

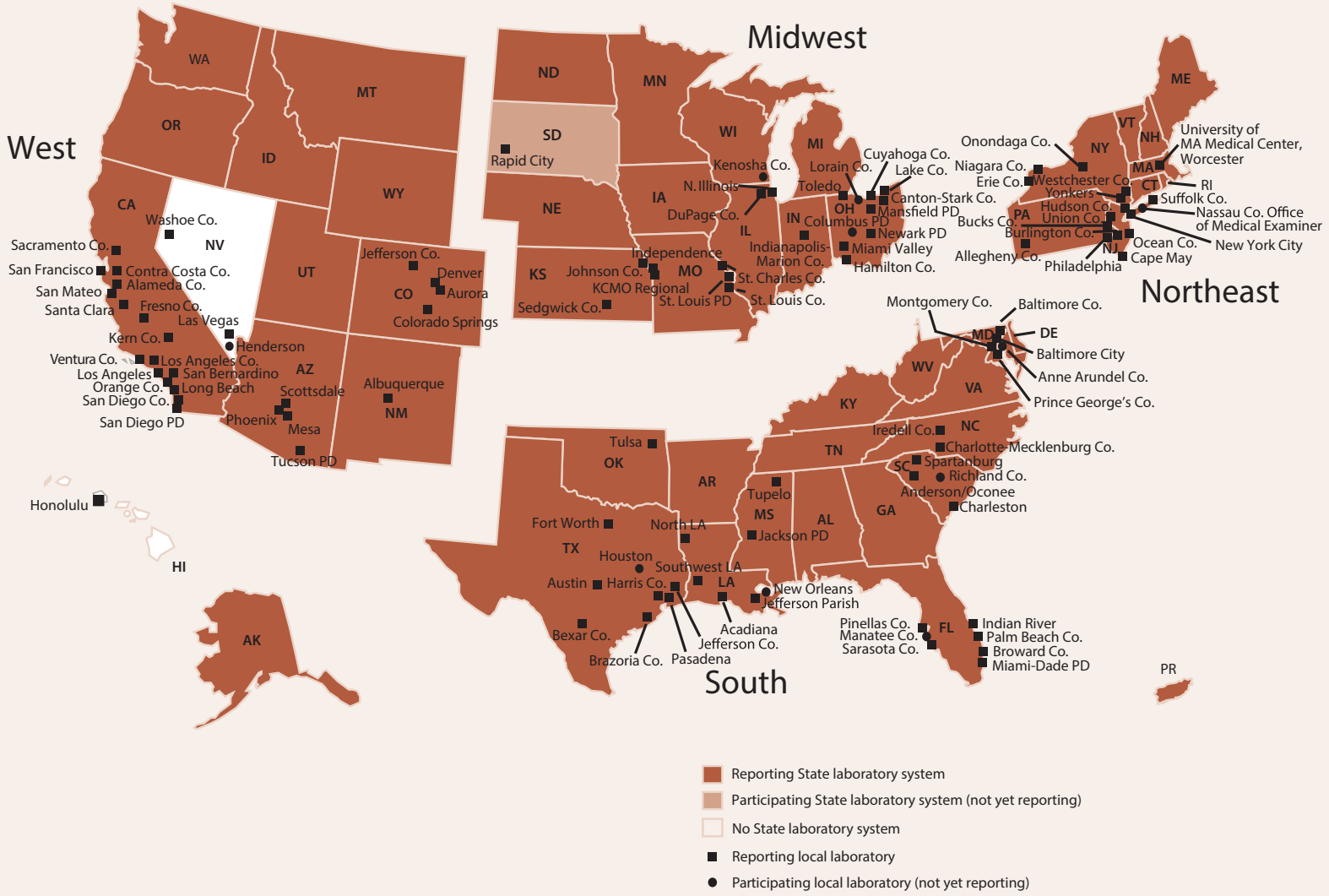
Since its inception in September 1997, NFLIS has developed into a comprehensive information system that includes data from forensic laboratories that handle over 91% of the Nation's estimated 1 million annual State and local drug analysis cases. Currently, 50 State systems and 101 local or municipal laboratories/laboratory systems participate in NFLIS, representing a total of 278 individual laboratories. In addition, the NFLIS database includes Federal data from the DEA and U.S. Customs and Border Protection (CBP) laboratories. NFLIS will continue recruiting nonparticipating State and local laboratories and work to incorporate the remainder of Federal laboratories that perform drug chemistry analyses.

This publication presents results of drug cases submitted to State and local laboratories from January 1, 2014, through June 30, 2014, that were analyzed by September 30, 2014. Data from Federal laboratories are also included in this publication. All data presented in this publication include the first, second, and third drugs that were mentioned in laboratories' reported drug items.

Section 1 of this publication provides national and regional estimates for the most frequently identified drugs. National and regional trends are also presented. Section 2 presents estimates of specific drugs by drug category. All estimates are based on the NEAR approach (National Estimates Based on All Reports).

Appendix A provides details on the methodology used in preparing the data presented in this publication. Appendix B includes a list of NFLIS participating and reporting laboratories. The benefits and limitations of NFLIS are presented in Appendix C.

Participating Laboratories, by U.S. Census Region



Section 1: National and Regional Estimates

This section presents national and regional estimates of drugs *submitted* to State and local laboratories from January 1, 2014, through June 30, 2014, that were *analyzed* by September 30, 2014 (see Table 1.1). National and regional drug estimates include all drug reports (up to three) mentioned in laboratories' reported drug items. National drug case estimates are also presented (see Table 1.2). In addition, semiannual trends are presented for selected drugs from January 2001 through June 2014.

The NEAR approach (National Estimates Based on All Reports) was used to produce estimates for the Nation and for the U.S. census regions. The NEAR approach uses all NFLIS reporting laboratories. Appendix A provides a detailed description of the methods used in preparing these estimates.

Table 1.1 NATIONAL AND REGIONAL ESTIMATES FOR THE 25 MOST FREQUENTLY IDENTIFIED DRUGS[1]
Estimated number and percentage of total drug reports submitted to laboratories from January 1, 2014, through June 30, 2014, and analyzed by September 30, 2014

	National		West		Midwest		Northeast		South	
Drug	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Cannabis/THC	241,057	29.65%	27,293	20.07%	79,010	39.05%	39,044	30.35%	95,710	27.65%
Methamphetamine	121,109	14.90%	53,509	39.35%	20,579	10.17%	1,939	1.51%	45,082	13.03%
Cocaine	119,014	14.64%	10,708	7.87%	22,883	11.31%	26,288	20.43%	59,135	17.09%
Heroin	84,962	10.45%	14,077	10.35%	26,614	13.15%	25,173	19.57%	19,099	5.52%
Oxycodone	23,132	2.85%	2,211	1.63%	4,068	2.01%	4,743	3.69%	12,111	3.50%
Alprazolam	21,804	2.68%	1,676	1.23%	4,067	2.01%	3,051	2.37%	13,009	3.76%
Hydrocodone	17,721	2.18%	2,455	1.80%	3,939	1.95%	1,023	0.80%	10,304	2.98%
Buprenorphine	7,709	0.95%	623	0.46%	1,572	0.78%	2,209	1.72%	3,306	0.96%
XLR11	6,602	0.81%	600	0.44%	1,230	0.61%	1,884	1.46%	2,888	0.83%
Amphetamine	6,101	0.75%	620	0.46%	1,551	0.77%	768	0.60%	3,163	0.91%
Clonazepam	6,097	0.75%	621	0.46%	1,240	0.61%	1,143	0.89%	3,094	0.89%
Methylone	4,417	0.54%	540	0.40%	329	0.16%	648	0.50%	2,901	0.84%
AB-FUBINACA	4,326	0.53%	161	0.12%	988	0.49%	299	0.23%	2,878	0.83%
Morphine	4,192	0.52%	661	0.49%	964	0.48%	329	0.26%	2,237	0.65%
Noncontrolled, non-narcotic[2]	3,231	0.40%	1,176	0.87%	19	0.01%	304	0.24%	1,732	0.50%
Methadone	3,077	0.38%	449	0.33%	614	0.30%	700	0.54%	1,314	0.38%
Diazepam	3,013	0.37%	405	0.30%	698	0.35%	261	0.20%	1,648	0.48%
Phencyclidine (PCP)	2,697	0.33%	217	0.16%	478	0.24%	974	0.76%	1,027	0.30%
Hydromorphone	2,479	0.30%	141	0.10%	298	0.15%	76	0.06%	1,965	0.57%
MDMA	2,347	0.29%	937	0.69%	662	0.33%	188	0.15%	560	0.16%
alpha-PVP	2,244	0.28%	49	0.04%	514	0.25%	603	0.47%	1,079	0.31%
AB-PINACA	2,232	0.27%	197	0.14%	796	0.39%	127	0.10%	1,112	0.32%
Fentanyl	2,219	0.27%	54	0.04%	697	0.34%	711	0.55%	759	0.22%
1-Benzylpiperazine (BZP)	2,211	0.27%	55	0.04%	1,545	0.76%	134	0.10%	478	0.14%
Carisoprodol	2,023	0.25%	383	0.28%	231	0.11%	87	0.07%	1,322	0.38%
Top 25 Total	696,018	85.60%	119,817	88.11%	175,584	86.78%	112,706	87.61%	287,912	83.19%
All Other Drug Reports	117,052	14.40%	16,175	11.89%	26,758	13.22%	15,946	12.39%	58,174	16.81%
Total Drug Reports[3]	813,071	100.00%	135,992	100.00%	202,342	100.00%	128,652	100.00%	346,085	100.00%

XLR11=[1-(5-Fluoro-pentyl)-1H-indol-3-yl],(2,2,3,3-tetramethylcyclo-propyl)methanone

AB-FUBINACA=(N-(1-amino-3-methyl-1-oxobutan-2-yl)-1-(4-fluorobenzyl)-1H-indazole-3-carboxamide)

MDMA=3,4-Methylenedioxymethamphetamine

alpha-PVP=alpha-Pyrrolidinopentiophenone

AB-PINACA=N-(1-amino-3-methyl-1-oxobutan-2-yl)-1-(4-fluorobenzyl)-1H-indazole-3-carboxamide

[1] *Sample n's and 95% confidence intervals for all estimates are available on request.*

[2] *As reported by NFLIS laboratories, with no specific drug name provided.*

[3] *Numbers and percentages may not sum to totals because of rounding.*

Table 1.2 ***National Case Estimates***
Top 25 estimated number of drug-specific cases and their percentage of distinct cases, January 1, 2014, through June 30, 2014

Drug	Number	Percent
Cannabis/THC	177,752	35.85%
Cocaine	96,753	19.51%
Methamphetamine	92,128	18.58%
Heroin	66,924	13.50%
Alprazolam	18,780	3.79%
Oxycodone	18,045	3.64%
Hydrocodone	15,649	3.16%
Buprenorphine	6,979	1.41%
Clonazepam	5,495	1.11%
Amphetamine	5,355	1.08%
XLR11	3,945	0.80%
Methylone	3,786	0.76%
Morphine	3,720	0.75%
AB-FUBINACA	3,316	0.67%
Diazepam	2,783	0.56%
Methadone	2,768	0.56%
Phencyclidine (PCP)	2,398	0.48%
Noncontrolled, non-narcotic[1]	2,248	0.45%
Hydromorphone	2,232	0.45%
Fentanyl	1,977	0.40%
Carisoprodol	1,835	0.37%
Psilocin/psilocibin	1,760	0.36%
MDMA	1,676	0.34%
alpha-PVP	1,640	0.33%
AB-PINACA	1,583	0.32%
Top 25 Total	541,529	109.22%
All Other Drugs	91,613	18.48%
Total All Drugs[2]	633,141	127.69%[3]

XLR11=[1-(5-Fluoro-pentyl)-1H-indol-3-yl],(2,2,3,3-tetramethylcyclopropyl)methanone

AB-FUBINACA=(N-(1-amino-3-methyl-1-oxobutan-2-yl)-1-(4-fluorobenzyl)-1H-indazole-3-carboxamide)

MDMA=3,4-Methylenedioxymethamphetamine

alpha-PVP=alpha-Pyrrolidinopentiophenone

AB-PINACA=N-(1-amino-3-methyl-1-oxobutan-2-yl)-1-(4-fluorobenzyl)-1H-indazole-3-carboxamide

[1] *As reported by NFLIS laboratories, with no specific drug name provided.*

[2] *Numbers and percentages may not sum to totals because of rounding.*

[3] *Multiple drugs can be reported within a single case, so the cumulative percentage exceeds 100%. The estimated national total of distinct case percentages is based on 495,836 distinct cases submitted to State and local laboratories from January 1, 2014, through June 30, 2014, and analyzed by September 30, 2014.*

Drugs Reported by Federal Laboratories

The majority of drug reports presented in this section are from the DEA. The data reflect results of substance evidence from drug seizures, undercover drug buys, and other evidence analyzed at DEA laboratories located across the country. DEA data include results for drug cases submitted by DEA agents, other Federal law enforcement agencies, and select local police agencies. Although DEA data capture both domestic and international drug cases, the results presented in this section describe only those drugs obtained within the United States. In addition to drug reports from the DEA, reports from seven U.S. Customs and Border Protection (CBP) laboratories are also included.

