

DRUG-IMPAIRED DRIVING

A NATIONAL THREAT TO PUBLIC HEALTH AND PUBLIC SAFETY

Drug-impaired driving is a threat to public health and public safety on par with the better-known problem of alcohol-impaired driving. Many drugs—both illegal and legal—have impairing effects including, adversely impacting coordination, reaction time, tracking, judgement, attention, and perception.^[1-2] Impairment resulting from drug use can vary from person to person based on tolerance as well as drug-to-drug and drug-to-alcohol interactions.

Drugged driving is always dangerous, costly, and potentially lethal.

Like other forms of impaired driving, drug-impaired driving contributes to motor vehicle crashes resulting in injuries and deaths on the nation's roads. This translates to significant economic costs, and personal costs to families directly impacted by drugged driving.

How prevalent is drugged driving?

National estimates of drug-impaired driving come from several sources: studies of self-reported data as well as toxicology results of impaired drivers and seriously and fatally injured crash victims.

- In 2019, an estimated 13.6 million drivers aged 16 and older in the U.S. self-reported driving under the influence of illicit drugs, including cannabis, in the past year.^[3] Notably, the highest prevalence of drug-impaired driving was among young drivers aged 21-25 (13%), followed by the youngest drivers aged 16-20 (9%).
- The National Roadside Survey, last conducted in 2013-2014, found that, among weekend nighttime drivers, 22.5% were positive for drugs other than alcohol.^[4]
- Among fatally injured drivers in the U.S. tested for drugs, nearly one third (30.7%) were positive for one or more drugs in 2017.^[5]

The incidence of drug-impaired driving has increased during the COVID-19 pandemic.

- During the early months of the pandemic, driving patterns changed. Although people made fewer trips, drivers engaged in riskier behaviors, including driving under the influence of drugs.^[6] The result is that while the total number of crash fatalities declined, the fatality rate *increased*.
- A 2019-2020 NHTSA-funded study found a significant increase in the prevalence of drugs detected in blood among seriously and fatally injured drivers, from 50.8% before the pandemic to 64.7% and 61.4%, during the two pandemic periods.^[6-8] See Table 1.
- More drivers tested positive for active THC than alcohol during the pandemic in Study Period 1.
- The proportion of drivers that tested positive for opioids nearly doubled from before the pandemic (7.5%) to during the pandemic in Study Period 1 (13.9%) and Study Period 2 (13.4%).
- The proportion of drivers that tested positive for two or more categories of drugs increased from 17.6% before the pandemic to 25.3% during the pandemic in Study Period 1 and 24.7% in Study Period 2.

Table 1. Seriously and fatally injured drivers positive for drug category

Drug Category	Before Pandemic (N=1,157)		During Pandemic Study Period 1 (N=699)		During Pandemic Study Period 2 (N=640)	
	n	%	n	%	n	%
Alcohol	252	21.8	198	28.3 ^A	187	29.2 ^A
Cannabinoids†	241	20.8	227	32.7 ^A	167	26.1 ^{A,B}
Stimulants	106	9.2	64	9.2	69	10.8
Sedatives	93	8.0	61	8.7	50	7.8
Opioids	87	7.5	97	13.9 ^A	86	13.4 ^A
Antidepressants	26	2.2	3	0.4 ^A	6	0.9
Over-the-Counter	25	2.2	10	1.4	8	1.3
Other Drugs	17	1.5	15	2.1	22	3.4 ^A
At Least 1 Category	588	50.8	452	64.7 ^A	394	61.6 ^A
Multiple Categories	204	17.6	177	25.3 ^A	158	24.7 ^A

† Active THC (Δ -9-THC or 11-OH-THC)

^A Significantly different from "Before" period, p<0.5

^B Significantly different than "During 1" period, p<.05

During 1 = 03/17/20 - 07/18/20

During 2 = 07/19/20 - 09/30/20

Polysubstance use is common.

