

File with  
Debbie Roy

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# Wait, Is My Dog Stoned?

Jean Hanff Korelitz

The author of the novels "The Latecomer" and "The Plot."

ON THANKSGIVING morning, our dog, Sherlock, ate his usual breakfast and went for his usual walk, on which he performed his usual bodily functions before returning to his usual spot on his (that is, our) bed.

"Something's wrong with Sherlock," my son announced an hour later, after which the dog bolted into the room and began to jerk uncontrollably. We tried to calm him down, but he was twitching violently and was plainly terrified. Briefly, I persuaded myself that he was experiencing some comical form of hiccups, but even I, with my considerable aptitude for self-delusion, had to give that up as he shook and flinched. Finally, my husband and I bowed to the inevitable. We had to get Sherlock to a veterinary emergency room.

As we made our way to the Schwarzman Animal Medical Center in Manhattan, I tried to prepare myself. Whatever this was, it wasn't going to be benign. My money was on something neurological, but what came on like this, out of the blue? A brain tumor? A stroke? (Do dogs even have strokes?) Could it be something crazily exotic, like kuru? (I once read a book about it, a prion disease from Papua New Guinea acquired from the ritualized consumption of dead relatives' brains.)

Years ago, I had a sweet dog named Angus that began frantically turning circles one morning and by the end of that day was in terminal organ failure. As we drove through Central Park, I was bracing for something along those lines.

Here's the diagnosis I wasn't expecting, which Sherlock received on arrival in the E.R.: acute cannabis intoxication from something — likely the butt of a joint — he had gobbled up off the street.

In the past couple of months, two dispensaries opened on my block on the Upper West Side, and that's in addition to the mobile store that appeared last year. All three seem to be thriving — not a surprise in a neighborhood with plenty of college students and left-leaning voters (a constituency to which I belong). I never thought twice about any of it until my dog nearly died.

According to Dr. Carly Fox, a senior veterinarian at Schwarzman, marijuana toxicity is now a common presentation in veterinary emergency rooms. Severity depends on the amount ingested and the size, age and health of the animal, and most dogs exhibit

## I knew to steer Sherlock away from many sidewalk hazards, but not weed.

uncoordinated gait, dribbling urine, an exaggerated reaction to normal stimuli — that would be the flinching and trembling — bradycardia (low heart rate) and mild hypothermia. Severe cases progress to respiratory depression, seizures and occasionally death.

On the plus side, most vets have now seen enough cannabis poisoning to know what it looks like. The Animal Poison Control Center reported an increase of 765 percent in calls about pets ingesting marijuana from 2008 to 2018, well before the mobile dispensary arrived on my block, let alone the two brick-and-mortar locations. From 2020 to 2021, there was a 60 percent jump in possible marijuana toxicity in pets. As in Sherlock's case, it's common for animals to exhibit clinical signs soon (one to two hours) after a walk outside, though it can take up to four hours in some cases.

Anyone who's ever walked a dog on a New York sidewalk knows that to a canine, the

pavement is a veritable smorgasbord, its delights ranging from the merely olfactory to various comestibles attractive to human taste buds and ... not. In short, walking your dog in this city is like asking any of us to run amok in Jean-Georges Vongerichten's new Tin Building food emporium, only it's full of signs screaming: Help yourself! It's all free!

Even if it took about a nanosecond for the emergency room vets to identify what was wrong with Sherlock, most dog owners are as ignorant as I was about this particular danger underfoot. To them I say, the sidewalks of New York are now a dispensary all their own, so if your dog suddenly starts to shudder and shake, it might be a good idea to think: "Maybe he ate the end of a joint off the pavement," before, as I did, "Maybe he ate a kuru-afflicted brain from Papua New Guinea."

And don't wait to figure it out on your own. According to Dr. Fox, it's a good idea for any animal with Sherlock's symptoms to get to the nearest veterinary emergency room.

Here's another good idea: Maybe people could use a little more care when smoking pot outdoors. Or let me put that a different way: Maybe people could please pick up their damn roaches off the sidewalk and throw them in the nearest garbage can instead of leaving them underfoot.

