NFLIS

NATIONAL FORENSIC LABORATORY INFORMATION SYSTEM

NFLIS-DRUG **2022** ANNUAL REPORT

DRUG

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

Contents

Special NFLIS Announcement
Updated Reporting on Isomers

NFLIS-Drug has updated how it reports on isomers. Previously, each identified isomer was listed individually in the tables. For example, in the 2021 Annual Report, fluorofentanyl and *para*-fluorofentanyl were both included in Table 1.1 as individual drugs. Increasingly, laboratories report substances to NFLIS-Drug as specific positional isomers and as undetermined or unspecified positional isomers. The number of specific isomers for emerging drugs has grown in recent years to the point that continuing to list them individually in the tables obscures the true estimate of affected drugs compared with other drugs and prevents other prevalent drugs from being included in the tables. For these reasons, beginning with the 2022 Midyear Report, NFLIS-Drug now combines reports for all positional isomers of a drug into a single listing for the unspecified isomer with an explanation of which specific isomers are included in the total.

Highlights

- From January 1, 2022, through December 31, 2022, an estimated 648,738 distinct drug cases were submitted to State and local laboratories in the United States and analyzed by March 31, 2023. From these cases, an estimated 1,181,750 drug reports were identified.

- Methamphetamine was the most frequently identified drug (341,049 reports) in 2022, followed by cocaine (169,972 reports), fentanyl (163,201 reports), cannabis/THC (146,631 reports), and heroin (41,227 reports). These five most frequently identified drugs accounted for approximately 73% of all drug reports.

- Nationally, methamphetamine reports increased from 2008 through 2019, decreased through 2020, increased again through 2021, then decreased through 2022. Cocaine reports decreased from 2008 through 2014 and again from 2019 to 2020, then remained steady through 2022. Fentanyl reports remained steady from 2008 to 2013, then increased significantly ($p < .05$) from 2014 through 2022. Cannabis/THC reports slightly increased from 2008 to 2009, then decreased through 2022. Heroin reports increased from 2008 through 2015, followed by a steady decrease through 2022.

- At the national level, fluorofentanyl reports dramatically increased from 2015 to 2022. Oxycodone reports increased significantly from 2008 to 2010, then steadily declined through 2022. Alprazolam reports showed an overall increase from 2008 to 2010 and another increase from 2014 to 2016, then decreased through 2022. Reports of buprenorphine increased from 2008 to 2019, then decreased through 2022. Psilocin/psilocybin generally decreased from 2010 through 2016, then more than doubled from 2016 through 2022.[*]

- From 2021 to 2022, national reports of fentanyl, cocaine, fluorofentanyl, and psilocin/psilocybin increased significantly, while national reports of methamphetamine, cannabis/THC, heroin, alprazolam, and buprenorphine decreased significantly.

- From 2021 to 2022, methamphetamine, heroin, and alprazolam reports decreased significantly across all regions. Fluorofentanyl reports increased significantly in all regions, while reports of psilocin/psilocybin increased in all regions except the West, where reports decreased significantly. Cocaine reports increased significantly in the Midwest and Northeast but decreased significantly in the West. Fentanyl reports increased significantly in the West and South but decreased significantly in the Northeast. Cannabis/THC reports decreased significantly in the Northeast, South, and West, while buprenorphine reports decreased significantly in the South and West, and oxycodone reports decreased significantly in the West only.

- In 2022, fentanyl accounted for 62% of identified narcotic analgesic reports, while alprazolam accounted for 31% of identified tranquilizer and depressant reports. Among identified synthetic cannabinoids, MDMB-en-PINACA accounted for 33% of reports.

[*] Some laboratories report psilocin and psilocybin together; others report them separately.

Common Drug Names Used in This Publication

| NFLIS Substance Name	Chemical Name
4-ANPP	4-anilino-*N*-phenethyl-4-piperidine
4F-MDMB-BUTICA	methyl 2-(1-(4-fluorobutyl)-1*H*-indole-3-carboxamido)-3,3-dimethylbutanoate
4F-MDMB-BUTINACA	methyl 2-(1-(4-fluorobutyl)-1*H*-indazole-3-carboxamido)-3,3-dimethylbutanoate
5F-ADB	methyl 2-(1-(5-fluoropentyl)-1*H*-indazole-3-carboxamido)-3,3-dimethylbutanoate
5F-MDMB-PICA	methyl 2-(1-(5-fluoropentyl)-1*H*-indole-3-carboxamido)-3,3-dimethylbutanoate
ADB-4en-PINACA	*N*-(1-amino-3,3-dimethyl-1-oxobutan-2-yl)-1-(pent-4-en-1-yl)-1*H*-indazole-3-carboxamide
ADB-5Br-BUTINACA	*N*-(1-carbamoyl-2,2-dimethylpropyl)-5-bromo-1-butyl-1*H*-indazole-3-carboxamide
ADB-BUTINACA	*N*-(1-amino-3,3-dimethyl-1-oxobutan-2-yl)-1-butyl-1*H*-indazole-3-carboxamide
ADB-FUBIATA	*N*-(1-amino-3,3-dimethyl-1-oxobutan-2-yl)-1-(4-fluorobenzyl)-1*H*-indole-3-acetamide
ADB-HEXINACA	*N*-(1-amino-3,3-dimethyl-1-oxobutan-2-yl)-1-hexyl-1*H*-indazole-3-carboxamide
alpha-PHP	alpha-pyrrolidinohexanophenone
alpha-PiHP	alpha-pyrrolidinoisohexanophenone
BZO-HEXOXIZID	*N'*-[(3Z)-1-hexyl-2-oxo-1,2-dihydro-3*H*-indol-3-ylidene]benzohydrazide
BZO-POXIZID	*N'*-[(3Z)-1-pentyl-2-oxo-1,2-dihydro-3*H*-indol-3-ylidene]benzohydrazide
CH-PIATA	*N*-cyclohexyl-2-(1-pentylindol-3-yl)acetamide
FUB-AMB	methyl 2-(1-(4-fluorobenzyl)-1*H*-indazole-3-carboxamido)-3-methylbutanoate
MDA	3,4-methylenedioxyamphetamine
MDMA	3,4-methylenedioxymethamphetamine
MDMB-4en-PINACA	methyl 3,3-dimethyl-2-(1-(pent-4-en-1-yl)-1*H*-indazole-3-carboxamido)butanoate
Phenethyl 4-ANPP	*N*-phenyl-*N*,1-bis(2-phenylethyl)piperidin-4-amine

INTRODUCTION

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

NFLIS-Drug is a comprehensive information system that includes data from forensic laboratories that handle the Nation's drug analysis cases. The NFLIS-Drug participation rate, defined as the percentage of the national drug caseload represented by laboratories that have joined NFLIS-Drug, is currently more than 98%. NFLIS-Drug includes 50 State systems and 111 local or municipal laboratories/laboratory systems, representing a total of 284 individual laboratories. The NFLIS-Drug database also includes Federal data from DEA and U.S. Customs and Border Protection laboratories.

This publication presents the results of drug cases *submitted* to State and local laboratories from January 1, 2022, through December 31, 2022, that were *analyzed* by March 31, 2023. Data from Federal laboratories for the same period are also included in this publication. The data presented in this publication include *all* drugs mentioned in the laboratories' reported drug items.

Section 1 of this publication presents national and regional estimates for the 25 most frequently identified drugs, as well as national and regional trends from January 2008 through December 2022. Section 2 presents estimates of specific drugs by drug category. NFLIS recently changed how it reports on isomers. NFLIS now combines reports for all positional isomers of a drug into a single listing for the unspecified isomer with an explanation of which specific isomers are included in the total (see Special NFLIS Announcement: Updated Reporting on Isomers). All estimates are based on the NEAR approach (National Estimates Based on All Reports). A detailed description of the methods used in preparing these estimates is provided in the current NFLIS Statistical Methodology publication at https://www.nflis.deadiversion.usdoj.gov/nflisdata/docs/NFLIS-2017-StatMethodology.pdf.
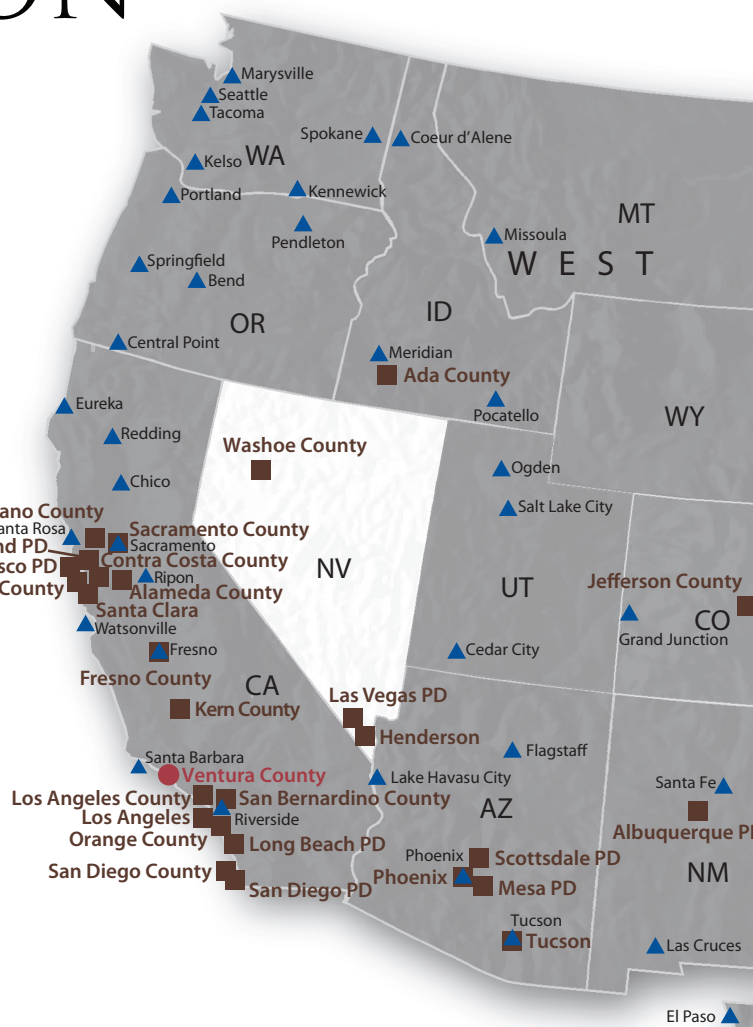
Sections 3 and 4 present actual reported data rather than national and regional estimates; all data reported by NFLIS-Drug State and local laboratories are included. Section 3 presents a geographic information system analysis of xylazine and psilocin/psilocybin reports by State and by county for selected States. Section 4 presents drugs reported by laboratories in selected cities across the country.

Appendix A presents annual national and regional trends for 2001 through 2022. Appendix B includes a list of NFLIS-Drug participating and reporting laboratories. The benefits and limitations of NFLIS-Drug are presented in Appendix C. A key area of improvement for NFLIS-Drug includes ongoing enhancements to the NFLIS website and the NFLIS-Drug Data Query System (DQS); Appendix D summarizes these DQS enhancement activities and provides details on the updated NFLIS website.

N O R T H E A S T

M I D W E S T

S O U T H

Reporting labels (partial map labels):

ND — Bemidji, Midwest Regional, Bismarck
MN — Marquette, Wausau
SD — Pierre, Rapid City PD, St. Paul
WI — Grayling
MI — East Lansing, Bridgeport, Sterling Heights, Oakland County, Milwaukee, Grand Rapids, Detroit, Northville
NE — Cheyenne, Douglas County, Lincoln
IA — Madison, Rockford, Chicago, Kenosha County, Northern Illinois, DuPage County, Joliet, Des Moines, Fort Wayne, Lowell, Morton
IN — Indianapolis-Marion County, Springfield, Indianapolis
KS — Denver, Denver PD, Unified Metro, Colorado Springs PD, Pueblo, Johnson County, KCMO Regional, Topeka, St. Joseph, Kansas City, Jefferson City, Belleville, Great Bend, Sedgwick County, Pittsburg, Park Hills, St. Louis PD, St. Charles County, St. Louis County
MO — Springfield, Cape Girardeau, Willow Springs, Carthage, Lowell, Evansville, Cold Springs, Ashland, Frankfort, Louisville
OK — Tulsa PD, Tahlequah, Edmond, Oklahoma City PD, Amarillo, Hobbs, Lubbock, Fort Worth
AR — Little Rock, Hope, Memphis, Batesville, Tupelo PD
KY — Madisonville, London, Knoxville
TN — Metro Nashville PD, Nashville, Cleveland, Asheville, Huntsville
MS — Jackson PD, North LA, Jackson, Meridian
AL — Birmingham, Decatur, Auburn, Montgomery, Macon, Midland, Moultrie, Tallahassee
GA — Savannah, Jacksonville
TX — Austin PD, Austin, Jefferson County, Houston, Dallas, Garland, Tyler, Bexar County, Harris County, Brazoria County, Abilene, Midland, Waco, Laredo, Corpus Christi, McAllen
LA — Southwest LA, Baton Rouge, Acadiana, Gulfport, Mobile, St. Tammany Parish, Jefferson Parish, New Orleans, Pensacola
FL — Pinellas County, Orlando, Tampa, Manatee County, Sarasota County, Indian River, Fort Myers, Palm Beach County, Broward County, Miami-Dade PD

Northeast region labels:
ME — Augusta, Waterbury, Concord, VT, NH, Sudbury, University of MA Medical Center, Providence, RI, Hartford, CT
NY — Onondaga County, Albany, MA, Niagara County, Erie County, Port Crane, Newburgh, Wyoming, Olean, Erie, Lorain County, Cuyahoga County, Yonkers PD, Suffolk County, Westchester County, New York City PD, Union County, Nassau County, Little Falls, Hudson County, Toledo PD, Lake County, Mansfield PD, Richfield, Allegheny County, Philadelphia PD, Burlington County, Ocean County, NJ, Bethlehem, Springfield, Bowling Green, Canton-Stark County, Harrisburg, Greensburg, Media, Sea Girt, Hammonton, Cape May County, Columbus PD, Columbus, London, Miami Valley, Baltimore City, Pikesville, Baltimore County, Montgomery County, Hagerstown, Anne Arundel County, Prince George's County, DE, Hamilton County, Fairfax, MD, Berlin, WV, South Charleston, Roanoke, Richmond, Norfolk, VA
NC — Greensboro, Raleigh/Wake County, Raleigh, Charlotte-Mecklenburg PD, Greenville County, Spartanburg PD, Anderson/Oconee, New Hanover County, Columbia, Richland County, SC, Charleston PD

PR — San Juan, Mayagüez, Ponce
AK — Anchorage
HI — Honolulu

Legend:

■ Reporting State Laboratory System

▨ Participating State Laboratory System
(Not Reporting)

□ No State Laboratory System

▲ Individual State Laboratory

■ Reporting Local Laboratory

● Participating Local Laboratory
(Not Reporting)

NATIONAL AND REGIONAL ESTIMATES

This section presents national and regional estimates of drugs *submitted* to State and local laboratories from January through December 2022 that were *analyzed* by March 31, 2023. Trends are presented for selected drugs from 2008 through 2022.

National and regional drug estimates presented in the following section include *all* drug reports mentioned in laboratories' reported drug items. The NEAR approach, which uses all NFLIS-Drug reporting laboratories, was used to produce estimates for the Nation and for the U.S. census regions. A detailed description of the methods used in preparing these estimates is provided in the current NFLIS Statistical Methodology publication.

1.1 Drug Reports

In 2022, a total of 1,181,750 drug reports were identified by State and local forensic laboratories in the United States. This estimate is a decrease of about 11% from the 1,326,205 drug reports identified during 2021. Table 1.1 presents estimates for the 25 most frequently identified drugs for the Nation and their prevalence in each of the U.S. census regions.

The top 25 drugs accounted for 87% of all drugs analyzed in 2022. Nationally, approximately three-fifths of all drugs reported in NFLIS-Drug were identified as methamphetamine (341,049 reports or 29%), cocaine (169,972 reports or 14%), cannabis/THC (146,631 reports or 12%), or heroin (41,227 reports or 3%).

In addition, seven narcotic analgesics were among the top 25 drugs: fentanyl (163,201 reports), fluorofentanyl (22,242 reports), oxycodone (15,825 reports), buprenorphine (13,300 reports), tramadol (8,548 reports), hydrocodone (6,322 reports), and acetyl fentanyl (2,497 reports). Five tranquilizers and depressants were included: alprazolam (14,110 reports), clonazepam (4,703 reports), PCP (2,863 reports), clonazolam (2,636 reports), and bromazolam (2,021 reports). There were also three phenethylamines: amphetamine (8,366 reports), dipentylone (7,849 reports), and MDMA (3,265 reports). The controlled substances 4-ANPP (18,713 reports), psilocin/psilocybin (9,932 reports), and LSD (2,727 reports) were also included in the top 25 most frequently identified drugs, as were the following substances: xylazine (9,125 reports), naloxone (3,707 reports) and gabapentin (2,592 reports).

