NFLIS

NATIONAL FORENSIC LABORATORY INFORMATION SYSTEM

2010 ANNUAL REPORT

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

Special NFLIS Announcement

New Methodology for Calculating National and Regional Estimates and Presenting Data in Publications

Consistent with the continuing advancement of the utility and functions of the National Forensic Laboratory Information System (NFLIS), the Drug Enforcement Administration (DEA), Office of Diversion Control is pleased to announce the implementation of a new methodology for calculating national and regional estimates and presenting data in NFLIS publications.

Since 2001, NFLIS publications have presented national and regional estimates of drugs that have been seized in law enforcement operations and subsequently analyzed by State and local laboratories. These estimates were based on a nationally representative sample of 57 laboratories and laboratory systems. Over time, participation in NFLIS has substantially increased. Overall, laboratories representing over 92% of the national drug caseload participate in NFLIS, with about 88% of the national caseload reported for each reporting period. This high participation and reporting rate has provided DEA with the opportunity to use a new method with strong statistical advantages for producing national and regional estimates.

Because of the changes in methodology, data in NFLIS publications published prior to 2011 should not be directly compared with this or future publications. Updated 2001 to 2009 annual estimates that use the new methodology are presented in this publication and will be included in all subsequent publications. For more complete details on the new methodology, see Appendix A.

The new methodology includes the following features:

- ***Submissions Analyzed Within Three Months***

  Past NFLIS publications presented data on drugs analyzed during the reporting period. The new approach will present data on drugs submitted to laboratories during the reporting period and analyzed within three months of the end of the report reference period. The submission date provides a reference point closer to the date the identified drug was seized than the date of analysis. For this publication, data are based on drug submissions to State and local laboratories from January 1, 2010, through December 31, 2010, that were analyzed by March 31, 2011.

- ***Up to Three Drug Reports Counted***

  For each drug item or exhibit analyzed by a laboratory, up to three drugs can be reported to NFLIS. In the new method, all drug reports (or up to three drugs), instead of only the first drug report, will be counted for calculating the estimates.

- ***The NEAR Approach***

  In the previous estimation model, a sample of laboratories was used to calculate national and regional estimates, and data from nonsampled laboratories that reported during the calendar year were used only in the process of computing sample weights. Using the new methodology, referred to as NEAR (National Estimates Based on All Reports), estimates are now calculated using data from *all* reporting laboratories, instead of only using a sample. Each reporting laboratory now represents itself. For laboratories that do not report data during the reference period, the data are imputed based on reports from the original NFLIS-sampled laboratories.

- ***All Data Included in Raw Counts***

  Finally, the change to a "date of submission" and to counting up to three drug reports per drug item will also apply to sections of NFLIS publications that present actual reported data (not estimated). In previous publications, only data from laboratories that reported at least 50% of the months in the reporting period were included in these sections. As part of the new method, all data reported by all NFLIS laboratories will be used. The standard of including only those laboratories reporting for at least 50% of the months during the report reference period will no longer apply to presentations of raw counts.

Contents

Highlights

- An estimated total of 1,713,360 drugs were submitted to State and local forensic laboratories in the United States from January 1 through December 31, 2010, and analyzed by March 31, 2011. This is a decrease of 3% from the 1,758,505 drug reports identified during 2009.
- Cannabis/THC was the most frequently identified drug (587,399 reports) in 2010, followed by cocaine (367,410 reports), methamphetamine (159,738 reports), and heroin (110,393 reports).
- Nationally, reports of oxycodone, hydrocodone, alprazolam, clonazepam, and morphine increased significantly from 2001 through 2010, while reports of diazepam decreased significantly. Oxycodone reports more than quadrupled, while hydrocodone reports and morphine reports more than tripled, and reports of alprazolam and clonazepam more than doubled.
- From 2009 to 2010, oxycodone reports increased nationally by more than 25%, and alprazolam reports increased nationally by more than 10%.
- Regionally, reports of oxycodone, hydrocodone, alprazolam, clonazepam, and morphine increased significantly in all four U.S. census regions from 2001 through 2010. Reports of diazepam decreased significantly in the Northeast and South.
- From 2009 to 2010, oxycodone reports increased by more than 25% in the Midwest, Northeast, and South.
- In 2010, more than 70% of narcotic analgesic reports were oxycodone or hydrocodone. Alprazolam accounted for 52% of identified tranquilizers and depressants. Among identified hallucinogens, MDMA accounted for 70% of reports.
- Nationally, from 2001 through 2010, cannabis/THC, cocaine, and methamphetamine reports decreased significantly, while MDMA reports increased significantly. There was little change in reports of most of these drugs during the past year. However, from 2009 to 2010, reports of cocaine decreased by 11%.
- Reports of cocaine decreased significantly from 2001 through 2010 in all four U.S. census regions. During this same time, methamphetamine reports decreased significantly in the West and Midwest, while MDMA reports increased significantly in these two regions; heroin reports increased significantly in the Midwest.
- From 2009 to 2010, reports of cocaine decreased by 22% in the West and by 17% in the Midwest. In this same time period, MDMA reports decreased by 18% in the Midwest but increased by 30% in the Northeast.

DEA Update: Synthetic Cathinones—DEA Request for Information

Although they have been popular in Europe since 2007, the following synthetic cathinones are new to the U.S. drug market:

- **MDPV** (*synonym*: 3,4-methylenedioxypyrovalerone);
- **Mephedrone** (*synonyms*: 4-methylmethcathinone, 4-MMC);
- **Methylone** (*synonyms*: 3,4-methylenedioxymethcathinone, MDMC);
- **Naphyrone** (*synonyms*: napthylpyrovalerone, NRG-1);
- **4-Fluoromethcathinone** (*synonyms*: 4-FMC, flephedrone);
- **3-Fluoromethcathinone** (*synonym*: 3-FMC);
- **Methedrone** (*synonyms*: 4-methoxymethcathinone, bk-PMMA, PMMC);
- **Butylone** (*synonyms*: bk-MBDB, beta-keto-N-methylbenzodioxolylpropylamine);
- **4-Methyl-N-ethylcathinone** (*synonym*: 4-MEC); and
- **4-Ethylmethcathinone** (*synonyms*: 4-ethyl-N-methylcathinone, 4-EMC).

These substances are falsely marketed as "research chemicals," "plant food," or "bath salts." They are sold at smoke shops, head shops, convenience stores, adult bookstores, and gas stations and can also be purchased on the Internet. These substances are manufactured in the form of capsules, tablets, and powders. The packages of these commercial products usually contain the warning "not for human consumption," most likely in an effort to circumvent statutory restrictions for these substances. Some of the products found to contain synthetic cathinones include, but are not limited to, the following: Ivory Wave, Vanilla Sky, Energy 1, Explosion, Meow Meow, and Bubbles.

Evidence from law enforcement and poison control centers indicates that the use of these substances appears to be widespread and is growing. The American Association of Poison Control Centers reported that in 2010, poison control centers took 303 calls about synthetic cathinones. As of July 31, 2011, poison control centers had received 2,237 calls relating to these products for the year. These calls were received in poison control centers in at least 47 States and the District of Columbia. In 2009, the National Forensic Laboratory Information System (NFLIS) received only 15 reports of analyzed seizures from eight States related to these substances. However, in 2010, nearly 3,000 reports of analyzed seizures from at least 26 States related to these substances were reported to NFLIS. A number of States have passed laws to control all or many of these synthetic cathinones (e.g., Alabama, Arkansas, Florida, Georgia, Hawaii, Idaho, Indiana, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, New Jersey, New Mexico, New York, North Carolina, North Dakota, Oklahoma, Oregon, Tennessee, Utah, Virginia, Washington, West Virginia, and Wyoming).

MDPV and mephedrone are psychoactive chemicals that are structurally related to the schedule I stimulants cathinone and methcathinone. Cathinone derivatives, including those bearing ring-group substituents, have been reported to induce subjective effects similar to those induced by cocaine, amphetamine, 3,4-methylenedioxymethamphetamine (MDMA), and methcathinone. MDPV and mephedrone are not scheduled under the Controlled Substances Act (CSA). However, law enforcement cases involving synthetic cathinones can be prosecuted under the Controlled Substance Analogue Enforcement Act if the synthetic cathinone meets the definition of a "controlled substance analogue."

Methylone is a psychoactive chemical that is structurally and pharmacologically similar to the schedule I substance MDMA. Methylone is not scheduled under the CSA. Naphyrone, 4-FMC, 3-FMC, methedrone, butylone, 4-MEC, and 4-EMC are also not scheduled under the CSA, but they have been identified by U.S. drug courts through drug screens and in the international drug market.

These substances are popular with youths in urban environments, with males appearing to use synthetic cathinones more than females. The most common routes of administration are inhalation by snorting the powder and ingestion by taking capsules or tablets. The powder can also be injected or swallowed. Abusers report that effects occur within a few minutes to 15 minutes after administration, depending on the route of administration, and can last up to three hours.

The Drug and Chemical Evaluation Section (ODE) of the DEA Office of Diversion Control continues to gather information on the pharmacology, toxicity, and abuse of synthetic cathinones and products containing these substances to support possible scheduling of these substances. ODE would greatly appreciate any information related to law enforcement encounters, drug identification, toxicology reports, medical examiner reports, and abuse related to these synthetic cathinones. This includes, but is not limited to, any information associated with the biological responses occurring from episodes, data describing toxic effects occurring in humans or animals as a result of exposure to these substances, toxicology reports, risk assessments, identification of these substances to establish prevalence and trends, and suspicion of poisonings connected to patients or postmortem samples. Information that connects these substances to adverse health effects is of particular interest and would provide valuable assistance in the evaluation of these substances for a Federal control action.

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INTRODUCTION

The National Forensic Laboratory Information System (NFLIS) is a program of the Drug Enforcement Administration (DEA), Office of Diversion Control, that systematically collects drug identification results and associated information from drug cases submitted to and analyzed by Federal, State, and local forensic laboratories. These laboratories analyze controlled and noncontrolled substances secured in law enforcement operations across the country. NFLIS represents an important resource in monitoring illicit drug abuse and trafficking, including the diversion of legally manufactured pharmaceuticals into illegal markets. NFLIS data are used to support drug scheduling decisions and to inform drug policy and drug enforcement initiatives both nationally and in local communities around the country.

NFLIS is a comprehensive information system that includes data from forensic laboratories that handle 88% of an estimated 1.3 million annual State and local drug analysis cases. Currently, NFLIS includes 47 State systems, 94 local or municipal laboratories/laboratory systems, and one territorial laboratory system, representing a total of 283 individual laboratories. The NFLIS database also includes Federal data from the DEA's System To Retrieve Information from Drug Evidence II (STRIDE), which reflects the results of drug evidence analyzed at DEA laboratories nationwide.

Beginning with the 2010 NFLIS midyear report, important methodological changes were implemented (see Appendix A). Earlier NFLIS annual reports presented data on drugs analyzed during the calendar year. In contrast, this publication presents results of drug cases submitted to State and local laboratories from January 2010 through December 2010 that were analyzed by March 31, 2011. In addition, the results include not only the first, but also the second and third drugs that were mentioned in laboratories' reported drug items. A third significant change is that the national and regional estimates are based on an estimation process (NEAR, or National Estimates Based on All Reports) that uses data from all reporting laboratories instead of only those included in the national representative sample of laboratories (see Appendix B for a list of reporting and participating laboratories). The STRIDE data are for the same time period and, like the national and regional estimates, include the first, second, and third drugs mentioned in DEA laboratories' drug items.

Sections 2 through 5 of this publication present actual reported data rather than national and regional estimates; all data reported by NFLIS State and local laboratories are included. Previously, these sections included only laboratories reporting data for at least 50% of the months included in the report

reference period (for this publication, six or more months of data). Also, and consistent with sections presenting national and regional estimates, these sections now include all drug reports (up to three) that were mentioned in laboratories' reported drug items.

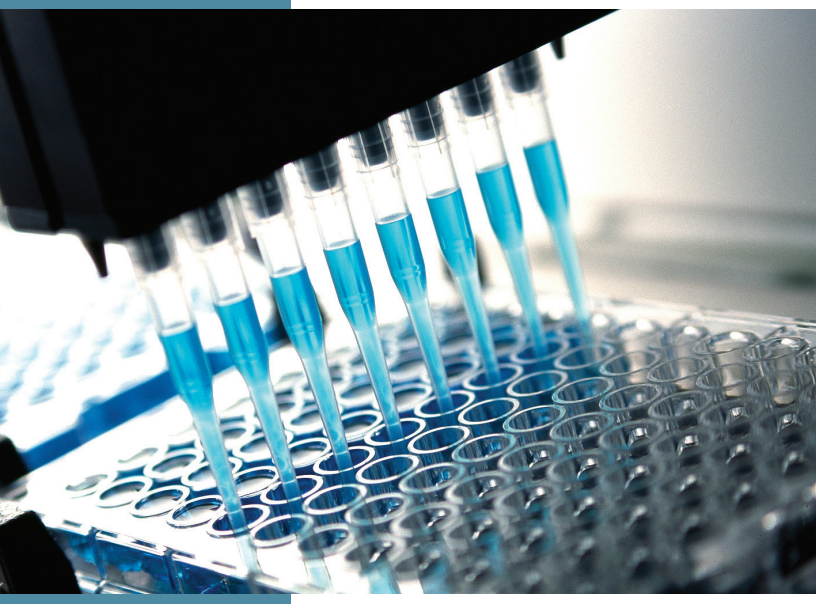
Section 1 presents national and regional estimates for the 25 most frequently reported drugs, as well as national and regional trends from 2001 through 2010. Federal laboratory data reported in STRIDE are also presented. Section 2 presents drug reports by major drug categories. Section 3 describes heroin, cocaine, and methamphetamine purity analyses. Section 4 presents a Geographic Information System (GIS) analysis on methadone and morphine reports by State and by county for selected States. Section 5 presents drugs reported by selected laboratories in cities across the country. The benefits and limitations of NFLIS are presented in Appendix C. A key area of improvement to NFLIS includes ongoing enhancements to the NFLIS Data Query System (DQS); Appendix D summarizes these DQS enhancement activities.


