

Trends in Impaired Driving Toxicology Analyses & Opportunities for Improvement

Association of Ignition Interlock Program Administrators

Charleston, SC May 23, 2023

Chris Heartsill – Regional Toxicology Liaison – NHTSA Region 7



Regional Toxicology Liaisons Project

NHTSA Regions 5,7,9

The Team!



NHTSA REGION 9

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RTL Project Manager

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NHTSA

Liaison Goals (long-term)

Consistency

Work to bring consistency to laboratory testing throughout the regions

Communication

Be a liaison between toxicology laboratories and other partners in the impaired driving problem

Involvement

Ensure the laboratories are aware and involved in state and regional meetings where impaired driving is discussed.

Grow

Expand the project to the other NHTSA Regions.



Current Traffic Safety Concerns



- National Highway Traffic Safety Report on 2020 Fatalities
 - 38, 824 people died on US Roadways
 - An increase of 6.8% regarding fatal crashes
 - 45% of those fatal crashes involve risky behavior (DUI, speed)
 - Alcohol-impaired fatalities were up 14%

<https://www.nhtsa.gov/press-releases/2020-traffic-crash-data-fatalities#:~:text=The%20U.S.%20Department%20of%20Transportation's,number%20of%20fatalities%20since%202007.>

Current Traffic Safety Concerns

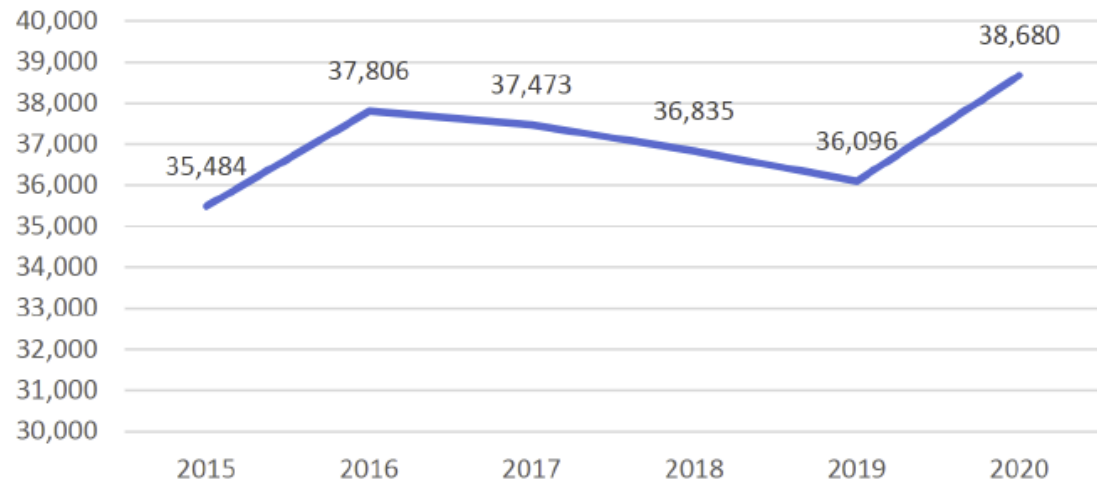


- National Highway Traffic Safety Report on 2021 Fatalities
 - 8,730 motor vehicle deaths in the first quarter of 2021
 - An increase of 10.5% from the same period in 2020
 - This increase comes even as driving declined

[← NEWS](#)

Newly Released Estimates Show Traffic Fatalities Reached a 16-Year High in 2021

Annual Fatalities 2015 - 2020



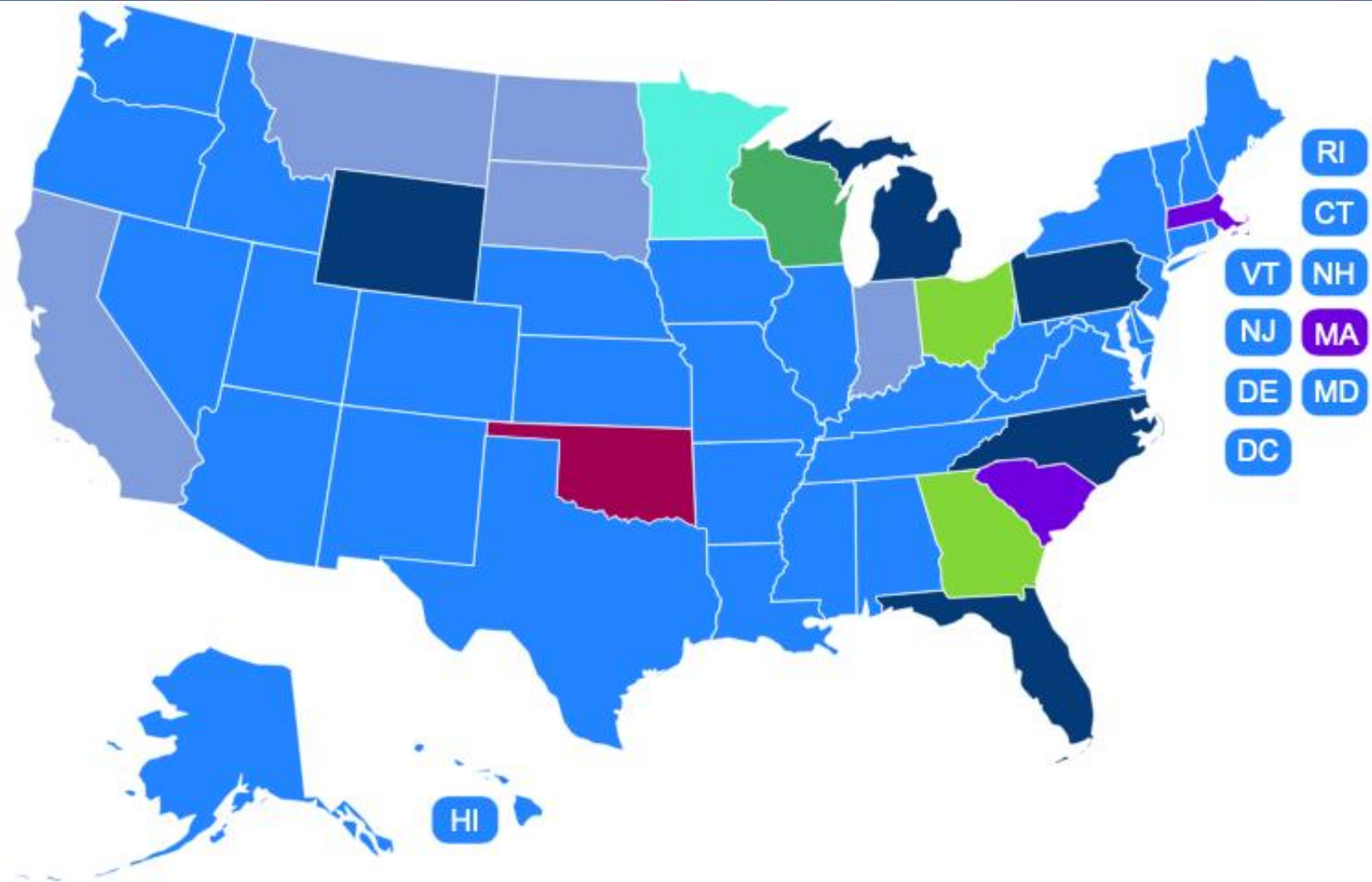
Adapted from NCSA, 2021²

Figure 1: FARS Motor Vehicle Fatalities in the United States 2015 to 2020

Current Traffic Safety Concerns



- National Highway Traffic Safety Report on 2022 Fatalities
 - Early Estimates report that 9,560 people died in motor vehicle crashes in the first quarter of 2022
 - An increase of 7% from the same period in 2021



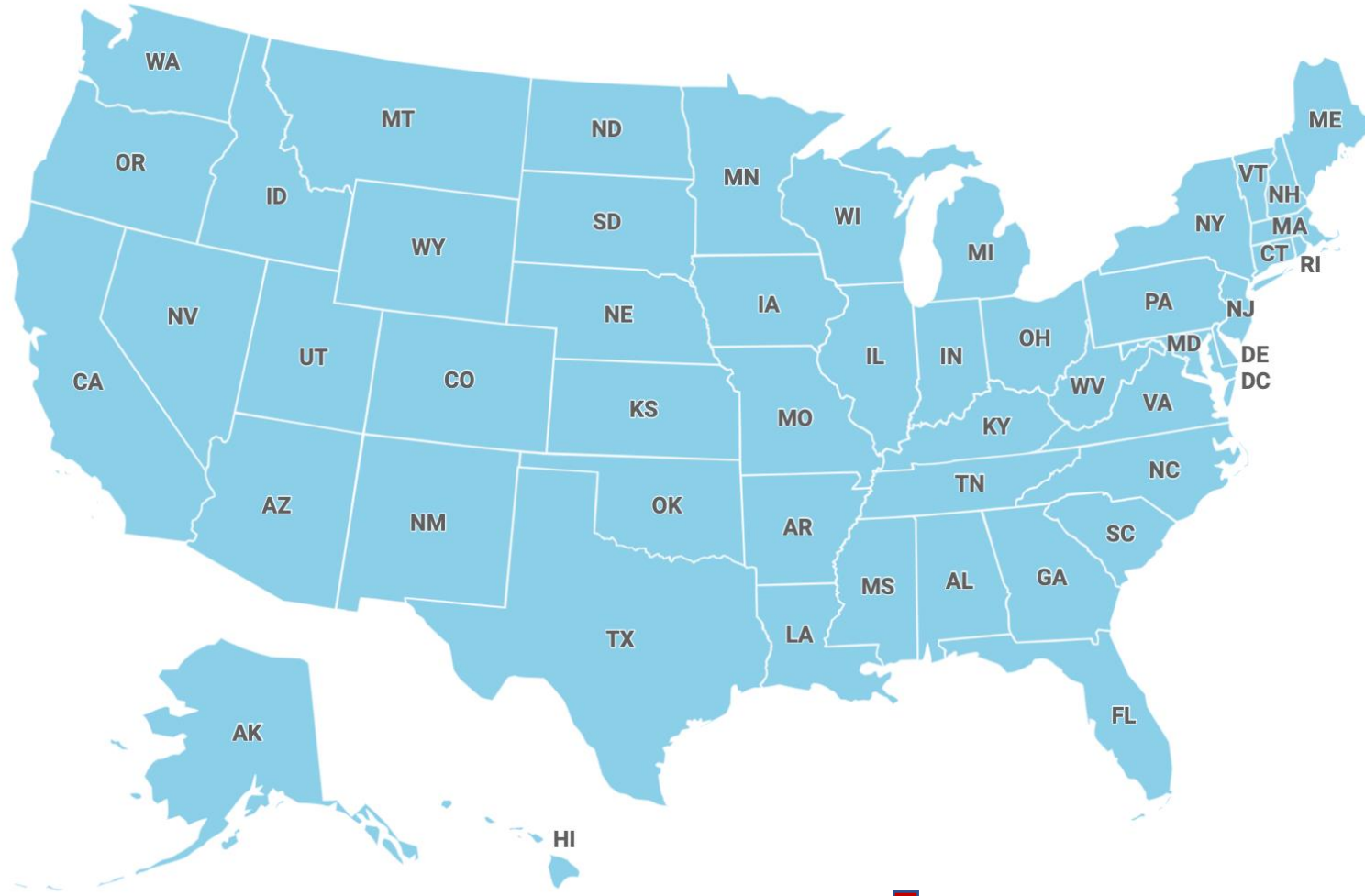
STATE LAW: IGNITION INTERLOCKS



Alcohol Ignition Interlock Devices

- Reduce driving while impaired repeat offenses by about 70% while they are installed
- 50 states have some sort of ignition interlock program
- Despite these laws, only about 1/5 of those arrested for DWI have interlocks installed

Drug Ignition Interlock Devices



 States with Drug Interlock Laws

Current Traffic Safety Concerns

2022 Study by Columbia University

2016-2019 34, 514 drivers were questioned

42% reported DUI of cannabis, ethanol, or both

8% DUI-A

20% DUI-C

14% DUI-A+C

68% were from a state with medical cannabis laws

<https://www.publichealth.columbia.edu/public-health-now/news/over-40-percent-drivers-past-year-alcohol-and-cannabis-use-report-dui>



Current Traffic Safety Concerns

- Substance Abuse and Mental Health Services Administration Survey on Drug Use
 - 2018 approximately 12 million drivers reported driving under the influence of cannabis.
 - 2.3 million reported driving under the influence of other illicit drugs
 - (20 million drove under the influence of alcohol)



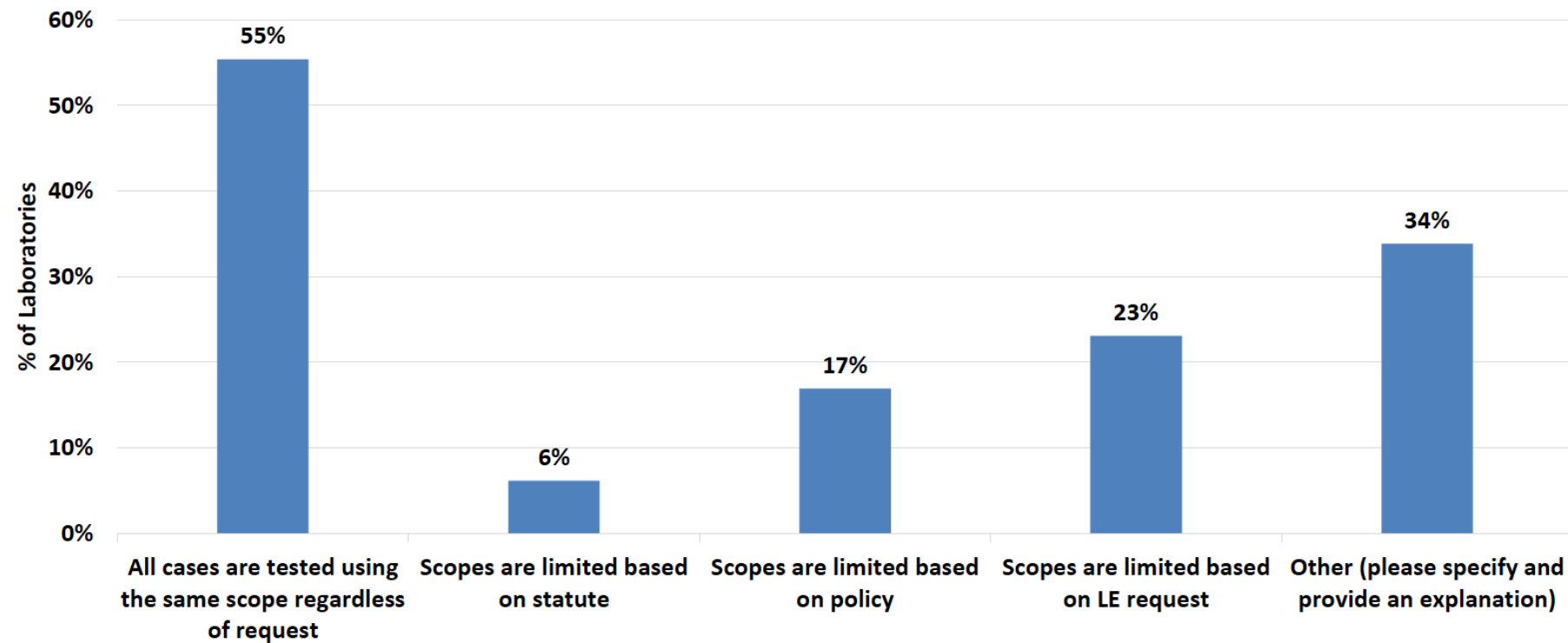
The Laboratory Problem:

- Ever changing landscape of drugs makes it difficult for toxicology laboratories to test for all the drugs that may be present
 - Laboratories generally cover the routine drugs (THC, Methamphetamine, benzodiazepines, opioids)
 - Some novel or short-lived drugs may not be detected
- Laboratories have different capabilities
 - Instrumentation, staffing, method validations, etc.

