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A ROCKY ROAD SO FAR:

Recreational marijuana and impaired driving

March 2019

Marijuana legalization is spreading.
What does this mean for traffic safety?

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Introduction

The “green gold rush” shows no signs of slowing.

As of March 11, 2019, more than 30 states, the District of Columbia, Guam and Puerto Rico have programs that allow qualifying patients to access medical marijuana products. Another 13 states permit non-intoxicating medical marijuana products.

Ten states and D.C. permit recreational marijuana, where any adult over the age of 21 can possess and use the drug. Recreational marijuana sales are booming.¹

Many people are rightly concerned about road safety in an age of legal recreational marijuana. Alcohol-impaired driving claimed nearly 11,000 lives in the U.S. in 2017 alone.² Will increasing acceptance and use of marijuana lead to a similar trend?

In a 2017 report to Congress, the U.S. National Highway Traffic Safety Administration (NHTSA) concluded that “the scope and magnitude of the marijuana-impaired driving problem in this country cannot be clearly specified at this time.”³ However, the report did note that “there are a number of indicators that suggest that a problem exists.” For example, based on the available evidence, it seems clear that “stoned driving” is dangerous.

This report examines the current state of knowledge related to marijuana impairment: its effects on driving abilities, how traffic safety might be impacted, and how states are grappling with the issue of “stoned driving.”

Key takeaways:

Marijuana affects users differently but it generally impairs cognitive and motor skills. The intensity and duration of marijuana impairment depends on several factors. But most research agrees that marijuana use to some degree results in impairment in the following: coordination, memory, associative learning, attention, cognitive flexibility and reaction time.

Marijuana impairment increases the risk of culpability for a car crash. And mixing marijuana and alcohol heightens risks. The more impaired the user, the more likely they are to be culpable for a traffic accident. The risks rise dramatically if the user has also consumed alcohol. Mixing both substances increases impairment greater than the net effects of each individual substance.

Marijuana use could increase after recreational marijuana legalization — and the number of THC-positive drivers could increase as well. When a state legalizes marijuana, more people use the drug. More people using marijuana could mean more people driving with THC in their systems.

Legalization is associated with an increase in collision claim frequency. Early evidence suggests that states with legal recreational marijuana experience higher collision claim frequency than comparable non-marijuana control states.

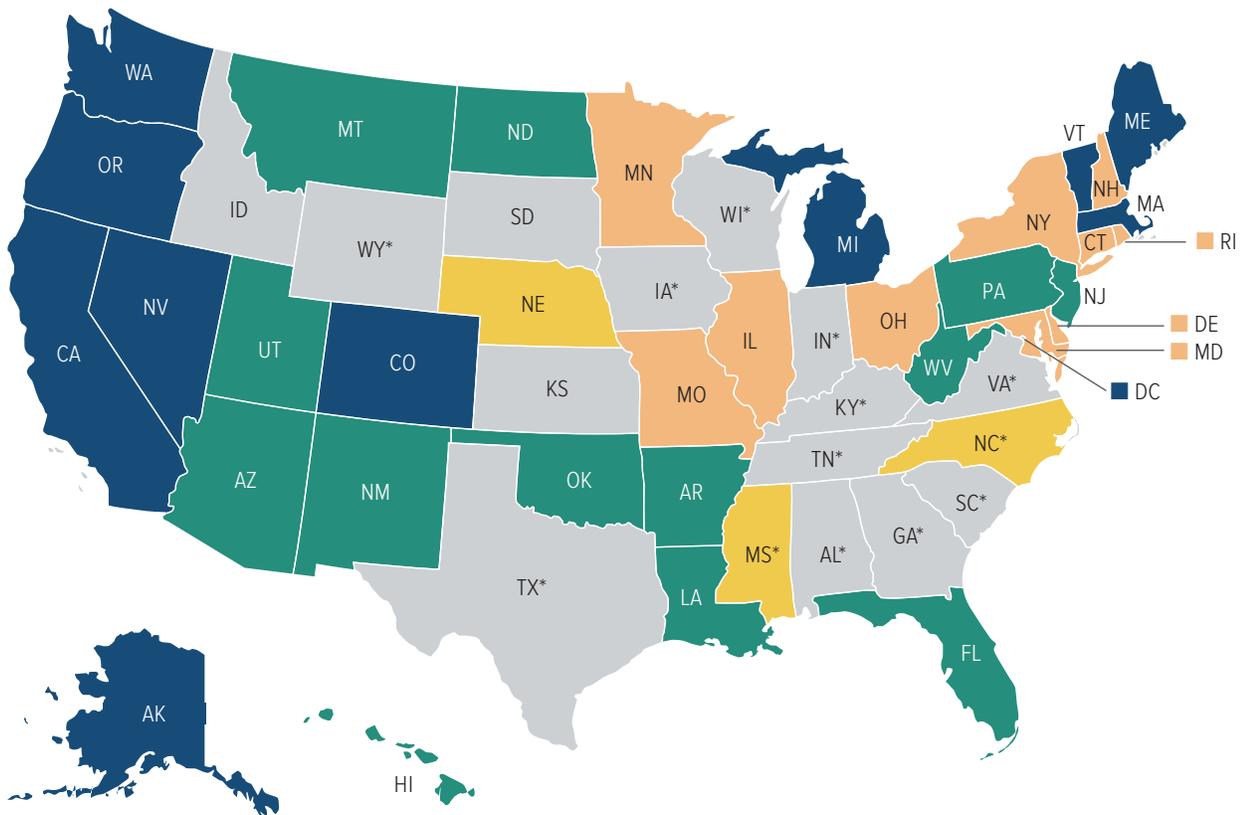
Fatal crashes involving drivers who tested positive for THC have increased — but it remains unclear how legalization impacts fatal crash rates. While THC-positivity rates in fatal crashes has increased, there is conflicting evidence about whether legalization increases fatal crash rates.



