



New Findings and Recommendations from Recent Crash Investigations

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Safety Advocate
October 22, 2024



AVIATION • RAILROAD • TRANSIT • HIGHWAY • MARINE • PIPELINE • COMMERCIAL SPACE

NTSB At A Glance

- Independent federal agency
- Investigate civil aviation accidents and surface transportation events
- Determine probable cause and issue safety recommendations
- No regulatory authority
- Five Board Members nominated by the President and confirmed by the Senate to serve 5-year terms
- A staff of more than 400 investigators, analysts, researchers, and others support the mission.



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NTSB On Scene

When you see our investigators working at the scene of an accident or crash, it is to document the scene and to secure perishable evidence.

We look at the roles of:

- Humans – Experience, physiological state, performance
- Machines – Mechanical failures, technology, management of the company

3 Environment – Infrastructure, weather



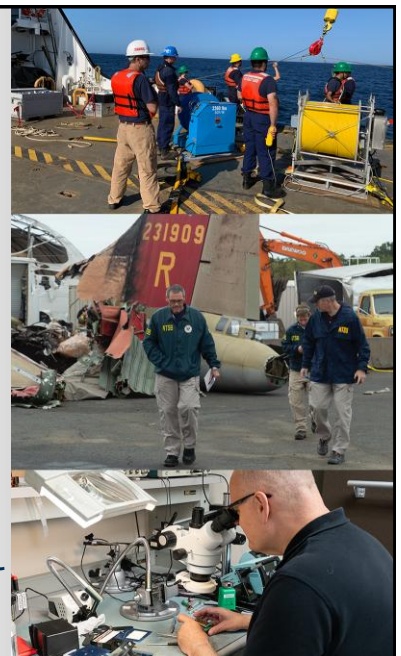
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Focus On Safety

We focus solely on safety. We make recommendations that could improve safety across all modes of transportation.

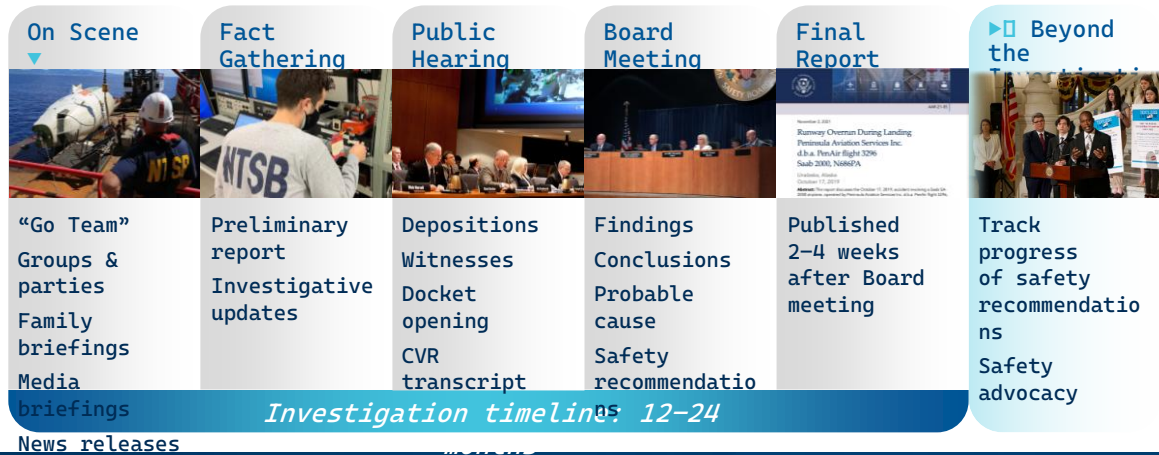
- We do not determine blame or liability
- We do not investigate intentional criminal acts

4



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Investigation Process



5

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NTSB Crash Investigations



Current Open NTSB Crash Investigations

Recently Completed Crash Investigations and Safety Studies:

North Las Vegas, Nevada

Tishomingo, Oklahoma

Alcohol, Other Drug, and Multiple Drug Use Among Drivers

6

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North Las Vegas, Nevada January 9, 2022

What happened



Photo 1: 2018 Dodge Challenger – Extensive damage viewed from the left front corner.



Photo 2: 2013 Toyota Sienna – Extensive damage viewed from the right side.

Why it Happened

Drug Impairment and Speeding

- The probable cause 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.