Most Frequently Reported Drugs by Federal Laboratories[1]
Number and percentage of drug reports submitted to laboratories from January 1, 2014, through June 30, 2014, and analyzed by September 30, 2014

Drug	Number	Percent
Methamphetamine	2,730	17.28%
Cannabis/THC	2,171	13.74%
Cocaine	2,165	13.70%
Heroin	1,574	9.96%
Oxycodone	305	1.93%
Noncontrolled, non-narcotic	153	0.97%
Methylone	142	0.90%
Fentanyl	121	0.77%
Testosterone	117	0.74%
Phencyclidine (PCP)	114	0.72%
All Other Drug Reports	6,209	39.29%
Total Drug Reports	15,801	100.00%[2]

[1] *Federal drug reports in this table include 14,386 reports from DEA laboratories and 1,415 reports from U.S. Customs and Border Protection (CBP) laboratories.*

[2] *Percentages may not sum to 100% because of rounding.*

National and Regional Drug Trends

The remainder of this section presents semiannual national and regional trends of selected drugs submitted to State and local laboratories during each six-month data reference period and analyzed within three months of the end of each six-month period. The trend analyses test the data for the presence of both linear and curved trends using statistical methods described in more detail in Appendix A. Curved trends are sometimes described as U-shaped (i.e., decreasing in earlier years and increasing in recent years) and S-shaped (i.e., two turns in the trend, roughly either increasing-decreasing-increasing or decreasing-increasing-decreasing). Estimates include all drug reports (up to three) identified among the NFLIS laboratories' reported drug reports. Between the first half of 2001 and the first half of 2014, the total estimated number of drug reports decreased approximately 8%, from 887,939 to 813,071.

National prescription drug trends

Figures 1.1 and 1.2 present national trends for the estimated number of prescription drug reports that were identified as oxycodone, alprazolam, hydrocodone, buprenorphine, amphetamine, and clonazepam. Significant ($p < .05$) results include the following:

- Oxycodone, alprazolam, hydrocodone, buprenorphine, and clonazepam reports showed S-shaped trends. Dramatic increases in reports of oxycodone, hydrocodone, and alprazolam occurred from 2002 to 2010, followed by decreases from 2011 to 2014. The upward trend for buprenorphine was similar to oxycodone, hydrocodone, and alprazolam, but occurred a few years later, with dramatic increases occurring from 2005 to 2010. The increase in

Figure 1.1 National trend estimates for oxycodone, alprazolam, and hydrocodone, January 2001–June 2014

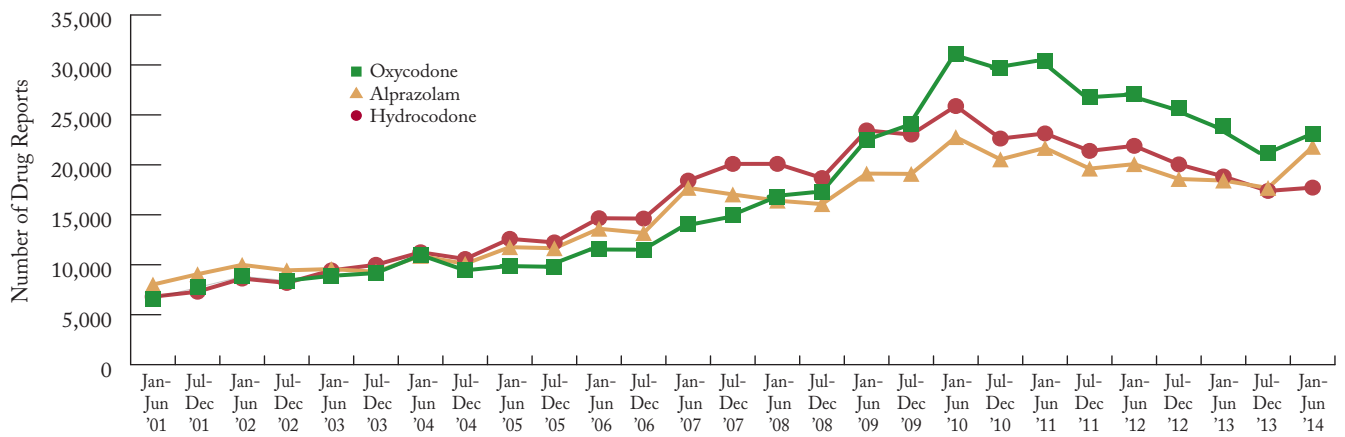
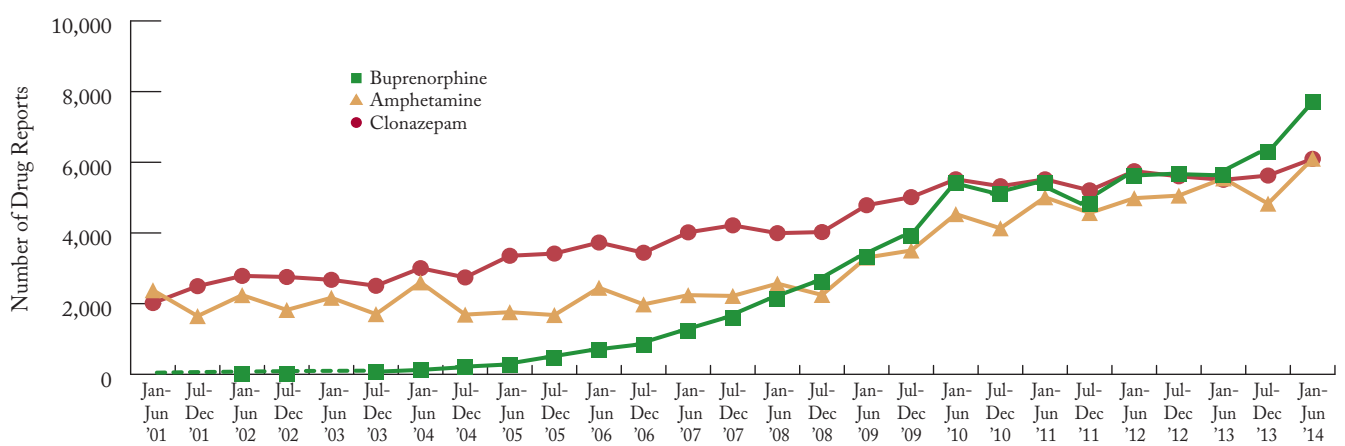


Figure 1.2 National trend estimates for buprenorphine, amphetamine, and clonazepam, January 2001–June 2014[1]



[1] *A dashed trend line indicates estimates did not meet the criteria for precision or reliability. See Appendix A for a more detailed methodology discussion.*

buprenorphine reports slowed from 2011 until more pronounced increases occurred in the second half of 2013. Clonazepam reports showed a more subtle S-shaped trend, with more pronounced increases from 2005 to 2010.

- Amphetamine reports decreased slightly from 2001 to 2004, but increased since 2004.

Significance tests were also performed on differences from the first half of 2013 to the first half of 2014 in order to identify more recent changes. Across these two periods, reports of alprazolam (from 18,428 to 21,804 reports), clonazepam (from 5,504 to 6,097 reports), buprenorphine (from 5,635 to 7,709 reports), and amphetamine (from 5,544 to 6,101 reports) increased significantly ($p < .05$), while reports of hydrocodone (from 18,834 to 17,721 reports) decreased significantly.

Other national drug trends

Figures 1.3 and 1.4 present national trends for reports of cannabis/THC, methamphetamine, cocaine, heroin, and MDMA. Significant ($p < .05$) results include the following:

- Cannabis/THC, methamphetamine, and MDMA reports all showed S-shaped trends. Cannabis/THC decreased from 2001 through 2004, slightly increased from 2004 to 2009, then decreased through 2014. Methamphetamine reports increased from 2001 through 2004, decreased from 2004 through 2010, and increased since 2010. MDMA reports decreased from 2001 through 2003, increased from 2003 through 2009, and decreased since 2009.
- Cocaine reports decreased between 2005 and 2014.

Figure 1.3 National trend estimates for cannabis/THC and methamphetamine, January 2001–June 2014

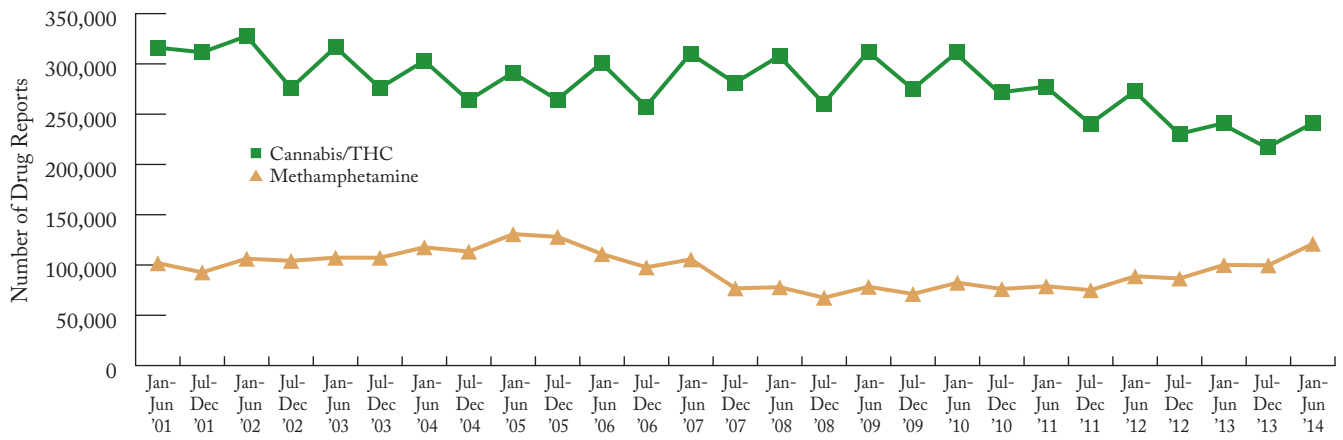
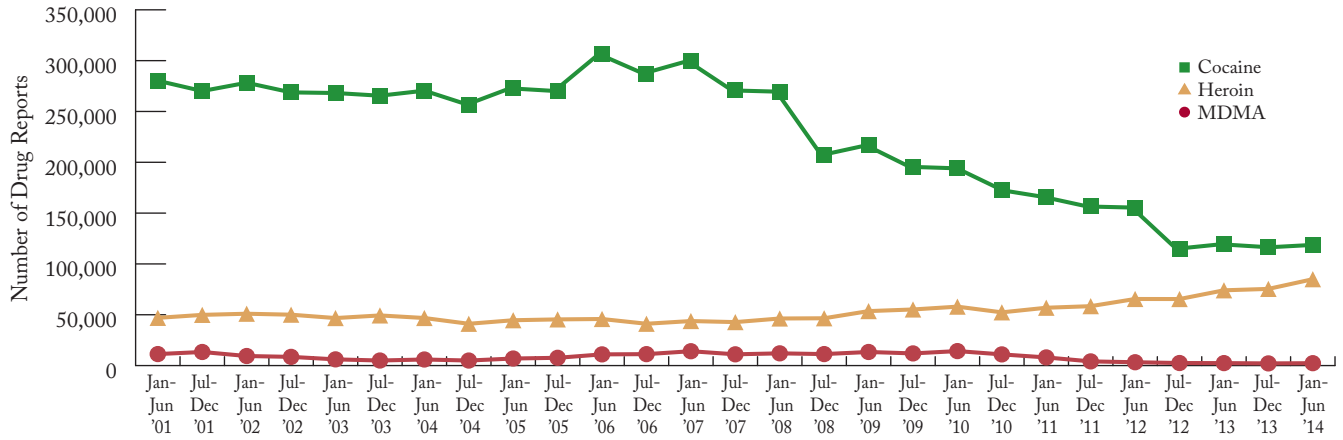


Figure 1.4 National trend estimates for cocaine, heroin, and MDMA, January 2001–June 2014



- Heroin reports showed a U-shaped trend in that they decreased from 2001 through 2005, but increased since 2005.