Fig. 1

Current marijuana laws by state

■ Fully legal ■ Medical use legal and recreational use decriminalized ■ Medical use legal ■ Recreational use decriminalized ■ Fully illegal



*CBD/Low THC medical program.
Source: National Journal; Ballotpedia, 2019.

A brief history of marijuana use in the U.S.

Marijuana is a plant of the species *Cannabis sativa L.*, part of the genus *Cannabis L.*⁴

The genus includes both industrial hemp and marijuana, which are chemically distinct from one another.⁵ Marijuana contains appreciable amounts of delta-9-tetrahydrocannabinol (THC), the active chemical that induces user intoxication. Industrial hemp, on the other hand, is typically understood as a cannabis plant containing not more than 0.3 percent THC on a dry weight basis.⁶ These so-called “trace THC amounts” are too low to induce intoxication. Both industrial hemp and marijuana also

contain several other, non-psychoactive cannabinoids such as “cannabidiol” (CBD).⁷

For the purposes of this paper, “cannabis” refers to the plant genus *Cannabis L.*, including industrial hemp. “Marijuana” refers to those cannabis plants with more than 0.3 percent THC on a dry weight basis.

Cannabis includes both industrial hemp and marijuana, which are chemically distinct from one another.

There is evidence that marijuana has been consumed for thousands of years, often for medicinal purposes. The plant was used as a patent medicine in the United

States since at least 1850, when the *United States Pharmacopoeia* described the plant for the first time.⁸ Marijuana was first regulated under U.S. federal law under the Marihuana Tax Act of 1937.⁹

Marijuana was subsequently subjected to U.S.-wide prohibition under the Controlled Substances Act of 1970 (CSA), which established a scheduling system for substances regulated under federal law.¹⁰ Marijuana is currently a Schedule I drug under the CSA, which defines Schedule I drugs as substances that have “no currently accepted medical use in the United States, a lack of accepted safety for use under medical supervision, and a high potential for abuse.” Other substances under Schedule I include heroin, LSD, and peyote.¹¹

Despite the treatment of marijuana under federal law, in 1996 California became the first state in the U.S. to pass legislation permitting a medical marijuana program. Since then, more than 30 states and the District of Columbia have passed legislation permitting so-called “comprehensive” medical marijuana programs, which typically allow qualifying patients to access, possess, and use marijuana and marijuana-related products.¹²

Since 2012, several states have also begun to pass legislation permitting anyone over the age of 21 to possess and use marijuana regardless of their medical status (“recreational marijuana”), subject to certain limitations.¹³ Most of those states also have or are developing regulations for a commercial market to support recreational marijuana sales (Fig. 1).