NORTHEAST
ME
Augusta
Waterbury
VT
NH
Sudbury
Boston
University of MA Medical Center, Worcester
Amherst
MA
Providence
RI
Hartford
CT
Suffolk County
Onondaga County
NY
Monroe County
Niagara County
Erie County
Westchester County
Wyoming
Yonkers
New York City
Union County
Hudson County
Little Falls
NJ
West Trenton
Bethlehem
Burlington County
Allegheny County
Philadelphia
Sea Girt
Ocean County
Harrisburg
Greensburg
Hammonton
Media
Bucks County
Cape May
Baltimore City
Baltimore County
Pikesville
Montgomery County
Hagerstown
DE
Fairfax
Anne Arundel County
Berlin
MD
VA
Richmond
Norfolk
Roanoke
Greensboro
Raleigh
NC
Charlotte-Mecklenburg PD
Spartanburg
Anderson/Oconee
Columbia
Augusta
SC
Charleston
Savannah
Asheville
Knoxville
Nashville
TN
Cleveland
Trion
Memphis
Florence
Huntsville
Tupelo
Batesville
Jacksonville
Decatur
Birmingham
Tuscaloosa
Macon
Auburn
Midland
GA
Montgomery
Jackson PD
MS
AL
Jackson
Meridian
Dothan
Moultrie
Jacksonville
Mobile
Gulfport
Pensacola
Tallahassee
Daytona Beach
Orlando
Pinellas County
Tampa
FL
Indian River
Sarasota County
Palm Beach County
Broward County
Miami-Dade PD
Fort Myers
Key West
Louisville
KY
London
Madisonville
Ashland
Highland Heights
South Charleston
Frankfort
Evansville
WV
Carbondale
Hillsboro
St. Louis County
St. Louis
Fairview Heights
Johnson County
Independence
KCMO Regional
Jefferson City
Topeka
Great Bend
Sedgwick County
Pittsburg
Springfield
SEMO Regional
Willow Springs
MSSU Regional
MO
KS
Colorado Springs
Pueblo
Denver
Aurora
Cheyenne
NE
North Platte
Lincoln
Des Moines
St. Joseph
Macon
Springfield
IL
Morton
Indianapolis-Marion County
Indianapolis
IN
Columbus
Columbus PD
Northern Illinois
DuPage County
Rockford
Chicago
Westchester
Joliet
Lowell
Fort Wayne
Toledo
Mansfield PD
Canton-Stark County
Newark PD
Miami Valley
Hamilton County
OH
Northville
Detroit
Sterling Heights
Lake County
Erie
PA
Grayling
Bridgeport
Grand Rapids
Milwaukee
Madison
East Lansing
MI
Wausau
Marquette
WI
St. Paul
St. Paul
Bemidji
Bismarck
ND
MN
SD
Rapid City
MIDWEST
Waco
Austin
Houston
Jefferson County
Harris County
Pasadena
Bexar County
Brazoria County
Southwest LA
Baton Rouge
Acadiana
New Orleans
Jefferson Parish
Gulfport
Laredo
Corpus Christi
McAllen
Lubbock
Garland
Fort Worth
Abilene
Midland
Tyler
Jackson
North LA
LA
TX
SOUTH
Amarillo
Southwest Region
Durant Region
Oklahoma City
Northwest Region
Tulsa
Tahlequah Region
OK
Little Rock
AR
Honolulu
HI
Anchorage
AK
Arecibo
San Juan
Mayagüez
Ponce
PR
Reporting State Lab System
Participating State Lab System
(Not Yet Reporting)
No Participating State Lab System
No State Lab System
Individual State Lab
Reporting Local Lab
Participating Local Lab
(Not Yet Reporting)

Section 1

NATIONAL AND RE

This section describes national and regional estimates for drug reports and drug cases submitted to State and local laboratories from January through December 2010 that were analyzed by March 31, 2011. Trends are presented for selected drugs from 2001 through 2010.



National and regional drug estimates presented in the following section include all drug reports (up to three) mentioned in laboratories' reported drug reports. 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.

1.1 Drug Reports

In 2010, a total of 1,713,360 drug reports were identified by State and local forensic laboratories in the United States. This estimate is a decrease of 3% from the 1,758,505 drug reports identified during 2009. Table 1.1 presents the 25 most frequently identified drugs for the Nation and for each of the U.S. census regions. The top 25 drugs accounted for 88% of all drugs analyzed in 2010. The majority of all drugs reported in NFLIS were identified as the top four drugs, with cannabis/THC, cocaine, methamphetamine, and heroin representing 71% of all drug reports. Nationally, 587,399 drugs were identified as cannabis/THC (34%), 367,410 as cocaine (21%), 159,738 as methamphetamine (9%), and 110,393 as heroin (6%).

There were seven narcotic analgesics in the top 25 drugs: oxycodone (60,932 reports), hydrocodone (48,078 reports), buprenorphine (10,537 reports), methadone (9,477 reports), morphine (7,593 reports), codeine (3,951 reports), and hydromorphone (2,596 reports). Also included were four tranquilizers and depressants: alprazolam (43,559 reports), clonazepam (11,044 reports), diazepam (7,336 reports), and lorazepam (2,410 reports). There were also four hallucinogens: MDMA (25,336 reports), BZP (8,784 reports), psilocin/psilocibin (5,201 reports), and TFMPP (2,022 reports). Other controlled pharmaceutical drugs were amphetamine (8,879 reports), phencyclidine (PCP) (5,522 reports), and methylphenidate (2,461 reports). Pseudoephedrine (7,406 reports), a listed chemical, and carisoprodol (5,840 reports), a noncontrolled pharmaceutical, were also included in the 25 most frequently identified drugs.

GIONAL 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 2010 through December 2010 and analyzed by March 31, 2011

	National		West		Midwest		Northeast		South	
Drug	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Cannabis/THC	587,399	34.28%	72,794	26.08%	184,252	46.27%	103,124	35.07%	227,228	30.62%
Cocaine	367,410	21.44%	34,449	12.34%	64,380	16.17%	81,111	27.59%	187,469	25.27%
Methamphetamine	159,738	9.32%	79,663	28.54%	22,732	5.71%	1,335	0.45%	56,007	7.55%
Heroin	110,393	6.44%	16,950	6.07%	33,080	8.31%	36,558	12.43%	23,805	3.21%
Oxycodone	60,932	3.56%	6,250	2.24%	11,143	2.80%	12,969	4.41%	30,570	4.12%
Hydrocodone	48,078	2.81%	6,622	2.37%	9,101	2.29%	3,170	1.08%	29,185	3.93%
Alprazolam	43,559	2.54%	2,636	0.94%	6,872	1.73%	6,608	2.25%	27,443	3.70%
MDMA	25,336	1.48%	7,984	2.86%	4,394	1.10%	4,389	1.49%	8,569	1.15%
Clonazepam	11,044	0.64%	1,075	0.38%	2,236	0.56%	2,665	0.91%	5,067	0.68%
Buprenorphine	10,537	0.61%	831	0.30%	1,689	0.42%	4,161	1.42%	3,856	0.52%
Methadone	9,477	0.55%	1,625	0.58%	1,699	0.43%	1,790	0.61%	4,363	0.59%
Amphetamine	8,879	0.52%	897	0.32%	2,375	0.60%	1,255	0.43%	4,352	0.59%
1-Benzylpiperazine (BZP)	8,784	0.51%	713	0.26%	2,009	0.50%	1,347	0.46%	4,715	0.64%
Morphine	7,593	0.44%	1,539	0.55%	1,931	0.49%	785	0.27%	3,338	0.45%
Pseudoephedrine[2]	7,406	0.43%	139	0.05%	2,059	0.52%	95	0.03%	5,113	0.69%
Diazepam	7,336	0.43%	1,129	0.40%	1,569	0.39%	890	0.30%	3,748	0.51%
Noncontrolled, non-narcotic[3]	7,026	0.41%	2,143	0.77%	155	0.04%	1,078	0.37%	3,650	0.49%
Carisoprodol	5,840	0.34%	851	0.30%	273	0.07%	120	0.04%	4,596	0.62%
Phencyclidine (PCP)	5,522	0.32%	729	0.26%	651	0.16%	2,661	0.90%	1,481	0.20%
Psilocin/psilocibin	5,201	0.30%	1,866	0.67%	1,306	0.33%	756	0.26%	1,273	0.17%
Codeine	3,951	0.23%	663	0.24%	727	0.18%	660	0.22%	1,901	0.26%
Hydromorphone	2,596	0.15%	341	0.12%	502	0.13%	205	0.07%	1,549	0.21%
Methylphenidate	2,461	0.14%	219	0.08%	807	0.20%	405	0.14%	1,029	0.14%
Lorazepam	2,410	0.14%	379	0.14%	615	0.15%	473	0.16%	942	0.13%
TFMPP	2,022	0.12%	195	0.07%	305	0.08%	243	0.08%	1,279	0.17%
Top 25 Total	1,510,928	88.19%	242,682	86.94%	356,865	89.62%	268,853	91.43%	642,528	86.60%
All Other Drug Reports	202,432	11.81%	36,468	13.06%	41,323	10.38%	25,188	8.57%	99,453	13.40%
Total Drug Reports[4]	1,713,360	100.00%	279,151	100.00%	398,188	100.00%	294,040	100.00%	741,981	100.00%

MDMA=3,4-Methylenedioxymethamphetamine

TFMPP=1-(3-Trifluoromethylphenyl)piperazine

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

[2] *Includes items from a small number of laboratories that do not distinguish between pseudoephedrine and ephedrine.*

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

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

System To Retrieve Information from Drug Evidence II (STRIDE)

The DEA's System To Retrieve Information from Drug Evidence II (STRIDE) collects the results of drug evidence analyzed at DEA laboratories across the country. STRIDE reflects evidence submitted by the DEA, other Federal law enforcement agencies, and some local police agencies that was obtained during drug seizures, undercover drug buys, and other activities. STRIDE captures data on both domestic and international drug cases; however, the following results describe only those drugs seized by law enforcement in the United States.

A total of 76,857 drugs were submitted to STRIDE in 2010 and analyzed by March 31, 2011, about 4% of the estimated 1.71 million drugs reported by NFLIS State and local laboratories during this period. In 2010, half of the drugs in STRIDE were identified as cocaine (19%), cannabis/THC (16%), methamphetamine (11%), or heroin (7%). Of the remaining drugs, 3% were identified as oxycodone and 2% as MDMA.

MOST FREQUENTLY REPORTED DRUGS IN STRIDE
Number and percentage of drug reports submitted to laboratories from January 2010 through December 2010 and analyzed by March 31, 2011

Drug	Number	Percent
Cocaine	14,349	18.67%
Cannabis/THC	11,929	15.52%
Methamphetamine	8,222	10.70%
Heroin	5,259	6.84%
Oxycodone	2,090	2.72%
MDMA	1,402	1.82%
Noncontrolled, non-narcotic drug	909	1.18%
1-Benzylpiperazine (BZP)	863	1.12%
TFMPP	749	0.97%
Hydrocodone	534	0.69%
All Other Drug Reports	30,551	39.75%
Total Drug Reports	76,857	100.00%

TFMPP=1-(3-Trifluoromethylphenyl)piperazine
Note: Percentages may not sum to 100% because of rounding.

1.2 DRUG CASES ANALYZED

Drug analysis results are also reported to NFLIS at the case level. These case-level data typically describe all drugs identified within a drug-related incident, although a small proportion of laboratories may assign a single case number to all drug submissions related to an entire investigation. Table 1.2 presents national estimates of cases containing the 25 most commonly identified drugs. This table illustrates the number of cases that contained one or more reports of the specified drug. In 2010, there were 1,274,383 drug cases submitted to and analyzed by State and local forensic laboratories, representing a 2% decrease from the 1,297,735 cases in 2009.

Among cases, cannabis/THC was the most common drug reported during 2010. Nationally, an estimated 41% of drug cases contained one or more reports of cannabis/THC, followed by cocaine, which was identified in 28% of all drug cases.

Table 1.2 ***NATIONAL CASE ESTIMATES***
Number and percentage of cases containing the 25 most frequently identified drugs, January 2010 through December 2010

Drug	Number	Percent
Cannabis/THC	420,808	41.09%
Cocaine	282,813	27.61%
Methamphetamine	112,544	10.99%
Heroin	82,385	8.04%
Oxycodone	47,088	4.60%
Hydrocodone	40,206	3.93%
Alprazolam	35,937	3.51%
MDMA	16,352	1.60%
Clonazepam	9,702	0.95%
Buprenorphine	9,375	0.92%
Methadone	8,173	0.80%
Amphetamine	7,406	0.72%
Diazepam	6,332	0.62%
Morphine	6,231	0.61%
Carisoprodol	5,280	0.52%
1-Benzylpiperazine (BZP)	5,021	0.49%
Pseudoephedrine[1]	4,925	0.48%
Phencyclidine (PCP)	4,807	0.47%
Noncontrolled, non-narcotic[2]	4,582	0.45%
Psilocin/psilocibin	4,268	0.42%
Codeine	3,390	0.33%
Hydromorphone	2,256	0.22%
Lorazepam	2,177	0.21%
Methylphenidate	2,053	0.20%
Zolpidem	1,743	0.17%
Top 25 Total	1,125,855	109.93%
All Other Drugs	148,529	14.50%
Total All Drugs	1,274,383[3]	124.44%[4]

MDMA=3,4-Methylenedioxymethamphetamine

[1] *Includes items from a small number of laboratories that do not distinguish between pseudoephedrine and ephedrine.*

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

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

[4] *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 1,024,130 distinct cases submitted from January 2010 through December 2010 and analyzed by March 31, 2011.*

About 11% of drug cases contained methamphetamine, 8% contained heroin, and 5% contained oxycodone; hydrocodone and alprazolam were each reported in about 4% of cases.

1.3 National and Regional Drug Trends

The remainder of this section presents annual national and regional trends of selected drugs submitted to State and local laboratories during each annual period and analyzed within three months of the end of each annual period. Trend estimates include all drug reports identified among the NFLIS laboratories' reported drug reports.

National prescription drug trends

Figure 1.1 presents national trends for the estimated number of drug reports that were identified as oxycodone, hydrocodone, alprazolam, clonazepam, diazepam, or morphine. Nationally, from 2001 through 2010, reports of oxycodone, hydrocodone, alprazolam, clonazepam, and morphine increased significantly, and diazepam decreased significantly ($p < .05$). Specifically, significant changes from 2001 through 2010 include the following:

- Oxycodone reports more than quadrupled from 14,726 to 60,932 reports.
- Reports of hydrocodone (from 14,525 to 48,078 reports) and morphine (from 2,147 to 7,593 reports) more than tripled.
- Reports of alprazolam (from 17,956 to 43,559 reports) and clonazepam (from 4,845 to 11,044 reports) more than doubled.
- Diazepam reports decreased by almost one-fifth (from 9,037 to 7,336 reports).

Although significance tests were not performed on differences from 2009 to 2010, there were a few notable changes during this time period. Oxycodone reports increased by more than 25% (from 47,822 to 60,932 reports), and alprazolam reports increased by more than 10% (from 38,860 to 43,559 reports).