More recently, from the first half of 2013 to the first half of 2014, reports of methamphetamine (from 100,045 to 121,109 reports) and heroin (from 74,049 to 84,962 reports) increased significantly ($p < .05$). There were no significant changes in reports of cannabis/THC, cocaine, and MDMA.

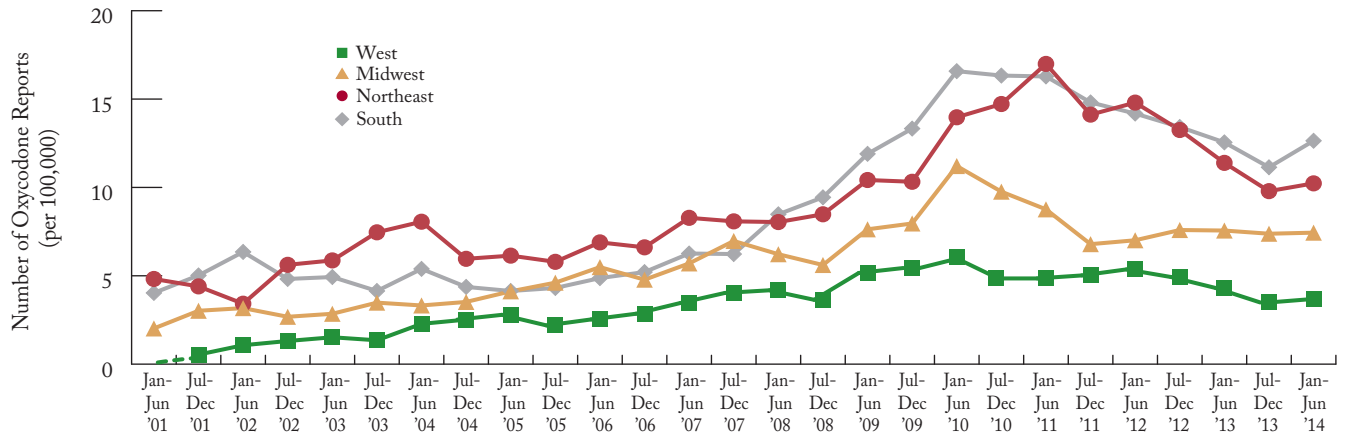
Regional prescription drug trends

Figures 1.5 through 1.10 show regional trends per 100,000 persons aged 15 or older for reports of oxycodone, hydrocodone, alprazolam, clonazepam, buprenorphine, and amphetamine from the first half of 2001 through the first half of 2014. These figures illustrate changes in prescription drugs reported over time, taking into account the population aged 15 or older within each U.S. census region. Significant ($p < .05$) trend results include the following:

- For oxycodone and hydrocodone, all regions showed S-shaped trends similar to the national trends for each drug. Dramatic increases generally occurred from 2002 to 2010, then reports decreased from 2011 to 2014.
- For alprazolam, the West and Midwest regions showed linear increasing trends. In the Northeast region, the rate of increase slowed since 2010 and began to reverse in 2012. In the South region, the curve had an even more pronounced S-shape; instead of flattening out since 2010, the trend in the South region began to curve downward in 2010.
- For clonazepam, the West, Midwest, and Northeast regions showed linear increasing trends. In the South region, the upward-curving trend had an S-shape, with the most dramatic increases occurring from 2008 to 2010.
- For buprenorphine, the West, Midwest, and South regions showed upward-curving trends. In the Northeast, the curve had an S-shape with the trend turning downward, due in part to a relatively low estimate in the first half of 2013. (Estimates for the second half of 2014 and the first half of 2014 were higher in comparison.)
- For amphetamine, the Midwest and South regions showed upward-curving trends, especially since 2007. The trend in the West region was more U-shaped, with a decrease from 2001 to 2007. In the Northeast region, the curve had an S-shape, with the most dramatic increases generally occurring from 2008 to 2010.

More recently, from the first half of 2013 to the first half of 2014, oxycodone reports decreased significantly in the West and Northeast regions ($p < .05$), while hydrocodone reports decreased significantly in the Midwest and South regions. Alprazolam decreased significantly in the Northeast, but increased significantly in all other regions. Clonazepam increased significantly in the Midwest and South regions. Buprenorphine increased significantly in all regions, while amphetamine had no significant changes at the regional level.

Figure 1.5 Regional trends in oxycodone reported per 100,000 persons aged 15 or older, January 2001–June 2014[1]



Note: U.S. Census 2014 population data by age were not available for this publication. Population data for 2014 were imputed.

[1] *A dashed trend line indicates estimates did not meet the criteria for precision or reliability. See Appendix A for a more detailed methodology discussion.*

Figure 1.6 Regional trends in alprazolam reported per 100,000 persons aged 15 or older, January 2001–June 2014[1]

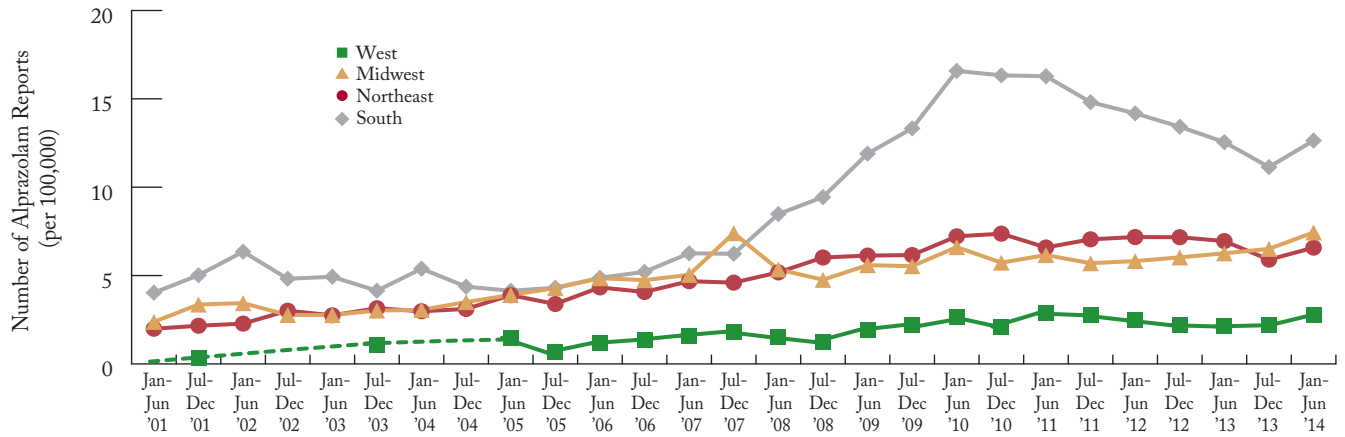


Figure 1.7 Regional trends in hydrocodone reported per 100,000 persons aged 15 or older, January 2001–June 2014

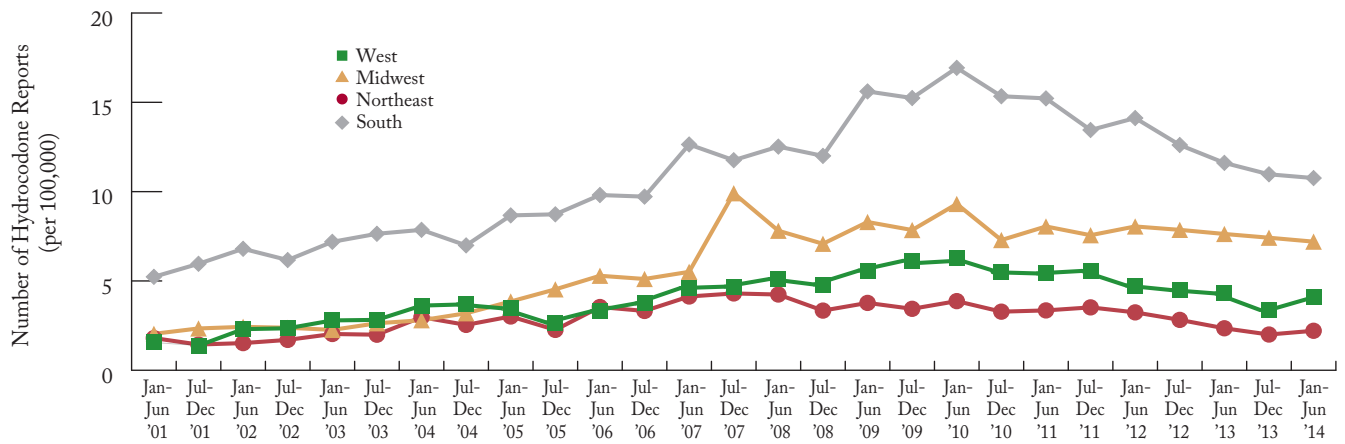
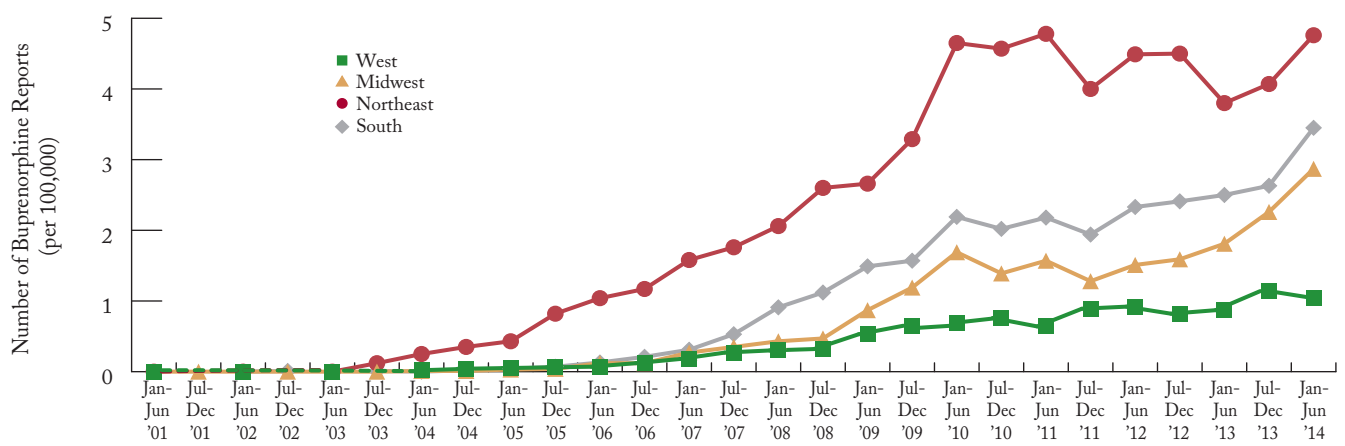


Figure 1.8 Regional trends in buprenorphine reported per 100,000 persons aged 15 or older, January 2001–June 2014[1]



Note: U.S. Census 2014 population data by age were not available for this publication. Population data for 2014 were imputed.

