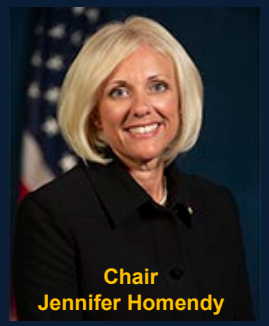
NTSB | National Transportation Safety Board

Working Together to End Impaired Driving: NTSB's Investigations, Research, and Recommendations

Ryan C. Smith, Ph.D.
Office of Research and Engineering
February 21, 2024
Texas Impaired Driving Forum

Our Mission

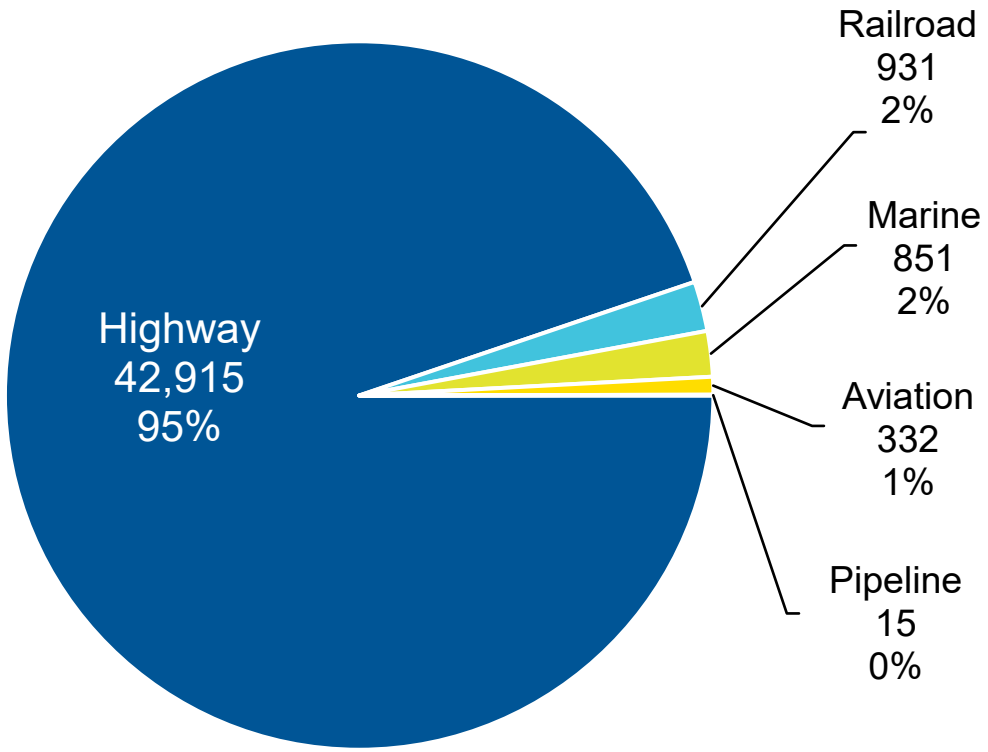
The NTSB is an independent Federal agency charged by Congress with **investigating every civil aviation accident in the United States** and significant accidents in the other modes of transportation – highway, marine, railroad and pipeline – and **issuing safety recommendations** aimed at preventing future accidents.

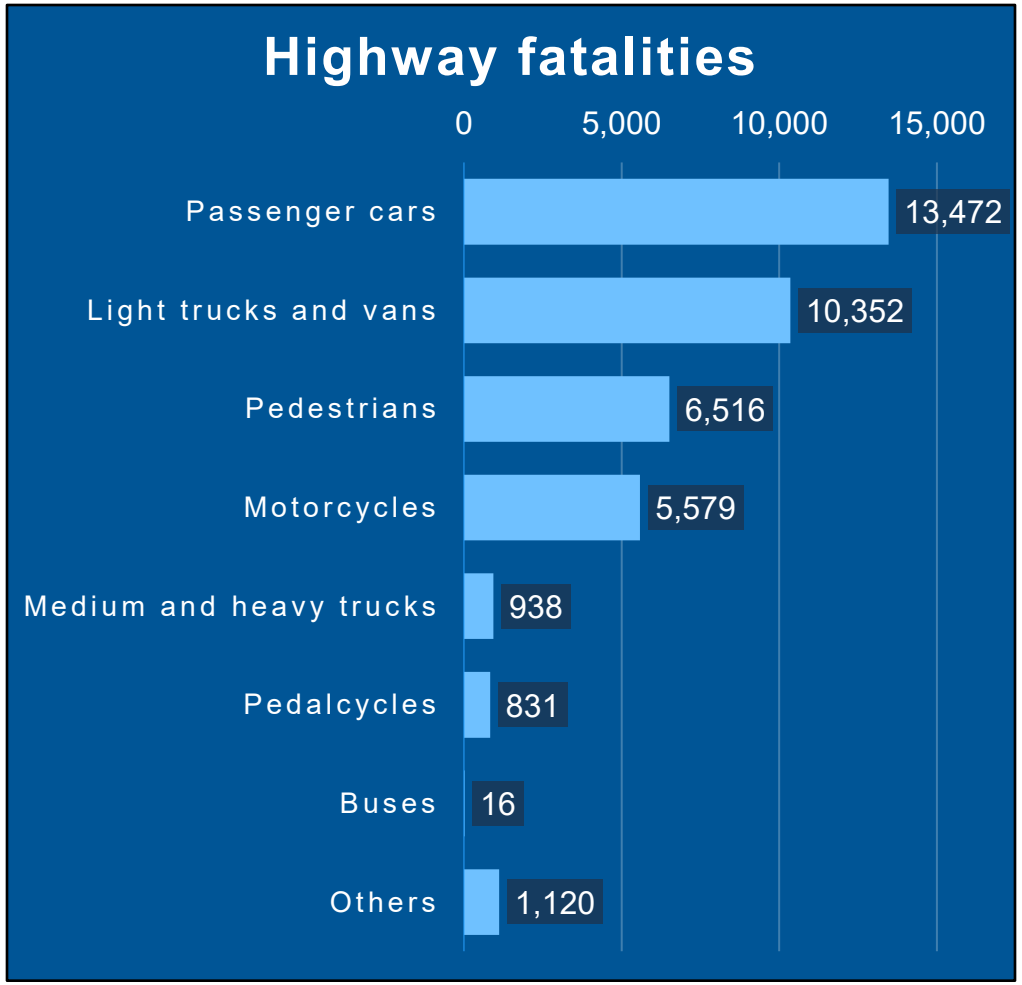


Legislative mandates

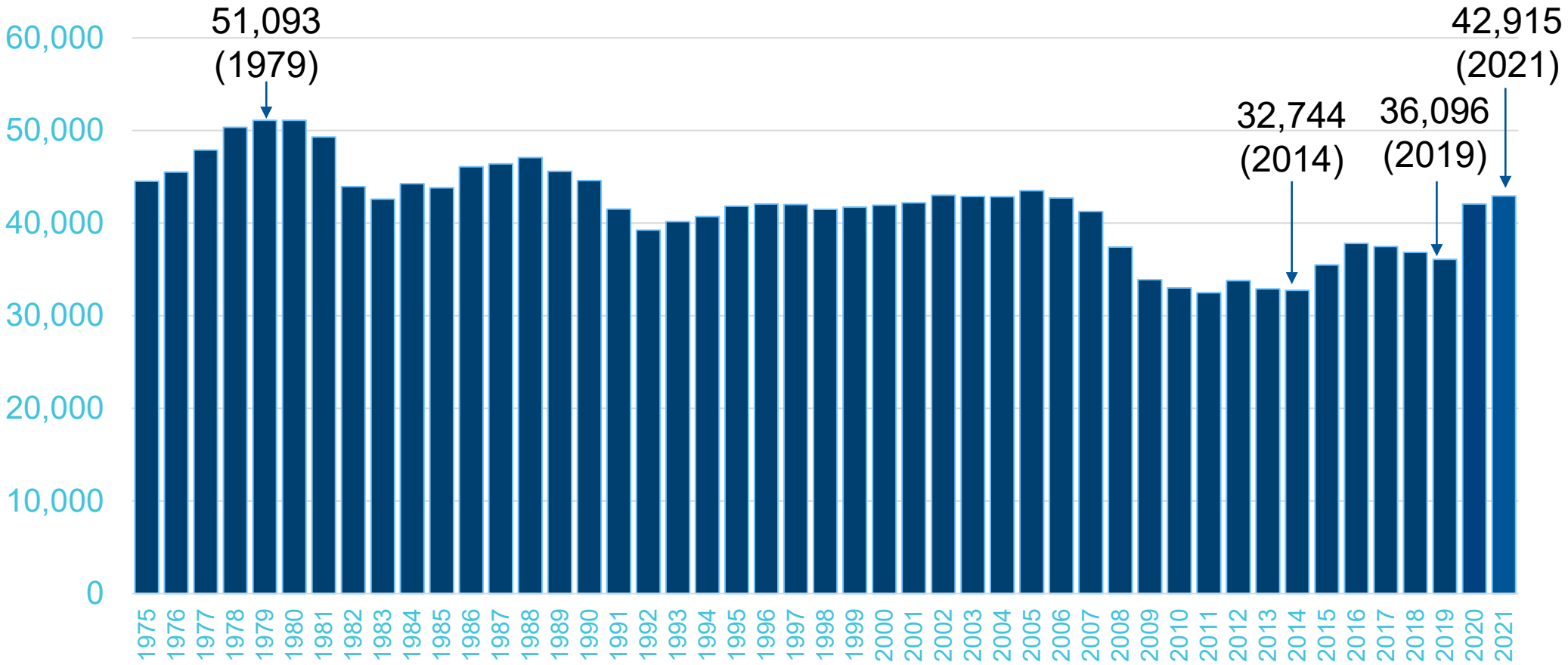
- Maintaining our congressionally mandated independence and objectivity
- **Conducting objective accident investigations and safety studies**
- Performing fair and objective pilot and mariner certification appeals
- **Advocating for safety recommendations**
- Assisting victims of transportation accidents and their families