The complicated story of marijuana impairment

The THC in marijuana plants causes intoxication in a user. Common experiences while intoxicated include feelings of euphoria and relaxation; some users may also experience heightened sensory perceptions and altered perceptions of time.¹⁴

Marijuana can affect users differently, depending on a variety of factors. Several factors influence intoxication onset, intensity and duration, including the method of consumption, type of marijuana product consumed, product potency and user characteristics.



Product potency is linked to THC levels. Potency varies considerably across marijuana products and can influence the degree of impairment.

Marijuana and related products can be consumed in several ways, including:

- inhalation (either by smoking or vaporizing) of dried plant matter or concentrates (such as hashish or kief)
- oral ingestion (edibles, capsules, infusible oils)
- sublingual ingestion (lozenges)
- topical application (lotions, salves, oils)

Smoking often causes almost immediate intoxication, with impairment typically lasting two to four hours. Intoxication onset is more delayed for other methods, sometimes up to two hours for edibles (e.g. “special brownies”) – and impairment may last much longer.

Product potency is linked to THC levels. Potency varies considerably across marijuana products and can influence the degree of impairment. Smokable marijuana plant matter can range anywhere from 8 percent to 30 percent THC, whereas high-quality hash oil could reach up to 80 percent THC.¹⁵ There is evidence that marijuana products have become more potent over time.¹⁶

User characteristics will also influence impairment. For example, chronic users may experience less acute impairment than non-chronic users.¹⁷

Marijuana cannot cause overdose death but it can potentially cause temporary psychosis. There are no documented instances of an adult dying from an overdose of marijuana alone.¹⁸ However, in rare instances a user may experience a psychotic reaction to the drug or high levels of anxiety – in some cases, these side effects could lead a user to seek medical treatment. Such negative effects are often experienced after consuming edible marijuana products, which are often more potent and take longer to induce intoxication.

Determining impairment: “THC persistence”

A key issue raised in many studies examining the effects of marijuana-impaired driving and the impact on traffic safety is “THC persistence.” Unlike alcohol, THC levels in a user’s body may not be an accurate indication of impairment.

Compared with marijuana, determining alcohol impairment is relatively straightforward. The human body processes alcohol at a rate that allows blood alcohol concentration (BAC) to closely correlate with intoxication, making it an effective and accurate benchmark for measuring impairment.¹⁹

THC presence does not necessarily indicate impairment. The human body processes THC differently than alcohol. As the AAA noted in a major 2016 study, THC and THC metabolites can remain in a user’s blood or urine for weeks after they consume marijuana, depending on various factors.²⁰ Furthermore, THC levels often spike immediately after consumption, but decline to low levels very quickly – long before impairment ends. It is therefore not currently possible to accurately determine when a user consumed marijuana based on the THC levels in their body.

Additionally, the length and intensity of intoxication depends not only on the strength of the marijuana product, but also on how the drug is consumed. Inhaling marijuana typically causes onset of intoxication within five minutes, with symptoms of intoxication lasting a couple of hours. On the other hand, ingesting marijuana can delay onset of intoxication between one to four hours, and intoxication can last much longer.²¹

These and other reasons led the AAA to conclude that “simply detecting any THC does not therefore indicate impairment.”²²

A U.S. National Highway Traffic Safety Administration report came to similar conclusions, noting that most studies have found that levels of THC do not closely correlate to the degree of impairment.²³ Peak impairment can occur when THC levels have already begun to decline, and user-reported impairment can continue long after THC levels have dropped to low levels. Furthermore, chronic users may have low THC levels even without having recently consumed any marijuana.

In sum, THC detection in a user post-collision does not necessarily mean that marijuana impairment contributed to a traffic accident.



THC detection in a user post-collision does not necessarily mean that marijuana impairment contributed to a traffic accident.



Marijuana- impaired driving and crash risks

Nonetheless, it seems clear that some level of marijuana intoxication causes impaired driving.

Marijuana impairment degrades cognitive and motor skills. Most studies agree that marijuana use results in impaired coordination, memory, associative learning, attention, cognitive flexibility, and reaction time.²⁴ Driving ability is thereby degraded to some degree – but by how much remains a matter of study and is subject to several factors, including the level of impairment and user characteristics.