The Data Problem:

- Due to the different capabilities, data may be inconsistent from lab to lab
 - Instrumentation
 - Scope of testing
 - Extraction techniques
 - Workflow or policy
- Creates gaps in databases such as the Fatality Analysis Reporting System (FARS), National Forensic Laboratory Information System (NFLIS-TOX, DEA)

Scope of Testing





U.S. Department
of Transportation
National Highway
Traffic Safety
Administration

TRAFFIC SAFETY FACTS

Research Note



www.nhtsa.gov

DOT HS 812 072

Behavioral Safety Research

November 2014

Understanding the Limitations of Drug Test Information, Reporting, and Testing Practices in Fatal Crashes

Amy Berning & Dereece D. Smither

<https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812072>

Table 1

Drivers Involved in Fatal Motor Vehicle Traffic Crashes by Crash Year, Drug Test Status, and Drug Test Results, 2008-2012

Crash Year	Total Drivers	Drug Test Status						Drug Tests Results					
		Not Tested for Drugs		Tested for Drugs		Unknown if Tested		Tested, Drug Positive		Tested, Drug Negative		Tested, Results Unknown	
		Number	Percent of Total Drivers	Number	Percent of Total Drivers	Number	Percent of Total Drivers	Number	Percent of Total Tested	Number	Percent of Total Tested	Number	Percent of Total Tested
2008	50,416	26,883	53%	20,875	41%	2,658	5%	5,433	26%	13,088	63%	2,354	11%
2009	45,337	23,617	52%	18,357	40%	3,363	7%	5,518	30%	10,863	59%	1,976	11%
2010	44,599	23,058	52%	19,319	43%	2,222	5%	5,946	31%	11,758	61%	1,615	8%
2011	43,840	22,224	51%	18,648	43%	2,968	7%	6,096	33%	11,189	60%	1,363	7%
2012	45,337	23,389	52%	18,120	40%	3,828	8%	5,765	32%	10,112	56%	2,243	12%

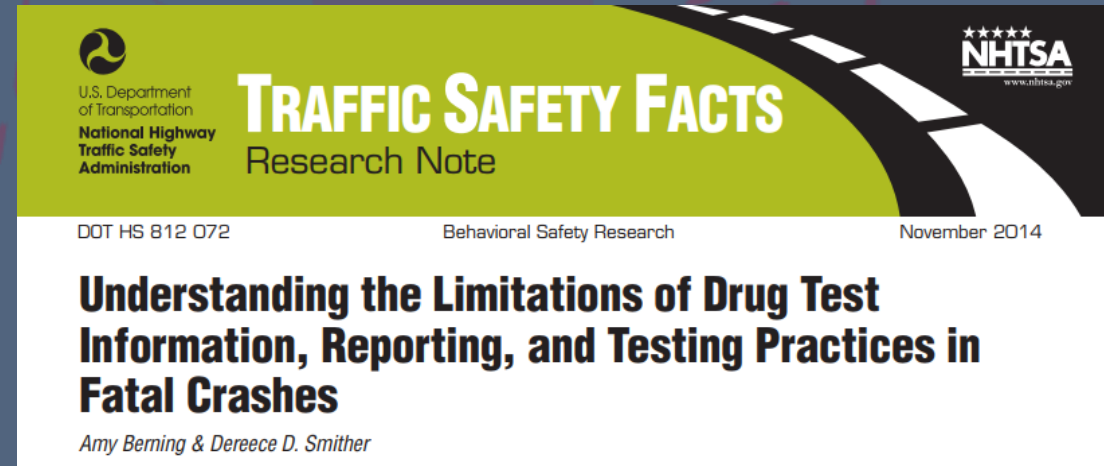
Source: NHTSA, 2014

Findings

- The majority of drivers were *not* tested for drugs (only 41% and 40% of drivers were tested in 2008 and 2012, respectively);
- There are typically higher testing rates of drivers who died in crashes (65% in 2008 and 61% in 2012) compared to surviving drivers (20% in 2008 and 21% in 2012) (not shown in Table 1);
- A driver who tests positive for a drug is not necessarily impaired by the drug;
- There is no consistent set of policies or procedures for drug testing across States; and
- Decreases in the cost of drug testing may have led to an increase in the number of people tested, as well as the range of drug types tested.

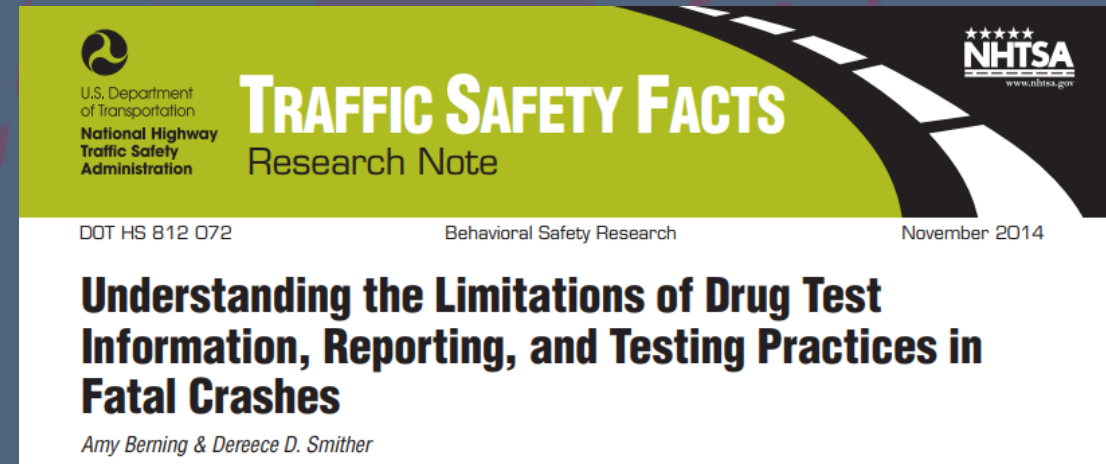
Conclusions

- The drugged driving issue is complex and drug testing and reporting across States and jurisdictions is not uniform. Users of FARS data must keep the limitations in mind when interpreting the data.



Conclusions

- Currently, the data in FARS is insufficient to allow comparisons of drug use across years, or across States. In addition, in light of the limitations detailed above, it is also not possible to make inferences about impairment, crash causation, or comparisons to alcohol from this limited data.

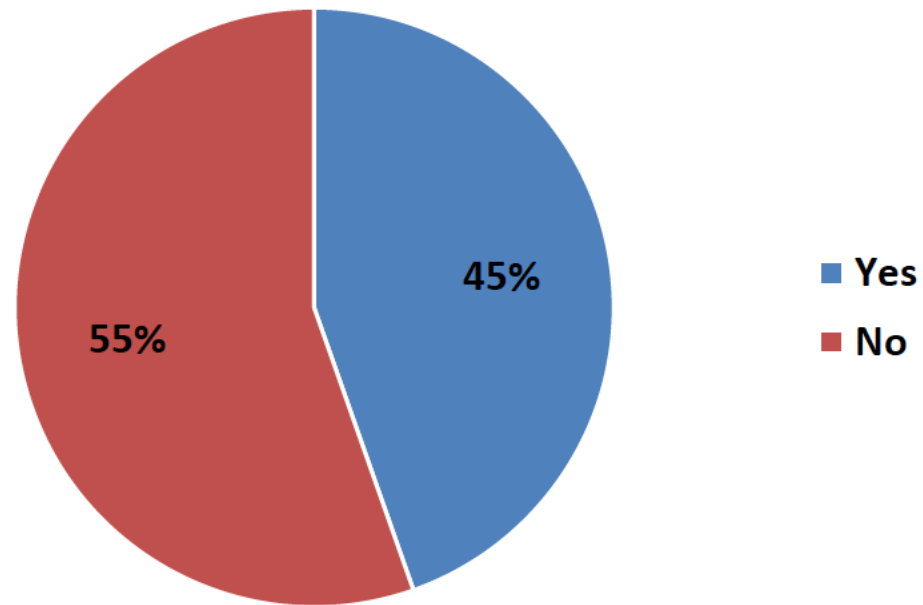


The Data Problem:

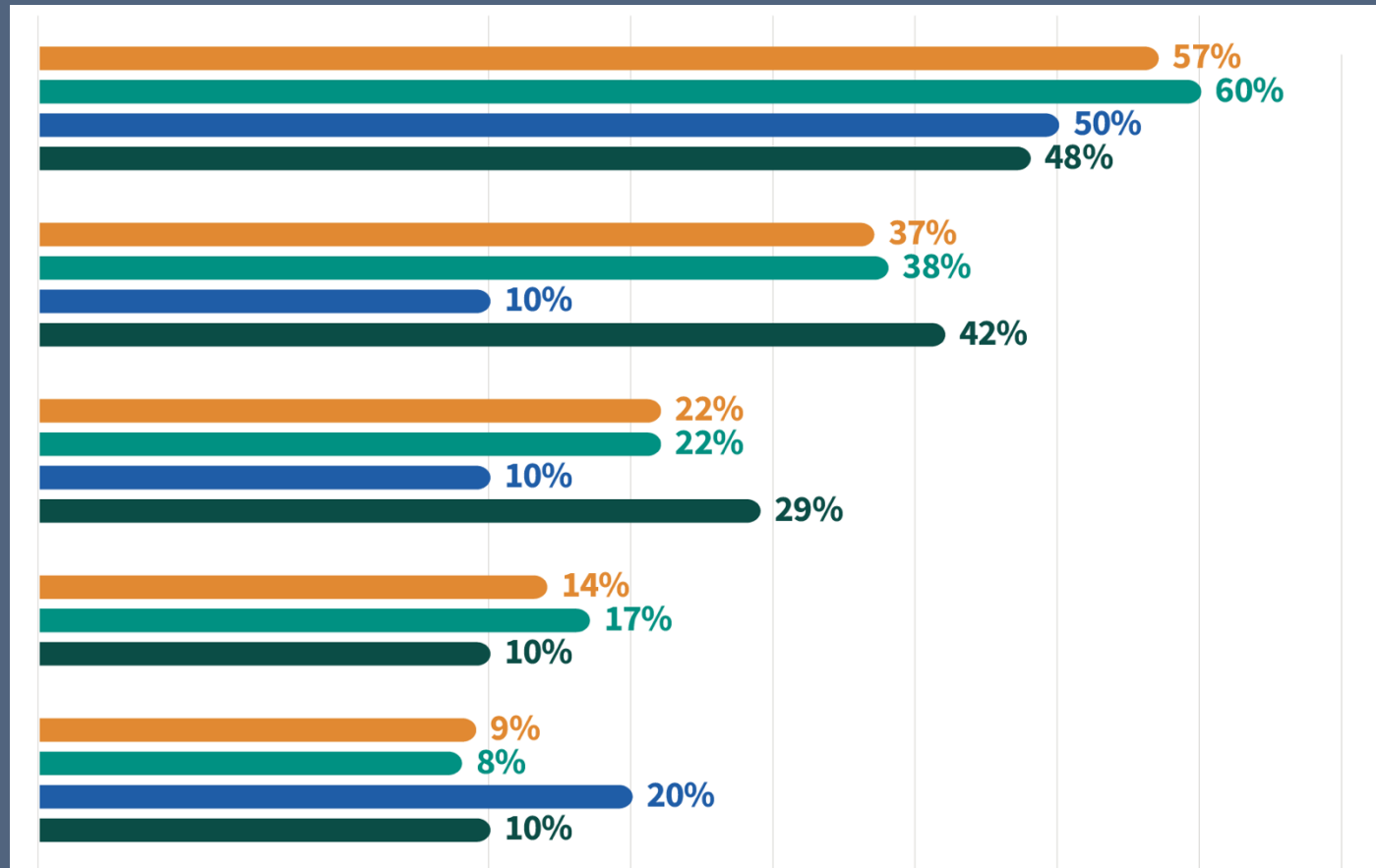
- It is difficult to compile information quickly enough.
 - Can do a retrospective look usually 1-2 years after occurrence
 - The landscape of drug use changes so rapidly that some data will be missed
 - Top drugs will typically remain the same

The Data Problem:

- Lowest BAC laboratories stop testing was 0.08 g/dL



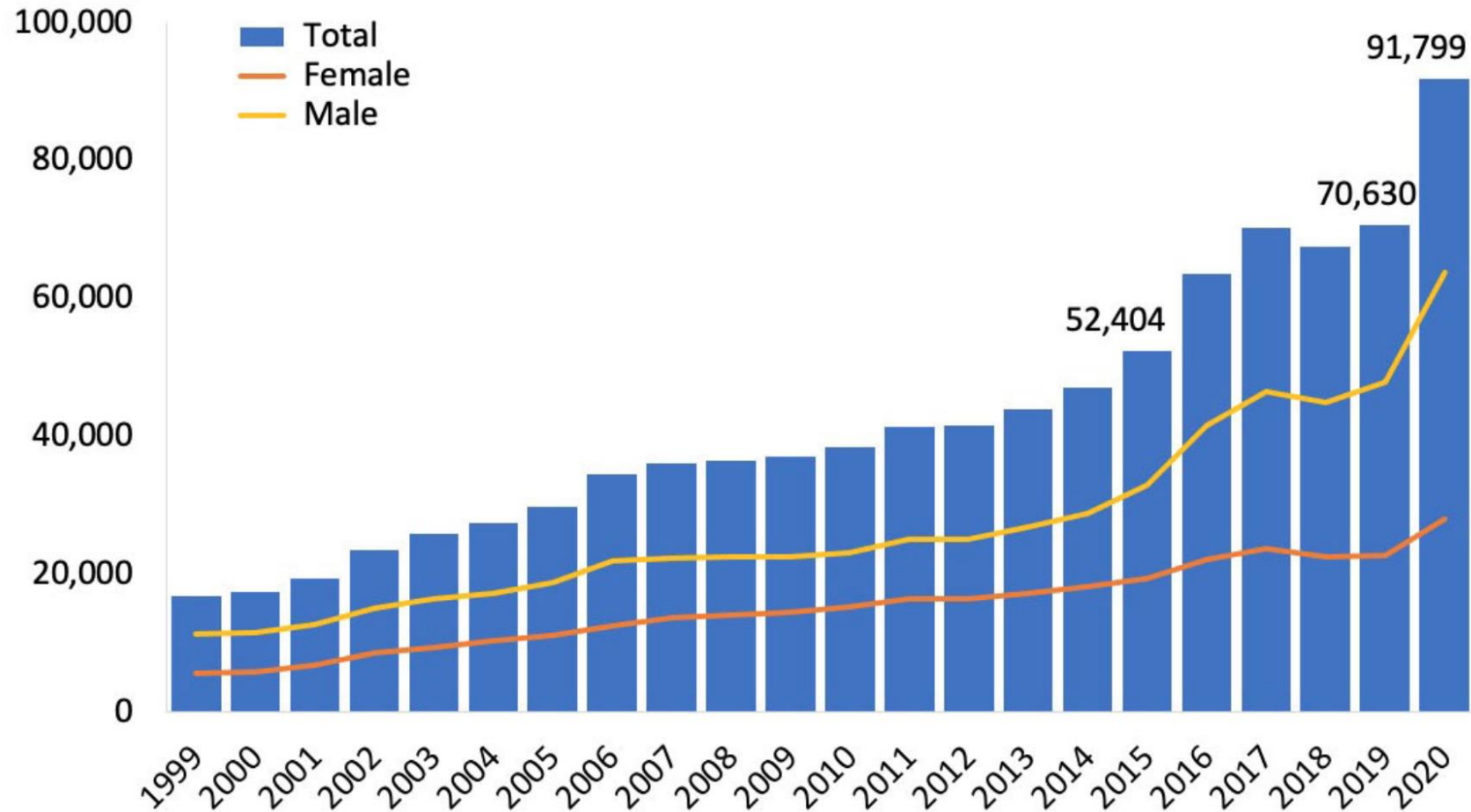
Drug Trends



Drug Trends

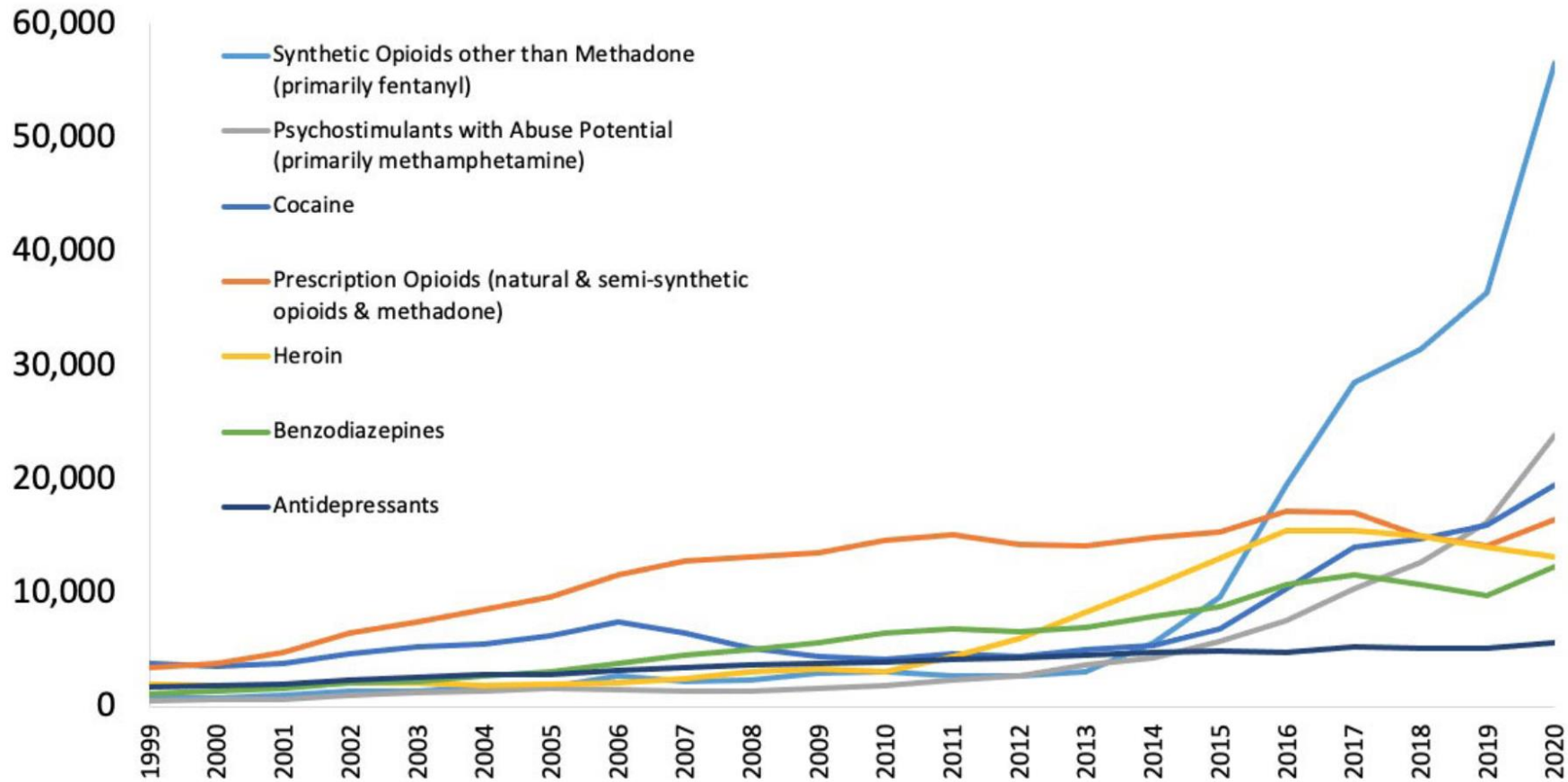
- Drug trends are somewhat regional
 - Scope of laboratory testing may need adjustment to account for local trends
 - 377,787 Methamphetamine seizures
 - 43.9% in the West
 - 28.3% in the Midwest
 - 7.5% in the Northeast
 - 31.7% in the South
 - 98,077 Heroin seizures
 - 13.6% in the West
 - 6.2% in the Midwest
 - 10.2% in the Northeast
 - 4.9% in the South

Figure 1. National Drug-Involved Overdose Deaths*
Number Among All Ages, by Gender, 1999-2020



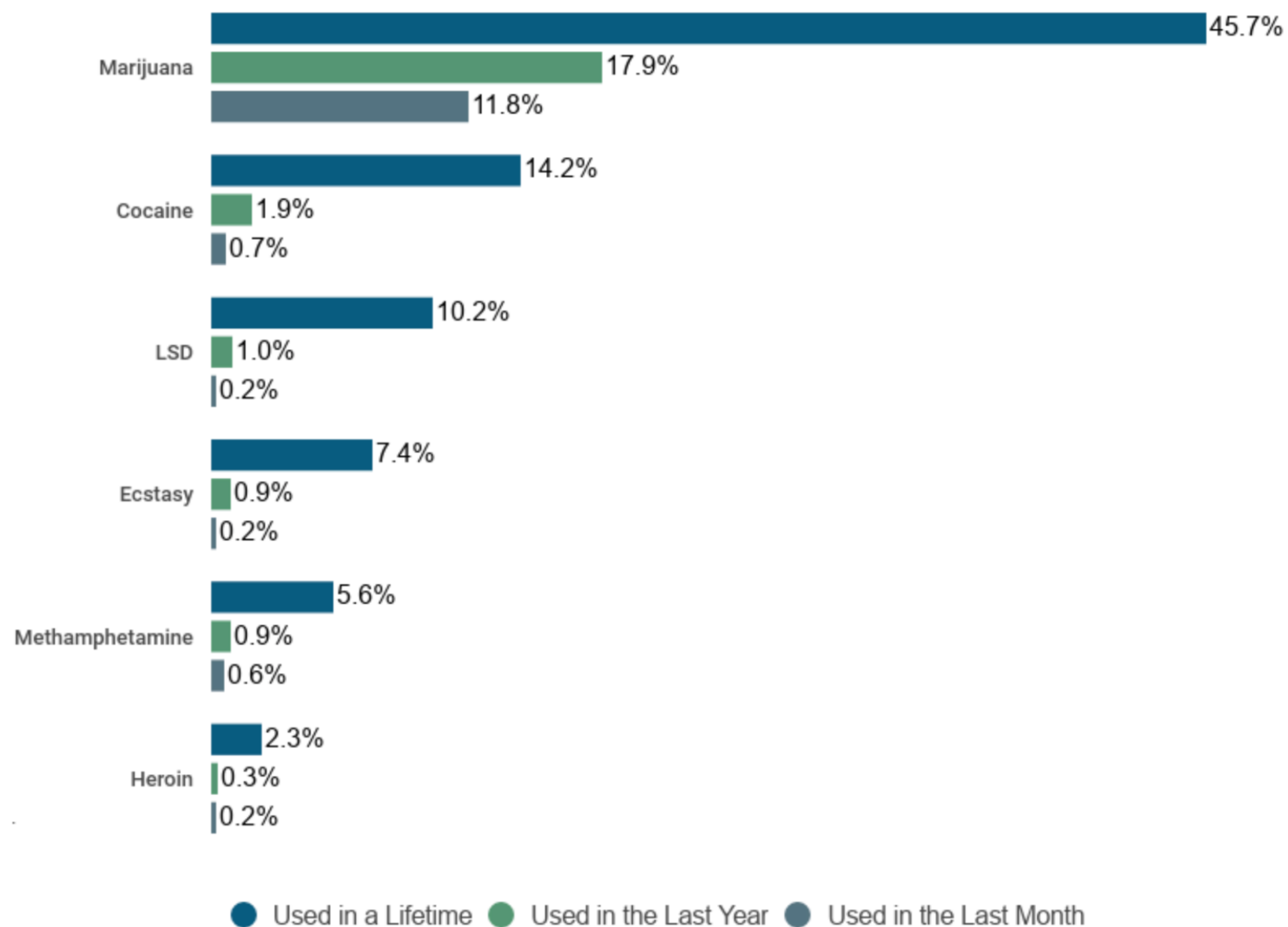
*Includes deaths with underlying causes of unintentional drug poisoning (X40–X44), suicide drug poisoning (X60–X64), homicide drug poisoning (X85), or drug poisoning of undetermined intent (Y10–Y14), as coded in the International Classification of Diseases, 10th Revision. Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2020 on CDC WONDER Online Database, released 12/2021.