US Transportation Fatalities in 2020 – by Mode

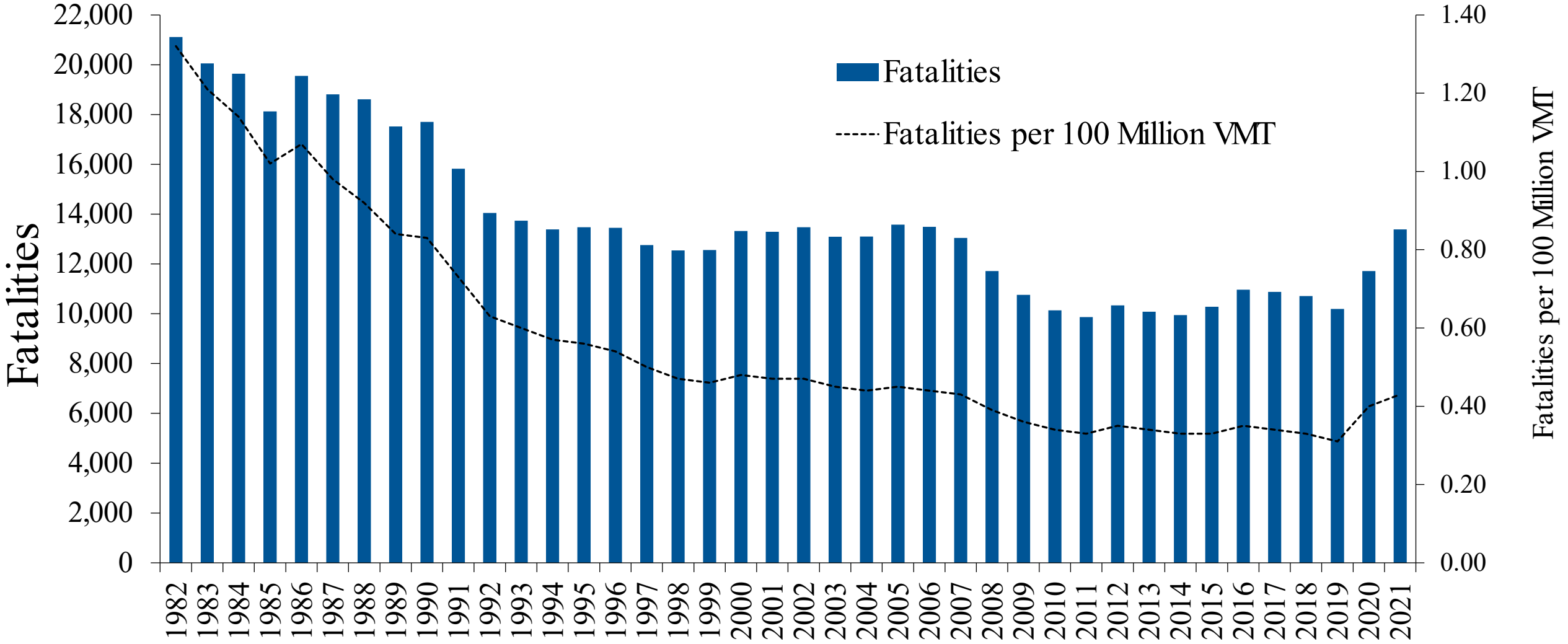




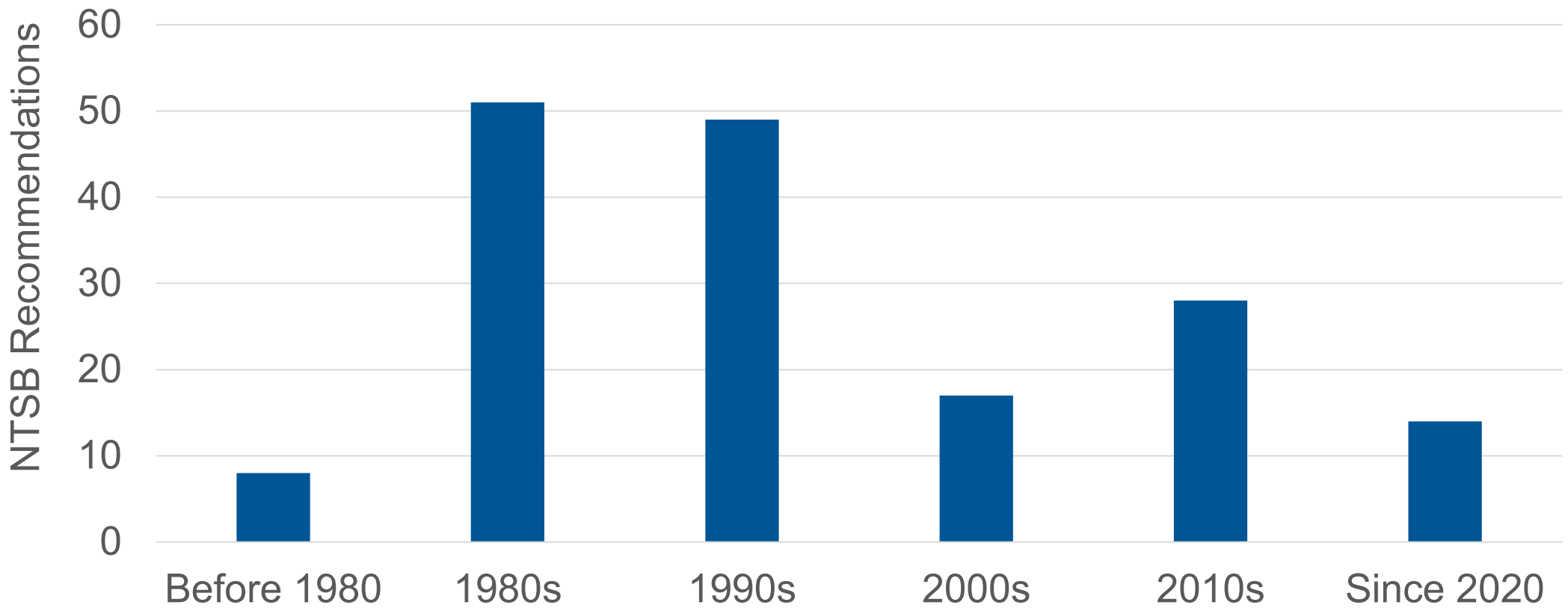
Motor vehicle crash deaths (1975-2021)



Alcohol-Impaired Driving Fatalities

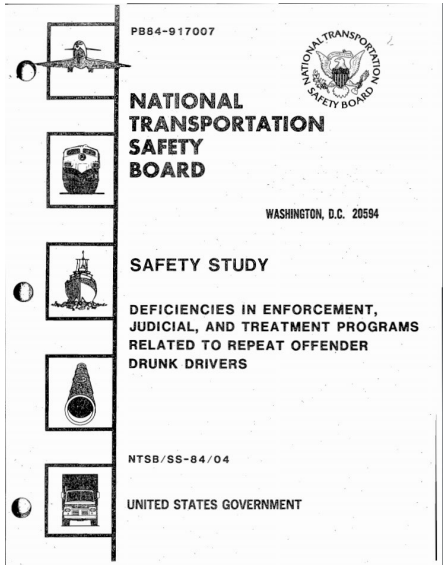


NTSB Impairment Recommendations by Decade



Early NTSB Impaired Driving Safety Recommendations

- 21 Minimum Drinking Age Law (H-82-18)
- Sobriety Checkpoints (H-84-11)
- Standardized Field Sobriety Tests and Preliminary Breath Testing Devices (H-84-77)
- Mandatory BAC Reporting of Fatal Crashes (H-85-50)
- State DUI Task Force (H-89-2)
- Zero Tolerance Under 21 Law (H-93-05)
- Ignition Interlocks for High BAC First-Offenders and Repeat Offenders (H-00-26)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NATIONAL TRANSPORTATION SAFETY BOARD