For example, there is some evidence that user impairment may also result in limited “compensatory defensive” driving, in which a user drives more carefully to compensate for a degradation in motor functioning – but this may only mitigate degradation for some skills and may not

apply to non-chronic users.²⁵ Nor does this compensate for any slowed reaction time in the event of a high speed or unexpected traffic incident. And impairment from marijuana becomes more pronounced the more difficult the task.²⁶

The greater the impairment, the worse the driving abilities. The level of impairment can influence the degree to which driving ability degrades. Indeed, there



The more difficult the task,
the more pronounced the
impairment from marijuana.

is strong evidence that the more impaired the driver, the worse their driving abilities.²⁷

Marijuana impairment could increase the risk of being culpable for a crash. Evidence suggests that acute impairment could increase the risk of crash culpability – though the magnitude of the increased risk is still a matter of further research and can vary widely depending on the study. For example, one review found that the increase in crash risk culpability could be 36 percent or 22 percent, depending on the model used.²⁸ Another review found that someone driving under the influence of marijuana is 1.65 times more likely to be responsible for a fatal accident.²⁹

But the extent to which marijuana use increases crash risks overall remains unclear. One review found evidence that 20 to 30 percent of crashes involving marijuana occurred because of the marijuana use.³⁰ (This compares to roughly 85 percent of crashes involving alcohol that occurred because of alcohol use.) The review estimated that the crash risk increased 22 percent while under the influence of marijuana, which the review described as a low-to-medium risk increase.

The U.S. National Highway Traffic Safety Administration (NHTSA) published similar results, finding that the unadjusted odds ratio for marijuana crash risks was 1.25.³¹ However, after adjusting for gender, age, race/ethnicity, and alcohol use, NHTSA found “no significant contribution

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to crash risks from any drug,” including marijuana. The agency did note that this appears to contradict other studies, some of which found significant increases in crash risk. One possible reason for NHTSA’s finding of no increased crash risks from marijuana use could be due to the difficulty of testing for marijuana impairment. Another possible reason is that other variables, such as demographics, could co-vary with marijuana use and account for much of the increased crash risks. For example, per the report: “if the THC-positive drivers were

predominantly young males, their apparent crash risk may have been related to age and gender rather than use of THC.”

Nonetheless, NHTSA emphasized that these findings do not imply that impaired driving is risk-free (as indeed other studies that found low-to-medium risk increases also emphasized). Rather, more research needs to be conducted before “definite conclusions about drug use and crash risk can be reached.”

Mixing marijuana and alcohol increases impairment greater than the net effects of each individual substance.



Mixing marijuana and alcohol produces additive effects. One 2017 study found evidence that mixing marijuana and alcohol increases impairment greater than the net effects of each individual substance.³² The study found that the adjusted odds ratio of fatal crash involvement for testing positive for alcohol alone were 16.33. For marijuana alone, the odds ratio was 1.54. But the ratio for testing positive for both substances was 25.09.

Alcohol may also increase THC levels. Any potential compensatory defensive driving is nullified when a user mixes alcohol and marijuana.³³

The background of the page is a blurred night scene of city lights, with various colored bokeh lights (yellow, blue, red, green) scattered across the frame. In the lower-left foreground, a car's speedometer is visible, showing a needle pointing to a low speed. The overall image has a dark, moody atmosphere.

Recreational marijuana legalization and impaired driving

The relative recency of recreational marijuana legalization in some states makes it difficult to determine its overall real-world impact on traffic safety.

Furthermore, different impacts on traffic safety between recreational and medical marijuana might exist.

There is evidence that legalizing **medical marijuana** is associated with more marijuana use in a state.³⁴ However, an Insurance Institute for Highway Safety (IIHS) study on marijuana use and crash rates notes that legalized medical marijuana may have different traffic safety impacts than recreational marijuana.³⁵ The study noted in part that there is some evidence that medical marijuana is substituted for alcohol or opioids, which may compensate for any increase in medical marijuana use – and while marijuana use might be implicated in more traffic fatalities because of potential substitution, the overall rates of traffic fatalities could decrease. A 2013 study found evidence suggesting that medical marijuana legalization is associated with a decrease in traffic fatalities.³⁶ A later study came to a similar conclusion.³⁷

The relative recency of recreational marijuana legalization in some states makes it difficult to determine its overall real-world impact on traffic safety.

Early evidence of the impact of **recreational marijuana** on traffic safety is discussed below, including the incidence of impaired driving, crash rates and traffic fatality rates following legalization.