**Figure 2. National Drug-Involved Overdose Deaths*,
Number Among All Ages, 1999-2020**



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Drug Usership Among Americans Aged 12 & Older



National Center for Drug Abuse Statistics, data from the Substance Abuse and Mental Health Services Administration 2020 National Survey of Drug Use and Health

2020 Survey

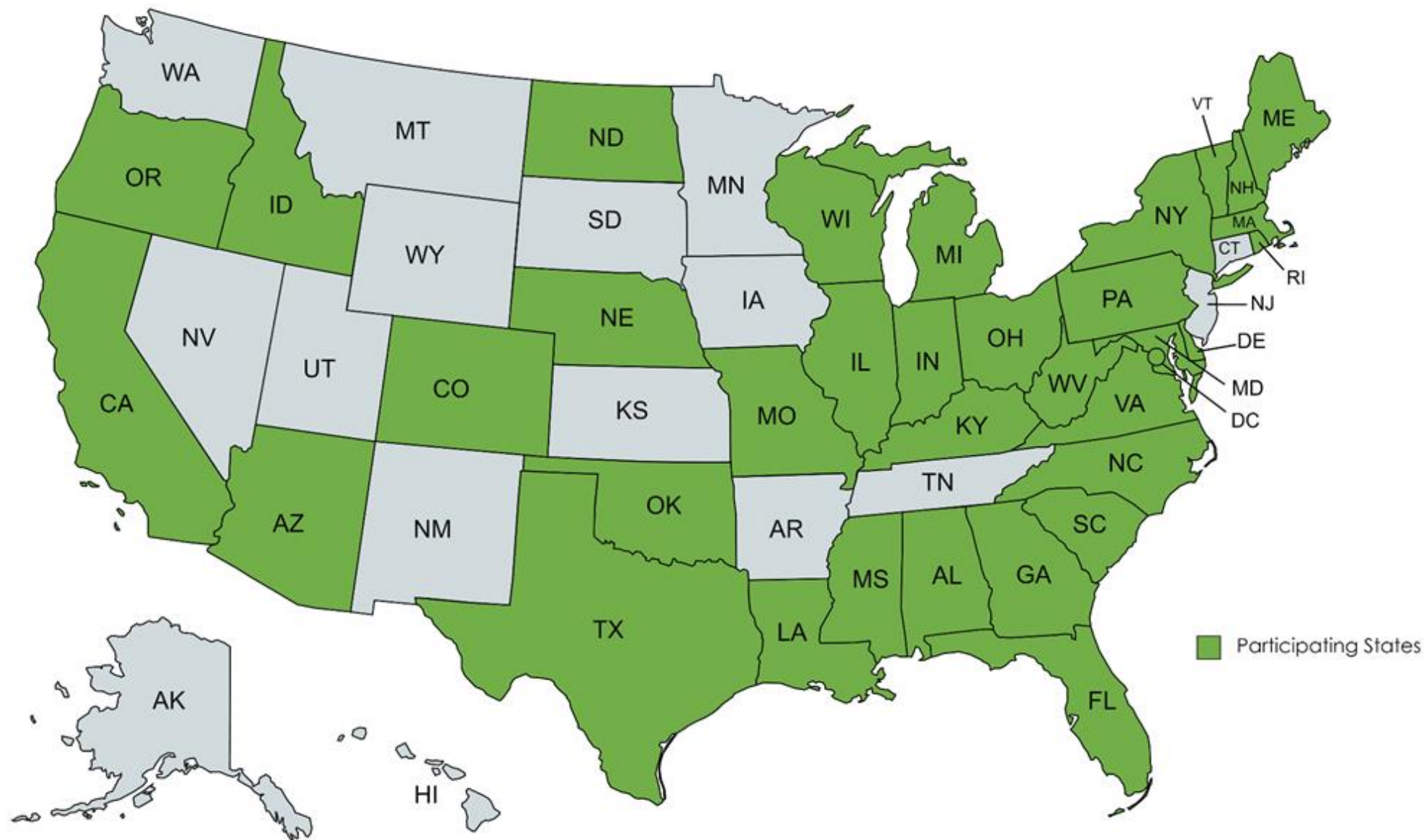
- Survey sent to 84 laboratories across the Nation
 - 65 laboratories completed the survey.



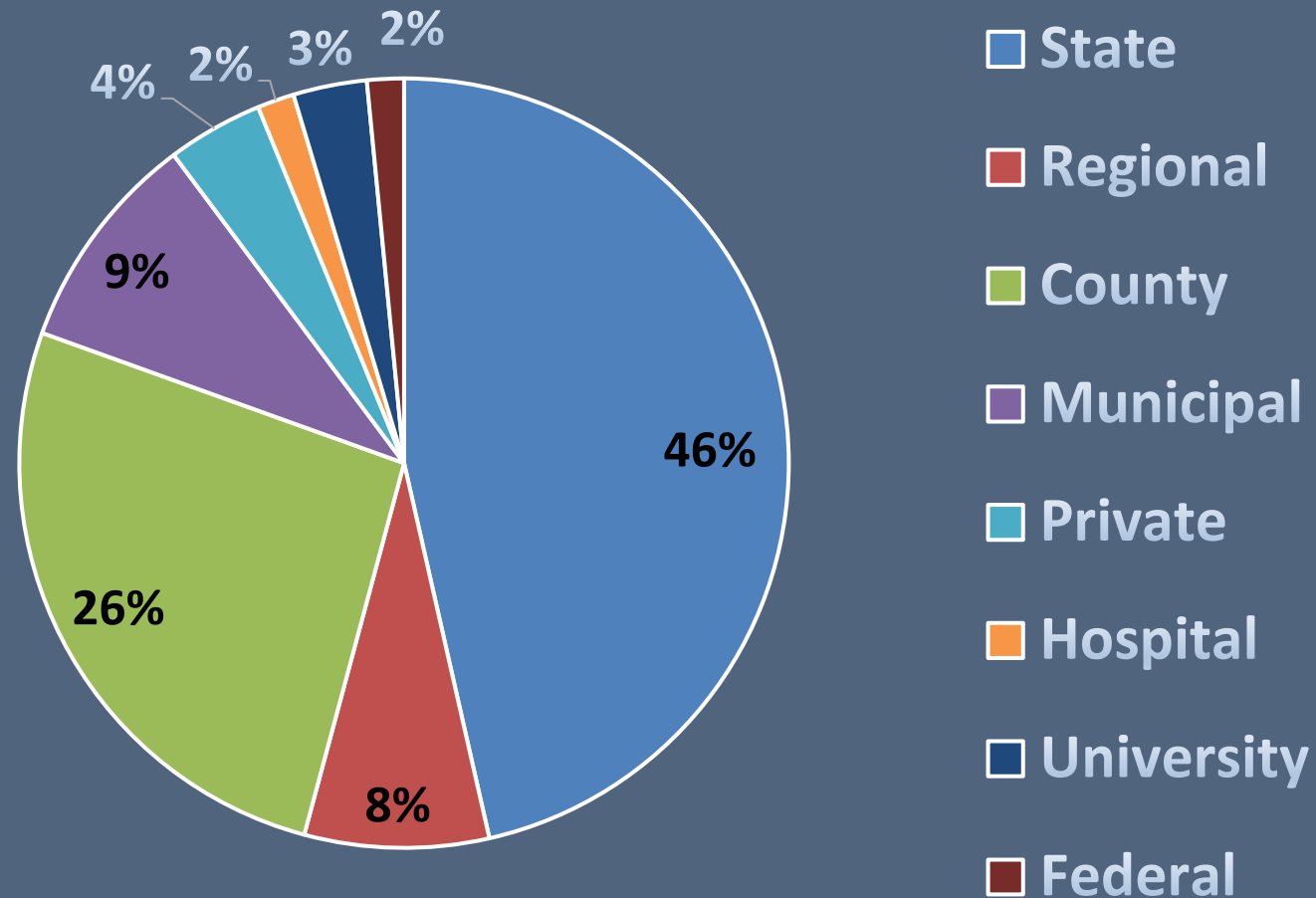
Survey Questions

- Participants provided information on:
 - Caseload
 - Laboratory Resources/Methods
 - Turnaround Time
 - Most frequently encountered drugs
 - Laboratory Needs



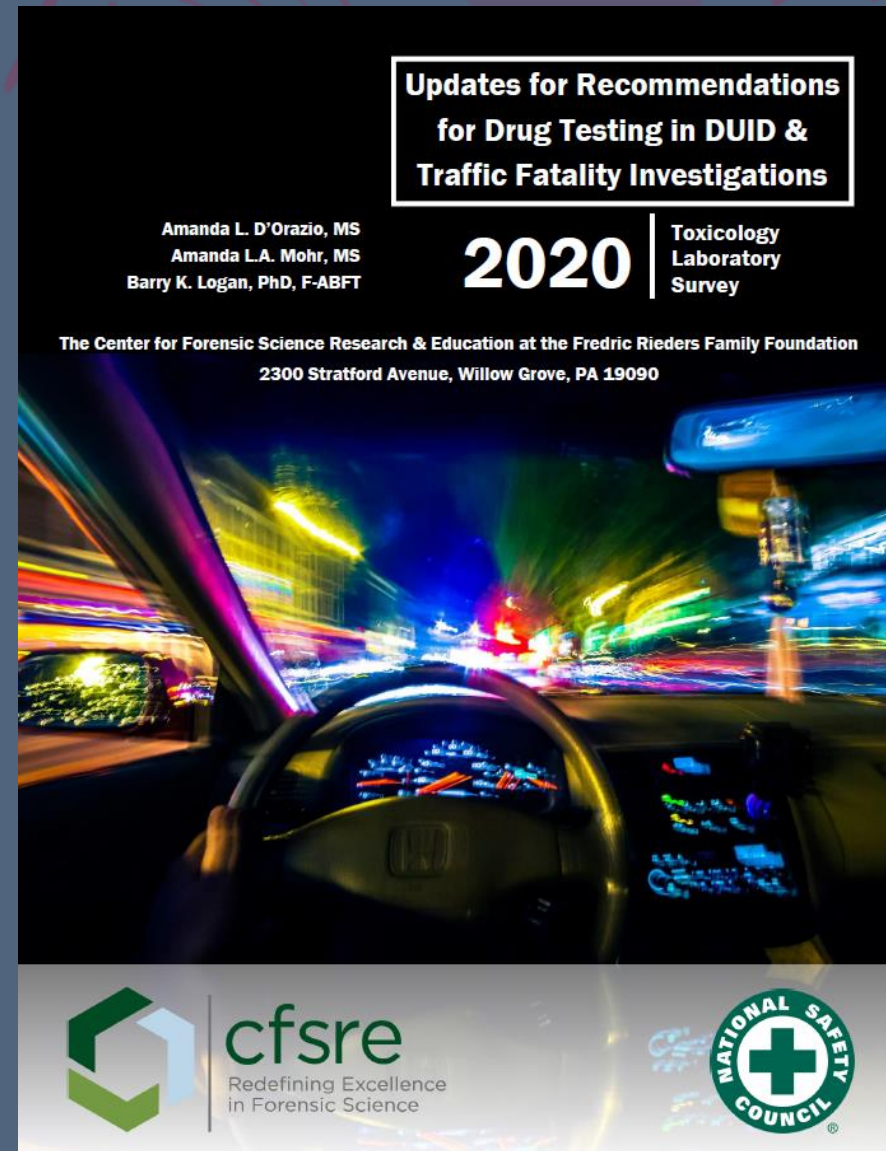


Survey Demographics



Reported Top DUI Drug Categories

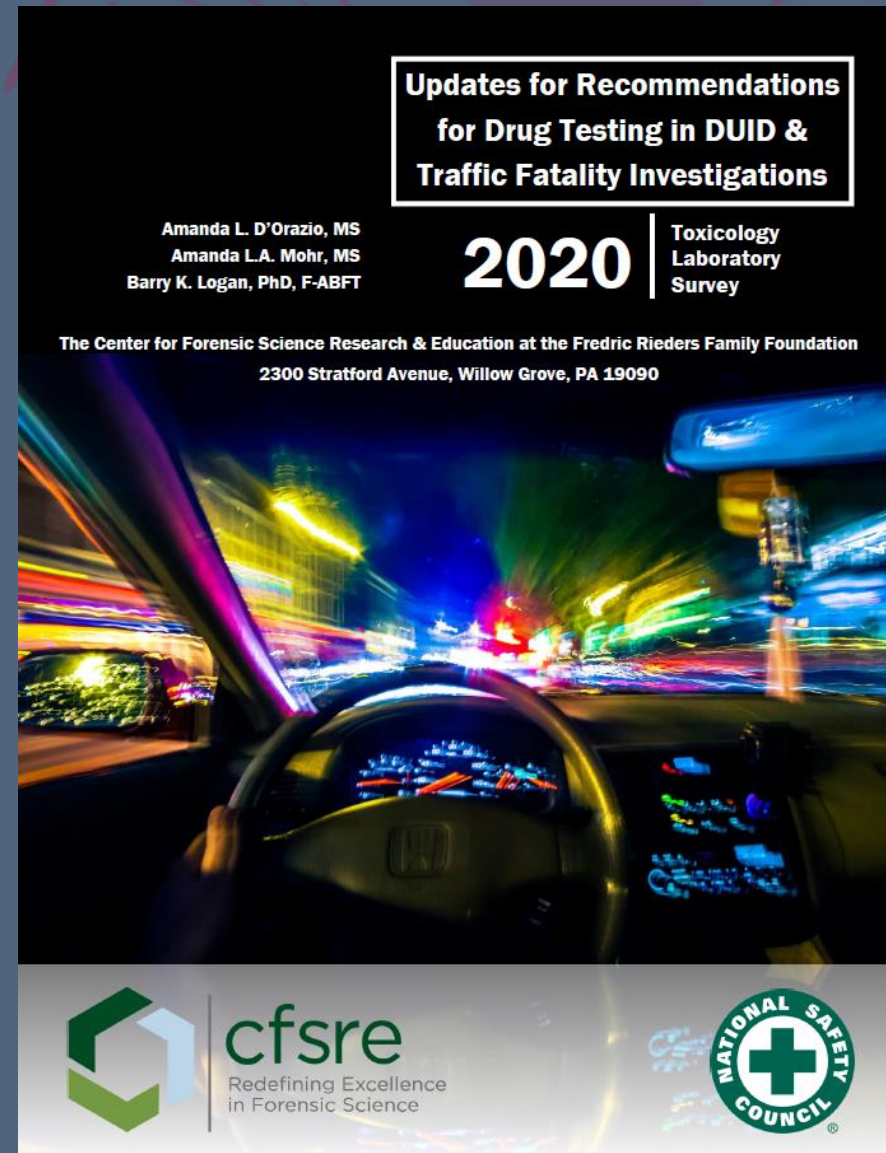
Prevalence	Compound/Class
1 (More)	THC and metabolites
2	Methamphetamine
3	Cocaine and metabolites
4	Alprazolam/alpha-hydroxyalprazolam
5	Clonazepam/7-aminoclonazepam
6	Morphine
7	Fentanyl
8	Diazepam/nordiazepam
9	Oxycodone
10	Citalopram
11	Hydrocodone
12	Lorazepam
13	Tramadol/O-Desmethytramadol
14	Zolpidem
15 (Less)	Temazepam