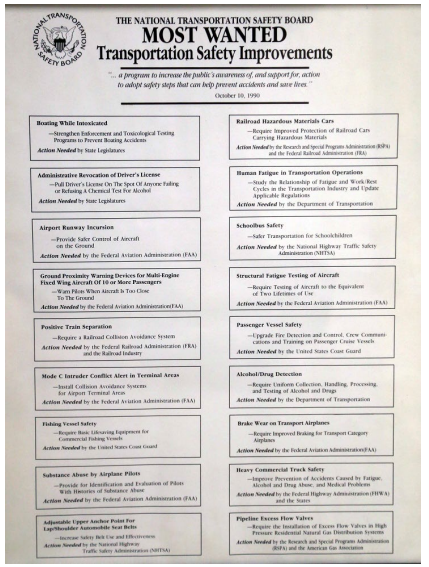
WASHINGTON, D.C. 20594

SAFETY STUDY

DEFICIENCIES IN ENFORCEMENT, JUDICIAL, AND TREATMENT PROGRAMS RELATED TO REPEAT OFFENDER DRUNK DRIVERS

NTSB/SS-84/04

UNITED STATES GOVERNMENT

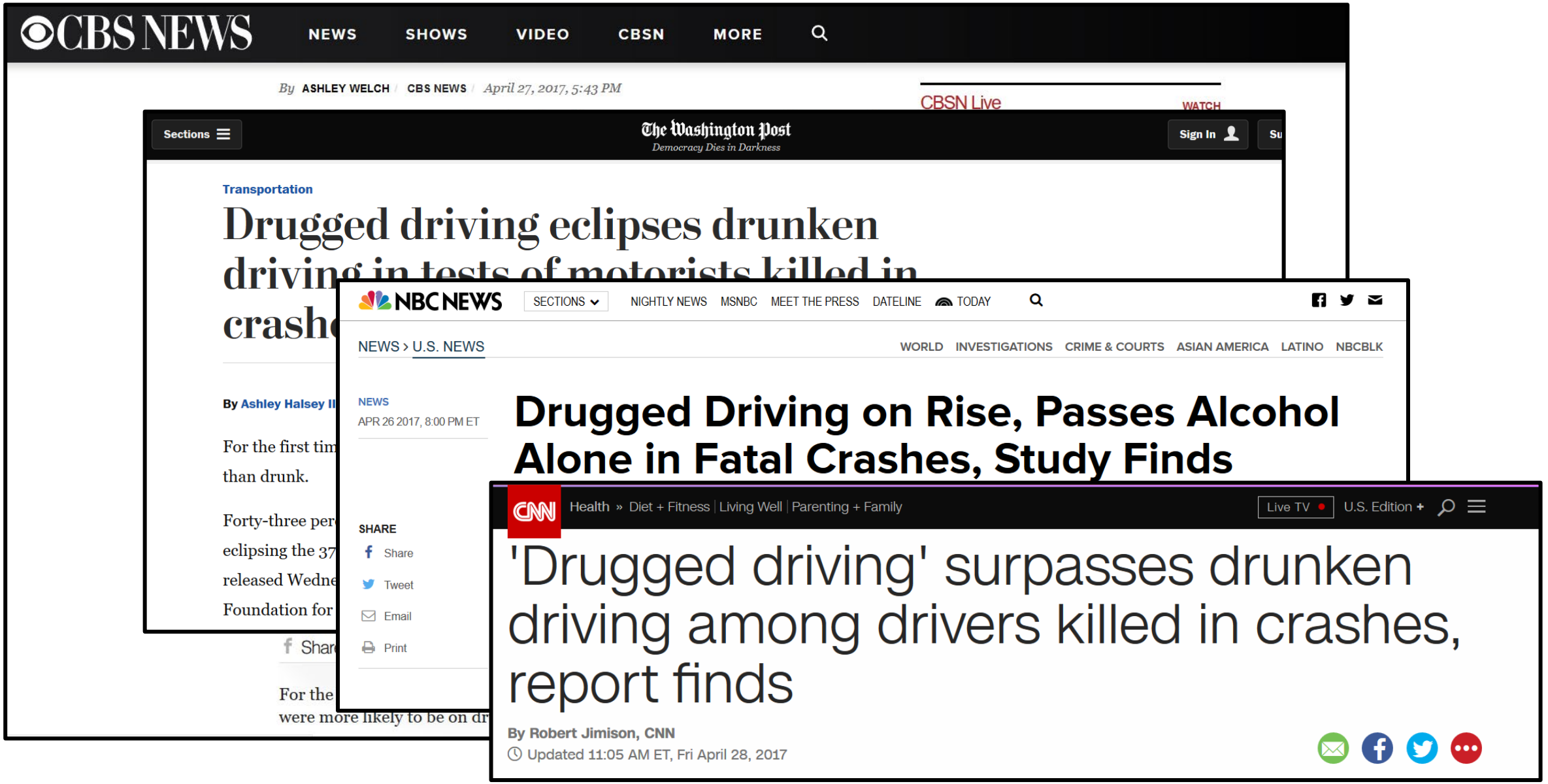

THE NATIONAL TRANSPORTATION SAFETY BOARD

MOST WANTED

Transportation Safety Improvements

NTSB

History of Impaired Driving and NTSB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Transportation
Drugged driving eclipses drunken driving in tests of motorists killed in crashe
By Ashley Halsey II
For the first tim
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APR 26 2017, 8:00 PM ET
Drugged Driving on Rise, Passes Alcohol Alone in Fatal Crashes, Study Finds
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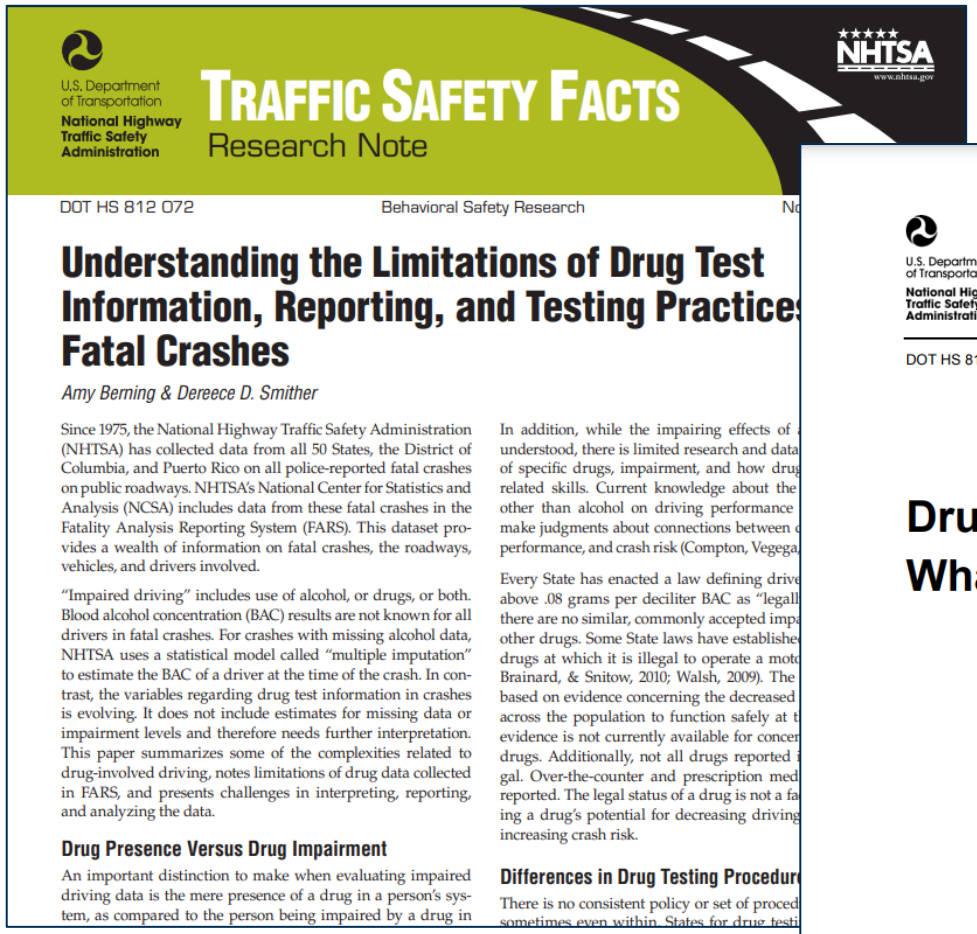
Live TV
U.S. Edition +
'Drugged driving' surpasses drunken driving among drivers killed in crashes, report finds
By Robert Jimison, CNN
Updated 11:05 AM ET, Fri April 28, 2017

NHTSA Cautions Against Drug Data in FARS



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

TRAFFIC SAFETY FACTS
Research Note

NHTSA
www.nhtsa.gov

DOT HS 812 072 Behavioral Safety Research No

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

Amy Berning & Dereece D. Smither

Since 1975, the National Highway Traffic Safety Administration (NHTSA) has collected data from all 50 States, the District of Columbia, and Puerto Rico on all police-reported fatal crashes on public roadways. NHTSA's National Center for Statistics and Analysis (NCSA) includes data from these fatal crashes in the Fatality Analysis Reporting System (FARS). This dataset provides a wealth of information on fatal crashes, the roadways, vehicles, and drivers involved.

"Impaired driving" includes use of alcohol, or drugs, or both. Blood alcohol concentration (BAC) results are not known for all drivers in fatal crashes. For crashes with missing alcohol data, NHTSA uses a statistical model called "multiple imputation" to estimate the BAC of a driver at the time of the crash. In contrast, the variables regarding drug test information in crashes is evolving. It does not include estimates for missing data or impairment levels and therefore needs further interpretation. This paper summarizes some of the complexities related to drug-involved driving, notes limitations of drug data collected in FARS, and presents challenges in interpreting, reporting, and analyzing the data.

Drug Presence Versus Drug Impairment

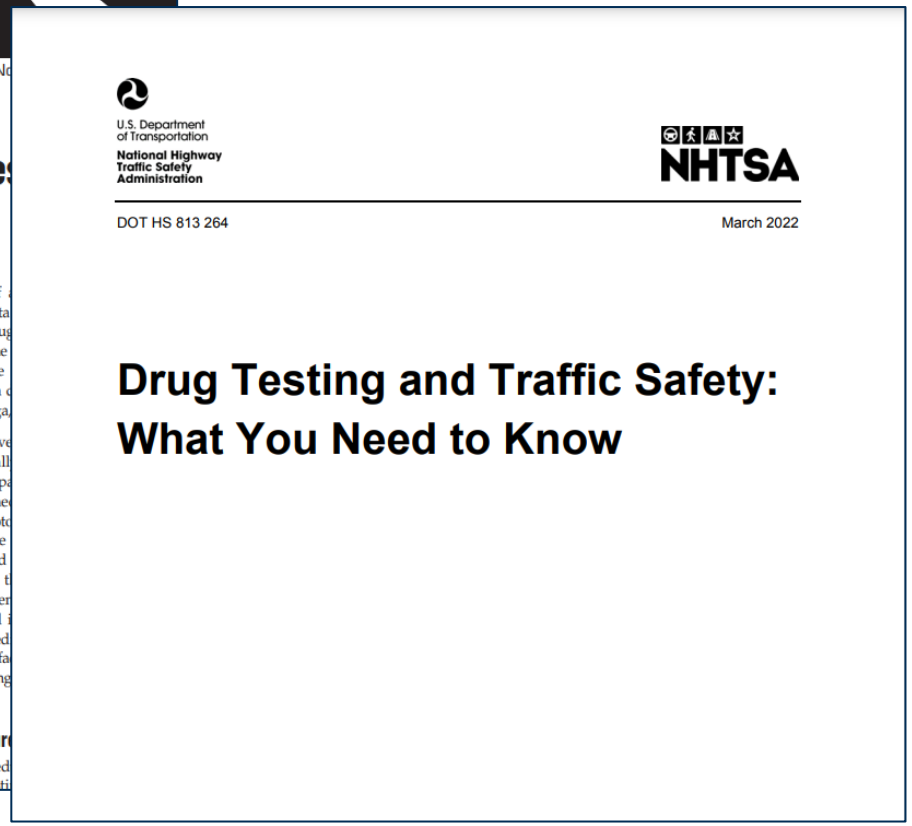
An important distinction to make when evaluating impaired driving data is the mere presence of a drug in a person's system, as compared to the person being impaired by a drug in

In addition, while the impairing effects of
understood, there is limited research and data
of specific drugs, impairment, and how drug
related skills. Current knowledge about the
other than alcohol on driving performance
make judgments about connections between
performance, and crash risk (Compton, Vegega,

Every State has enacted a law defining drive
above .08 grams per deciliter BAC as "legall
there are no similar, commonly accepted impa
other drugs. Some State laws have establishe
drugs at which it is illegal to operate a moto
Brainard, & Snitow, 2010; Walsh, 2009). The
based on evidence concerning the decreased
across the population to function safely at t
evidence is not currently available for concer
drugs. Additionally, not all drugs reported
gal. Over-the-counter and prescription med
reported. The legal status of a drug is not a fa
ing a drug's potential for decreasing driving
increasing crash risk.

Differences in Drug Testing Procedur

There is no consistent policy or set of proced
sometimes even within States for drug testi



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

NHTSA

DOT HS 813 264 March 2022

Drug Testing and Traffic Safety: What You Need to Know

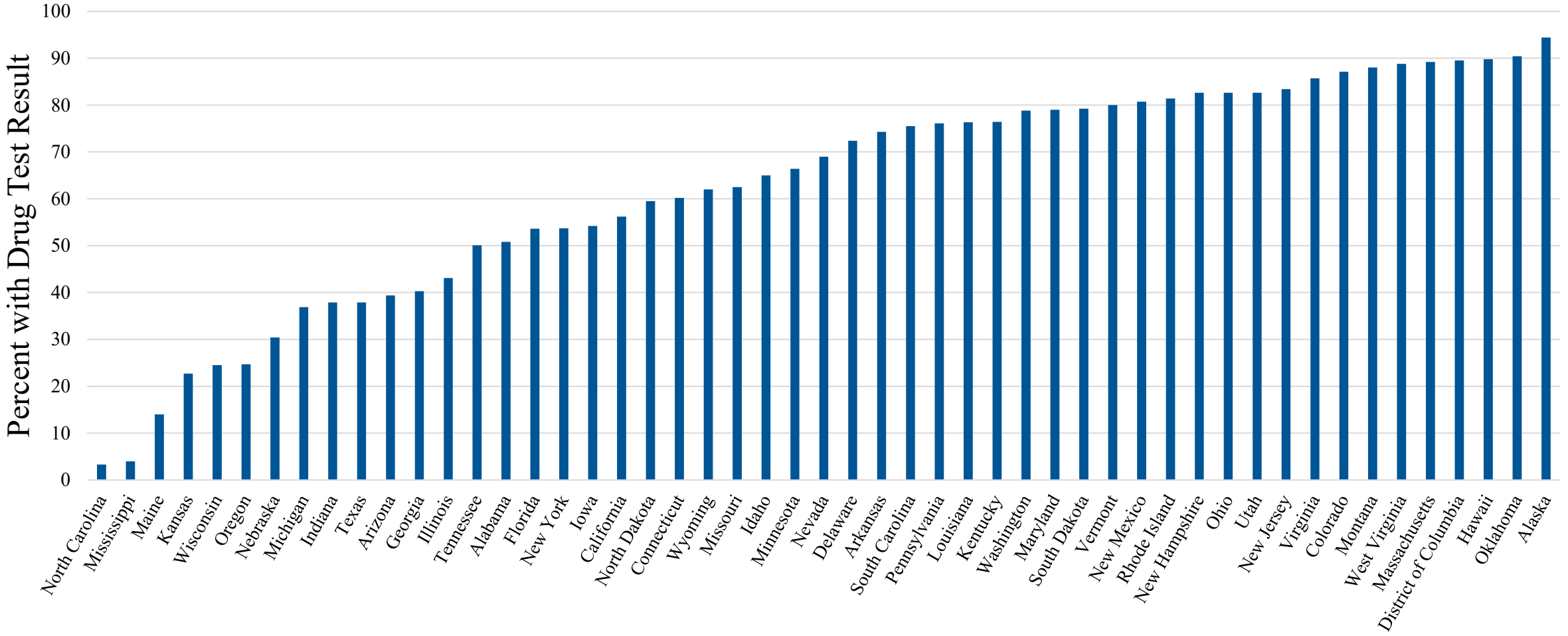
Challenges to Understanding Drug Prevalence

Data Loss

Inconsistencies

Traffic Event	Sample Collection	Toxicology Testing	Reporting & Databases	Analysis
Who is tested? Under what circumstances?	Delay in sample collection? Which matrix is collected?	What is the drug panel? What are the cutoffs? What equipment and procedures? Screening and confirmation? Quantification?	All drug results? Quantification? Equipment and procedure?	Drug inclusion? Drug categorization?