[1] *A dashed trend line indicates estimates did not meet the criteria for precision or reliability. See Appendix A for a more detailed methodology discussion.*

Figure 1.9 Regional trends in amphetamine reported per 100,000 persons aged 15 or older, January 2001–June 2014

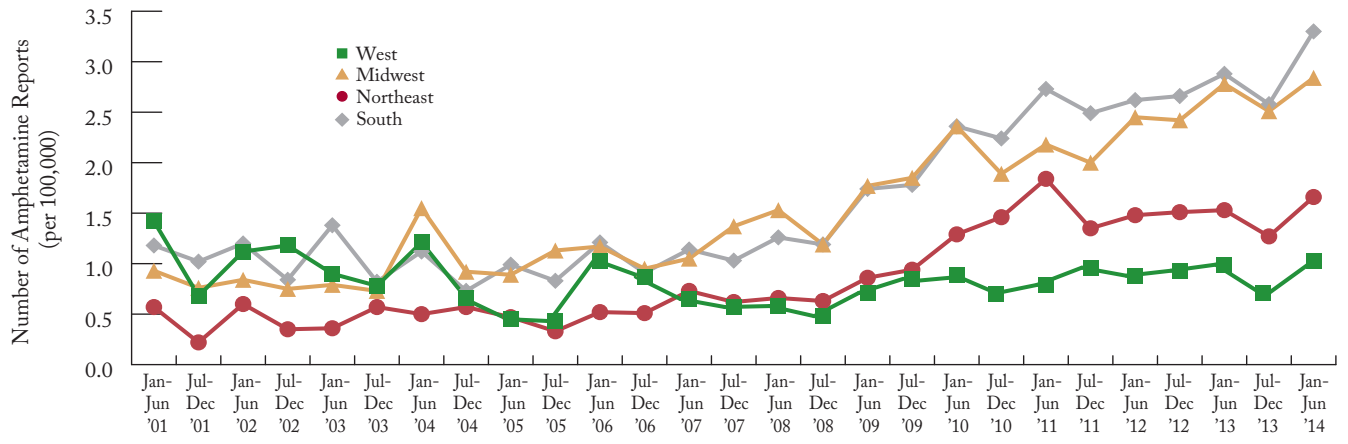
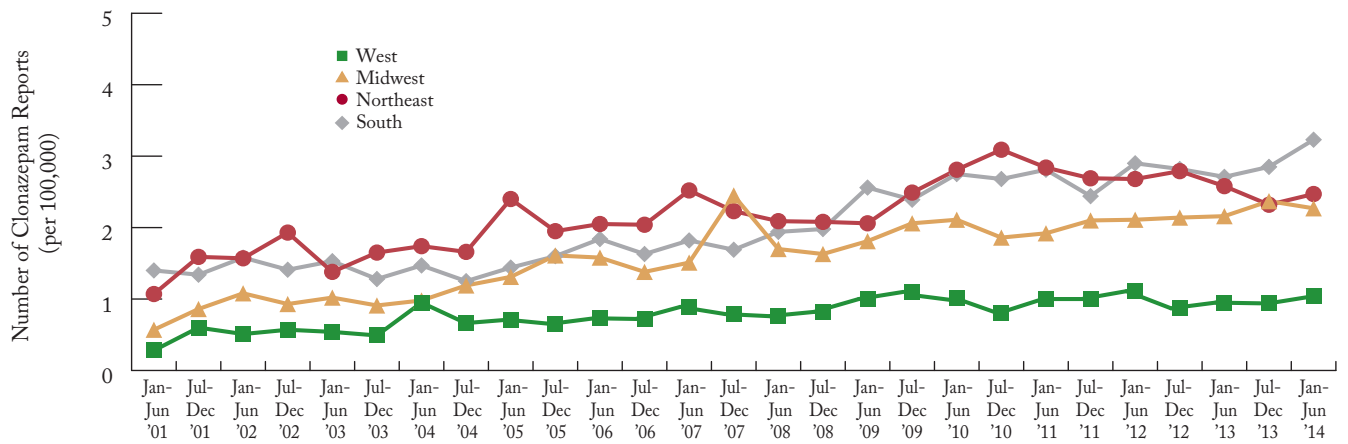


Figure 1.10 Regional trends in clonazepam reported per 100,000 persons aged 15 or older, January 2001–June 2014



Note: U.S. Census 2014 population data by age were not available for this publication. Population data for 2014 were imputed.

Other regional drug trends

Figures 1.11 through 1.15 present regional trends per 100,000 persons aged 15 or older for cannabis/THC, cocaine, methamphetamine, heroin, and MDMA reports from the first half of 2001 through the first half of 2014. Significant ($p < .05$) trends include the following:

- For cannabis/THC reports, the Midwest and South regions showed linear decreasing trends. In the Northeast and West regions, the trends were S-shaped, showing sharp decreases since 2009.
- For methamphetamine and MDMA, the regional trends were all S-shaped as were the corresponding national trends. For methamphetamine, all regions showed increases since 2010. For MDMA, all regions showed decreases since 2009 along with a slower rate of decrease since the second half of 2012.
- For cocaine, all four regions showed decreasing trends since about 2004. The rate of decrease slowed in all regions since the second half of 2012.
- For heroin, all regions showed U-shaped trends. The lowest point occurred in about 2006 for the West, Northeast, and South and in 2004 for the Midwest.

Between the first half of 2013 and the first half of 2014, cannabis/THC and cocaine decreased significantly in the Northeast ($p < .05$). Both methamphetamine and heroin increased significantly in all regions. MDMA decreased significantly in the Northeast and Midwest regions.

Figure 1.11 Regional trends in cannabis/THC reported per 100,000 persons aged 15 or older, January 2001–June 2014

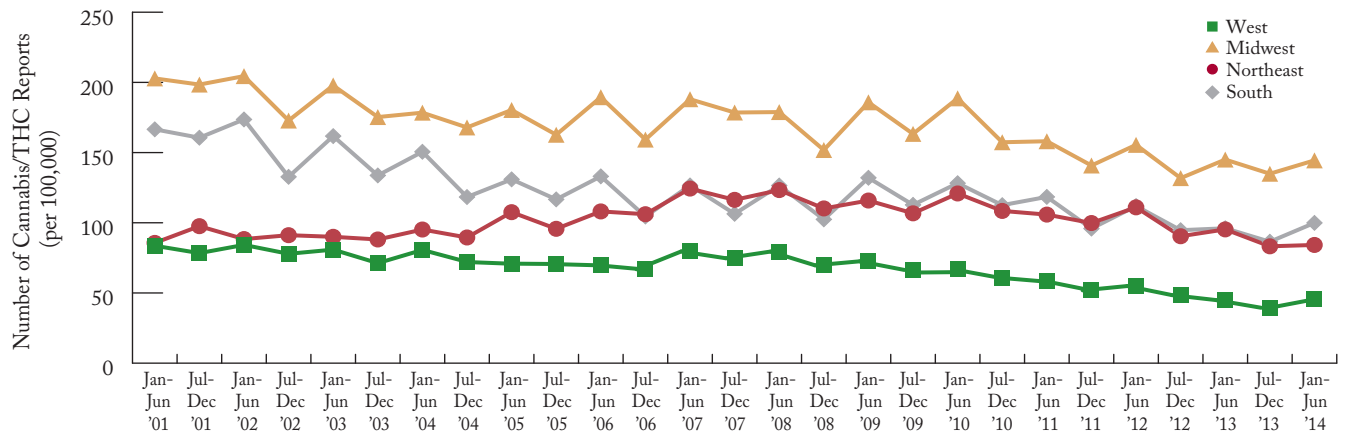
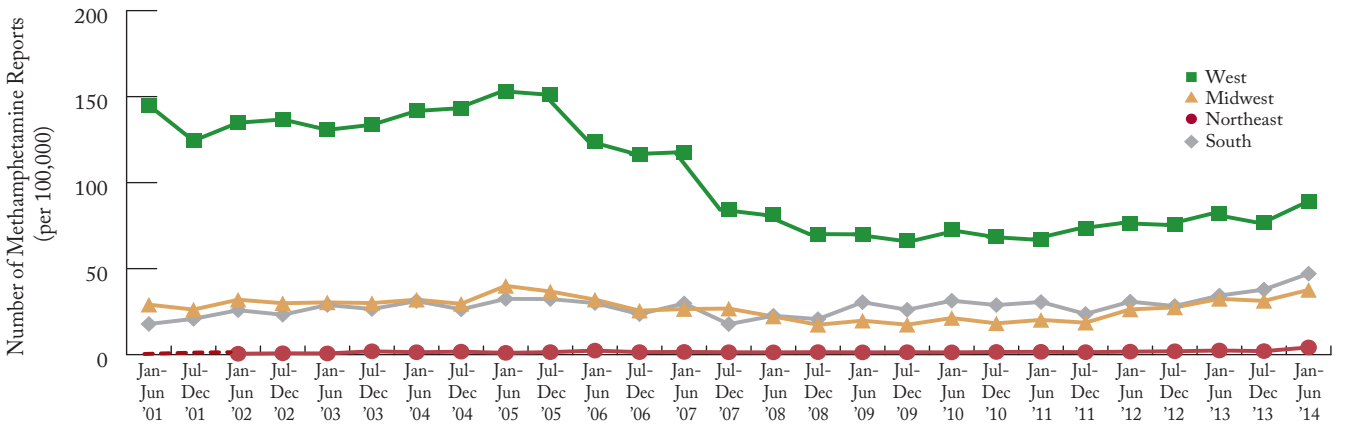


Figure 1.12 Regional trends in methamphetamine reported per 100,000 persons aged 15 or older, January 2001–June 2014[1]



Note: U.S. Census 2014 population data by age were not available for this publication. Population data for 2014 were imputed.

[1] *A dashed trend line indicates estimates did not meet the criteria for precision or reliability. See Appendix A for a more detailed methodology discussion.*

Figure 1.13 Regional trends in cocaine reported per 100,000 persons aged 15 or older, January 2001–June 2014

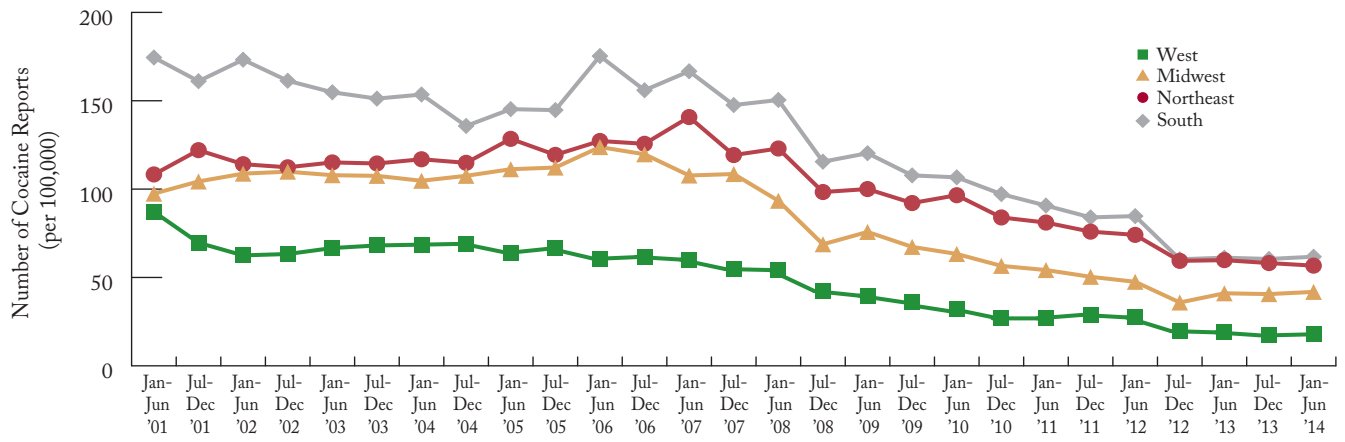


Figure 1.14 Regional trends in heroin reported per 100,000 persons aged 15 or older, January 2001–June 2014