https://www.cfsre.org/images/content/research/toxicology/Survey_Report_Final.pdf

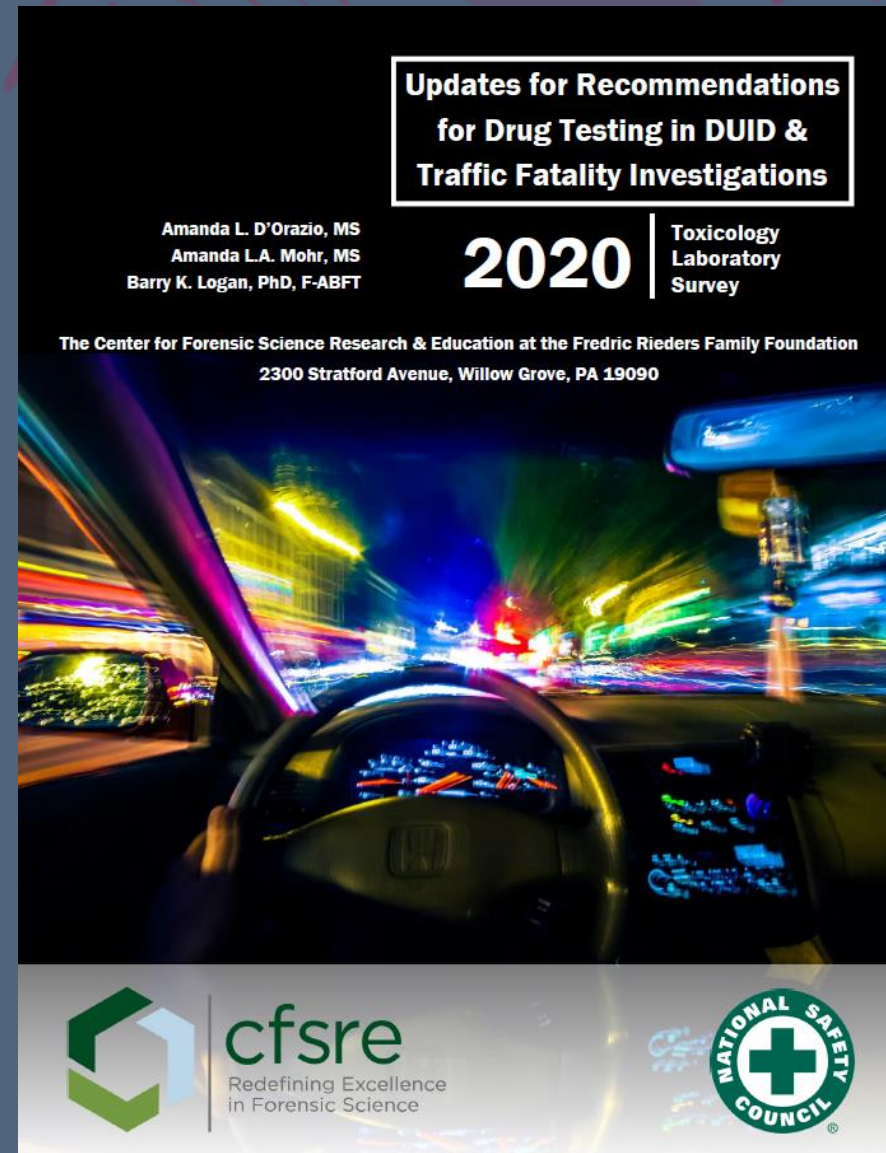
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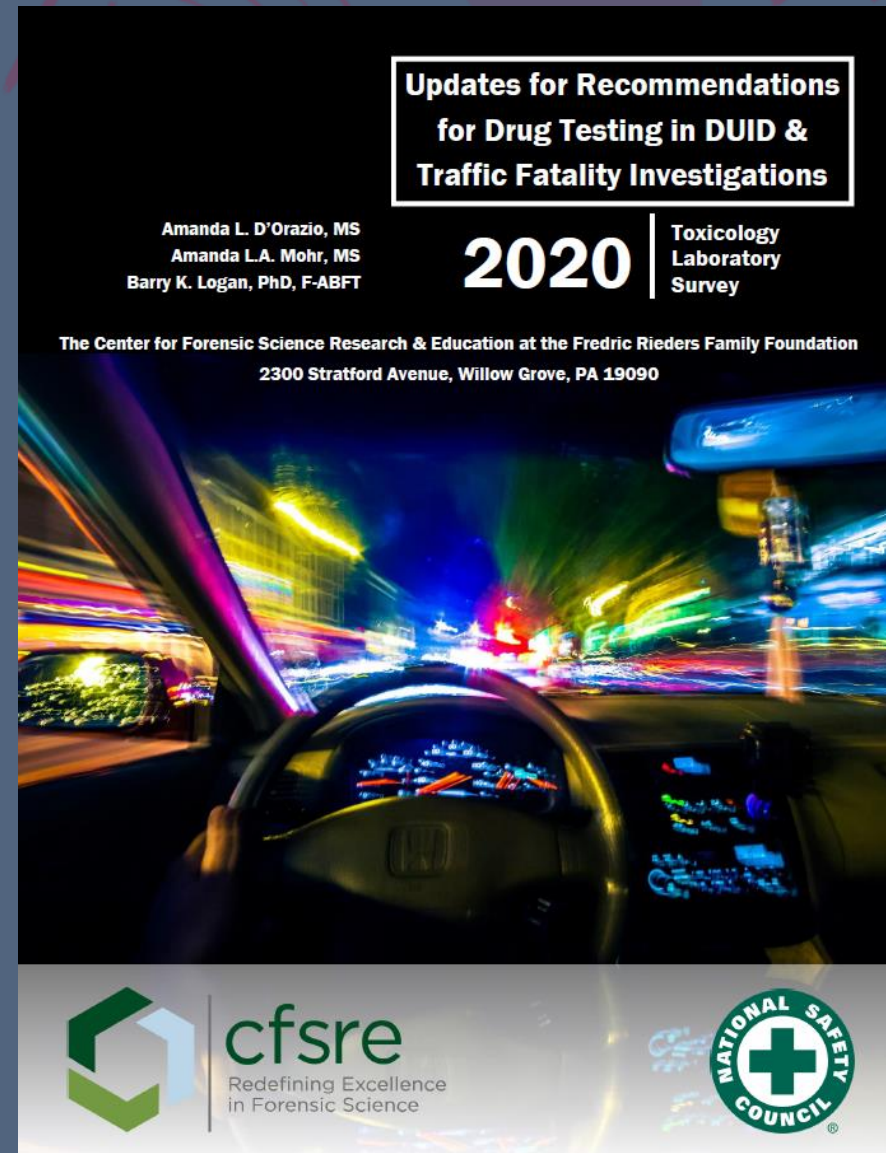
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2021 Regional Data

To provide an overview of impaired driving fatality rates, legislation, and prevention mechanisms of each state.

<https://www.nhtsa.gov/risky-driving/drug-impaired-driving>



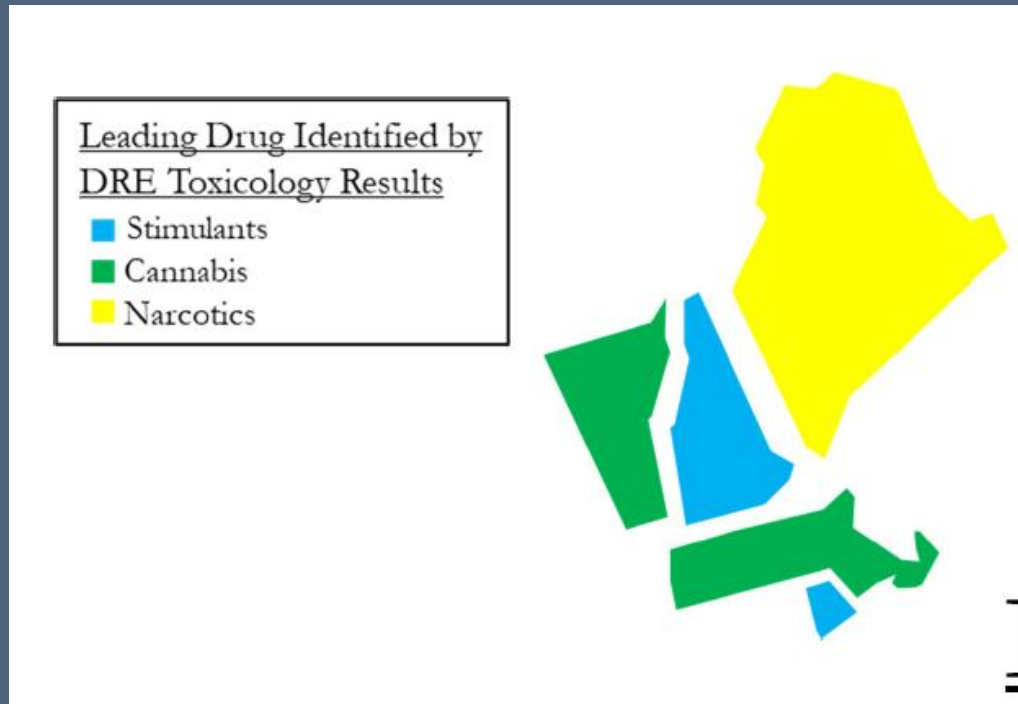
Impaired Driving State Landscape

REGION

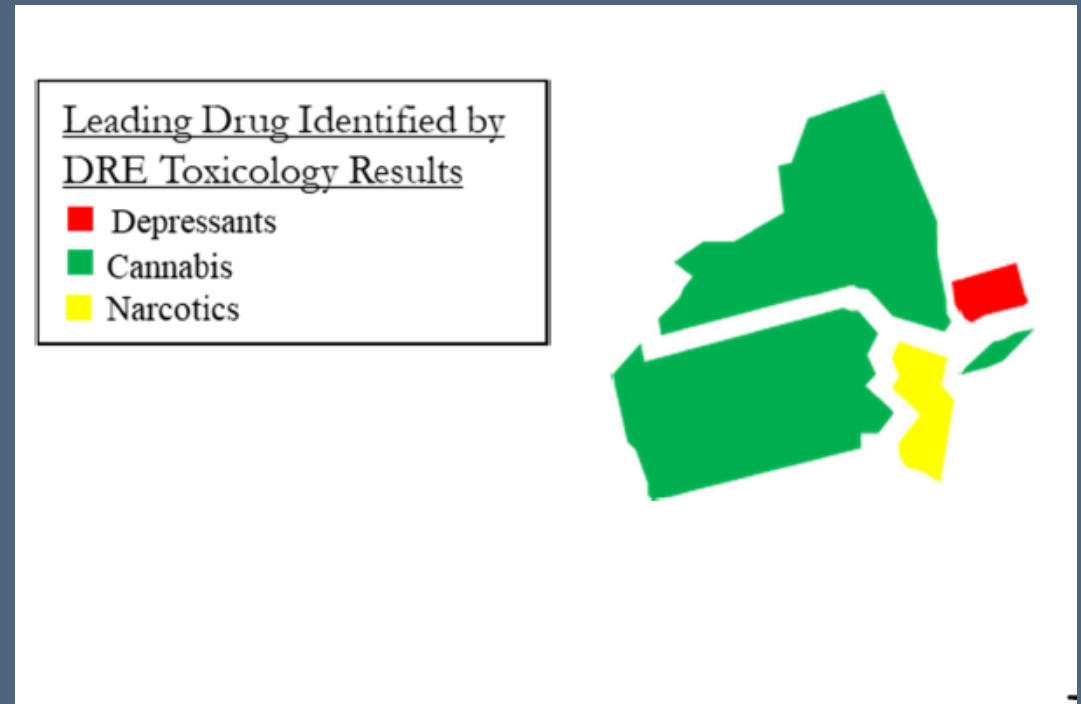
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Regional Data