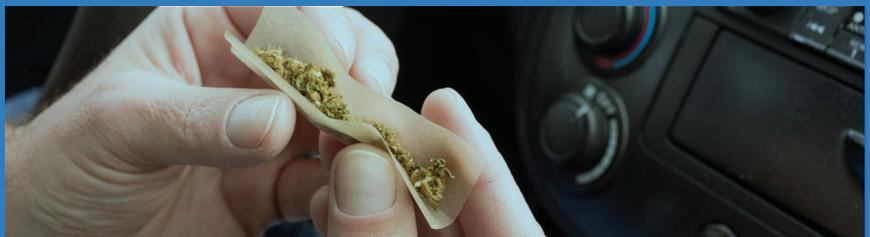
Incidence of impaired driving after recreational legalization

As might be expected, recreational marijuana legalization is associated with an increase in the prevalence of marijuana use. It appears that the number of “THC-positive” drivers increases after legalization. Many DUI defendants test positive for both marijuana and alcohol. Furthermore, high risk demographics tend to consume marijuana at higher rates and drive while impaired more often.

The number of marijuana users could increase after legalization. As with medical marijuana, there is some evidence that legalizing recreational marijuana increases the prevalence of marijuana use. This was found, for example, in Washington state.³⁸ And while adult marijuana use rates in Colorado have remained fairly stable since 2014,³⁹ the prevalence of adults using marijuana daily or near daily has increased since 2014, and Colorado use rates are higher than national averages.⁴⁰

The number of “THC-positive” drivers on the road could increase after legalization. There is some evidence that the percentage of people driving with THC in their systems during the daytime increased after Washington state legalized recreational marijuana.⁴¹ However, total increases in THC positivity while driving were not statistically significant. Additionally, as noted above, the presence of THC does not necessarily indicate impairment. Nonetheless, given that THC persists in a user’s bloodstream for some time, it stands to reason that a higher prevalence of use would be associated with higher rates of THC-positive drivers.

There is evidence of some impaired driving in states with legal recreational marijuana. A survey in Colorado found that almost 70 percent of cannabis consumers have reported driving while impaired at least once in the past year.⁴² Another survey found that between 16 and 20 percent of current marijuana users reported driving within 2-3 hours of consumption.⁴³ However, only 2.1 to 3.0 percent of all Colorado adults (regardless of whether or not they are a marijuana consumer) reported driving within a few hours of marijuana consumption when they are most likely to be impaired.⁴⁴ In comparison, about 2.0 percent of Coloradoans report driving after drinking “too much.”⁴⁵



A survey in Colorado found that almost 70 percent of cannabis consumers have reported driving while impaired at least once in the past year.

Self-reported data in Washington indicates that 15 percent of respondents had driven within two hours of consuming marijuana in a 12-month period.⁴⁶

Regarding medical marijuana, a 2018 survey of Michigan medical users found that in the past six months 56 percent had driven within two hours of consuming marijuana. Twenty-one percent reported that they had driven while “very high” within the past six months.⁴⁷

Impaired drivers often have both marijuana and alcohol in their systems. A Colorado Division of Criminal Justice report found that 70 percent of DUI defendants tested positive for both alcohol and marijuana.⁴⁸ The report argued that the rate may be much higher, since “officers may confirm the presence of alcohol above the per se limit and stop further testing at that point.”

Washington found that 9 percent of survey respondents had reported driving under the influence of both alcohol and cannabis over a 12-month period.⁴⁹ Forty-five percent of these reported doing so “once or twice” over the 12 months. Nearly 20 percent reported doing so “7 to 11 times” and nearly 10 percent did so daily.

Higher risk demographics have higher rates of marijuana-impaired driving. Younger drivers are at greater risk of traffic accidents than older drivers. Younger male drivers are at higher risk of traffic accidents than females. Men consume marijuana at higher rates than women.⁵⁰ And early evidence suggests that younger male drivers are most likely to drive under the influence of marijuana compared to other demographics.⁵¹ Furthermore, males are more likely to drive under the influence of marijuana *and* alcohol at the same time.⁵²

Crash rates after recreational legalization

Early evidence suggests that recreational marijuana legalization is associated with an increase in traffic accidents.