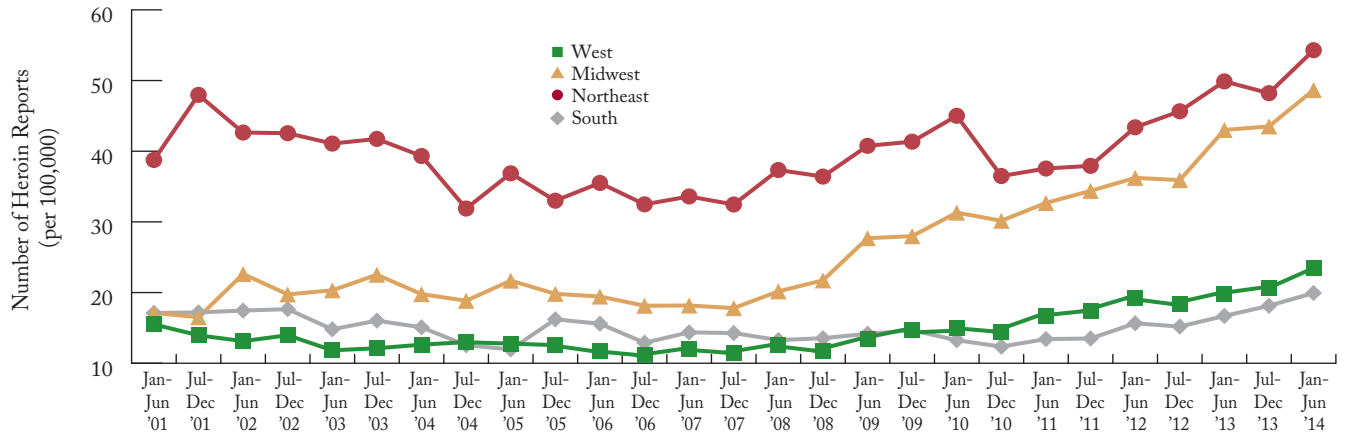
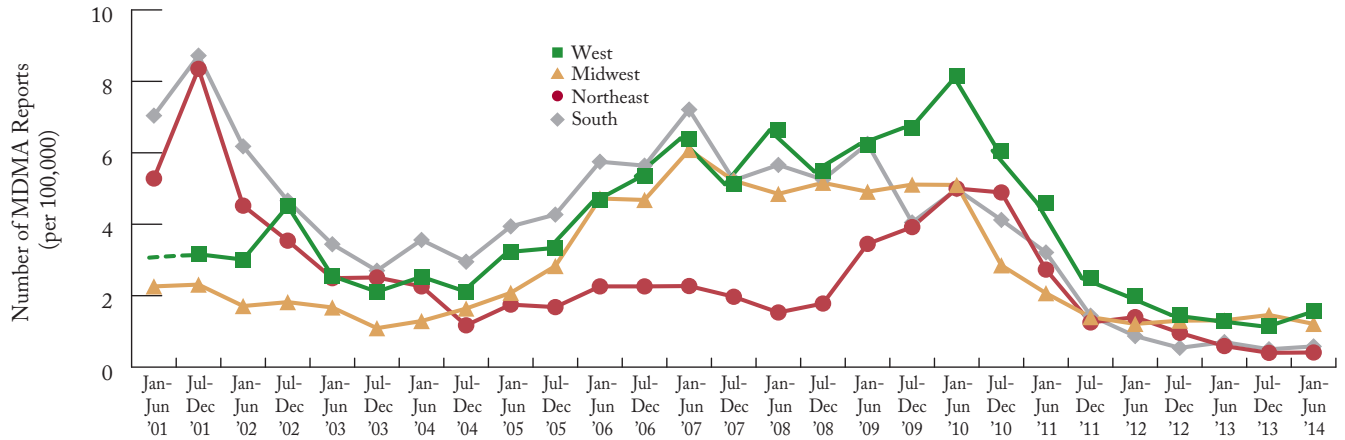


Figure 1.15 Regional trends in MDMA reported per 100,000 persons aged 15 or older, January 2001–June 2014[1]



Note: U.S. Census 2014 population data by age were not available for this publication. Population data for 2014 were imputed.

[1] *A dashed trend line indicates estimates did not meet the criteria for precision or reliability. See Appendix A for a more detailed methodology discussion.*

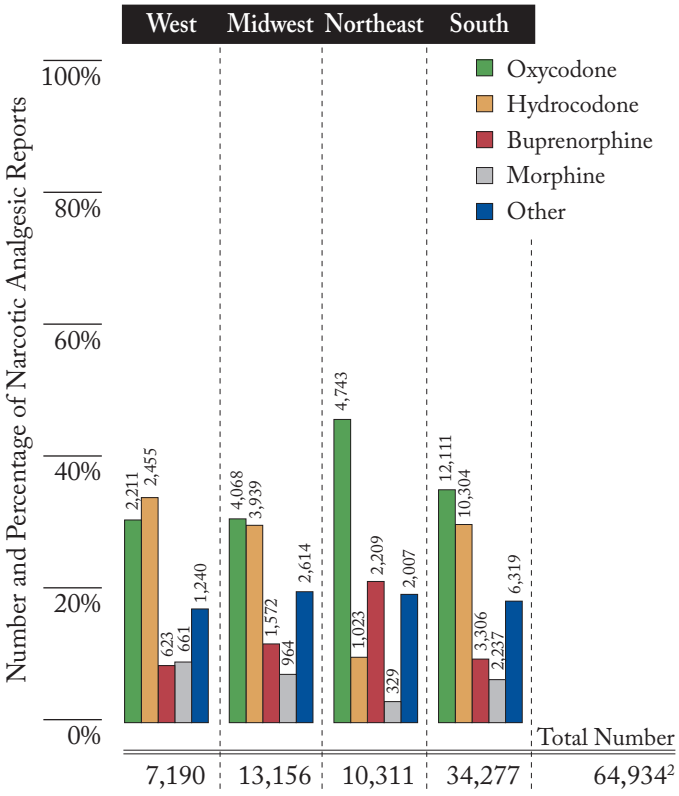
Section 2: Major Drug Categories

This section presents results for major drug categories. Specifically, this section presents estimates of specific drugs by drug category using the NEAR approach. The first, second, and third drugs mentioned in laboratories' drug items are included in the counts. Drug categories presented in this section include narcotic analgesics, tranquilizers and depressants, anabolic steroids, phenethylamines, and synthetic cannabinoids. A total of 813,071 drug reports were submitted to State and local laboratories from January 1, 2014, through June 30, 2014, and analyzed by September 30, 2014.

Table 2.1 *NARCOTIC ANALGESICS*
Number and percentage of narcotic analgesic reports in the United States, January 2014–June 2014[1]

Narcotic Analgesic Reports	Number	Percent
Oxycodone	23,132	35.62%
Hydrocodone	17,721	27.29%
Buprenorphine	7,709	11.87%
Morphine	4,192	6.46%
Methadone	3,077	4.74%
Hydromorphone	2,479	3.82%
Fentanyl	2,219	3.42%
Codeine	1,611	2.48%
Tramadol	1,426	2.20%
Oxymorphone	932	1.43%
Mitragynine	88	0.13%
Propoxyphene	78	0.12%
Meperidine	57	0.09%
Acetyl fentanyl	55	0.08%
Hydrocodeinone	40	0.06%
Other narcotic analgesics	120	0.18%
Total Narcotic Analgesic Reports[2]	64,934	100.00%
Total Drug Reports	813,071	

Figure 2.1 Distribution of narcotic analgesic reports within region, January 2014–June 2014[1]



[1] *Includes drug reports submitted to laboratories from January 1, 2014, through June 30, 2014, that were analyzed by September 30, 2014.*
[2] *Numbers and percentages may not sum to totals because of rounding.*

Table 2.2 *TRANQUILIZERS AND DEPRESSANTS*
Number and percentage of tranquilizer and depressant reports in the United States, January 2014–June 2014[1]

Tranquilizer and Depressant Reports	Number	Percent
Alprazolam	21,804	53.01%
Clonazepam	6,097	14.83%
Diazepam	3,013	7.32%
Phencyclidine (PCP)	2,697	6.56%
Carisoprodol	2,023	4.92%
Lorazepam	1,241	3.02%
Zolpidem	903	2.20%
Cyclobenzaprine	626	1.52%
Ketamine	574	1.40%
Phenobarbital	358	0.87%
Methaqualone	348	0.85%
Pregabalin	193	0.47%
Hydroxyzine	187	0.45%
Temazepam	172	0.42%
Butalbital	139	0.34%
Other tranquilizers and depressants	754	1.83%
Total Tranquilizer and Depressant Reports[2]	41,129	100.00%
Total Drug Reports	813,071	

Figure 2.2 Distribution of tranquilizer and depressant reports within region, January 2014–June 2014[1]

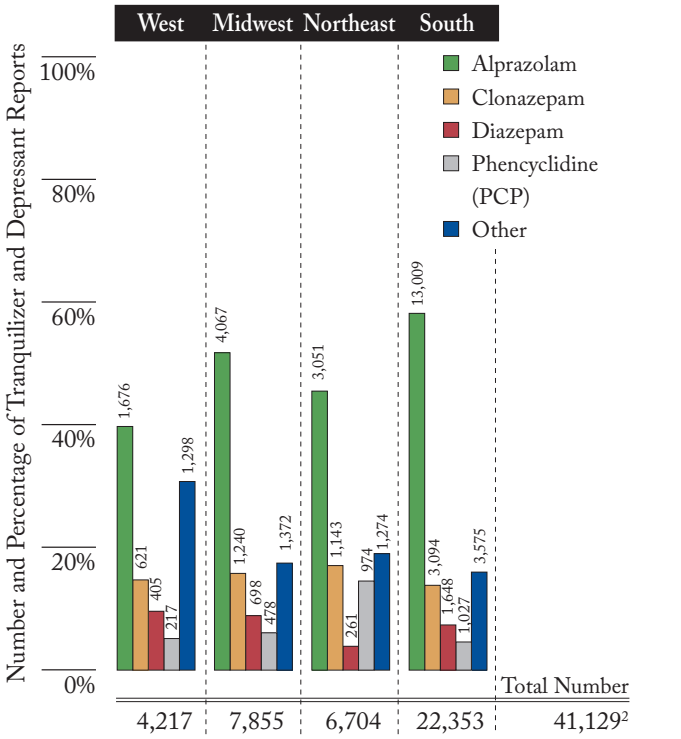
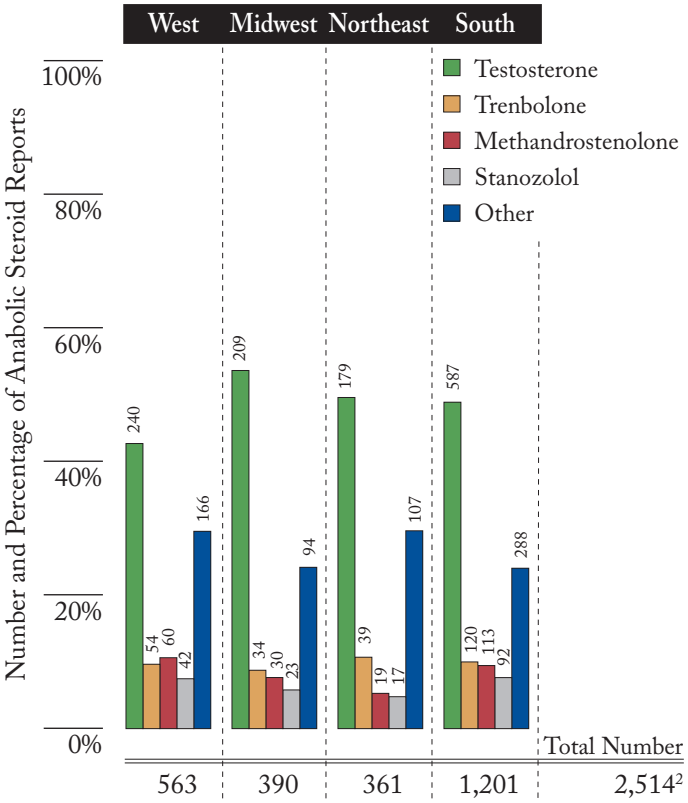


Table 2.3 *ANABOLIC STEROIDS*
Number and percentage of anabolic steroid reports in the United States, January 2014–June 2014[1]

Anabolic Steroid Reports	Number	Percent
Testosterone	1,216	48.35%
Trenbolone	247	9.82%
Methandrostenolone	222	8.84%
Stanozolol	174	6.91%
Nandrolone	158	6.27%
Oxandrolone	124	4.94%
Boldenone	93	3.70%
Oxymetholone	79	3.13%
Drostanolone	76	3.01%
Mesterolone	30	1.20%
Methenolone	20	0.79%
Methyltestosterone	15	0.59%
Other anabolic steroids	62	2.47%
Total Anabolic Steroid Reports[2]	2,514	100.00%
Total Drug Reports	813,071	