Other national drug trends

Figure 1.2 presents annual national trends for reports of cannabis/THC, cocaine, methamphetamine, heroin, and MDMA. From 2001 through 2010, cannabis/THC, cocaine, and methamphetamine reports decreased significantly, and MDMA reports increased significantly ($p < .05$). Reports of heroin did not significantly change during this time period. There was little change in reports of most of these drugs from 2009 to 2010. However, during this time, reports of cocaine decreased by 11% (from 420,408 to 367,410 reports).

Figure 1.1 National trend estimates for selected prescription drugs, January 2001–December 2010

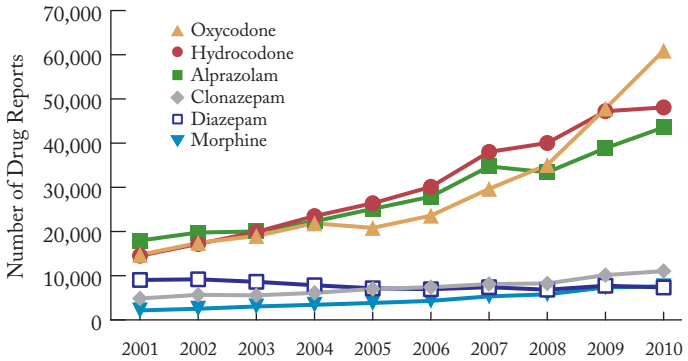
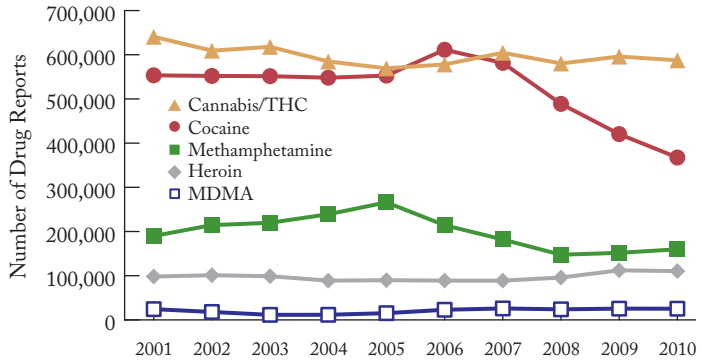


Figure 1.2 National trend estimates for other selected drugs, January 2001–December 2010



Regional prescription drug trends

Figures 1.3 through 1.8 show regional trends per 100,000 persons aged 15 or older for oxycodone, hydrocodone, alprazolam, clonazepam, diazepam, and morphine reports from 2001 through 2010. These figures illustrate changes in drugs reported over time, taking into account the population of each U.S. census region.

Reports of oxycodone, hydrocodone, alprazolam, clonazepam, and morphine increased significantly in all regions from 2001 through 2010 ($p < .05$). The largest increases include the following:

- Oxycodone reports increased more than tenfold in the West (from 1.1 to 11.0 reports per 100,000 persons).
- Hydrocodone reports more than quadrupled in the West (from 2.8 to 11.6 reports per 100,000 persons) and more than tripled in the Midwest (from 4.8 to 16.9 reports per 100,000 persons).
- Alprazolam reports increased sixfold in the West (from 0.7 to 4.6 reports per 100,000 persons) and more than tripled in the Northeast (from 4.3 to 14.6 reports per 100,000 persons).
- Reports of clonazepam more than doubled in the Midwest (from 1.6 to 4.2 reports per 100,000 persons) and Northeast (from 2.8 to 5.9 reports per 100,000 persons).
- Morphine reports more than tripled in the West (from 0.7 to 2.7 reports per 100,000 persons), Midwest (from 1.0 to 3.6 reports per 100,000 persons), and South (from 1.1 to 3.7 reports per 100,000 persons).

Between 2009 and 2010, oxycodone reports increased by more than 25% in the Midwest, Northeast, and South. Oxycodone reports increased in the Midwest from 16.1 to 20.7 reports per 100,000 persons, in the Northeast from 21.9 to 28.7 reports per 100,000 persons, and in the South from 25.8 to 33.6 reports per 100,000 persons.

From 2001 through 2010, reports of diazepam decreased significantly in the Northeast and South ($p < .05$). In the Northeast, reports of diazepam decreased from 3.0 to 2.0 reports per 100,000 persons. In the South, reports of diazepam decreased from 6.6 to 4.1 reports per 100,000 persons.

Figure 1.3 Regional trends in oxycodone reported per 100,000 persons aged 15 or older, January 2001–December 2010

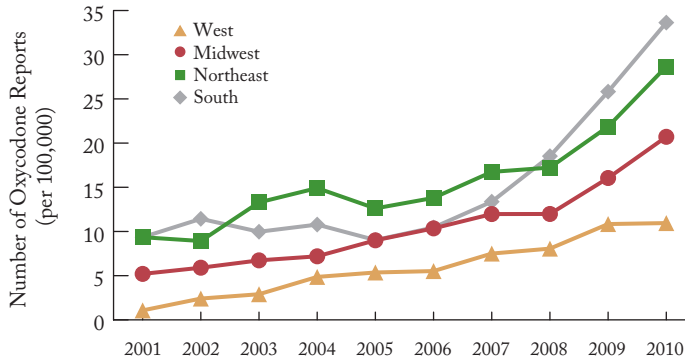
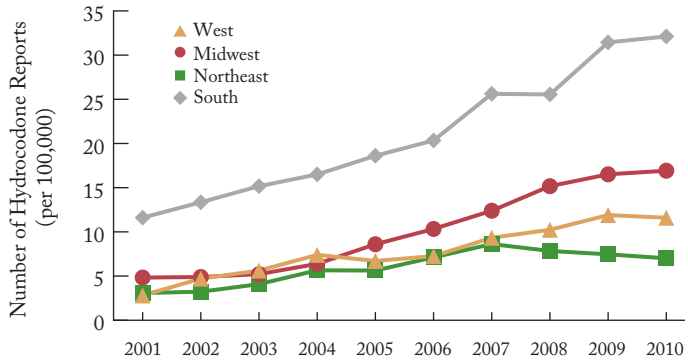


Figure 1.4 Regional trends in hydrocodone reported per 100,000 persons aged 15 or older, January 2001–December 2010



Note: U.S. Census 2010 population data by age were not available for this publication. Population data for 2010 were imputed.

Figure 1.5 Regional trends in alprazolam reported per 100,000 persons aged 15 or older, January 2001–December 2010*

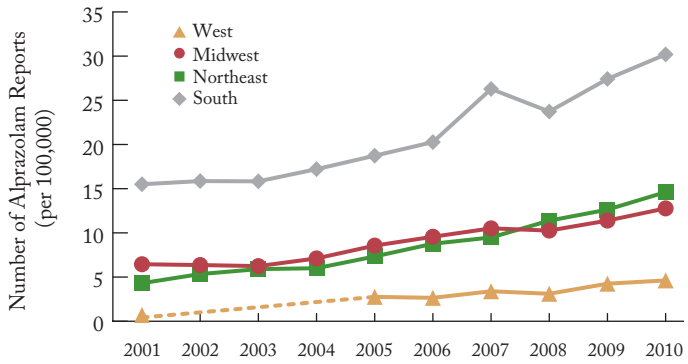


Figure 1.6 Regional trends in clonazepam reported per 100,000 persons aged 15 or older, January 2001–December 2010

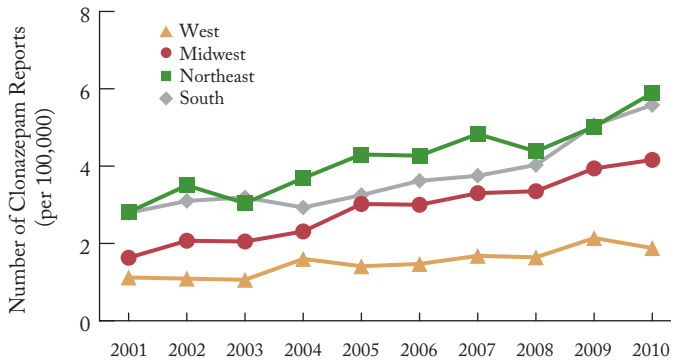


Figure 1.7 Regional trends in diazepam reported per 100,000 persons aged 15 or older, January 2001–December 2010

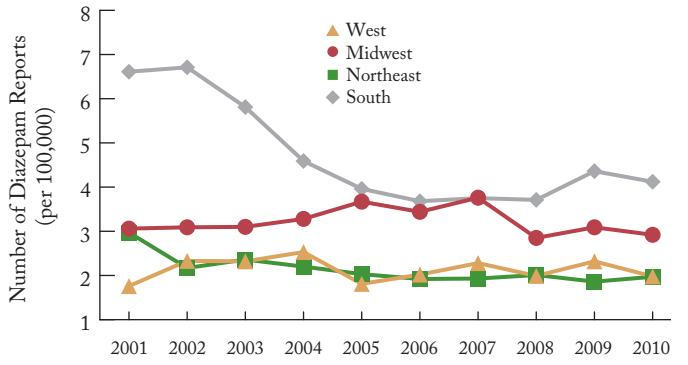
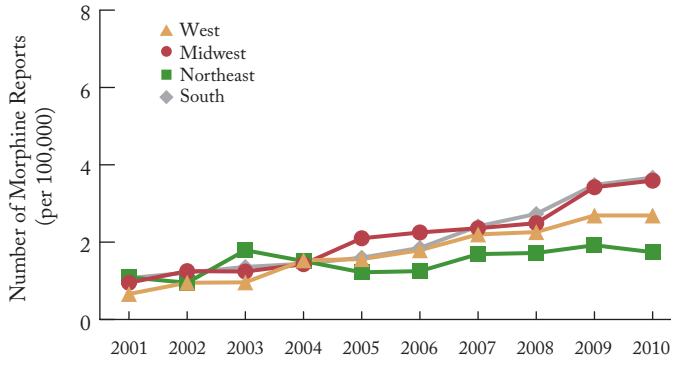


Figure 1.8 Regional trends in morphine reported per 100,000 persons aged 15 or older, January 2001–December 2010



Note: U.S. Census 2010 population data by age were not available for this publication. Population data for 2010 were imputed.

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

Other regional drug trends

Figures 1.9 through 1.13 present regional trends per 100,000 persons aged 15 or older for cannabis/THC, cocaine, methamphetamine, heroin, and MDMA reports. From 2001 through 2010, cannabis/THC reports increased significantly in the Northeast, but decreased significantly in the Midwest and South ($p < .05$). Cocaine reports decreased significantly in all four U.S. census regions. During this same time period, methamphetamine reports decreased significantly in the West and Midwest. Heroin reports increased significantly in the Midwest. Finally, MDMA reports increased significantly in the West and Midwest.

From 2009 to 2010, reports of cocaine decreased by more than 20% in the West (from 77.0 to 60.3 reports per 100,000 persons) and by 17% in the Midwest (from 145.0 to 120.0 reports per 100,000). In this same time period, reports of heroin decreased by 13% in the South (from 30.2 to 26.2 reports per 100,000). MDMA reports decreased by 18% in the Midwest (from 10.0 to 8.2 reports per 100,000 persons), but increased by 30% in the Northeast (from 7.4 to 9.7 reports per 100,000 persons).

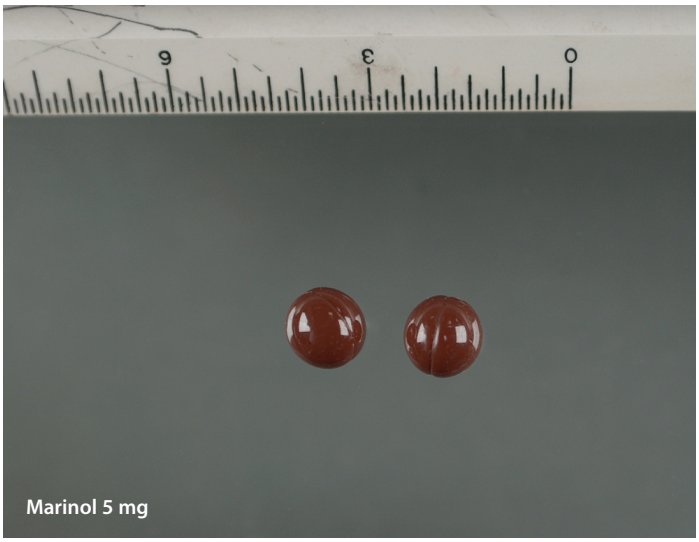


Figure 1.9 Regional trends in cannabis/THC reported per 100,000 persons aged 15 or older, January 2001–December 2010

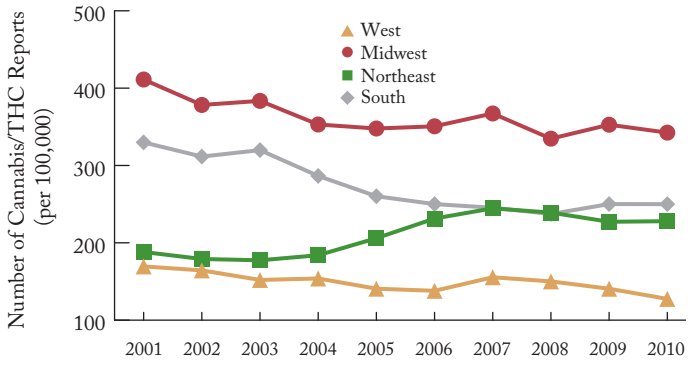


Figure 1.10 Regional trends in cocaine reported per 100,000 persons aged 15 or older, January 2001–December 2010

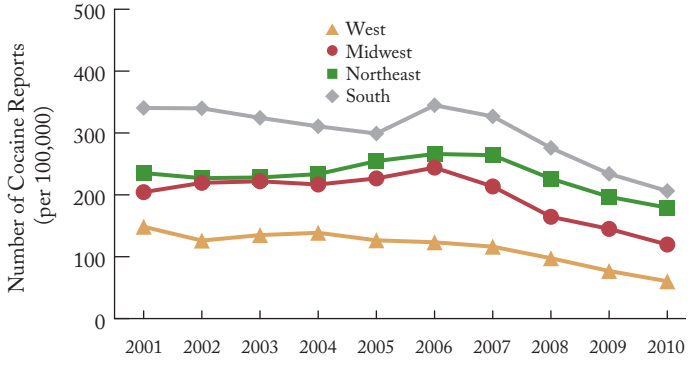
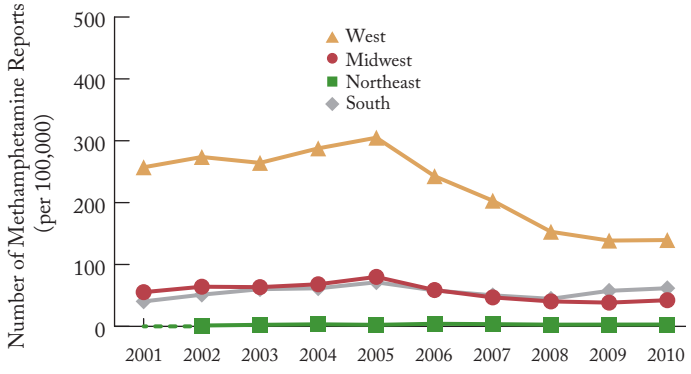


Figure 1.11 Regional trends in methamphetamine reported per 100,000 persons aged 15 or older, January 2001–December 2010*



Note: U.S. Census 2010 population data by age were not available for this publication. Population data for 2010 were imputed.