- Region - 1

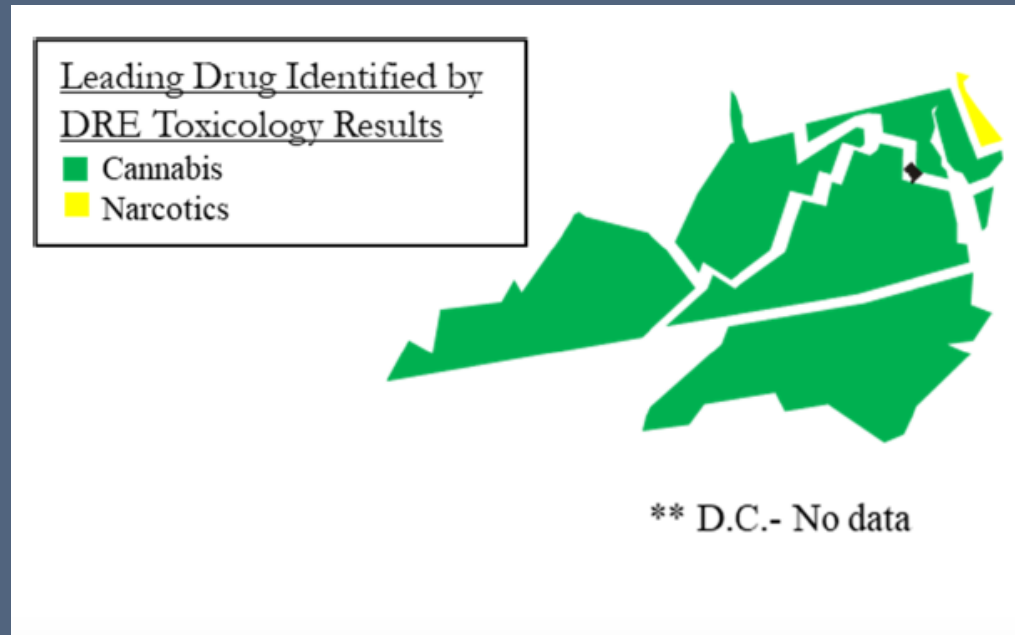


- Region - 2



Regional Data

- Region - 3

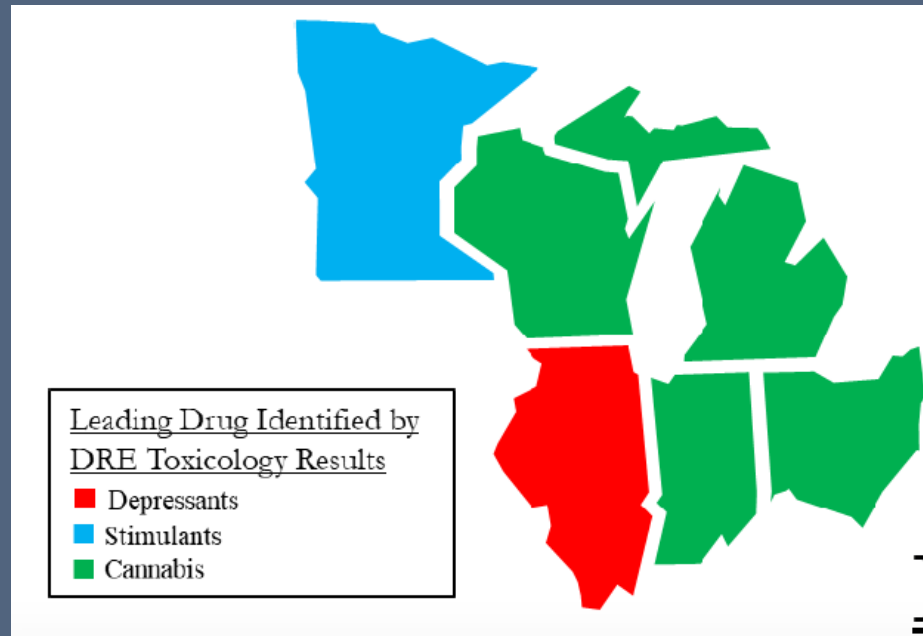


- Region - 4

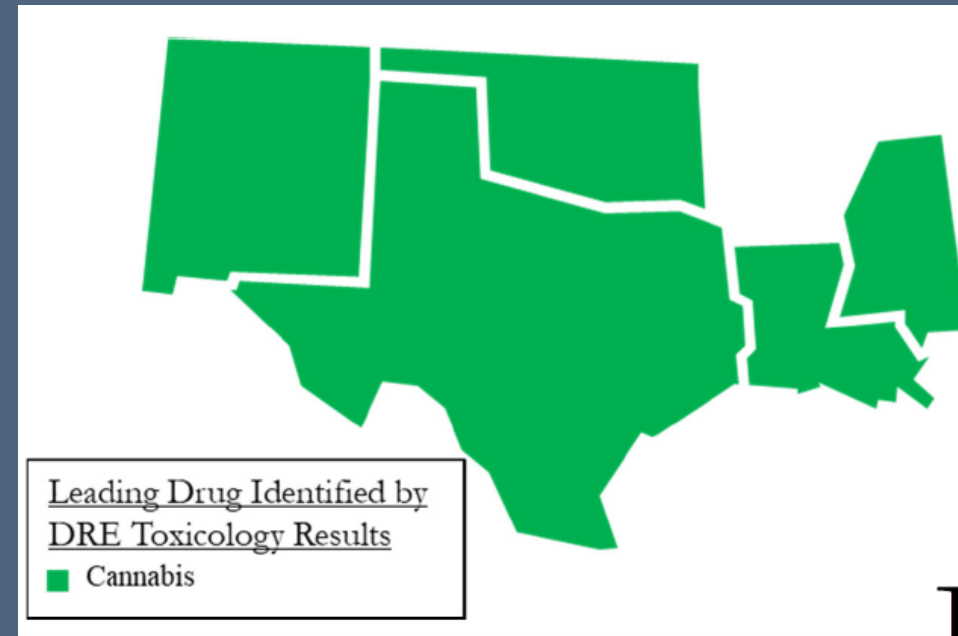


Regional Data

- Region - 5

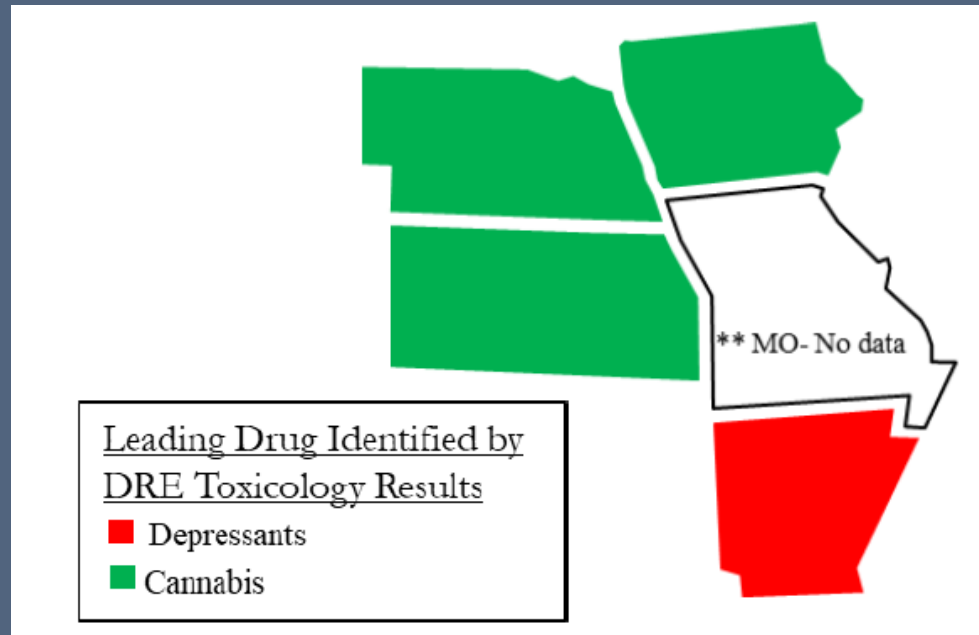


- Region - 6

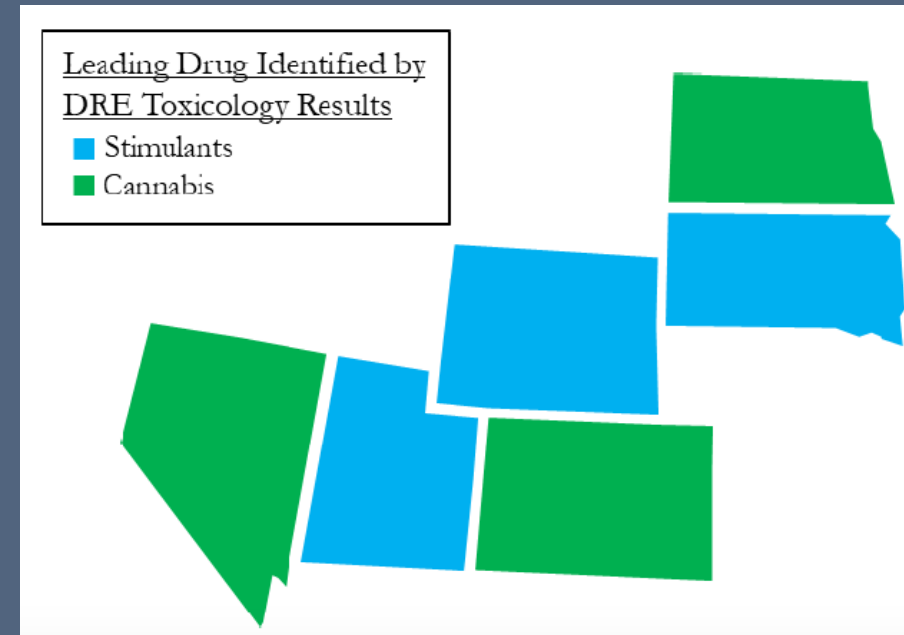


Regional Data

- Region - 7

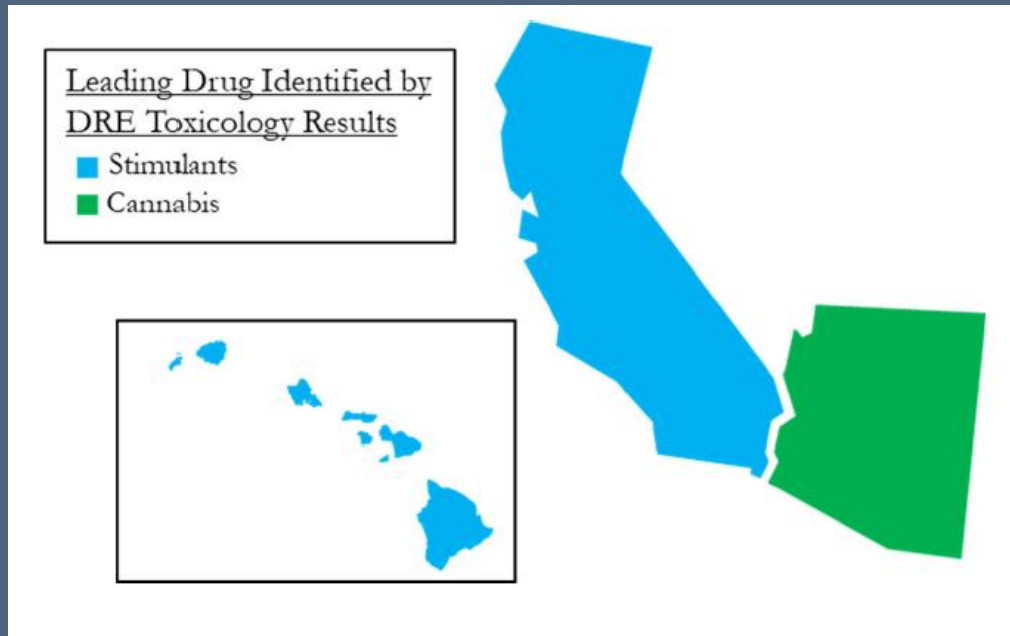


- Region - 8

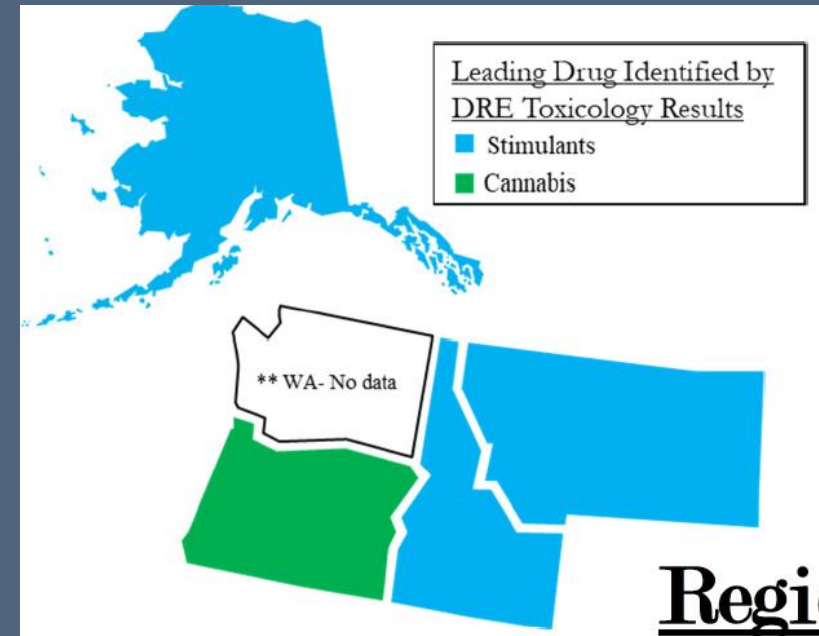


Regional Data

- Region - 9



- Region - 10





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TRAFFIC SAFETY FACTS

Research Note



DOT HS 813 135

Behavioral Safety Research

June 2021

Update to Special Reports on Traffic Safety During the COVID-19 Public Health Emergency: Fourth Quarter Data

Table 1

Drivers (Excluding Motorcyclists): Positive for Drug Category by Quarter

Drug Category	Q4 2019 (N=409)		Q1 2020 (N=536)		Q2 2020 (N=404)		Q3 2020 (N=603)		Q4 2020 (N=474)	
	n	%	n	%	n	%	n	%	n	%
Alcohol	90	22.0	137	25.6	102	25.2	166	27.5	127	26.8
Cannabinoids	78	19.1	118	22.0	133	32.9^{A,B}	155	25.7	130	27.4^A
Opioids	28	6.8	52	9.7	60	14.9^A	88	14.6^A	44	9.3
Stimulants	36	8.8	60	11.2	41	10.1	64	10.6	42	8.9
Sedatives	42	10.3	35	6.5	34	8.4	48	8.0	33	7.0
Antidepressants	11	2.7	12	2.2	1	0.2^A	4	0.7	4	0.8
Over-the-Counter	4	1.0	22	4.1	6	1.5	10	1.7	8	1.7
Other Drugs	7	1.7	9	1.7	3	0.7	17	2.8	10	2.1
At Least 1 Category	211	51.6	292	54.5	260	64.4^{A,B}	366	60.7^A	266	56.1
Multiple Categories	69	16.9	120	22.4	92	22.8	150	24.9^A	108	22.8

^A Significantly different ($p < .05$) compared to Q4 2019 period.

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**National Highway
Traffic Safety
Administration**

DOT HS 813 399



December 2022

Alcohol and Drug Prevalence Among Seriously or Fatally Injured Road Users

Table 7. Overall Drug Prevalence by Case Source

Drug Category	Trauma Center (n =6,382)			Medical Examiner (n =897)			Total (N =7,279)		
	n	%	95% CI	n	%	95% CI	N	%	95% CI
Alcohol	1,364	21.4	[20.4, 22.4]	321	35.8	[32.7, 39.0]	1,685	23.1	[22.2, 24.1]
Cannabinoids^	1,579	24.7	[23.7, 25.8]	251	28.0	[25.1, 31.0]	1,830	25.1	[24.2, 26.1]
Stimulants	675	10.6	[9.8, 11.3]	112	12.5	[10.4, 14.8]	787	10.8	[10.1, 11.5]
Sedatives	475	7.4	[6.8, 8.1]	73	8.1	[6.5, 10.1]	548	7.5	[6.9, 8.2]
Opioids	541	8.5	[7.8, 9.2]	137	15.3	[13.0, 17.7]	678	9.3	[8.7, 10.0]
Antidepressants	64	1.0	[0.8, 1.3]	10	1.1	[0.6, 2.0]	74	1.0	[0.8, 1.3]
Over-the-Counter	106	1.7	[1.4, 2.0]	39	4.3	[3.2, 5.8]	145	2.0	[1.7, 2.3]
Other Drugs	97	1.5	[1.2, 1.8]	36	4.0	[2.9, 5.4]	133	1.8	[1.5, 2.2]
Positive for Any Drug	3,456	54.2	[52.9, 55.4]	607	67.7	[64.6, 70.7]	4,063	55.8	[54.7, 57.0]
Drug Negative	2,926	45.8	[44.6, 47.1]	290	32.3	[29.3, 35.4]	3,216	44.2	[43.0, 45.3]
Positive for 2 or More Drug Categories	1,163	18.2	[17.3, 19.2]	286	31.9	[28.9, 35.0]	1,449	19.9	[19.0, 20.8]

^Active THC (Δ-9-THC or 11-OH-THC).

