

WE'VE BEEN HERE BEFORE

The impact of marijuana legalization on DUI

By Jim Concannon

The United States has a history of making intoxicating substances, like alcohol and marijuana, illegal under the guise of weakening moral values. So-called moral offenses—drinking alcohol, gambling, cheating on your spouse—offend some people to the point where they feel legislation banning or restricting such activities is needed. This, of course, is how Prohibition came into effect in 1919. But legislating morality has also proved difficult. As far back as 1926, RM Maciver warned that puritanical legislation was not necessarily a proper object of political lawmaking.(1) Prohibition was repealed just seven years later.

The same societal forces that led to the repeal of Prohibition are currently shaping the trend toward relaxing marijuana laws. A Gallup poll in November 2017 showed [support for recreational marijuana legalization](#) at 64 percent, a record high.(2)

That support is carrying over to the voting booth. In 2016, Maine, Massachusetts, Nevada, and California passed legislation legalizing recreational marijuana use, joining four states that already had similar provisions. Additional states will likely follow suit; 21 other states legalized marijuana for medical use, and such laws are often a precursor to recreational legalization.

So, it's safe to say we can expect recreational marijuana use to grow. For law enforcement officers who routinely patrol America's roadways, that creates an interesting question: What impact will marijuana legalization have on driving?

Although the repeal of Prohibition led to a widespread societal acceptance of drinking alcohol, over time we as a society drew a line: Intoxication may be OK, but intoxicated *driving* is roundly ostracized, and DUI laws enjoy widespread public support. Recognizing that it may be inappropriate to legislate morality, we have agreed that it is entirely appropriate to regulate dangerous behavior. And we have used scientific research to help us determine how much is too much and how to detect whether a driver is intoxicated.

Looking back at how our understanding of alcohol intoxication and driving under the influence (DUI) evolved allows us to make certain predictions about the impact of marijuana legalization.

DUID Will Increase

The repeal of Prohibition not only brought social acceptance to drinking alcohol; it also caused an influx of drunk driving. In 1933 the 21st Amendment repealed Prohibition nationwide. In the first six months of 1934, injuries and deaths due to DUI were four times higher in Chicago, and Los Angeles officials reported a vast increase in DUI.(3)

We can expect the same trend with marijuana. In fact, [we're already seeing it](#). In Washington, 19% of those arrested for intoxicated driving had THC in their system before marijuana legalization. Following legalization in 2012, the rate has increased steadily, reaching 25 percent in 2013, 28 percent in 2014, and 33 percent in 2015.(4) Correlation does not prove causation, but common sense tells us if more people are smoking pot, more drivers will be stoned.

Societal Attitude Toward Stoned Driving Will Change

It seems evident to us now that drinking and driving is a dangerous act. However, that was not always the case. In the not-so-distant past, drinking and driving was not necessarily frowned upon; in fact, some considered it an act of free will. "Punishment" took form in civil court to compensate the injured party. Criminal sanctions were a topic of much debate, both socially and politically.

The industrial revolution brought machinery that made intoxicated behavior dangerous to bystanders. Intoxicated individuals in the past might merely fall off a horse or get in a bar fight. With machinery, mainly automobiles, a real danger existed that could impact innocent bystanders. Thus, there was some early recognition of the dangers of DUI. For example, around 1909, the Massachusetts highway commission implemented fines of up to \$200 and incarceration of up to six months for the operation of an automobile recklessly while under the influence of liquor.(5) News reports from as early as 1887 point to the role of alcohol in train crashes, and the first report on the effect of drinking and operating motorized wagons was completed in 1904.(6)

However, the passage of the Volstead Act (National Prohibition) in 1919 made alcohol harder to obtain and consumption a possible crime. Thus, rates of drinking went down, drunk driving declined, and so did attention to the issue.(5) After the repeal of Prohibition, it took decades of DUI-related deaths before DUI laws became widely enacted, and longer before they were strictly enforced. That change came mostly due to grassroots efforts by organizations such as Mothers Against Drunk Driving.

