NFLIS

NATIONAL FORENSIC LABORATORY INFORMATION SYSTEM

NFLIS-DRUG **2021** ANNUAL REPORT

DRUG

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

Contents

Notice of Continued Decrease in Drug Reports

Although the number of drugs reported for the NFLIS-Drug 2021 Annual Report increased from the number of drugs reported for the NFLIS-Drug 2020 Annual Report, the total number of cases and drugs reported continues to be noticeably lower than the annual number reported for the years before the coronavirus disease 2019 (COVID-19) pandemic began. The continued decrease in reports is likely due to many factors, including the ongoing impacts of COVID-19 on drug availability within disrupted illicit markets and on law enforcement and laboratory caseloads, staffing, and operations. Caution should be used when comparing data from 2020 and 2021 with data from previous years. The U.S. Drug Enforcement Administration (DEA) will continue to explore the impacts of COVID-19 and other factors on reporting and would like to thank the participating and reporting NFLIS-Drug laboratories for their continued support and dedication to NFLIS, especially during the difficult times of the pandemic.

Highlights

- From January 1, 2021, through December 31, 2021, an estimated 712,130 distinct drug cases were submitted to State and local laboratories in the United States and analyzed by March 31, 2022. From these cases, an estimated 1,326,205 drug reports were identified. Although the number of drugs reported for the NFLIS-Drug 2021 Annual Report increased from the number of drugs reported for the NFLIS-Drug 2020 Annual Report, the total number of cases and drugs reported continues to be noticeably lower than the annual number reported for the years before the COVID-19 pandemic began. Please see the Notice of Continued Decrease in Drug Reports.
- Methamphetamine was the most frequently identified drug (406,200 reports) in 2021, followed by cannabis/THC (167,669 reports), cocaine (165,162 reports), fentanyl (153,949 reports), and heroin (72,315 reports). These five most frequently identified drugs accounted for approximately 73% of all drug reports.
- Nationally, fentanyl reports dramatically increased from 2014 through 2021. Alprazolam reports greatly increased from 2014 through 2016, then decreased through 2021. Oxycodone reports dramatically increased from 2007 through 2010, then declined steadily through 2021. Buprenorphine reports increased from 2013 through 2019, then decreased through 2021. Tramadol reports increased steadily from 2007 through 2018, then increased again from 2019 through 2021. Amphetamine reports increased from 2007 through 2018, then decreased through 2021.
- Between 2020 and 2021, national reports of fentanyl and tramadol increased significantly ($p < .05$), while reports of alprazolam, oxycodone, buprenorphine, and amphetamine decreased significantly.
- Regionally, fentanyl reports in the Northeast increased considerably from 2015 through 2019 and increased significantly from 2020 to 2021, while reports in the Midwest, West, and South increased substantially beginning in 2014. For alprazolam, reports in the West and Northeast decreased in 2019 and 2020, then increased in 2021, while in the Midwest and South, reports decreased from 2017 through 2021. For oxycodone, the highest number of reports occurred in 2010 or 2011 in all four regions, then decreased through 2020 in the Northeast and through 2021 in the West, Midwest, and South. Buprenorphine reports increased from 2014 through 2021 in the West, decreased from 2019 through 2021 in the Midwest and South, and remained steady in the Northeast from 2020 through 2021. In the West, tramadol reports increased steadily from 2011 through 2015 and in the South from 2011 through 2021, while the Midwest and Northeast exhibited even larger increases in reports from 2017 through 2021. For amphetamine, reports increased significantly in the Northeast from 2020 to 2021.
- In 2021, fentanyl accounted for 60% of identified narcotic analgesic reports, while alprazolam accounted for 31% of identified tranquilizer and depressant reports. Among identified synthetic cannabinoids, ADB-BUTINACA accounted for 36% of reports.
- Nationwide, methamphetamine reports increased from 2011 through 2019, decreased in 2020, and then increased again in 2021. Cannabis/THC reports decreased from 2009 through 2021. Cocaine reports increased slightly from 2015 through 2017 and again in 2021. Heroin reports increased from 2007 through 2015, then decreased through 2021. Eutylone reports increased from 31 reports in 2017 to almost 13,000 reports in 2020 and remained steady in 2021. Fluorofentanyl reports increased from 2 reports in 2016 to over 10,000 reports in 2021.

Common Drug Names Used in This Publication

NFLIS Substance Name	Chemical Name
3,4-Methylenedioxy PV8	3,4-methylenedioxy-alpha-pyrrolidinoheptaphenone
3Cl-PCP	3-chloro-phencyclidine
4-CN-CUMYL-BUTINACA	1-(4-cyanobutyl)-*N*-(2-phenylpropan-2-yl)-1*H*-indazole-3-carboxamide
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-EMB-PICA	ethyl 2-(1-(5-fluoropentyl)-1*H*-indole-3-carboxamido)-3-methylbutanoate
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-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
ANPP	4-anilino-*N*-phenethyl-4-piperidine
BMDP	3,4-methylenedioxy-*N*-benzylcathinone
BZO-HEXOXIZID	*N*'-[(3Z)-1-hexyl-2-oxo-1,2-dihydro-3*H*-indol-3-ylidene]benzohydrazide
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*,1-diphenethyl-N-phenylpiperidin-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 110 local or municipal laboratories/laboratory systems, representing a total of 286 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, 2021, through December 31, 2021, that were *analyzed* by March 31, 2022. 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. In addition, 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 and are reported independently in this publication unless otherwise specified.

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 2007 through December 2021. Section 2 presents estimates of specific drugs by drug category. All estimates are based on the NEAR approach (National Estimates Based on All Reports). Although the number of drugs reported for the NFLIS-Drug 2021 Annual Report increased from the number of drugs reported for the NFLIS-Drug 2020 Annual Report, the total number of cases and drugs reported continues to be noticeably lower than the annual number reported for the years before the coronavirus disease 2019 (COVID-19) pandemic began. Caution should be used when interpreting the estimates and trends for January through December 2021 and when comparing them with data from previous years because of the decrease in reporting

likely due, in part, to the impacts of COVID-19 (see the Notice of Continued Decrease in Drug 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 fluorofentanyl (all isomers) and clonazolam reports by State and by county for selected States. Section 4 presents drugs reported by selected laboratories in cities across the country.

Appendix A presents annual national and regional trends for 2001 through 2021. 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.


NORTHEAST
MIDWEST
SOUTH
ME
Augusta
Waterbury
VT
NH
Concord
Onondaga County
NY
Albany
Sudbury
University of MA Medical Center, Worcester
MA
Providence
RI
Hartford
CT
Niagara County
Erie County
Port Crane
Newburgh
Olean
Suffolk County
Westchester County
Wyoming
Yonkers
Nassau County
New York City
Union County
Hudson County
PA
Hamilton
NJ
Little Falls
Bethlehem
Burlington County
Philadelphia
Sea Girt
Ocean County
Hammonton
Harrisburg
Media
Greensburg
Cape May
Baltimore City
Pikesville
Baltimore County
Montgomery County
Hagerstown
DE
Fairfax
Anne Arundel County
Prince George's County
MD
Berlin
ND
Bismarck
Bemidji
Midwest Regional
Marquette
MN
Wausau
WI
St. Paul
SD
Pierre
Rapid City
Grayling
MI
East Lansing
Oakland County
Bridgeport
Sterling Heights
Lorain County
Cuyahoga County
Erie
Milwaukee
Grand Rapids
Madison
Kenosha County
Detroit
Northville
Lake County
Toledo
Richfield
Allegheny County
Rockford
Chicago
Northern Illinois
DuPage County
Joliet
Fort Wayne
Lowell
Mansfield PD
Springfield
Bowling Green
OH
Canton-Stark County
Columbus PD
Columbus
London
IA
Des Moines
NE
Lincoln
Cheyenne
Douglas County, NE
Greely
Denver
Denver
Unified Metro (Englewood)
Colorado Springs
Pueblo
IN
Morton
Indianapolis-Marion County
Indianapolis
Miami Valley
Hamilton County
St. Joseph
Macon
IL
Springfield
KCMO Regional
St. Charles County
Johnson County
KS
Topeka
Belleville
Evansville
Great Bend
Jefferson City
St. Louis
MO
Park Hills
St. Louis County
Sedgwick County
Pittsburg
Springfield
Cape Girardeau
Willow Springs
Carthage
Cold Springs
Ashland
Frankfort
Louisville
KY
WV
South Charleston
VA
Richmond
Norfolk
Roanoke
London
Madisonville
Greensboro
Raleigh/Wake County
NC
Raleigh
Knoxville
Asheville
Charlotte-Mecklenburg PD
Metro Nashville
Nashville
TN
Greenville County
Spartanburg
Anderson/Oconee
Cleveland
Columbia
Richland County
SC
Charleston
Lowell
Enid
Tulsa
OK
Tahlequah
Edmond
AR
Memphis
Huntsville
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McAlester
Tupelo
Little Rock
Batesville
Decatur
Birmingham
Hope
Macon
Savannah
Hobbs
Lubbock
Jackson PD
MS
AL
Auburn
Midland
GA
Fort Worth
Garland
Dallas
North LA
Jackson
Meridian
Montgomery
Abilene
Tyler
LA
Moultrie
Jacksonville
Midland
Waco
TX
Mobile
Gulfport
Pensacola
Southwest LA
Baton Rouge
St. Tammany Parish
Jefferson Parish
New Orleans
Austin
Jefferson County
Houston
Houston
Acadiana
Orlando
Pinellas County
Bexar County
Harris County
Brazoria County
Tampa
Manatee County
Sarasota County
FL
Indian River
Fort Myers
Palm Beach County
Broward County
Miami-Dade PD
Laredo
Corpus Christi
McAllen
San Juan
PR
Mayagüez
Ponce
Honolulu
HI
AK
Anchorage
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)

Section 1

NATIONAL AND REGIONAL ESTIMATES

This section presents national and regional estimates of drugs *submitted* to State and local laboratories from January through December 2021 that were *analyzed* by March 31, 2022. Trends are presented for selected drugs from 2007 through 2021.

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 2021, a total of 1,326,205 drug reports were identified by State and local forensic laboratories in the United States. This estimate is an increase of about 3% from the 1,283,971 drug reports identified during 2020 (see the Notice of Continued Decrease in Drug Reports). 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 86% of all drugs analyzed in 2021. Nationally, approximately two-thirds of all drugs reported in NFLIS-Drug were identified as methamphetamine (406,200 reports or 31%), cannabis/THC (167,669 reports or 13%), cocaine (165,162 reports or 12%), and heroin (72,315 reports or 5%).

In addition, seven narcotic analgesics were among the top 25 drugs: fentanyl (153,949 reports), oxycodone (15,819 reports), buprenorphine (15,123 reports), tramadol (14,856 reports), fluorofentanyl (10,340 reports), *para*-fluorofentanyl (7,199 reports), and hydrocodone (6,930 reports). Five tranquilizers and depressants were included: alprazolam (17,579 reports), xylazine (7,326 reports), clonazolam (6,508 reports), clonazepam (5,301 reports), and etizolam (4,207 reports). There were also three phenethylamines: eutylone (12,996 reports), amphetamine (8,454 reports), and MDMA (4,624 reports). In addition, there were two synthetic cannabinoids: ADB-BUTINACA (4,725 reports) and MDMB-4en-PINACA (3,841 reports). The controlled substances ANPP (16,259 reports), psilocin/psilocybin (8,179 reports), and lysergic acid diethylamide (LSD) (3,724 reports) were also included in the top 25 most frequently identified drugs, as were the following noncontrolled substances: xylazine (7,326 reports) and naloxone (3,936 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, 2021, through December 31, 2021, and analyzed by March 31, 2022[2]

	National		West		Midwest		Northeast		South	
Drug	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Methamphetamine	406,200	30.63%	100,050	43.34%	102,151	30.87%	18,989	8.49%	185,011	34.21%
Cannabis/THC	167,669	12.64%	15,347	6.65%	51,223	15.48%	21,541	9.63%	79,558	14.71%
Cocaine	165,162	12.45%	12,123	5.25%	34,824	10.52%	49,640	22.19%	68,576	12.68%
Fentanyl	153,949	11.61%	26,691	11.56%	40,259	12.17%	45,607	20.39%	41,393	7.65%
Heroin	72,315	5.45%	19,841	8.60%	14,640	4.42%	17,420	7.79%	20,414	3.77%
Alprazolam	17,579	1.33%	3,588	1.55%	3,471	1.05%	2,327	1.04%	8,193	1.51%
ANPP	16,259	1.23%	1,412	0.61%	4,440	1.34%	7,127	3.19%	3,280	0.61%
Oxycodone	15,819	1.19%	1,367	0.59%	3,272	0.99%	3,483	1.56%	7,697	1.42%
Buprenorphine	15,123	1.14%	1,641	0.71%	2,994	0.90%	2,987	1.34%	7,502	1.39%
Tramadol	14,856	1.12%	540	0.23%	4,512	1.36%	5,392	2.41%	4,413	0.82%
Eutylone	12,996	0.98%	79	0.03%	1,954	0.59%	940	0.42%	10,023	1.85%
Fluorofentanyl	10,340	0.78%	522	0.23%	2,704	0.82%	5,389	2.41%	1,724	0.32%
Amphetamine	8,454	0.64%	633	0.27%	2,241	0.68%	1,434	0.64%	4,146	0.77%
Psilocin/psilocybin	8,179	0.62%	2,450	1.06%	2,450	0.74%	782	0.35%	2,497	0.46%
Xylazine	7,326	0.55%	68	0.03%	1,420	0.43%	2,968	1.33%	2,870	0.53%
para-Fluorofentanyl	7,199	0.54%	456	0.20%	2,968	0.90%	2,080	0.93%	1,695	0.31%
Hydrocodone	6,930	0.52%	980	0.42%	1,688	0.51%	287	0.13%	3,975	0.74%
Clonazolam	6,508	0.49%	647	0.28%	2,685	0.81%	899	0.40%	2,278	0.42%
Clonazepam	5,301	0.40%	382	0.17%	1,400	0.42%	1,015	0.45%	2,504	0.46%
ADB-BUTINACA	4,725	0.36%	97	0.04%	1,589	0.48%	582	0.26%	2,457	0.45%
MDMA	4,624	0.35%	1,286	0.56%	1,560	0.47%	461	0.21%	1,316	0.24%
Etizolam	4,207	0.32%	563	0.24%	760	0.23%	582	0.26%	2,302	0.43%
Naloxone	3,936	0.30%	186	0.08%	671	0.20%	645	0.29%	2,435	0.45%
MDMB-4en-PINACA	3,841	0.29%	116	0.05%	1,450	0.44%	633	0.28%	1,642	0.30%
Lysergic acid diethylamide (LSD)	3,724	0.28%	600	0.26%	1,486	0.45%	406	0.18%	1,231	0.23%
Top 25 Total	1,143,219	86.20%	191,662	83.03%	288,810	87.29%	193,615	86.55%	469,133	86.75%
All Other Drug Reports	182,987	13.80%	39,169	16.97%	42,060	12.71%	30,089	13.45%	71,669	13.25%
Total Drug Reports[3]	1,326,205	100.00%	230,831	100.00%	330,870	100.00%	223,704	100.00%	540,801	100.00%

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

[2] Although the number of drugs reported to NFLIS-Drug for 2021 increased from the number of drugs reported for 2020, the total number of cases and drugs reported continues to be noticeably lower than the number reported for the years before the COVID-19 pandemic began.Use caution when comparing data from 2021 with data from previous years.

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

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 2021, there were 1,027,219 drug-specific cases submitted to and analyzed by State and local forensic laboratories, representing a 2% increase from the 1,009,958 drug-specific cases in 2020 (see the Notice of Continued Decrease in Drug Reports).

Among all drug cases, methamphetamine was the most common drug reported during 2021. Nationally, 45% of drug cases contained one or more reports of methamphetamine, followed by cocaine, which was identified in 18% of all drug cases. About 17% of drug cases contained cannabis/THC, and 16% contained fentanyl. Heroin was reported in 8% of cases, and alprazolam, ANPP, buprenorphine, oxycodone, and tramadol were each reported in 2% of cases.