Percentage of Fatally Injured Drivers with a Drug Test (2020)



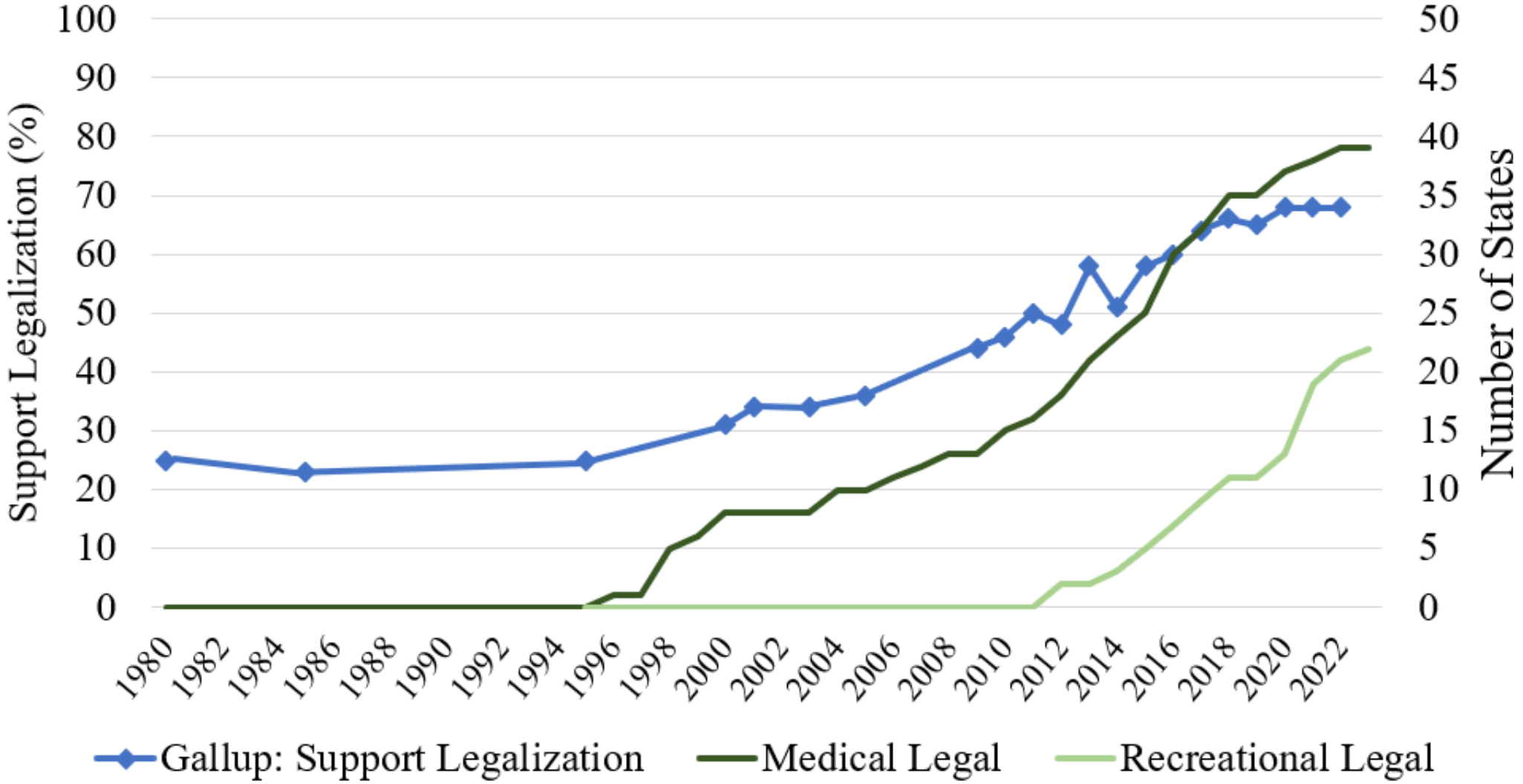
The magnitude of problems posed by excessive drinking among college students should stimulate both improved measurement of these problems and efforts to reduce them (NIAAA, 2007, p. 3).

-Ralph Hingson, Sc.D., M.P.H.

Why Should We Care About Drug Prevalence?

- Rapidly shifting legal and drug landscape
  - Cannabis (and other drug) legalization/decriminalization
  - Opioid epidemic
  - Prescription and OTC drug usage

Cannabis Legalization 1980 - 2023



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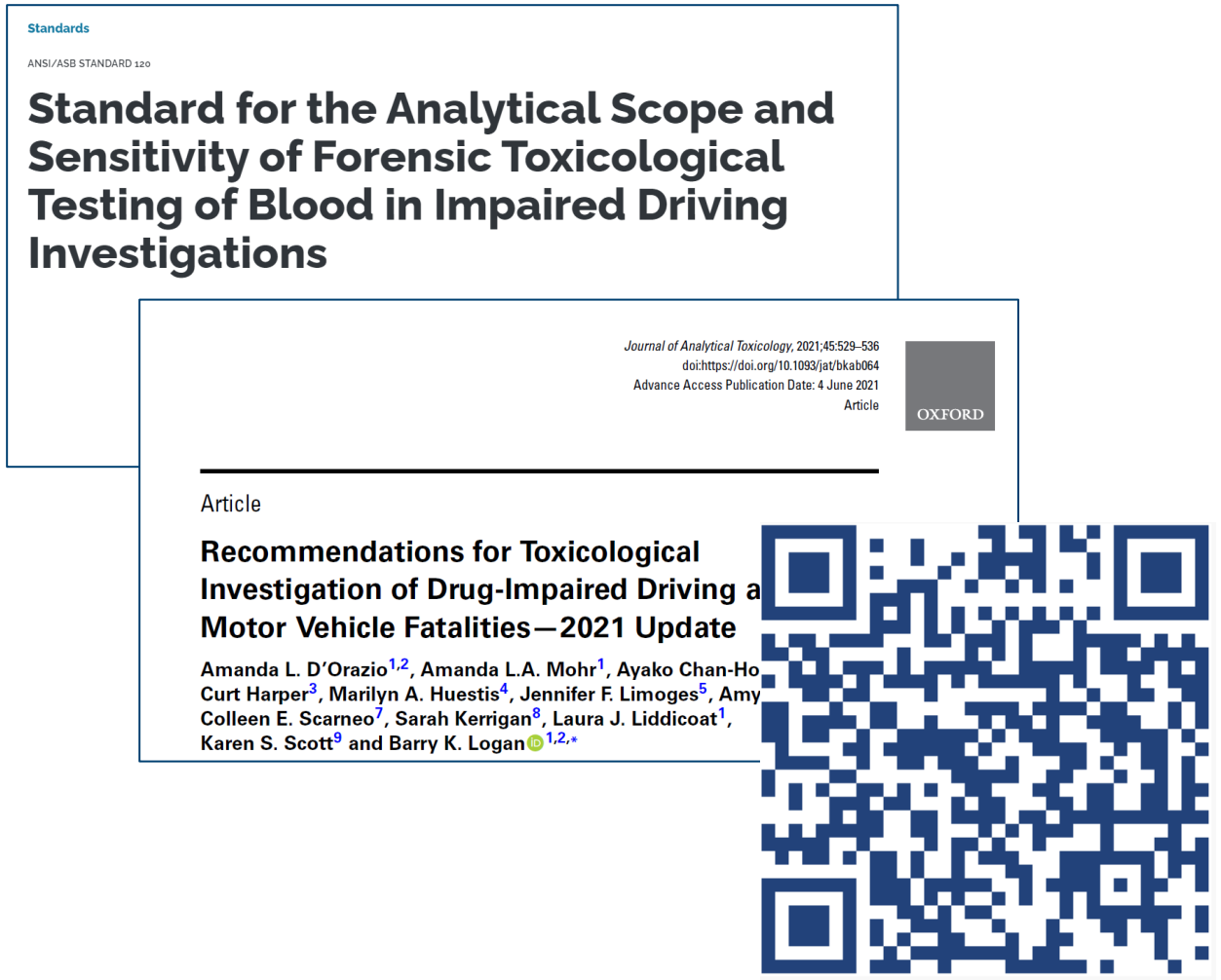
- Countermeasure effectiveness
- Evidence-based deployment of resources
- Effective treatment for offenders

Development of Standards

- There are well developed standards for the toxicological investigation of drugged driving cases:
  - ANSI/ASB Standard 120
  - NSC ADID Recommendations
- There is no similar standard for the analysis of toxicology data



"Polydrug" Driving Examples

Driver #1

- Acetaminophen
- Loratadine

Unlikely to be Impairing

Driver #2

- Propofol
- Ethanol

Medical Administration

Driver #3

- Clonazepam
- 7-Aminoclonazepam
- Delta-9-THC
- Carboxy-THC
- Hydroxy-THC

Metabolites of a Parent Drug

Development of a Standardized Method

- Reviewed nearly 400 common analytes:
  - Likelihood of impairment
  - Likelihood of post-crash administration
- Documented metabolite pathways
- Developed a novel categorization scheme for analysis
- Collaboration with NTSB Medical Officers and Toxicology SMEs

NTSB Analysis Method

- Only included potentially impairing drugs
  - Removed drugs not likely to be impairing
  - Removed drugs likely administered as post-crash care
- "Coded up" metabolites to the highest parent drug

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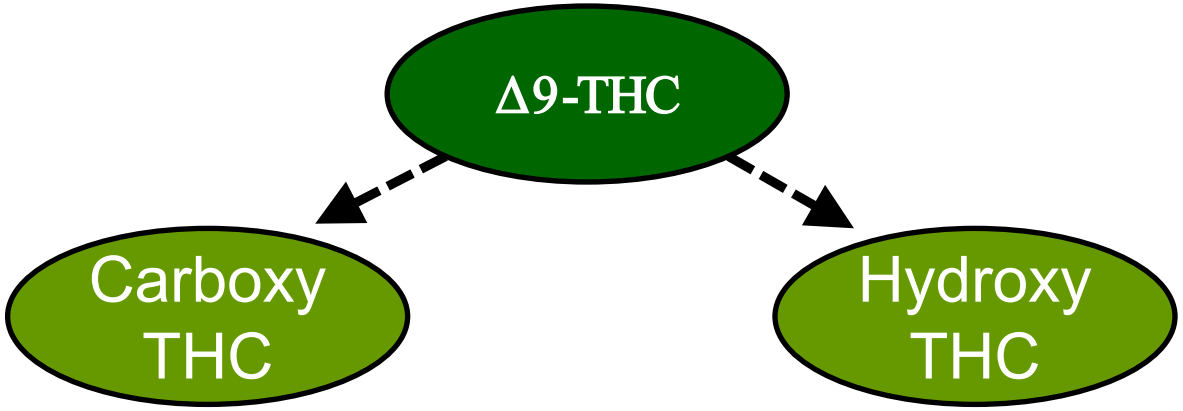
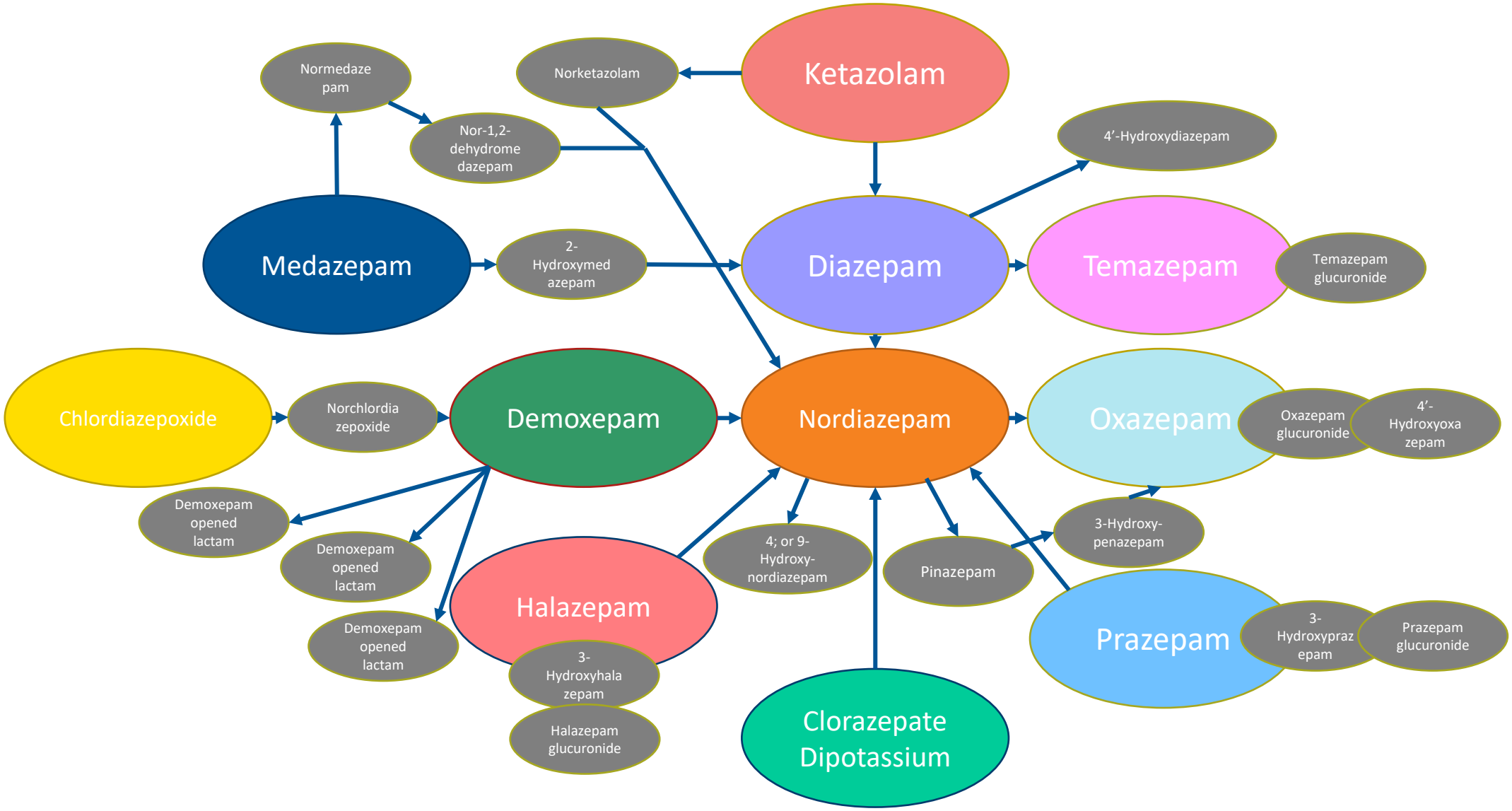