Figure 2.3 Distribution of anabolic steroid reports within region, January 2014–June 2014[1]



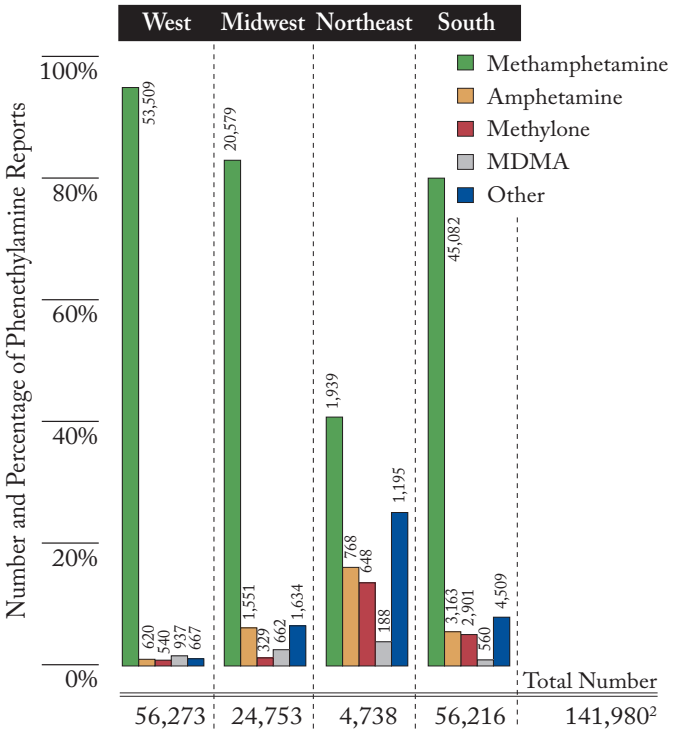
[1] *Includes drug reports submitted to laboratories from January 1, 2014, through June 30, 2014, that were analyzed by September 30, 2014.*
[2] *Numbers and percentages may not sum to totals because of rounding.*

Table 2.4 ***Phenethylamines***
Number and percentage of phenethylamine reports in the United States, January 2014–June 2014[1]

Phenethylamine Reports	Number	Percent
Methamphetamine	121,109	85.30%
Amphetamine	6,101	4.30%
Methylone	4,417	3.11%
MDMA	2,347	1.65%
alpha-PVP	2,244	1.58%
Ethylone	1,426	1.00%
Lisdexamfetamine	1,030	0.73%
2C-I-NBOMe	396	0.28%
2C-C-NBOMe	375	0.26%
MDA	331	0.23%
Phentermine	326	0.23%
MDPV	312	0.22%
2C-B-NBOMe	239	0.17%
Dimethylone	219	0.15%
4-MEC	138	0.10%
Other phenethylamines	968	0.68%
Total Phenethylamine Reports[2]	141,980	100.00%
Total Drug Reports	813,071	

MDMA=3,4-Methylenedioxymethamphetamine
alpha-PVP=alpha-Pyrrolidinopentiophenone
2C-I-NBOMe=2-(4-iodo-2,5-dimethoxyphenyl)-N-[(2-methoxyphenyl)methyl] ethanamine
2C-C-NBOMe=2-(4-chloro-2,5-dimethoxyphenyl)-N-[(2-methoxyphenyl) methyl]ethanamine
MDA=3,4-methylenedioxyamphetamine

Figure 2.4 Distribution of phenethylamine reports within region, January 2014–June 2014[1]



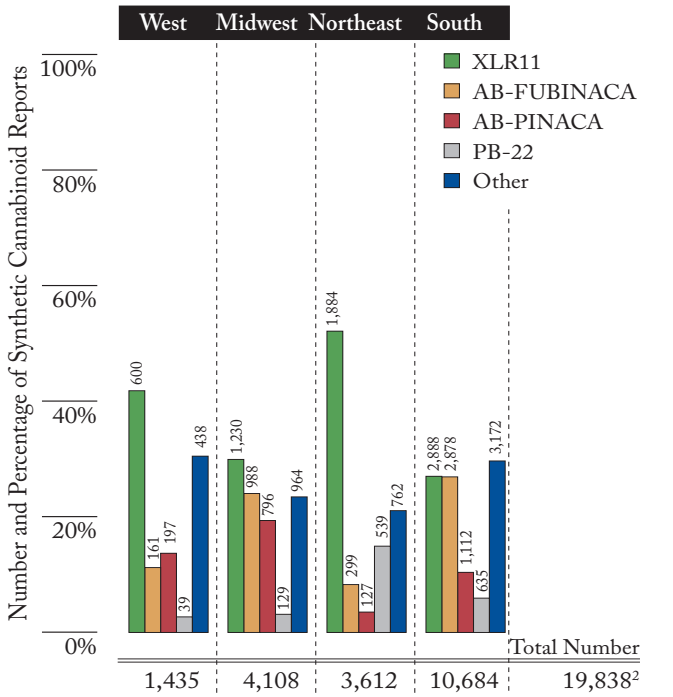
MDPV=3,4-Methylenedioxypyrovalerone
2C-B-NBOMe=2-(4-bromo-2,5-dimethoxyphenyl)-N-[(2-methoxyphenyl) methyl]ethanamine
4-MEC=4-Methyl-N-Ethylcathinone

Table 2.5 ***Synthetic Cannabinoids***
Number and percentage of synthetic cannabinoid reports in the United States, January 2014–June 2014[1]

Synthetic Cannabinoid Reports	Number	Percent
XLR11	6,602	33.28%
AB-FUBINACA	4,326	21.81%
AB-PINACA	2,232	11.25%
PB-22	1,342	6.77%
5F-PB-22	758	3.82%
UR-144	512	2.58%
AB-CHMINACA	324	1.63%
AM-2201	201	1.01%
AKB48 N-(5-fluoropentyl)	199	1.00%
5F-AB-PINACA	193	0.97%
ADB-FUBINACA	161	0.81%
FUB-PB-22	124	0.62%
THJ-2201	117	0.59%
AKB48	106	0.54%
JWH-018 (AM-678)	93	0.47%
Other synthetic cannabinoids	2,547	12.84%
Total Synthetic Cannabinoid Reports[2]	19,838	100.00%
Total Drug Reports	813,071	

XLR11=[1-(5-Fluoro-pentyl)1H-indol-3-yl],(2,2,3,3-tetramethylcyclopropyl) methanone
AB-FUBINACA=(N-(1-amino-3-methyl-1-oxobutan-2-yl)-1-(4-fluorobenzyl)-1H-indazole-3-carboxamide)
AB-PINACA=N-(1-amino-3-methyl-1-oxobutan-2-yl)-1-(4- fluorobenzyl)-1H-indazole-3-carboxamide
PB-22=quinolin-8-yl 1-pentyl-1H-indole-3-carboxylate
5F-PB-22=(Quinolin-8-yl 1-(5-fluoropentyl)-1H-indole-carboxylate)
UR-144=(1-Pentyl-1H-indol-3-yl)(2,2,3,3-tetramethylcyclopropyl)methanone
AB-CHMINACA=N-[(1S)-1-(Aminocarbonyl)-2-methylpropyl]-1-(cyclohexylmethyl)-1H-indazole-3-carboxamide
AM-2201=(1-(5-Fluoropentyl)-3-(1-naphthoyl)indole)
AKB48 N-(5-fluoropentyl)=N-(1-adamantyl)-1-(5-fluoropentyl)-1H-indazole-3-carboxamide

Figure 2.5 Distribution of synthetic cannabinoid reports within region, January 2014–June 2014[1]



5F-AB-PINACA (primary)=N-(1-amino-3-methyl-1-oxobutan-2-yl)-1-(5-fluoropentyl)-1H-indazole-3-Carboxamide
ADB-FUBINACA=N-(1-amino-3,3-dimethyl-1-oxobutan-2-yl)-1-pentyl-1H-indazole-3-carboxamide
FUB-PB-22=quinolin-8-yl 1-(4-fluorobenzyl)-1H-indole-3-carboxylate
THJ-2201=(1-(5-fluoropentyl)-1H-indazol-3-yl)(naphthalen-1-yl)methanone
AKB48=N-(1-Adamantyl)-1-pentyl-1H-indazole-3-carboxamide
JWH-018 (AM-678)=(1-Pentyl-3-(1-naphthoyl)indole)

[1] *Includes drug reports submitted to laboratories from January 1, 2014, through June 30, 2014, that were analyzed by September 30, 2014.*

[2] *Numbers and percentages may not sum to totals because of rounding.*

Appendix A Statistical Methodology

Overview

Since 2001, NFLIS publications have included national and regional estimates for the number of drug reports and drug cases analyzed by State and local forensic laboratories in the United States. This appendix discusses the methods used for producing these estimates, including sample selection, weighting, imputation, and trend analysis procedures. RTI International, under contract to the DEA, began implementing NFLIS in 1997. Results from a 1998 survey (updated in 2002, 2004, 2007, and 2012) provided laboratory-specific information, including annual caseloads, which was used to establish a national sampling frame of all State and local forensic laboratories that routinely perform drug chemistry analyses. A probability proportional to size (PPS) sample was drawn on the basis of annual cases analyzed per laboratory, resulting in a NFLIS national sample of 29 State laboratory systems and 31 local or municipal laboratories, and a total of 168 individual laboratories (see Appendix B for a list of sampled NFLIS laboratories).

Estimates appearing in this publication are based on cases and items *submitted* to laboratories between January 1, 2014, and June 30, 2014, and analyzed by September 30, 2014. Analysis has shown that approximately 95% of cases submitted during a semiannual period are analyzed within three months of the end of the semiannual period (not including the approximately 30% of cases that are never analyzed).

For each drug item (or exhibit) analyzed by a laboratory in the NFLIS program, up to three drugs can be reported to NFLIS and counted in the estimation process. A drug-specific case is one for which the specific drug was identified as the first, second, or third drug report for any item associated with the case. A drug-specific report is the total number of reports of the specific drug.

Currently, laboratories representing more than 90% of the national drug caseload participate in NFLIS, with about 88% of the national caseload reported for each reporting period. This reporting provided an opportunity to implement a method, referred to as NEAR (National Estimates Based on All Reports), that has strong statistical advantages for producing national and regional estimates.

NEAR Methodology

In NFLIS publications before 2011, data reported by nonsampled laboratories were not used in national or regional estimates.[1] However, as the number of nonsampled laboratories reporting to NFLIS increased,[2] it began to make sense to consider ways to utilize the data they submitted. Under NEAR, the "volunteer" laboratories (i.e., the reporting nonsampled laboratories) represent themselves and are no longer represented by the reporting sampled laboratories. The volunteer laboratories are assigned weights of one, and hence the weights of the sampled and responding laboratories are appropriately adjusted downward. The outcome is that the estimates are more precise, especially for recent years, which include a large number of volunteer laboratories. More precision allows for more power to detect trends and fewer suppressed estimates in Tables 1.1 and 1.2 of the NFLIS annual and midyear reports.

NEAR imputations and adjusting for missing monthly data in reporting laboratories

Because of technical and other reporting issues, some laboratories do not report data for every month during a given reporting period, resulting in missing monthly data. If a laboratory reports fewer than six months of data for the annual estimates (fewer than three months for the semiannual estimates), it is considered nonreporting, and its reported data are not included in the estimates. Otherwise, imputations are performed separately by drug for laboratories that are missing monthly data, using drug-specific proportions generated from laboratories that are reporting all months of data. This imputation method is used for cases, items, and drug-specific reports and accounts for both the typical month-to-month variation and the size of the laboratory requiring imputation. The general idea is to use the nonmissing months to assess the size of the laboratory requiring imputation and then to apply the seasonal pattern exhibited by all laboratories with no missing data. Imputations of monthly case counts are created using the following ratio (r_L):

$$r_L = \frac{\sum_{m \in R_L} c_{L,m}}{\sum_{m \in R_L} c_{.,m}},$$

where

R_L = set of all nonmissing months in laboratory L,

$c_{L,m}$ = case count for laboratory L in month m, and

$c_{.,m}$ = mean case counts for all laboratories reporting complete data.

[1] The case and item loads for the nonsampled laboratories were used in calculating the weights.