Table 1.1 NATIONAL AND REGIONAL ESTIMATES FOR THE 25 MOST FREQUENTLY IDENTIFIED DRUGS[1]
Estimated number and percentage of total drug reports submitted to laboratories from January 1, 2022, through December 31, 2022, and analyzed by March 31, 2023

Drug	National Number	National Percent	West Number	West Percent	Midwest Number	Midwest Percent	Northeast Number	Northeast Percent	South Number	South Percent
Methamphetamine	341,049	28.86%	76,770	38.84%	87,367	29.49%	16,872	8.28%	160,040	33.07%
Cocaine	169,972	14.38%	10,930	5.53%	37,632	12.70%	50,822	24.93%	70,588	14.59%
Fentanyl	163,201	13.81%	38,208	19.33%	38,830	13.11%	40,271	19.75%	45,892	9.48%
Cannabis/THC	146,631	12.41%	14,338	7.25%	46,789	15.79%	18,876	9.26%	66,628	13.77%
Heroin	41,227	3.49%	7,679	3.88%	9,237	3.12%	12,341	6.05%	11,971	2.47%
Fluorofentanyl	22,242	1.88%	1,454	0.74%	7,316	2.47%	8,016	3.93%	5,456	1.13%
Fluorofentanyl (unspecified isomer)	12,793	1.08%	846	0.43%	3,055	1.03%	6,489	3.18%	2,403	0.50%
para-Fluorofentanyl	9,427	0.80%	606	0.31%	4,254	1.44%	1,518	0.74%	3,048	0.63%
ortho-Fluorofentanyl	15	0.00%	*	*	5	0.00%	4	0.00%	5	0.00%
meta-Fluorofentanyl	7	0.00%	0	0.00%	2	0.00%	5	0.00%	0	0.00%
4-ANPP	18,713	1.58%	1,572	0.79%	5,352	1.81%	6,485	3.18%	5,304	1.10%
Oxycodone	15,825	1.34%	1,161	0.59%	3,202	1.08%	3,472	1.70%	7,989	1.65%
Alprazolam	14,110	1.19%	2,310	1.17%	3,008	1.02%	2,035	1.00%	6,756	1.40%
Buprenorphine	13,300	1.13%	1,394	0.71%	2,846	0.96%	2,913	1.43%	6,147	1.27%
Psilocin/psilocybin[2]	9,932	0.84%	2,228	1.13%	3,161	1.07%	1,199	0.59%	3,344	0.69%
Xylazine	9,125	0.77%	107	0.05%	1,832	0.62%	3,455	1.69%	3,731	0.77%
Tramadol	8,548	0.72%	480	0.24%	2,701	0.91%	2,598	1.27%	2,769	0.57%
Amphetamine	8,366	0.71%	613	0.31%	2,103	0.71%	1,565	0.77%	4,085	0.84%
Dipentylone	7,849	0.66%	4	0.00%	209	0.07%	128	0.06%	7,509	1.55%
Hydrocodone	6,322	0.54%	703	0.36%	1,568	0.53%	264	0.13%	3,787	0.78%
Clonazepam	4,703	0.40%	317	0.16%	1,359	0.46%	974	0.48%	2,052	0.42%
Naloxone	3,707	0.31%	191	0.10%	635	0.21%	729	0.36%	2,152	0.44%
MDMA	3,265	0.28%	681	0.34%	1,200	0.41%	365	0.18%	1,018	0.21%
Phencyclidine (PCP)	2,863	0.24%	162	0.08%	451	0.15%	525	0.26%	1,724	0.36%
Lysergic acid diethylamide (LSD)	2,727	0.23%	436	0.22%	1,055	0.36%	376	0.18%	860	0.18%
Clonazolam	2,636	0.22%	221	0.11%	1,119	0.38%	407	0.20%	890	0.18%
Gabapentin	2,592	0.22%	86	0.04%	476	0.16%	808	0.40%	1,222	0.25%
Acetyl fentanyl	2,497	0.21%	103	0.05%	1,063	0.36%	786	0.39%	544	0.11%
Bromazolam	2,021	0.17%	82	0.04%	908	0.31%	363	0.18%	668	0.14%
Top 25 Total	1,023,423	86.60%	162,228	82.07%	261,420	88.23%	176,646	86.65%	423,129	87.44%
All Other Drug Reports	158,328	13.40%	35,450	17.93%	34,878	11.77%	27,227	13.35%	60,772	12.56%
Total Drug Reports[3]	1,181,750	100.00%	197,678	100.00%	296,298	100.00%	203,873	100.00%	483,901	100.00%

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

[2] *Some laboratories report psilocin and psilocybin together; others report them separately.*

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

* *The estimate for this drug does not meet the standards of precision and reliability. A more detailed description of the methods used in preparing these estimates is provided in the current NFLIS Statistical Methodology publication.*

1.2 Drug Cases Analyzed

Drug analysis results are also reported to NFLIS-Drug at the case level. These case-level data typically describe all drugs identified in 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 the top 25 drug-specific cases. This table illustrates the number of cases that contained one or more reports of the specified drug. In 2022, there were 944,146 drug-specific cases submitted to and analyzed by State and local forensic laboratories, representing an 8% decrease from the 1,027,219 drug-specific cases in 2021.

Among all drug cases, methamphetamine was the most common drug reported during 2022. Nationally, 43% of drug cases contained one or more reports of methamphetamine, followed by cocaine and fentanyl, which were each identified in about 20% of all drug cases, and cannabis/THC, which was identified in 16% of cases. Approximately 5% of cases contained heroin, and 3% contained fluorofentanyl.

Bag of fentanyl pills

Table 1.2	NATIONAL CASE ESTIMATES Top 25 estimated number of drug-specific cases and their percentage of distinct cases, January 1, 2022, through December 31, 2022

Drug	Number	Percent
Methamphetamine	276,685	42.65%
Cocaine	131,345	20.25%
Fentanyl	127,282	19.62%
Cannabis/THC	104,212	16.06%
Heroin	34,667	5.34%
Fluorofentanyl	18,261	2.81%
Fluorofentanyl (unspecified isomer)	9,698	1.49%
para-Fluorofentanyl	8,546	1.32%
ortho-Fluorofentanyl	13	0.00%
meta-Fluorofentanyl	4	0.00%
4-ANPP	16,427	2.53%
Oxycodone	13,032	2.01%
Alprazolam	12,279	1.89%
Buprenorphine	11,789	1.82%
Psilocin/psilocybin[1]	9,274	1.43%
Xylazine	8,131	1.25%
Tramadol	7,223	1.11%
Amphetamine	7,210	1.11%
Dipentylone	6,082	0.94%
Hydrocodone	5,950	0.92%
Clonazepam	4,469	0.69%
Naloxone	3,681	0.57%
MDMA	2,709	0.42%
Phencyclidine (PCP)	2,540	0.39%
Lysergic acid diethylamide (LSD)	2,503	0.39%
Gabapentin	2,364	0.36%
Clonazolam	2,351	0.36%
Acetyl fentanyl	2,056	0.32%
Bromazolam	1,856	0.29%
Top 25 Total	814,377	125.80%
All Other Drugs	129,769	19.73%
Total All Drugs[2]	944,146	145.54%[3]

[1] Some laboratories report psilocin and psilocybin together; others report them separately.

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

[3] Multiple drugs can be reported within a single case, so the cumulative percentage exceeds 100%. The estimated national total of distinct case percentages is based on 648,738 distinct cases submitted to State and local laboratories from January 1, 2022, through December 31, 2022, and analyzed by March 31, 2023.

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

A total of 71,664 drugs were submitted to DEA and CBP laboratories in 2022 and analyzed by March 31, 2023, or about 6% of the estimated 1.2 million drugs reported by NFLIS-Drug State and local laboratories during this period. In 2022, more than half of the drugs reported by DEA and CBP laboratories were identified as methamphetamine (24%), fentanyl (17%), or cocaine (12%).

DRUGS MOST FREQUENTLY REPORTED BY FEDERAL LABORATORIES[1]

Number and percentage of drugs submitted to laboratories from January 1, 2022, through December 31, 2022, and analyzed by March 31, 2023

Drug	Number	Percent
Methamphetamine	16,905	23.59%
Fentanyl	12,514	17.46%
Cocaine	8,863	12.37%
Heroin	3,177	4.43%
Fluorofentanyl	2,684	3.75%
para-Fluorofentanyl	2,647	3.69%
Fluorofentanyl (unspecified isomer)	35	0.05%
meta-Fluorofentanyl	2	0.00%
Xylazine	2,145	2.99%
Tramadol	977	1.36%
Cannabis/THC	830	1.16%
Phenacetin	561	0.78%
4-ANPP	477	0.67%
All Other Drugs	22,531	31.44%
Total Drug Reports[2]	71,664	100.00%

[1] *Federal drug reports in this table include 68,371 reports from DEA laboratories and 3,293 reports from CBP laboratories.*

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

1.3 NATIONAL AND REGIONAL DRUG TRENDS

The remainder of this section presents national and regional trends for the top 10 most frequently identified drugs from Table 1.1, except 4-ANPP, which is a precursor to fentanyl, submitted to State and local laboratories during each annual data reference period and analyzed within three months of the end of each period for the most recent 15 years (from 2008 through 2022). National and regional trends for 2001 through 2022 are presented in Appendix A. The trend analyses test the data for the presence of linear and curved trends, using statistical methods described in more detail in the current NFLIS Statistical Methodology publication. Because the trends are determined through regression modeling, the descriptions of the trends detailed in this section may differ slightly from the plotted lines of estimates featured in Figures 1.1 through 1.14. Estimates include all drug reports identified among the NFLIS-Drug laboratories' reported drug items.

National drug trends

Figures 1.1 and 1.2 present national trends for the estimated number of drug reports that were identified as methamphetamine, cocaine, fentanyl, cannabis/THC, and heroin. Notable results include the following:

- Methamphetamine reports increased from 2008 through 2019. Reports decreased through 2020, increased again through 2021, then decreased through 2022.

- Cocaine reports decreased from 2008 through 2014, then remained relatively steady through 2019. Reports decreased through 2020 and remained steady through 2022.

- Fentanyl reports remained steady from 2008 to 2013, then increased significantly ($p < .05$) from 2014 through 2022.

- Cannabis/THC reports slightly increased from 2008 to 2009, then decreased through 2022.

- Heroin reports increased from 2008 through 2015, followed by a steady decrease through 2022.

Significance tests were also performed on differences from 2021 to 2022 to identify more recent changes. Across these two years, reports of fentanyl (from 153,949 to 163,201 reports) and cocaine (from 165,162 to 169,972 reports) increased significantly. Reports of methamphetamine (from 406,200 to 341,049 reports), cannabis/THC (from 167,669 to 146,631 reports), and heroin (from 72,315 to 41,227 reports) decreased significantly.

Figures [1.3](#) and [1.4](#) present national trends for reports of fluorofentanyl, oxycodone, alprazolam, buprenorphine, and psilocin/psilocybin. Notable results include the following:

- Fluorofentanyl reports first appeared in NFLIS in 2015. Reports dramatically increased from fewer than 10 reports annually to over 15,000 reports in 2021 and to more than 22,000 reports in 2022.
- From 2008 to 2010, oxycodone reports dramatically increased, then steadily declined through 2022.
- Alprazolam reports showed an overall increase from 2008 to 2010, then decreased through 2013. Reports increased from 2014 to 2016, then decreased through 2022.
- Reports of buprenorphine increased from 2008 to 2019 to over 20,000. Since then, reports have decreased through 2022.
- Psilocin/psilocybin reports increased slightly from 2008 to 2009, then generally decreased through 2016. Reports more than doubled from 2016 through 2022.

More recently, from 2021 to 2022, reports of fluorofentanyl (from 17,587 to 22,242 reports) and psilocin/psilocybin (from 8,179 to 9,932 reports) increased significantly ($p < .05$), while reports of alprazolam (from 17,579 to 14,110 reports) and buprenorphine (from 15,123 to 13,300 reports) decreased significantly. The change in reports of oxycodone was not statistically significant (from 15,819 to 15,825 reports).

[1] There was a noticeable decrease in the number of drugs reported and drug cases submitted and analyzed during 2020 and 2021 compared with earlier years, which is likely due, in part, to the impacts of COVID-19. Use caution when comparing the shaded estimates with other years' estimates.

[2] Estimates are not available for fluorofentanyl for 2008 through 2014 because fluorofentanyl was first reported to NFLIS-Drug in 2015. Fluorofentanyl isomers reported to NFLIS-Drug from January 2015 through December 2022 were ortho-fluorofentanyl, meta-fluorofentanyl, para-fluorofentanyl, 3-fluorofentanyl, and fluorofentanyl (unspecified isomer).

[3] Some laboratories report psilocin and psilocybin together; others report them separately.

Figure 1.1 National trend estimates for methamphetamine and cocaine, January 2008–December 2022
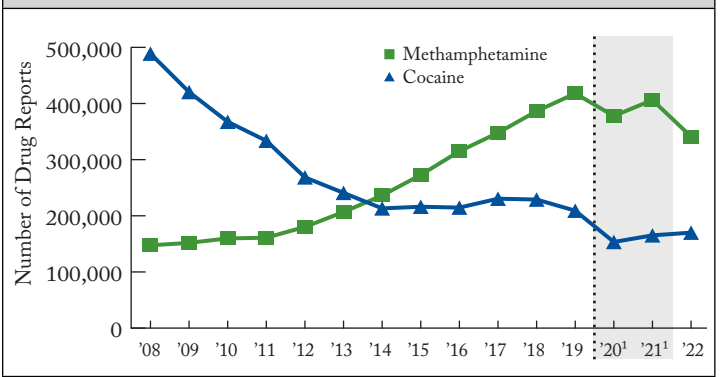
Figure 1.2 National trend estimates for fentanyl, cannabis/THC, and heroin, January 2008–December 2022
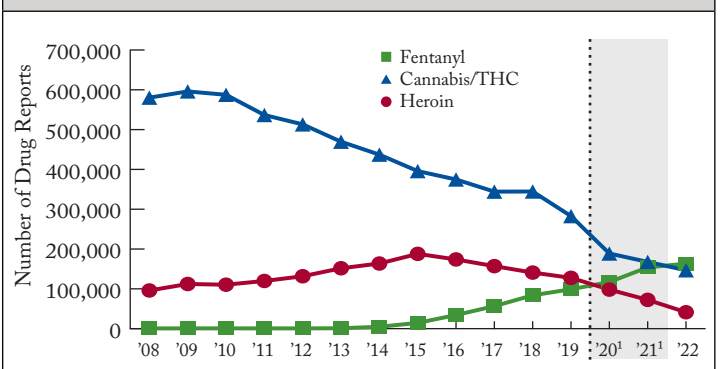
Figure 1.3 National trend estimates for fluorofentanyl and oxycodone, January 2008–December 2022[2]
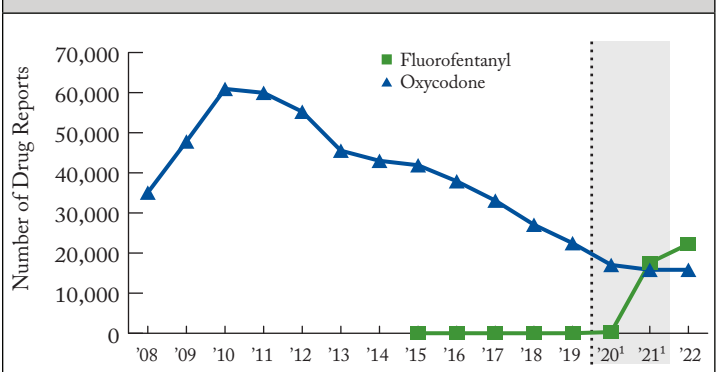
Figure 1.4 National trend estimates for alprazolam, buprenorphine, and psilocin/psilocybin, January 2008–December 2022[3]
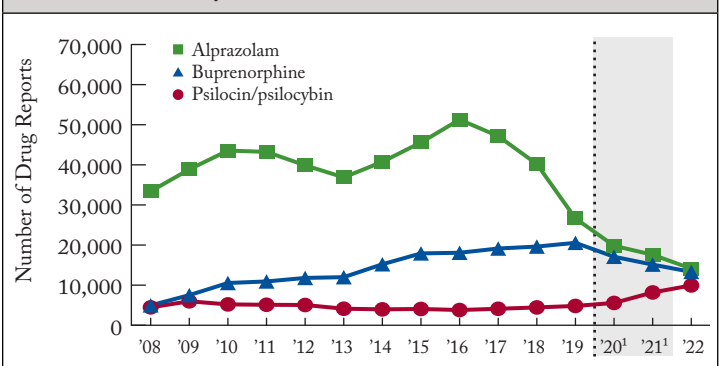
Regional drug trends

[Figures 1.5](#) through [1.9](#) show regional trends per 100,000 people aged 15 or older for reports of methamphetamine, cocaine, fentanyl, cannabis/THC, and heroin from 2008 to 2022. These figures illustrate changes in drugs reported over time, accounting for the population aged 15 years or older in each U.S. census region. Notable trend results include the following:

- For methamphetamine reports, the West had more pronounced decreases than the other regions from 2008 through 2010. All regions showed increases beginning in 2011 or 2012 and continuing through 2019. Reports continued to increase in the South and Northeast through 2021. Reports in the West and Midwest decreased in 2020, then in the Midwest, they increased significantly ($p < .05$) in 2021 while continuing to decrease in the West. In 2022, reports in all regions decreased significantly.

- Cocaine reports in the Midwest and Northeast steadily decreased from 2008 through 2014, with slight increases in reports through 2017 for the Midwest and 2018 for the Northeast. The West and South had steady declines through 2021. Cocaine reports in the Northeast, Midwest, and South increased in 2022, while reports in the West decreased. The West had the lowest number of reports among all the regions throughout the reporting period.

- For fentanyl reports, from 2008 to 2014, there was a more gradual increase in the West than in other regions. Reports remained steady through 2013 for the Midwest, Northeast, and South until substantial increases began in 2014 and continued through 2021. In 2022, fentanyl reports decreased in the Northeast and Midwest and increased in the South and West.

- Cannabis/THC reports decreased across all regions from 2008 to 2022. In 2008, the number of reports in the Midwest was considerably higher than the numbers of reports in the other three regions, but by 2019, numbers of cannabis/THC reports were similar in the Midwest, Northeast, and South. The West had the lowest number of reports from 2008 through 2022.

- Reports of heroin increased in the Northeast, Midwest, and South from 2008 through 2015, then steadily decreased through 2022. Heroin reports in the West increased through 2019, then decreased through 2022.

More recently, from 2021 to 2022, cocaine reports increased significantly in the Midwest and Northeast but decreased significantly in the West. Fentanyl reports increased significantly in the West and South but decreased significantly in the Northeast. Cannabis/THC reports decreased significantly in the Northeast, South, and West. Methamphetamine and heroin reports decreased significantly across all regions.

Figure 1.5 Regional trends in methamphetamine reported per 100,000 people aged 15 or older, January 2008–December 2022
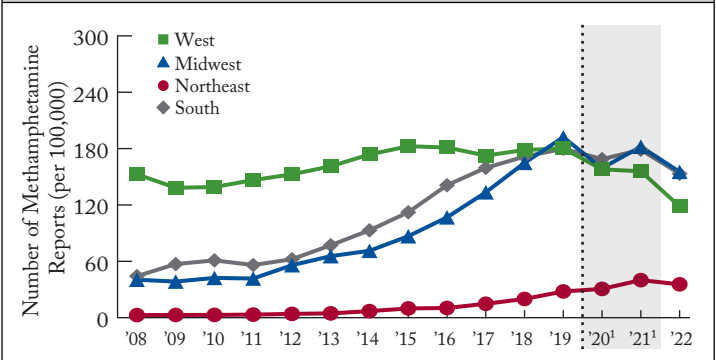

Figure 1.6 Regional trends in cocaine reported per 100,000 people aged 15 or older, January 2008–December 2022
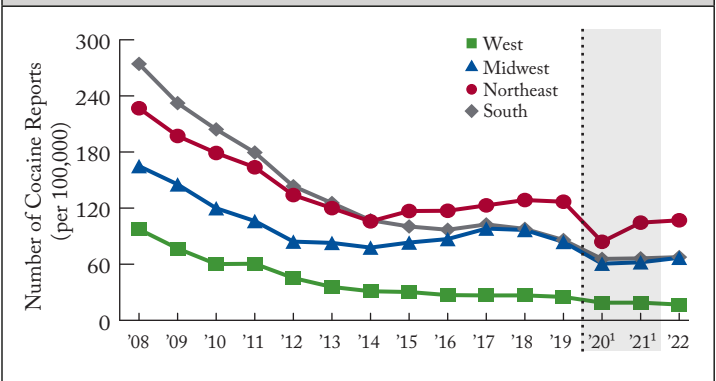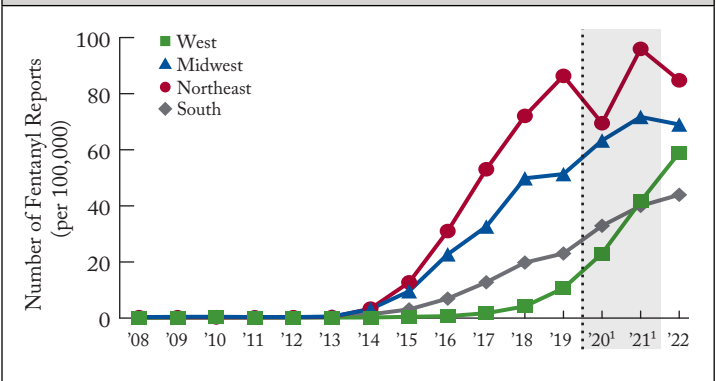

Figure 1.7 Regional trends in fentanyl reported per 100,000 people aged 15 or older, January 2008–December 2022

Note: U.S. Census 2022 population data by age were not available for this publication. Population data for 2022 were imputed.