Hey, we're living in a divided nation, and there's so much we can't agree about. But dogs? Everybody loves dogs. Republicans love dogs. Democrats love dogs. Even Kyrsten Sinema loves dogs. So let's not, you know, poison them.

Alas, poor Sherlock. He has recovered fully, but a new era has begun in which he is obliged to wear a mesh muzzle every time he goes out for a walk. He doesn't like that one bit, but a little humiliation (for him) and inconvenience (for me) are far preferable to another night in the I.C.U. (for him), not to mention the bill (for me).



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# Legalizing recreational marijuana is linked to increased crashes

June 22, 2017

Legalizing recreational marijuana use in Colorado, Oregon and Washington has resulted in collision claim frequencies that are about 3 percent higher overall than would have been expected without legalization, a new Highway Loss Data Institute (HLDI) analysis shows. This is HLDI's first look at how the legalization of marijuana since 2014 has affected crashes reported to insurers.

More drivers admit to using marijuana, and it is showing up more frequently among people involved in crashes. Though there is evidence from simulator and on-road studies that marijuana can degrade some aspects of driving performance, researchers haven't been able to definitively connect

marijuana use with more frequent real-world crashes. Some studies have found that using the drug could more than double crash risk, while others, including a large-scale federal case-control study, have failed to find a link between marijuana use and crashes. Studies on the effects of legalizing marijuana for medical use also have been inconclusive.

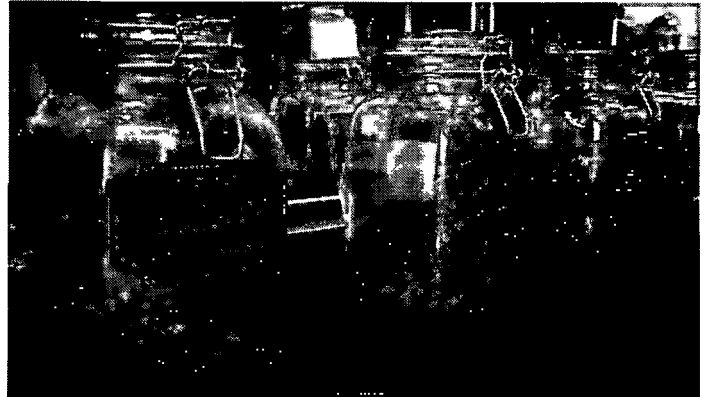
Colorado and Washington were the first to legalize recreational marijuana for adults 21 and older with voter approval in November 2012. Retail sales began in January 2014 in Colorado and in July 2014 in Washington. Oregon voters approved legalized recreational marijuana in November 2014, and sales started in October 2015.

HLDI conducted a combined analysis using neighboring states as additional controls to examine the collision claims experience of Colorado, Oregon and Washington before and after law changes. Control states included Idaho, Montana, Nevada, Utah and Wyoming, plus Colorado, Oregon and Washington prior to legalization of recreational use. During the study period, Nevada and Montana permitted medical use of marijuana, Wyoming and Utah allowed only limited use for medical purposes, and Idaho didn't permit any use. Oregon and Washington authorized medical marijuana use in 1998, and Colorado authorized it in 2000.

HLDI also looked at loss results for each state individually compared with loss results for adjacent states without legalized recreational marijuana use prior to November 2016. Data spanned collision claims filed between January 2012 and October 2016 for 1981 to 2017 model vehicles. Analysts controlled for differences in the rated driver population, insured vehicle fleet, the mix of urban versus rural exposure, unemployment, weather and seasonality.

Collision claims are the most frequent kind of claims insurers receive. Collision coverage insures against physical damage to a driver's vehicle in a crash with an object or other vehicle, generally when the driver is at fault. Collision claim frequency is the number of collision claims divided by the number of insured vehicle years (one vehicle insured for one year or two vehicles insured for six months each).