Cocaine

Table 1.2 *National Case Estimates*
Top 25 estimated number of drug-specific cases and their percentage of distinct cases, January 1, 2021, through December 31, 2021[1]

Drug	Number	Percent
Methamphetamine	317,431	44.57%
Cocaine	124,875	17.54%
Cannabis/THC	120,789	16.96%
Fentanyl	115,304	16.19%
Heroin	56,814	7.98%
Alprazolam	15,035	2.11%
ANPP	13,839	1.94%
Buprenorphine	13,282	1.87%
Oxycodone	12,699	1.78%
Tramadol	12,201	1.71%
Eutylone	8,651	1.21%
Fluorofentanyl	7,654	1.07%
Amphetamine	7,239	1.02%
Psilocin/psilocybin	7,015	0.99%
Hydrocodone	6,247	0.88%
para-Fluorofentanyl	6,069	0.85%
Xylazine	6,056	0.85%
Clonazolam	5,594	0.79%
Clonazepam	4,946	0.69%
ADB-BUTINACA	4,259	0.60%
Etizolam	3,806	0.53%
MDMA	3,547	0.50%
Naloxone	3,467	0.49%
Lysergic acid diethylamide (LSD)	3,310	0.46%
MDMB-4en-PINACA	3,268	0.46%
Top 25 Total	883,399	124.05%
All Other Drugs	143,821	20.20%
Total All Drugs[2]	1,027,219	144.25%[3]

[1] *Although the number of drugs reported to NFLIS-Drug for 2021 increased from the number of drugs reported for 2020, the total number of cases and drugs reported continues to be noticeably lower than the number reported for the years before the COVID-19 pandemic began. Use caution when comparing data from 2021 with data from previous years.*

[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 712,130 distinct cases submitted to State and local laboratories from January 1, 2021, through December 31, 2021, and analyzed by March 31, 2022.*

Drugs Reported by Federal Laboratories

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 selected 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 64,521 drug reports were identified by DEA and CBP laboratories in 2021 and analyzed by March 31, 2022, or about 5% of the estimated 1.3 million drugs reported by NFLIS-Drug State and local laboratories during this period. In 2021, more than half of the drugs reported by DEA and CBP laboratories were identified as methamphetamine (26%), fentanyl (14%), or cocaine (13%).

DRUGS MOST FREQUENTLY REPORTED BY FEDERAL LABORATORIES[1]

Number and percentage of drug reports submitted to laboratories from January 1, 2021, through December 31, 2021, and analyzed by March 31, 2022

Drug	Number	Percent
Methamphetamine	16,477	25.54%
Fentanyl	8,749	13.56%
Cocaine	8,506	13.18%
Heroin	3,800	5.89%
Cannabis/THC	1,331	2.06%
Phenacetin	1,135	1.76%
para-Fluorofentanyl	1,094	1.70%
Tramadol	1,045	1.62%
Xylazine	1,040	1.61%
ANPP	570	0.88%
All Other Drugs	20,774	32.20%
Total Drug Reports[2]	64,521	100.00%

[1] Federal drug reports in this table include 60,071 reports from DEA laboratories and 4,450 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 of selected drugs 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 2007 through 2021). National and regional trends for 2001 through 2021 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 1.16. Estimates include all drug reports identified among the NFLIS-Drug laboratories' reported drug items. Although the number of drugs reported for this report increased from the number of drugs reported for last year's annual report, the total number of cases and drugs reported continues to be noticeably lower than the annual number reported for the years before the COVID-19 pandemic began. The decrease in reporting is likely due, in part, to the impacts of COVID-19, and caution should be used when comparing data for 2020 and 2021 with data from previous years.

National prescription drug trends

Figures 1.1 and 1.2 present national trends for the estimated number of prescription drug reports that were identified as fentanyl, alprazolam, oxycodone, buprenorphine, tramadol, and amphetamine, drugs all available by prescription. Note that laboratories do not identity whether reported drugs are licitly or illicitly manufactured. Thus, diverted pharmaceuticals are not distinguished from illicitly manufactured drugs. Notable results include the following:

- Although fentanyl reports remained steady from 2007 through 2013, dramatic increases occurred from 2014 through 2021.
- Alprazolam reports showed an overall increase from 2007 to 2010, followed by a decrease in reports from 2011 to 2013. Reports greatly increased from 2014 to 2016, then decreased through 2021.
- From 2007 to 2010, oxycodone reports dramatically increased, then steadily declined through 2021.
- Buprenorphine reports steadily increased from 2007 through 2010 and increased again from 2013 to 2019. Reports decreased from 2019 through 2021.
- From 2007 through 2018, tramadol reports steadily increased, then increased again from 2019 to 2021.

Figure 1.1 National trend estimates for fentanyl, alprazolam, and oxycodone, January 2007–December 2021

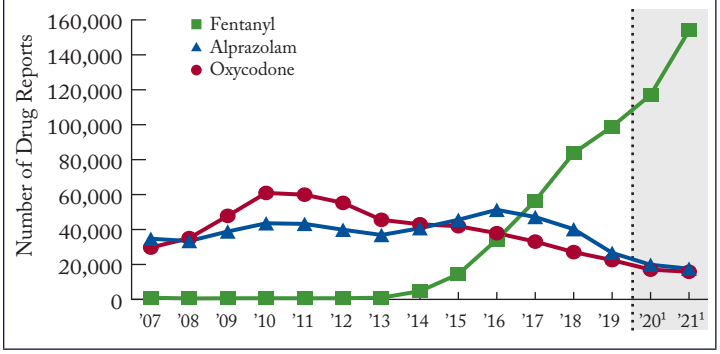
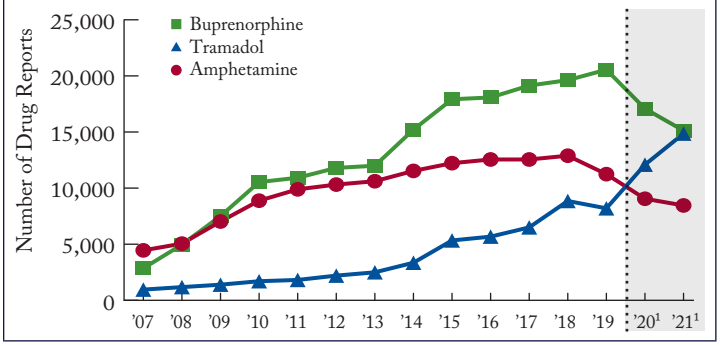


Figure 1.2 National trend estimates for buprenorphine, tramadol, and amphetamine, January 2007–December 2021



- An increase in amphetamine reports occurred from 2007 through 2018, followed by a decrease through 2021.

Significance tests were also performed on differences from 2020 to 2021 to identify more recent changes. Across these two periods, reports of fentanyl (from 117,045 to 153,949 reports) and tramadol (from 12,086 to 14,856 reports) increased significantly ($p < .05$). Reports of alprazolam (from 19,810 to 17,579 reports), oxycodone (from 17,038 to 15,819 reports), buprenorphine (from 17,077 to 15,123 reports), and amphetamine (from 9,051 to 8,454 reports) decreased significantly.

Other national drug trends

Figures 1.3 and 1.4 present national trends for reports of methamphetamine, cannabis/THC, cocaine, heroin, eutylone, and fluorofentanyl. Notable results include the following:

- Methamphetamine reports decreased from 2007 through 2010, increased from 2011 through 2019, decreased in 2020, and then increased slightly in 2021.
- Cannabis/THC reports increased slightly from 2007 to 2009 and decreased from 2009 through 2021.
- Cocaine reports decreased substantially from 2007 through 2014, increased slightly through 2017, and then decreased through 2020; reports increased in 2021.
- Heroin reports increased from 2007 through 2015, then decreased through 2021.
- Reports of eutylone first appeared in NFLIS in 2017. Eutylone reports increased from 31 in 2017 to almost 13,000 in 2020 and remained steady in 2021.
- Reports of fluorofentanyl first appeared in NFLIS in 2016. Reports increased from 2 reports in 2016 to 167 reports in 2020, then increased significantly to over 10,000 reports in 2021.

More recently, from 2020 to 2021, reports of cocaine (from 153,372 to 165,162 reports) and fluorofentanyl (from 167 to 10,340 reports) increased significantly ($p < .05$), while reports of cannabis/THC (from 188,735 to 167,669 reports) and heroin (from 98,077 to 72,315 reports) decreased significantly. Changes in reports of eutylone (from 12,969 to 12,996 reports) and methamphetamine (from 377,787 to 406,200 reports) were not statistically significant.

Figure 1.3 National trend estimates for methamphetamine, cannabis/THC, and cocaine, January 2007–December 2021

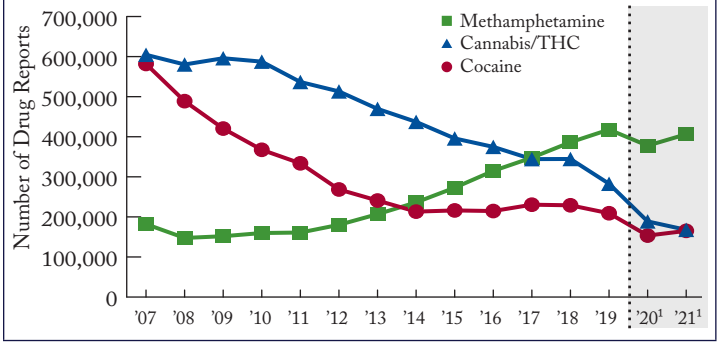
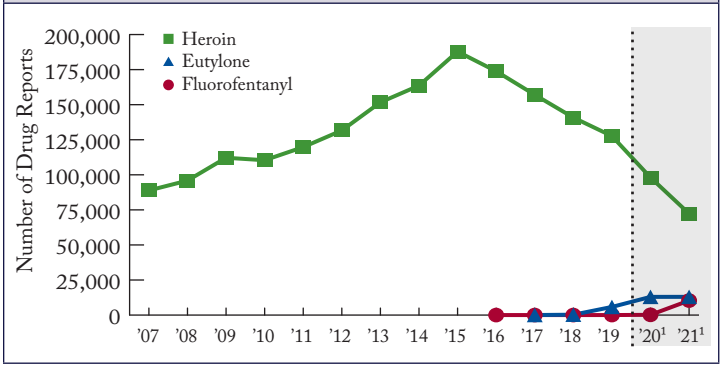


Figure 1.4 National trend estimates for heroin, eutylone, and fluorofentanyl, January 2007–December 2021



Note: Estimates are not available for eutylone for 2007 through 2016 because eutylone was first reported to NFLIS-Drug in 2017. Estimates are not available for fluorofentanyl for 2007 through 2015 because fluorofentanyl was first reported to NFLIS-Drug in 2016.

[1] Although the number of drugs reported to NFLIS-Drug for 2021 increased from the number of drugs reported for 2020, the total number of cases and drugs reported continues to be noticeably lower than the number reported for the years before the COVID-19 pandemic began. Use caution when comparing the shaded estimates with previous years' estimates.

Regional prescription drug trends

Figures 1.5 through 1.10 show regional trends per 100,000 people aged 15 or older for reports of fentanyl, alprazolam, oxycodone, buprenorphine, tramadol, and amphetamine from 2007 to 2021. These figures illustrate changes in prescription drugs reported over time, accounting for the population aged 15 or older in each U.S. census region. Notable trend results include the following:

- For fentanyl, the Northeast showed a gradual increase from 2007 to 2014, followed by considerable increases from 2015 through 2019, a decrease in 2020, and a significant increase in 2021. Reports were steady from 2007 through 2013 for the Midwest, West, and South until substantial increases began in 2014.
- For alprazolam, the West showed an increasing curved trend line through 2018, with subsequent decreases annually until a slight increase in 2021. The Midwest, Northeast, and South had increasing curved trend lines, with increases from roughly 2007 to 2010, followed by slight decreases through 2013. Increases in reports occurred through 2016, followed by decreases from 2017 through 2021 in the South and Midwest and through 2020 in the Northeast.
- For oxycodone, all four regions showed similar trend lines, with the highest number of reports occurring in 2010 or 2011, followed by a steady decline in the Northeast through 2020 and in the South through 2021, while a more gradual decrease occurred in the West and Midwest through 2021.
- Buprenorphine reports increased from 2007 through 2010 for the Midwest, South, and Northeast, while the increase continued into 2011 for the West. The increase in reports slowed for all regions from 2011 to 2013. Reports then continued to increase through 2021 in the West, while decreasing from 2019 to 2021 in the Midwest and South and remaining steady in the Northeast from 2020 to 2021.
- For tramadol, the South showed a steady increase in reports from 2011 through 2021. The Midwest and Northeast showed a sharper increase in reports from 2017 to 2021. Reports in the West increased over time but remained at fewer than one report per 100,000 persons in 2021.
- For amphetamine, the Midwest, Northeast, and South showed a steady increase in reports from 2007 through 2015 and 2016. The number of reports decreased for all three regions in 2020, then increased in the Northeast in 2021. The West had a flatter trend line from 2007 through 2021.

More recently, from 2020 to 2021, fentanyl reports increased significantly ($p < .05$) in all regions, while tramadol reports increased significantly in the South and Northeast. Alprazolam and buprenorphine reports decreased in the Midwest and South, while oxycodone decreased in the Midwest. Amphetamine reports decreased in the South but increased significantly in the Northeast.

Figure 1.5 Regional trends in fentanyl reported per 100,000 people aged 15 or older, January 2007–December 2021

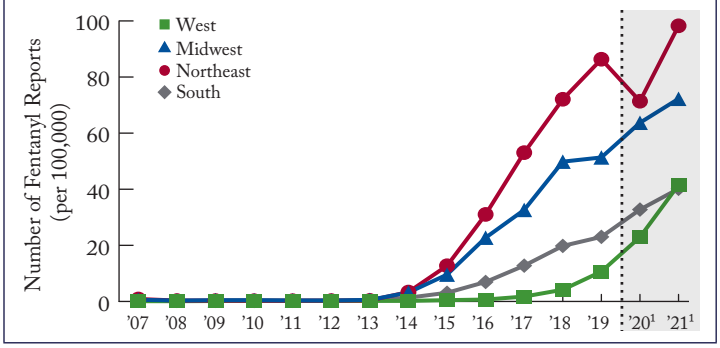


Figure 1.6 Regional trends in alprazolam reported per 100,000 people aged 15 or older, January 2007–December 2021

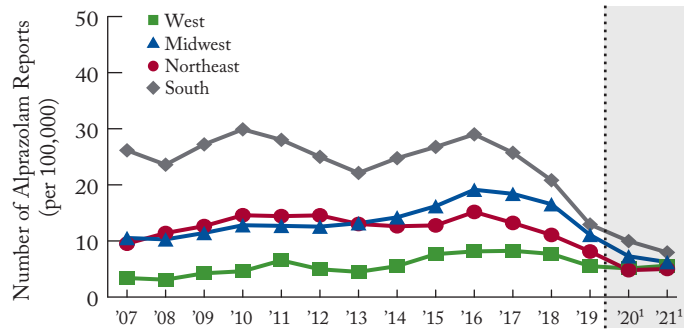
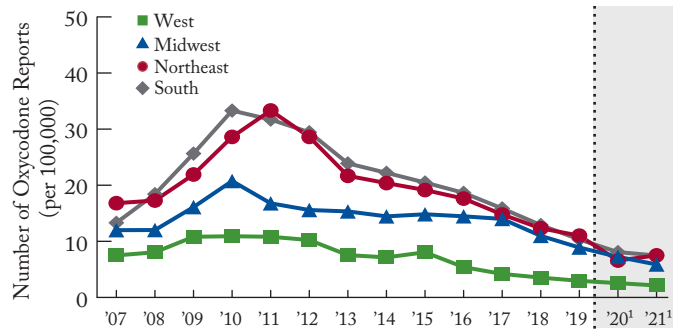


Figure 1.7 Regional trends in oxycodone reported per 100,000 people aged 15 or older, January 2007–December 2021



Note: U.S. Census 2021 population data by age were not available for this publication. Population data for 2021 were imputed.

[1] *Although the number of drugs reported to NFLIS-Drug for 2021 increased from the number of drugs reported for 2020, the total number of cases and drugs reported continues to be noticeably lower than the number reported for the years before the COVID-19 pandemic began. Use caution when comparing the shaded estimates with previous years' estimates.*

Figure 1.8 Regional trends in buprenorphine reported per 100,000 people aged 15 or older, January 2007–December 2021

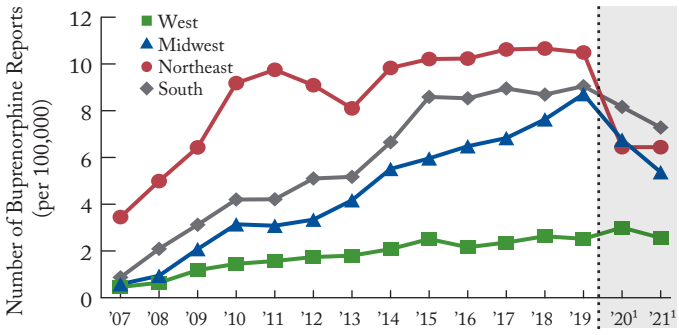


Figure 1.9 Regional trends in tramadol reported per 100,000 people aged 15 or older, January 2007–December 2021

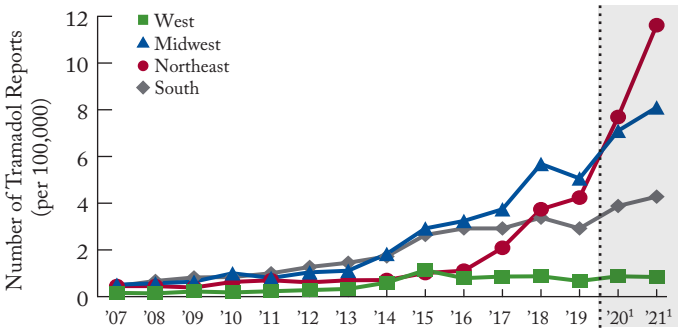
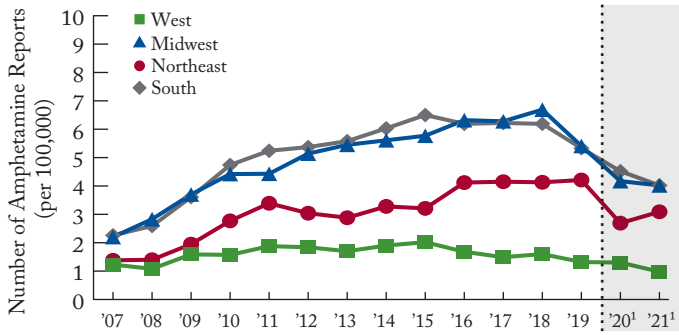


Figure 1.10 Regional trends in amphetamine reported per 100,000 persons aged 15 or older, January 2006–December 2020



Note: U.S. Census 2021 population data by age were not available for this publication. Population data for 2021 were imputed.