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

Figure 1.12 Regional trends in heroin reported per 100,000 persons aged 15 or older, January 2001–December 2010

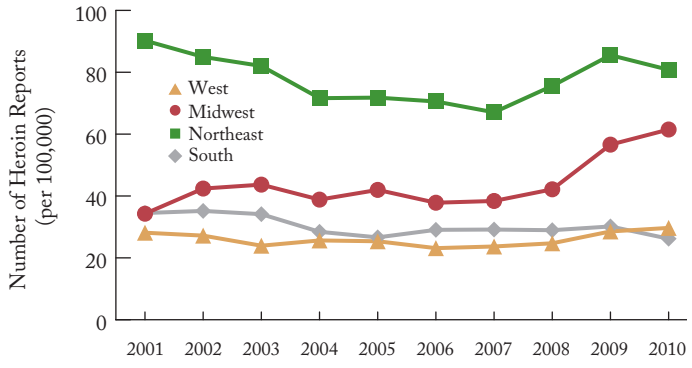
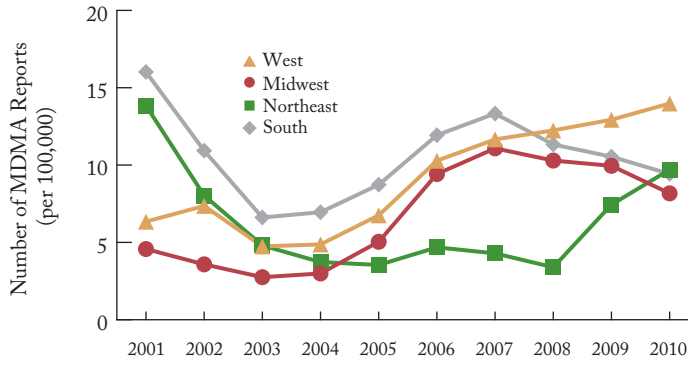


Figure 1.13 Regional trends in MDMA reported per 100,000 persons aged 15 or older, January 2001–December 2010



Note: U.S. Census 2010 population data by age were not available for this publication. Population data for 2010 were imputed.

Section 2

MAJOR DRUG CATEGORIES

Section 2 presents results for drug categories reported by NFLIS laboratories. It is important to note differences between the results presented in this section and the national and regional estimates presented in Section 1. The estimates presented in Section 1 are based on the NEAR approach (see Appendix A for a description of the methodology). The data presented in Section 2 and subsequent sections are not weighted and only represent those laboratories that provided data during the reference period. A total of 1,505,223 drug reports were submitted to State and local laboratories during 2010 and were analyzed within three months of the end of the reference period.

2.1 Narcotic Analgesics

In 2010, narcotic analgesics were the third most frequently prescribed class of drugs, with more than 244 million prescriptions dispensed.[1] When abused, narcotic analgesics can cause serious adverse health reactions, including addiction. Among substance abuse treatment admissions of persons aged 12 or older, the proportion that reported pain reliever abuse increased more than fourfold between 1998 and 2008, from 2.2% to 9.8% percent.[2]

A total of 137,670 narcotic analgesics were identified by NFLIS laboratories in 2010, representing 9% of all drug reports (Table 2.1). Oxycodone (41%) and hydrocodone (32%) accounted for the majority of all narcotic analgesic reports. Other narcotic analgesics reported included buprenorphine (7%), methadone (6%), morphine (5%), and codeine (3%).

The types of narcotic analgesics reported varied considerably by region (Figure 2.1). In comparison with reports from other regions in the country, the Northeast reported the highest percentage of oxycodone (54%) and the highest percentage of buprenorphine (17%), and the West reported the highest percentage of hydrocodone (38%).

Table 2.1 **Narcotic Analgesics**
*Number and percentage of narcotic analgesic reports, 2010**

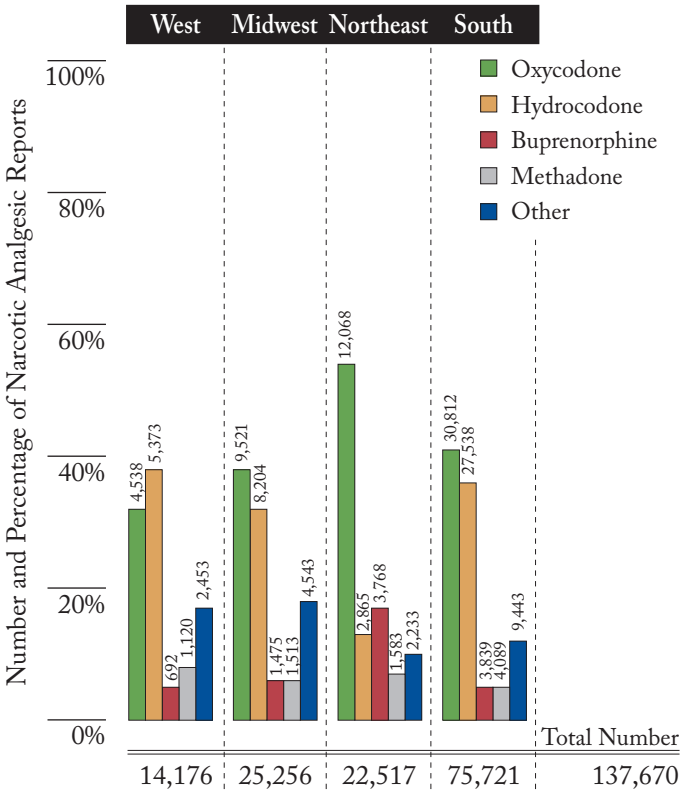
Narcotic Analgesic Reports	Number	Percent
Oxycodone	56,939	41.36%
Hydrocodone	43,980	31.95%
Buprenorphine	9,774	7.10%
Methadone	8,305	6.03%
Morphine	6,956	5.05%
Codeine	3,440	2.50%
Hydromorphone	2,464	1.79%
Propoxyphene	2,063	1.50%
Tramadol (noncontrolled)	1,395	1.01%
Oxymorphone	819	0.59%
Opium	581	0.42%
Fentanyl	579	0.42%
Meperidine	217	0.16%
Other narcotic analgesics	158	0.11%
Total Narcotic Analgesic Reports	137,670	100.00%
Total Drug Reports	1,505,223	

Note: Percentages may not sum to 100% because of rounding.
* *Includes drug reports submitted to laboratories during the calendar year that were analyzed within three months of the reporting period.*

[1] IMS Institute for Healthcare Informatics. (2011, April). *The use of medicines in the United States: Review of 2010*. Parsippany, NJ: Author. [Available as a PDF at http://www.imshealth.com/deployedfiles/imshealth/Global/Content/IMS%20Institute/Static%20File/IHII_UseOfMed_report.pdf]

[2] Office of Applied Studies. (2010, July 15). *The TEDS Report: Substance abuse treatment admissions involving abuse of pain relievers: 1998 and 2008* (TEDS_230A). Rockville, MD: Substance Abuse and Mental Health Services Administration. [Available at http://oas.samhsa.gov/2k10/230/230PainRelvr2k10.cfm]

Figure 2.1 Distribution of narcotic analgesic reports within region, 2010*



2.2 *Tranquilizers and Depressants*

Tranquilizers and depressants are substances that slow normal brain function and as a result are often used to treat sleep and anxiety disorders. Misuse of these substances can lead to dependence.[3]

Approximately 4% of all drug reports in 2010, or 75,106 reports, were identified by NFLIS laboratories as tranquilizers and depressants (Table 2.2). Alprazolam accounted for 52% of reported tranquilizers and depressants. Approximately 14% of tranquilizers and depressants were identified as clonazepam.

Alprazolam was identified in one-half or more of the tranquilizers and depressants reported in the South (59%) and in the Midwest (50%) (Figure 2.2). Clonazepam accounted for 18% of tranquilizers and depressants identified in the Northeast, while diazepam accounted for 13% of those identified in the West.

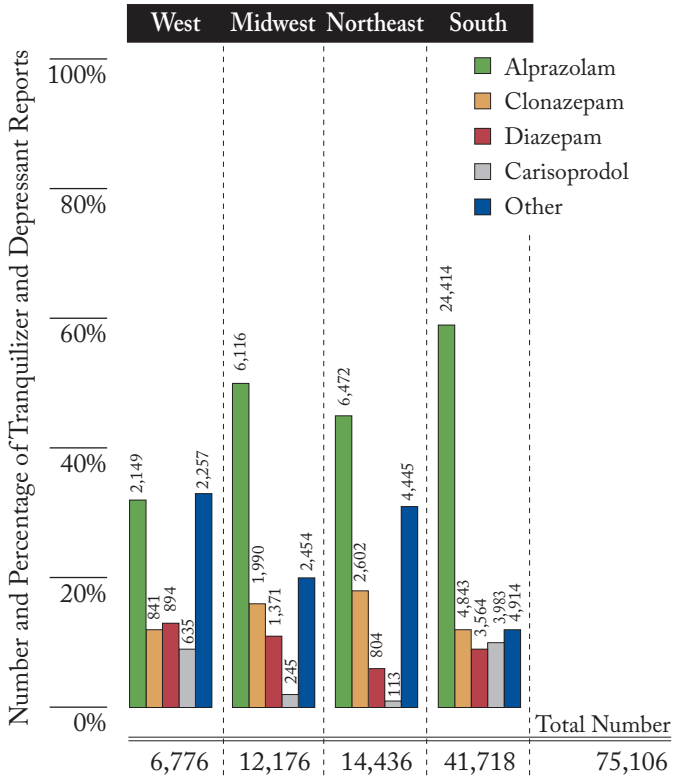
[3] National Institute on Drug Abuse. (2005, August). *Prescription drugs: Abuse and addiction* (NIH Publication Number 05-4881 & NIH Publication No. 01-4881, NIDA Research Report Series). Rockville, MD: U.S. Department of Health and Human Services, National Institutes of Health. [Available at http://www.drugabuse.gov/ResearchReports/Prescription/Prescription.html]

Table 2.2 ***Tranquilizers and Depressants***
*Number and percentage of tranquilizer and depressant reports, 2010**

Tranquilizer and Depressant Reports	Number	Percent
Alprazolam	39,151	52.13%
Clonazepam	10,276	13.68%
Diazepam	6,633	8.83%
Carisoprodol (noncontrolled)	4,976	6.63%
Phencyclidine (PCP)	4,840	6.44%
Lorazepam	2,147	2.86%
Zolpidem (noncontrolled)	1,752	2.33%
Cyclobenzaprine (noncontrolled)	1,311	1.75%
Ketamine	1,141	1.52%
Butalbital	355	0.47%
Phenobarbital	325	0.43%
Temazepam	323	0.43%
Pregabalin	186	0.25%
GHB	158	0.21%
Other tranquilizers and depressants	1,532	2.04%
Total Tranquilizer and Depressant Reports	75,106	100.00%
Total Drug Reports	1,505,223	

GHB=Gamma-hydroxybutyrate

Figure 2.2 Distribution of tranquilizer and depressant reports within region, 2010*



** Includes drug reports submitted to laboratories during the calendar year that were analyzed within three months of the reporting period.*

2.3 Hallucinogens

Hallucinogen plants, such as mushrooms and fungi, have been cultivated and used for centuries, primarily for religious and social rituals. Although many hallucinogens occur naturally, synthetic hallucinogens, such as LSD, have been available for decades and can be easily manufactured.[4] According to the 2009 National Survey on Drug Use and Health (NSDUH), 4.5 million persons aged 12 or older used a hallucinogen in the past year.[5]

NFLIS laboratories identified 30,984 hallucinogens in 2010 (Table 2.3). Of these, 70% were identified as MDMA. Among the other hallucinogen reports, 14% were identified as psilocin/psilocibin, and 6% were identified as TFMPP.

As shown in Figure 2.3, MDMA accounted for 78% of hallucinogens in the Northeast, 77% in the West, 64% in the South, and 63% in the Midwest. Approximately 19% of the hallucinogens reported in the Midwest and 17% reported in the West were psilocin/psilocibin. In the South, 12% of hallucinogens were TFMPP.

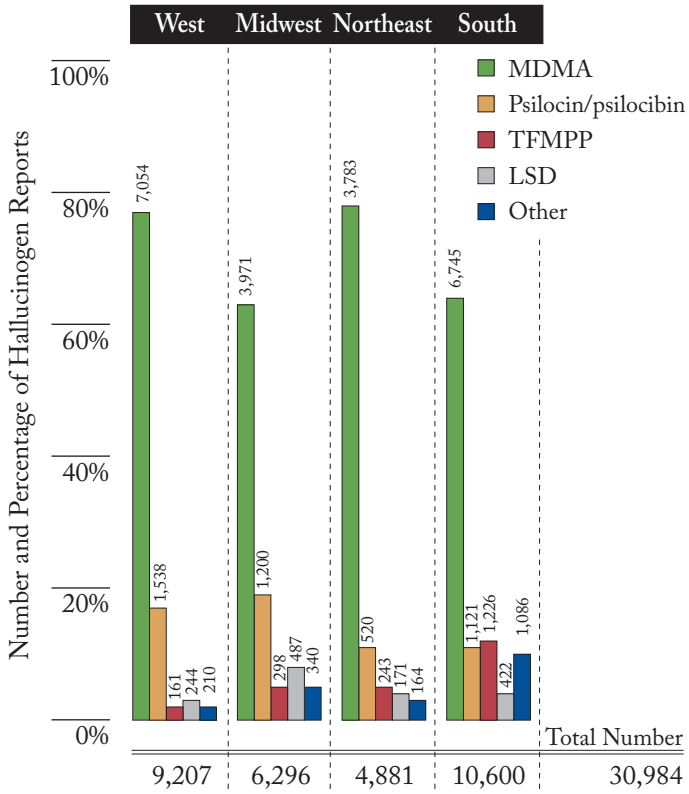
Table 2.3 ***Hallucinogens***
*Number and percentage of hallucinogen reports in the United States, 2010**

Hallucinogen Reports	Number	Percent
MDMA	21,553	69.56%
Psilocin/psilocibin	4,379	14.13%
TFMPP (noncontrolled)	1,928	6.22%
LSD	1,324	4.27%
DMT	322	1.04%
MDA	300	0.97%
MCPP (noncontrolled)	141	0.46%
2C-B	79	0.25%
2C-E	60	0.19%
5-MEO-DIPT	60	0.19%
Salvinorin-A/*Salvia divinorum* (noncontrolled)	55	0.18%
2C-I	54	0.17%
Other hallucinogens	729	2.35%
Total Hallucinogen Reports	30,984	100.00%
Total Drug Reports	1,505,223	

MDMA=3,4-Methylenedioxymethamphetamine
TFMPP=1-(3-Trifluoromethylphenyl)piperazine
DMT=N,N-dimethyltryptamine
MDA=3,4-Methylenedioxyamphetamine
MCPP=Meta-chlorphenylpiperazine
2C-B=4-Bromo-2,5 dimethoxyphenethylamine
2C-E=4-Ethyl-2,5 dimethoxyphenethylamine
5-MEO-DIPT=5-Methoxy-N,N-DiIsopropyltryptamine
2C-I=2,5-Dimethoxy-4-iodophenethylamine

Note: Percentages may not sum to 100% because of rounding.