Notes: "Drug" refers to alcohol, medications, and all other drugs included on this study's toxicology panel. This table combines data from all road users (e.g., drivers, pedestrians, bicyclists) included in the study.

Table 7. Overall Drug Prevalence by Case Source

Drug Category	Trauma Center (<i>n</i> =6,382)			Medical Examiner (<i>n</i> =897)			Total (<i>N</i> =7,279)		
	<i>n</i>	%	95% CI	<i>n</i>	%	95% CI	<i>N</i>	%	95% CI
Alcohol	1,364	21.4	[20.4, 22.4]	321	35.8	[32.7, 39.0]	1,685	23.1	[22.2, 24.1]
Cannabinoids [^]	1,579	24.7	[23.7, 25.8]	251	28.0	[25.1, 31.0]	1,830	25.1	[24.2, 26.1]
Stimulants	675	10.6	[9.8, 11.3]	112	12.5	[10.4, 14.8]	787	10.8	[10.1, 11.5]
Sedatives	475	7.4	[6.8, 8.1]	73	8.1	[6.5, 10.1]	548	7.5	[6.9, 8.2]
Opioids	541	8.5	[7.8, 9.2]	137	15.3	[13.0, 17.7]	678	9.3	[8.7, 10.0]
Antidepressants	64	1.0	[0.8, 1.3]	10	1.1	[0.6, 2.0]	74	1.0	[0.8, 1.3]
Over-the-Counter	106	1.7	[1.4, 2.0]	39	4.3	[3.2, 5.8]	145	2.0	[1.7, 2.3]
Other Drugs	97	1.5	[1.2, 1.8]	36	4.0	[2.9, 5.4]	133	1.8	[1.5, 2.2]
Positive for Any Drug	3,456	54.2	[52.9, 55.4]	607	67.7	[64.6, 70.7]	4,063	55.8	[54.7, 57.0]
Drug Negative	2,926	45.8	[44.6, 47.1]	290	32.3	[29.3, 35.4]	3,216	44.2	[43.0, 45.3]
Positive for 2 or More Drug Categories	1,163	18.2	[17.3, 19.2]	286	31.9	[28.9, 35.0]	1,449	19.9	[19.0, 20.8]

[^]Active THC (Δ -9-THC or 11-OH-THC).

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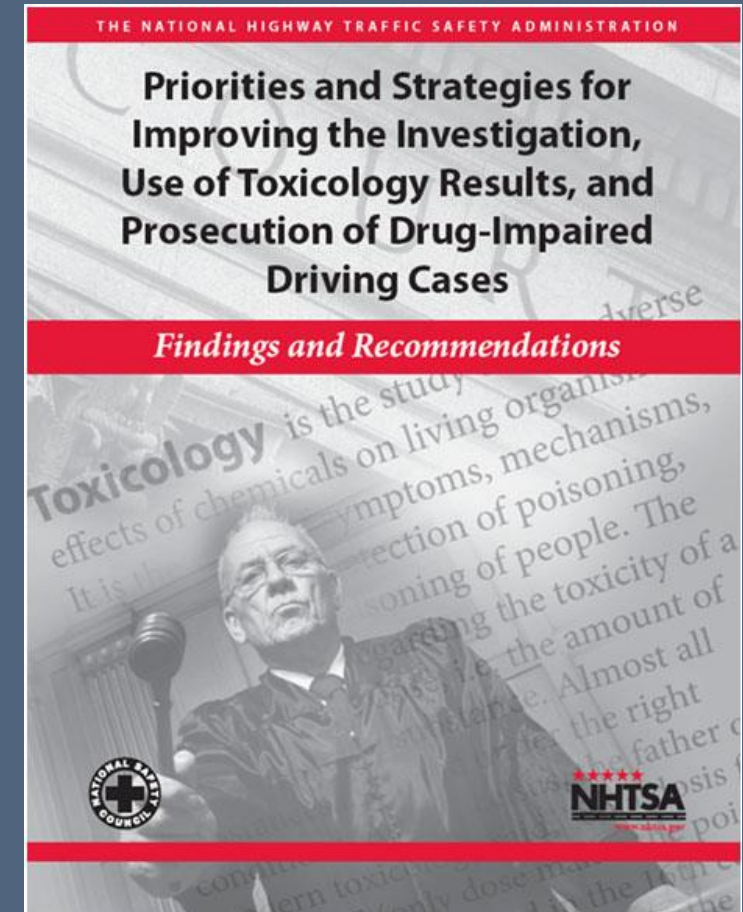
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A look at best Practices - 2004

- **Issue #1:** What are the major problems encountered in processing a drug-impaired driving case through the criminal justice system?
- **Issue #2:** Are current laws optimally structured to deter DUID?
- **Issue #3:** What resources currently exist to promote informed and effective DUID prosecution, and how can they be used more effectively?
- **Issue #4:** What should be the priority activities of stakeholders in advancing the enforcement and prosecution of drug-impaired driving?



National Safety Council Alcohol, Drugs, and Impairment Division

- Began looking at testing, scope, and cutoffs in laboratories across the US
- Issued scope and cutoff recommendations beginning in 2007



Alcohol, Drugs &
Impairment Division

- National Safety Council Alcohol Drugs & Impairment Division published Recommendations for Toxicological Investigation of Drug-Impaired Driving and Motor Vehicle Fatalities (Updated in 2021)
 - Identifies drugs in Tiers (1 and 2)
 - Tier 1 drugs also include minimum levels required for detection

Recommendations for Toxicological Investigation of Drug-Impaired Driving and Motor Vehicle Fatalities—2017 Update

Barry K. Logan^{1,2,*}, Amanda L. D'Orazio^{1,3}, Amanda L.A. Mohr¹, Jennifer F. Limoges⁴, Amy K. Miles⁵, Colleen E. Scarneo⁶, Sarah Kerrigan⁷, Laura J. Liddicoat¹, Karen S. Scott³, and Marilyn A. Huestis^{2,8}



- Tier I drugs were considered essential for inclusion in routine testing workflows. Tier II analytes had limited or regional prevalence, were encountered less frequently or required more advanced instrumentation

Recommendations for Toxicological Investigation of Drug-Impaired Driving and Motor Vehicle Fatalities—2017 Update

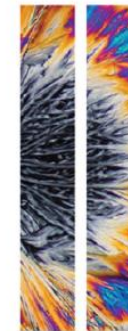
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IN THIS ISSUE:

Technical Note: Profiling from Probability: Combining Low and High Probability Isotopes as a Tool for Extending the Dynamic Range of an Assay Measuring Amphetamine and Methamphetamine in Urine
Stability of Synthetic Cannabinoids in Biological Specimens: Analysis Through Liquid Chromatography-Mass Spectrometry
Identification of Unique Metabolites of the Designer (Spice) Ketone Fentanyl
Hair Testing for Drugs of Abuse and New Psychoactive Substances in a High-Risk Population
Sensitive Determination of Cannabinoids in Whole Blood by LC-MS/MS After Rapid Removal of Phospholipids by Filtration
Oral Fluid Testing for Cocaine: Analytical Evaluation of Two Point-of-Collection Drug Screening Devices
QuEChERS-Based Method for Pesticides Analysis in Adipose Tissue Associated with Rat Ovaries
Internal Hydrolysis Indicator for Sample-Specific Monitoring of β -Glucuronidase Activity: Evaluation of an Automated Reader and Color Interpretation-Based Immunoassays for Multiplexed Drug-of-Abuse Testing in Urine
Developing a HPLC-ESI/MS and Automated Library Search Method for Screening Drugs and Basic Compounds in Postmortem Specimens
Validated LC-MS/MS Method for Simultaneous Analysis of 17 Barbiturates in Horse Plasma for Doping Control
Validated Method for the Screening and Quantification of Baclofen, Gabapentin and Pregabalin in Human Post-Mortem Whole Blood Using Pre-Extraction and Liquid Chromatography-Tandem Mass Spectrometry
Short Communication: Urinary Metabolites of New Metabolites in Pigs Shortly After Intake
Technical Note: Deconvolution Screening Using Commercial Software—A User's Manual
Article
Letter to the Editor: Inconsistent Toxicity Testing to Cough-It



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Tier I Drugs

Cannabinoids	CNS Depressants Cont.
Δ9-THC	Diazepam
Carboxy-THC	Nordiazepam
11-hydroxy-THC	Oxazepam
CNS Stimulants	Temazepam
Methamphetamine	Narcotic Analgesics
Amphetamine	Codeine
MDMA	6-MAM
MDA	Buprenorphine
Cocaine	Norbuprenorphine
Benzoylecgonine	Fentanyl
CNS Depressants	Hydrocodone
Carisoprodol	Hydromorphone
Meprobamate	Methadone
Alprazolam	Morphine
Alpha-hydroxyalprazolam	Oxycodone
Clonazepam	Oxymorphone
7-Aminoclonazepam	Tramadol
Lorazepam	O-Desmethyiltramadol

Tier II Drugs

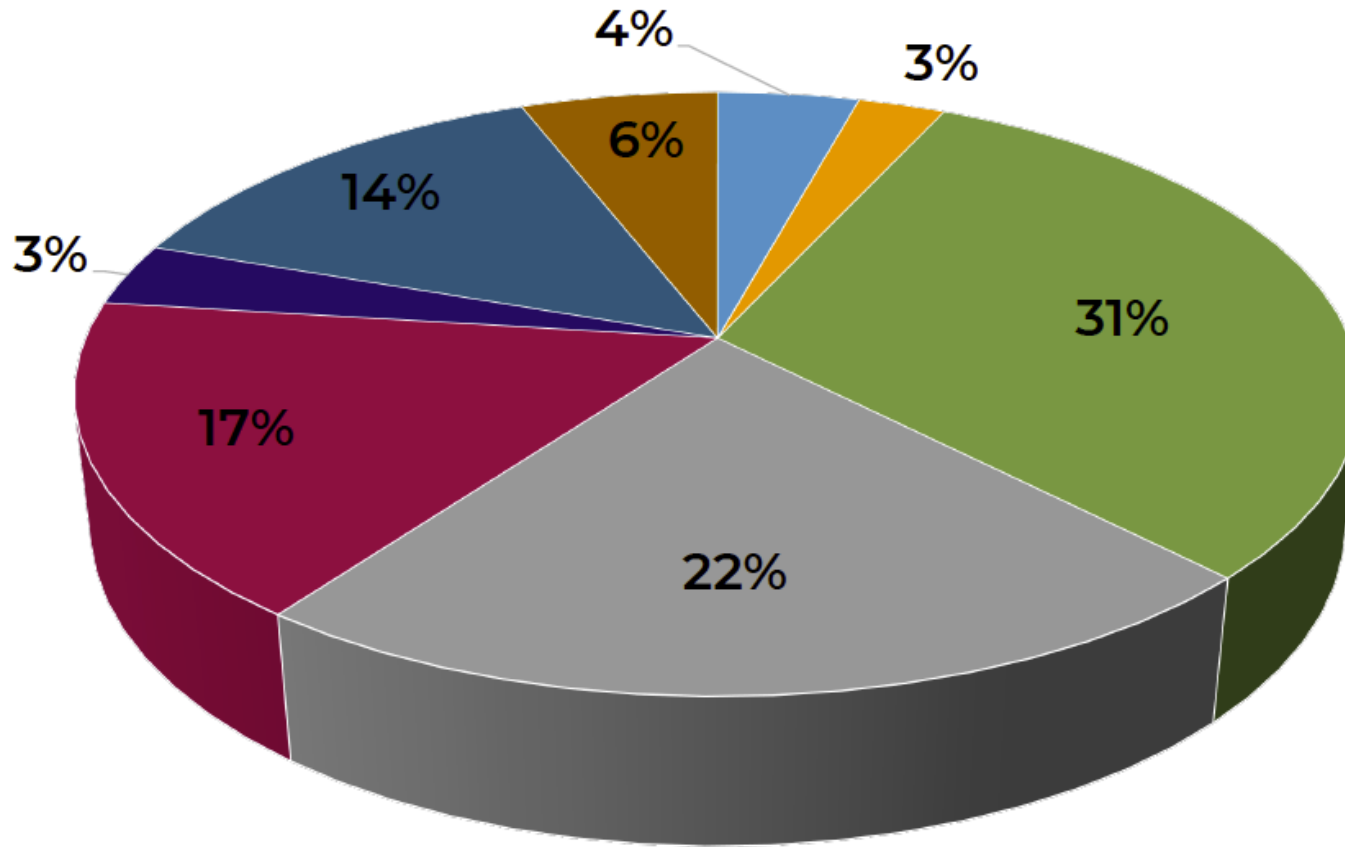
Cannabinoids	CNS Depressants Cont.
Synthetic cannabinoids	Pregabalin
CNS Stimulants	Secobarbital
Cathinones	Topiramate
Methylphenidate	Trazodone
Mitragynine	Tricyclic antidepressants
CNS Depressants	Valproic Acid
Atypical antipsychotics	Zopiclone
Barbiturates	Narcotic Analgesics
Carbamazepine	Fentanyl analogs
Chlordiazepoxide	Novel opioids
Chlorpheniramine	Tapentadol
Cyclobenzaprine	Dissociative Drugs*
Diphenhydramine	Dextromethorphan
Doxylamine	Ketamine
Gabapentin	PCP
GHB	Inhalants*
Hydroxyzine	Difluoroethane
Lamotrigine	Inhalant class
Mirtazapine	Hallucinogens*
Novel benzodiazepines	Hallucinogens
Phenytoin	

Summary Data

- A total of 2,514 cases were analyzed
 - Data in chart is not mutually exclusive

Category	Number of Cases	Percent of Total
None Detected	107	4%
Ethanol Positive	1004	40%
Drug Positive	1982	79%

Percent Positivity Data (n=2,514)



- None Detected
- Tier I Only
- Tier I and Ethanol
- Tier I and Tier II
- Ethanol Only
- Tier I, Tier II and Ethanol
- Tier II Only
- Tier II and Ethanol