[1] *There was a noticeable decrease in the number of drugs reported and drug cases submitted and analyzed during 2020 and 2021 compared with earlier years, which is likely due, in part, to the impacts of COVID-19. Use caution when comparing the shaded estimates with other years' estimates.*

Cannabis/THC

Figure 1.8 Regional trends in cannabis/THC reported per 100,000 people aged 15 or older, January 2008–December 2022
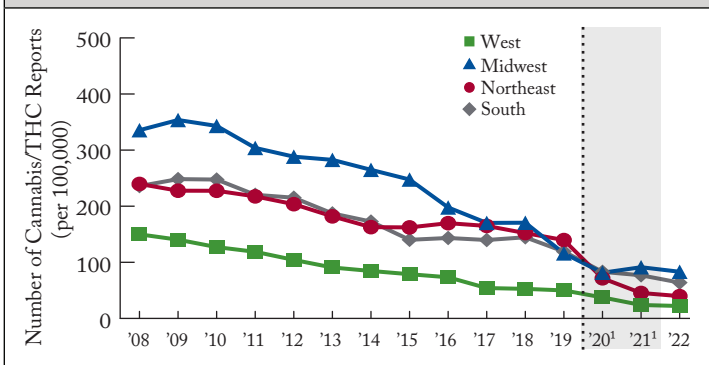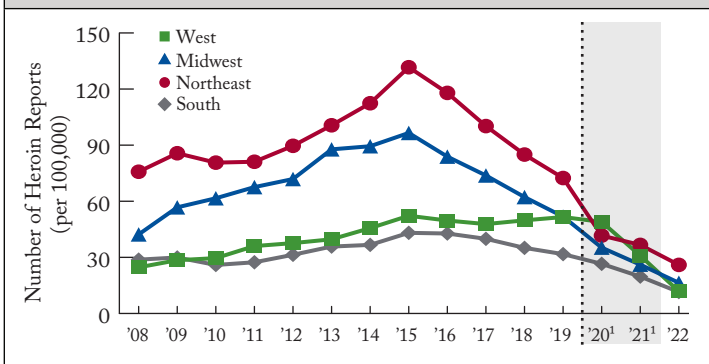

Figure 1.9 Regional trends in heroin reported per 100,000 people aged 15 or older, January 2008–December 2022

Note: U.S. Census 2022 population data by age were not available for this publication. Population data for 2022 were imputed.

[1] *There was a noticeable decrease in the number of drugs reported and drug cases submitted and analyzed during 2020 and 2021 compared with earlier years, which is likely due, in part, to the impacts of COVID-19. Use caution when comparing the shaded estimates with other years' estimates.*

Figures 1.10 through 1.14 present regional trends per 100,000 people aged 15 or older for fluorofentanyl, oxycodone, alprazolam, buprenorphine, and psilocin/psilocybin reports from 2008 through 2022. Notable trends include the following:

- Fluorofentanyl reports were first observed in NFLIS in 2015. Across all regions, reports increased significantly ($p < .05$) in 2021 and 2022.

- For oxycodone, reports in the West, Midwest, and South increased from 2008 to 2010, while reports in the Northeast increased through 2011. Oxycodone reports in all regions then decreased through 2020. Reports in the West and Midwest decreased in 2021 and 2022, while reports in the South decreased in 2021 and slightly increased in 2022. In the Northeast, oxycodone reports increased in 2021 and remained steady in 2022.

- For alprazolam, the South had the highest number of reports across all four regions, with the highest numbers occurring in 2010, 2011, and 2016. Reports in the Midwest, Northeast, and South decreased from 2017 through 2022. In the West, reports showed a similar decrease through 2020, increased in 2021, and decreased significantly in 2022.

- Buprenorphine reports in the Midwest and South increased from 2008 to 2019, then decreased through 2022. Reports in the Northeast generally increased from 2008 to 2019, except for decreases in 2012 and 2013, decreased significantly in 2020, then remained steady through 2022. The West had the lowest number of buprenorphine reports, with moderate increases from 2008 until reports decreased in 2021 and 2022.

- For psilocin/psilocybin, reports in the West decreased from 2008 to the lowest number of reports per 100,000 in 2016, then steadily increased until a more dramatic increase occurred in 2021, followed by a significant decrease in 2022. Reports in the other three regions remained steady from 2008 through 2018 or 2019, then increased through 2022.

More recently, from 2021 to 2022, fluorofentanyl reports increased significantly in all regions. Psilocin/psilocybin reports increased in all regions except the West, where reports decreased significantly. Alprazolam reports decreased significantly across all regions, while buprenorphine reports decreased significantly in the South and West, and oxycodone reports decreased significantly in the West only.

Figure 1.10 Regional trends in fluorofentanyl reported per 100,000 people aged 15 or older, January 2008–December 2022[1]
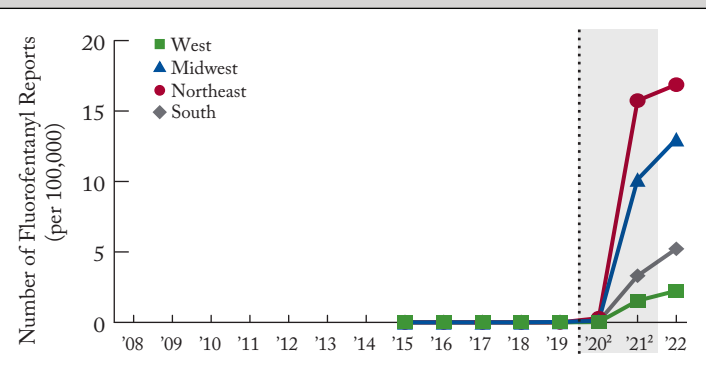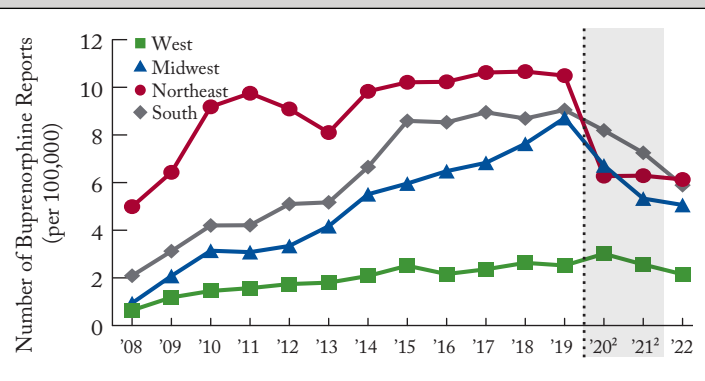

Figure 1.11 Regional trends in oxycodone reported per 100,000 people aged 15 or older, January 2008–December 2022
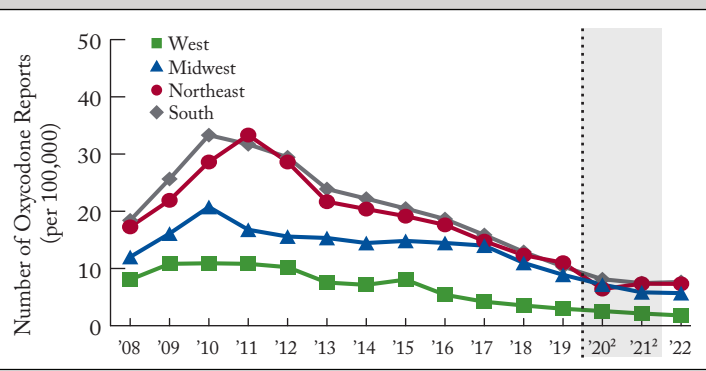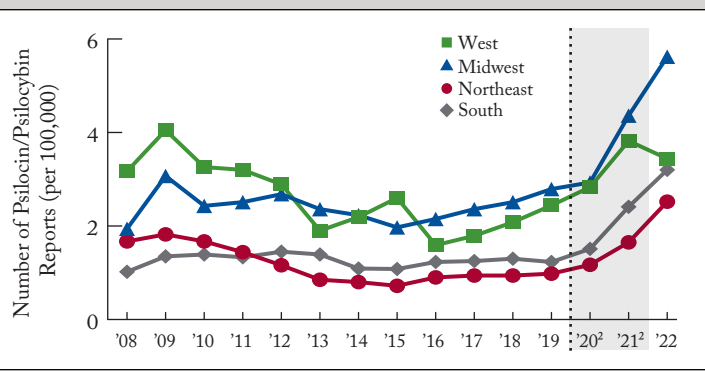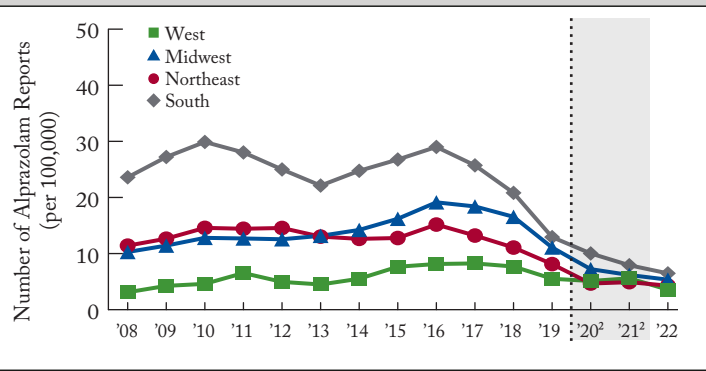

Figure 1.12 Regional trends in alprazolam reported per 100,000 people aged 15 or older, January 2008–December 2022

Figure 1.13 Regional trends in buprenorphine reported per 100,000 people aged 15 or older, January 2008–December 2022

Figure 1.14 Regional trends in psilocin/psilocybin reported per 100,000 people aged 15 or older, January 2008–December 2022[3]

Note: U.S. Census 2022 population data by age were not available for this publication. Population data for 2022 were imputed.

[1] *Estimates are not available for fluorofentanyl for 2008 through 2014 because fluorofentanyl was first reported to NFLIS-Drug in 2015. Fluorofentanyl isomers reported to NFLIS-Drug from January 2015 through December 2022 were ortho-fluorofentanyl, meta-fluorofentanyl, para-fluorofentanyl, 3-fluorofentanyl, and fluorofentanyl (unspecified isomer).*

[2] *There was a noticeable decrease in the number of drugs reported and drug cases submitted and analyzed during 2020 and 2021 compared with earlier years, which is likely due, in part, to the impacts of COVID-19. Use caution when comparing the shaded estimates with other years' estimates.*

[3] *Some laboratories report psilocin and psilocybin together; others report them separately.*

Psilocybin mushrooms

MAJOR DRUG CATEGORIES

Section 2 presents national and regional estimates of specific drugs by drug category using the NEAR approach (see the current NFLIS Statistical Methodology publication for a description of the methodology). All drugs mentioned in laboratories' drug items are included. An estimated 1,181,750 drugs were submitted to State and local laboratories during 2022 and were analyzed by March 31, 2023.

[i] Centers for Disease Control and Prevention. (2023). Provisional data shows U.S. drug overdose deaths top 100,000 in 2022. *NCHS: A Blog of the National Center for Health Statistics.* https://blogs.cdc.gov/ nchs/2023/05/18/7365/

Table 2.1 Notes

Note: Although the NFLIS–Drug database contains specified and unspecified isomers of reported drugs, the narcotic analgesic isomers included in Table 2.1 were the only ones reported during calendar year 2022.

[1] *Includes drug reports submitted to laboratories from January 1, 2022, through December 31, 2022, that were analyzed by March 31, 2023.*

[2] *4–ANPP and phenethyl 4–ANPP are precursors of fentanyl and not narcotic analgesics. They are included in Table 2.1 due to the interest in fentanyl and fentanyl–related compounds. However, they are not included in Figure 2.1 because it represents the geographic distribution of narcotic analgesics.*

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

2.1 NARCOTIC ANALGESICS

Narcotic analgesics, including opioids such as fentanyl, oxycodone, and hydrocodone, are used to treat pain but are highly addictive and dangerous when misused. Most drug overdose deaths in the United States involve an opioid. According to provisional data from the Centers for Disease Control and Prevention (CDC), of the 105,452 reported overdose deaths in 2022, three-quarters (or 79,770) involved an opioid.[i]

A total of 262,500 narcotic analgesic reports were identified by NFLIS-Drug laboratories in 2022, representing 22% of all drug reports (Table 2.1). Fentanyl (62%) accounted for more than three-fifths of narcotic analgesic reports. The types of narcotic analgesics reported varied considerably by region (Figure 2.1). The West reported the highest percentage of fentanyl (83%), followed by the Midwest and Northeast (60% each). The Northeast reported the highest percentage of fluorofentanyl (12%), while the South reported the highest percentages of oxycodone (10%) and buprenorphine (7%).

Table 2.1	NARCOTIC ANALGESICS Number and percentage of narcotic analgesic reports in the United States, 2022[1]	
Narcotic Analgesic Reports	**Number**	**Percent**
Fentanyl	163,201	62.17%
Fluorofentanyl	22,242	8.47%
Fluorofentanyl (unspecified isomer)	12,793	4.87%
para-Fluorofentanyl	9,427	3.59%
ortho-Fluorofentanyl	15	0.01%
meta-Fluorofentanyl	7	0.00%
4-ANPP[2]	18,713	7.13%
Oxycodone	15,825	6.03%
Buprenorphine	13,300	5.07%
Tramadol	8,548	3.26%
Hydrocodone	6,322	2.41%
Acetyl fentanyl	2,497	0.95%
Fluorobutyryl fentanyl (unspecified isomer)	1,640	0.62%
Phenethyl 4-ANPP[2]	1,371	0.52%
Morphine	1,348	0.51%
Codeine	1,141	0.43%
Methadone	1,122	0.43%
Hydromorphone	717	0.27%
Metonitazene	587	0.22%
Other narcotic analgesics	3,926	1.50%
Total Narcotic Analgesic Reports[3]	262,500	100.00%
Total Drug Reports	1,181,750	

Figure 2.1 Distribution of narcotic analgesic reports within region, 2022[1,2]

	West	Midwest	Northeast	South	Total Number[4]
	45,918	65,043	67,653	83,886	262,500

Legend:
(a) Fentanyl
(b) Fluorofentanyl[3]
(c) Oxycodone
(d) Buprenorphine
(e) Other

2.2 TRANQUILIZERS AND DEPRESSANTS

In 2021, approximately 2% of people misused prescription tranquilizers or sedatives in the past year.[ii] Xylazine, a veterinary tranquilizer not approved for human use, has been increasingly detected as an adulterant in many illicit drug mixtures, including in combination with fentanyl, cocaine, and heroin. From January 2019 to June 2022, CDC's State Unintentional Drug Overdose Reporting System (SUDORS) reported a nearly 300% increase in the number of xylazine-positive overdose deaths.[iii]

Approximately 4% of all drug reports in 2022, or 45,916 reports, were identified by NFLIS-Drug laboratories as tranquilizers and depressants (Table 2.2). Alprazolam accounted for 31% of reported tranquilizers and depressants. Approximately 20% of tranquilizers and depressants were identified as xylazine, followed by clonazepam (10%), PCP (6%), and clonazolam (6%). Alprazolam was identified in 54% of the tranquilizer and depressant reports in the West, 35% in the South, 24% in the Midwest, and 21% in the Northeast (Figure 2.2). Xylazine accounted for 36% of tranquilizers and depressants identified in the Northeast. The Midwest and South reported the highest percentages of clonazepam reports (11% each). The South reported the highest percentage of PCP reports (9%).

Table 2.2	*TRANQUILIZERS AND DEPRESSANTS* Number and percentage of tranquilizer and depressant reports in the United States, 2022[1]

Tranquilizer and Depressant Reports	Number	Percent
Alprazolam	14,110	30.73%
Xylazine	9,125	19.87%
Clonazepam	4,703	10.24%
Phencyclidine (PCP)	2,863	6.23%
Clonazolam	2,636	5.74%
Bromazolam	2,021	4.40%
Ketamine	1,984	4.32%
Etizolam	1,473	3.21%
Diazepam	1,420	3.09%
Flualprazolam	879	1.91%
Lorazepam	795	1.73%
Cyclobenzaprine	449	0.98%
Carisoprodol	405	0.88%
Flubromazepam	362	0.79%
Zolpidem	360	0.78%
Other tranquilizers and depressants	2,331	5.08%
Total Tranquilizer and Depressant Reports[4]	45,916	100.00%
Total Drug Reports	1,181,750	

[1] Includes drug reports submitted to laboratories from January 1, 2022, through December 31, 2022, that were analyzed by March 31, 2023.

[2] 4-ANPP and phenethyl 4-ANPP are precursors of fentanyl and not narcotic analgesics. They are included in Table 2.1 due to the interest in fentanyl and fentanyl-related compounds. However, they are not included in Figure 2.1 because it represents the geographic distribution of narcotic analgesics.
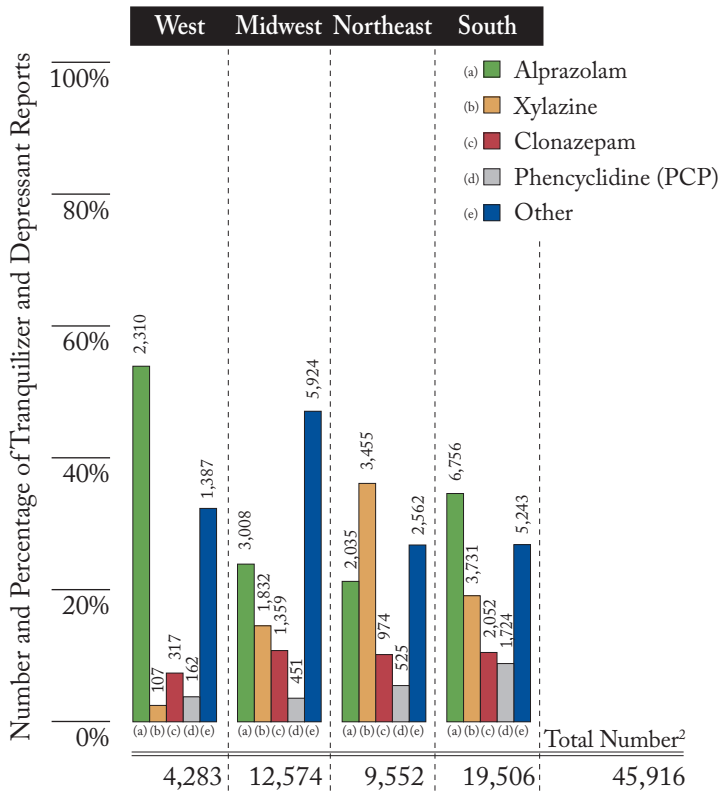
[3] For Figure 2.1, the fluorofentanyl isomers reported to NFLIS-Drug during 2022 are listed in Table 2.1.