Figure 2.3 Distribution of hallucinogen reports within region, 2010*



** Includes drug reports submitted to laboratories during the calendar year that were analyzed within three months of the reporting period.*


Psilocin Candy

[4] National Institute on Drug Abuse. (2001, March). *Hallucinogens and dissociative drugs, including LSD, PCP, ketamine, dextromethorphan* (NIH Publication Number 01-4209). Rockville, MD: U.S. Department of Health and Human Services, National Institutes of Health. [Available at http://www.drugabuse.gov/ResearchReports/hallucinogens/hallucinogens.html]

[5] Office of Applied Studies. (2010, September). *Results from the 2009 National Survey on Drug Use and Health: Detailed tables* [Table 1.39A]. Rockville, MD: Substance Abuse and Mental Health Services Administration. [Available at http://oas.samhsa.gov/WebOnly.htm]

2.4 Anabolic Steroids

Anabolic steroids are synthetically produced versions of testosterone, the naturally occurring male hormone. Anabolic steroids are legally available by prescription. However, purchasing through the Internet without a prescription and smuggling from Mexico and Europe, where often no prescription is required, are the two most common ways to obtain steroids for illegal use.[6]

During 2010, a total of 2,753 drug reports were identified as anabolic steroids (Table 2.4). The most commonly identified anabolic steroid was testosterone (41%), followed by methandrostenolone (11%), stanozolol (10%), nandrolone (9%), and trenbolone (8%). Testosterone accounted for 46% of anabolic steroids in the Midwest, 45% in the South, 34% in the Northeast, and 32% in the West (Figure 2.4). The Northeast reported the highest percentage of methandrostenolone (14%), while the South reported the highest percentage of nandrolone (11%).

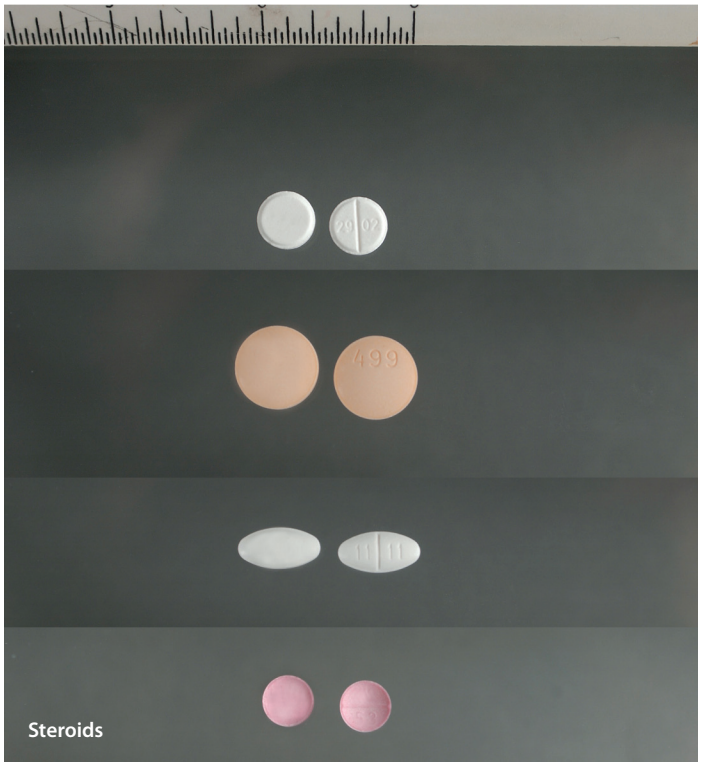
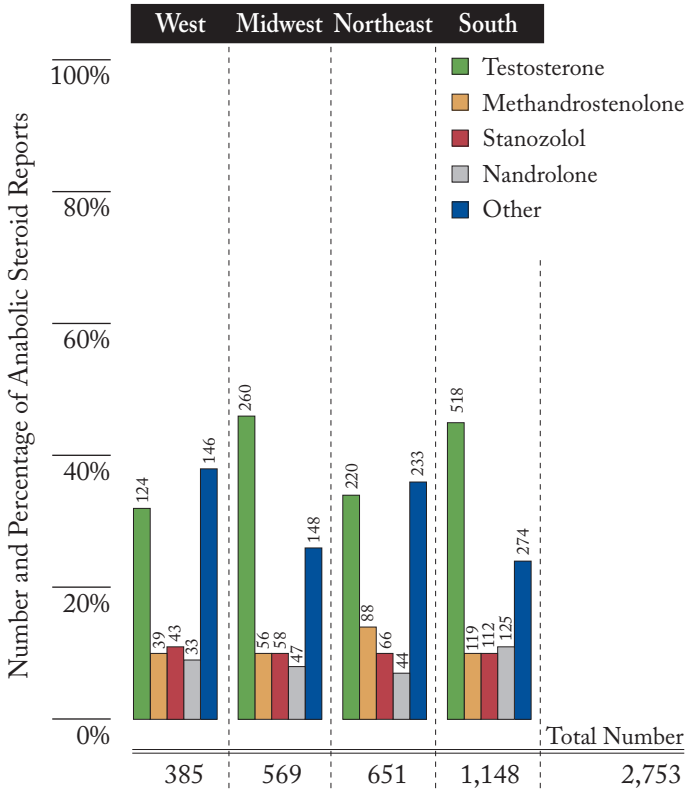


Table 2.4 *Anabolic Steroids*
*Number and percentage of anabolic steroid reports in the United States, 2010**

Anabolic Steroid Reports	Number	Percent
Testosterone	1,122	41.47%
Methandrostenolone	302	11.30%
Stanozolol	279	10.39%
Nandrolone	249	9.02%
Trenbolone	247	8.42%
Boldenone	119	3.94%
Oxandrolone	80	2.73%
Oxymetholone	73	2.73%
Drostanolone	38	1.44%
Mesterolone	21	0.61%
Methenolone	16	0.53%
Methyltestosterone	16	0.45%
Mestanolone	10	0.38%
4-Chlorodehydromethyltestosterone	6	0.30%
Other anabolic steroids	175	6.29%
Total Anabolic Steroid Reports	2,753	100.00%
Total Drug Reports	1,505,223	

Figure 2.4 Distribution of anabolic steroid reports within region, 2010*



* *Includes drug reports submitted to laboratories during the calendar year that were analyzed within three months of the reporting period.*

[6] U.S. Drug Enforcement Administration. (2011). *Steroids*. Retrieved June 29, 2011, from http://www.justice.gov/dea/concern/steroids_factsheet.html

2.5 Stimulants

Stimulants are sometimes referred to as "uppers" because they increase alertness, attention, and energy. Some stimulants are prescribed by doctors to treat obesity, narcolepsy, and attention deficit disorders. As drugs of abuse, stimulants are frequently taken to produce a sense of exhilaration, enhance self-esteem, improve mental and physical performance, increase activity, reduce appetite, and produce prolonged wakefulness.[7] The 2009 NSDUH showed that nearly 22 million persons aged 12 or older had used a stimulant nonmedically during their lifetimes, and more than three million had done so during the past year.[8]

A total of 171,868 stimulants were identified during 2010, accounting for about 11% of all drugs reported (Table 2.5). Methamphetamine accounted for 85% of all stimulant reports in 2010. Amphetamine and BZP each accounted for approximately 4%.

Methamphetamine accounted for 96% of stimulant reports in the West, 80% in the South, and 76% in the Midwest (Figure 2.5). In the Northeast, 25% of stimulants were reported as amphetamine and 26% were reported as BZP.

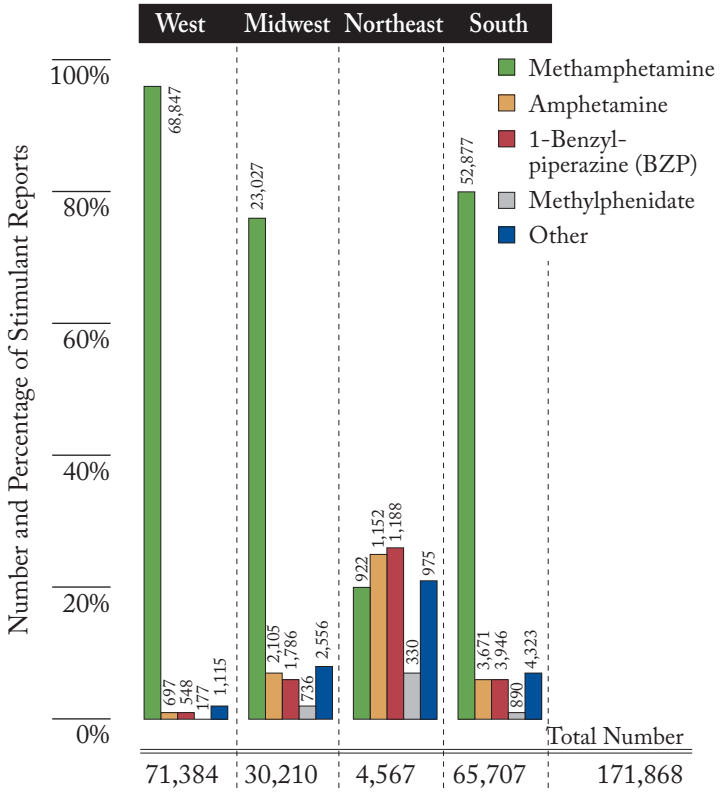

Methamphetamine

Table 2.5 ***Stimulants***
*Number and percentage of stimulant reports in the United States, 2010**

Stimulant Reports	Number	Percent
Methamphetamine	145,673	84.76%
Amphetamine	7,625	4.44%
1-Benzylpiperazine (BZP)	7,468	4.35%
Methylphenidate	2,133	1.24%
Trazodone (noncontrolled)	937	0.55%
Phentermine	622	0.36%
Lisdexamfetamine	611	0.36%
Ephedrine (listed chemical)	537	0.31%
Cathinone	400	0.23%
Amitriptyline (noncontrolled)	291	0.17%
Citalopram (noncontrolled)	274	0.16%
MDPV	271	0.16%
Sertraline (noncontrolled)	271	0.16%
Fluoxetine (noncontrolled)	235	0.14%
Mephedrone	203	0.12%
Other stimulants	4,317	2.51%
Total Stimulant Reports	171,868	100.00%
Total Drug Reports	1,505,233	

MDPV=3,4-Methylenedioxypyrovalerone
Note: Percentages may not sum to 100% because of rounding.

Figure 2.5 Distribution of stimulant reports within region, 2010*



** Includes drug reports submitted to laboratories during the calendar year that were analyzed within three months of the reporting period.*

[7] U.S. Drug Enforcement Administration. (2011). *Stimulants*. Retrieved June 29, 2011, from http://www.justice.gov/dea/concern/stimulants.html

[8] Office of Applied Studies. (2010, September). *Results from the 2009 National Survey on Drug Use and Health: Detailed tables* [Table 1.1A]. Rockville, MD: Substance Abuse and Mental Health Services Administration. [Available at http://oas.samhsa.gov/WebOnly.htm]

Section 3

DRUG PURITY

One of the functions of NFLIS is the system's ability to monitor and analyze drug purity data. NFLIS drug purity data reflect results verified by chemical analysis and therefore have a high degree of validity. In addition, the NFLIS purity data are timely, allowing for recent fluctuations in purity to be monitored and assessed.

Heroin

Some State and local forensic laboratories perform analyses to determine drug purity, but the majority do so only under special circumstances, such as a special request from law enforcement or a prosecutor. A small number of laboratories perform purity analyses on a more routine basis because of State laws that require the amount of "pure" heroin or cocaine in an item to be determined. During 2010, a total of 22 individual laboratories (including laboratories from five State systems) reported purity data to NFLIS.

It is important to consider laboratory policies for conducting purity analyses when comparing purity data across laboratories because these factors can have an impact on the results presented. For example, some laboratories typically limit purity analyses to larger seizures (e.g., powders over 200 grams or one kilogram). Other laboratories perform purity analyses on a more routine basis, including smaller cocaine and heroin seizures.

3.1 Heroin Purity

This section describes heroin purity analyses reported by the Texas Department of Public Safety (DPS) and the Austin (Texas) Police Department. The Texas DPS laboratory system typically conducts purity analyses for powders of 200 grams. The Austin laboratory conducts purity analyses to include residue.

The Texas DPS provided heroin purity data for 11 reports in 2010. The average heroin purity reported by the Texas DPS fluctuated substantially between 2002 and 2010. Part of this fluctuation may be due to the small number of data reports provided by the laboratory. The average heroin purity reported by the Texas DPS increased from 32% in 2002 to 54% in 2007. In 2008, the average heroin purity decreased to 15%, then increased to 21% in 2010 (Figure 3.1).

The Austin Police Department provided heroin purity for only four reports in 2010 compared with 17 reports in 2009, 14 in 2008, and 23 in 2007. The Austin laboratory reported an average heroin purity of 30% in 2007 and 34% in 2008, which decreased to 29% in 2009 and 28% in 2010 (Figure 3.1).

3.2 Cocaine Purity

Cocaine purity is presented for three NFLIS laboratories—the Texas DPS, the Austin (Texas) Police Department, and the Westchester County (New York) Forensic Sciences Laboratory (Valhalla).

The Texas DPS provided purity data for 141 cocaine reports in 2010. The average cocaine purity reported by the Texas DPS increased steadily from 60% in 2002 to 75% in 2006, but decreased from 71% in 2007 to 63% in 2008 and 2009 and to 60% in 2010 (Figure 3.2).

The Austin (Texas) Police Department provided cocaine purity for 78 reports in 2010. Between 2007 and 2010, the average cocaine purity reported by the laboratory decreased from 67% in 2007 to 48% in 2008 (Figure 3.2). In 2009 and 2010, the average purity reported by the Austin laboratory increased slightly to 49% and 50%, respectively.