When it comes to driving under the influence of marijuana, we will likely not move as slowly; having learned the devastating effects of DUI, it should not be as great a leap to accept the effects of DUID. Nevertheless, we have a ways to go. Lee Vinsel, an assistant professor of science and technology studies at the Stevens Institute of Technology in New Jersey, has [written about](#) how a study by Ramaekers et al. (2004) is often miscited by marijuana users as proof that driving stoned is safer than driving straight.(7) (In fact, the study found that stoned drivers perform worse than straight drivers, but that they perform better than drunk drivers.) Stoned driving is still the stuff of comedy (*Cheech and Chong, The Big Lebowski, Super Troopers*). Stoned drivers are often depicted as driving too slowly, too timidly, in contrast with the aggressive, reckless actions of drunk drivers. Many people who acknowledge that it's probably not safe to drive high argue that at least it's safer than driving drunk.

Are we justifying dangerous behavior (stoned driving) because another behavior (drunk driving) is more dangerous? Most would agree that it *is* more dangerous to drive 150 miles per hour than it *is* to drive 100 miles per hour, but both driving patterns *are* hazardous and can impact innocent lives. Thus, both behaviors need legislative attention.

As the number of stoned drivers increases, we can expect a change in the attitude toward stoned driving. How quickly that attitude changes will likely rest on how quickly we can amass scientific



evidence on the effects of stoned driving and develop a scientifically sound method of determining marijuana impairment.

Science Will Lag Behind

And that, in turn, leads to the third prediction. Even if we intuitively understand that driving stoned is dangerous, there will be a lag before we can scientifically prove it and test for it, and that, in turn, will impact law enforcement.

We saw this same lag with alcohol. After society recognized the social problem was real, and restrictions on intoxicated driving were enacted, evidentiary issues became apparent. There was no actual scientific data to back the argument that alcohol consumption indeed had a negative impact on skills necessary to operate a motor vehicle. Everyone knew it was dangerous and innocent lives were at stake, but a presumption of guilt requires tangible evidence based on scientific study.

In 1932, a Swedish study by Widmark was the first to establish the basic relationship between alcohol consumption and blood alcohol content (BAC).(6) In 1934, Herman Heise published the first-known research on the effects of alcohol on driving, and in 1954 Robert Borkenstein invented the first practical alcohol breath testing device.(6) The most famous drunk driving research paper, the 1964 Grand Rapids Study, conducted and written by Borkenstein, determined an actual relationship between the consumption of alcoholic beverages, BAC and the inability to safely operate a motor vehicle.(8)

Borkenstein's Breathalyzer subsequently made it possible to measure BAC and how it was tied directly to impairment. Since then, additional research has continued to refine our understanding of the impact of alcohol on driving, with many states lowering legal BAC levels.

We're in a similar situation with understanding the effects of stoned driving. Because marijuana is classified by the federal government as a schedule I drug and was determined to serve no medicinal function in addition to posing a high risk of addiction and abuse, clinical researchers were prohibited from conducting scientific research.(9) Thus, studies documenting the effects of THC on driving behavior are sparse in the United States.

We do know that marijuana, mainly dependent on the THC dose, reduces visual scanning, orientation ability, divided attention and psychomotor performance, and that it affects mood, memory and attention. These performance inhibitors, in turn, may impair temporal processing, complex reaction times and dynamic tracking.(10) And the seminal Ramaekers et al. (2004) study referenced earlier showed that THC impairs cognition, psychomotor function and driving performance in a dose-related manner.(11) Those researchers also found the detrimental effects of THC appear more prominent in highly automated driving behavior, as compared to more complex driving tasks that require conscious control.

The other major area ripe for scientific explanation is how to measure impairment. Alcohol dissipates at a measurable rate. Marijuana remains in a person's system days after consumption—well after the intoxicating effects have worn off—making *per se* limits very challenging to prove or disprove. There's a lot we don't know, and we can expect a lag while science struggles to catch up. I fear we're trying to speed up the process by placing a square peg (proposed DUID field testing) in a round hole (established DUI field testing). This is a cumbersome process with the potential for a dubious outcome.



At a Crossroads

So, we are at a crossroads—one that society has already traversed. We have (mostly) legalized marijuana, but we have done so without adequate tools for the inevitable outcome of legalization, impaired driving.

Every state has drug-impaired driving laws, including six states that have [per se laws in effect for one more drugs](#). But DUID laws vary across states and are not nearly as clear-cut as DUI laws. Further, enactment of sanctions is only one-half of the equation. Arresting for a criminal code section is easy and frankly meaningless unless the state can successfully prosecute, and prosecution requires admissible evidence.

The current evidentiary trend has been to pigtail marijuana impairment to tried-and-true alcohol intoxication tests. Whether this will work—and how it's playing out in the courts—will be the focus of my next article.

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