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

[ii] Center for Behavioral Health Statistics and Quality. (2023). Table 1.51B, Misuse of prescription tranquilizers or prescription sedatives in past year: Among people aged 12 or older; by age group and demographic characteristics, percentages, 2021. In *2021 National Survey on Drug Use and Health: Detailed tables.* Substance Abuse and Mental Health Services Administration. https://www.samhsa.gov/data/report/2021-nsduh-detailed-tables

[iii] Kariisa, M., O'Donnell, J., Kumar, S., Mattson, C. L., & Goldberger, B. A. (2023). Illicitly manufactured fentanyl–involved overdose deaths with detected xylazine — United States, January 2019–June 2022. *Morbidity and Mortality Weekly Report, 72*(26), 721–727. https://doi.org/10.15585/mmwr.mm7226a4

Figure 2.2 Distribution of tranquilizer and depressant reports within region, 2022[1]

	West	Midwest	Northeast	South
(a)	Alprazolam			
(b)	Xylazine			
(c)	Clonazepam			
(d)	Phencyclidine (PCP)			
(e)	Other			

Total Number[2]: 4,283 | 12,574 | 9,552 | 19,506 | 45,916

Table 2.3 — *ANABOLIC STEROIDS*
Number and percentage of anabolic steroid reports in the United States, 2022[1]

Anabolic Steroid Reports	Number	Percent
Testosterone	961	53.14%
Trenbolone	188	10.39%
Nandrolone	122	6.73%
Methandrostenolone	100	5.51%
Stanozolol	90	5.00%
Oxandrolone	71	3.90%
Boldenone	59	3.24%
Drostanolone	30	1.68%
Oxymetholone	29	1.63%
Dehydrochloromethyltestosterone	18	0.98%
Mesterolone	13	0.74%
Methenolone	11	0.62%
Methasterone	7	0.39%
Mestanolone	5	0.30%
Fluoxymesterone	4	0.22%
Other anabolic steroids	100	5.53%
Total Anabolic Steroid Reports[2]	1,809	100.00%
Total Drug Reports	1,181,750	

2.3 ANABOLIC STEROIDS

In the United States, approximately 3 million to 4 million Americans use anabolic steroids.[iv] Steroids are also known as "Arnolds," "juice," "pumpers," "roids," "stackers," and "weight gainers," and individuals often use doses that are 10 to 100 times higher than those approved for therapeutic and medical treatments. Although most illicit steroids are smuggled into the United States, they are also obtained from legitimate sources through illicit activities such as theft or inappropriate prescribing.[v]

During 2022, a total of 1,809 drug reports were identified by NFLIS-Drug laboratories as anabolic steroids (Table 2.3), representing less than 1% of all drug reports. The most frequently identified anabolic steroid was testosterone (53%), followed by trenbolone (10%), nandrolone (7%), methandrostenolone (6%), and stanozolol (5%). Testosterone accounted for 55% of anabolic steroids reported in the South, 53% in the Northeast, and 52% each in the West and Midwest (Figure 2.3). The South reported the highest percentages of trenbolone and methandrostenolone (13% and 7%, respectively), and the West reported the highest percentage of nandrolone (8%).

Figure 2.3 Distribution of anabolic steroid reports within region, 2022[1]

	West	Midwest	Northeast	South
(a)	Testosterone			
(b)	Trenbolone			
(c)	Nandrolone			
(d)	Methandrostenolone			
(e)	Other			

Total Number[2]: 343 | 549 | 316 | 601 | 1,809

[1] *Includes drug reports submitted to laboratories from January 1, 2022, through December 31, 2022, that were analyzed by March 31, 2023.*

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

[iv] AlShareef, S., Gokarakonda, S. B., & Marwaha, R. (2022). Anabolic steroid use disorder. In *StatPearls*. StatPearls Publishing. https://www.ncbi.nlm.nih.gov/books/NBK538174/
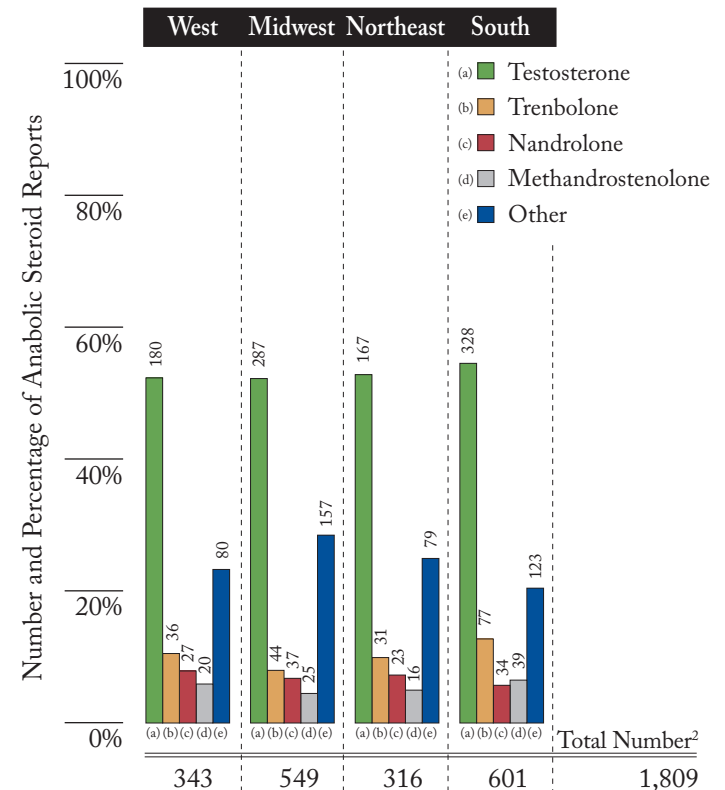
[v] Drug Enforcement Administration. (2020). *Drug fact sheet: Steroids.* https://www.dea.gov/sites/default/files/2020-06/Steroids-2020_0.pdf

2.4 Phenethylamines

Phenethylamines cause stimulant and hallucinogenic effects. They are active on serotonin receptors and are reported to enhance feelings of empathy and emotional closeness and can cause side effects including hypertension, convulsions, and death. Amphetamine, methamphetamine, and MDMA are some of the most common phenethylamines; however, since around 2010, a wide array of new phenethylamines have been reported across the United States and internationally.[vi]

NFLIS–Drug laboratories identified 369,163 phenethylamine reports in 2022, representing 31% of all drug reports (Table 2.4). Of these, 92% were identified as methamphetamine. Among the other phenethylamine reports, 2% were identified as amphetamine, and another 2% were identified as dipentylone. Methamphetamine accounted for 98% of phenethylamine reports in the West, 95% in the Midwest, 89% in the South, and 86% in the Northeast (Figure 2.4). The Northeast reported the highest percentages of amphetamine (8%) and MDMA (2%), while the South reported the highest percentage of dipentylone (4%).

Table 2.4	PHENETHYLAMINES Number and percentage of phenethylamine reports in the United States, 2022[1]	

Phenethylamine Reports	Number	Percent
Methamphetamine	341,049	92.38%
Amphetamine	8,366	2.27%
Dipentylone	7,849	2.13%
MDMA	3,265	0.88%
Eutylone	1,821	0.49%
alpha-PiHP	1,550	0.42%
MDA	1,069	0.29%
N-Cyclohexylmethylone	632	0.17%
Lisdexamfetamine	604	0.16%
Phentermine	195	0.05%
N-Propylbutylone	154	0.04%
alpha-PHP	133	0.04%
N-Cyclohexylbutylone	132	0.04%
Dimethylamphetamine	104	0.03%
N,N-Dimethylamphetamine	93	0.03%
Dimethylamphetamine (unspecified isomer)	10	0.00%
2,5-Dimethylamphetamine	1	0.00%
N-Ethylpentylone	99	0.03%
Other phenethylamines	2,141	0.58%
Total Phenethylamine Reports[2]	369,163	100.00%
Total Drug Reports	1,181,750	

Figure 2.4 Distribution of phenethylamine reports within region, 2022[1]
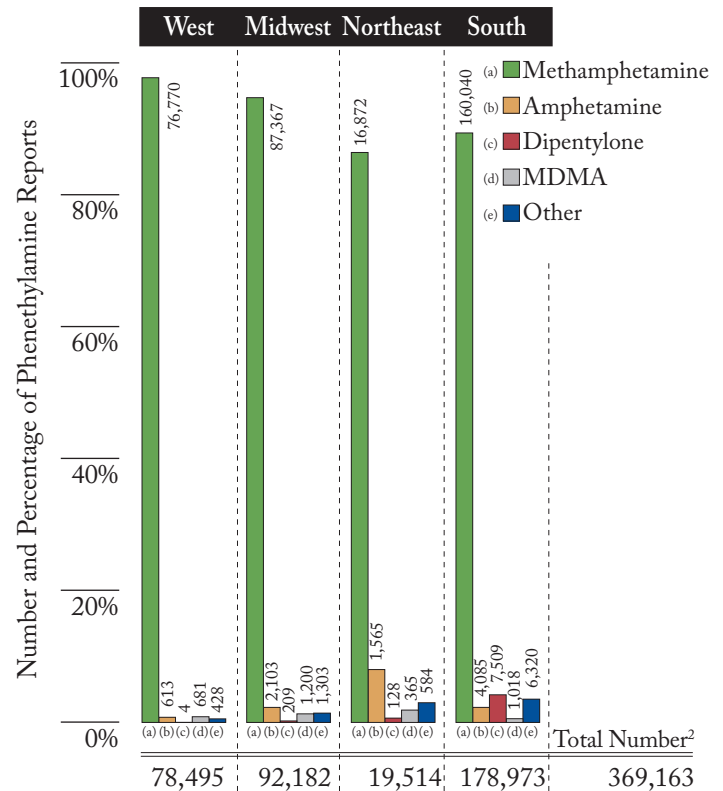
Note: Although the NFLIS–Drug database contains specified and unspecified isomers of reported drugs, the phenethylamine isomers included in Table 2.4 were the only ones reported during calendar year 2022.

[1] Includes drug reports submitted to laboratories from January 1, 2022, through December 31, 2022, that were analyzed by March 31, 2023.

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

[vi] Mercolini, L. (2019). New psychoactive substances: An overview. In A. Dasgupta (Ed.), Critical issues in alcohol and drugs of abuse testing (pp. 247–258). Academic Press. https://doi.org/10.1016/B978-0-12-815607-0.00020-4

2.5 SYNTHETIC CANNABINOIDS

Synthetic cannabinoids are often referred to as "synthetic marijuana" but are very different from marijuana and can have unpredictable side effects because they are often contaminated with other drugs or chemicals.[vii] From January to June 2023, poison control centers across the country received 323 calls for synthetic cannabinoid–related exposures.[viii]
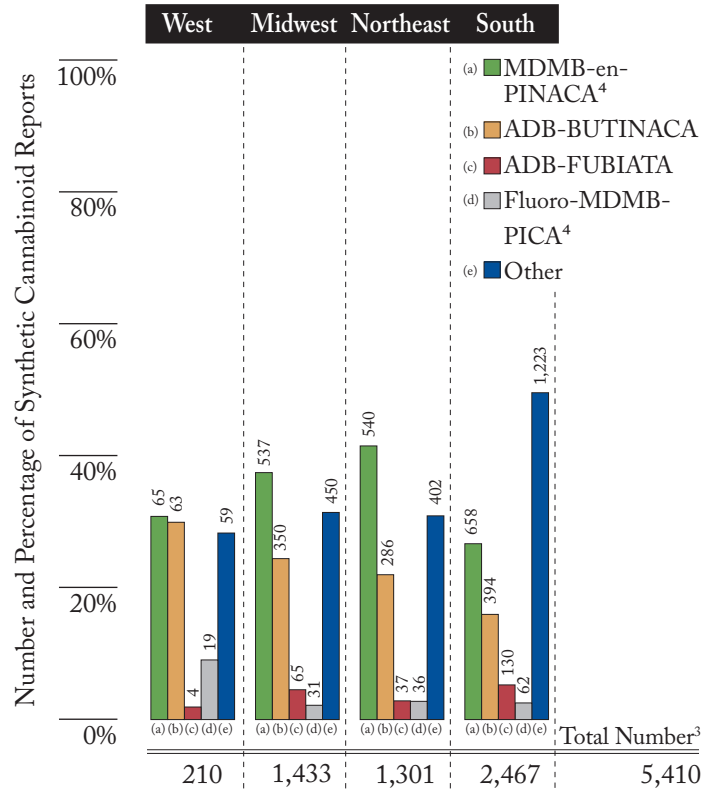
A total of 5,410 synthetic cannabinoid reports were identified during 2022, accounting for less than 1% of all drugs reported (Table 2.5). The most frequently identified synthetic cannabinoid was MDMB-en-PINACA (33%), followed by ADB-BUTINACA (20%) and ADB-FUBIATA (4%). Specifically, MDMB-en-PINACA accounted for 42% of synthetic cannabinoid reports in the Northeast, 37% in the Midwest, 31% in the West, and 27% in the South (Figure 2.5). ADB-BUTINACA accounted for 30% of synthetic cannabinoids in the West, 24% in the Midwest, 22% in the Northeast, and 16% in the South. The Midwest and South reported the highest percentages of ADB-FUBIATA (5% each), and the West reported the highest percentage of fluoro-MDMB-PICA (9%).

Figure 2.5 Distribution of synthetic cannabinoid reports within region, 2022[1]

Synthetic Cannabinoid Reports	Number	Percent
MDMB-en-PINACA	1,800	33.26%
MDMB-4en-PINACA	1,795	33.17%
MDMB-en-PINACA (unspecified isomer)	5	0.09%
ADB-BUTINACA	1,092	20.19%
ADB-FUBIATA	236	4.35%
Fluoro-MDMB-PICA	148	2.74%
5F-MDMB-PICA	113	2.09%
Fluoro-MDMB-PICA (unspecified isomer)	36	0.66%
CH-PIATA	132	2.43%
BZO-HEXOXIZID	111	2.05%
FUB-AMB	94	1.73%
BZO-POXIZID	78	1.44%
Fluoro-MDMB-BUTICA	75	1.38%
4F-MDMB-BUTICA	44	0.82%
Fluoro-MDMB-BUTICA (unspecified isomer)	30	0.56%
Fluoro-MDMB-BUTINACA	64	1.19%
4F-MDMB-BUTINACA	62	1.15%
Fluoro-MDMB-BUTINACA (unspecified isomer)	2	0.04%
5F-ADB	58	1.08%
ADB-HEXINACA	56	1.04%
Hexahydrocannabinol	54	1.00%
ADB-4en-PINACA	45	0.83%
ADB-5Br-BUTINACA	43	0.79%
Other synthetic cannabinoids	1,325	24.50%
Total Synthetic Cannabinoid Reports[3]	5,410	100.00%
Total Drug Reports	1,181,750	

Table 2.5 SYNTHETIC CANNABINOIDS *Number and percentage of synthetic cannabinoid reports in the United States, 2022[1,2]*

[1] Includes drug reports submitted to laboratories from January 1, 2022, through December 31, 2022, that were analyzed by March 31, 2023.

[2] Although the NFLIS–Drug database contains specified and unspecified isomers of reported drugs, the synthetic cannabinoid isomers included in Table 2.5 were the only ones reported during calendar year 2022.

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

[4] For Figure 2.5, the MDMB-en–PINACA and fluoro-MDMB–PICA isomers reported to NFLIS-Drug during 2022 are listed in Table 2.5.

[vii] National Institute on Drug Abuse. (2020, June). *Synthetic cannabinoids (K2/Spice) DrugFacts.* https://nida.nih.gov/publications/drugfacts/synthetic-cannabinoids-k2spice

[viii] American Association of Poison Control Centers. (2023). *Synthetic cannabinoids.* https://www.aapcc.org/track/synthetic-cannabinoids

Section 3

GIS ANALYSIS: XYLAZINE AND PSILOCIN/PSILOCYBIN COMPARISONS, BY LOCATION, 2020 AND 2022

One of the unique features of NFLIS-Drug 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-Drug can provide information on drug seizure locations.

This section presents data by State and by county for selected States for the percentage of drug reports identified as xylazine and psilocin/psilocybin at two time points—2020 and 2022. In 2020, xylazine did not appear in the NFLIS-Drug list of the top 25 most frequently identified drugs; by 2022, it was the 12th most frequently reported drug and the 2nd most frequently reported drug in the tranquilizer and depressant category. Psilocin/psilocybin has consistently moved up the top 25 list in recent years, from the 16th most frequently reported drug in 2020 to the 11th most frequently reported drug in 2022.

The GIS data presented here are based on information provided to NFLIS-Drug forensic laboratories by the submitting law enforcement agencies ([Figures 3.1](#) to [3.8](#)). 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 drugs that were submitted to and analyzed by NFLIS-Drug forensic laboratories. In addition, some laboratories in several States are not currently reporting data to NFLIS-Drug, and their absence may affect the relative distribution of drugs seized and analyzed. Nevertheless, these data can serve as an important source for identifying drug use and misuse, trafficking trends, and patterns across and within States.