The Westchester County (New York) Forensic Sciences Laboratory (Valhalla) conducts purity analyses to include residue. In 2010, the Westchester laboratory provided cocaine purity for 97 reports, with an average purity of 53%, a slight decrease from the average purity of 56% reported in 2009 (data not shown).

3.3 Methamphetamine Purity

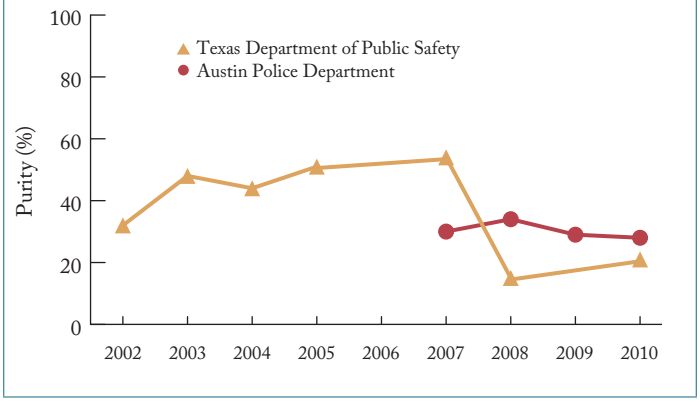
Methamphetamine purity is presented for the Texas DPS and the Austin (Texas) Police Department, as well as for the Sedgwick County (Kansas) Regional Forensic Science Center (Wichita).

The Texas DPS provided purity data for 94 methamphetamine reports in 2010. The average methamphetamine purity increased sharply from 12% in 2002 to 47% in 2005, then declined to 35% in 2006 before increasing steadily from 42% in 2007 to 65% in 2010 (Figure 3.3).

The Austin (Texas) Police Department provided methamphetamine purity data for 17 reports in 2010. The average methamphetamine purity reported by the Austin laboratory increased substantially between 2007 and 2008, from 28% to 54%, declined in 2009 to 49%, and increased in 2010 to 61% (Figure 3.3).

The Sedgwick County (Kansas) Regional Forensic Science Center (Wichita), which typically conducts purity analyses to include residue, provided methamphetamine purity data for 39 reports in 2010. The average methamphetamine purity reported by the Sedgwick County laboratory was 65% (data not shown).

Figure 3.1 Heroin purity, 2002–2010: The Texas Department of Public Safety and the Austin Police Department*



Note: Because of the small number of reports of purity, data for the Texas DPS for 2006 (two reports) and 2009 (one report) are not presented.

Figure 3.2 Cocaine purity, 2002–2010: The Texas Department of Public Safety and the Austin Police Department*

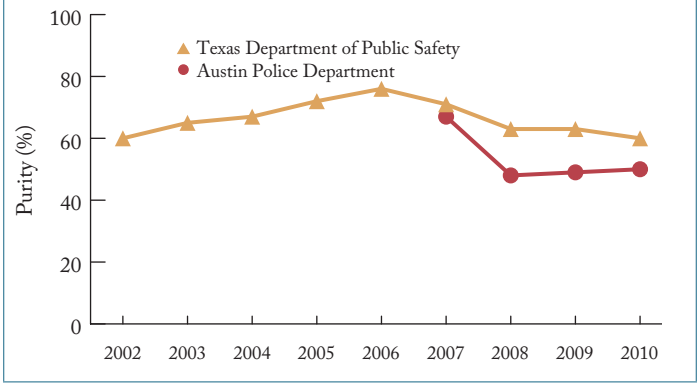
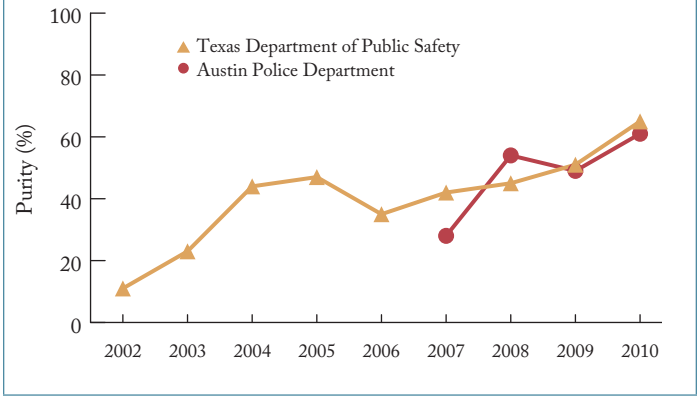


Figure 3.3 Methamphetamine purity, 2002–2010: The Texas Department of Public Safety and the Austin Police Department*



* *Includes drug reports submitted to laboratories during the calendar year that were analyzed within three months of the reporting period.*

Section 4

GIS Analyses: Methadone and Morphine Comparisons by Location, 2005 and 2010

One of the unique features of NFLIS is the ability to analyze and monitor, by the county of origin, variation in drugs reported by laboratories. By using Geographic Information System (GIS) analyses, NFLIS can provide information on drug seizure locations.

This section presents data at the State and county levels for the percentage of drug reports identified as methadone and morphine at two points in time—2005 and 2010. Reports of methadone and morphine increased in NFLIS between 2005 and 2010. In both years, these two pharmaceuticals were in the NFLIS top 25 most frequently identified drugs.

The GIS data presented here are based on information provided to the forensic laboratories by the submitting law enforcement agencies (Figures 4.1 to 4.8). The information submitted by law enforcement includes the ZIP Code or county of origin associated with the drug seizure incident or the name of the submitting law enforcement agency. When a ZIP Code or county of origin is unavailable, the drug seizure or incident is assigned to the same county as the submitting law enforcement agency. If the submitting agency is unknown, the seizure or incident is assigned to the county in which the laboratory completing the analyses is located.

It is important to note that these data may not include all drug items seized at the State and county levels. Instead, these data represent only those items that were submitted and analyzed by forensic laboratories. In addition, some laboratories within several States are not currently reporting data to NFLIS, and their absence may affect the relative distribution of drugs seized and analyzed. Nevertheless, these data can serve as an important source for identifying abuse and trafficking trends and patterns across and within States.

Figure 4.1 Percentage of total drug reports identified as methadone, by State, 2005*

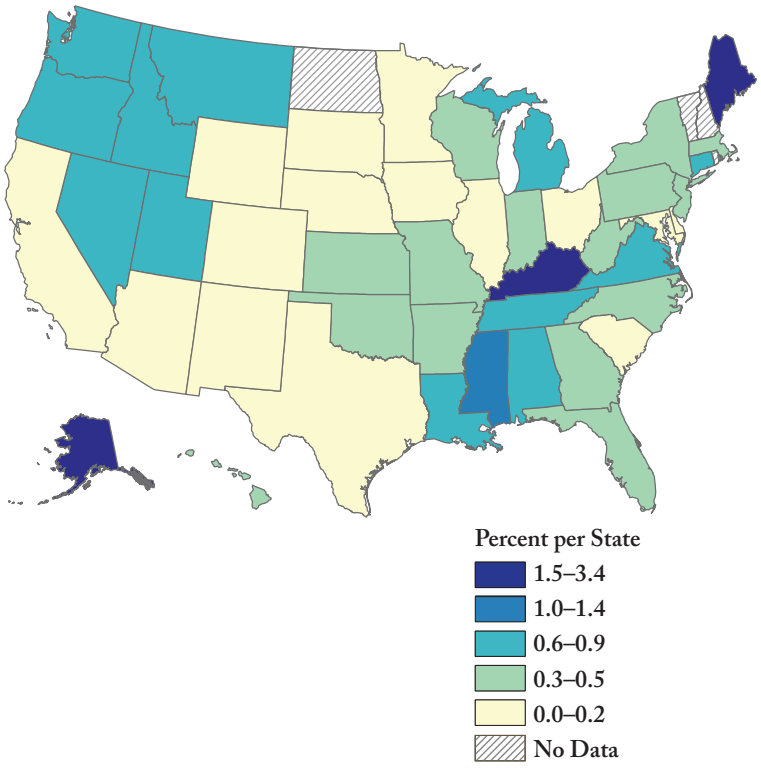


Figure 4.2 Percentage of total drug reports identified as methadone, by State, 2010*

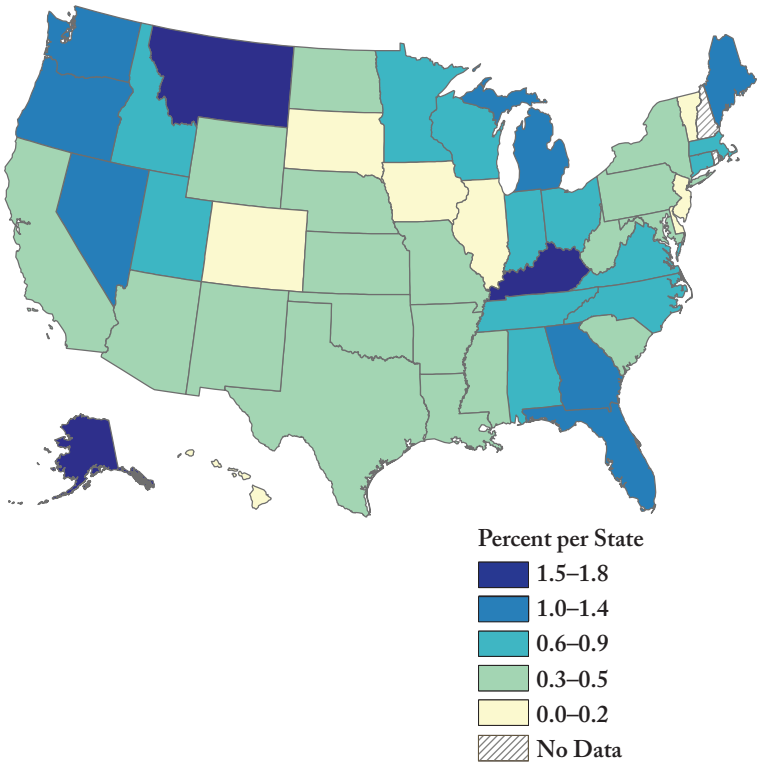


Figure 4.3 Percentage of total drug reports identified as morphine, by State, 2005*

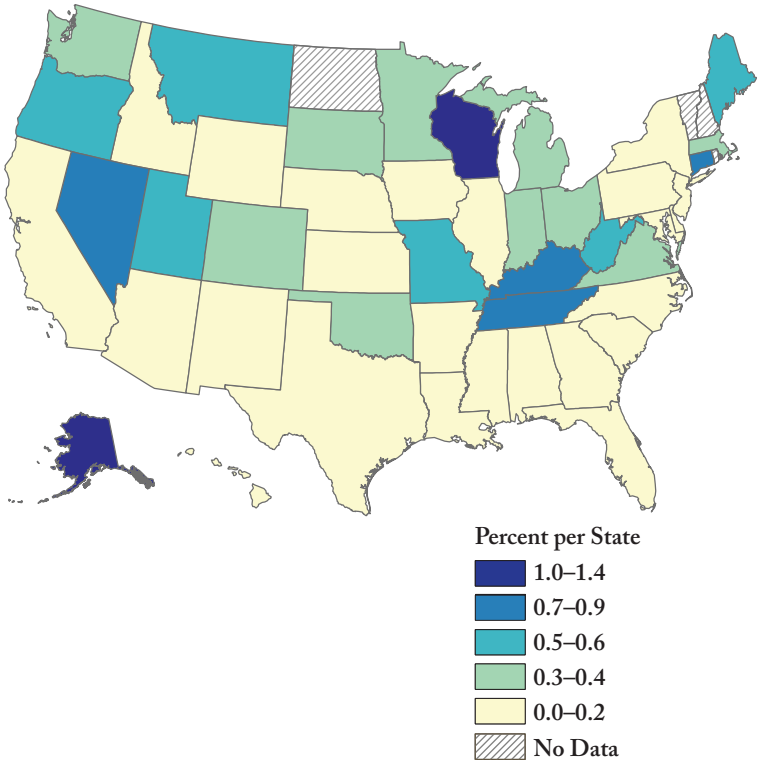
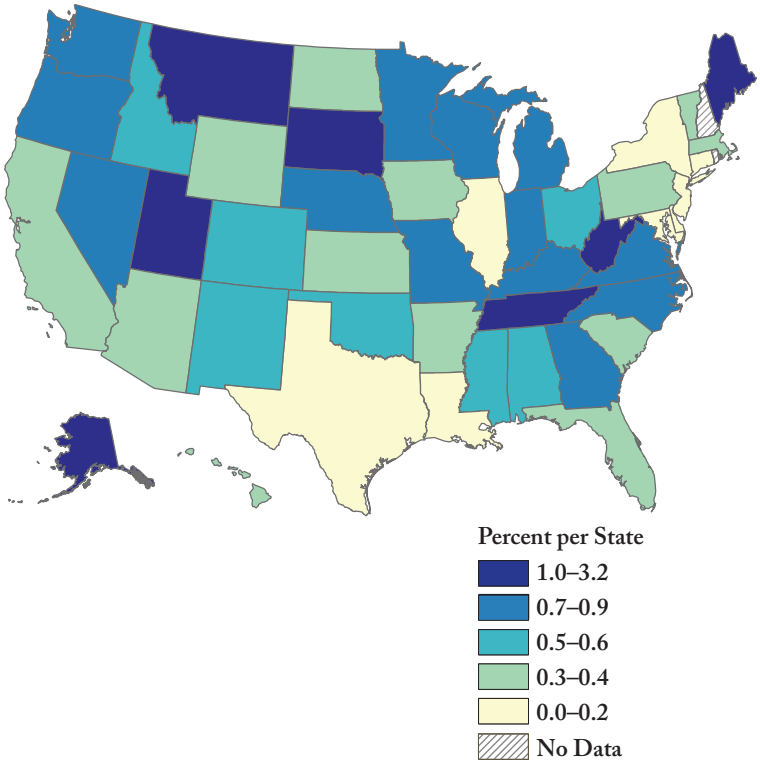


Figure 4.4 Percentage of total drug reports identified as morphine, by State, 2010*



** Includes drug reports submitted to State and local laboratories during the calendar year that were analyzed within three months of the reporting period.*

Figure 4.5 Percentage of total drug reports identified as methadone in Washington, by county, 2005*