"The combined-state analysis shows that the first three states to legalize recreational marijuana have experienced more crashes," says Matt Moore, senior vice president of HLDI. "The individual state analyses suggest that the size of the effect varies by state."



Marijuana product in jars at a dispensary

Colorado saw the biggest estimated increase in claim frequency compared with its control states. After retail marijuana sales began in Colorado, the increase in collision claim frequency was 14 percent higher than in nearby Nebraska, Utah and Wyoming. Washington's estimated increase in claim frequency was 6.2 percent higher than in Montana and Idaho, and Oregon's estimated increase in claim frequency was 4.5 percent higher than in Idaho, Montana and Nevada.

"The combined effect for the three states was smaller but still significant at 3 percent," Moore says. "The combined analysis uses a bigger control group and is a good representation of the effect of marijuana legalization overall. The single-state analyses show how the effect differs by state."

Each of the individual state analyses also showed that the estimated effect of legalizing recreational use of marijuana varies depending on the comparison state examined. For example, results for Colorado vary from a 3 percent rise in claim frequency when compared with Wyoming to a 21 percent increase when compared with Utah.

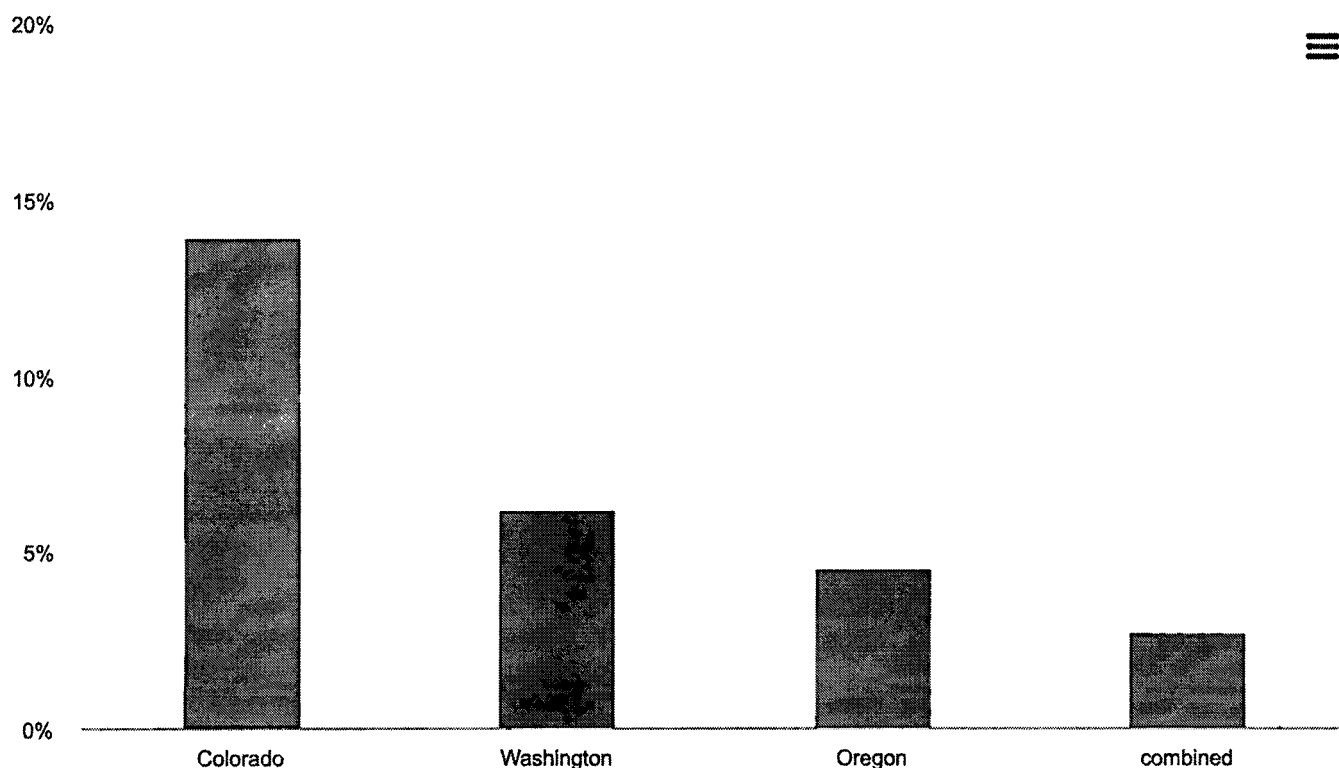
HLDI's new analysis of real-world crashes provides one look at the emerging picture of what marijuana's legalization will mean for highway safety as more states decriminalize its use. In the coming years, more research from HLDI and others will help sharpen the focus. As HLDI continues to examine insurance claims in states that allow recreational use of marijuana, IIHS has begun a large-scale case-control study in Oregon to assess how legalized marijuana use may be changing the risk of crashes with injuries. Preliminary results are expected in 2020.