[1] *Although the number of drugs reported to NFLIS-Drug for 2021 increased from the number of drugs reported for 2020, the total number of cases and drugs reported continues to be noticeably lower than the number reported for the years before the COVID-19 pandemic began. Use caution when comparing the shaded estimates with previous years' estimates.*

Other regional drug trends

Figures 1.11 through 1.16 present regional trends per 100,000 people aged 15 or older for methamphetamine, cannabis/THC, cocaine, heroin, eutylone, and fluorofentanyl reports from 2007 through 2021. Notable trends include the following:

- For methamphetamine, the Northeast had an increasing curved trend line, with higher rates of increase from 2018 through 2021. From 2007 to 2021, the annual number of reports per 100,000 for the West decreased from over 200 to around 160 reports, while reports per 100,000 for the Midwest and South increased from around 50 reports in 2007 to around 180 reports in 2021.
- In all four regions, the trend lines for cannabis/THC exhibited rolling decreases from 2007 through 2021, with an increase in the Midwest in 2021.
- For cocaine, all four regions had rolling decreasing trend lines. All regions had decreases through at least 2014. Increases in reports occurred from 2015 through 2017 in the Midwest and through 2018 in the Northeast. All regions showed a decrease from 2018 to 2020, followed by slight increases in 2021.
- Heroin reports in the Northeast and South increased steadily from 2011 through 2015, while the West and Midwest had similar increases in reports from 2008 through 2015. The Midwest, Northeast, and South had considerable decreases in reports from 2015 through 2021, while the West had the largest decrease in reports from 2020 to 2021.
- Eutylone reports increased in all regions from 2019 to 2020. While eutylone reports in the Midwest decreased from 2020 to 2021, they remained relatively steady in the West and Northeast and increased slightly in the South.
- Fluorofentanyl reports increased significantly in all four regions from 2020 to 2021, with the Northeast having the highest number of reports per 100,000 among all regions in both years.

Between 2020 and 2021, methamphetamine reports increased significantly ($p < .05$) in all regions except the West. Cannabis/THC reports increased significantly in the Midwest and decreased significantly in all other regions. Heroin reports decreased significantly in all regions except the Northeast. Eutylone reports decreased significantly in the West. Fluorofentanyl reports increased significantly in all regions. Cocaine reports increased in all regions, but the increases were not statistically significant.

Figure 1.11 Regional trends in methamphetamine reported per 100,000 people aged 15 or older, January 2007–December 2021

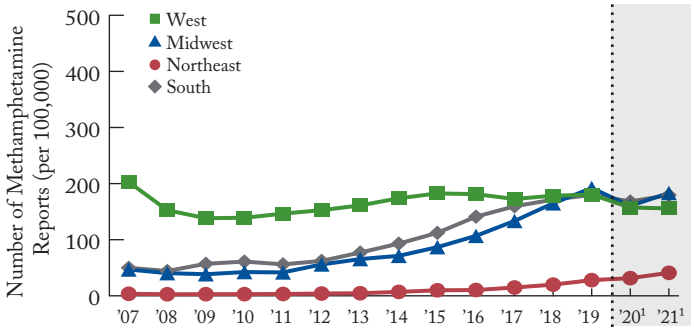


Figure 1.12 Regional trends in cannabis/THC reported per 100,000 people aged 15 or older, January 2007–December 2021

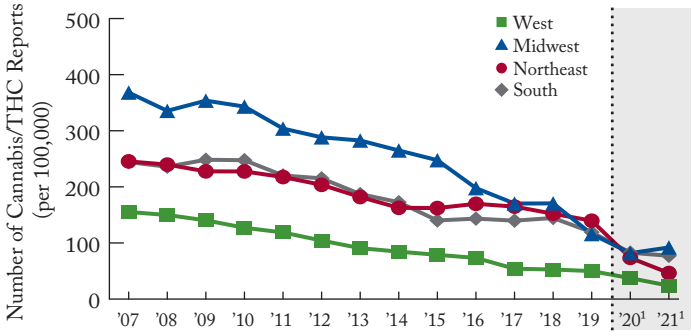


Figure 1.13 Regional trends in cocaine reported per 100,000 people aged 15 or older, January 2007–December 2021

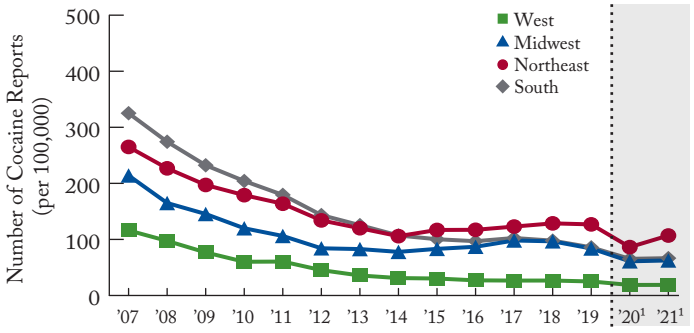


Figure 1.14 Regional trends in heroin reported per 100,000 people aged 15 or older, January 2007–December 2021

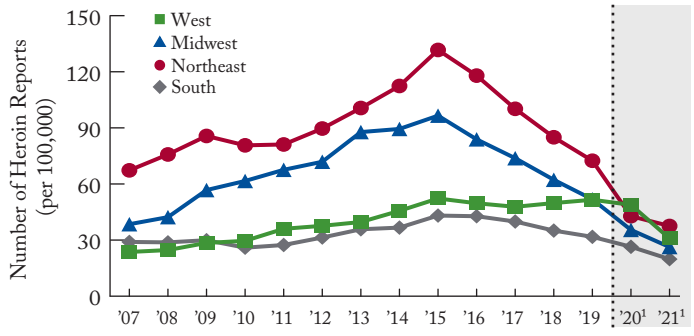


Figure 1.15 Regional trends in eutylone reported per 100,000 people aged 15 or older, January 2007–December 2021

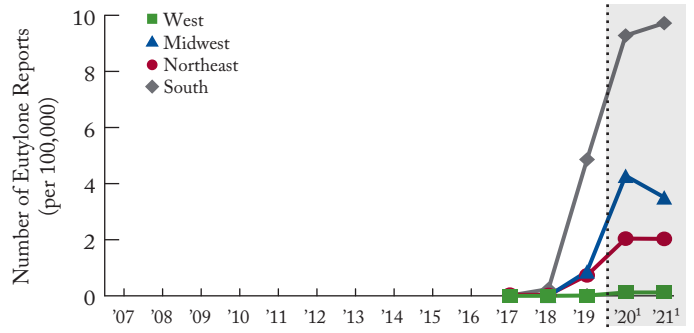
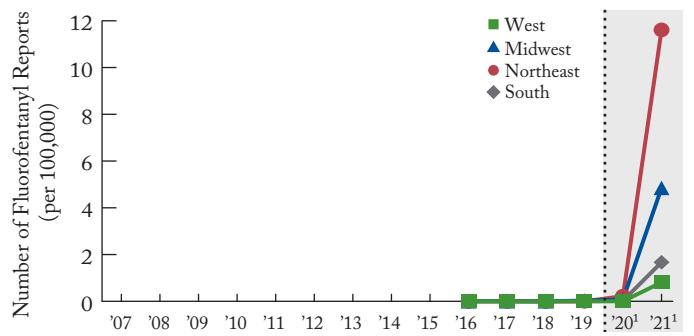


Figure 1.16 Regional trends in fluorofentanyl reported per 100,000 people aged 15 or older, January 2007–December 2021



Note: U.S. Census 2021 population data by age were not available for this publication. Population data for 2021 were imputed. Estimates are not available for eutylone for 2007 through 2016 because eutylone was first reported to NFLIS in 2017. Estimates are not available for fluorofentanyl for 2007 through 2015 because fluorofentanyl was first reported to NFLIS in 2016.

[1] *Although the number of drugs reported to NFLIS-Drug for 2021 increased from the number of drugs reported for 2020, the total number of cases and drugs reported continues to be noticeably lower than the number reported for the years before the COVID-19 pandemic began. Use caution when comparing the shaded estimates with previous years' estimates.*

Section 2

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 1,326,205 drugs were submitted to State and local laboratories during 2021 and were analyzed by March 31, 2022.

2.1 Narcotic Analgesics

Provisional data from the Centers for Disease Control and Prevention show that drug overdose deaths continued to increase in the United States, from 93,655 deaths in 2020 to 107,622 deaths in 2021, although the increase is half of what it was from 2019 to 2020 (15% vs. 30%). The provisional data also indicate that from 2020 to 2021, the number of overdose deaths involving opioids increased 15%, from 70,029 deaths to 80,816 deaths, while the number of overdose deaths involving synthetic opioids, such as fentanyl, increased 23%, from 57,834 deaths to 71,238 deaths.[i]

A total of 254,749 narcotic analgesic reports were identified by NFLIS-Drug laboratories in 2021, representing 19% of all drug reports (Table 2.1). Fentanyl (60%) accounted for more than one-half of narcotic analgesic reports, while ANPP (6%), oxycodone (6%), buprenorphine (6%), tramadol (6%), and fluorofentanyl (4%) together accounted for more than one-quarter of the reports. Other narcotic analgesics reported included *para*-fluorofentanyl (3%) and hydrocodone (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 West reported the highest percentage of fentanyl (77%), followed by the Midwest and Northeast (60% each). The Northeast reported the highest percentage of ANPP (9%), while the South reported the highest percentages of oxycodone and buprenorphine (10% each).

Table 2.1 *Narcotic Analgesics*
Number and percentage of narcotic analgesic reports in the United States, 2021[1]

Narcotic Analgesic Reports	Number	Percent
Fentanyl	153,949	60.43%
ANPP[2]	16,259	6.38%
Oxycodone	15,819	6.21%
Buprenorphine	15,123	5.94%
Tramadol	14,856	5.83%
Fluorofentanyl	10,340	4.06%
para-Fluorofentanyl	7,199	2.83%
Hydrocodone	6,930	2.72%
Acetyl fentanyl	3,665	1.44%
Morphine	1,606	0.63%
Methadone	1,355	0.53%
Codeine	1,320	0.52%
Phenethyl 4-ANPP[2]	1,069	0.42%
Metonitazene	817	0.32%
Hydromorphone	784	0.31%
Other narcotic analgesics	3,657	1.44%
Total Narcotic Analgesic Reports[3]	254,749	100.00%
Total Drug Reports	1,326,205	

Table 2.1 Notes:

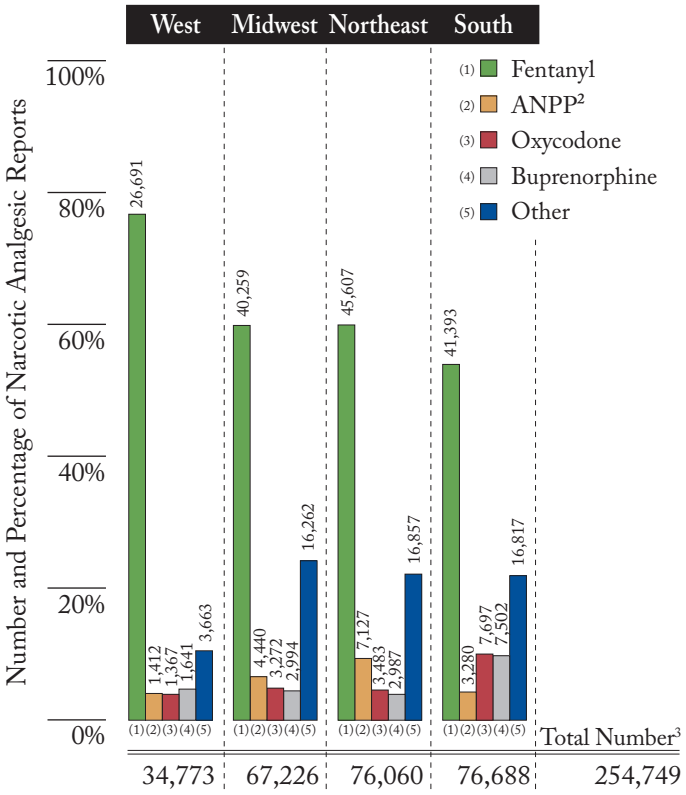
[1] *Includes drug reports submitted to laboratories from January 1, 2021, through December 31, 2021, that were analyzed by March 31, 2022. Although the number of drugs reported to NFLIS-Drug for 2021 increased from the number of drugs reported for 2020, the total number of cases and drugs reported continues to be noticeably lower than the number reported for the years before the COVID-19 pandemic began. Use caution when comparing data from 2021 with data from previous years.*

[2] *Because of the interest in fentanyl and fentanyl-related compounds, ANPP and phenethyl 4-ANPP, immediate precursors of fentanyl and not narcotic analgesics, are shown in this table.*

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

[i] Centers for Disease Control and Prevention (CDC). (2022). *U.S. overdose deaths in 2021 increased half as much as in 2020—but are still up 15%.* https://www.cdc.gov/nchs/pressroom/nchs_press_releases/2022/202205.htm

Figure 2.1 Distribution of narcotic analgesic reports within region, 2021[1]



2.2 *Tranquilizers and Depressants*

The misuse of tranquilizers is seen as a risk factor for abusing more addictive substances.[ii] Overdose deaths related to benzodiazepines, a type of tranquilizer, decreased in the United States in 2018 and 2019, but they increased from 2019 to 2020, from 9,711 deaths to 12,290 deaths. The majority of these deaths involved benzodiazepines in combination with synthetic opioids other than methadone.[iii]

Approximately 4% of all drug reports in 2021, or 56,977 reports, were identified by NFLIS-Drug laboratories as tranquilizers and depressants (Table 2.2). Alprazolam accounted for 31% of reported tranquilizers and depressants. Approximately 13% of tranquilizers and depressants were identified as xylazine, followed by clonazolam (11%), clonazepam (9%), and etizolam (7%). Alprazolam was identified in 52% of the tranquilizer and depressant reports in the West, 33% in the South, 23% in the Midwest, and 22% in the Northeast (Figure 2.2). Clonazolam accounted for 18% of the tranquilizers and depressants identified in the Midwest and for 9% of these substances identified in the West, Northeast, and South. The Northeast and South reported the highest percentages of xylazine reports (29% and 12%, respectfully) and clonazepam reports (10% each). The South also reported the highest percentage of etizolam reports (10%).