Collision claim frequency has increased. In 2017, the Highway Loss Data Institute (HLDI) found evidence that increased collision claim frequencies in Colorado, Oregon and Washington correlated with the enactment of recreational marijuana legalization. Each state was analyzed relative to nearby states without legal recreational marijuana. HLDI found that claim frequencies in Colorado were 13.9 percent higher, in Oregon 4.5 percent higher and in Washington 6.2 percent higher than in control states. A combined analysis found that recreational marijuana was associated with an overall 2.7 percent increase in collision claim frequency.⁵³

In April 2018 HLDI updated its findings with another year of collision claims data. HLDI found that claims frequencies in Colorado were 12.5 percent higher, in Oregon one percent (not significant), and in Washington 9.7 percent higher than in control states. Combined analysis found that recreational marijuana was associated with a 6 percent increase in collision claim frequency⁵⁴ (Fig. 2).

Police-reported crashes increased following legalization. The IIHS conducted another study in 2018, examining police-reported crash rates in states with legal recreational marijuana. The study’s findings were generally consistent with the collision claims rate increases in those states: police-reported crash rates increased an average of 5.2 percent in Colorado, Oregon and Washington when compared to control states.⁵⁵

Recreational marijuana was associated with a 6 percent increase in collision claim frequency.

Fig. 2

Percent change in collision claim frequency following recreational marijuana legalization*



*vs. nearby states. **Not statistically significant.
Source: Highway Loss Data Institute, 2018.



Police-reported crash rates increased an average of 5.2 percent in Colorado, Oregon and Washington when compared to control states.

Fatal crashes following recreational legalization

Unfortunately, early evidence is ambiguous about the effects of recreational marijuana legalization on fatal crash rates.

There are limitations to current marijuana-impaired fatality data. In addition to difficulties in determining marijuana impairment, the recency of legalization has made reliable data collection difficult. For example, to date the Colorado Department of Transportation (CDOT) can only provide cannabis-involved fatality data beginning in 2016 and relies on the state’s “permissible inference” standard to determine marijuana impairment.⁵⁶ Prior to 2016, data collection on THC metabolites was incomplete or unavailable. The currently available CDOT data indicates a decrease from 2016 to 2017 in cannabis-involved fatalities in Colorado, from 52 to 35.

And the CDOT data do not distinguish between fatalities where alcohol or other drugs may have been present. As noted above, concurrent alcohol or other drug use may produce additive effects, and it is therefore unclear to what extent marijuana use alone contributed to a traffic fatality. Concurrent alcohol or other drug use has also raised difficulties in other early studies examining marijuana crash risk and fatalities. Many found evidence of significant increases in marijuana-related traffic fatalities following recreational legalization, but without always controlling for concurrent drug use. Whether the traffic fatalities were *caused* by marijuana impairment is a different question entirely.

Fatal crashes involving drivers who tested positive for THC have increased. In Washington, it appears that after legalization, more people with “detectable” levels of THC in their bloodstreams were involved in fatal accidents.⁵⁷ However, as discussed above, the mere presence of THC does not necessarily indicate marijuana impairment.

In Colorado, 6 percent of traffic fatalities involved a driver testing positive for marijuana in 2006.⁵⁸ By 2017 that number had increased to 21 percent of all fatalities. Thirty-seven percent of the drivers who tested positive had levels of THC that, under Colorado law, imply a “permissible inference” of marijuana impairment. However, these numbers do not control for concurrent alcohol or other drug use, the problems of which are outlined above. Indeed, only 35 percent of drivers who tested positive for marijuana following a fatal crash in 2017 tested positive for marijuana only, and it is unclear what percentage of those had THC levels exceeding Colorado’s determination for marijuana impairment.

Recreational marijuana legalization is associated with an increase in the prevalence of marijuana use, and could partially explain the increase in driver THC positivity.

After legalization, more people with detectable levels of THC in their bloodstreams were involved in fatal accidents.

But it remains unclear whether legalization impacts fatal crash rates. One study found evidence that legalizing recreational marijuana could increase vehicle fatalities by 8 percent when compared to non-legal states.⁵⁹

On the other hand, at least one study found no significant annual changes in crash fatality rates for Colorado and Washington when compared to eight control states.⁶⁰

Another study found evidence that the increase in fatal crashes involving THC-positive drivers is not significantly different from that of control states without recreational marijuana.⁶¹ The study’s authors suggest that the legalization of recreational marijuana did not impact the trends in fatal crashes involving THC-positive drivers.