Tier I Findings

Drug	No. of Positive Cases	Positivity (%)
THC	1,227	48.8
Ethanol	1,004	40.0
Methamphetamine	391	15.5
Fentanyl	348	13.8
Amphetamine	347	13.8
Benzoyllecgonine	174	6.9
Alprazolam	87	3.5
Cocaine	86	3.4
Methadone	68	2.7
7-Amino Clonazepam	62	2.5
Buprenorphine	52	2.0
Clonazepam	45	1.7
Oxycodone	42	1.6
Tramadol	28	1.1

Tier II Findings

Drug	No. of Positive Cases	Positivity (%)
Diphenhydramine	187	7.4
Gabapentin*	104	5.5
Hydroxyzine	90	3.5
8-Aminoclonazepam	80	3.1
Fluorofentanyl	71	2.8
Trazodone	69	2.7
Cyclobenzaprine	54	2.1
Doxylamine	53	2.1
Lamotrigine	50	1.9
Etizolam	47	1.8
Eutylone	42	1.6
Mitragynine	34	1.4

* n=1,907 for gabapentin

■ n=2,514

Tier II: NPS Findings

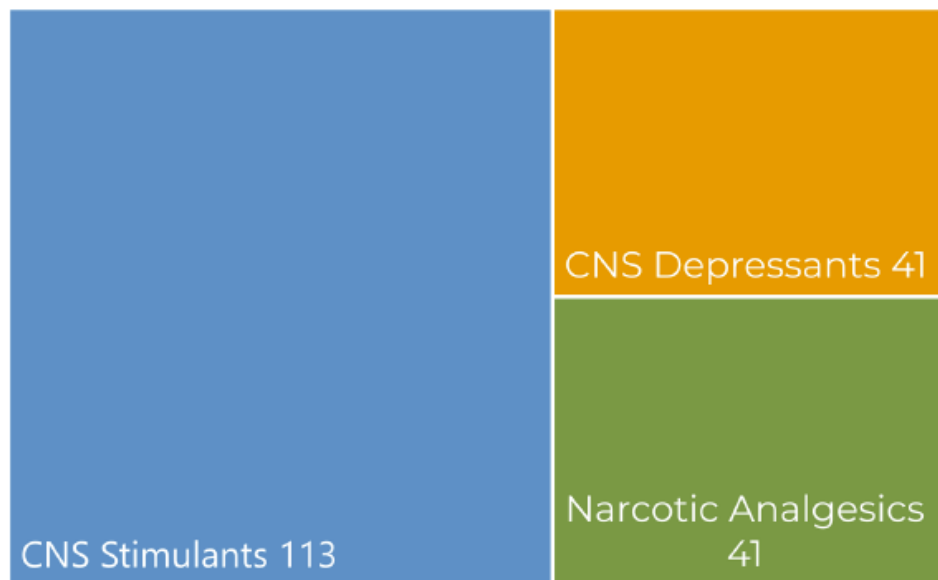
DRE Category	No. of Identifications	Compound (Number of positives)
Synthetic Cannabinoids	3	MDMB-4en-PINACA (2), ADB-BINACA (2) 5F-ADB 3,3-Dimethylbutanoic Acid (1)
Cathinones	4	Eutylone (42), Butylone (1), N-ethylpentylone (1), Dibutylone (1)
Novel Benzodiazepines	7	8-Aminoclonazepam (80), Etizolam (47), Clonazepam (38), Flubromazepam (12), Flualprazolam (10), Adinazolam (1), Bromazolam (6)
Fentanyl Analogs	3	Fluorofentanyl (71), Methoxyacetylfentanyl (9), Chlorofentanyl (1)
Novel Opioids	4	Isotonitazene (3), Metonitazene (3), N-Pyrrolidino Etonitazene(2), Protonitazene (1)
NPS Hallucinogens	1	4-HO-DiPT (3)

Ethanol and THC in Combination with Tier I Drugs

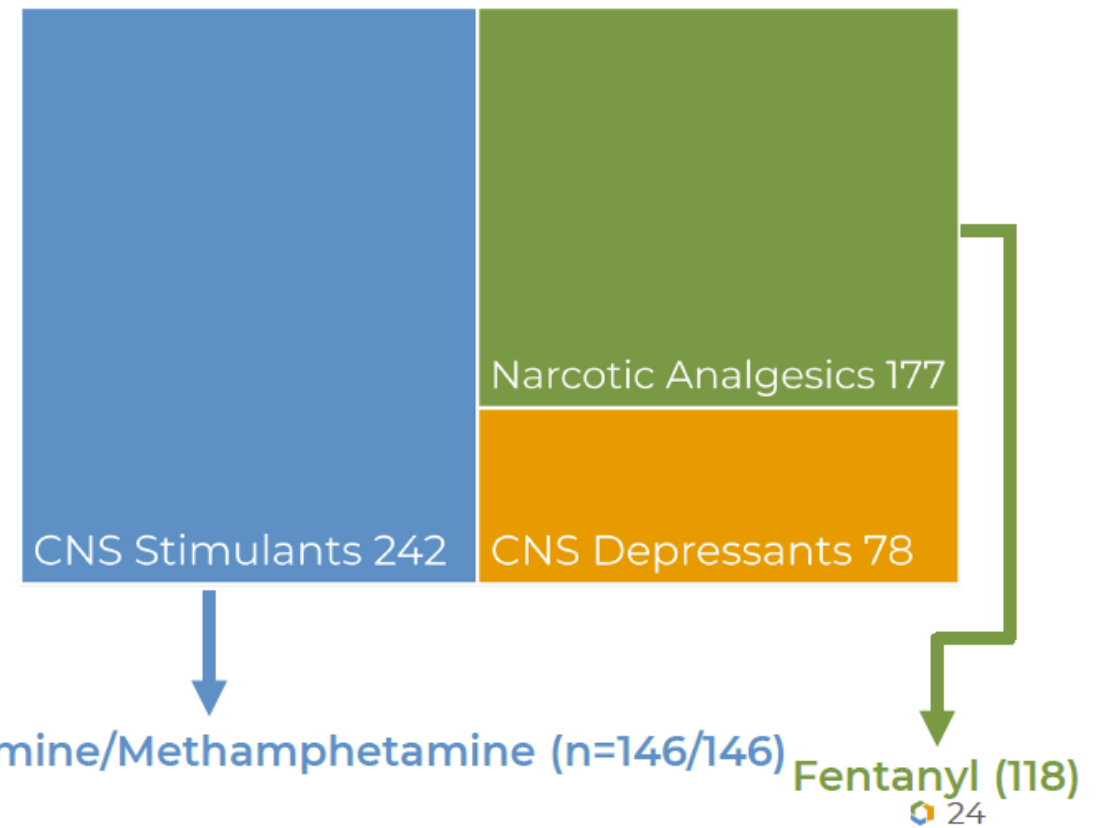
Ethanol (n=1,004)

THC (n=1,227)

Ethanol and Cannabis 359



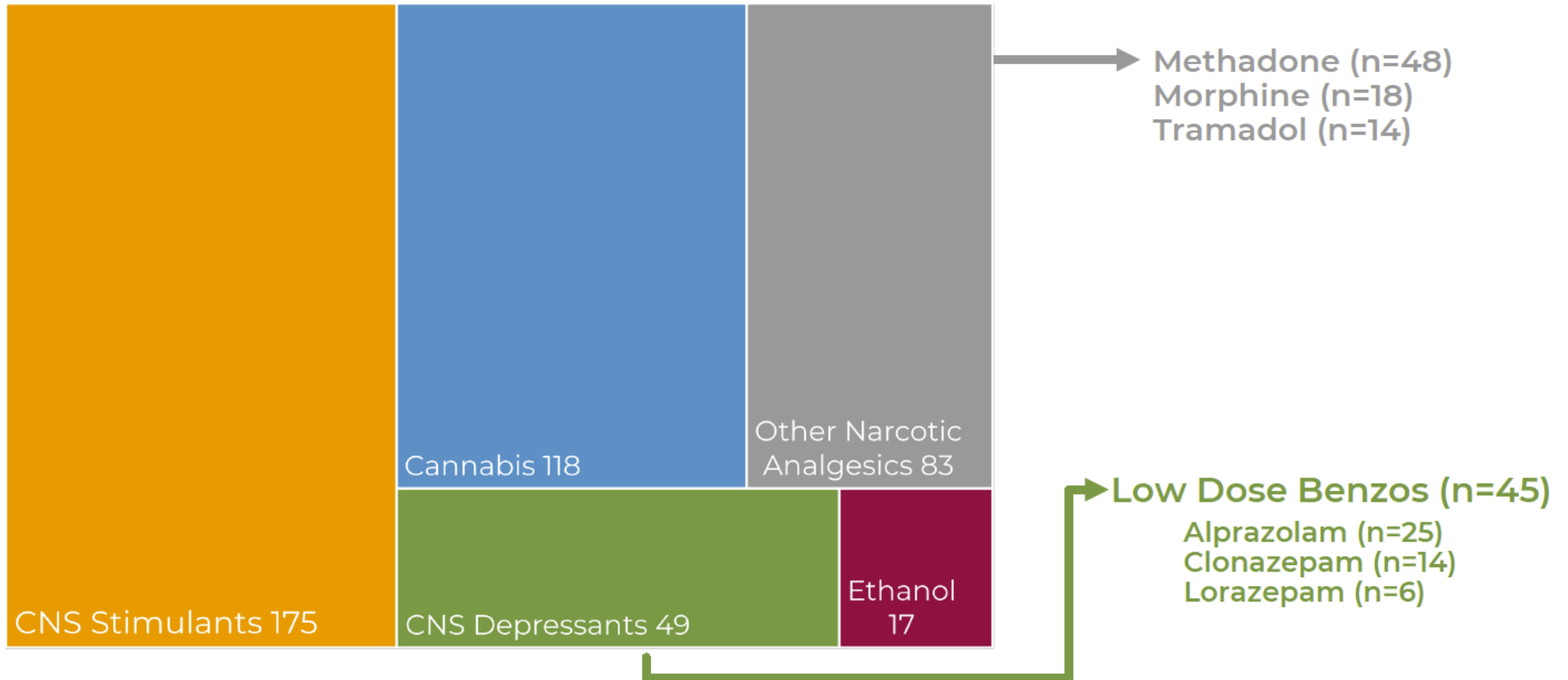
Benzoylecgonine (57)



Amphetamine/Methamphetamine (n=146/146)

Fentanyl (118)

Fentanyl Combinations with Tier I Drugs



Drug Positivity at Various BAC Thresholds

- Evaluated for 2,514 cases

Stop Limit Thresholds

	<0.08 g/100 mL	≥0.08 g/100mL	≥0.10 g/100 mL	≥0.15 g/100 mL
Tier I Only Positivity	33.0% (n=829)	11.5% (n=288)	10.6% (n=266)	6.4% (n=152)
Tier II Only Positivity	2.9% (n=72)	3.1% (n=79)	2.8% (n=71)	2.1% (n=32)
Tier I and Tier II Positivity	23.9% (n=602)	4.4% (n=111)	3.9% (n=97)	2.7% (n=41)
Positivity for any Tier I, Tier II or Combo	60% (n=1,503)	19% (n=478)	17.3% (n=434)	11.1% (n=280)

Tier I Drug Positive Results at BAC ≥ 0.10 g/100 mL

- 813 cases with a BAC at or greater than 0.10 g/100 mL
- Data in chart represents cases **only** positive for a Tier I drug

Drug	Number of Positive Cases	Percent of Cases with Drug
THC	209	25.7%
Amphetamine	20	2.4%
BZE	20	2.4%
Methamphetamine	11	1.3%
Cocaine	11	1.3%
Fentanyl	10	1.2%
Alprazolam	6	0.7%
7-Aminoclonazepam	4	0.5%

Tier II Drug Positive Results at BAC ≥ 0.10 g/100 mL

- 813 cases with a BAC at or greater than 0.10 g/100 mL
- Data in chart represents cases **only** positive for a Tier II drug

Drug	Number of Positive Cases	Percent of Cases with Drug
Diphenhydramine	21	2.5%
Doxylamine	8	1.0%
Hydroxyzine	7	0.8%
Cyclobenzaprine	4	0.5%
Mitragynine	3	0.4%

- Other NPS detected etizolam (n=1) and flubromazolam (n=1)

4-Year Assessment of Concentration Data

- Number of meth positives nearly doubled from 1,541 to 2,998

- Number of fentanyl positive cases climbed to 2,122 in 2020 from 330 in 2017

Drug	Year	Median (ng/mL)	Max (ng/mL)
THC	2017	4.0	140
	2018	4.4	100
	2019	4.4	230
	2020	4.5	160
Methamphetamine	2017	180	5,500
	2018	230	8,800
	2019	240	8,200
	2020	240	13,000
Fentanyl	2017	4.2	56
	2018	3.4	83
	2019	4.6	140
	2020	5.4	310
Amphetamine	2017	36	1,400
	2018	39	4,100
	2019	39	5,400
	2020	37	2,700

4-Year Assessment of Concentration Data

- Number of alprazolam cases steadily declined from 1,951 in 2017 to 46 in 2020

Drug	Year	Median (ng/mL)	Max (ng/mL)
Cocaine	2017	65	7,000
	2018	66	2,300
	2019	67	7,000
	2020	56	1,400
Alprazolam	2017	44	1,300
	2018	40	1,200
	2019	34	390
	2020	32	1,400
Methadone	2017	190	1,200
	2018	215	1,000
	2019	230	1,100
	2020	210	1,200
7-aminoclonazepam	2017	24	340
	2018	25	290
	2019	35	380
	2020	30	180

Recent Reviews by the RTL Program

- Information from states across Regions 5,7,9
 - Data is consistent with the findings of CFSRE
 - Tier I and II drugs are most prevalent
 - NPS drugs are detected but at a much lower rate

Next Steps

- CFSRE in coordination with the RTLs will work to incorporate more laboratories across the Nation to determine the drug prevalence in all DUID cases.
- NHTSA is preparing to launch another Roadside Survey to update the survey done almost 10 years ago
- Consistent reporting into the FARS database will improve data interpretation

Acknowledgments

- Mandi Mohr – CFSRE
- RTLs - Amy Miles, Sabra Jones, Kristen Burke
- NHTSA



Thank you for your Time



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