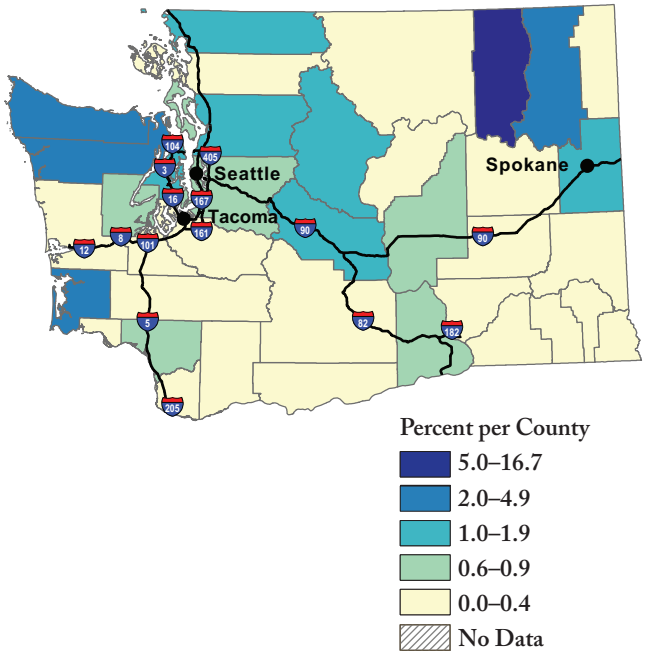


Figure 4.6 Percentage of total drug reports identified as methadone in Washington, by county, 2010*

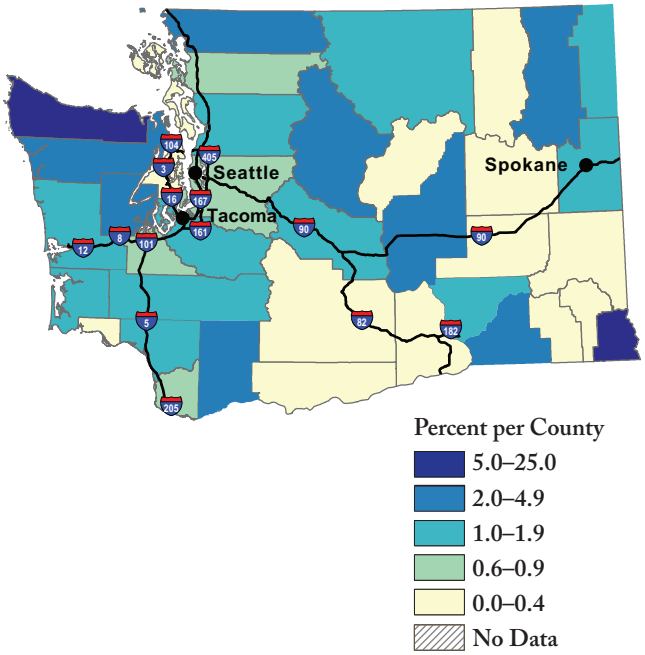


Figure 4.7 Percentage of total drug reports identified as morphine in Tennessee, by county, 2005*

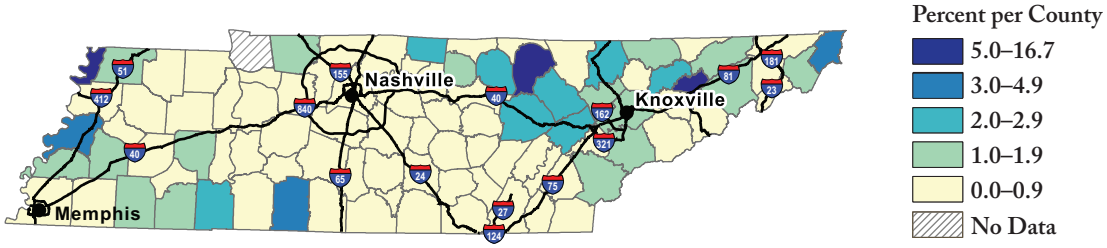
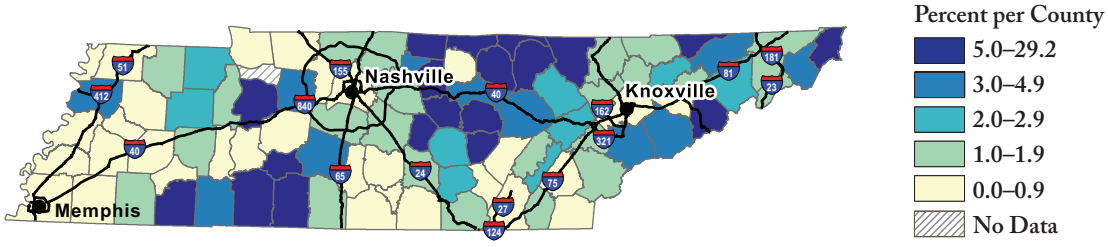


Figure 4.8 Percentage of total drug reports identified as morphine in Tennessee, by county, 2010*



** Includes drug reports submitted to State and local laboratories during the calendar year that were analyzed within three months of the reporting period.*

Section 5

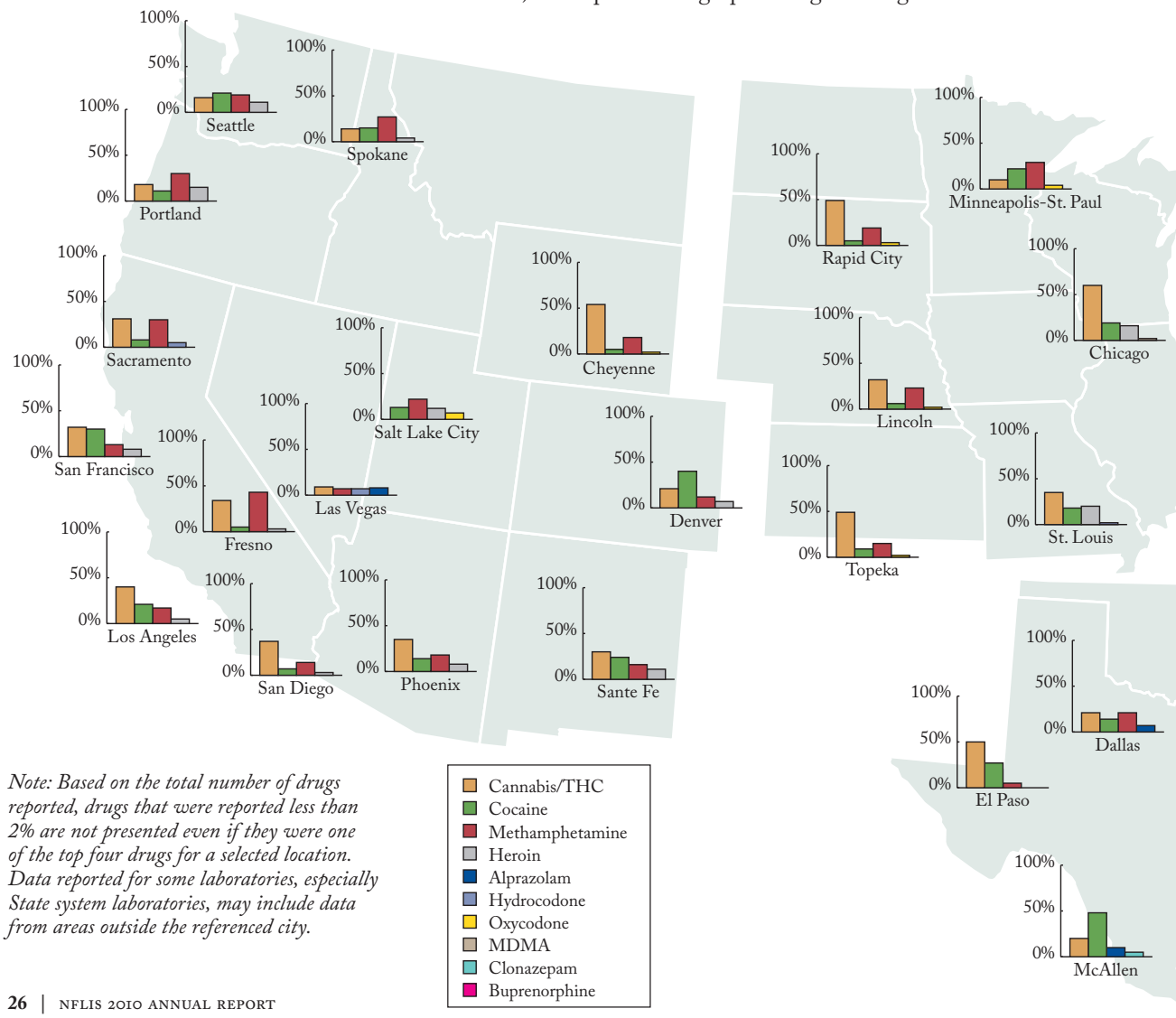
DRUGS IDENTIFIED SELECTED U.S. CITIES

NFLIS can be used to monitor drugs reported by forensic laboratories across the country, including large U.S. cities. This section presents drug analysis results of all drug reports (up to three per laboratory item) submitted to State and local laboratories during 2010 and analyzed by March 31, 2011.

This section presents data for the four most common drugs reported by NFLIS laboratories in selected cities. The following results highlight geographic differences in the types of drugs abused and trafficked, such as the higher levels of methamphetamine reporting on the West Coast and cocaine reporting on the East Coast.

Nationally, 21% of all drugs in NFLIS were identified as cocaine (Table 1.1). Cities east of the Mississippi River that reported the highest levels of cocaine included Columbia (71%), Miami (58%), Orlando (44%), Tampa (40%), Atlanta (36%), Augusta (35%), Raleigh (35%), New York (34%), and Philadelphia (31%). Among other cities, McAllen (48%), Denver (40%), and San Francisco (30%) also reported a high percentage of drugs identified as cocaine.

The highest percentages of methamphetamine were reported in cities located in the West and Midwest, such as Fresno (43%), Spokane (37%), Portland (30%), Sacramento (30%), and Minneapolis-St. Paul (29%). Oklahoma City (25%), Atlanta (22%), and Dallas (22%), cities located in the South, also reported a high percentage of drugs identified as



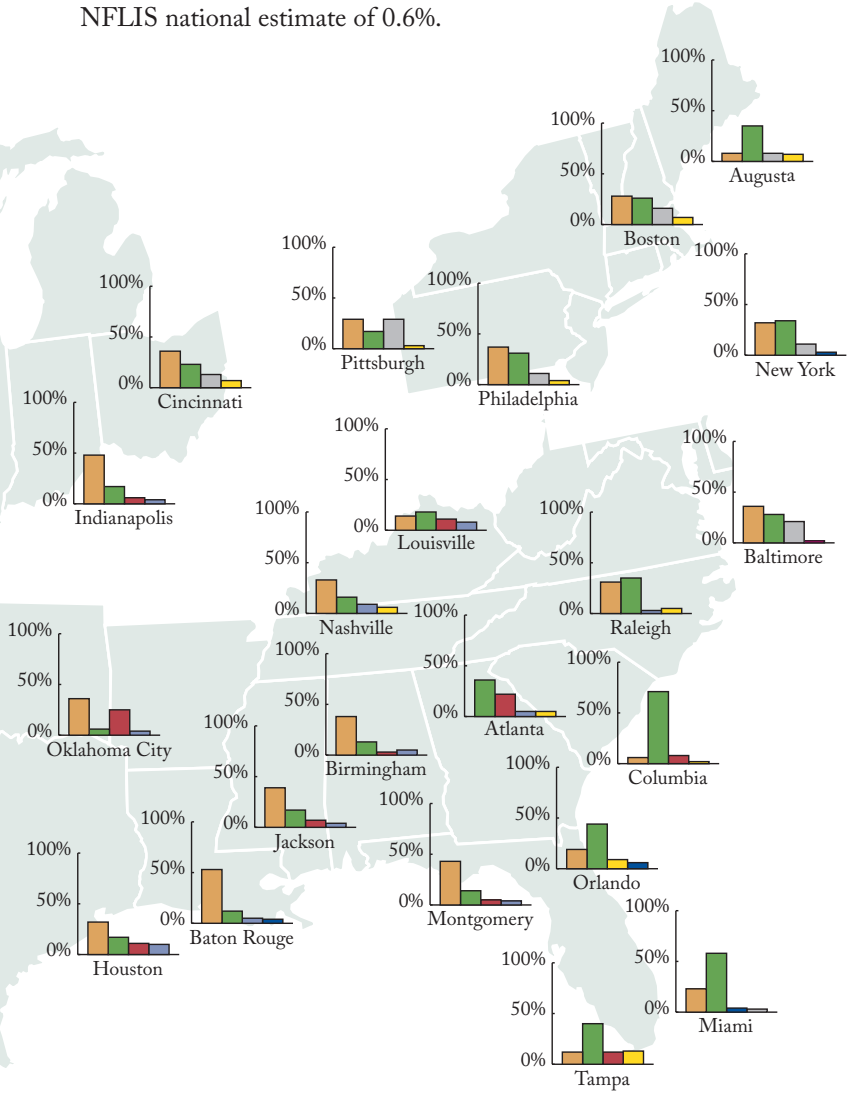
Note: Based on the total number of drugs reported, drugs that were reported less than 2% are not presented even if they were one of the top four drugs for a selected location. Data reported for some laboratories, especially State system laboratories, may include data from areas outside the referenced city.

BY LABORATORIES IN

methamphetamine. Nationally, 9% of drugs in NFLIS were identified as methamphetamine.

High percentages of heroin were reported in Northeastern cities, such as Pittsburgh (29%) and Baltimore (21%), although St. Louis (20%), Boston (16%), Chicago (16%), Portland (15%), Cincinnati (13%), and Salt Lake City (12%) also reported a high percentage of drugs identified as heroin. Nationally, 6% of all drugs in NFLIS were identified as heroin.

Among controlled prescription drugs, the highest percentages of oxycodone were reported in Tampa (13%), Orlando (9%), Augusta (7%), Boston (7%), Cincinnati (7%), and Salt Lake City (7%). Nationally, 4% of drugs in NFLIS were identified as oxycodone. Southern cities, such as Houston (10%), Nashville (9%), and Louisville (8%), reported the highest percentages of hydrocodone, although Las Vegas (7%), Atlanta (5%), Baton Rouge (5%), Birmingham (5%), and Sacramento (5%) also reported hydrocodone at a higher percentage than the NFLIS national estimate of 3%. Cities that reported percentages of alprazolam that were higher than the NFLIS national estimate of 3% included McAllen (10%), Las Vegas (8%), Dallas (7%), Orlando (6%), Baton Rouge (4%), and Miami (4%). McAllen (5%) reported the highest percentage of clonazepam compared with the NFLIS national estimate of 0.6%.



