



## TOPIC

# Addressing Marijuana-Impaired Driving

## PROBLEM

Marijuana use can impair attentiveness, reaction time, motor coordination, and judgement, raising the risk of automotive accidents. These risks are exacerbated when the driver also consumes alcohol.

Marijuana use is associated with impairments in psychomotor and cognitive function, which poses a threat on the road to both the users and to other drivers around them.

## SOLUTIONS



Solutions for measuring marijuana impairment are still evolving. Some legalizing states have followed the alcohol impairment model and established “per se” limits (e.g., 5 nanograms of THC/ml blood) above which drivers are presumed impaired. Other states have no per se standard and rely instead on generic approaches to judge impairment, such as evidence of erratic driving or poor performance on roadside coordination tests.



Alcohol testing methods such as breathalyzation are generally effective at measuring recency of alcohol use and level of impairment. However, comparable technology does not exist for cannabis, which complicates assessment of driver impairment.

## CONCLUSION

Many researchers are attempting to develop new technologies to measure cannabis impairment, but currently available technologies have numerous shortcomings for addressing this complex problem. Until technology improves, a combination detection approach is probably most prudent, i.e., relying on both biological tests and generic performance impairment tests used for a range of substances.



## KEY POLICY EVIDENCE

Studies are mixed regarding whether marijuana legalization increases the prevalence of automotive accidents. A 2017 study found that participants who ate marijuana brownies showed significant impairment in attentiveness, physical coordination and ability to concentrate, yet only 11% of them ever had a blood THC level of the legal limit used by several US states.

Some jurisdictions use an oral fluid test followed by a blood test, which increases the number of cannabis-impaired drivers who are caught. But such tests also produce some false positives.

Oral fluid tests like mouth swabs have the advantage of detecting recent cannabis use, but they provide only a yes/no result rather than measuring the degree of exposure.

### LEARN MORE

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Lane TJ and Hall W (2019). Traffic Fatalities within US States That Have Legalized Recreational Cannabis Sales and Their Neighbours Addiction. *Addiction* 114(5): 847-856.

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Our findings tell me that 5 nanograms of THC per milliliter of blood is just not a good marker for intoxication," says Ryan Vandrey, a scientist at Johns Hopkins who has studied the effects of marijuana on cognitive functioning. Attorney and highway safety expert Stephen Talpins agrees, arguing that the current standard is "a license to use with near impunity. There should be zero tolerance for people driving with any amount of THC in their blood."

*Dr. Keith Humphreys, "Everyone agrees 'driving while high' is bad. But what does that even mean?," The Washington Post, May 31, 2017*