[2] In 2012, for example, out of 113 nonsampled laboratories and laboratory systems, 79 (or 70%) reported.

Monthly item counts are imputed for each laboratory using an estimated item-to-case ratio (s_L) for nonmissing monthly item counts within the laboratory. The imputed value for the missing monthly number of items in each laboratory is calculated by multiplying $c_{L,m}$ by s_L.

$$s_L = \frac{\sum_{m \in R_L} i_{L,m}}{\sum_{m \in R_L} c_{L,m}},$$

where

R_L = set of all nonmissing months in laboratory L,
$i_{L,m}$ = item count for laboratory L in month m, and
$c_{L,m}$ = case count for laboratory L in month m.

Drug-specific case and report counts are imputed using the same imputation techniques presented above for the case and item counts. The total drug, item, and case counts are calculated by aggregating the laboratory and laboratory system counts for those with complete reporting and those that require imputation.

NEAR imputations and drug report-level adjustments

Most forensic laboratories classify and report case-level analyses in a consistent manner in terms of the number of vials of a particular pill. A small number, however, do not produce drug report-level counts in the same way as those submitted by the vast majority. Instead, they report as items the count of the individual pills themselves. Laboratories that consider items in this manner also consider drug report-level counts in this same manner. Drug report-to-case ratios for each drug were produced for the similarly sized laboratories, and these drug-specific ratios were then used to adjust the drug report counts for the relevant laboratories.

NEAR weighting procedures

Each NFLIS reporting laboratory was assigned a weight to be used in the calculation of design-consistent, nonresponse-adjusted estimates. Two weights were created: one for estimating cases and one for estimating drug reports. The weight used for case estimation was based on the caseload for every laboratory in the NFLIS population, and the weight used for drug reports' estimation was based on the item load for every laboratory in the NFLIS population. For reporting laboratories, the caseload and item load used in weighting were the reported totals. For nonreporting laboratories, the caseload and item load used in weighting were obtained from an updated laboratory survey administered in 2013.

When the NFLIS sample was originally drawn, two stratifying variables were used: (1) type of laboratory (State system or municipal or county laboratory) and (2) determination of "certainty" laboratory status. To ensure that the NFLIS sample had strong regional representation, U.S. census regions were used as the geographical divisions to guide the selection of certainty laboratories and systems. Some large laboratories were automatically part of the original NFLIS sample because they were deemed critically important to the calculation of reliable estimates. These laboratories are called "certainty laboratories." The criteria used in selecting the certainty laboratories included (1) size, (2) region, (3) geographical location, and (4) other special considerations (e.g., strategic importance of the laboratory).

Each weight has two components, the design weight and the nonresponse adjustment factor, the product of which is the final weight used in estimation. After imputation, the final item weight is based on the item count, and the final case weight is based on the case count of each laboratory or laboratory system. The final weights are used to calculate national and regional estimates. The first component, the design weight, is based on the proportion of the caseload and item load of the NFLIS universe[3] represented by the individual laboratory or laboratory system. This step takes advantage of the original PPS sample design and provides precise estimates as long as the drug-specific case and report counts are correlated with the overall caseload and item load.[4]

For noncertainty reporting laboratories in the sample (and reporting laboratories in the certainty strata with nonreporting laboratories), the design-based weight for each laboratory is calculated as follows:

$$\text{Design Weight}_i = A/(B \times \text{Case [item] Count for Laboratory or Laboratory System } i),$$

where

i = ith laboratory or laboratory system;
A = sum of the case (item) counts for all of the laboratories and laboratory systems (sampled and nonsampled) within a specific stratum, excluding certainty strata and the volunteer stratum; and
B = number of sampled laboratories and laboratory systems within the same stratum, excluding certainty strata and the volunteer stratum.

Certainty laboratories were assigned a design weight of one.[5]

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[3] See the Introduction of this publication for a description of the NFLIS universe.

[4] Lohr, S. L. (2010). *Sampling: Design and analysis* (2nd ed., pp. 231-234). Boston, MA: Brooks/Cole.

[5] With respect to the design weight, reporting laboratories and laboratory systems in certainty strata with nonreporting laboratories and laboratory systems are treated the same way as reporting noncertainty sampled laboratories and laboratory systems. This is done to reduce the variance; otherwise, all reporting laboratories and laboratory systems in these strata would get the same weight regardless of their size.

The second component, the nonresponse adjustment factor, adjusts the weights of the reporting and sampled laboratories to account for the nonreporting and sampled laboratories. The nonresponse (*NR*) adjustment, for both certainty and noncertainty laboratories, is calculated as follows:

$$NR_j = C/D,$$

where

j = stratum;

C = number of sampled laboratories and laboratory systems in the stratum, excluding the volunteer stratum; and

D = number of laboratories and laboratory systems in the stratum that were both sampled and reporting.

Because volunteer laboratories only represent themselves, they were automatically assigned a final weight of one.

NEAR estimation

The estimates in this publication are the weighted sum of the counts from each laboratory. The weighting procedures make the estimates more precise by assigning large weights to small laboratories and small weights to large laboratories.[6] Because most of the values being estimated tend to be related to laboratory size, the product of the weight and the value to be estimated tend to be relatively stable across laboratories, resulting in precise estimates.

A finite population correction is also applied to account for the high sampling rate. In a sample-based design, the sampling fraction, which is used to create the weights, equals the number of sampled laboratories divided by the number of laboratories in the NFLIS universe. Under NEAR, the sampling fraction equals the number of sampled laboratories divided by the sum of the number of sampled laboratories and the number of nonreporting, unsampled laboratories. Volunteer laboratories are not included in the sampling fraction calculation. Thus, the NEAR approach makes the sampling rate even higher because volunteer laboratories do not count as nonsampled laboratories.

Suppression of Unreliable Estimates

For some drugs, such as cannabis/THC and cocaine, thousands of reports occur annually, allowing for reliable national prevalence estimates to be computed. For other drugs, reliable and precise estimates cannot be computed because of a combination of low report counts and substantial variability in report counts between laboratories. Thus, a suppression rule was established. Precision and reliability of estimates are evaluated using the relative standard error (RSE), which is the ratio between the standard error of an estimate and the estimate. Drug estimates with an RSE > 50% are suppressed and not shown in the tables.

Statistical Techniques for Trend Analysis

Two types of analyses to compare estimates across years were used. The first is called *prior-year comparisons* and compared national and regional estimates from January 2013 through June 2013 with those from January 2014 through June 2014. The second is called *long-term trends* and examined trends in the annual national and regional estimates from January 2001 through June 2014. The long-term trends method described below was implemented beginning with the 2012 Midyear Report. The new method offers the ability to identify both linear and curved trends, unlike the method used in previous NFLIS publications. Both types of trend analyses are described below. For the region-level prior-year comparisons and long-term trends, the estimated drug reports were standardized to the most recent regional population totals for persons aged 15 years or older.

Prior-year comparisons

For selected drugs, the prior-year comparisons statistically compared estimates in Table 1.1 of this publication with estimates in Table 1.1 of the 2013 Midyear Report. The specific test examined whether the difference between any two estimates was significantly different from zero. A standard t test was completed using the statistic,

$$t_{df} = \frac{a\hat{T}_{2014} - b\hat{T}_{2013}}{\sqrt{a^2\,\mathrm{var}(\hat{T}_{2014}) + b^2\,\mathrm{var}(\hat{T}_{2013}) - 2ab\,\mathrm{cov}(\hat{T}_{2013,}\hat{T}_{2014})}}$$

where

df = appropriate degrees of freedom (number of laboratories minus number of strata);

$\hat{T}_{2014}$ = estimated total number of reports for the given drug for January 2014 through June 2014;

$\hat{T}_{2013}$ = estimated total number of reports for the given drug for January 2013 through June 2013;

$\mathrm{var}(\hat{T}_{2014})$ = variance of $\hat{T}_{2014}$;

$\mathrm{var}(\hat{T}_{2013})$ = variance of $\hat{T}_{2013}$; and

$\mathrm{cov}(\hat{T}_{2013}, \hat{T}_{2014})$ = covariance between $\hat{T}_{2013}$ and $\hat{T}_{2014}$.

For the national prior-year comparisons, $a = b = 1$. For the regional prior-year comparisons, a = 100,000 divided by the regional population total for 2014, and b = 100,000 divided by the regional population total for 2013.

The percentile of the test statistic in the t distribution determined whether the prior-year comparison was statistically significant (a two-tailed test at $\alpha = .05$).

[6] See footnote 4.

Long-term trends

A long-term regression trends analysis was performed on the January 2001 through June 2014 semiannual national estimates of totals and regional estimates of rates for selected drug reports. The models allow for randomness in the totals and rates due to both the sample and the population. That is, for the vector of time period totals over that time,

$$\mathbf{Y}^T \equiv (Y_1, Y_2, \ldots, Y_{27}),$$

and for the estimates,

$$\hat{\mathbf{Y}}^T \equiv (\hat{Y}_1, \hat{Y}_2, \ldots, \hat{Y}_{27})$$

the regression model is

$$\hat{\mathbf{Y}} = \mathbf{X}\beta + \eta + \varepsilon,$$

where

$\eta = \hat{\mathbf{Y}} - \mathbf{Y}$ is a 27 × 1 vector of errors due to the probability sample, and

ε is a 27 × 1 vector of errors due to the underlying model.

Randomness due to the sample exists because only a sample of all eligible laboratories has been randomly selected to be included. Randomness due to the population exists because many factors that can be viewed as random contribute to the specific total reported by a laboratory in a time period. For example, not all drug seizures that could have been made were actually made, and there may have been some reporting errors. If rates (per 100,000 persons aged 15 years or older) and not totals are of interest, the above model can be applied to $\hat{\mathbf{Y}}^* = c\hat{\mathbf{Y}}$, where c equals 100,000 divided by the 15-or-older regional population size as given by the U.S. Census Bureau.

The regression model used to perform the analysis is

$$Y_t = \alpha_0 + \alpha_1 t + \alpha_2 t^2 + \alpha_3 t^3 + \varepsilon_t \qquad t = 1, \ldots, T,$$

where

Y_t = is the population total value, considered to be a realization of the underlying model; and

ε_t = is one of a set of 27 independent normal variates with a mean of zero and a variance of σ^2.

The model allows for a variety of trend types: linear (straight-line), quadratic (U-shaped), and cubic (S-shaped). Because it is a model for Y_t but the sample estimates $\hat{Y}_t$ differ by the sampling error, estimation was performed by restricted maximum likelihood (REML), allowing for the two sources of error.

To implement the regression model, point estimates of totals $\hat{Y}_t$ and their standard errors were obtained for all 27 semiannual periods beginning with the January to June 2001 period and ending with the January to June 2014 period. Sampling standard errors were estimated as the full sampling variance-covariance matrix $\mathbf{S}$ over these 27 time periods. The $\mathbf{S}$ matrix contains variances in totals at any time period and covariances in totals between any two time periods, thus giving a very general modeling of the sampling variance structure. The variance-covariance matrix of the totals is then $V[\hat{\mathbf{Y}}] = \sigma^2 \boldsymbol{I} + \mathbf{S}$, where $\boldsymbol{I}$ is the identity matrix.

Regression coefficients were estimated using the REML method. Because higher order polynomial regression models generally show strong collinearity among predictor variables, the model was reparameterized using orthogonal polynomials. The reparameterized model is

$$Y_t = \beta_0 X_0(t) + \beta_1 X_1(t) + \beta_2 X_2(t) + \beta_3 X_3(t) + \varepsilon_t,$$

where

$X_0(t) = 1/\sqrt{T}$ for all t, and

$X_1(t), X_2(t), X_3(t)$ provide contributions for the first-order (linear), second-order (quadratic), and third-order (cubic) polynomials, respectively.

Note that the error term is the same in both the original model and the reparameterized model because the fitted surface is the same for both models. The model was further constrained to have regression residuals sum to zero, a constraint that is not guaranteed by theory for these models, but was considered to improve model fit due to an approximation required to estimate $\mathbf{S}$. Standard errors of the regression trend estimates were obtained by simulation.

Final models were selected after testing for the significance of coefficients at the $\alpha = 0.05$ level ($p < .05$), which means that if the trend of interest (linear, quadratic, cubic) were in fact zero, then there would be a 5% chance that the trend would be detected as statistically significant when in fact it is not. Final fitted models are most easily interpreted using graphical plots.