In addition to Colorado, Oregon and Washington, five other states and Washington, D.C., have legalized marijuana for all uses, and 21 states have comprehensive medical marijuana programs as of June. An additional 17 states permit limited access for medical use. Marijuana is still an illegal controlled substance under federal law.

## COLLISION CLAIMS

### Estimated effects of recreational marijuana sales in 3 states

Change in claim frequency for vehicles up to 33 years old, 2012-16



Colorado saw the biggest estimated increase in claim frequency compared with its control states. The combined effect for the three states was smaller but still significant at 3 percent. The combined-state analysis is a good representation of the effect of marijuana legalization overall, while the single-state analyses show how the effect can vary from state to state.

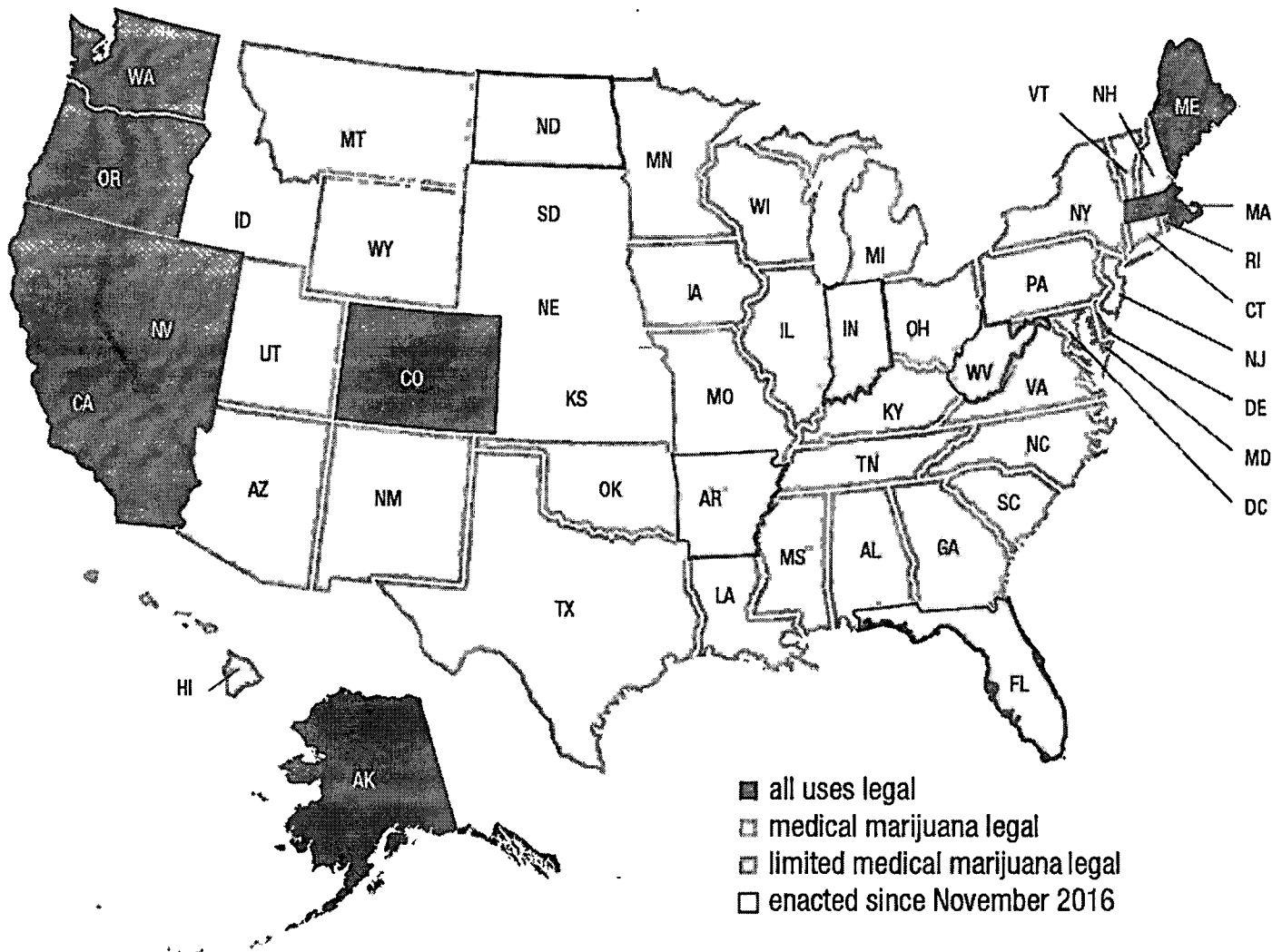
#### Key dates for laws in study states

Colorado was first with retail sales of recreational marijuana

	Colorado	Washington	Oregon
Vote	November 2012	November 2012	November 2014
Retail sales	January 2014	July 2014	October 2015

#### U.S. marijuana laws

States with some form of legalized marijuana use as of June 2017



## The business of pot

Marijuana is a booming business in states where its use is legal. Retail sales of recreational marijuana in the U.S. hit \$1.8 billion in 2016, led by Colorado and Washington, and are expected to grow to \$2.6 billion to \$2.9 billion in 2017, *Marijuana Business Daily* reports in its 2017 *Marijuana Business Factbook*. Colorado has reaped a nearly fivefold increase in tax revenue from retail sales of recreational marijuana since January 2014, an analysis of Colorado Department of Revenue data indicates.

Tourism is just one driver of state economies, and for pot-friendly locales, access to legalized marijuana is promoted as another reason to visit. A "Colorado marijuana tourism map" from Kush Tourism, for instance, touts the state's allure as a destination for "breathtaking mountain views, unparalleled outdoor recreation, and now high-quality legal cannabis!"