Driver's History	
Date	Citation
04/26/2017	Speeding
05/17/2017	Speeding
12/25/2017– 01/08/2020	License suspended
08/29/2020	Speeding
11/18/2020	Speeding
02/03/2021	Speeding
08/25/2021	Speeding
12/09/2021	Speeding
01/29/2022	*Crash*

Substance	NMS Labs (Blood)	FAA Forensic Sciences Laboratory (Blood)
Cocaine	390 ng/mL	394 ng/mL
Phencyclidine (PCP)	27 ng/mL	19 ng/mL

9

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Safety Recommendations

To NHTSA:

- Require as standard equipment in all new vehicles intelligent speed assistance systems that, at a minimum, warn the driver when the vehicle exceeds the speed limit. (H-23-14)
- Develop a communication plan to educate the public about the capabilities and benefits of intelligent speed assistance to mitigate speeding. (H-23-15)
- Update the Uniform Guidelines for State Highway Safety Programs to include identification and tracking of repeat speeding offenders. (H-23-16)

10

Develop countermeasures to reduce speeding recidivism, determine their effectiveness, and disseminate the

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Safety Recommendations

To BMW Group, Ferrari USA, Ford Motor Company, General Motors Company, American Honda Motor Company, Hyundai USA, Kia Motors Corporation, Mazda USA, Mercedes-Benz USA, Mitsubishi Motors, Nissan USA, Porsche Cars North America, Stellantis, Subaru of America, Toyota Motor North America, Volkswagen Group, and Volvo Car Corporation:

- Install as standard equipment in all new vehicles intelligent speed assistance systems that, at a minimum, warn the driver when the vehicle exceeds the speed limit. (H-23-20)

To the 50 States, the Commonwealth of Puerto Rico, and the District of Columbia:

- Implement programs to identify repeat speeding offenders and measurably reduce speeding behavior. (H-23-19)

11

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Crash Investigation Resources

Stephanie Shaw

BEHIND THE SCENE @NTSB

Leah Walton

N. Las Vegas, NV, Multivehicle Collision from Speeding

Ellen Lee

Brian Bragonier

EPISODE 58

NATIONAL TRANSPORTATION SAFETY BOARD

November 14, 2023 Highway Investigation Report HIR-23-09

Multivehicle Crash at Signalized Intersection

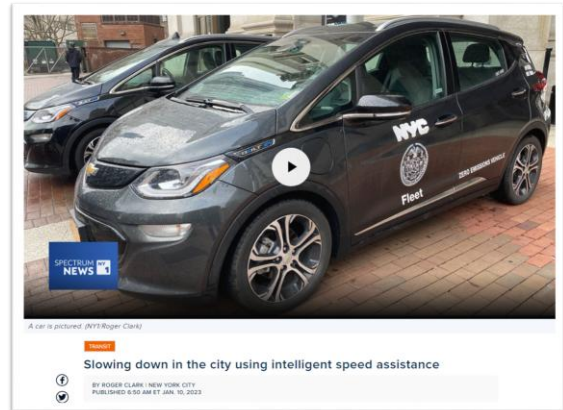
North Las Vegas, Nevada
January 29, 2022

Abstract: On Saturday, January 29, 2022, about 3:12 p.m. Pacific Standard Time, a 2018 Dodge Challenger passenger car was traveling northbound on Commerce Street in North Las Vegas, Clark County, Nevada. The car approached the traffic signal-controlled intersection with Cheyenne Avenue on a red traffic signal (which had been red for approximately 10 seconds) and struck the right side of a Toyota Sienna minivan traveling eastbound on Cheyenne Avenue. Four additional vehicles traveling on Cheyenne Avenue were involved in the crash.

12

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Intelligent Speed Assist in Action