State responses to marijuana-impaired driving

The difficulty in determining marijuana impairment has been met with different responses among states that have legalized recreational and medical marijuana use (Fig. 3).

There is no agreed-upon impairment limit. Greater impairment is associated with worse driving skills.⁶² And there is some evidence that higher blood THC concentrations are associated with a driver's culpability in an accident, as stated before.⁶³ However, there is no agreed-upon impairment limit above which an individual is indisputably impaired.⁶⁴

Some states enforce per se limits on THC concentrations. Several states currently enforce per se limits to determine marijuana impaired driving, typically 5 ng/ml

of THC, though the limit in some states is as low as 1 ng/ml. Operating a vehicle with blood THC concentrations above the per se limit is prohibited. Colorado enforces a “permissible inference” standard, in which any THC concentration above 5 ng/ml can result in a DUI charge but is not, by itself, enough to convict. (Other states enforce a zero tolerance policy for THC – any level of THC is prohibited.)⁶⁵

There is no agreed-upon impairment limit above which an individual is indisputably impaired.

However, per se limits have been criticized for their potential to incriminate drivers who are not impaired, since THC can persist for long periods of time in a user. Unfortunately, the opposite may also be true: impaired drivers may not always be prosecuted, since high levels of THC quickly leave the bloodstream before impairment subsides. One study found that only 10 percent of its participants would have been prosecuted for impaired driving, even though many self-reported recent marijuana use.⁶⁶

Furthermore, the time between a roadside traffic stop and subsequent blood testing could take hours, making potential impairment difficult to measure since THC levels might have declined long before testing.

The AAA has therefore concluded that “a quantitative threshold for per se laws for THC following cannabis use cannot be scientifically supported.”⁶⁷

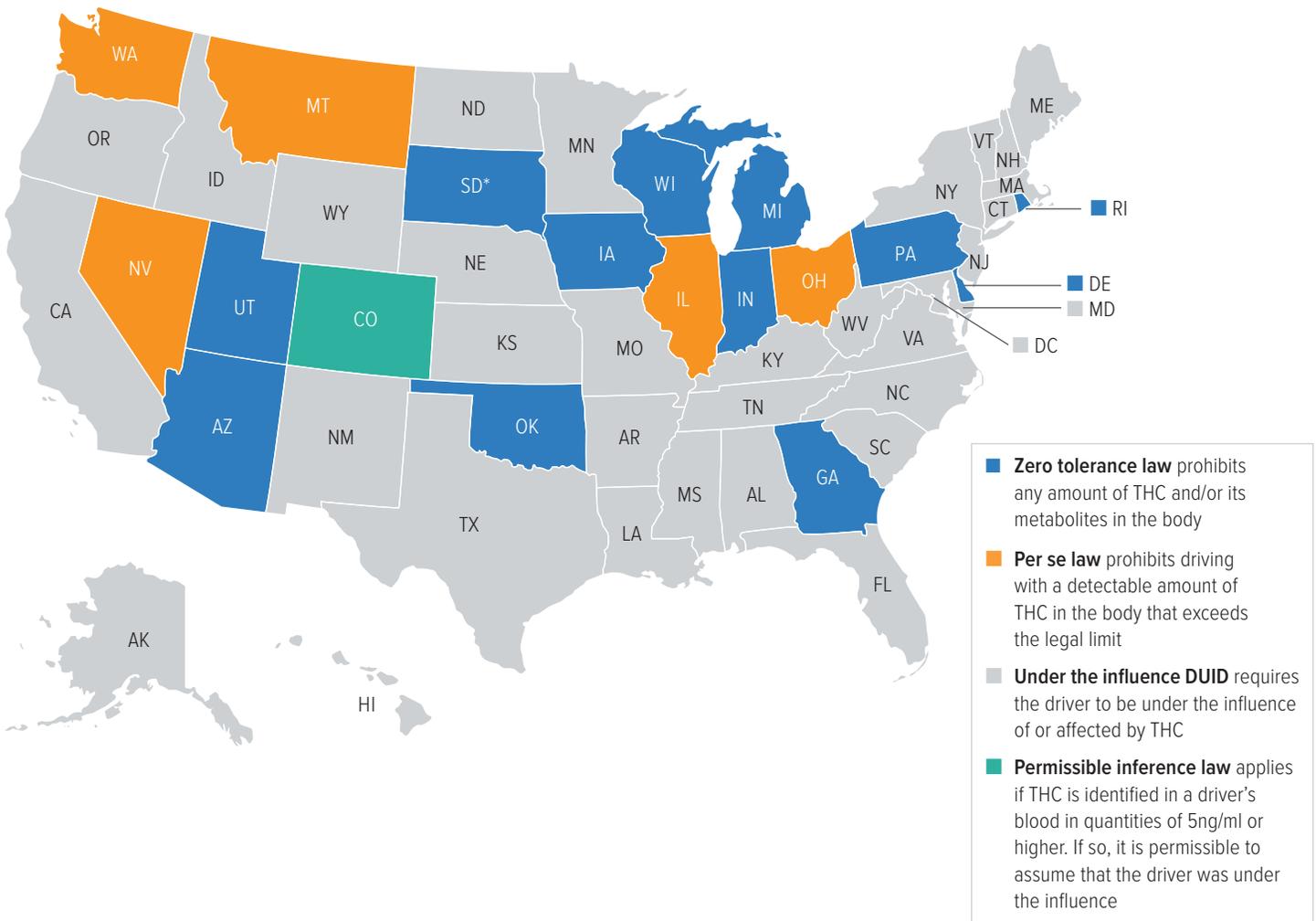
Other states use “behavioral evaluations” to help determine impairment. Several states prohibit a driver from being under the influence of THC.⁶⁸ In these states, determining whether a driver was marijuana-impaired depends on a variety of evidence, including behavioral evaluations of the driver by a law enforcement officer.