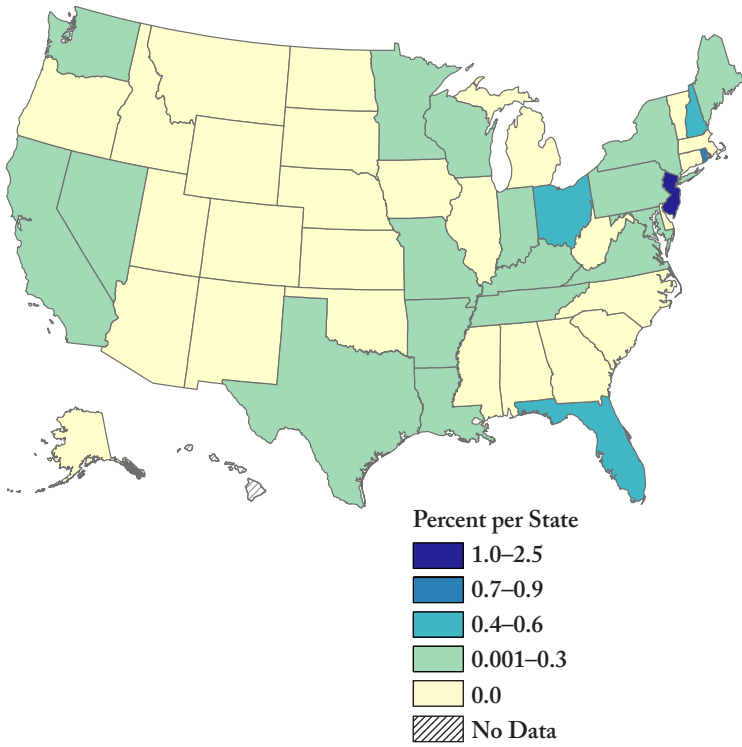**Figure 3.1** Percentage of total drug reports identified as xylazine, by State, 2020[1]

Percent per State
- 1.0–2.5
- 0.7–0.9
- 0.4–0.6
- 0.001–0.3
- 0.0
- No Data

Figure 3.2 Percentage of total drug reports identified as xylazine, by State, 2022[1]

Percent per State
- 1.0–6.4
- 0.7–0.9
- 0.4–0.6
- 0.001–0.3
- 0.0
- No Data
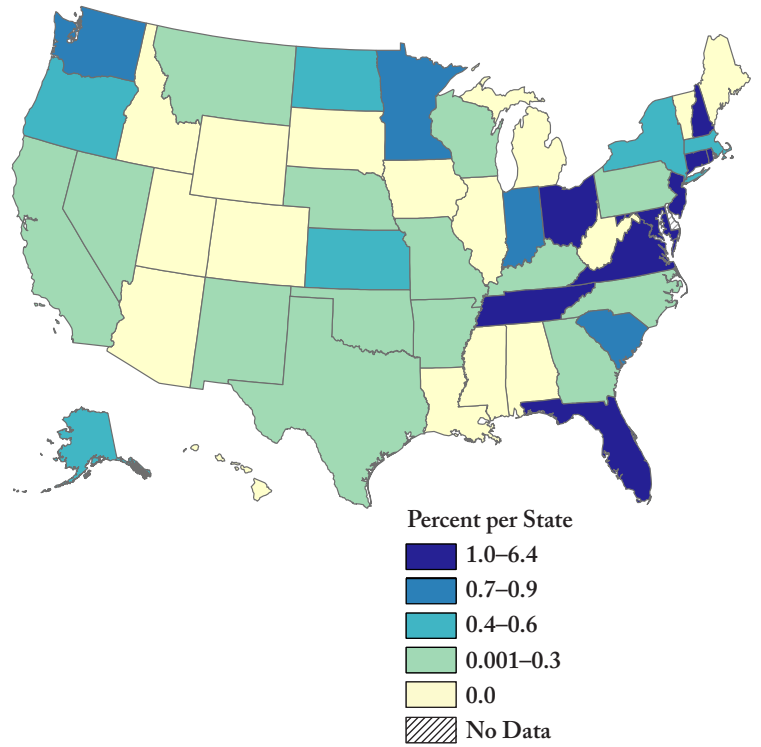
Figure 3.3 Percentage of total drug reports identified as psilocin/psilocybin, by State, 2020[1,2]

Percent per State
- 1.0–4.1
- 0.7–0.9
- 0.4–0.6
- 0.1–0.3
- 0.0
- No Data
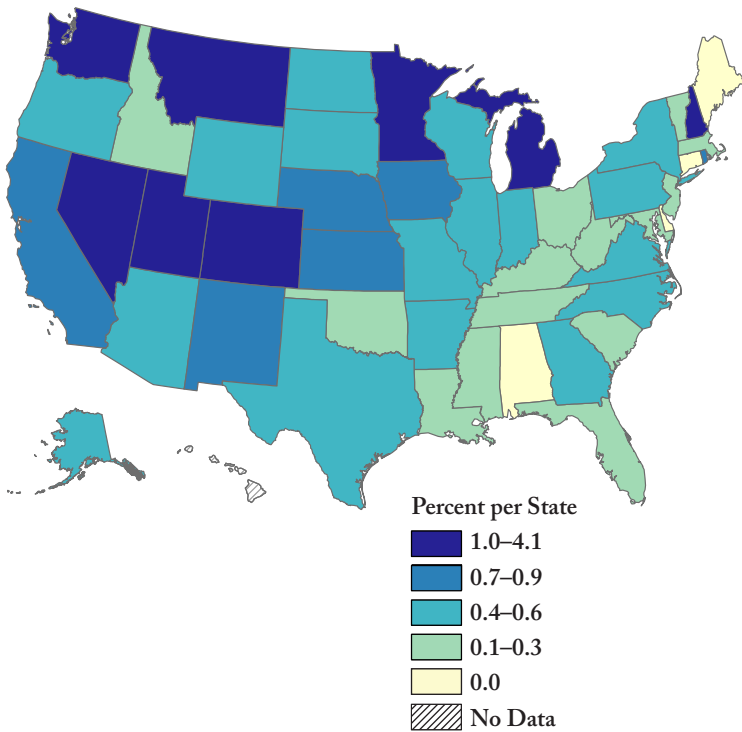
Figure 3.4 Percentage of total drug reports identified as psilocin/psilocybin, by State, 2022[1,2]
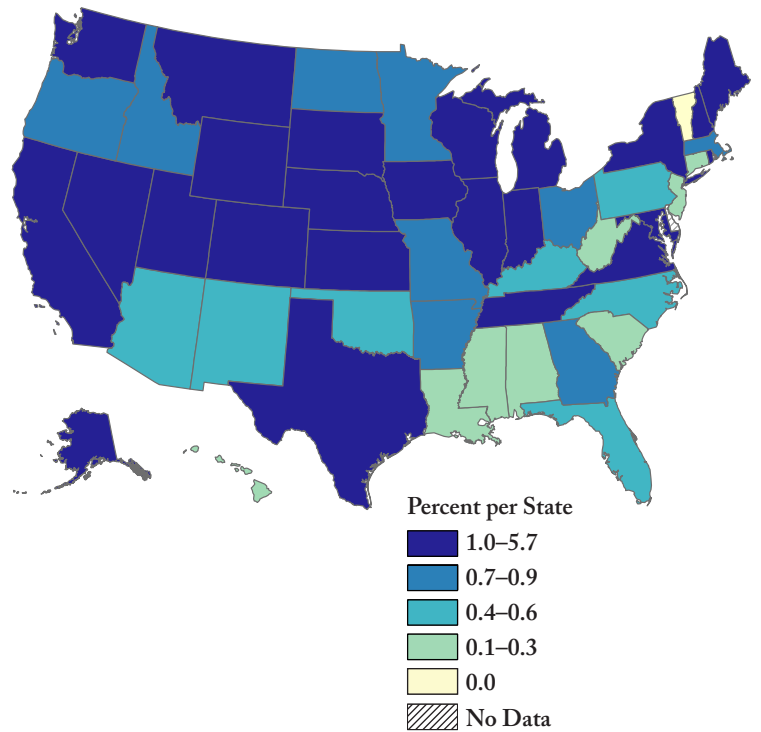
Percent per State
- 1.0–5.7
- 0.7–0.9
- 0.4–0.6
- 0.1–0.3
- 0.0
- No Data

[1] *Includes drugs submitted to State and local laboratories during the calendar year that were analyzed within three months of the reporting period.*

[2] *Some laboratories report psilocin and psilocybin together; others report them separately.*

Figure 3.5 Percentage of total drug reports identified as
xylazine in New Jersey, by county, 2020[1]

Percent per County

- 5.0–5.8
- 3.0–4.9
- 1.0–2.9
- 0.001–0.9
- 0.0
- No Data
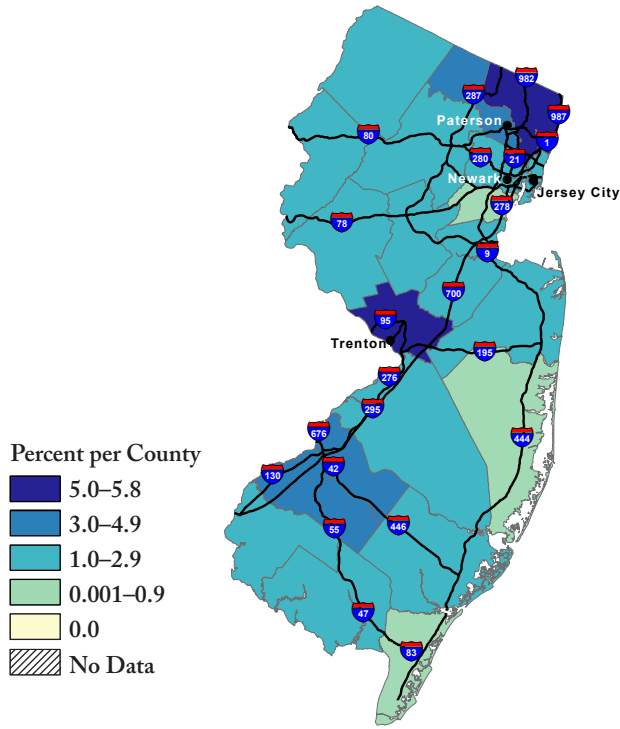
Figure 3.6 Percentage of total drug reports identified as
xylazine in New Jersey, by county, 2022[1]

Percent per County

- 5.0–14.9
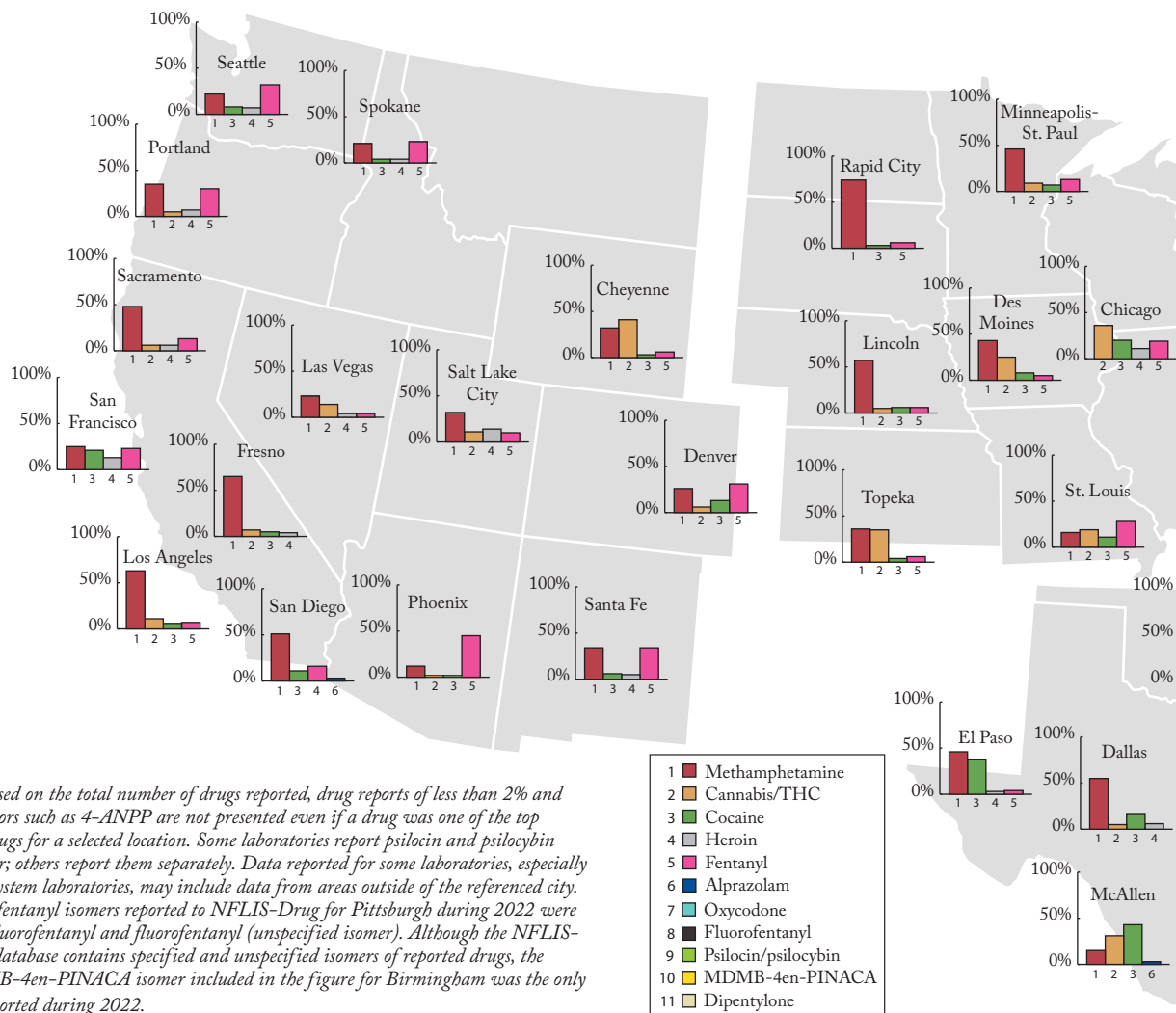- 3.0–4.9
- 1.0–2.9
- 0.001–0.9
- 0.0
- No Data
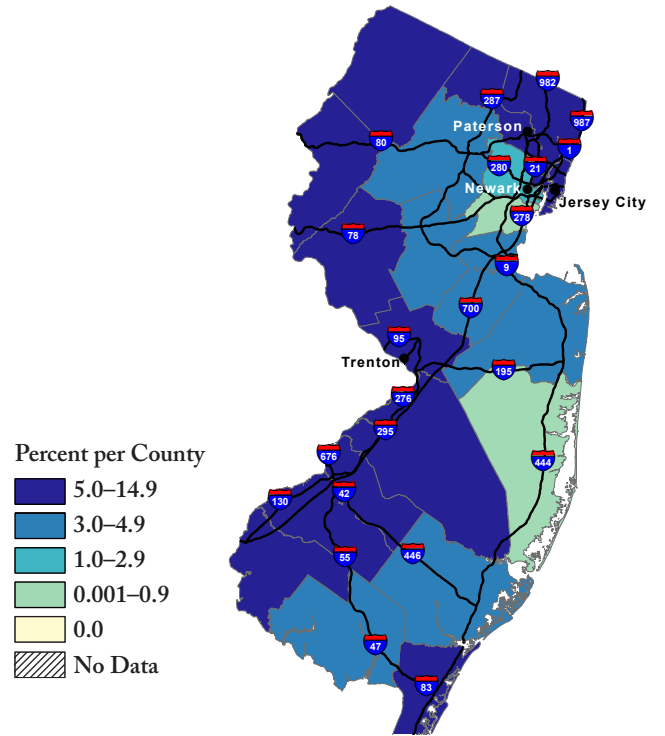
Figure 3.7 Percentage of total drug reports identified as
psilocin/psilocybin in Nevada, by county, 2020[1,2]

Percent per County

- 5.0–33.3
- 3.0–4.9
- 1.0–2.9
- 0.001–0.9
- 0.0
- No Data
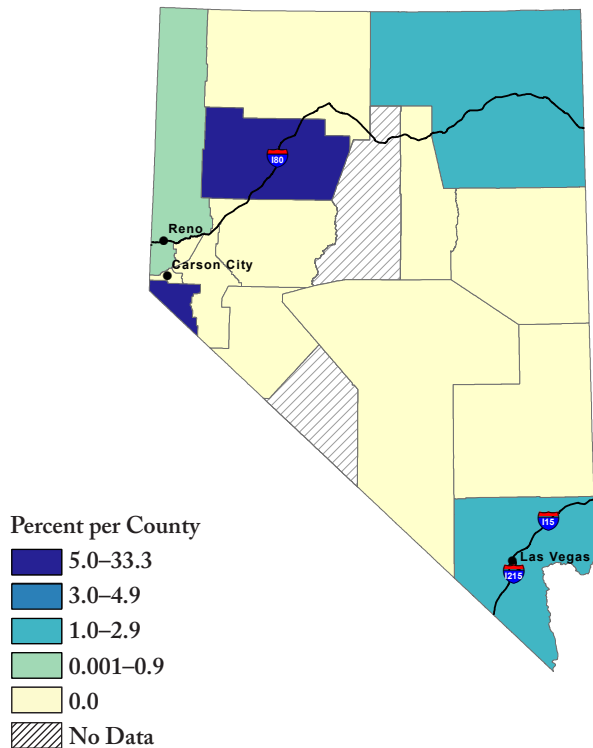
Figure 3.8 Percentage of total drug reports identified as
psilocin/psilocybin in Nevada, by county, 2022[1,2]
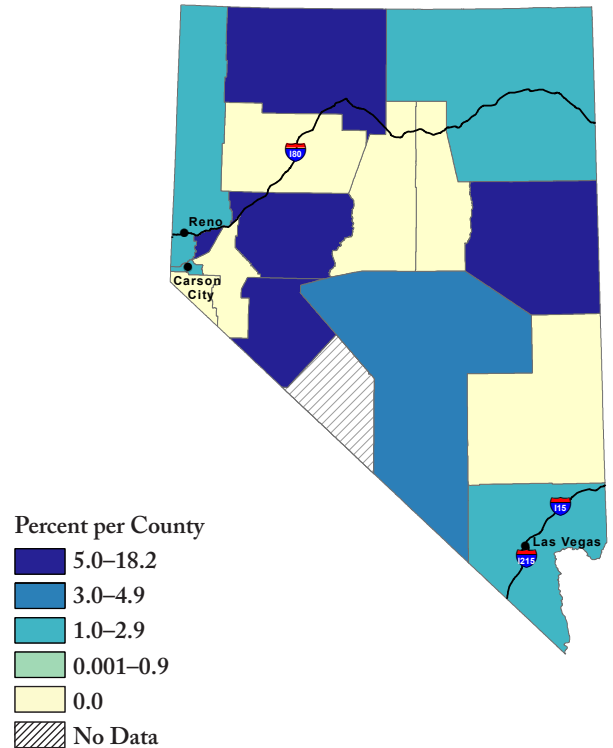
Percent per County

- 5.0–18.2
- 3.0–4.9
- 1.0–2.9
- 0.001–0.9
- 0.0
- No Data

[1] *Includes drugs submitted to State and local laboratories during the calendar year that were analyzed within three months of the reporting period.*

[2] *Some laboratories report psilocin and psilocybin together; others report them separately.*

DRUGS IDENTIFIED BY LABORATORIES IN SELECTED U.S. CITIES

NFLIS-Drug can be used to monitor drugs reported by forensic laboratories across the country, including laboratories in large U.S. cities. This section presents drug analysis results of all drugs submitted to State and local laboratories during 2022 and analyzed by March 31, 2023.

