

Commentary

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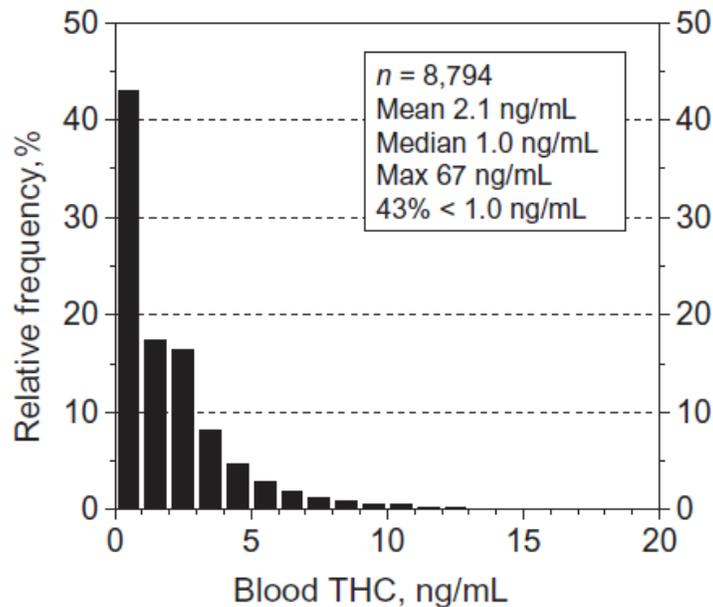
“Medical Marijuana” and Drugged Driving

Today many US states are working to reduce drugged driving, a threat to public health and highway safety that is made worse by initiatives that permit the use of marijuana for “medical” needs. Most drugged driving laws specify that drivers impaired by Schedule I illegal drugs, including marijuana, may be prosecuted. Fifteen states and the District of Columbia permit the use of marijuana for “medical” conditions, creating ambiguity in these states about how to manage the added safety risks resulting from such use. In the United States the incidence of drugged driving now is on the same scale as drunk driving, with similarly deadly consequences. One third (33%) of all drivers in the Fatality Analysis Reporting System (FARS) for which there were known drug test results were positive for one or more drug.¹ Marijuana was the most frequently identified drug, accounting for 28% of drug-positive drivers.² In the 2007 National Roadside Survey, more drivers tested positive for drugs (16.6%)³ than for alcohol (12.4%).⁴ A total of 8.6% of drivers were positive for marijuana.⁵ Only 2.2% of drivers had an illegal Blood Alcohol Concentration (BAC) of 0.08 or greater. With ever-more “medical marijuana” users on the roads, it is imperative that drugged driving prevention and enforcement efforts remain a priority.

Dramatic increases in the number of “medical marijuana” users in Colorado led to the state legislature’s consideration of a bill to set a blood-content threshold for drivers of 5 ng/ml of tetrahydrocannabinol (THC), the primary psychoactive substance in marijuana. This would have set a standard for Driving Under the Influence (DUI) for marijuana analogous to that of BAC.⁶ Although the desire to assist law enforcement in drugged driving enforcement is admirable, research clearly shows that setting *any* blood-content threshold for marijuana, let alone one as high as 5 ng/ml for THC, is not a viable option.

Between 1995 and 2004, 18% to 30% of 3,794 drugged driving suspects judged to be impaired in Sweden had measurable THC in blood (>0.3 ng/ml).⁷ Among drugged driving suspects positive for marijuana, 43% had THC concentrations less than 1 ng/ml; 61% of cases had THC concentrations below 2 ng/ml. THC concentrations were higher when drivers did not have other detected drugs in their blood. It is certain that THC concentrations were higher when the drivers were stopped for suspicion of drugged driving because the THC concentration declines rapidly when use stops. Even a delay of 30 and 90 minutes is associated with significant drop in blood levels of THC. Swedish researchers concluded that many drivers impaired by recent marijuana use would not be identified at cutoffs between 3 ng/ml and 5 ng/ml because THC is rapidly cleared from the blood after smoked cannabis. Figure 1 shows that over 90% of drugged driving suspects had THC levels under 5 ng/ml.