Benzodiazepine: Oxazepam Metabolic Pathways



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- "Coded up" metabolites to the highest parent drug
- Developed a novel drug categorization scheme for analysis

Drug Categorization Scheme

- Alcohol (Ethanol)
- Non-Ethanol Alcohols
- Cannabis
- Potentially Impairing Neuropsychiatric Medications (PINM)
- Hallucinogens
- Inhalants
- Dissociative Anesthetics
- Sedatives
- Stimulants
- Narcotic Analgesics
- Novel Psychoactive Substances (NPS)
- Other Potentially Impairing Drugs (OPID)

Development of Public Resources

Analyte	Metabolite of	Coded As	Category	SubCategory	Potentially Impairing	Likely Post-Crash Administration
Diphenhydramine		Diphenhydramine	Sedatives	Sedating Antihistamines	Yes	No
Diphenidine		Diphenidine	Dissociative Anesthetics	Dissociative Anesthetics	Yes	No
Diphenoxylate		Diphenoxylate	Narcotic Analgesics	Non-Fentanyl Opioids	Yes	No
Donepezil		Donepezil	Likely Non-Impairing	Likely Non-Impairing	No	No
Dothiepin		Dothiepin	Potentially Impairing Neuropsychiatric Medications	Antidepressants	Yes	No
Doxepin		Doxepin	Potentially Impairing Neuropsychiatric Medications	Antidepressants	Yes	No
Doxylamine		Doxylamine	Sedatives	Sedating Antihistamines	Yes	No
Duloxetine		Duloxetine	Potentially Impairing Neuropsychiatric Medications	Antidepressants	Yes	No
Ecgonine ethyl ester	Cocaine	Cocaine	Stimulants	Cocaine	Yes	No
Ecgonine methyl ester	Cocaine	Cocaine	Stimulants	Cocaine	Yes	No
EDDP	Methadone	Methadone	Narcotic Analgesics	Non-Fentanyl Opioids	Yes	No
EMDP	EDDP	Methadone	Narcotic Analgesics	Non-Fentanyl Opioids	Yes	No
Ephedrine/Pseudoephedrine		Ephedrine	Likely Non-Impairing	Likely Non-Impairing	No	No
Ephenidine		Ephenidine	Dissociative Anesthetics	Dissociative Anesthetics	Yes	No
Eslicarbazepine		Eslicarbazepine	Potentially Impairing Neuropsychiatric Medications	Antiepileptics	Yes	No
Estazolam		Estazolam	Sedatives	Benzodiazepines	Yes	No
Eszopiclone/Zopiclone		Zopiclone	Sedatives	Sleep Aids	Yes	No
Ethanol		Ethanol	Ethanol	Ethanol	Yes	No
Ethylone		Ethylone	Novel Psychoactive Substances	Synthetic Cathinones	Yes	No
Etizolam		Etizolam	Sedatives	Benzodiazepines	Yes	No
Etodolac		Etodolac	Likely Non-Impairing	Likely Non-Impairing	No	No
Etomidate		Etomidate	Likely Post-Crash Administration	Likely Post-Crash Administration	Yes	Yes
Fenproporex		Fenproporex	Stimulants	Amphetamines	Yes	No
Fentanyl		Fentanyl	Narcotic Analgesics	Fentanyls	Yes	No

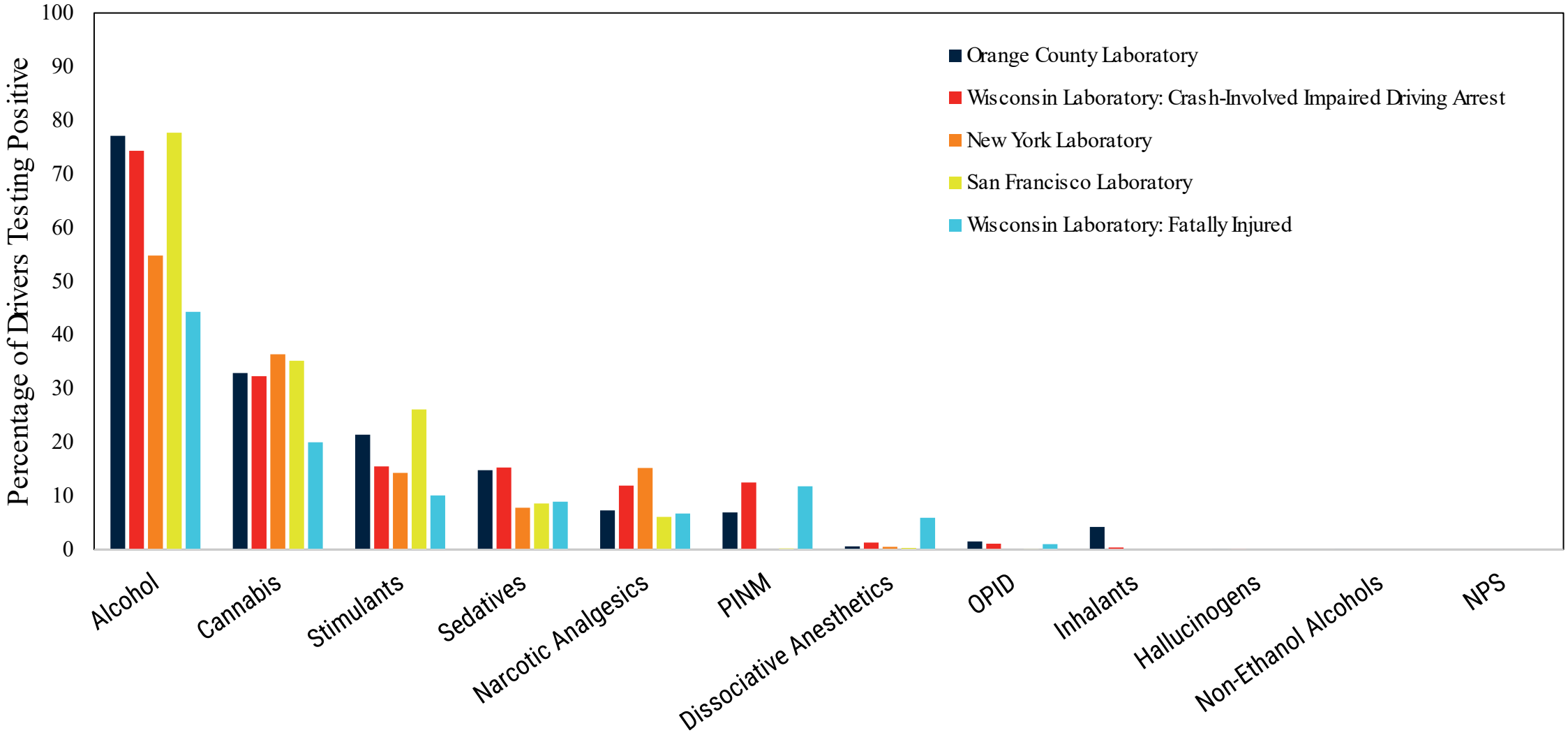
Identification of Toxicology Datasets

- Worked with toxicology experts to identify high-quality data from leading US toxicology laboratories
- Toxicology data used in the study met key criteria:
  - Tested all drivers for other drugs regardless of BAC
  - Used a comprehensive drug panel
  - Used blood specimens for testing
  - Allowed for deidentified transmission of raw data to NTSB

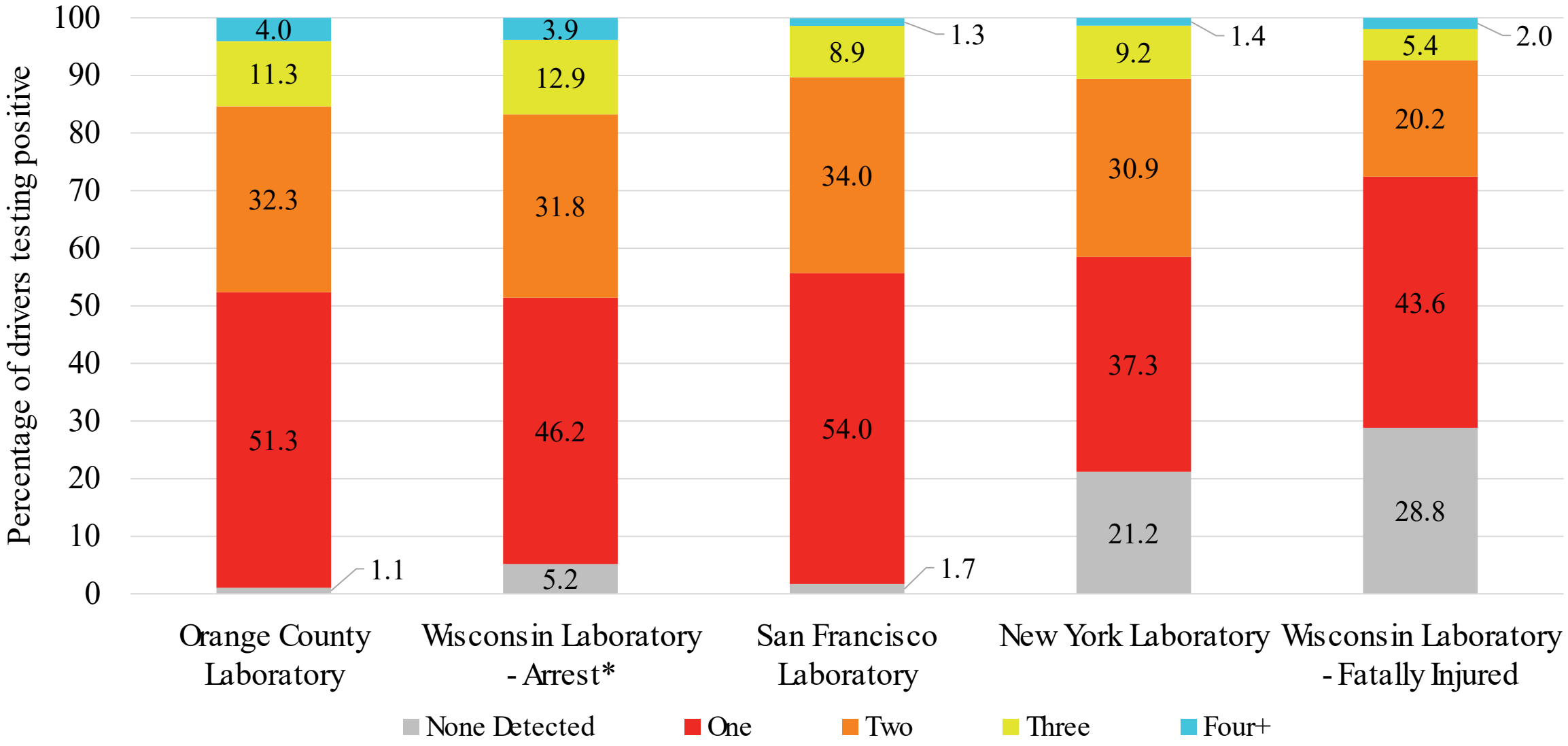
Four Study Toxicology Laboratories

Data Provided	Orange County Laboratory	Wisconsin Laboratory	Wisconsin Laboratory	San Francisco Laboratory	New York Laboratory
Driver Population	Impaired driving arrests	Crash-involved impaired driving arrests	Crash-involved fatally injured	Impaired driving arrests	Crash-involved suspected impaired-driving cases involving fatality or serious injury
Potentially Impairing Compounds Tested	183	136	136	54	39
Data Start Date	8/1/2018	1/1/2019	1/1/2019	3/20/2015	5/7/2020
Data End Date	7/30/2020	3/31/2021	3/31/2021	12/31/2018	6/8/2021
Sample Size	14,051	9,569	406	2,075	217