Table 2.2 ***Tranquilizers and Depressants***
Number and percentage of tranquilizer and depressant reports in the United States, 2021[1]

Tranquilizer and Depressant Reports	Number	Percent
Alprazolam	17,579	30.85%
Xylazine	7,326	12.86%
Clonazolam	6,508	11.42%
Clonazepam	5,301	9.30%
Etizolam	4,207	7.38%
Phencyclidine (PCP)	3,448	6.05%
Diazepam	2,098	3.68%
Flualprazolam	2,053	3.60%
Ketamine	1,856	3.26%
Lorazepam	855	1.50%
Bromazolam	710	1.25%
3Cl-PCP	645	1.13%
Flubromazolam	616	1.08%
Carisoprodol	590	1.04%
Cyclobenzaprine	479	0.84%
Other tranquilizers and depressants	2,707	4.75%
Total Tranquilizer and Depressant Reports[3]	56,977	100.00%
Total Drug Reports	1,326,205	

[1] *Includes drug reports submitted to laboratories from January 1, 2021, through December 31, 2021, that were analyzed by March 31, 2022. Although the number of drugs reported to NFLIS-Drug for 2021 increased from the number of drugs reported for 2020, the total number of cases and drugs reported continues to be noticeably lower than the number reported for the years before the COVID-19 pandemic began. Use caution when comparing data from 2021 with data from previous years.*

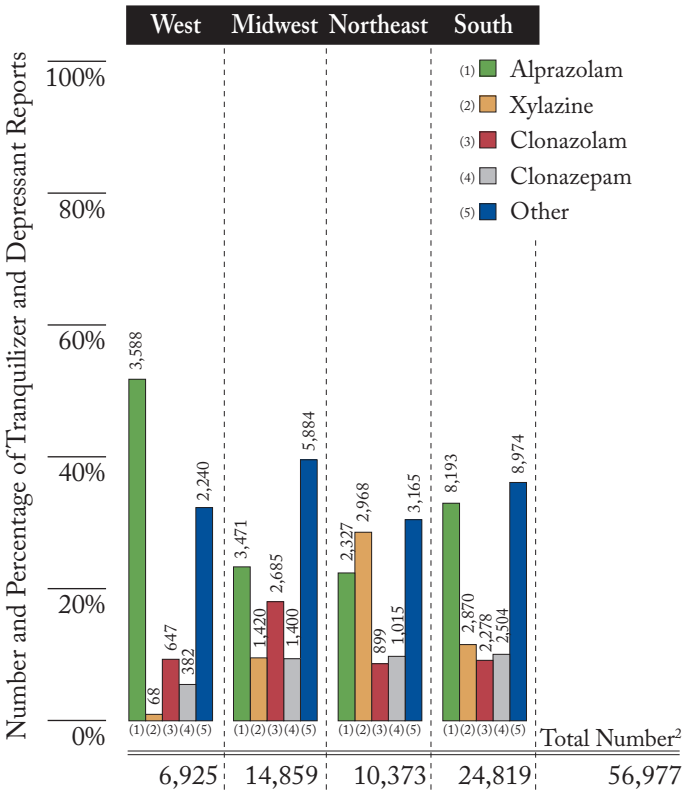
[2] *Because of the interest in fentanyl and fentanyl-related compounds, ANPP and phenethyl 4-ANPP, immediate precursors of fentanyl and not narcotic analgesics, are shown in the figure.*

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

[ii] Boyd, C. J., West, B., & McCabe, S. E. (2018). Does misuse lead to a disorder? The misuse of prescription tranquilizer and sedative medications and subsequent substance use disorders in a U.S. longitudinal sample. *Addictive Behaviors, 79,* 17–23. https://doi.org/10.1016/j.addbeh.2017.11.042

[iii] National Institute on Drug Abuse (NIDA). (2022). *Overdose death rates.* https://nida.nih.gov/research-topics/trends-statistics/overdose-death-rates

Figure 2.2 Distribution of tranquilizer and depressant reports within region, 2021[1]



2.3 *Anabolic Steroids*

Even though anabolic steroids do not cause the same high as other drugs, they can lead to a substance use disorder. Users sometimes turn to other drugs to counteract the adverse effects of steroid abuse. Adverse effects of steroid abuse include physical issues such as hair loss and acne; health problems such as kidney failure, liver damage, and blood clots; and mental effects such as paranoia, delusions, and mania.[iv]

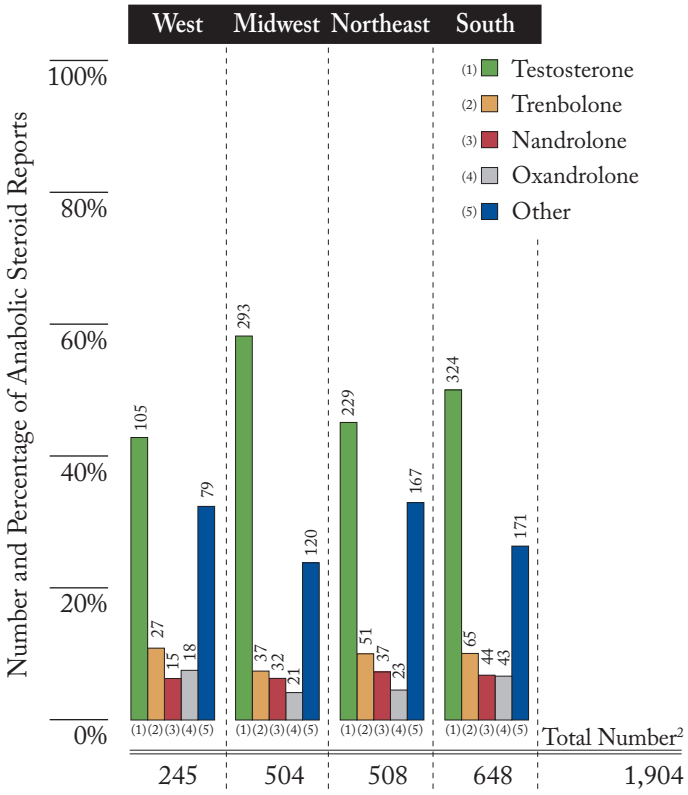
During 2021, a total of 1,904 drug reports were identified by NFLIS-Drug laboratories as anabolic steroids (Table 2.3), representing less than 1% of all drug reports. The most frequently identified anabolic steroid was testosterone (50%), followed by trenbolone (9%), nandrolone (7%), oxandrolone (6%), methandrostenolone (5%), and stanozolol (5%). Testosterone accounted for 58% of anabolic steroids reported in the Midwest, 50% in the South, 45% in the Northeast, and 43% in the West (Figure 2.3). The West reported the highest percentages of trenbolone and oxandrolone (11% and 8%, respectively), and the Northeast and South reported the highest percentages of nandrolone (7% each).

[iv] National Institute on Drug Abuse (NIDA). (2018). *Anabolic steroids DrugFacts.* https://nida.nih.gov/publications/research-reports/steroids-other-appearance-performance-enhancing-drugs-apeds/introduction

Table 2.3 *Anabolic Steroids*
Number and percentage of anabolic steroid reports in the United States, 2021[1]

Anabolic Steroid Reports	Number	Percent
Testosterone	952	49.99%
Trenbolone	181	9.48%
Nandrolone	128	6.74%
Oxandrolone	106	5.55%
Methandrostenolone	100	5.24%
Stanozolol	93	4.86%
Oxymetholone	63	3.31%
Drostanolone	59	3.10%
Boldenone	46	2.42%
Methenolone	24	1.28%
Mesterolone	15	0.78%
Dehydrochloromethyltestosterone	12	0.63%
Methasterone	9	0.50%
Fluoxymesterone	5	0.26%
Methyltestosterone	5	0.26%
Other anabolic steroids	107	5.60%
Total Anabolic Steroid Reports[2]	1,904	100.00%
Total Drug Reports	1,326,205	

Figure 2.3 Distribution of anabolic steroid reports within region, 2021[1]



[1] *Includes drug reports submitted to laboratories from January 1, 2020, through December 31, 2020, that were analyzed by March 31, 2021. For most drugs, the 2020 estimates show a noticeable decrease likely due to the impacts of the COVID-19 pandemic. Use caution when comparing data from 2020 with data from previous years.*

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

2.4 Phenethylamines

Phenethylamines are synthetic drugs that cause psychoactive and stimulant effects.[v] They are available in many forms, including pills, powder, and liquid solutions. Even very small amounts can cause serious side effects or death.[vi]

NFLIS-Drug laboratories identified 439,128 phenethylamine reports in 2021, representing 33% of all drug reports (Table 2.4). Of these, 93% were identified as methamphetamine. Among the other phenethylamine reports, 3% were identified as eutylone and 2% as amphetamine. Methamphetamine accounted for 98% of phenethylamine reports in the West, 94% in the Midwest, 90% in the South, and 85% in the Northeast (Figure 2.4). The South reported the highest percentage of eutylone (5%), while the Northeast reported the highest percentages of amphetamine (6%) and MDMA (2%).

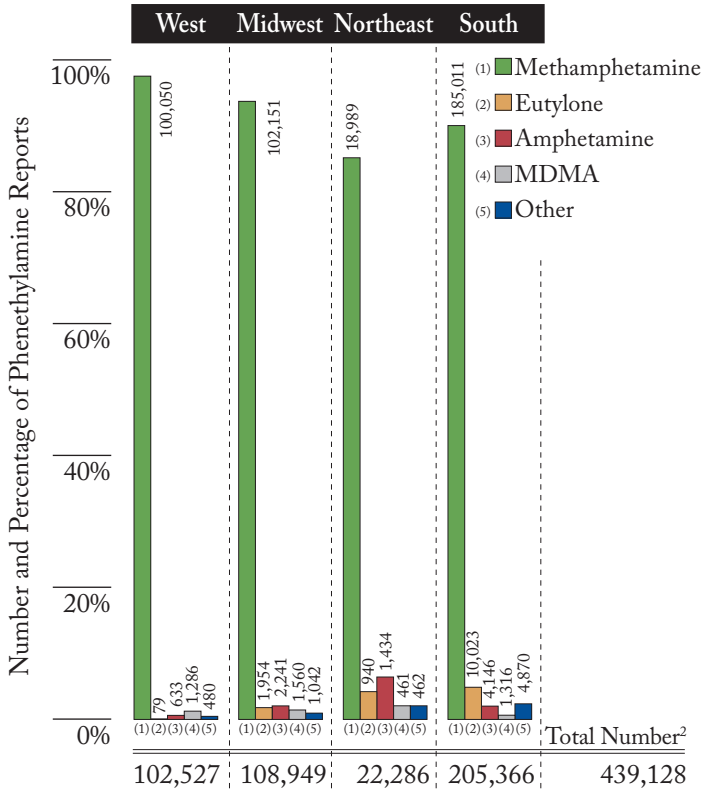
Table 2.4 ***Phenethylamines***
Number and percentage of phenethylamine reports in the United States, 2021[1]

Phenethylamine Reports	Number	Percent
Methamphetamine	406,200	92.50%
Eutylone	12,996	2.96%
Amphetamine	8,454	1.93%
MDMA	4,624	1.05%
MDA	974	0.22%
Lisdexamfetamine	705	0.16%
Dipentylone	511	0.12%
alpha-PiHP	503	0.11%
BMDP	375	0.09%
Phentermine	262	0.06%
alpha-PHP	157	0.04%
3,4-Methylenedioxy PV8	147	0.03%
N-Ethylpentylone	110	0.03%
N-Butylpentylone	87	0.02%
N,N-Dimethylamphetamine	83	0.02%
Other phenethylamines	2,940	0.67%
Total Phenethylamine Reports[2]	439,128	100.00%
Total Drug Reports	1,326,205	

[1] Includes drug reports submitted to laboratories from January 1, 2021, through December 31, 2021, that were analyzed by March 31, 2022. Although the number of drugs reported to NFLIS-Drug for 2021 increased from the number of drugs reported for 2020, the total number of cases and drugs reported continues to be noticeably lower than the number reported for the years before the COVID-19 pandemic began. Use caution when comparing data from 2021 with data from previous years.

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

Figure 2.4 Distribution of phenethylamine reports within region, 2021[1]



2.5 Synthetic Cannabinoids

Synthetic cannabinoids act on the same brain cell receptors as THC, the main ingredient in marijuana. Many synthetic cannabinoids are illegal and cause adverse health effects. Also, products may be contaminated with other drugs or chemicals, such as synthetic cathinones.[vii]

A total of 13,255 synthetic cannabinoid reports were identified during 2021, accounting for about 1% of all drugs reported (Table 2.5). The most identified synthetic cannabinoid was ADB-BUTINACA (36%), followed by MDMB-4en-PINACA (29%) and 5F-MDMB-PICA (5%). Specifically, ADB-BUTINACA accounted for 44% of synthetic cannabinoid reports in the Midwest, 34% in the South, 30% in the Northeast, and 29% in the West (Figure 2.5). MDMB-4en-PINACA accounted for 40% of synthetic cannabinoids in the Midwest, 35% in the West, 32% in the Northeast, and 22% in the South. The West reported the highest percentages of 5F-MDMB-PICA (10%) and 4F-MDMB-BUTINACA (6%).

[v] United Nations Office on Drugs and Crime (UNODC) Laboratory and Scientific Service Portals. *Phenethylamines.* https://www.unodc.org/LSS/SubstanceGroup/Details/275dd468-75a3-4609-9e96-cc5a2f0da467

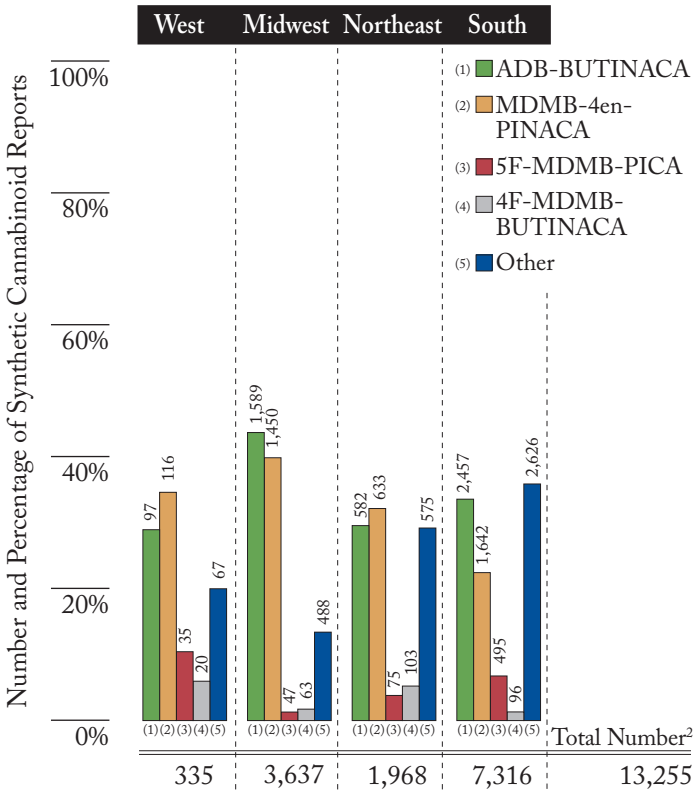
[vi] Diversion Control Division. (n.d.). *About synthetic drugs.* U.S. Department of Justice, U.S. Drug Enforcement Administration. https://www.deadiversion.usdoj.gov/synthetic_drugs/about_sd.html

[vii] Centers for Disease Control and Prevention (CDC). (2021). *About synthetic cannabinoids.* https://www.cdc.gov/nceh/hsb/chemicals/sc/About.html

Table 2.5 *SYNTHETIC CANNABINOIDS*
Number and percentage of synthetic cannabinoid reports in the United States, 2021[1]

Synthetic Cannabinoid Reports	Number	Percent
ADB-BUTINACA	4,725	35.64%
MDMB-4en-PINACA	3,841	28.98%
5F-MDMB-PICA	652	4.92%
4F-MDMB-BUTINACA	282	2.13%
4F-MDMB-BUTICA	191	1.44%
ADB-4en-PINACA	161	1.22%
Fluoro-MDMB-PICA	122	0.92%
ADB-HEXINACA	118	0.89%
4-CN-CUMYL-BUTINACA	114	0.86%
BZO-HEXOXIZID	113	0.85%
5F-EMB-PICA	104	0.78%
5F-ADB	103	0.78%
Fluoro-MDMB-BUTICA	95	0.72%
ADB-FUBIATA	89	0.67%
FUB-AMB	80	0.61%
Other synthetic cannabinoids	2,465	18.60%
Total Synthetic Cannabinoid Reports[2]	13,255	100.00%
Total Drug Reports	1,326,205	

Figure 2.5 Distribution of synthetic cannabinoid reports within region, 2021[1]



[1] *Includes drug reports submitted to laboratories from January 1, 2021, through December 31, 2021, that were analyzed by March 31, 2022. Although the number of drugs reported to NFLIS-Drug for 2021 increased from the number of drugs reported for 2020, the total number of cases and drugs reported continues to be noticeably lower than the number reported for the years before the COVID-19 pandemic began. Use caution when comparing data from 2021 with data from previous years.*

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

Section 3

GIS ANALYSIS: FLUOROFENTANYL AND CLONAZOLAM COMPARISONS, BY LOCATION, 2019 AND 2021

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 any fluorofentanyl isomer and clonazolam at two time points—2019 and 2021. In 2019, neither drug appeared in the NFLIS-Drug list of the top 25 most frequently identified drugs. By 2021, fluorofentanyl (isomer unspecified) was the 12th most frequently reported drug and the 6th most frequently reported narcotic analgesic, while its specific isomer *para*-fluorofentanyl was the 16th most frequently reported drug and the 7th most frequently reported narcotic analgesic. Clonazolam was the 18th most frequently reported drug and the 3rd most frequently reported tranquilizer and depressant in 2021.