In 2015, 7 percent of tourists older than age 25 who visited Colorado cited a marijuana dispensary as a top reason for their trip, the Colorado Tourism Office reported. A year later, 4 percent of tourists surveyed cited that reason. The novelty of legalized marijuana may have drawn younger adult travelers in 2015, but visitor demographics returned to a more traditional pattern in 2016, the tourism office said.



A new tourism industry has sprouted around legalized use of marijuana. A trip to a dispensary has been cited by some tourists as a top reason to visit Colorado.

## Mixed research on risk

As marijuana has won at the ballot box, public health officials, safety advocates and citizens have questioned the negative impact legalization might have on the road if stoned drivers were at the wheel. A 2016 IIHS survey found that drivers in Colorado, Oregon and Washington were more likely to view marijuana as a highway safety problem than drivers in states without legalized use.

"Worry that legalized marijuana is increasing crash rates isn't misplaced," says David Zuby, IIHS executive vice president and chief research officer. "HLDI's findings on the early experience of Colorado, Oregon and Washington should give other states eyeing legalization pause."

Consuming THC just prior to driving has been shown to increase reaction time and impair distance estimation and lane tracking in both simulator and on-road studies. THC, or tetrahydrocannabinol, is the psychoactive substance in marijuana. A recent study conducted using the National Advanced Driving Simulator found that drivers under the influence of marijuana had trouble maintaining constant lane position, but they tended to drive more slowly and with more headway than drivers not under the influence.