Percentage of Drivers Positive by Each Drug Category



Percentage of drivers testing positive for multiple drug categories



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Frequency of Drug Categories Combinations in Orange County

Drug Categories and Combinations of Drug Categories	Frequency	Overall Percent
Alcohol Only	5,926	42.17
Alcohol and Cannabis	2,022	14.39
Alcohol and Stimulants	739	5.26
Cannabis Only	685	4.88
Stimulants Only	455	3.24
Alcohol, Cannabis, and Stimulants	376	2.68
Alcohol and Sedatives	356	2.53
Cannabis and Stimulants	264	1.88
Cannabis and Sedatives	175	1.25
Alcohol, Cannabis, and Sedatives	166	1.18
Narcotic Analgesics and Stimulants	157	1.12
No Alcohol or Other Drugs Detected	148	1.05
Alcohol and Inhalants	143	1.02
Alcohol and Potentially Impairing Neuropsychiatric Medications	143	1.02
All Other Single Drug Categories or Combinations of Drug Categories	2,296	16.34
Total	14,051	100.00

Alcohol Prevalence Across Laboratory Samples

Alcohol	Orange County Laboratory	Wisconsin Laboratory (Crash-Involved Impaired Driving Arrests)	Wisconsin Laboratory (Crash-Involved Fatally Injured Drivers)	San Francisco Laboratory	New York Laboratory
Alcohol Only	42.2%	39.7%	26.9%	43.6%	22.6%
Alcohol and Other Drugs	34.9%	34.6%	17.4%	34.1%	32.3%
Alcohol Total	77.1%	74.3%	44.3%	77.7%	54.9%

Cannabis Prevalence Across Laboratory Samples

Drug Category	Orange County Laboratory	Wisconsin Laboratory (Crash-Involved Impaired Driving Arrests)	Wisconsin Laboratory (Crash-Involved Fatally Injured Drivers)	San Francisco Laboratory	New York Laboratory
Cannabis Only	4.9%	2.9%	5.2%	5.5%	8.8%
Cannabis and Alcohol Only	14.4%	15.6%	6.7%	16.1%	17.1%
Cannabis, Alcohol, and Other Drug	5.0%	6.8%	3.2%	6.6%	5.5%
Cannabis and Other Non-Alcohol Drugs	8.6%	7.0%	4.9%	7.0%	5.1%
Cannabis Total	32.9%	32.3%	20.0%	35.2%	36.4%

Summary of Results

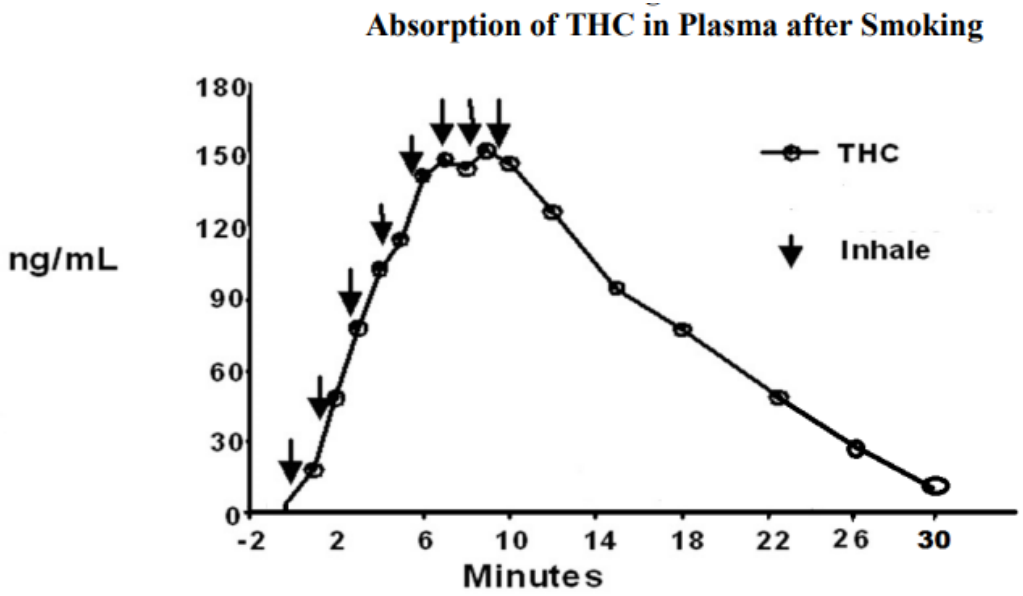
- Alcohol was the most prevalent drug detected among impaired drivers followed by cannabis
- About half of drivers tested positive for more than one category of drug (including alcohol)
- Alcohol was most often detected alone, without any other drugs
- Cannabis was usually detected with at least one other drug category
- While alcohol countermeasures must remain the highest priority, countermeasures that address cannabis and other drugs are also needed

Effects of "Stop Testing" Procedures

- Stop testing refers to cancelling additional drug testing if alcohol is detected over a certain BAC
- Many drivers over a certain BAC will never be tested for other drugs
- Estimated data loss if Orange County laboratory had used stop testing at BAC $\geq$ 0.08 g/dL
  - About 70% would not have been tested for other drugs
  - Within that group, 43% tested positive for other potentially impairing drugs, representing 30% of all drivers

Time Between Event and Sample Collection

- Drugs may quicky metabolize out of a driver's system
- Reducing time delays between a traffic event and specimen collection is critical
- THC concentrations rise rapidly over the course of minutes
- Within 30 minutes THC concentrations drop to 80-90% of peak
- After a few hours, only low or no THC can be detected in blood



Time Between Event and Sample Collection

- In Wisconsin, average delay between the event and sample collection was 1 hour and 51 minutes
- In San Francisco, the average time was 2 hours and 4 minutes

Limitations and Caveats

- Toxicology data is not a perfect indicator of impaired driving:
  - Testing positive for a drug does not necessarily imply a driver was impaired by that drug
  - Toxicology results may not always reflect all drugs impairing a driver
  - There are many exceptions
- Goal is to provide a technique for large-scale data analysis
- Standard method was designed to be approachable by traffic safety researchers

New NTSB Recommendations

- **States, DC, PR:**
  - Toxicology standards: ANSI/ASB Standard 120
  - Cannabis labeling
  - E-Warrants
  - Legislative enhancements: oral fluid and drugged driving
- **NHTSA:**
  - Disseminate ANSI/ASB Standard 120
  - Toxicology Support
  - Trauma center sentinel surveillance
- **FDA:**
  - Drug labeling
  - Audit drugmaker compliance with FDA guidance on evaluation of drug effects on driving
  - Drug data surveillance

Key Acknowledgements

Study Co-Manager
Jana Price

NTSB Medical Officers
Mary Pat McKay (Retired)
Michelle Watters
Turan Kayagil

Many Others at NTSB
- Board Members
- Office of Research and Engineering
- Office of Highway Safety
- Advocacy & Safety Recommendations

Toxicology Data Sharing Partners
Jennifer Limoges, New York State Police Forensic Investigation Center
Luke Rodda, San Francisco Office of the Chief Medical Examiner
Bruce Lyle, Orange County Crime Laboratory
Amy Miles, Wisconsin State Laboratory of Hygiene

Other Toxicology SMEs
Barry Logan
Jennifer Harmon

Crash Investigations

Avenal, California; January 2021
What happened

Figure 2. Northbound view of vehicles postcrash with SUV in southbound lane of SR-33 and truck off east road edge (Source: California Highway Patrol [CHP]).

Avenal, California 2021

SUV Driver

- No driver's license
- Driving 88-98 mph
- BAC 0.18 g/dL (California's BAC limit is 0.08 g/dL)
- Delta-9 THC 7.2 ng/mL
- Probable Cause: Impairment from high level of alcohol. Excessive speed

Source: California Highway Patrol

Why it Happened

- The probable cause of the Avenal, California, crash was **the failure of the sport utility vehicle (SUV) driver to control his vehicle due to a high level of alcohol impairment.** Contributing to the severity of the crash was the SUV driver's excessive speed.

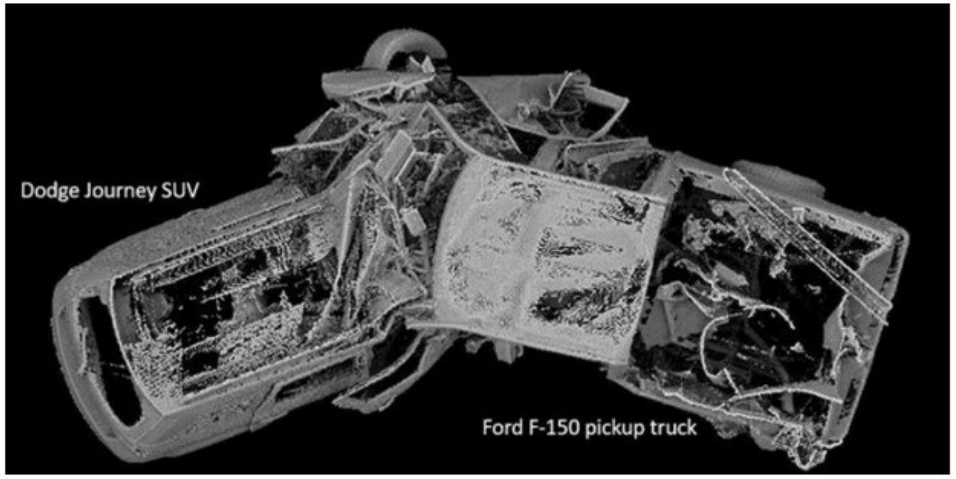
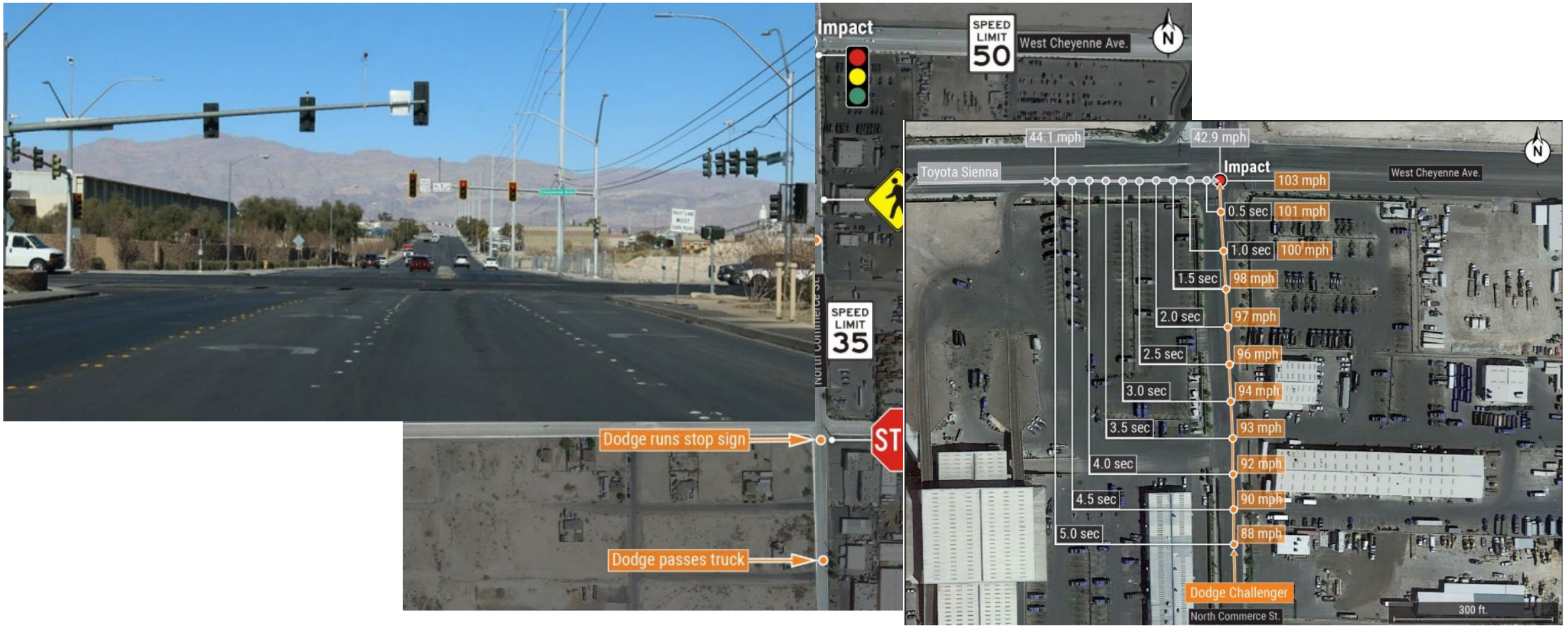