The GIS data presented here are based on information provided to NFLIS-Drug forensic laboratories by the submitting law enforcement agencies (Figures 3.1 through 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 abuse and trafficking trends and patterns across and within States.

Figure 3.1 Percentage of total drug reports identified as any fluorofentanyl isomer, by State, 2019[1,2]

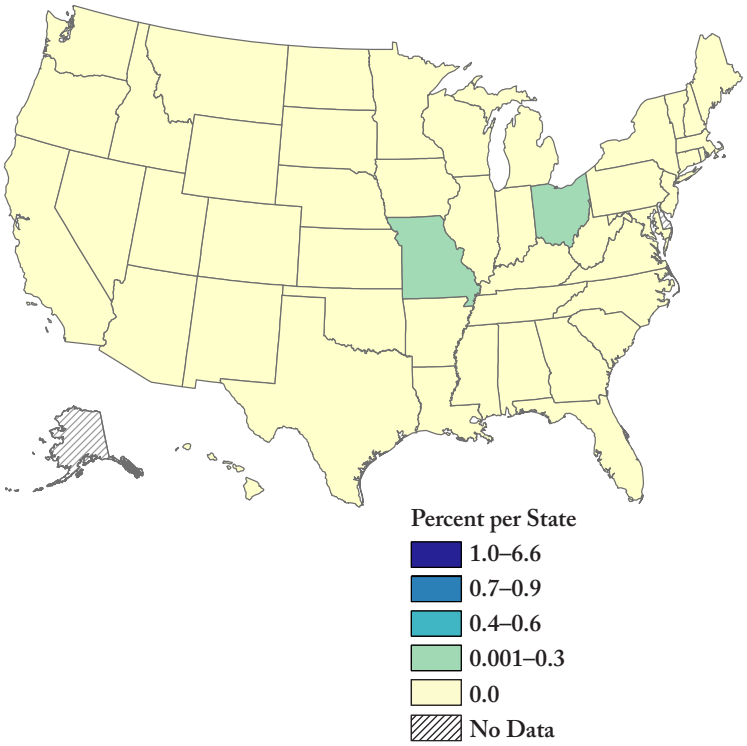


Figure 3.2 Percentage of total drug reports identified as any fluorofentanyl isomer, by State, 2021[1,2]

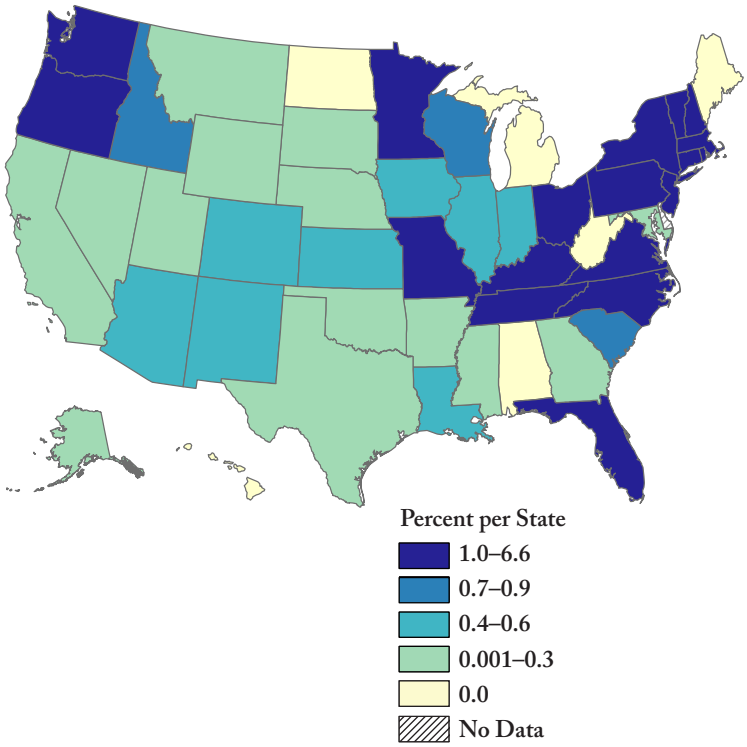


Figure 3.3 Percentage of total drug reports identified as clonazolam, by State, 2019[1]

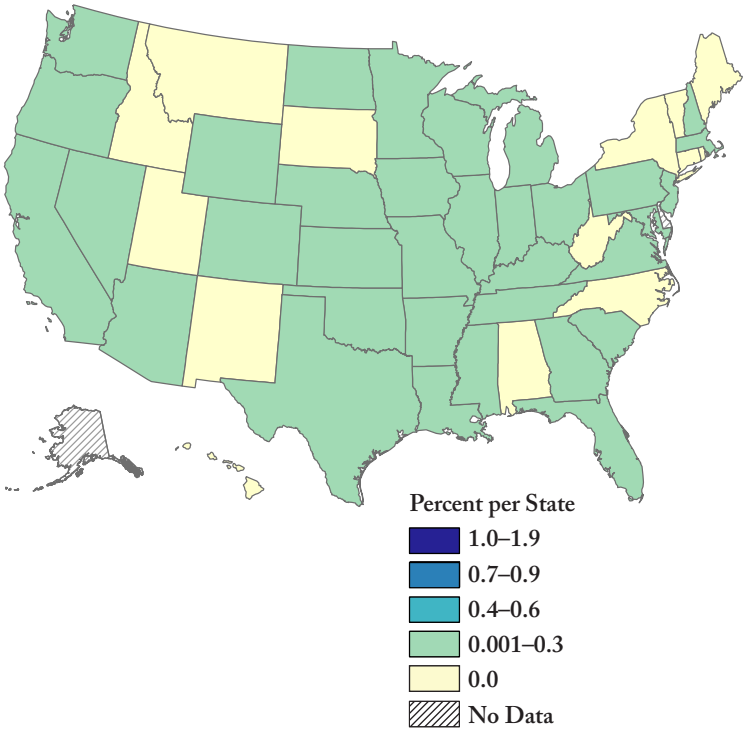
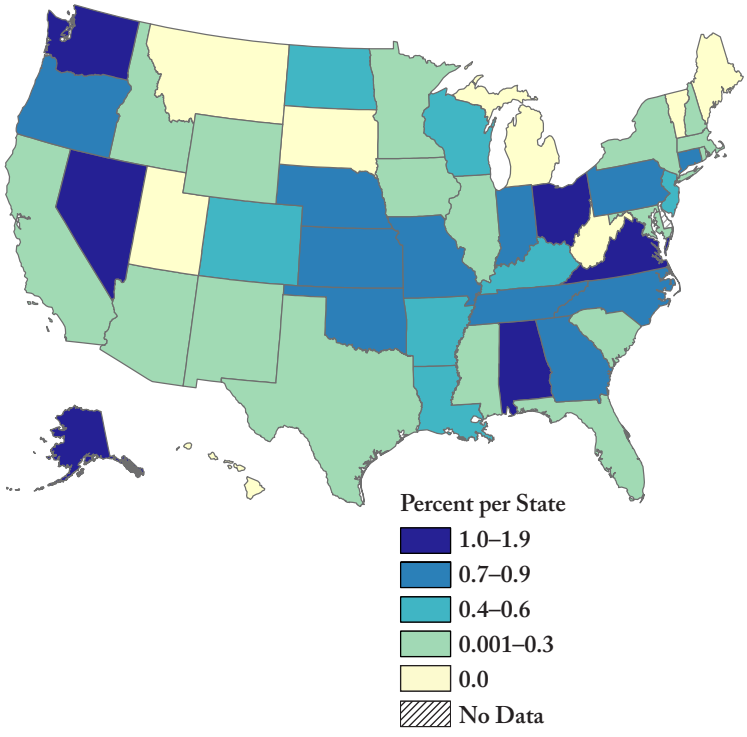


Figure 3.4 Percentage of total drug reports identified as clonazolam, by State, 2021[1]



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

[2] *Fluorofentanyl isomers reported to NFLIS are 3-fluorofentanyl, ortho-fluorofentanyl, meta-fluorofentanyl, para-fluorofentanyl, and fluorofentanyl (isomer unspecified).*

Figure 3.5 Percentage of total drug reports identified as any fluorofentanyl isomer in Massachusetts, by county, 2019[1,2]

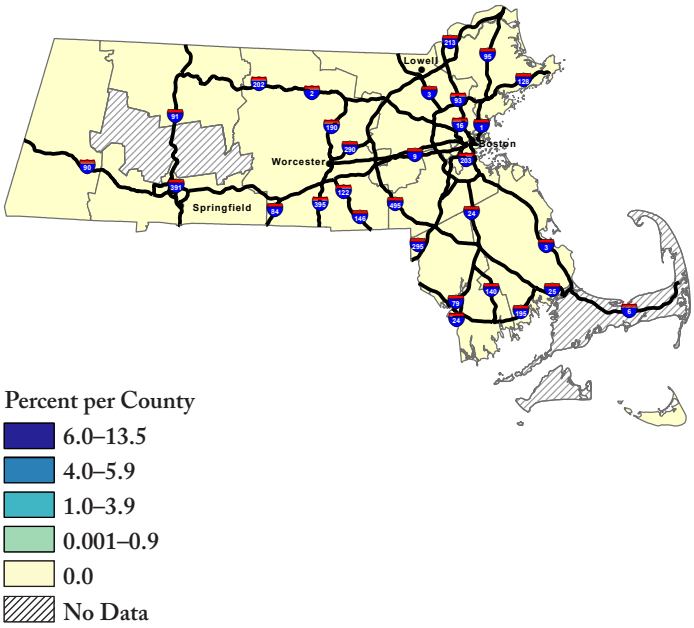


Figure 3.6 Percentage of total drug reports identified as any fluorofentanyl isomer in Massachusetts, by county, 2021[1,2]

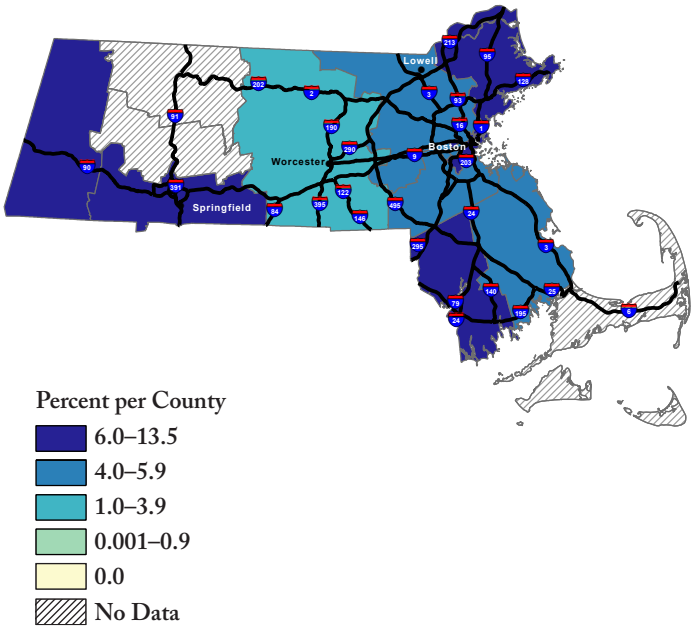


Figure 3.7 Percentage of total drug reports identified as clonazolam in Missouri, by county, 2019[1]

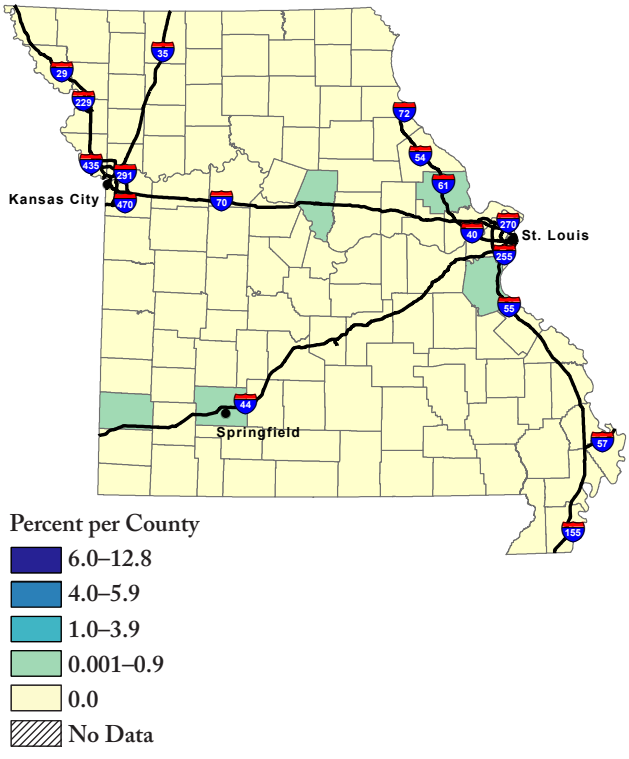
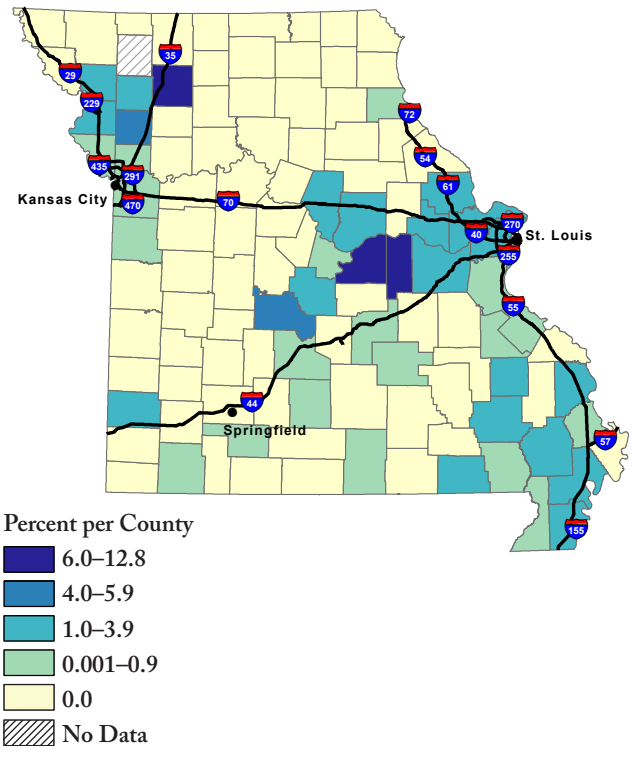


Figure 3.8 Percentage of total drug reports identified as clonazolam in Missouri, by county, 2021[1]



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

[2] *Fluorofentanyl isomers reported to NFLIS are 3-fluorofentanyl, ortho-fluorofentanyl, meta-fluorofentanyl, para-fluorofentanyl, and fluorofentanyl (isomer unspecified).*

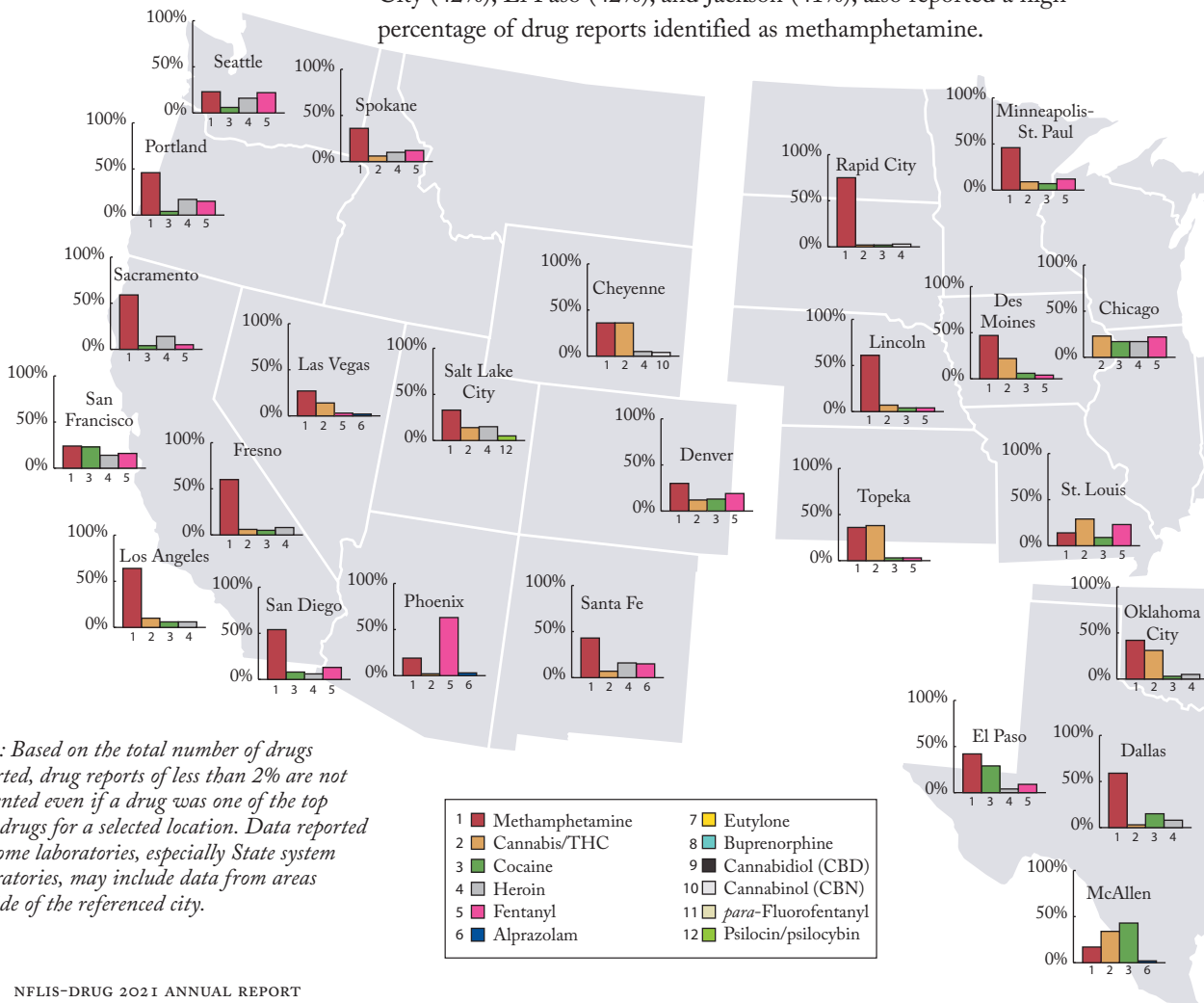
Section 4

DRUGS IDENTIFIED BY LABORATORIES IN SELECTED U.S. CITIES

N FLIS-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 2021 and analyzed by March 31, 2022.