The consumption of two or more impairing substances is of significant concern because it can lead to an increase in impairment and relative crash risk. The increase can be additive or, in some instances, multiplicative or synergistic. For example, the European Union Driving Under the Influence of Drugs, Alcohol and Medicines (DRUID) study found the use of multiple drugs can produce a “highly increased crash risk” and the combination of alcohol and drugs can produce an “extremely increased crash risk” whereby an individual is up to 200 times more likely to be involved in a crash.^[9]

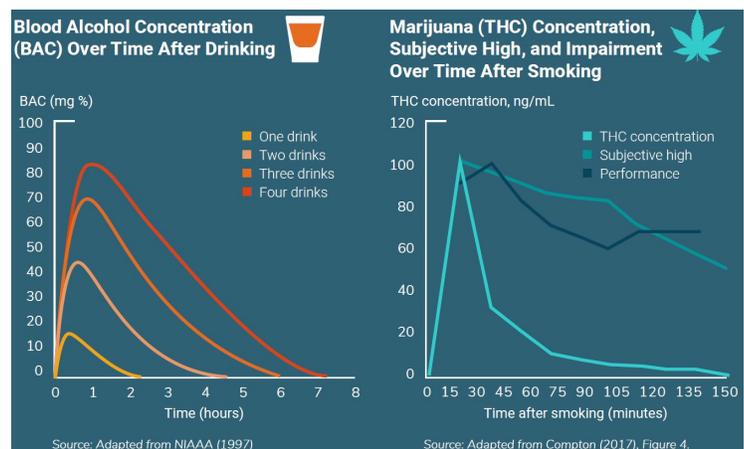
A growing body of research shows how common polysubstance use is among impaired drivers, and seriously and fatally injured drivers.

- Significant percentages of adults aged 18 and older have reported using other drugs while driving under the influence of alcohol, including inhalants (70.3%), cocaine (68.9%), and hallucinogens (63.7%).^[10] More than half (53.4%) of the adults who reported driving under the influence of marijuana also used methamphetamine.
- Data from Washington, one of the first states to legalize recreational cannabis, revealed that between 2008 and 2016, 44% of drivers involved in fatal crashes tested positive for two or more substances.^[11] Alcohol and cannabis were the most common combination of substances detected.
- Of all the enforcement evaluations performed by Drug Recognition Experts (DREs) in 2019, about 42% concluded driver impairment was the result of polydrug use.^[12]
- A study of drivers arrested for impairment in Miami, Florida showed 40% were positive for one or more drug, and half of these drivers had a blood alcohol concentration (BAC) at or above 0.08 g/dL.^[13] Overall, 39% of drivers with a BAC \geq 0.08 g/dL were drug-positive. Among the drivers who were alcohol-free, 78% were positive for one or more drug.
- A national study of fatally injured drivers who were positive for drugs in 2017 showed over a third (34.6%) had a BAC at or above 0.08 g/dL.^[5]
- An oral fluid pilot study in Dane County, Wisconsin, found that approximately 40% of drivers with a BAC > 0.10g/dL also screened positive for one or more drug categories in both oral fluid and blood.^[14]

Unlike alcohol, there are no impairment thresholds for drugs.

Alcohol impairment tracks closely with blood alcohol concentration: as alcohol is consumed, an individual’s BAC increases and so does impairment.^[15] See Figure 1. A clear standard now exists for alcohol use among drivers: it is illegal to drive with a BAC of 0.08 g/dL or more in every state.¹ However, there will never be an equivalent impairment threshold for *any other substance*, including cannabis,^[16-17] because drug levels do not consistently correlate with specific levels of impairment. For example, when an individual smokes cannabis, THC concentration in blood peaks quickly and begins to drop very soon after; however, impairment is longer lasting.^[15] See Figure 1.

Figure 1. Source: GHSA and Responsibility.org, 2018



¹ In Utah, the BAC limit is 0.05 g/dL.

Drug testing technology is currently underused in impaired driving enforcement.