There is currently no scientifically sound roadside impairment test. There is currently no “breathalyzer”-equivalent for marijuana impairment, in part due to the various difficulties of scientifically measuring impairment as outlined above.⁶⁹ Some have argued that saliva testing may help in determining THC levels during a roadside stop, but others have argued that the mere presence of THC still cannot consistently and scientifically determine impairment. Furthermore, such tests may conflate marijuana use and passive exposure to marijuana (e.g. smoke).⁷⁰

There is currently no breathalyzer-equivalent for marijuana impairment.

Fig. 3

State marijuana-impaired driving laws



*South Dakota has a zero tolerance law for drivers under the age of 21.
Source: National Conference of State Legislatures.



“It remains unacceptable for any safety-sensitive employee subject to drug testing under the Department of Transportation’s drug testing regulations to use marijuana.”

- U.S. Department of Transportation

Impacts on insurance

Personal auto: The standard personal auto policy does not address driving under the influence of any drug, including alcohol and marijuana. However, auto insurance rates may be affected by the spread of marijuana legalization, particularly if such legalization is associated with an increase in impaired driving and related accidents. An individual’s auto insurance rates may rise if they are convicted of driving under the influence of marijuana. Risky driving behavior may also influence rates.

Commercial auto: The standard commercial auto policy also does not address driving under the influence of drugs. However, the U.S. Federal Motor Carrier Safety Administration (FMCSA) governs the drug and alcohol testing rules and regulations for employees driving vehicles that require a commercial drivers license.⁷¹

The FMCSA requires employers to test a prospective employee for drugs, including marijuana, before permitting the individual to operate a commercial motor vehicle.⁷² The FMCSA may also require post-accident drug testing in the event of certain vehicle accidents, including those that result in a human fatality.

Random testing throughout the year is also required for commercial operators. Any commercial motor vehicle operator who is under the reasonable suspicion of being under the influence of drugs can be tested immediately.

An operator who fails a drug test is prohibited from operating a commercial motor vehicle.⁷³ The FMCSA prescribes a “return-to-duty” process for such an operator.

Of note, the U.S. Department of Transportation has stated that: “It remains unacceptable for any safety-sensitive employee subject to drug testing under the Department of Transportation’s drug testing regulations to use marijuana.”⁷⁴

Conclusion

Marijuana is an intoxicant. As an intoxicant, it can impair driving abilities. But marijuana-impaired driving is an evolving issue with many questions and few concrete answers. Do the rates of marijuana-impaired driving increase following recreational legalization? What does marijuana-impaired driving mean for crash risks and traffic fatalities? How can states best address marijuana-impaired driving?

There is active research, discussion and debate being conducted to answer these and other questions. As more states legalize recreational marijuana, forthcoming answers will become ever more critical to help best guide public policy and traffic safety initiatives.

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