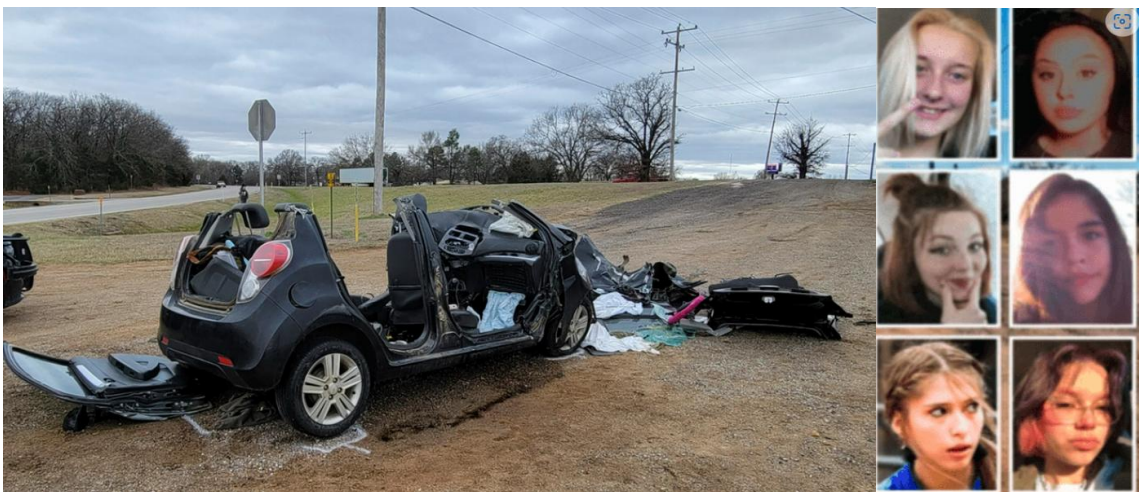


Tishomingo, Oklahoma
March 22, 2022



15

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16

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Why It Happened

Driver Inexperience

- 16-year-old female
- Familiar with vehicle
- Completed parent-taught driver's education
- Obtained intermediate driver's license 4 months before crash
- Was under GDL restrictions for six months

17

Marijuana Impairment

- Marijuana found in Chevrolet
- Delta-9 THC (95.9 ng/mL) detected in driver's blood

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Driver Inexperience

- Transporting five students in vehicle, in violation of Oklahoma GDL laws
- Passengers were a likely source of driver distraction
- Acute left turn required complex judgement and decision making



18

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Marijuana Impairment

- Driver was likely impaired by marijuana
- Marijuana can impair
 - Cognition
 - Motor coordination
 - Reaction time
 - Judgement of time and distance
 - Sustained and divided attention
- Oklahoma currently has very liberal medical marijuana laws
- Tishomingo had six dispensaries at the time of the crash

19

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Marijuana Impairment

- 33% of all teens surveyed thought that driving under the influence of cannabis was legal in states where it was legal for adult recreational use
- 27% of parents surveyed also believed that driving under the influence of cannabis was legal in these states
- 93% of parents believed that driving under the influence of alcohol was dangerous, but only 76% said the same about cannabis
- 88% of teens agreed that drinking and driving was dangerous, but only 68% thought that driving under the influence of cannabis was dangerous (Liberty Mutual

20

2023)

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Marijuana Impairment

- Tishomingo schools did not provide information of the risks of marijuana-impaired driving
- Oklahoma did not provide adequate information or resources to schools on the impairing effects of marijuana and other drugs
- There are several ways to increase awareness
 - Improved driver education
 - Parent engagement
 - Driver manual revisions
 - Marijuana product labeling

21

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Safety Recommendations

What recommendations did we issue?

TO THE OKLAHOMA HIGHWAY SAFETY OFFICE: Incorporate information on the risks of cannabis-impaired driving into the Oklahoma Challenge and clarify that driving under the influence of cannabis is illegal.

TO THE OKLAHOMA STATE DEPARTMENT OF EDUCATION: Develop a drug and alcohol abuse prevention curriculum framework with content that covers the risks of impaired driving—including cannabis-impaired driving—and disseminate this curriculum framework to local school boards in a format that can be taught in elementary through high school classrooms.

TO THE OKLAHOMA DEPARTMENT OF PUBLIC SAFETY: Update your Oklahoma Driver Manual to reflect Oklahoma's zero tolerance law and to indicate that, although the state has legalized cannabis for some medical purposes, it impairs driving performance, and it is illegal for anyone

²² drive with any detectable level of cannabis in their system.

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Safety Recommendations

TO THE GOVERNORS HIGHWAY SAFETY ASSOCIATION AND THE NATIONAL CONFERENCE OF STATE LEGISLATURES: Inform your members about the Tishomingo, Oklahoma, crash and about the need for information in driving curricula for future and novice drivers to understand the risks of and to avoid cannabis-impaired driving.

TO THE NATIONAL ASSOCIATION OF STATE BOARDS OF EDUCATION: Inform your members about the Tishomingo, Oklahoma, crash and about the need for information in school curricula for future and novice drivers to understand the risks of and to avoid cannabis-impaired driving.

TO THE AMERICAN ASSOCIATION OF MOTOR VEHICLE ADMINISTRATORS: Update your Model Driver's License Manual to reflect that, although cannabis may be legal for medical purposes or recreational use in some states, it impairs driving performance, and it is illegal to drive while under the influence of cannabis.

TO THE AMERICAN ASSOCIATION OF MOTOR VEHICLE ADMINISTRATORS: Inform your members about the Tishomingo, Oklahoma, crash and about the need for information in driver manuals on the risks of and the need to avoid cannabis-impaired driving.