This section presents data for the four most common drugs reported by NFLIS-Drug laboratories in selected cities. The laboratories representing selected cities are presented in the summary table on the next page. The following results highlight geographic differences in the types of drugs used and trafficked, such as the higher levels of methamphetamine reporting on the West Coast and cocaine reporting on the East Coast.

Nationally, 29% of all drugs in NFLIS-Drug were identified as methamphetamine (Table 1.1). The highest percentages of methamphetamine were reported by laboratories representing cities in the West and Midwest, including Rapid City (74%), Fresno (65%), Los Angeles (63%), Lincoln (57%), San Diego (51%), Sacramento (48%), Minneapolis-St. Paul (46%), and Des Moines (43%). Cities in the South,

Note: Based on the total number of drugs reported, drug reports of less than 2% and precursors such as 4–ANPP are not presented even if a drug was one of the top four drugs for a selected location. Some laboratories report psilocin and psilocybin together; others report them separately. Data reported for some laboratories, especially State system laboratories, may include data from areas outside of the referenced city. Fluorofentanyl isomers reported to NFLIS-Drug for Pittsburgh during 2022 were para-fluorofentanyl and fluorofentanyl (unspecified isomer). Although the NFLIS–Drug database contains specified and unspecified isomers of reported drugs, the MDMB-4en-PINACA isomer included in the figure for Birmingham was the only one reported during 2022.

| 1 | Methamphetamine |
2	Cannabis/THC
3	Cocaine
4	Heroin
5	Fentanyl
6	Alprazolam
7	Oxycodone
8	Fluorofentanyl
9	Psilocin/psilocybin
10	MDMB-4en-PINACA
11	Dipentylone

such as Houston (57%), Dallas (55%), El Paso (46%), Louisville (46%), Atlanta (44%), and Little Rock (43%), also reported high percentages of drug reports identified as methamphetamine.

Overall, the highest percentages of cocaine were reported by laboratories representing cities in the Northeast and South, such as Miami (45%), New York City (44%), McAllen (43%), El Paso (38%), Orlando (26%), Philadelphia (24%), and Pittsburgh (20%). Cities in the West, such as San Francisco (21%), and in the Midwest, such as Chicago (20%), also reported high percentages of cocaine. Nationally, 14% of drugs in NFLIS-Drug were identified as cocaine.

The highest percentages of heroin were reported by laboratories representing the Western cities of Salt Lake City (14%) and San Francisco (13%), the Midwestern city of Chicago (11%), and the Northeastern city of New York City (10%). Nationally, 3% of all drugs in NFLIS-Drug were identified as heroin.

As for other controlled substances, Phoenix (45%), Santa Fe (34%), Seattle (32%), Denver (31%), Augusta (30%), Portland (30%), Pittsburgh (29%), St. Louis (28%), Spokane (23%), San Francisco (23%), New York City (21%), and Philadelphia (21%) reported the highest percentages of fentanyl. Nationally, 14% of drugs in NFLIS-Drug were identified as fentanyl. Pittsburgh (8%) reported the highest percentage of fluorofentanyl, which was identified in 2% of all drugs in NFLIS-Drug. McAllen and San Diego (3% each) reported the highest percentages of alprazolam. Dipentylone was identified in 17% of drug reports in Miami. The highest percentage of MDMB-4en-PINACA (4%), a noncontrolled substance, was reported in Birmingham. Nationally, 1% or less of drugs in NFLIS-Drug were identified as alprazolam, buprenorphine, dipentylone, or MDMB-4en-PINACA.
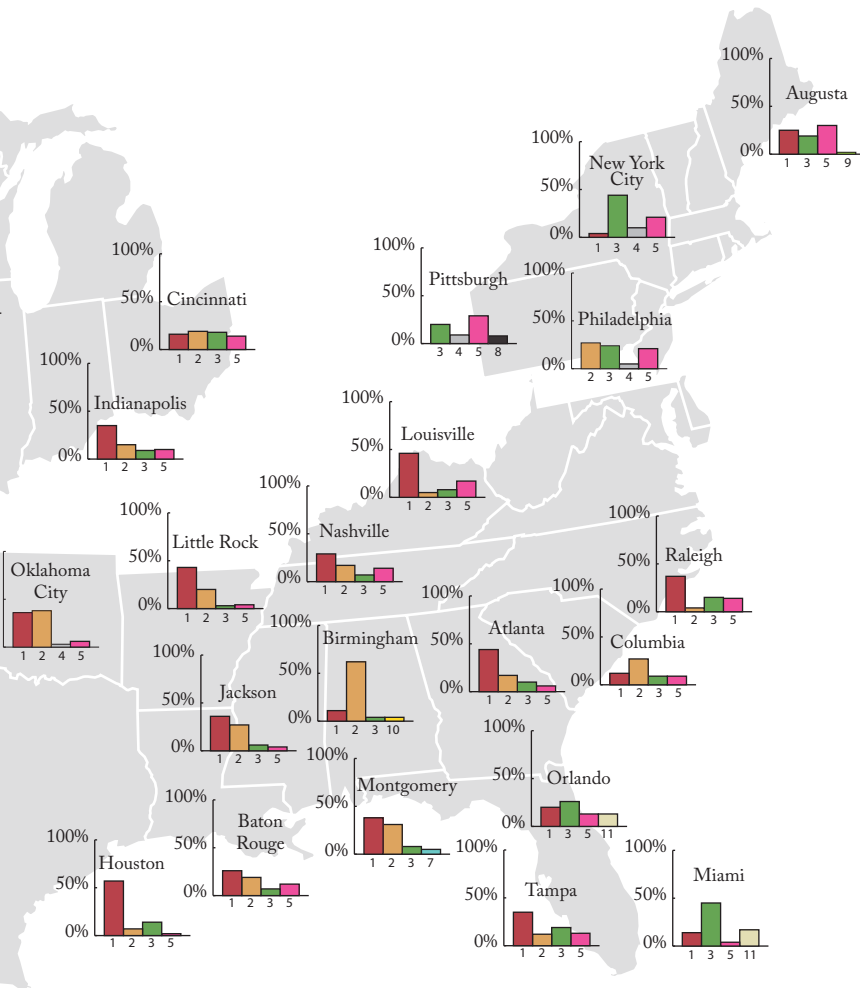
Selected Laboratories
Atlanta (Georgia State Bureau of Investigation—Decatur Laboratory)
Augusta (Maine Department of Health and Human Services)
Baton Rouge (Louisiana State Police)
Birmingham (Alabama Department of Forensic Sciences—Birmingham Laboratory)
Cheyenne (Wyoming State Crime Laboratory)
Chicago (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)
Des Moines (Iowa Division of Criminal Investigations)
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 Institute of Forensic Sciences Crime Laboratory)
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)
Little Rock (Arkansas State Crime 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 City (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)
Phoenix (Phoenix Police Department)
Pittsburgh (Allegheny Office of the Medical Examiner Forensic Laboratory)
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 Department of Public Safety—Salt Lake City State Crime 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)

LONG-TERM TREND GRAPHS

Figure A.1   National trend estimates for methamphetamine and cocaine, January 2001–December 2022
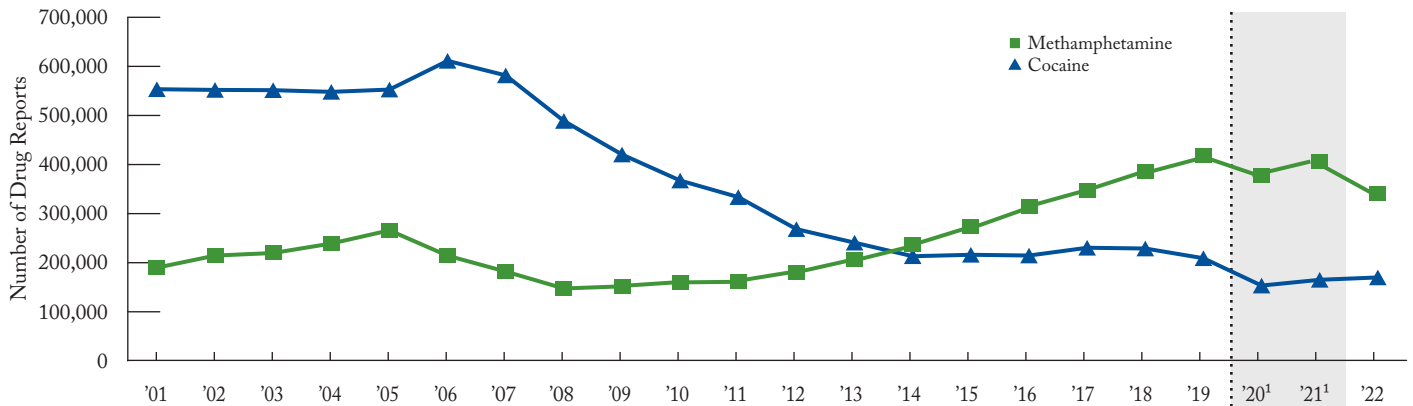

Figure A.2   National trend estimates for fentanyl, cannabis/THC, and heroin, January 2001–December 2022
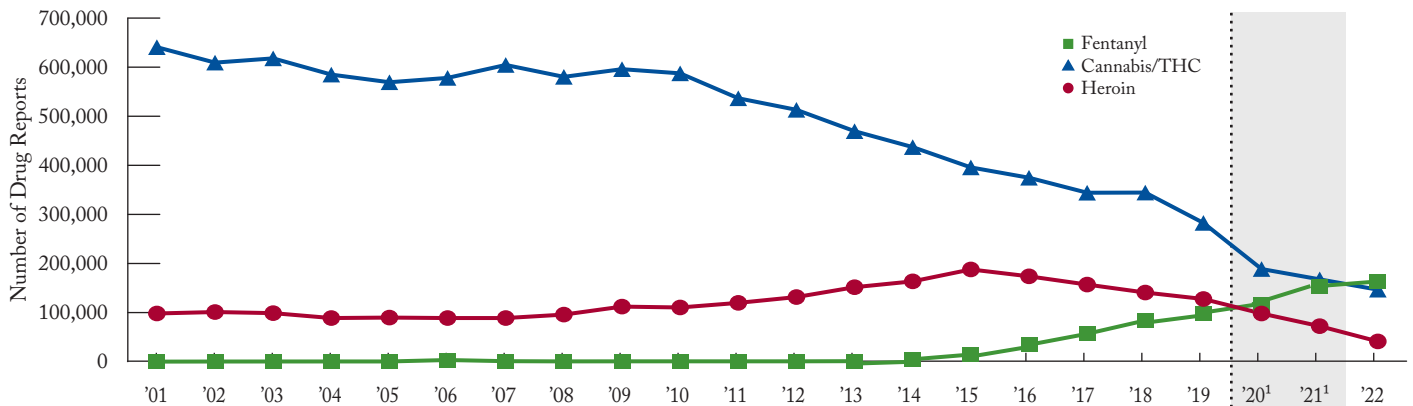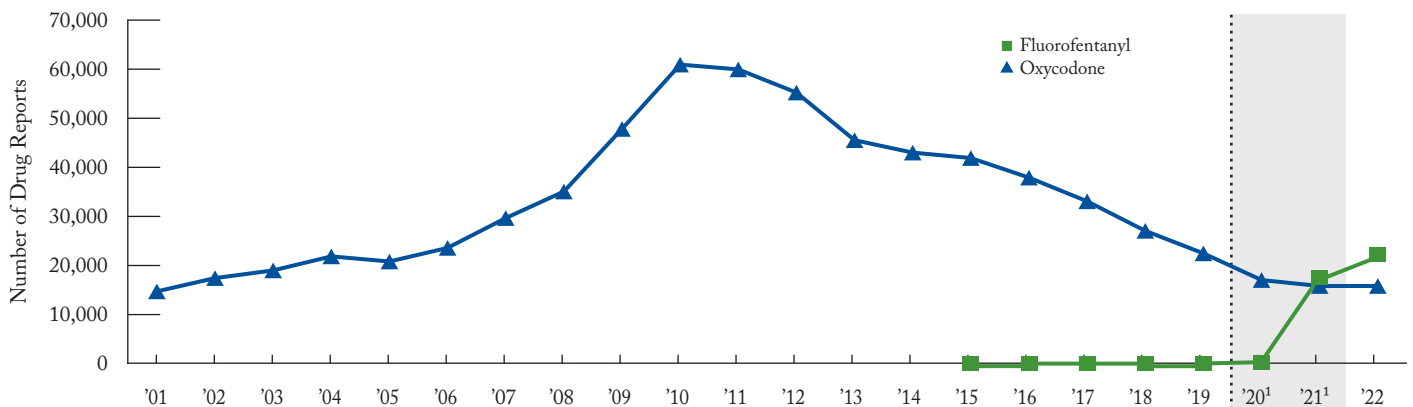

Figure A.3   National trend estimates for fluorofentanyl and oxycodone, January 2001–December 2022[2]

[1] *There was a noticeable decrease in the number of drugs reported and drug cases submitted and analyzed during 2020 and 2021 compared with earlier years, which is likely due, in part, to the impacts of COVID-19. Use caution when comparing the shaded estimates with other years' estimates.*

[2] *Estimates are not available for fluorofentanyl for 2001 through 2014 because fluorofentanyl was first reported to NFLIS-Drug in 2015. Fluorofentanyl isomers reported to NFLIS from January 2015 through December 2022 were ortho-fluorofentanyl, meta-fluorofentanyl, para-fluorofentanyl, 3-fluorofentanyl, and fluorofentanyl (unspecified isomer).*

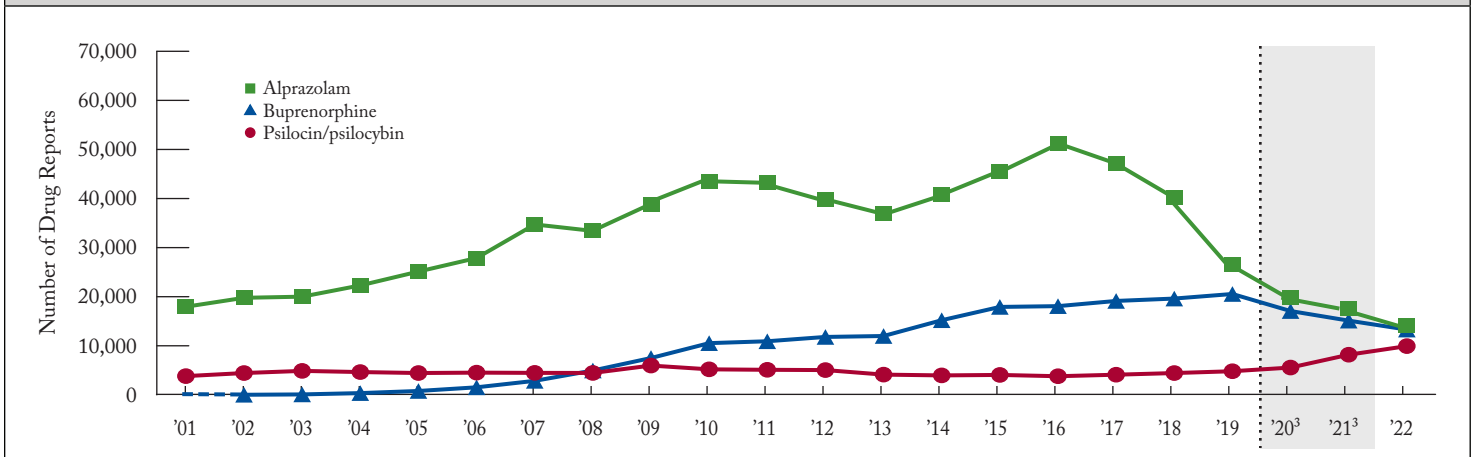**Figure A.4** National trend estimates for alprazolam, buprenorphine, and psilocin/psilocybin, January 2001–December 2022[1,2]

Figure A.5 Regional trends in methamphetamine reported per 100,000 people aged 15 or older, January 2001–December 2022[1]
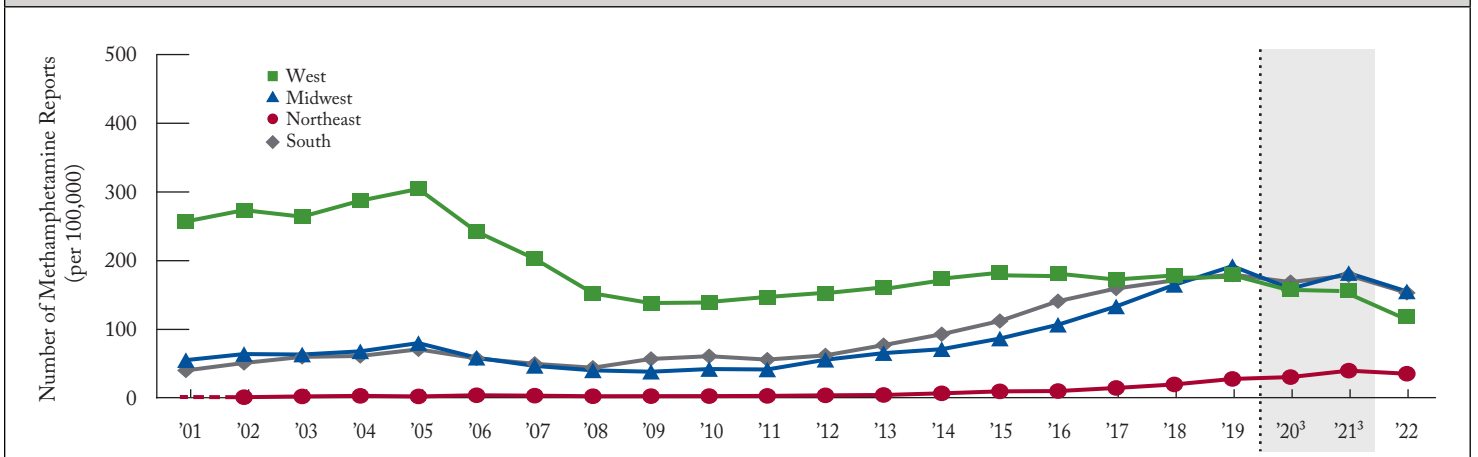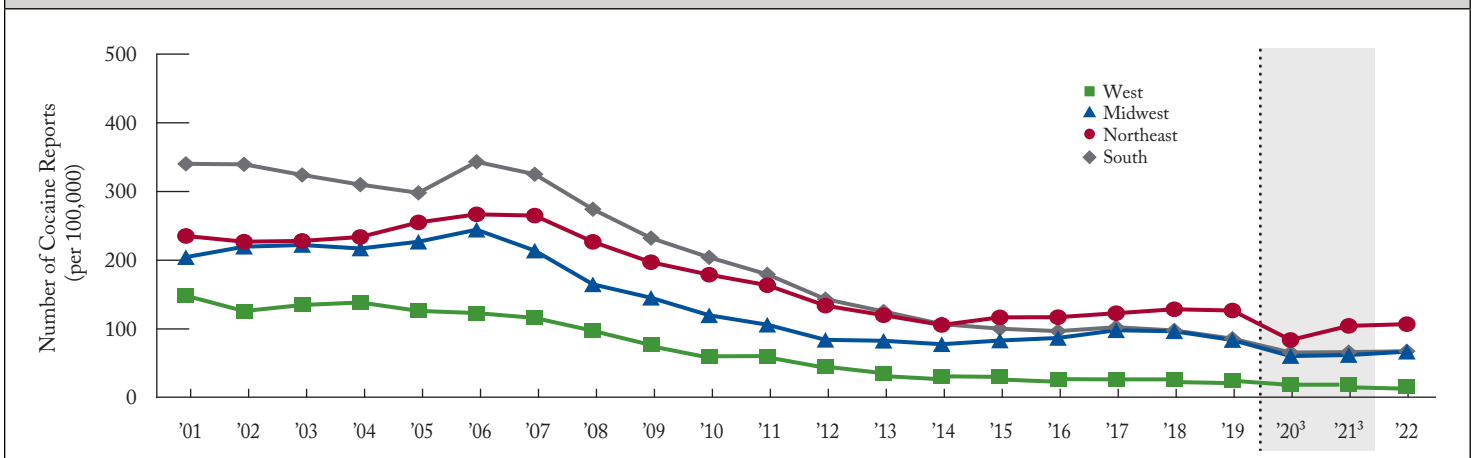

Figure A.6 Regional trends in cocaine reported per 100,000 people aged 15 or older, January 2001–December 2022

Note: U.S. Census 2022 population data by age were not available for this publication. Population data for 2022 were imputed.