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 abused and trafficked, such as the higher levels of methamphetamine reporting on the West Coast and cocaine reporting on the East Coast.

Nationally, 31% 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 (75%), Los Angeles (64%), Lincoln (61%), Fresno (60%), Sacramento (59%), San Diego (54%), Des Moines (47%), Little Rock (46%), Minneapolis-St. Paul (46%), Portland (46%), and Santa Fe (43%). Cities in the South, such as Houston (61%), Dallas (59%), Louisville (51%), Atlanta (44%), Raleigh (43%), Oklahoma City (42%), El Paso (42%), and Jackson (41%), also reported a high percentage of drug reports identified as methamphetamine.

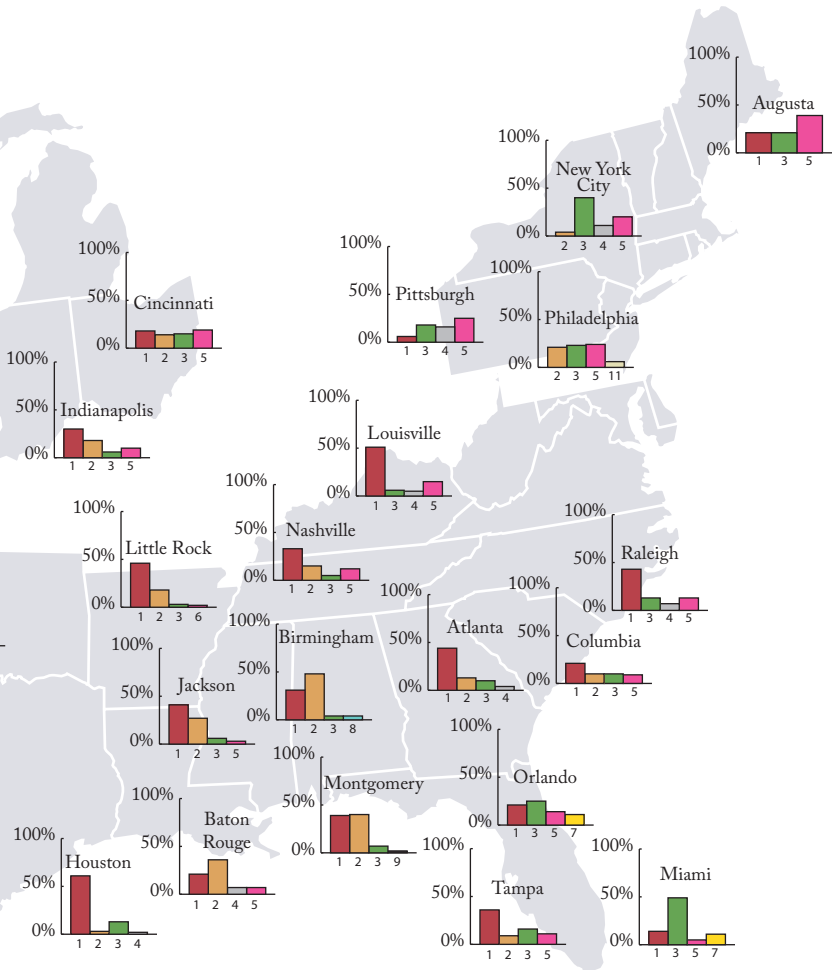


Note: Based on the total number of drugs reported, drug reports of less than 2% are not presented even if a drug was one of the top four drugs for a selected location. Data reported for some laboratories, especially State system laboratories, may include data from areas outside of the referenced city.

Overall, the highest percentages of cocaine were reported by laboratories representing cities in the Northeast and South, such as Miami (49%), McAllen (43%), New York City (40%), El Paso (29%), Orlando (25%), Philadelphia (23%), Augusta (21%), Pittsburgh (18%), Tampa (16%), and Dallas (15%). Cities in the West, such as San Francisco (23%), and in the Midwest, such as Chicago (17%) and Cincinnati (15%), also reported high percentages of cocaine. Nationally, 12% of drugs in NFLIS-Drug were identified as cocaine.

The highest percentages of heroin were reported by laboratories representing the Midwestern city of Chicago (17%); the Western cities of Portland (17%), Santa Fe (16%), Seattle (16%), Salt Lake City (15%), San Francisco (14%), Sacramento (14%), and Spokane (10%); and the Northeastern cities of Pittsburgh (16%) and New York City (11%). Nationally, 5% of all drugs in NFLIS-Drug were identified as heroin.

As for controlled prescription drugs, Phoenix (63%), Augusta (39%), Pittsburgh (25%), Philadelphia (24%), St. Louis (23%), Seattle (22%), Chicago (22%), and New York City (20%) reported the highest percentages of fentanyl. Nationally, 12% of drugs in NFLIS-Drug were identified as fentanyl. Phoenix (3%) reported the highest percentage of alprazolam, and Birmingham (4%) reported the highest percentage of buprenorphine. Nationally, 1% of drugs in NFLIS-Drug were identified as alprazolam or buprenorphine. Montgomery (2%) reported the highest percentage of cannabidiol (CBD); nationally, less than 1% of drugs in NFLIS-Drug were identified as CBD. As for other drugs, Miami and Orlando (11% each) reported the highest percentages of eutylone, while Philadelphia (5%) reported the highest percentage of *para*-fluorofentanyl. Salt Lake City (5%) reported the highest percentage of psilocin/psilocybin, while Cheyenne (4%) reported the highest percentage of cannabinol (CBN). Nationally, 1% of drugs were identified as eutylone, while less than 1% of drugs were identified as *para*-fluorofentanyl, psilocin/psilocybin, or CBN.



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)

Appendix A LONG-TERM TREND GRAPHS

Figure A.1 National trend estimates for fentanyl, alprazolam, and oxycodone, January 2001–December 2021

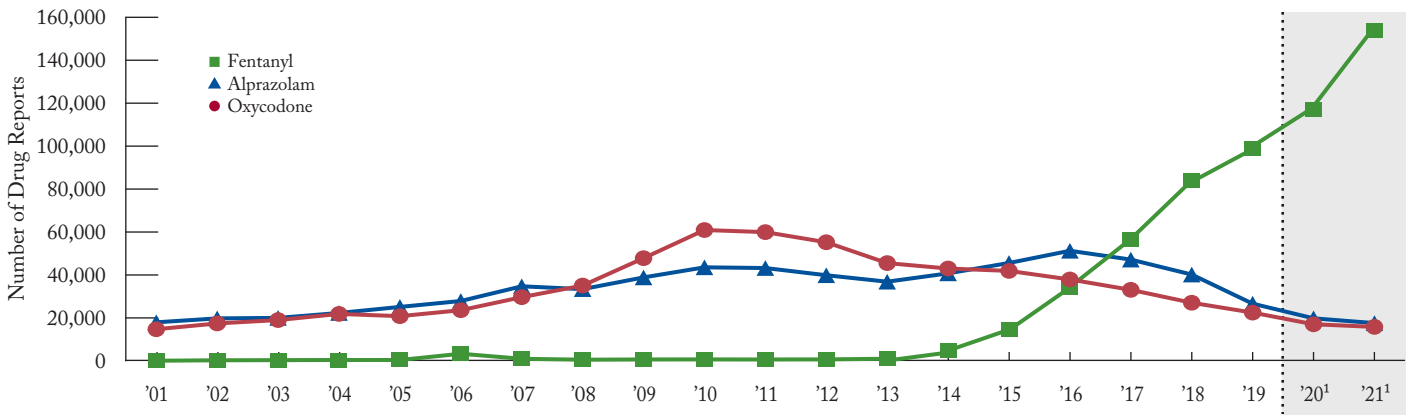


Figure A.2 National trend estimates for buprenorphine, tramadol, and amphetamine, January 2001–December 2021[2]

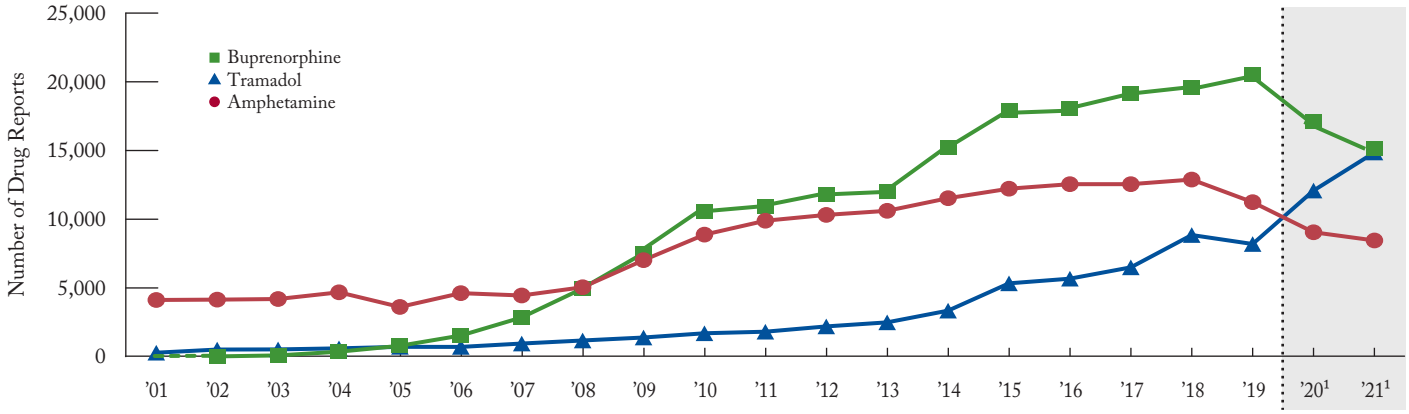
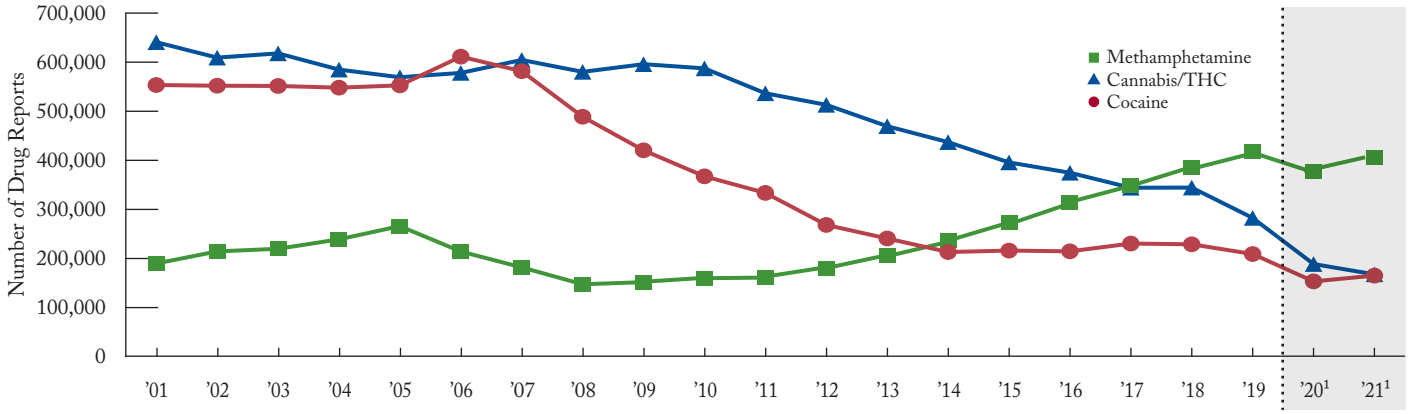


Figure A.3 National trend estimates for methamphetamine, cannabis/THC, and cocaine, January 2001–December 2021



[1] *Although the number of drugs reported to NFLIS-Drug for 2021 increased from the number of drugs reported for 2020, the total number of cases and drugs reported continues to be noticeably lower than the number reported for the years before the COVID-19 pandemic began. Use caution when comparing the shaded estimates to previous years' estimates.*

[2] *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.*

Figure A.4 National trend estimates for heroin, eutylone, and fluorofentanyl, January 2001–December 2021

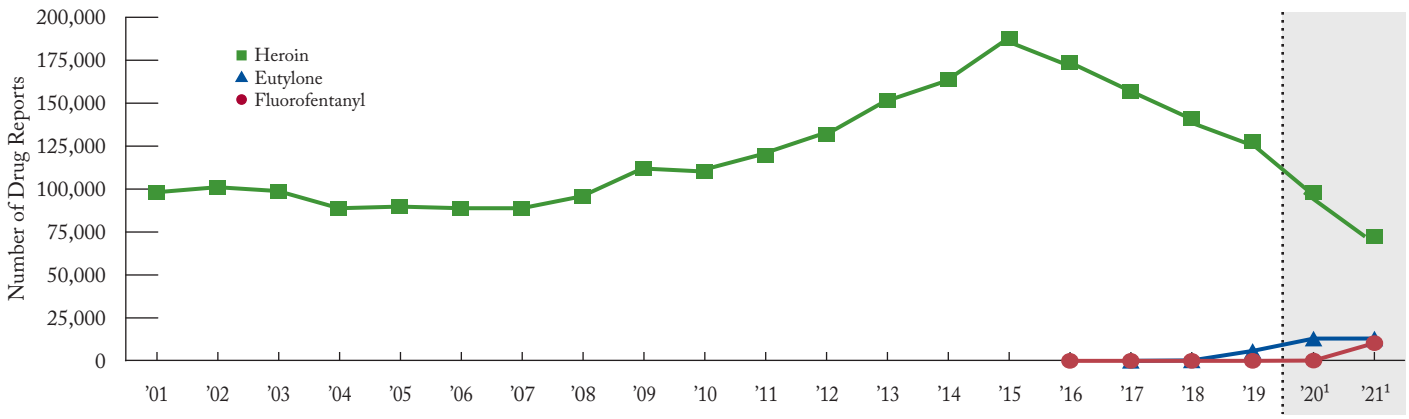


Figure A.5 Regional trends in fentanyl reported per 100,000 people aged 15 or older, January 2001–December 2021