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Crash Investigation Resources



May 30, 2024 Highway Investigation Report HIR-24-04

Intersection Crash Between Passenger Car and Combination Vehicle

Tishomingo, Oklahoma
March 22, 2022

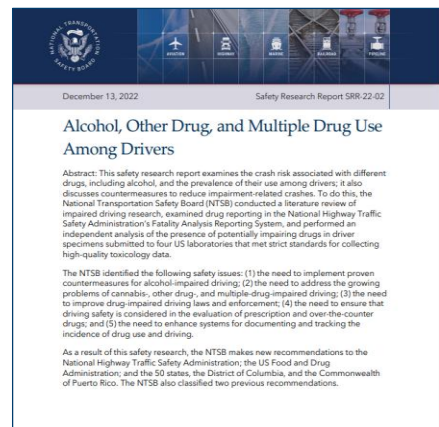
Abstract: On the afternoon of March 22, 2015, a 2015 Chevrolet Spark four-passenger car with seven passengers, was traveling east on US Highway 377 (US-377) on SH-22, was controlled by a stop sign, and was stopped. At the same time, a 1994 Peterbilt semitrailer (combination vehicle) was traveling east on US Highway 377 (US-377) on SH-22, was controlled by a stop sign, and was stopped.



Alcohol, Other Drug, and Multiple Drug Use Among Drivers Safety Research Report

Alcohol, Other Drug, and Multiple Drug Use Among Drivers

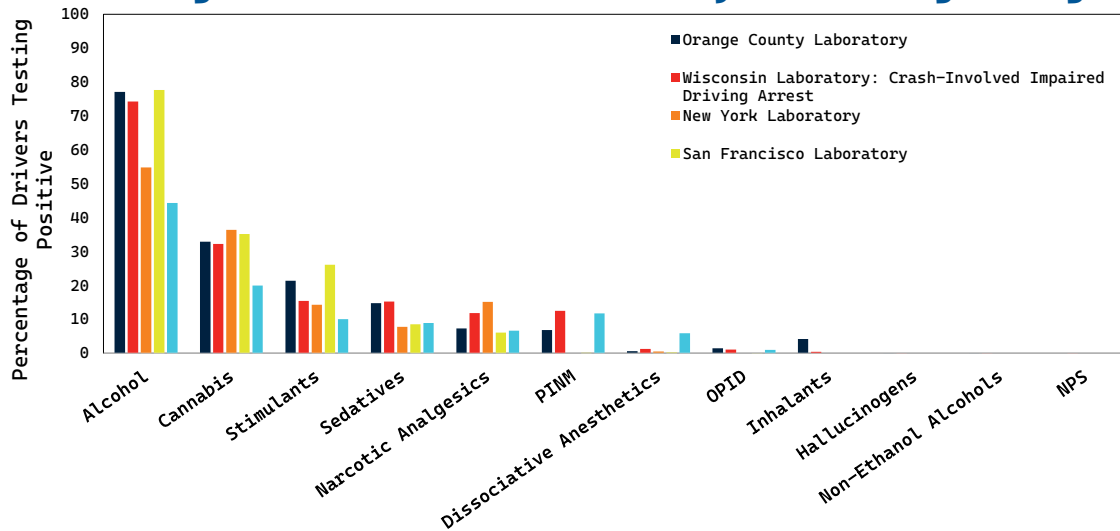
- Alcohol-impaired driving accounts for nearly one in three traffic fatalities.
- However, less is known about other the prevalence of other drugs:
 - Lack of drug testing in traffic events (even fatal crashes)
 - Lack of standardization even when drug tests are given
- NTSB conducted a safety research report to address this gap.