[1] *A dashed trend line indicates that estimates did not meet the criteria for precision or reliability. See the current NFLIS Statistical Methodology publication for a more detailed description of the methods used in preparing these estimates.*

[2] *Some laboratories report psilocin and psilocybin together; others report them separately.*

[3] *There was a noticeable decrease in the number of drugs reported and drug cases submitted and analyzed during 2020 and 2021 compared with earlier years, which is likely due, in part, to the impacts of COVID-19. Use caution when comparing the shaded estimates with other years' estimates.*

Figure A.7 Regional trends in fentanyl reported per 100,000 people aged 15 or older, January 2001–December 2022[1]
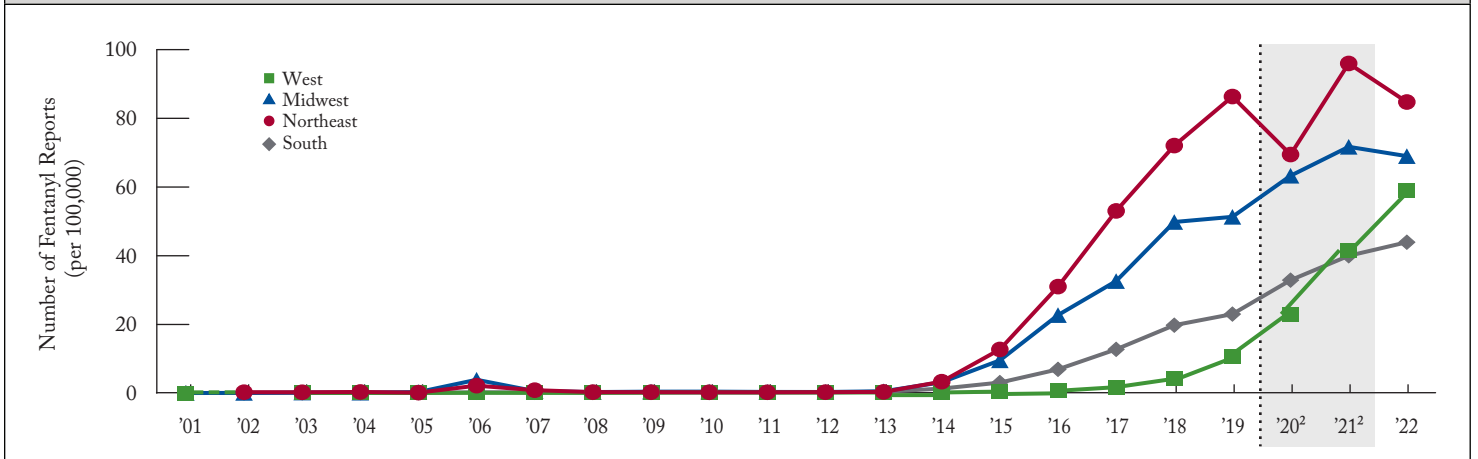

Figure A.8 Regional trends in cannabis/THC reported per 100,000 people aged 15 or older, January 2001–December 2022
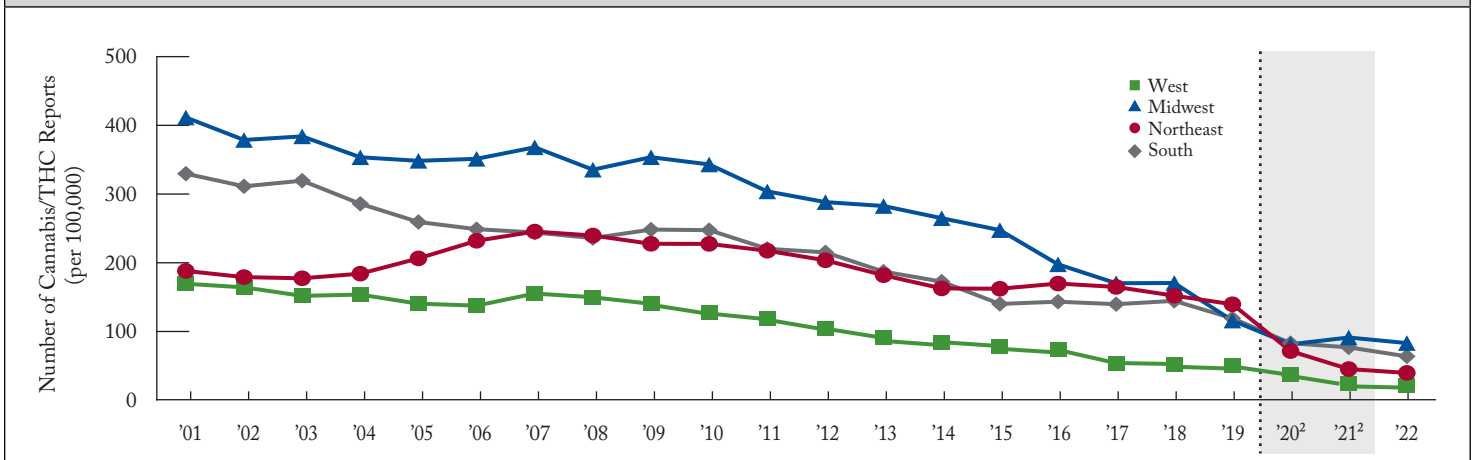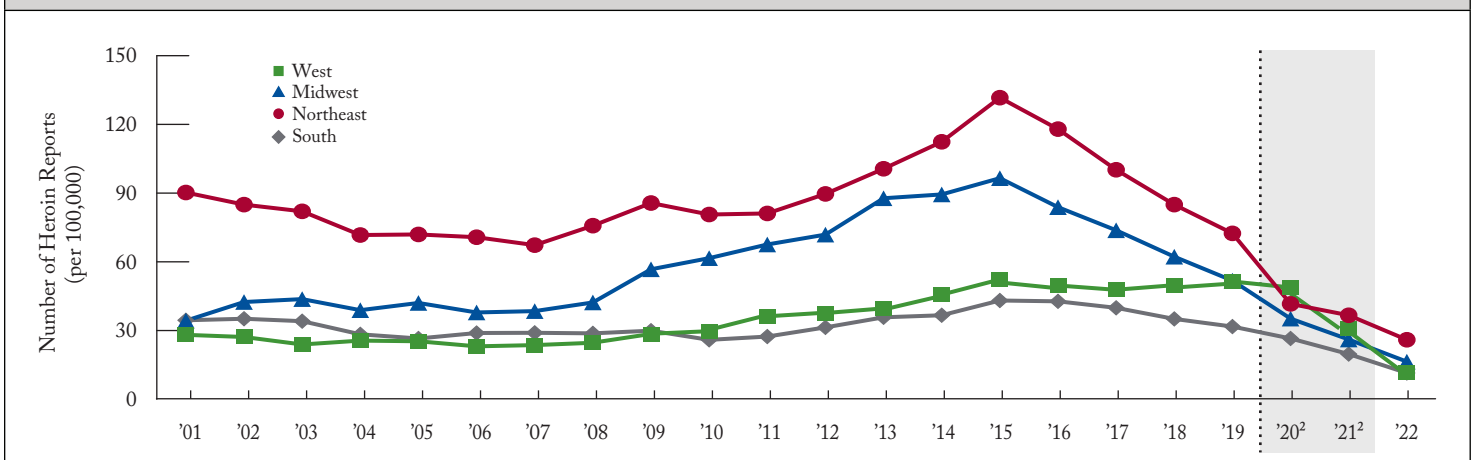

Figure A.9 Regional trends in heroin reported per 100,000 people aged 15 or older, January 2001–December 2022

Note: U.S. Census 2022 population data by age were not available for this publication. Population data for 2022 were imputed.

[1] *A dashed trend line indicates that estimates did not meet the criteria for precision or reliability. See the current NFLIS Statistical Methodology publication for a more detailed description of the methods used in preparing these estimates.*

[2] *There was a noticeable decrease in the number of drugs reported and drug cases submitted and analyzed during 2020 and 2021 compared with earlier years, which is likely due, in part, to the impacts of COVID-19. Use caution when comparing the shaded estimates with other years' estimates.*

Figure A.10 Regional trends in fluorofentanyl reported per 100,000 people aged 15 or older, January 2001–December 2022[1]
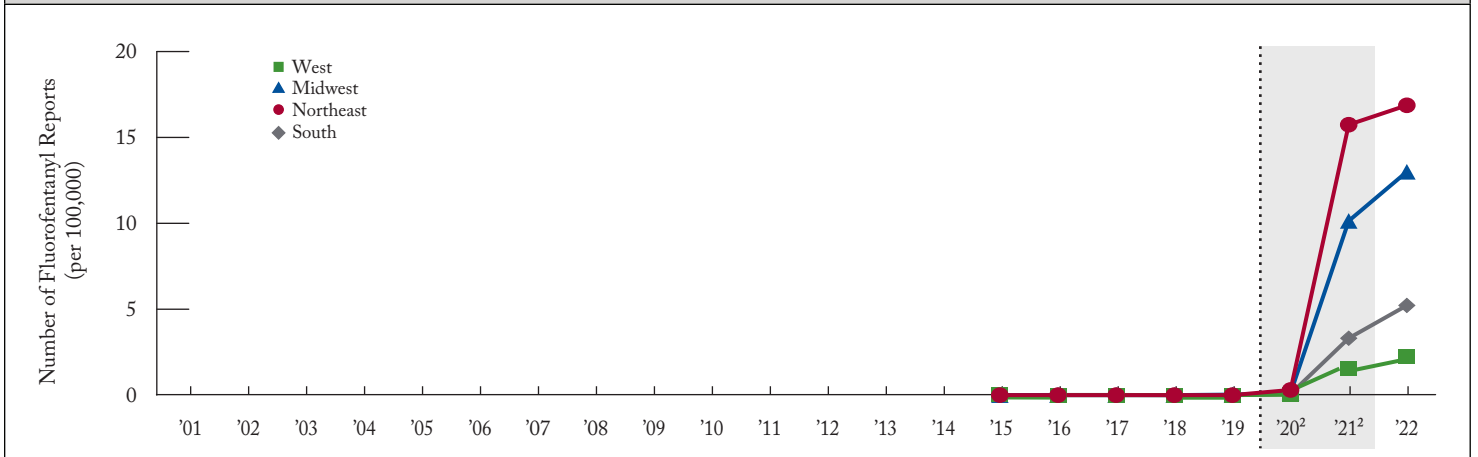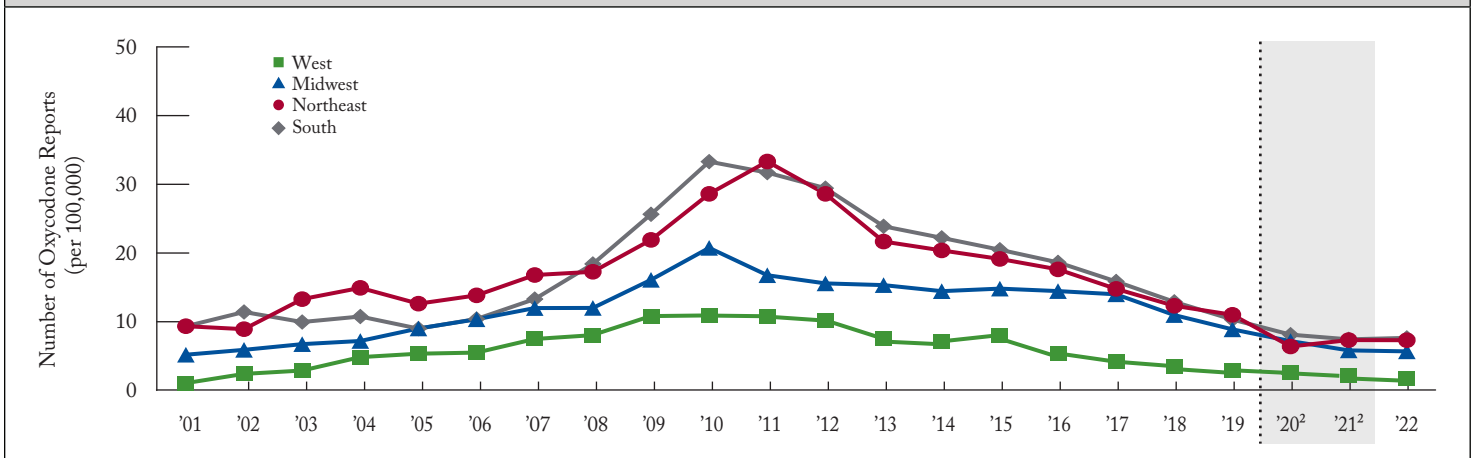

Figure A.11 Regional trends in oxycodone reported per 100,000 people aged 15 or older, January 2001–December 2022

Note: U.S. Census 2022 population data by age were not available for this publication. Population data for 2022 were imputed.

[1] Estimates are not available for fluorofentanyl for 2001 through 2014 because fluorofentanyl was first reported to NFLIS-Drug in 2015. Fluorofentanyl isomers reported to NFLIS-Drug from January 2015 through December 2022 were ortho-fluorofentanyl, meta-fluorofentanyl, para-fluorofentanyl, 3-fluorofentanyl, and fluorofentanyl (unspecified isomer).

[2] There was a noticeable decrease in the number of drugs reported and drug cases submitted and analyzed during 2020 and 2021 compared with earlier years, which is likely due, in part, to the impacts of COVID-19. Use caution when comparing the shaded estimates with other years' estimates.

Oxycodone

Figure A.12 Regional trends in alprazolam reported per 100,000 people aged 15 or older, January 2001–December 2022[1]
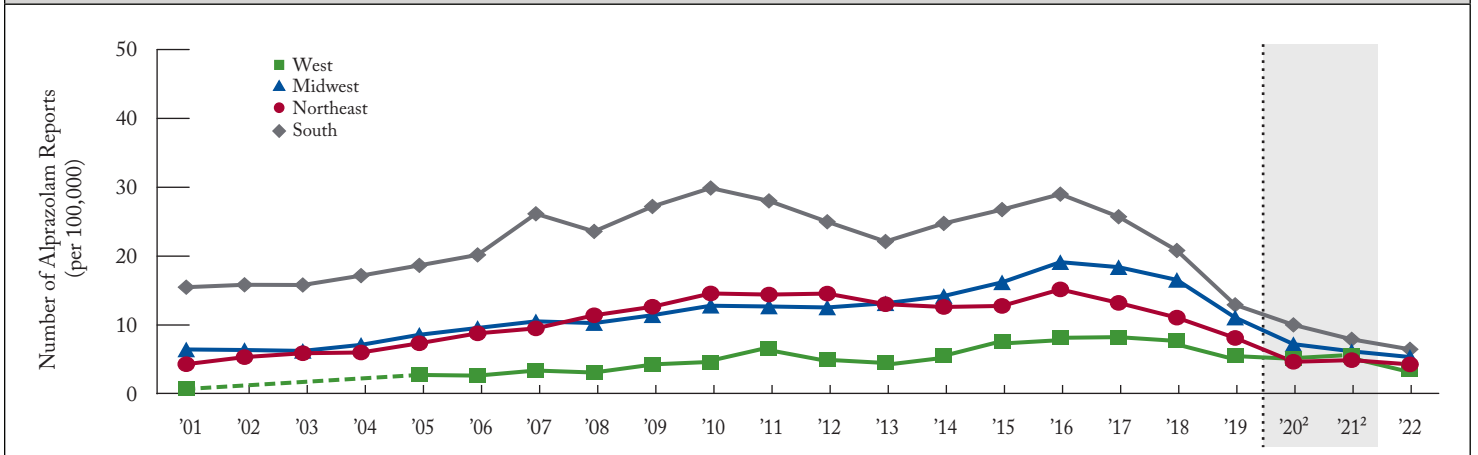