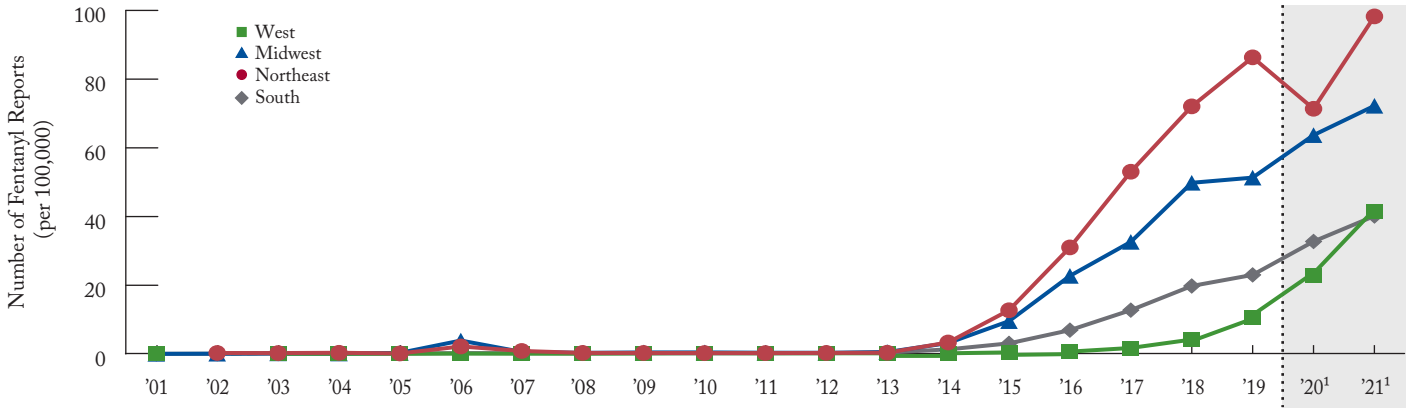
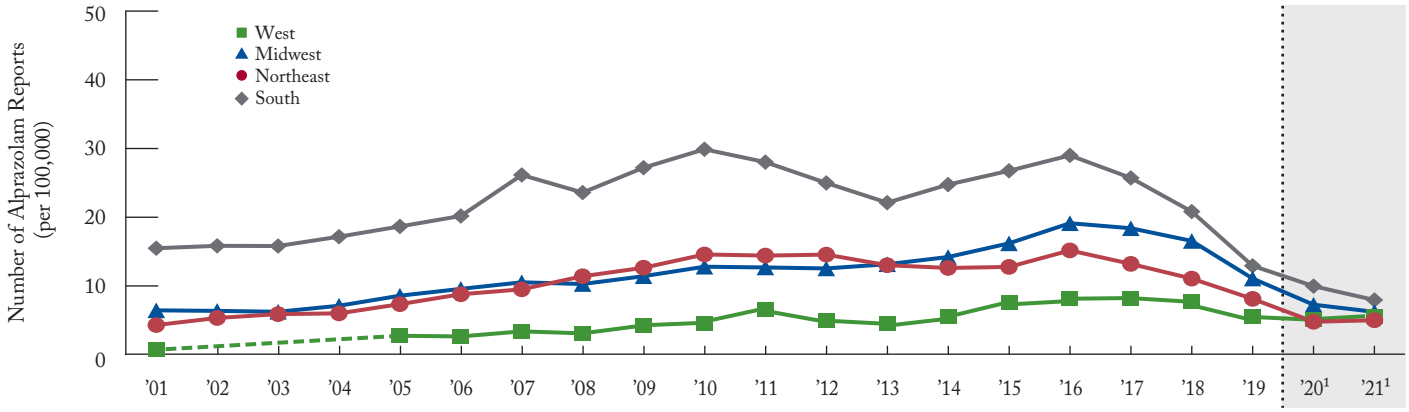


Figure A.6 Regional trends in alprazolam reported per 100,000 people aged 15 or older, January 2001–December 2021[2]



Note: Estimates are not available for eutylone for 2007 through 2016 because eutylone was first reported to NFLIS in 2017. Estimates are not available for fluorofentanyl for 2007 through 2015 because fluorofentanyl was first reported to NFLIS in 2016. U.S. Census 2021 population data by age were not available for this publication. Population data for 2021 were imputed.

[1] *Although the number of drugs reported to NFLIS-Drug for 2021 increased from the number of drugs reported for 2020, the total number of cases and drugs reported continues to be noticeably lower than the number reported for the years before the COVID-19 pandemic began. Use caution when comparing the shaded estimates to previous years' estimates.*

[2] *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.*

Figure A.7 Regional trends in oxycodone reported per 100,000 people aged 15 or older, January 2001–December 2021

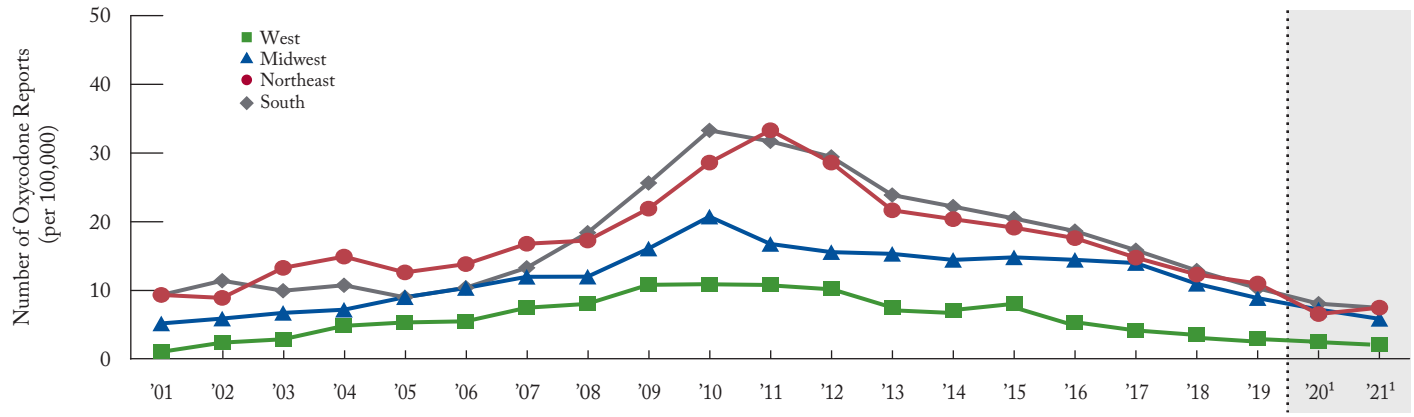


Figure A.8 Regional trends in buprenorphine reported per 100,000 people aged 15 or older, January 2001–December 2021[2]

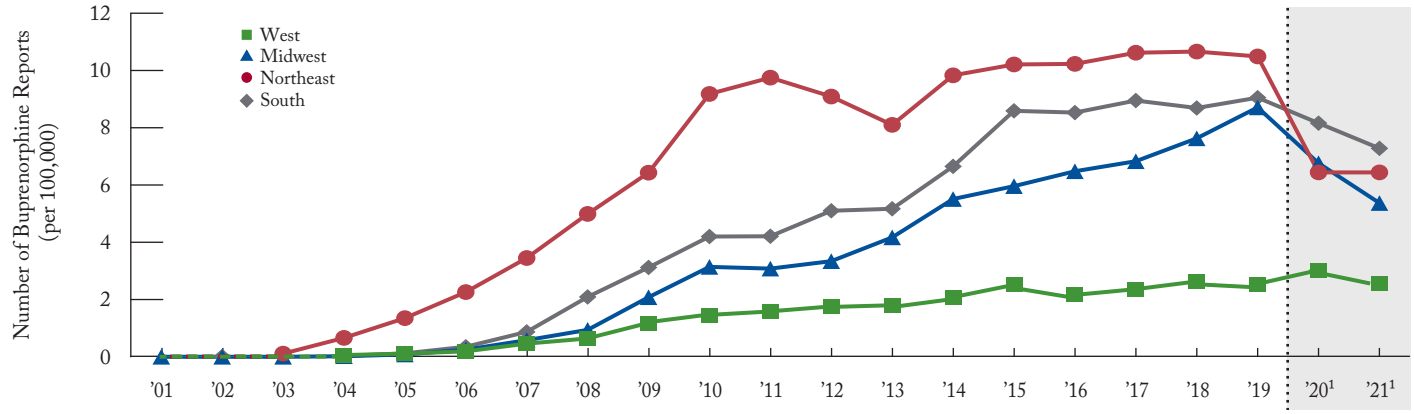
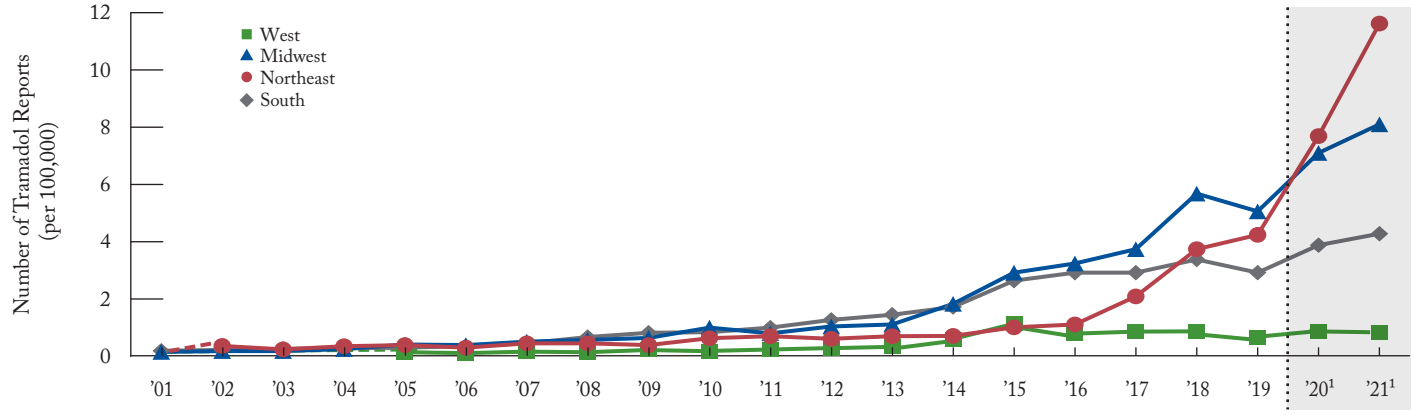


Figure A.9 Regional trends in tramadol reported per 100,000 people aged 15 or older, January 2001–December 2021[2]



Note: U.S. Census 2021 population data by age were not available for this publication. Population data for 2021 were imputed.

[1] *Although the number of drugs reported to NFLIS-Drug for 2021 increased from the number of drugs reported for 2020, the total number of cases and drugs reported continues to be noticeably lower than the number reported for the years before the COVID-19 pandemic began. Use caution when comparing the shaded estimates to previous years' estimates.*

[2] *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.*

Figure A.10 Regional trends in amphetamine reported per 100,000 people aged 15 or older, January 2001–December 2021

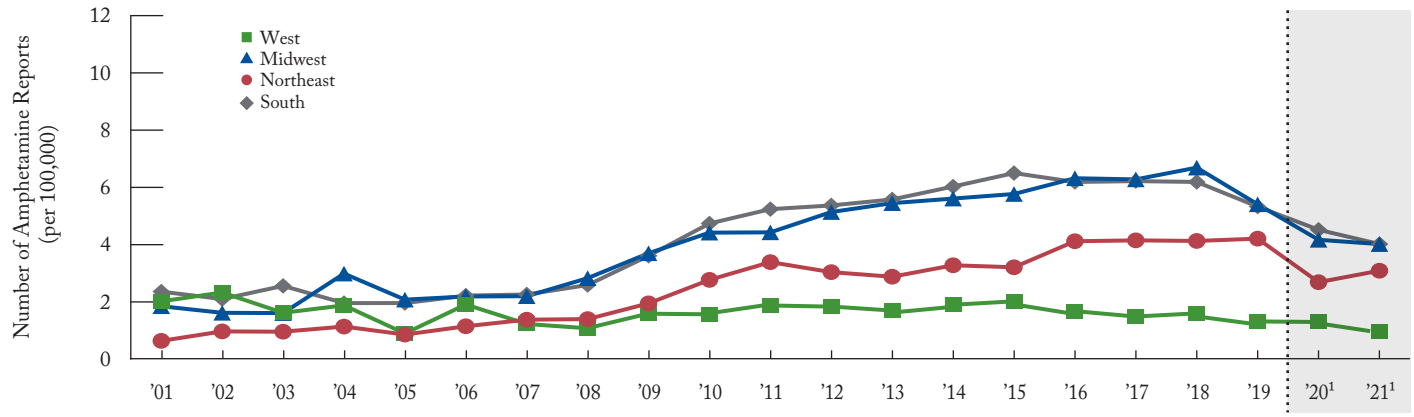


Figure A.11 Regional trends in methamphetamine reported per 100,000 people aged 15 or older, January 2001–December 2021[2]

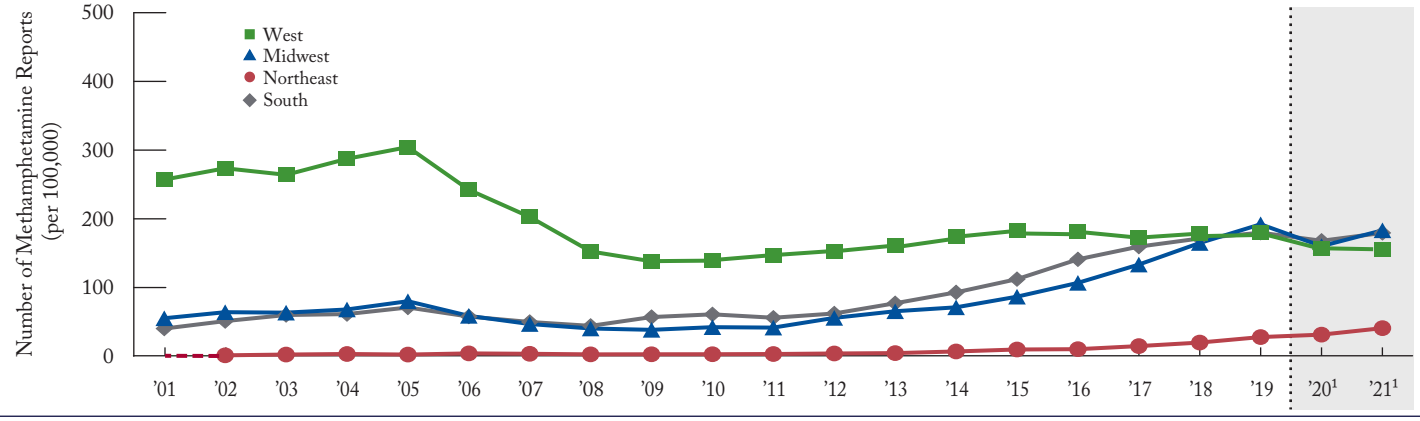
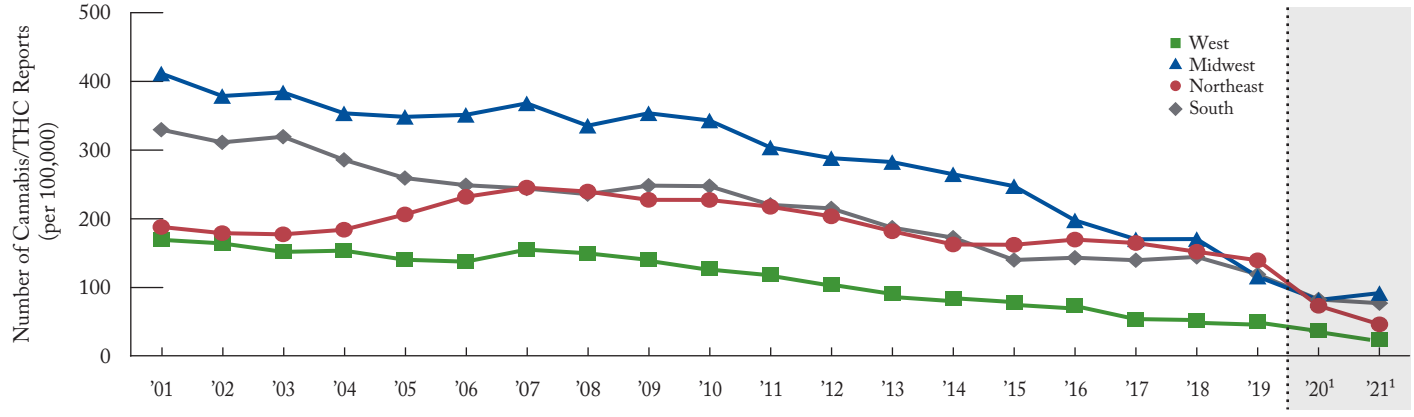


Figure A.12 Regional trends in cannabis/THC reported per 100,000 people aged 15 or older, January 2001–December 2021



Note: U.S. Census 2021 population data by age were not available for this publication. Population data for 2021 were imputed.