Figure 9. Approximate orientation of vehicles at maximum engagement during crash.

North Las Vegas, Nevada; January 29, 2022
What happened



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North Las Vegas, NV

Dodge Driver

- Toxicology Results
  - Cocaine
  - PCP
  - Levamisole
  - Gabapentin
  - Dextromethorphan
- Four speeding tickets reduced to "Illegal Parking"

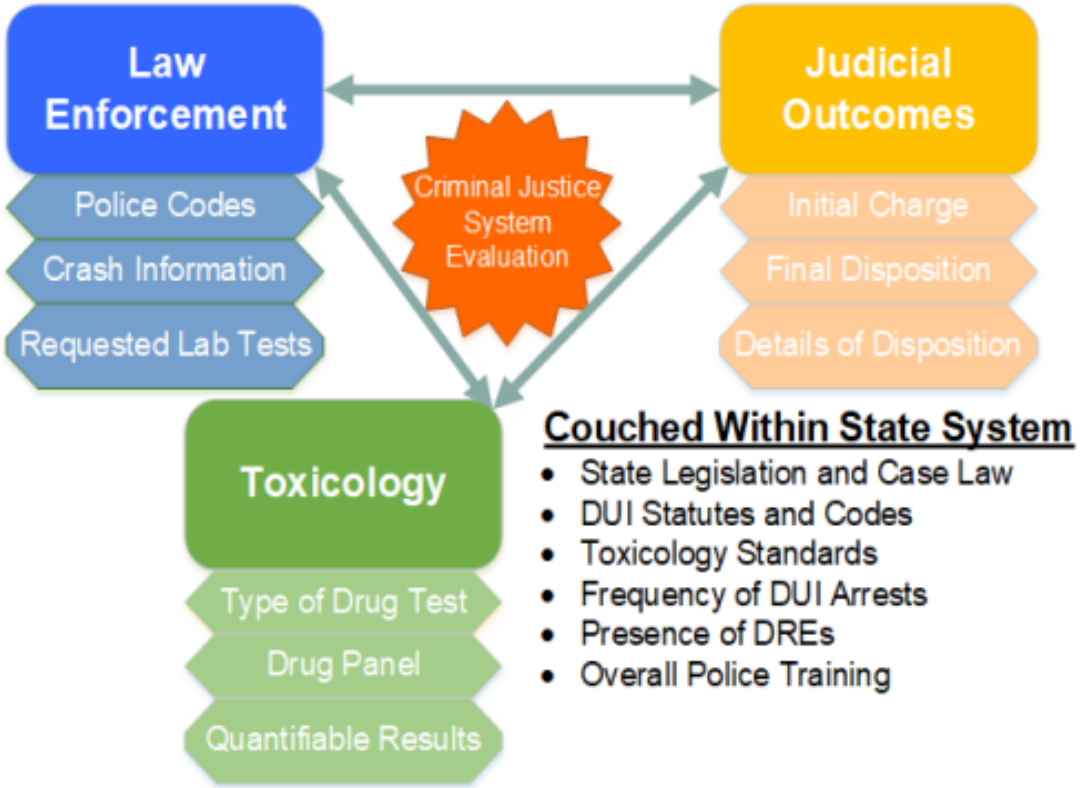
Date	Original Citation Description	Source
02/23/1984	Driving while intoxicated	Criminal history (National Crime Information Center [NCIC])
09/29/1986	Driving while intoxicated	Criminal history (NCIC)
08/13/1992	Speeding	National Law Enforcement Telecommunications System (NLETS)
08/13/1992	Driving while license suspended	NLETS
04/16/1993	Driving while license suspended	NLETS
07/03/2000	Driving without liability insurance	NLETS
02/17/2001	Driving while license suspended	NLETS
02/17/2001	Failure to obey traffic signal	NLETS
11/20/2001	Driving while license suspended	NLETS
02/14/2005	Failure to use signal	NLETS
03/31/2005	Driving while license suspended	NLETS
10/05/2008	Unsafe operation	NLETS
02/22/2011	Speeding	NLETS
04/26/2017	Speeding	Ten-year record (Nevada DMV)
05/17/2017	Speeding	Henderson Justice Court Records
12/25/2017–01/08/2020	License suspended (for failure to pay required fines and costs)	Ten-year record (Nevada DMV)
08/29/2020	Speeding	North Las Vegas Municipal Court Records
11/18/2020	Speeding	North Las Vegas Municipal Court Records
02/03/2021	Speeding	North Las Vegas Municipal Court Records
08/25/2021	Speeding	Las Vegas Municipal Court Records
12/09/2021	Speeding	Clark County Justice Court Records
01/29/2022	*Crash*	

Why it Happened

- The National Transportation Safety Board determines that the probable cause of the North Las Vegas, Nevada, crash was the Dodge driver's excessive speed and failure to obey traffic control devices. Contributing to the driver's behavior was his impairment from the effects of cocaine and phencyclidine and his disregard for safety and traffic laws. Also contributing to the driver's repeated disregard for safety and traffic laws despite numerous citations was the state of Nevada's failure to deter the driver's speeding recidivism due to systemic deficiencies, including routine plea agreements that alter or drop violations, inaccurate driver records, failure to accurately track citations, and delays in reporting convictions.

Paradigm Shifts

Paradigm Shift Required
From Good Intentions to Data-Driven Solutions



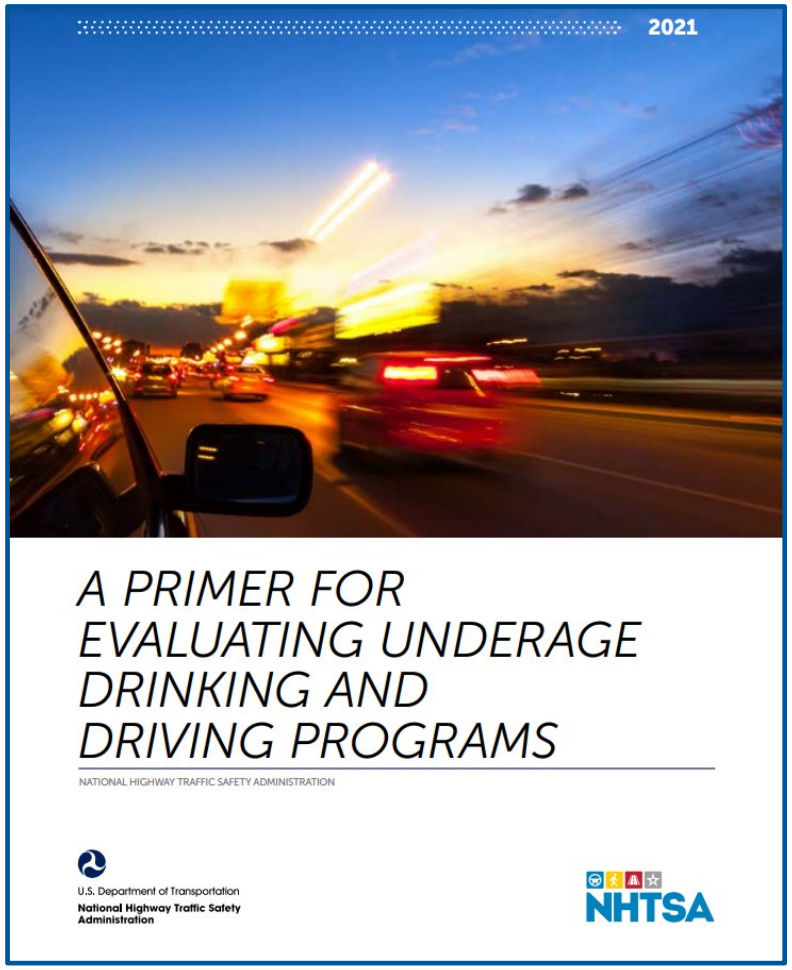
Smith , R.C., Turturici, M., Dunn, N., & Comer, C. (2019, April). Assessing the Feasibility of Evaluating the Legal Implications of Marijuana Per Se Statutes in the Criminal Justice System. AAA Foundation for Traffic Safety, Washington: DC.

Improving and Using Data

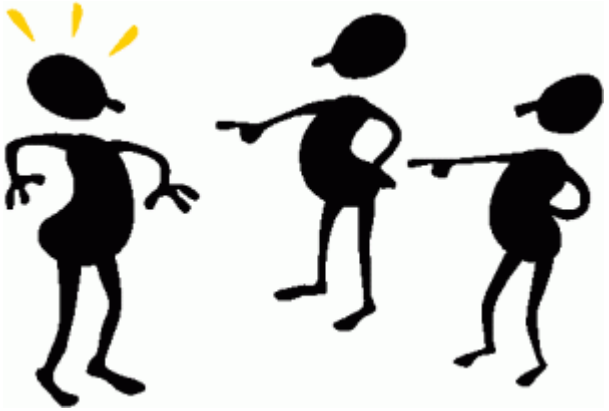
- Increase BAC reporting
- Toxicology standards
- Sentinel surveillance
- Place of last drink
- NHTSA drug-impaired driving criminal justice evaluation tool