Due to a combination of factors, marijuana's role in crashes is hazier than the data on alcohol. Many states don't include consistent information on driver drug use in crash reports that the Fatality Analysis Reporting System (FARS) database

aggregates, and policies and procedures for drug testing are inconsistent. More drivers in crashes are tested for alcohol than for drugs. When drivers are tested, other drugs are often found in combination with alcohol, which makes it difficult to isolate their separate effects.

What is more, unlike alcohol, experts don't agree on how much marijuana must be consumed for a driver to be impaired. A positive test for THC and its active metabolite doesn't mean the driver was impaired at the time of the crash. Habitual users of marijuana may have positive blood tests for THC days to weeks after using the drug.



Marijuana flowers are weighed at a dispensary near Crested Butte, Colorado. The Rocky Mountain state was the first to begin retail sales of recreational marijuana in January 2014 after voters endorsed recreational use of pot for adults 21 and older in November 2012. Retail sales in Washington began six months after Colorado.

## Marijuana-positive drivers

About 1 in 5 weekend nighttime drivers tested positive for at least one legal or illegal drug in the 2013-14 National Roadside Survey of Alcohol and Drug Use by Drivers conducted by the National Highway Traffic Safety Administration (NHTSA) (see "More drivers use marijuana, but link to crashes is murky," May 12, 2015). Marijuana was much more prevalent than in a prior roadside survey. Nearly 13 percent of weekend nighttime drivers tested positive for marijuana use, compared with 8.6 percent in 2007.

A handful of studies have examined the prevalence of marijuana among crash-involved drivers in Washington since legalization. An AAA Foundation study published in 2016 estimated that the prevalence of drivers in fatal crashes with detectable THC in their blood roughly doubled from 8.3 percent in 2013 to 17 percent in 2014.

The authors note that it isn't clear whether the upward trend was due to legalization or other factors. They caution that "results of this study do not indicate that drivers with detectable THC in their blood at the time of the crash were necessarily impaired by THC or that they were at-fault for the crash" and that the FARS data used in the study "are very limited with respect to toxicology results related to marijuana."

A Pacific Institute for Research and Evaluation (PIRE) study, published last year and sponsored by NHTSA and partially funded by IIHS, collected roadside data from drivers in three waves: before legal sales began, about six months afterward and again a year later. The researchers found that more drivers were THC-positive after one year of retail sales than just before sales began in the state.

Of the nearly 2,400 participants who provided oral fluid or blood samples, 15 percent of drivers were THC-positive in Wave 1, 19 percent were THC-positive in Wave 2 and 21 percent were positive in Wave 3. However, the differences weren't statistically significant. Separating the results by time of day, the researchers found a statistically significant increase in the daytime prevalence of THC-positive drivers between waves. The prevalence increased from 7.8 percent of daytime drivers in Wave 1 to 18 percent in Wave 2 and 19 percent in Wave 3. The prevalence also increased among nighttime drivers with each successive wave, but the increases weren't statistically significant.

The study didn't "address whether an increased prevalence of THC-positive drivers is related to greater impairment among drivers or greater crash risk," the PIRE researchers cautioned.

A NHTSA-sponsored case-control study by PIRE examined the crash risk associated with driver drug use and found that drivers who tested positive for marijuana were overrepresented in the crash-involved population. When the researchers controlled for driver demographics and alcohol use, however, they found no link between marijuana use and driver crash risk. Published in 2016, the study included 2011-12 data on drivers involved in police-reported crashes in Virginia Beach, Virginia, where it is illegal to use marijuana.

A 2016 study by researchers at Columbia University examined traffic fatalities in 19 states before and after enacting medical marijuana laws. Although on average there was an 11 percent reduction in fatality rates, the results varied across states. Seven states saw a reduction in fatalities, while two had an increase, and the other 10 didn't change.

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