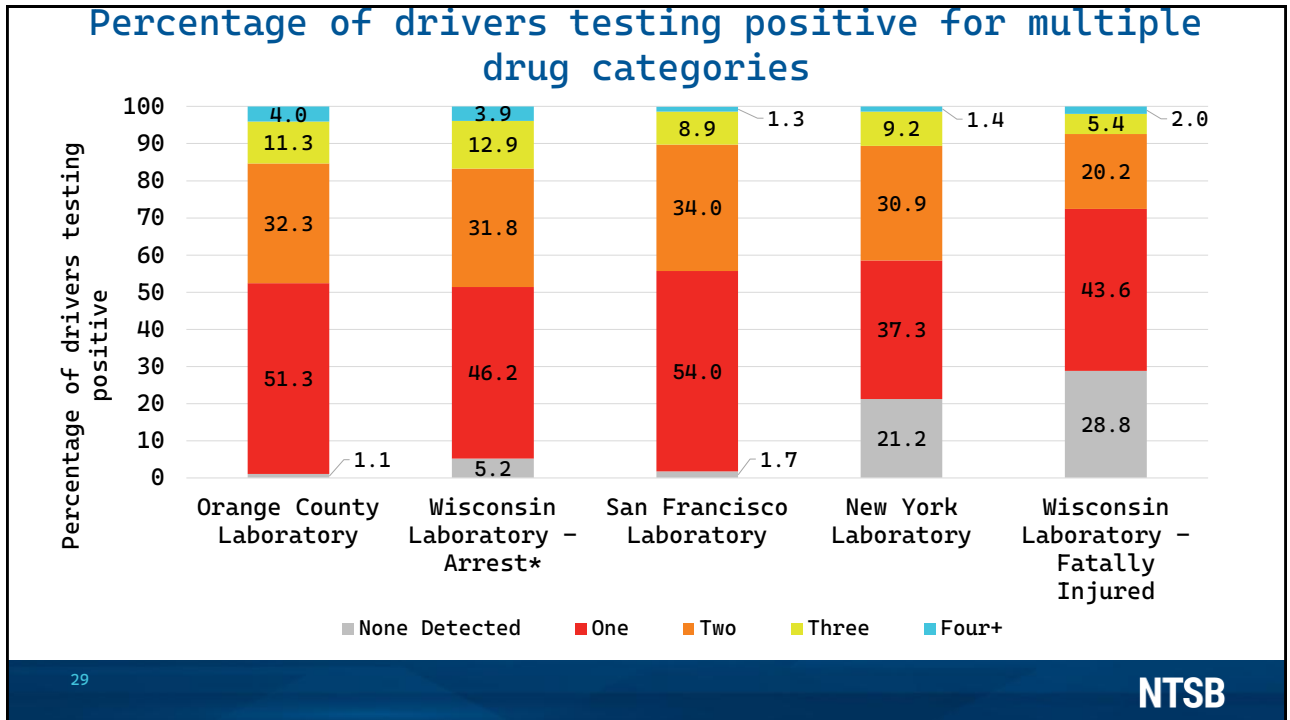


Four Study Toxicology Laboratories

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





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

Recommendations to States

To the 50 states, the District of Columbia, and the Commonwealth of Puerto Rico:

Complete an assessment using the National Highway Traffic Safety Administration's (NHTSA) Drug-Impaired Driving Criminal Justice Evaluation Tool, and, if gaps are identified, apply to NHTSA for support in establishing programs to reduce drug-impaired driving. (H-22-39)

Require government-funded laboratories that conduct forensic toxicology testing to adopt and routinely apply (*regardless of driver blood alcohol concentration*) the American National Standards Institute/American Academy of Forensic Sciences Standards Board Standard for the Analytical Scope and Sensitivity of Forensic Toxicological

31 IACP IDTS 2023

Testing of Blood in Impaired Driving Investigations - ANSI/ASB Sta

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Recommendations to States

To the District of Columbia and the states of Alaska, California, Connecticut, Delaware, Florida, Hawaii, Idaho, Iowa, Kentucky, Maine, Maryland, Massachusetts, Michigan, **Minnesota**, Montana, Nebraska, New Hampshire, New Jersey, New Mexico, Oregon, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, Washington, West Virginia, and Wisconsin:

Modify your impaired driving laws to allow for oral fluid

32 IACP IDTS 2023

screening, and testing for the detection of drug use by drivers. (H-22-41)

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New NTSB Recommendations

- States, DC, PR:
 - Toxicology standards: ANSI/ASB Standard 120
 - Cannabis labeling
 - E-Warrants
 - Legislative enhancements: oral fluid and drug
- 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



33

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So, Now What? What You Can Do

- Use NTSB Safety Recommendations as best safety practices and implement them when possible
- Advocate for NTSB Safety Recommendations to improve legislation for road safety
- Don't wait for Federal Regulatory Action to improve safety in your organization.
- Share NTSB resources with decision-makers
- Stay connected with NTSB

34

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How NTSB Can Help You

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



State lawmakers discussed a bill that would lower the legal drinking and driving limit in Connecticut from .08 to .05 percent.

35

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This Week is National Teen Driver Safety Week

NTSB NATIONAL TEEN DRIVER SAFETY WEEK WEBINARS

October 24th, 2024 – 2-4pm ET

**Preventing Drugged Driving Among Youth:
Understanding the Issue and
Advocating for Change**

Hosted by NTSB Office of Highway Safety
Director Robert Molloy



SUN	MON	TUE	WED	THU	FRI	SAT
20	21	22	23	24	25	26

Live via Zoom

Register here:
<https://t.co/DoCy2eKP63>

36

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37

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38

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