Appendix B Participating and Reporting Forensic Laboratories

State	Lab Type	Laboratory Name	Reporting
AK	State	Alaska Department of Public Safety	✓
AL	State	Alabama Department of Forensic Sciences (5 sites)	✓
AR	State	Arkansas State Crime Laboratory (2 sites)	✓
AZ	State	Arizona Department of Public Safety, Scientific Analysis Bureau (4 sites)	
	Local	Mesa Police Department	✓
	Local	Phoenix Police Department	✓
	Local	Scottsdale Police Department	✓
	Local	Tucson Police Department Crime Laboratory	✓
CA	State	California Department of Justice (10 sites)	✓
	Local	Alameda County Sheriff's Office Crime Laboratory (San Leandro)	✓
	Local	Contra Costa County Sheriff's Office (Martinez)	✓
	Local	Fresno County Sheriff's Forensic Laboratory	✓
	Local	Kern County District Attorney's Office (Bakersfield)*	✓
	Local	Long Beach Police Department	✓
	Local	Los Angeles County Sheriff's Department (4 sites)	✓
	Local	Los Angeles Police Department (2 sites)	✓
	Local	Orange County Sheriff's Department (Santa Ana)	✓
	Local	Sacramento County District Attorney's Office	✓
	Local	San Bernardino Sheriff's Office	✓
	Local	San Diego County Sheriff's Department	✓
	Local	San Diego Police Department	✓
	Local	San Francisco Police Department*	✓
	Local	San Mateo County Sheriff's Office (San Mateo)	✓
	Local	Santa Clara District Attorney's Office (San Jose)	✓
	Local	Ventura County Sheriff's Department	✓
CO	State	Colorado Bureau of Investigation (4 sites)	✓
	Local	Aurora Police Department	✓
	Local	Colorado Springs Police Department	✓
	Local	Denver Police Department Crime Laboratory	✓
	Local	Jefferson County Sheriff's Office (Golden)	✓
CT	State	Connecticut Department of Public Safety	✓
DE	State	Chief Medical Examiner's Office*	✓
FL	State	Florida Department of Law Enforcement (7 sites)	✓
	Local	Broward County Sheriff's Office (Fort Lauderdale)	✓
	Local	Indian River Crime Laboratory (Fort Pierce)	✓
	Local	Manatee County Sheriff's Office (Bradenton)	✓
	Local	Miami-Dade Police Department Crime Laboratory	✓
	Local	Palm Beach County Sheriff's Office Crime Laboratory (West Palm Beach)	✓
	Local	Pinellas County Forensic Laboratory (Largo)	✓
	Local	Sarasota County Sheriff's Office	✓
GA	State	Georgia State Bureau of Investigation (7 sites)	✓
HI	Local	Honolulu Police Department	✓
IA	State	Iowa Division of Criminal Investigations	✓
ID	State	Idaho State Police (3 sites)	✓
IL	State	Illinois State Police (7 sites)	✓
	Local	DuPage County Sheriff's Office (Wheaton)	✓
	Local	Northern Illinois Police Crime Laboratory (Chicago)	✓
IN	State	Indiana State Police Laboratory (4 sites)	✓
	Local	Indianapolis-Marion County Forensic Laboratory (Indianapolis)	✓
KS	State	Kansas Bureau of Investigation (3 sites)	✓
	Local	Johnson County Sheriff's Office (Mission)	✓
	Local	Sedgwick County Regional Forensic Science Center (Wichita)	✓
KY	State	Kentucky State Police (6 sites)	✓
LA	State	Louisiana State Police	✓
	Local	Acadiana Criminalistics Laboratory (New Iberia)	✓
	Local	Jefferson Parish Sheriff's Office (Metairie)	✓
	Local	New Orleans Police Department Crime Laboratory	
	Local	North Louisiana Criminalistics Laboratory System (3 sites)	✓
	Local	Southwest Louisiana Regional Laboratory (Lake Charles)	✓
MA	State	Massachusetts State Police	✓
	Local	University of Massachusetts Medical Center (Worcester)	✓
MD	State	Maryland State Police Forensic Sciences Division (3 sites)	✓
	Local	Anne Arundel County Police Department (Millersville)	✓
	Local	Baltimore City Police Department	✓
	Local	Baltimore County Police Department (Towson)	✓
	Local	Montgomery County Crime Laboratory (Rockville)	✓
	Local	Prince George's County Police Department (Landover)	
ME	State	Maine Department of Human Services	✓
MI	State	Michigan State Police (7 sites)*	✓
MN	State	Minnesota Bureau of Criminal Apprehension (2 sites)	✓
MO	State	Missouri State Highway Patrol (8 sites)	✓
	Local	Independence Police Department	✓
	Local	KCMO Regional Crime Laboratory (Kansas City)	✓
	Local	St. Charles County Criminalistics Laboratory (O'Fallon)	✓
	Local	St. Louis County Crime Laboratory (Clayton)	✓
	Local	St. Louis Police Department	✓
MS	State	Mississippi Department of Public Safety (4 sites)	✓
	Local	Jackson Police Department Crime Laboratory	✓
	Local	Tupelo Police Department	✓
MT	State	Montana Forensic Science Division	✓
NC	State	North Carolina State Bureau of Investigation (3 sites)	✓
	Local	Charlotte-Mecklenburg Police Department	✓
	Local	Iredell County Sheriff's Office Crime Laboratory (Statesville)	✓
ND	State	North Dakota Crime Laboratory Division	✓
NE	State	Nebraska State Patrol Criminalistics Laboratory (2 sites)	✓
NH	State	New Hampshire State Police Forensic Laboratory	✓
NJ	State	New Jersey State Police (4 sites)	✓
	Local	Burlington County Forensic Laboratory (Mt. Holly)	✓
	Local	Cape May County Prosecutor's Office	✓
	Local	Hudson County Prosecutor's Office (Jersey City)	✓
	Local	Ocean County Sheriff's Department (Toms River)	✓
	Local	Union County Prosecutor's Office (Westfield)	✓
NM	State	New Mexico Department of Public Safety (3 sites)	✓
	Local	Albuquerque Police Department	✓
NV	Local	Henderson City Crime Laboratory	
	Local	Las Vegas Metropolitan Police Crime Laboratory	✓
	Local	Washoe County Sheriff's Office Crime Laboratory (Reno)	✓
NY	State	New York State Police (4 sites)	✓
	Local	Erie County Central Police Services Laboratory (Buffalo)	✓
	Local	Nassau County Office of Medical Examiner (East Meadow)	
	Local	New York City Police Department Crime Laboratory**	✓
	Local	Niagara County Police Department (Lockport)	✓
	Local	Onondaga County Center for Forensic Sciences (Syracuse)	✓
	Local	Suffolk County Crime Laboratory (Hauppauge)	✓
	Local	Westchester County Forensic Sciences Laboratory (Valhalla)	✓
	Local	Yonkers Police Department Forensic Science Laboratory	✓
OH	State	Ohio Bureau of Criminal Identification & Investigation (3 sites)	✓
	State	Ohio State Highway Patrol	✓
	Local	Canton-Stark County Crime Laboratory (Canton)	✓
	Local	Columbus Police Department	✓
	Local	Cuyahoga County Regional Forensic Science Laboratory (Cleveland)	✓
	Local	Hamilton County Coroner's Office (Cincinnati)	✓
	Local	Lake County Regional Forensic Laboratory (Painesville)	✓
	Local	Lorain County Crime Laboratory (Elyria)	
	Local	Mansfield Police Department	✓
	Local	Miami Valley Regional Crime Laboratory (Dayton)	✓
	Local	Newark Police Department Forensic Services	✓
	Local	Toledo Police Forensic Laboratory	✓
OK	State	Oklahoma State Bureau of Investigation (5 sites)	✓
	Local	Tulsa Police Department Forensic Laboratory	
OR	State	Oregon State Police Forensic Services Division (5 sites)	✓
PA	State	Pennsylvania State Police Crime Laboratory (6 sites)	✓
	Local	Allegheny County Coroner's Office (Pittsburgh)	✓
	Local	Bucks County Crime Laboratory (Warminster)	✓
	Local	Philadelphia Police Department Forensic Science Laboratory	✓
RI	State	Rhode Island Forensic Sciences Laboratory	
SC	State	South Carolina Law Enforcement Division	✓
	Local	Anderson/Oconee Regional Forensics Laboratory	✓
	Local	Charleston Police Department	✓
	Local	Richland County Sheriff's Department Forensic Sciences Laboratory (Columbia)	
	Local	Spartanburg Police Department	✓
SD	State	South Dakota Department of Public Health Laboratory	
	Local	Rapid City Police Department	✓
TN	State	Tennessee Bureau of Investigation (3 sites)	✓
TX	State	Texas Department of Public Safety (13 sites)	✓
	Local	Austin Police Department	✓
	Local	Bexar County Criminal Investigations Laboratory (San Antonio)	✓
	Local	Brazoria County Crime Laboratory (Angleton)	✓
	Local	Fort Worth Police Department Criminalistics Laboratory	✓
	Local	Harris County Medical Examiner's Office (Houston)	✓
	Local	Houston Forensic Science Local Governance Corporation	✓
	Local	Jefferson County Sheriff's Regional Crime Laboratory (Beaumont)	✓
	Local	Pasadena Police Department	✓
UT	State	Utah State Crime Laboratory (3 sites)	✓
VA	State	Virginia Department of Forensic Science (4 sites)	✓
VT	State	Vermont Forensic Laboratory	✓
WA	State	Washington State Patrol (6 sites)	✓
WI	State	Wisconsin Department of Justice (3 sites)	✓
	Local	Kenosha County Division of Health Services	✓
WV	State	West Virginia State Police	✓
WY	State	Wyoming State Crime Laboratory	✓
PR	Territory	Puerto Rico Crime Laboratory (3 sites)	✓

This list identifies laboratories that are participating in and reporting to NFLIS as of January 31, 2015.

* This laboratory is not currently conducting drug chemistry analysis. Cases for the agencies they serve are being analyzed via contracts or agreements with other laboratories.

**The New York City Police Department Crime Laboratory currently reports summary data.

Appendix C NFLIS Benefits and Limitations

Benefits

The systematic collection and analysis of drug analysis data aid our understanding of the Nation's illicit drug problem. NFLIS serves as a resource for supporting drug scheduling policy and drug enforcement initiatives both nationally and in specific communities around the country.

Specifically, NFLIS helps the drug control community achieve its mission by

- providing detailed information on the prevalence and types of controlled substances secured in law enforcement operations;
- identifying variations in controlled and noncontrolled substances at the national, State, and local levels;
- identifying emerging drug problems and changes in drug availability in a timely fashion;
- monitoring the diversion of legitimately marketed drugs into illicit channels;
- providing information on the characteristics of drugs, including quantity, purity, and drug combinations; and
- supplementing information from other drug sources, including the DEA's STRIDE, the National Survey on Drug Use and Health (NSDUH), and the Monitoring the Future (MTF) study.

NFLIS is an opportunity for State and local laboratories to participate in a useful, high-visibility initiative. Participating laboratories regularly receive reports that summarize national and regional data. In addition, the Data Query System (DQS) is a secure website that allows NFLIS participants—including State and local laboratories, the DEA, and other Federal drug control agencies—to run customized queries on the NFLIS data. Enhancements to the DQS provide a new interagency exchange forum that will allow the DEA, forensic laboratories, and other members of the drug control community to post and respond to current information.

Limitations

NFLIS has limitations that must be considered when interpreting findings generated from the database.

- Currently, NFLIS includes data from Federal, State, and local forensic laboratories. Federal data are shown separately in this publication. Efforts are under way to enroll additional Federal laboratories.
- NFLIS includes drug chemistry results from completed analyses only. Drug evidence secured by law enforcement but not analyzed by laboratories is not included in the database.
- National and regional estimates may be subject to variation associated with sample estimates, including nonresponse bias.
- 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, while 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.
- Laboratories vary with respect to the records they maintain. For example, some laboratories' automated records include the weight of the sample selected for analysis (e.g., the weight of one of five bags of powder), while others record total weight.

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