[1] *Although the number of drugs reported to NFLIS-Drug for 2021 increased from the number of drugs reported for 2020, the total number of cases and drugs reported continues to be noticeably lower than the number reported for the years before the COVID-19 pandemic began. Use caution when comparing the shaded estimates to previous years' estimates.*

[2] *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.*

Figure A.13 Regional trends in cocaine reported per 100,000 people aged 15 or older, January 2001–December 2021

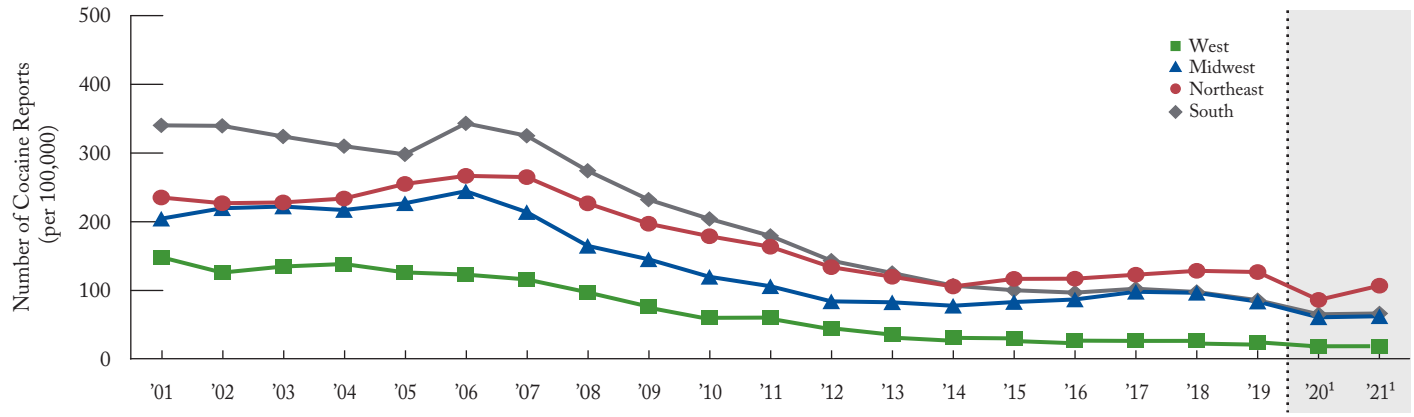


Figure A.14 Regional trends in heroin reported per 100,000 people aged 15 or older, January 2001–December 2021

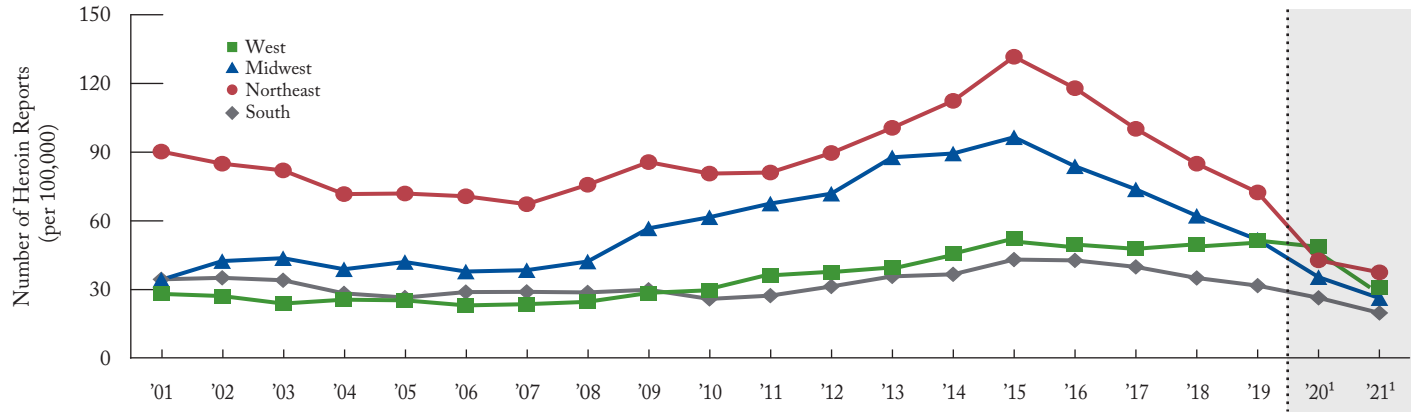
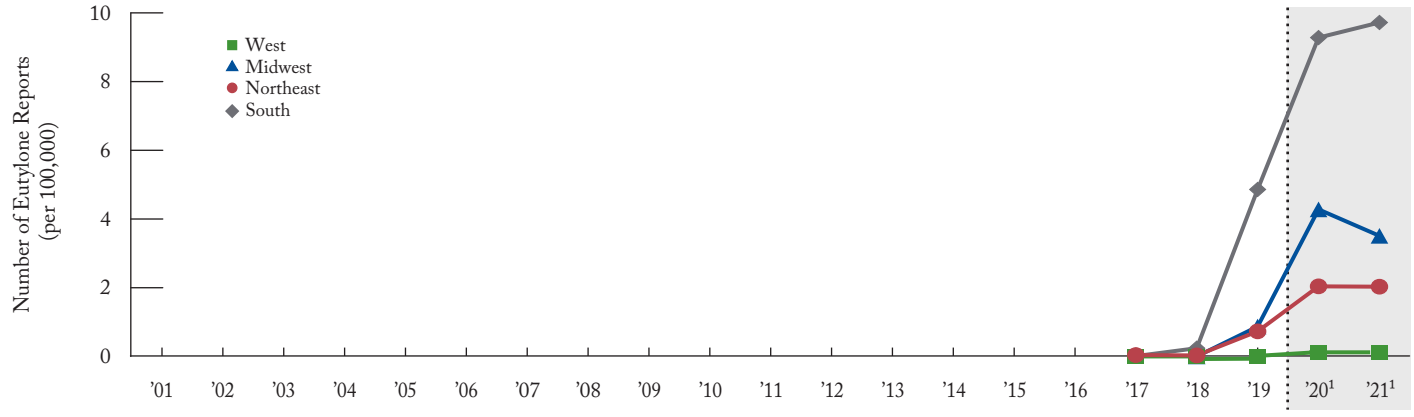


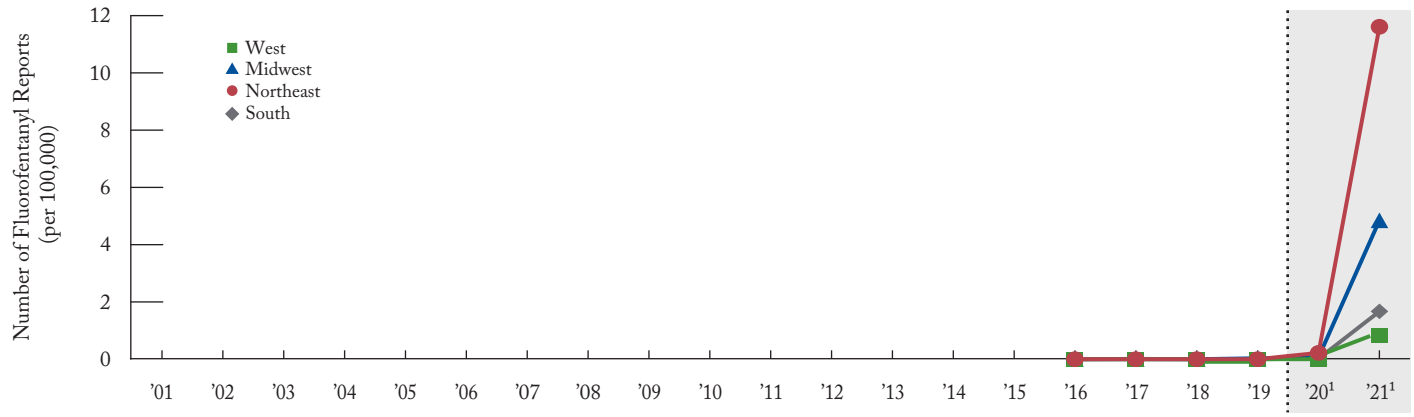
Figure A.15 Regional trends in eutylone reported per 100,000 people aged 15 or older, January 2001–December 2021



Note: U.S. Census 2021 population data by age were not available for this publication. Population data for 2021 were imputed. Estimates are not available for eutylone for 2007 through 2016 because eutylone was first reported to NFLIS in 2017.

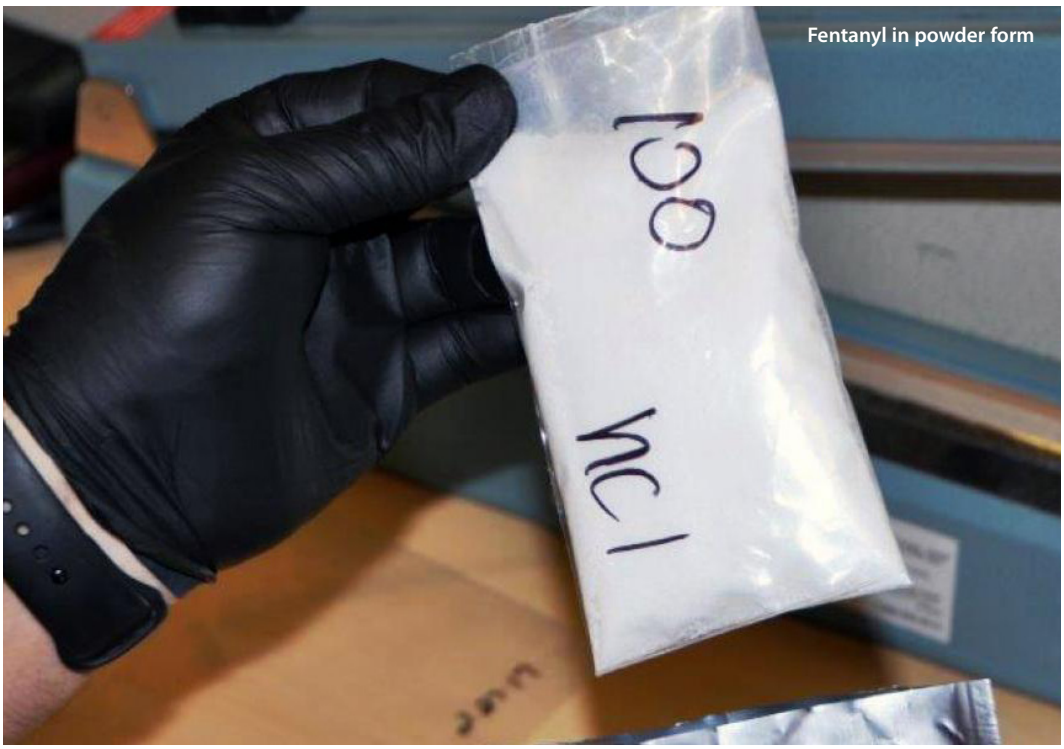
[1] Although the number of drugs reported to NFLIS-Drug for 2021 increased from the number of drugs reported for 2020, the total number of cases and drugs reported continues to be noticeably lower than the number reported for the years before the COVID-19 pandemic began. Use caution when comparing the shaded estimates to previous years' estimates.

Figure A.16 Regional trends in fluorofentanyl reported per 100,000 people aged 15 or older, January 2001–December 2021



Note: U.S. Census 2021 population data by age were not available for this publication. Estimates are not available for fluorofentanyl for 2007 through 2015 because fluorofentanyl was first reported to NFLIS in 2016.

[1] *Although the number of drugs reported to NFLIS-Drug for 2021 increased from the number of drugs reported for 2020, the total number of cases and drugs reported continues to be noticeably lower than the number reported for the years before the COVID-19 pandemic began. Use caution when comparing the shaded estimates with previous years' estimates.*



Appendix B

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 (4 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 (5 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 (3 sites)	✓
	Local	Johnson County Sheriff's Office (Mission)	✓
	Local	Sedgwick County Regional Forensic Science Center (Wichita)	✓
KY	State	Kentucky State Police (6 sites)	✓
LA	State	Louisiana State Police	✓
	Local	Acadiana Criminalistics Laboratory (New Iberia)	✓
	Local	Jefferson Parish Sheriff's Office (Metairie)	✓
	Local	New Orleans Police Department Crime Laboratory	
	Local	North Louisiana Criminalistics Laboratory System (3 sites)	✓
	Local	Southwest Louisiana 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	✓
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	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 Crime Laboratory	
NH	State	New Hampshire State Police Forensic Laboratory	✓
NJ	State	New Jersey State Police (4 sites)	✓
	Local	Burlington County Forensic Laboratory (Mt. Holly)	✓
	Local	Cape May County Prosecutor's Office	✓
	Local	Hudson County Prosecutor's Office (Jersey City)	
	Local	Ocean County Sheriff's Department (Toms River)	✓
	Local	Union County Prosecutor's Office (Westfield)	✓
NM	State	New Mexico Department of Public Safety (3 sites)	✓
	Local	Albuquerque Police Department	✓
NV	Local	Henderson City Crime Laboratory	✓
	Local	Las Vegas Metropolitan Police Crime Laboratory	✓
	Local	Washoe County Sheriff's Office Crime Laboratory (Reno)	✓
NY	State	New York State Police (4 sites)	✓
	Local	Erie County Central Police Services Laboratory (Buffalo)	✓
	Local	Nassau County Office of Medical Examiner (East Meadow)	✓
	Local	New York City Police Department Crime Laboratory**	✓
	Local	Niagara County 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 (4 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 Office of the Medical Examiner Forensic Laboratory (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 February 10, 2022.

*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.

Appendix C 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 under way 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 and are reported independently in NFLIS Annual and Midyear Reports.

Appendix D

NFLIS Website and NFLIS-Drug Data Query System (DQS)

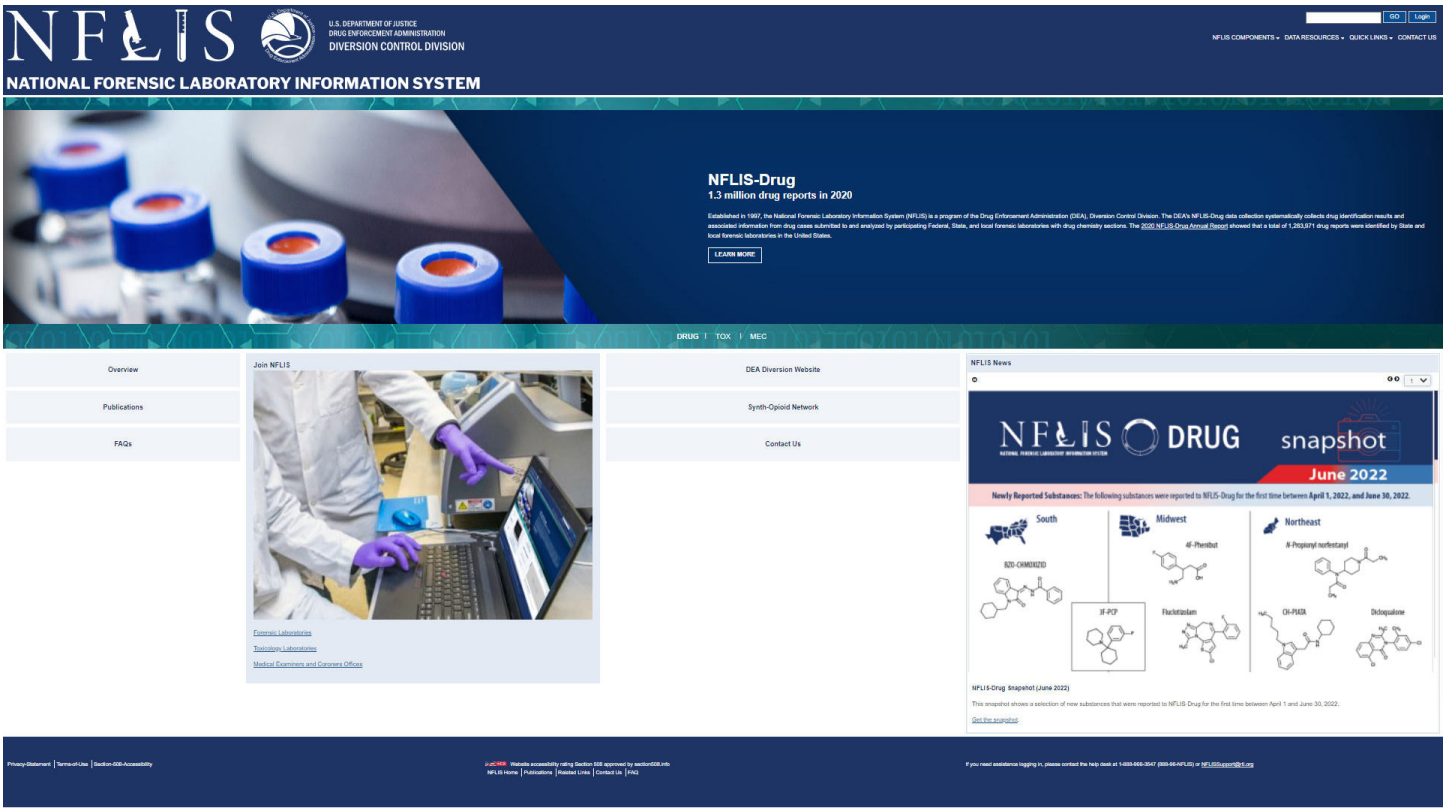
The NFLIS website (https://www.nflis.deadiversion.usdoj.gov) is an important feature of the NFLIS program. It is the key resource providing public access to review information regarding NFLIS data collections and to search for and download NFLIS publications. The website also gives NFLIS-Drug participants access to the NFLIS-Drug Data Query System (DQS). An enhancement to the NFLIS website will be a public DQS, which will be available in fall 2022.

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/.



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

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