Selected Laboratories
Atlanta (Georgia State Bureau of Investigation—Decatur Laboratory)
Augusta (Maine Department of Human Services)
Baltimore (Baltimore City Police Department)
Baton Rouge (Louisiana State Police)
Birmingham (Alabama Department of Forensic Sciences—Birmingham Laboratory)
Boston (Massachusetts Department of Public Health—Boston Laboratory)
Cheyenne (Wyoming State Crime Laboratory)
Chicago (Illinois State Police—Chicago Laboratory)
Cincinnati (Hamilton County Coroner's Office)
Columbia (South Carolina Law Enforcement Division—Columbia Laboratory)
Dallas (Texas Department of Public Safety—Garland Laboratory)
Denver (Denver Police Department Crime Laboratory)
El Paso (Texas Department of Public Safety—El Paso Laboratory)
Fresno (California Department of Justice—Fresno Laboratory and Fresno County Sheriff's Forensic Laboratory)
Houston (Texas Department of Public Safety—Houston Laboratory and Harris County Medical Examiner's Office)
Indianapolis (Indianapolis-Marion County Forensic Laboratory)
Jackson (Mississippi Department of Public Safety—Jackson Laboratory and Jackson Police Department Crime Laboratory)
Las Vegas (Las Vegas Metropolitan Police Crime Laboratory)
Lincoln (Nebraska State Patrol Criminalistics Laboratory—Lincoln Laboratory)
Los Angeles (Los Angeles Police Department and Los Angeles County Sheriff's Department)
Louisville (Kentucky State Police—Louisville Laboratory)
McAllen (Texas Department of Public Safety—McAllen Laboratory)
Miami (Miami-Dade Police Department Crime Laboratory)
Minneapolis-St. Paul (Minnesota Bureau of Criminal Apprehension—Minneapolis Laboratory)
Montgomery (Alabama Department of Forensic Sciences—Montgomery Laboratory)
Nashville (Tennessee Bureau of Investigation—Nashville Laboratory)
New York (New York City Police Department Crime Laboratory)
Oklahoma City (Oklahoma State Bureau of Investigation—Oklahoma City Laboratory)
Orlando (Florida Department of Law Enforcement—Orlando Laboratory)
Philadelphia (Philadelphia Police Department Forensic Science Laboratory)
Phoenix (Phoenix Police Department)
Pittsburgh (Allegheny County Coroner's Office)
Portland (Oregon State Police Forensic Services Division—Portland Laboratory)
Rapid City (Rapid City Police Department)
Raleigh (North Carolina State Bureau of Investigation—Raleigh Laboratory)
Sacramento (Sacramento County District Attorney's Office)
Salt Lake City (Utah State Crime Laboratory—Salt Lake City Laboratory)
San Diego (San Diego Police Department)
San Francisco (San Francisco Police Department)
Santa Fe (New Mexico Department of Public Safety—Santa Fe Laboratory)
Seattle (Washington State Patrol—Seattle Laboratory)
Spokane (Washington State Patrol—Spokane Laboratory)
St. Louis (St. Louis Police Department)
Tampa (Florida Department of Law Enforcement—Tampa Laboratory)
Topeka (Kansas Bureau of Investigation—Topeka Laboratory)

Appendix A — National Estimates 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, and imputation procedures. RTI International, under contract to the DEA, began implementing NFLIS in 1997. Results from a 1998 survey (updated in 2002, 2004, and 2008) 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 representative 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, 2010, and December 31, 2010, and *analyzed* by March 31, 2011. 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 92% 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.[9] However, as the number of nonsampled laboratories reporting to NFLIS increased,[10] 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. Imputation of monthly case counts are created using the following ratio (r_L):

$$r_L = \frac{\sum_{m \in \tilde{R}_L} c_{L,m}}{\sum_{m \in \tilde{R}_L} c_{.,m}},$$

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.

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

[10] In 2009, for example, out of 110 nonsampled laboratories and laboratory systems, 74 (or 67%) 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.

$$s_L = \frac{\sum_{m \in \tilde{R}_L} i_{L,m}}{\sum_{m \in \tilde{R}_L} c_{L,m}},$$

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 2008.

When the NFLIS sample was originally drawn, two stratifying variables were used: 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 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[11] represented by the individual laboratory. This step takes advantage of the original PPS sample design, which provides precise estimates as long as the number of drug-specific case estimates and report estimates are correlated with the overall caseload and item load.[12]

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.[13]

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

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

[13] 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 certainty strata would get the same weight.

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 = sum of the case (item) counts of all sampled laboratories and laboratory systems within the stratum, excluding the volunteer stratum; and
- D = sum of the case (item) counts for all sampled reporting laboratories and laboratory systems within the same stratum.

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.[14] 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 tends 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, suppression rules were 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

A trend analysis was performed on the January 2001 through December 2010 national and regional estimates for selected drug reports. Typically, models test for mean differences; however, the national and regional estimates are based on total drug report counts. To work around this challenge, a bootstrapping technique was employed. (Bootstrapping is an iterative technique used to estimate variances when standard variance estimation procedures cannot be used.[15]) All statistical tests were performed at the 95% confidence level ($p < .05$). In other words, there is a < 5% probability of detecting a statistically significant linear trend when no linear trend exists.

The bootstrapping method used for trend analysis has four steps. First, estimates and standard errors are obtained for all 10 annual periods beginning with January–December 2001 and ending with January–December 2010. Second, a background distribution that assumes no trend is generated using a simulation. For each annual period, 1,000 values are drawn from a normal distribution with a mean equal to the mean of all 10 annual estimates and a standard deviation equal to the actual standard error from the first step. Third, the slope of the least-squares trend line is calculated for each of the 1,000 simulated time series. Fourth, the slope of the observed least-squares trend line is calculated. If the observed slope is ≥ 975 of the 1,000 simulated slopes, a significant increasing trend is indicated; and if the observed slope is < 975 of the 1,000 simulated slopes, a significant decreasing trend is indicated. Otherwise, the data do not support a significant linear trend.

Note that the trend analyses test for a linear trend is based on a time series of semiannual estimates. The tests do not compare the most recent semiannual estimate with the estimate for the first half of 2001. Instead, the tests follow the trend across all time points. The trend line may not fit the time series particularly well because the actual time series shows a curvilinear pattern. For example, if the estimates increased drastically during the early years of the time series but decreased in recent years, the linear trend test may detect an increasing trend, thus oversimplifying the actual pattern. For the regional trends, the estimated drug reports are standardized to the most recent regional population totals for persons aged 15 years or older.

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[14] See footnote 12.

[15] For more information on this technique, see Chernick, M. R. (1999). *Bootstrap methods: A practitioner's guide*. New York: Wiley.

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 (10 sites)	✓
AR	State	Arkansas State Crime Laboratory	✓
AZ	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	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 (2 sites)	✓
	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 (5 sites)	✓
	Local	Aurora Police Department	✓
	Local	Colorado Springs Police Department	✓
	Local	Denver Police Department Crime Laboratory	✓
	Local	Grand Junction Police Department	✓
	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 (8 sites)	✓
	Local	Broward County Sheriff's Office (Fort Lauderdale)	✓
	Local	Indian River Crime Laboratory (Fort Pierce)	✓
	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 (8 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 (8 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 (4 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 Department of Public Health (2 sites)	✓
	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)	✓
ME	State	Maine Department of Human Services	✓
MI	State	Michigan State Police (7 sites)	✓
	Local	Detroit Police Department*	✓
MN	State	Minnesota Bureau of Criminal Apprehension (2 sites)	✓
	Local	St. Paul Police Department	✓
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	✓
ND	State	North Dakota Crime Laboratory Division	✓
NE	State	Nebraska State Patrol Criminalistics Laboratory (2 sites)	✓
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 (2 sites)	✓
	Local	Albuquerque Police Department	✓
NV	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	Monroe County Department of Public Safety (Rochester)	✓
	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	Hamilton County Coroner's Office (Cincinnati)	✓
	Local	Lake County Regional Forensic Laboratory (Painesville)	✓
	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 (6 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	Spartanburg Police Department	✓
SD	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	Jefferson County Sheriff's Regional Crime Laboratory (Beaumont)	✓
	Local	Pasadena Police Department	✓
UT	State	Utah State Crime Laboratory (4 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)	✓
WV	State	West Virginia State Police	✓
WY	State	Wyoming State Crime Laboratory	✓
PR	Territory	Puerto Rico Crime Laboratory (4 sites)	✓

This list identifies laboratories that are participating in and reporting to NFLIS as of July 2011.

* The Detroit Police Department currently reports data via the Michigan State Police.

**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 can improve our understanding of the Nation's illicit drug problem. NFLIS serves as a critical 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 Drug Abuse Warning Network (DAWN), 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 and 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, other Federal drug control agencies, and researchers—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 State and local forensic laboratories, as well as data from the DEA's STRIDE, which includes data from DEA laboratories across the country. The STRIDE 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.
- For results presented in Sections 2 through 5, the absolute and relative frequency of analyzed results for individual drugs can, in part, be a function of laboratories that are participating in NFLIS.
- 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 related 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.

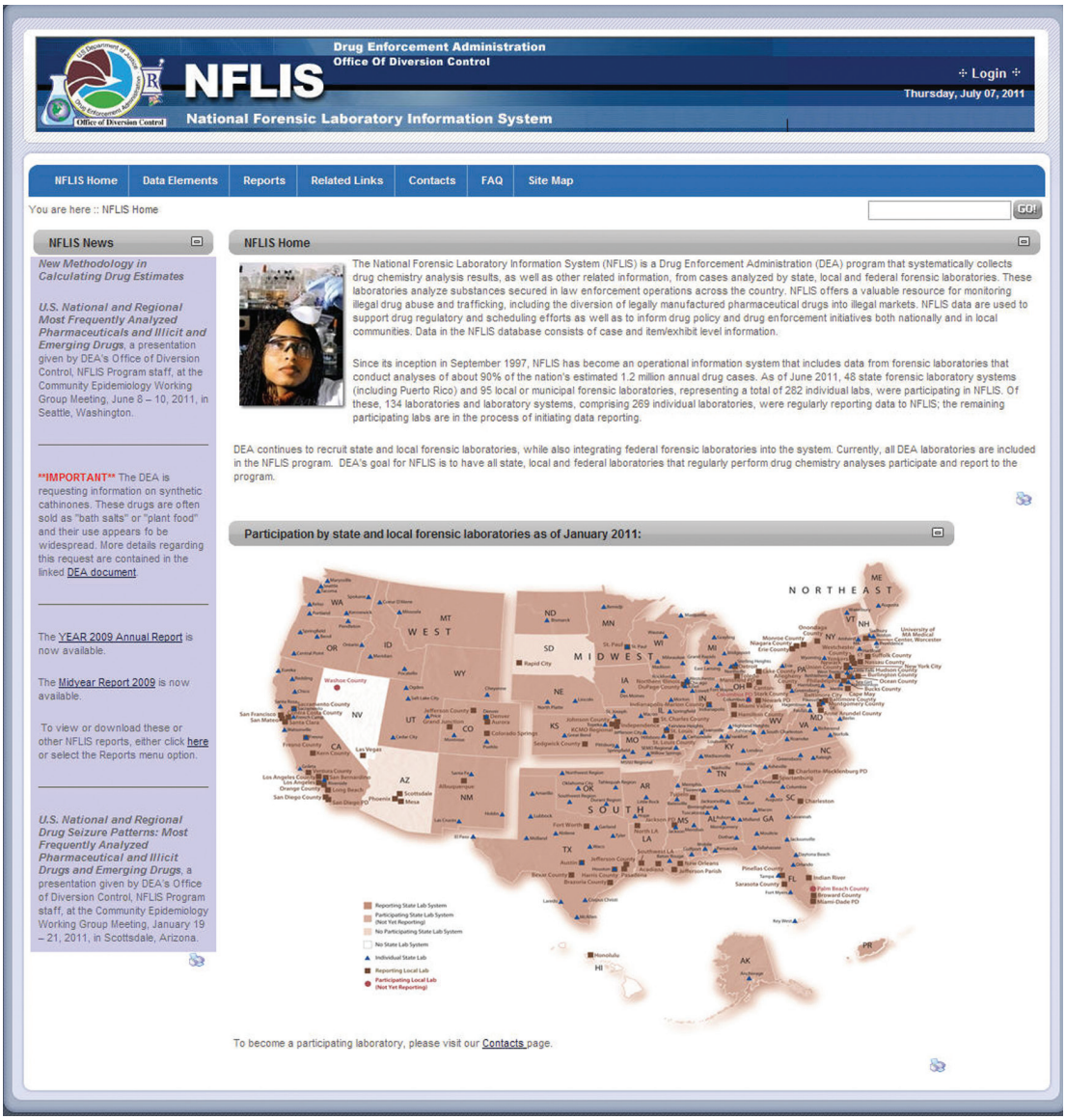
Appendix D NFLIS Data Query System

Available since September 2001, the NFLIS website (https://www.nflis.deadiversion.usdoj.gov/) is an important feature of the NFLIS program. It is the key resource through which the Drug Enforcement Administration (DEA) provides significant NFLIS-related information and provides secure access to the NFLIS Data Query System (DQS), formerly the Interactive Data Site or IDS.

The public site is frequently updated with NFLIS-related news, including information relevant to drug control efforts and DEA participation in conferences. Also available are downloadable versions of published NFLIS reports, links to other websites, and contact information to key NFLIS staff. Recently added public features include links to mass spectral libraries, such as the Scientific Working Group for the Analysis of Seized Drugs (SWGDRUG) library at http://www.swgdrug.org/ and the ForensicDB library at https://www.forensicdb.org/.

The private site requires user accounts, and security roles are assigned to manage access to its features, including the Map Library, NFLIS Data Entry Application, and DQS. The DQS is a distinct resource for NFLIS reporting laboratories to run customizable queries on their own case-level data and on aggregated metropolitan, State, regional, and national data. Recently added DQS features include the geospatial query for dynamically creating drug-related maps (DEA only) and the new drug category queries for synthetic cannabinoids and synthetic cathinones.

To obtain information about NFLIS participation or the DQS, please visit the NFLIS website at https://www.nflis.deadiversion.usdoj.gov/.



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Obtaining Copies of This Publication

Electronic copies of this publication can be downloaded from the NFLIS website at **https://www.nflis.deadiversion.usdoj.gov**.

American Association of Poison Control Centers (AAPCC) Disclaimer and Statement on AAPCC Data

The content of this report does not necessarily reflect the opinions or conclusions of the American Association of Poison Control Centers.

The American Association of Poison Control Centers (AAPCC; **http://www.aapcc.org**) maintains the national database of information logged by the country's 57 Poison Control Centers (PCCs). Case records in this database are from self-reported calls: they reflect only information provided when the public or healthcare professionals report an actual or potential exposure to a substance (e.g., an ingestion, inhalation, or topical exposure, etc.), or request information/educational materials. Exposures do not necessarily represent a poisoning or overdose. The AAPCC is not able to completely verify the accuracy of every report made to member centers. Additional exposures may go unreported to PCCs and data referenced from the AAPCC should not be construed to represent the complete incidence of national exposures to any substance(s).

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