An arrest for driving under the influence (DUI) is made only if there is probable cause. Officers establish probable cause based upon the totality of the circumstances, documenting dangerous driving behaviors, administering a Standardized Field Sobriety Test (SFST), and/or administering a preliminary breath test for alcohol. It has been said that DUI is the only crime for which an investigation stops after obtaining a minimum amount of evidence. This is because when an illegal BAC of 0.08 g/dL is detected in an impaired driving suspect, no other biological testing is typically done. Arrestees who test below the legal limit for alcohol are also rarely tested for drugs. As a result, we do not know the full scale of the prevalence of impairing drugs on our nation's roads and how frequently people engage in drugged driving behavior.

Some states have improved and expanded their drug testing. For example, in July 2019, the Colorado Bureau of Investigation began offering toxicology analysis of blood samples from DUI investigations received from law enforcement agencies for both alcohol and a 14-drug panel.^[18] This testing required special funding authorized by the state legislature. However, many states continue to test only a small percentage of drivers for drugs, including those involved in fatal crashes.

Reliable oral fluid drug testing technology can be used at the roadside to screen DUI suspects for drugs in addition to the preliminary alcohol breath tests that are currently used. Several countries (e.g., Australia, Canada, Spain) and a growing number of states (e.g., AL, IN, MI) are implementing roadside drug testing programs to identify and remove drug-impaired drivers from the roads. The use of oral fluid testing for evidentiary purposes is also being explored as sample collection is less invasive than a blood draw and can be collected proximal to the time of a traffic stop. Unlike oral fluid screening which produces preliminary results, an evidential sample would be submitted to a forensic laboratory for confirmation testing. The state of Michigan recently completed a statewide pilot program demonstrating the feasibility of collecting oral fluid samples for preliminary screening to support impaired driving investigations. The Michigan State Police concluded that oral fluid testing is “accurate for purposes of preliminary roadside testing.”^[19]

Importantly, funding for both law enforcement officer training and equipment, as well as laboratory equipment and analyses must be national priorities. Recommendations for toxicological investigation of impaired driving cases and motor vehicle crashes have been published by the National Safety Council's Alcohol, Drugs and Impairment Division.^[20]

Drug testing is not just a tool necessary for impaired driving investigations, but it can also be used to impact state and national drug policies. As more states move towards the commercial legalization of cannabis (and potentially other drugs), states should collect baseline data on drug-impaired driving, beginning with testing fatally and seriously injured drivers for drugs.

Clear, accurate, and balanced public messaging on drugged driving is needed.

Targeted, culturally relevant education messaging is needed to inform the public, and in particular, young drivers, on the dangers of drugged driving. “Don't drink and drive” is a public safety message that is near-universally accepted. We need an equivalent, clear message of “Don't drug and drive” with the explicit knowledge that all efforts to identify and reduce drug-impaired driving support and complement—and do not compete with—efforts to reduce alcohol-impaired driving. In recent years, several state highway safety offices have launched drugged driving messaging campaigns including Colorado (e.g., “*Drive High, Get A DUI*” in 2014^[21] and “*Uncomfortable High*” in 2020^[22]). NHTSA launched the first national drug-impaired driving education campaign, “*If You Feel Different, You Drive Different*” in 2019^[23] which is part of impaired driving mobilizations. While these efforts are a step in the right direction, future public awareness campaigns should continue to target common misperceptions related to drug-impaired driving and be coupled with high-visibility enforcement.

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Additional Resources

- AAA Foundation for Traffic Safety: www.aaafoundation.org
- DUID Victim Voices: www.duidvictimvoices.org
- Foundation for Advancing Alcohol Responsibility: www.Responsibility.org
- Governors Highway Safety Association: www.ghsa.org
- National Highway Traffic Safety Administration: www.nhtsa.gov/risky-driving/drug-impaired-driving
- Smart Approaches to Marijuana: www.learnaboutsam.org
- We Save Lives: www.wesavelives.org