NTSB

Program Development and Evaluation



Paradigm Shift Required
From Blame to Empathy



Paradigm Shift Required
From Reactive Responding to Proactive Intervention

- Treatment Courts
- SBIRT
- 24/7 Sobriety Programs
- Monitoring

Person

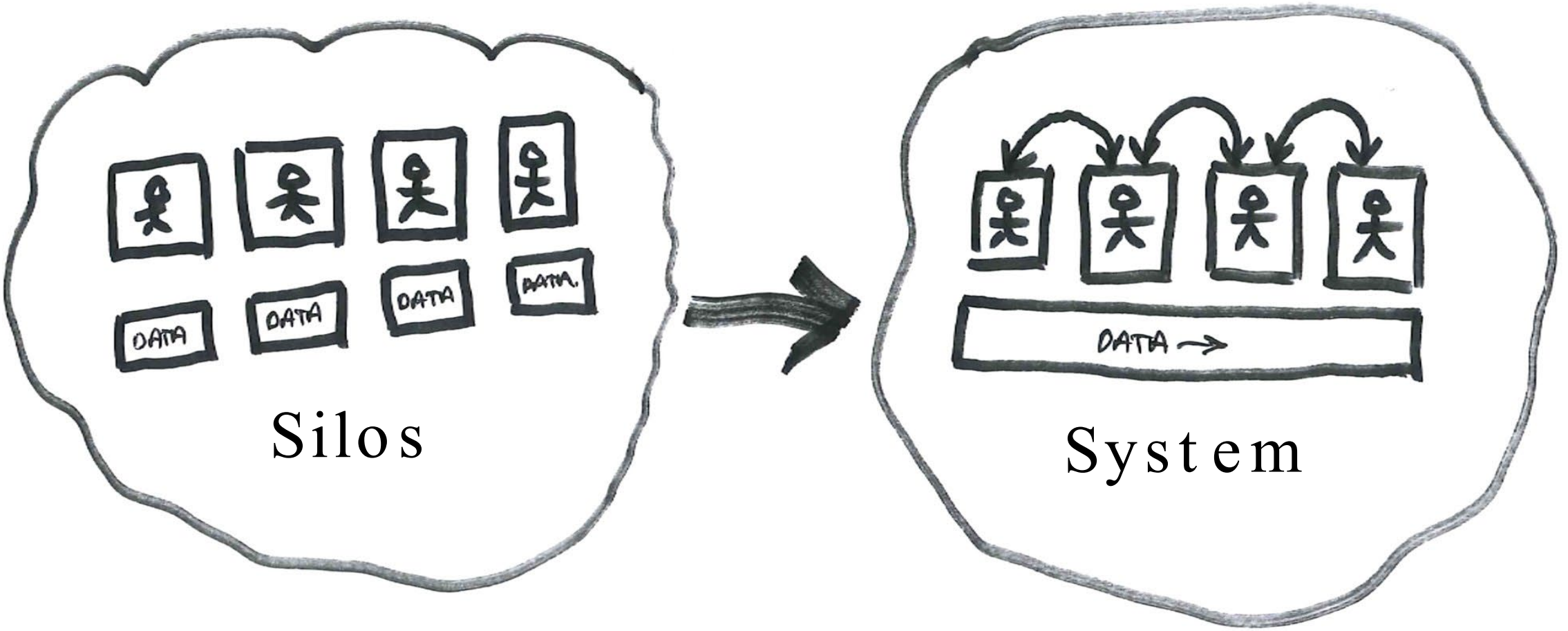
- Administrative License Revocation
- License Suspensions

Drinking → Driving

Moving the Needle Towards .05 BAC

Myth	Reality
People are safe to drive at .05 BAC	Drivers are Impaired at .05
Designed to arrest people after one drink	Not usually one drink over a typical drinking session
Extreme policy	.05 BAC and lower is the normal globally
Very few drivers between .05 and .08 BAC	Produces a general deterrent effect
Limited practical effect	Saves lives
Disastrous impact on tourism and the economy	Doesn't impact alcohol sales, tourism, or the economy
People dislike .05 BAC policies	Majority of the population supports .05 BAC

Paradigm Shift Required
From Silos to Systems



Data Sharing Across States and Jurisdictions

United States Government Accountability Office

GAO

Report to Congressional Committees

June 2023

IMPAIRED DRIVING

Information on Data Used to Identify Repeat Offenders

GAO Highlights

Highlights of GAO-23-105859, a report to congressional committees

June 2023

IMPAIRED DRIVING

Information on Data Used to Identify Repeat Offenders

Why GAO Did This Study

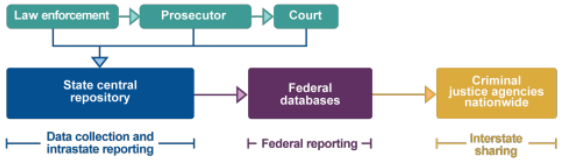
Driving while impaired by substances such as alcohol, prescription and over-the-counter medicines, or illicit drugs remains a persistent traffic safety and public health issue. Identifying repeat offenders can help criminal justice agencies take measures to reduce impaired driving, such as imposing escalating penalties for repeat offenses and better targeting programs to reduce recidivism. States have persistently reported large amounts of incomplete criminal history information used for this purpose.

The Infrastructure Investment and Jobs Act included a provision for GAO to study issues related to the reporting and interstate sharing of data on impaired-driving offenses. This report describes (1) how states report impaired-driving information to federal databases; (2) the challenges that selected states face in collecting impaired-driving information and reporting it to federal databases; and (3) how selected states have used federal resources to address challenges to collecting impaired-driving information.

What GAO Found

Various state and local criminal justice agencies collect information on impaired drivers—including arrest reports, fingerprints, and dispositions (i.e., the results of criminal proceedings)—and report it to state central repositories. Through a largely automated process, these central repositories report, or make accessible, criminal history information—including on impaired-driving offenders—to fingerprint-based databases maintained by Department of Justice's (DOJ) Federal Bureau of Investigation (FBI). There are no federal statutory reporting requirements. However, all 50 states voluntarily report criminal history information to FBI's databases, which in turn are accessible to criminal justice agencies nationwide. These agencies can use the databases to identify repeat impaired-driving offenders. For example, a law enforcement officer may query FBI's databases to check whether a suspected impaired driver has prior impaired-driving convictions, including in another state.

General Process Used by States for Collecting, Reporting, and Sharing Impaired-driving Data That Can Be Used to Identify Repeat Offenders



Source: GAO summary of Department of Justice documentation and information from selected states. | GAO-23-105859

Selected states face challenges collecting complete impaired-driving information

Principles of the Safe System Approach

Humans Make Mistakes

Humans are Vulnerable to Injury

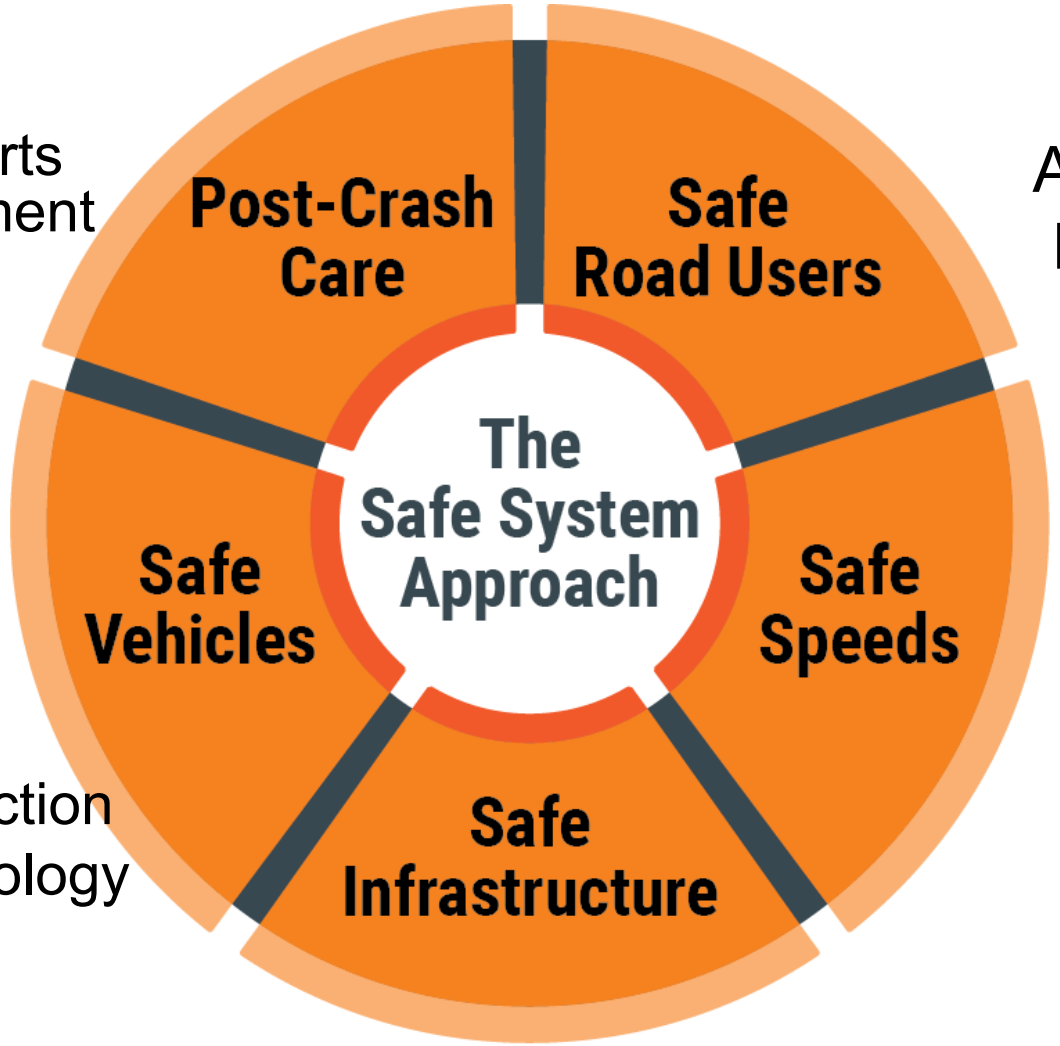
Responsibility is Shared

No Death or Serious Injury is Acceptable

Safety is Proactive

Elements of the Safe System Approach

First Responders
Drug Recognition Experts
General Traffic Enforcement



Sober Drivers
Accessible Sober Rides
Equitable Sober Rides

Ignition Interlocks
In-Vehicle Alcohol Detection
Driver Monitoring Technology

How Can NTSB Help You?

- Provide resources
- Monitoring impaired driving prevention legislation for changes
- Support state coalitions
- Write Op-Eds or contribute to articles
- Testify on behalf of legislation in line with safety recommendations
  - Or send written testimony

What You Can Do?

- Use NTSB Safety Recommendations as best safety practices and implement them when possible
- Advocate for NTSB Safety Recommendations to prevent impaired driving
- Share NTSB resources with decision-makers
- Connect State Traffic Safety Task Force with NTSB
- Stay connected with NTSB

Connect with NTSB

Twitter

Facebook

Instagram

YouTube

LinkedIn

Flickr

Podcast

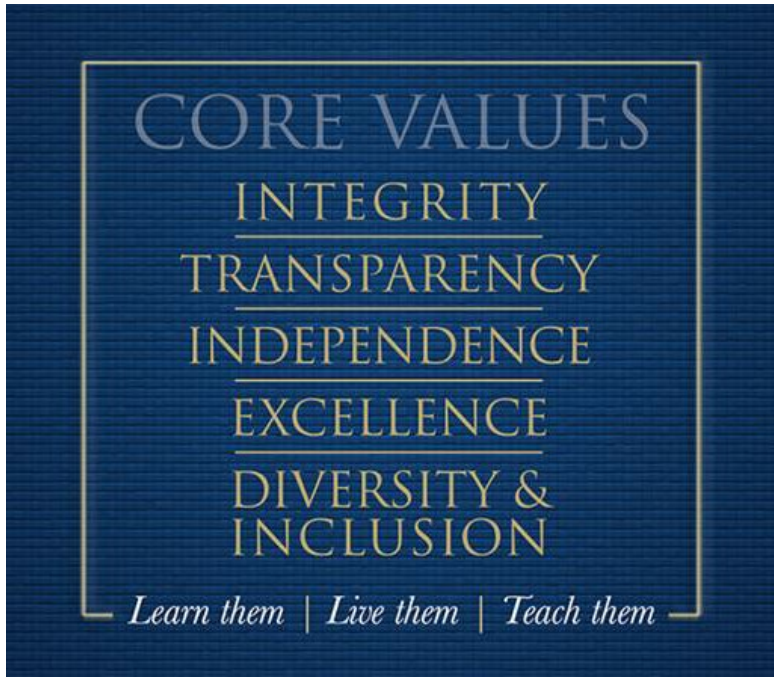
Behind the Scenes @NTSB

Blog

Safety Compass

Copernican Moment

Thank you!



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