Figure A.13 Regional trends in buprenorphine reported per 100,000 people aged 15 or older, January 2001–December 2022[1]
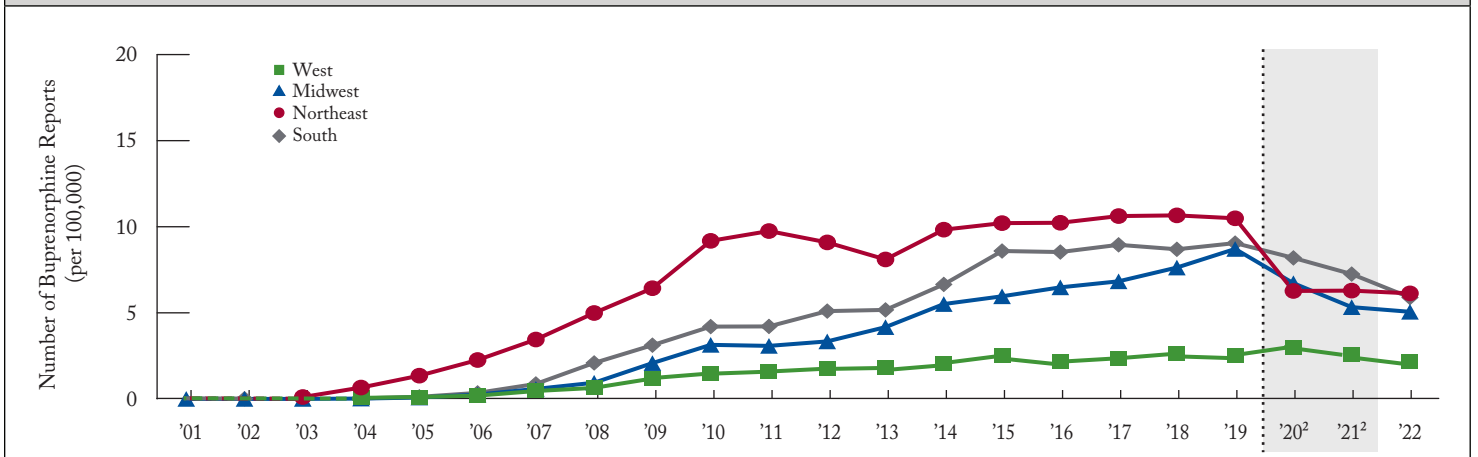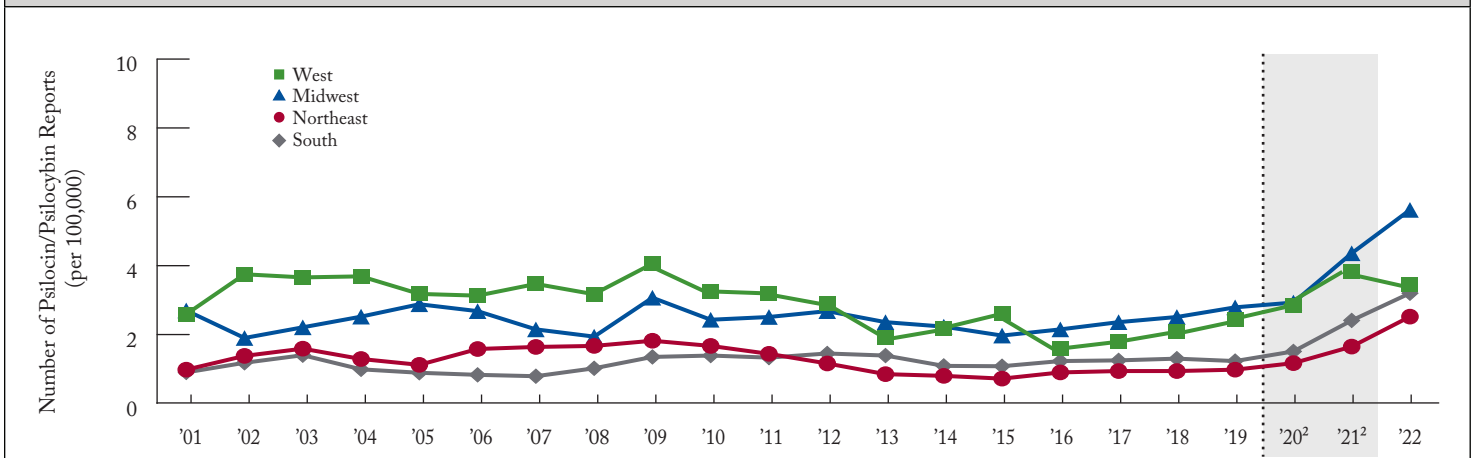

Figure A.14 Regional trends in psilocin/psilocybin reported per 100,000 people aged 15 or older, January 2001–December 2022[3]

Note: U.S. Census 2022 population data by age were not available for this publication. Population data for 2022 were imputed.

[1] *A dashed trend line indicates that estimates did not meet the criteria for precision or reliability. See the current NFLIS Statistical Methodology publication for a more detailed description of the methods used in preparing these estimates.*

[2] *There was a noticeable decrease in the number of drugs reported and drug cases submitted and analyzed during 2020 and 2021 compared with earlier years, which is likely due, in part, to the impacts of COVID-19. Use caution when comparing the shaded estimates with other years' estimates.*

[3] *Some laboratories report psilocin and psilocybin together; others report them separately.*

NFLIS-Drug Participating and Reporting Forensic Laboratories

State	Lab Type	Laboratory Name	Reporting
AK	State	Alaska Department of Public Safety	✓
AL	State	Alabama Department of Forensic Sciences (5 sites)	✓
AR	State	Arkansas State Crime Laboratory (3 sites)	✓
AZ	State	Arizona Department of Public Safety, Scientific Analysis Bureau (4 sites)	✓
	Local	Mesa Police Department	✓
	Local	Phoenix Police Department	✓
	Local	Scottsdale Police Department	✓
	Local	Tucson Police Department Crime Laboratory	✓
CA	State	California Department of Justice (10 sites)	✓
	Local	Alameda County Sheriff's Office Crime Laboratory (San Leandro)	✓
	Local	Contra Costa County Sheriff's Office (Martinez)	✓
	Local	Fresno County Sheriff's Forensic Laboratory	✓
	Local	Kern County District Attorney's Office (Bakersfield)	✓
	Local	Long Beach Police Department	✓
	Local	Los Angeles County Sheriff's Department (4 sites)	✓
	Local	Los Angeles Police Department	✓
	Local	Oakland Police Department Crime Laboratory	✓
	Local	Orange County Sheriff's Department (Santa Ana)	✓
	Local	Sacramento County District Attorney's Office	✓
	Local	San Bernardino County Sheriff's Department	✓
	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	Solano County District Attorney, Bureau of Forensic Services	✓
	Local	Ventura County Sheriff's Department	✓
CO	State	Colorado Bureau of Investigation (3 sites)	✓
	Local	Colorado Springs Police Department	✓
	Local	Denver Police Department Crime Laboratory	✓
	Local	Jefferson County Sheriff's Office (Golden)	✓
	Local	Unified Metropolitan Forensic Crime Laboratory (Englewood)	
CT	State	Connecticut Department of Public Safety	✓
DE	State	Chief Medical Examiner's Office	
FL	State	Florida Department of Law Enforcement (6 sites)	✓
	Local	Broward County Sheriff's Office (Fort Lauderdale)	✓
	Local	Indian River Crime Laboratory (Fort Pierce)	✓
	Local	Manatee County Sheriff's Office (Bradenton)	✓
	Local	Miami-Dade Police Department Crime Laboratory	✓
	Local	Palm Beach County Sheriff's Office Crime Laboratory (West Palm Beach)	✓
	Local	Pinellas County Forensic Laboratory (Largo)	✓
	Local	Sarasota County Sheriff's Office	✓
GA	State	Georgia State Bureau of Investigation (6 sites)	✓
HI	Local	Honolulu Police Department	✓
IA	State	Iowa Division of Criminal Investigations	✓
ID	State	Idaho State Police (3 sites)	✓
	Local	Ada County Sheriff's Office Forensic Lab (Boise)	✓
IL	State	Illinois State Police (6 sites)	✓
	Local	DuPage County Forensic Science Center (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 Criminalistics Laboratory (Lake Charles)	✓
	Local	St. Tammany Parish Sheriff's Office Crime Laboratory (Slidell)	✓
MA	State	Massachusetts State Police	✓
	Local	University of Massachusetts Medical School (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 Police Department Crime Laboratory (Rockville)	✓
	Local	Prince George's County Police Department (Landover)	
ME	State	Maine Department of Health and Human Services	✓
MI	State	Michigan State Police (7 sites)	✓
	Local	Oakland County Sheriff's Office Forensic Science Laboratory (Pontiac)	✓
MN	State	Minnesota Bureau of Criminal Apprehension (2 sites)	✓
	Local	Midwest Regional Forensic Laboratory (Andover)	✓
MO	State	Missouri State Highway Patrol (8 sites)	✓
	Local	KCMO Regional Crime Laboratory (Kansas City)	
	Local	St. Charles County Police Department Criminalistics Laboratory (O'Fallon)	✓
	Local	St. Louis County Police Department Crime Laboratory (Clayton)	✓
	Local	St. Louis Police Department	✓

State	Lab Type	Laboratory Name	Reporting
MS	State	Mississippi Department of Public Safety (4 sites)	✓
	Local	Jackson Police Department Crime Laboratory	✓
	Local	Tupelo Police Department	✓
MT	State	Montana Forensic Science Division	✓
NC	State	North Carolina State Bureau of Investigation (3 sites)	✓
	Local	Charlotte-Mecklenburg Police Department	
	Local	New Hanover County Sheriff's Office (Castle Hayne)	
	Local	Raleigh/Wake City-County Bureau of Identification	✓
ND	State	North Dakota Crime Laboratory Division	✓
NE	State	Nebraska State Patrol Criminalistics Laboratory	✓
	Local	Douglas County Sheriff's Office Forensic Services Division (Omaha)	
NH	State	New Hampshire State Police Forensic Laboratory	✓
NJ	State	New Jersey State Police (4 sites)	✓
	Local	Burlington County Forensic Laboratory (Mt. Holly)	✓
	Local	Cape May County Prosecutor's Office	✓
	Local	Hudson County Prosecutor's Office (Jersey City)	
	Local	Ocean County Sheriff's Department (Toms River)	✓
	Local	Union County Prosecutor's Office (Westfield)	✓
NM	State	New Mexico Department of Public Safety (3 sites)	✓
	Local	Albuquerque Police Department	✓
NV	Local	Henderson City Crime Laboratory	✓
	Local	Las Vegas Metropolitan Police Department Crime Laboratory	✓
	Local	Washoe County Sheriff's Office Crime Laboratory (Reno)	✓
NY	State	New York State Police (4 sites)	✓
	Local	Erie County Central Police Services Laboratory (Buffalo)	✓
	Local	Nassau County Office of Medical Examiner (East Meadow)	✓
	Local	New York City Police Department Crime Laboratory**	✓
	Local	Niagara County Sheriff's Office Forensic Laboratory (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 (4 sites)	✓
	State	Ohio State Highway Patrol	✓
	Local	Canton-Stark County Crime Laboratory (Canton)	✓
	Local	Columbus Police Department	✓
	Local	Cuyahoga County Regional Forensic Science Laboratory (Cleveland)	✓
	Local	Hamilton County Coroner's Office (Cincinnati)	✓
	Local	Lake County Regional Forensic Laboratory (Painesville)	✓
	Local	Lorain County Crime Laboratory (Elyria)	✓
	Local	Mansfield Police Department	✓
	Local	Miami Valley Regional Crime Laboratory (Dayton)	✓
	Local	Toledo Police Forensic Laboratory	✓
OK	State	Oklahoma State Bureau of Investigation (2 sites)	✓
	Local	Oklahoma City Police Department Laboratory Services Division	✓
	Local	Tulsa Police Department Forensic Laboratory	✓
OR	State	Oregon State Police Forensic Services Division (5 sites)	✓
PA	State	Pennsylvania State Police Crime Laboratory (6 sites)	✓
	Local	Allegheny County Office of the Medical Examiner (Pittsburgh)	✓
	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	Greenville County Crime Laboratory	
	Local	Richland County Sheriff's Department Forensic Sciences Laboratory (Columbia)	✓
	Local	Spartanburg Police Department	
SD	State	South Dakota Department of Public Health Laboratory	
	Local	Rapid City Police Department	✓
TN	State	Tennessee Bureau of Investigation (3 sites)	✓
	Local	Metro Nashville Police Department (Madison)	
TX	State	Texas Department of Public Safety (13 sites)	✓
	Local	Austin Police Department	✓
	Local	Bexar County Criminal Investigations Laboratory (San Antonio)	✓
	Local	Brazoria County Sheriff's Office Crime Laboratory (Angleton)	✓
	Local	Dallas Institute of Forensic Sciences	
	Local	Fort Worth Police Department Criminalistics Laboratory	
	Local	Harris County Institute of Forensic Sciences Crime Laboratory (Houston)	✓
	Local	Houston Forensic Science Center	✓
	Local	Jefferson County Sheriff's Regional Crime Laboratory (Beaumont)	✓
UT	State	Utah Department of Public Safety (3 sites)	✓
VA	State	Virginia Department of Forensic Science (4 sites)	✓
VT	State	Vermont Forensic Laboratory	✓
WA	State	Washington State Patrol (6 sites)	✓
WI	State	Wisconsin Department of Justice (3 sites)	✓
	Local	Kenosha County Division of Health Services	✓
WV	State	West Virginia State Police	✓
WY	State	Wyoming State Crime Laboratory	✓
PR	Territory	Institute of Forensic Science of Puerto Rico Criminalistics Laboratory (3 sites)	

This list identifies laboratories that were participating in and reporting to NFLIS-Drug as of July 21, 2023.

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

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

NFLIS-DRUG BENEFITS AND LIMITATIONS

Benefits

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

Specifically, NFLIS-Drug 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 National Survey on Drug Use and Health (NSDUH) and the Monitoring the Future (MTF) study.

NFLIS-Drug is an opportunity for State and local laboratories to participate in a useful, high-visibility initiative. Participating laboratories regularly receive reports that summarize national and regional data. In addition, the Data Query System (DQS) is a secure website that allows NFLIS-Drug participants—including State and local laboratories, the DEA, and other Federal drug control agencies—to run customized queries on the NFLIS-Drug data.

Limitations

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

- Currently, NFLIS-Drug includes data from Federal, State, and local forensic laboratories. Federal data are shown separately in this publication. Efforts are underway to enroll additional Federal laboratories.

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

- National and regional estimates may be subject to variation associated with sample estimates, including nonresponse bias.

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

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

- 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), whereas others record total weight.

- Laboratories also vary with respect to identifying and reporting specific isomers. Data submitted to NFLIS include reports of unspecified isomers (e.g., fluorofentanyl, fluoro-AB-PINACA). These unspecified isomer reports are counted and estimated separately from any specific isomer reports. For NFLIS-Drug Annual and Midyear Reports, reports for all positional and unspecified isomers of a drug are combined into a single listing with an explanation of which individual isomers are included in the total.

Appendix D

NFLIS WEBSITE AND NFLIS-DRUG DATA QUERY SYSTEM (DQS)

The NFLIS website (https://www.nflis.deadiversion.usdoj.gov) is an important feature of the NFLIS program. It is the key resource providing public access to review information regarding NFLIS data collections and to search for and download NFLIS publications. The website also gives NFLIS-Drug participants access to the NFLIS-Drug Data Query System (DQS). A publicly accessible DQS is also available to provide public access to aggregated data from the NFLIS-Drug data collection.

The public site is frequently updated with news related to the NFLIS program, including downloadable versions of published NFLIS-Drug reports, NFLIS-Drug data sets, guides for accurate data use and citations, links to other websites, and contact information for key NFLIS-Drug staff. Public features include a link to the Scientific Working Group for the Analysis of Seized Drugs (SWGDRUG) mass spectral library at https://www.swgdrug.org/ .

The private NFLIS site requires user accounts, which are role based, to manage access to its features, including the NFLIS-Drug Data Entry Application and the DQS. The DQS is a distinct resource for NFLIS-Drug reporting laboratories to run customizable queries on their own case-level data and on aggregated State, regional, and national data. Features include the ability to quickly run drug category queries, such as for synthetic cannabinoids and synthetic cathinones.

The NFLIS website also includes the NFLIS DEA Synth-Opioids Real-Time Communication Network (Synth-Opioids). This communication platform is a partnership between NFLIS and Synth-Opioids. Synth-Opioids provides rapid dissemination of information on emerging psychoactive substances in the United States and internationally, provides reports on emerging drug trends and unknown substances, and provides a searchable database of information. It also allows users to share data, methodologies, and information on novel substances, and it provides the opportunity for scientific forensic surveys to gather information quickly. An account is required to access Synth-Opioids. The NFLIS website provides instructions on how to create an account.

To obtain information about NFLIS-Drug participation or the DQS, please visit the NFLIS website at https://www.nflis.deadiversion.usdoj.gov/.
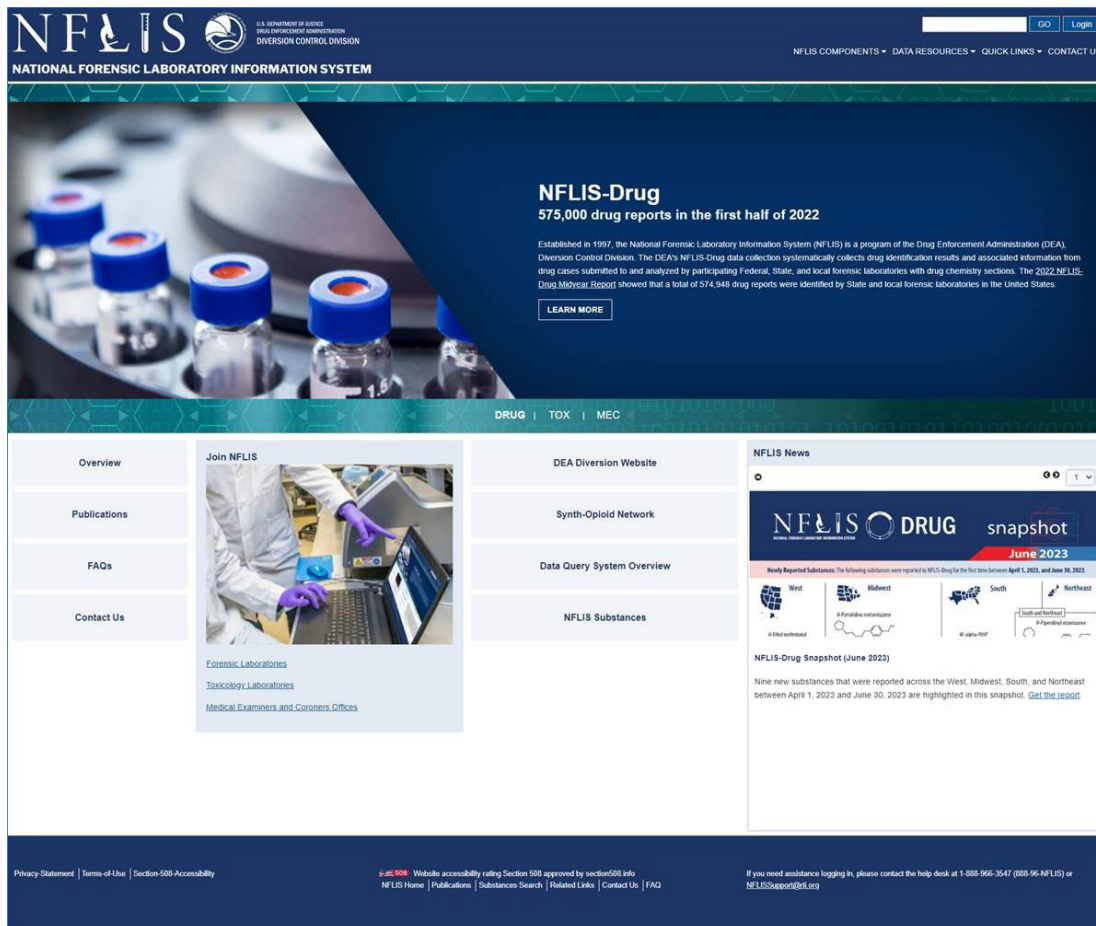
Obtaining Copies of This Publication

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

U.S. Drug Enforcement Administration
Diversion Control Division
8701 Morrissette Drive
Springfield, VA 22152