Figure 1. Relative Frequency Distribution of the Concentrations of THC in Blood Samples from Driving Under the Influence of Drugs Suspects Apprehended over a 10-year Period¹



This study demonstrates the importance of rapid specimen collection to obtain accurate detection of recent marijuana use using laboratories' standard detection cut-offs. For law enforcement in Colorado, or any other state, to obtain a 5 ng/ml THC level in blood from an arrested drugged driving suspect, the driver would have to have used marijuana within an hour or two of the test. Because blood samples are not taken at the roadside sample collection is routinely 2 to 3 hours after arrest. Due to the long time it takes to collect a blood sample from a suspect, virtually all marijuana users – no matter how impaired they were at the time of arrest – would be under the 5 ng/ml level by the time they were tested.

Marijuana's behavioral effects are often prolonged past the point of blood concentrations under any standard cut-off. As the blood levels rise and fall, the degree and nature of impairment at the same blood concentration vary. Among other factors, tolerance to marijuana plays a large role in the level of impairment observed.

Zero tolerance for marijuana and other drugs of abuse in drivers is the standard in Western Europe. It has also been the standard for commercial drivers and others in safety sensitive roles in the US since 1986. Under zero tolerance drugged driving *per se* laws, any detectable amount of a controlled substance constitutes *per se* evidence of a drugged driving violation. There is also no reason to limit the test to blood. Urine and oral fluids are far easier to collect and provide all the information needed for detection of drugs among drivers.

¹ n=38 cases (0.43%) with a THC concentration above 20 ng/ml are not plotted for clarity

A common argument against zero tolerance drugged driving *per se* laws is that drivers who test positive for marijuana may have used the drug long before the test and therefore may not be impaired by the drug. However, when a driver is drug tested, he or she typically has already been arrested under the suspicion of impaired driving, demonstrating behavioral evidence of impairment.

“Medical marijuana” is not recognized as a defense for a positive drug test for the 10 million commercial drivers in the United States, even in the in states with “medical marijuana” laws. For all drivers, the Institute for Behavior and Health, Inc. strongly supports this national standard that has been successfully used for commercial drivers for more than two decades. The recent push to use blood will discourage testing while a 5 ng/ml cutoff will ensure that virtually no drivers will be identified as violating drugged driving laws. This fact explains why the advocates for wider marijuana use are eager to promote these standards. Adopting the 5 ng/ml standard in blood as the measure of drugged driving gives the appearance of protecting the public from marijuana-impaired driving without any substance behind the appearance. That standard is a virtual license for any driver to use marijuana and get behind the wheel of a motor vehicle. The zero tolerance standard for marijuana and any other illegal drug of abuse for all drivers is the best way to keep our highways safe. Blood tests are difficult to administer. The far more practical standard for highway drug tests is not blood but either urine or oral fluids using the standard cut-offs now in wide use in the US and abroad.

Those marijuana apologists who argue for very high cut-offs in blood and who oppose the zero tolerance *per se* standard on the highway using urine or oral fluids need to explain why the *per se* standard has been used -- not with blood but with urine -- with little or no controversy for more than two decades for commercial drivers and why it is used widely for both urine and oral fluids in Western Europe. Do they think the American public would scrap the current standard and accept any level of marijuana – or cocaine or any other illegal drug use – for pilots, train engineers or truck drivers? If not, why should other drivers on American highways be held to a lower standard?

For more information on the Institute for Behavior and Health, Inc. and drugged driving, visit www.ibhinc.org and www.StopDruggedDriving.org.

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- ¹ National Highway Traffic Safety Administration. (2010). Drug Involvement of Fatally Injured Drivers. Traffic Safety Facts. Available <http://www-nrd.nhtsa.dot.gov/Pubs/811415.pdf>
- ² Center for Substance Abuse Research. (2010). One-third of fatally injured drivers with known test results tested positive for at least one drug in 2009. *CESAR FAX*, 19(49).
- ³ Lacey, J.H., Kelley-Baker, T., Furr-Holden, D., Voas, R.B., Romano, E., Torres, P., et al. (2009). 2007 National Roadside Survey of Alcohol and Drug Use by Drivers: Alcohol results. (DOT HS 811 249) Washington, DC: National Highway Traffic Safety Administration.
- ⁴ Lacey, J.H., Kelley-Baker, T., Furr-Holden, D., Voas, R.B., Romano, E., Torres, P., et al. (2009). 2007 National Roadside Survey of Alcohol and Drug Use by Drivers: Alcohol results. (DOT HS 811 248) Washington, DC: National Highway Traffic Safety Administration.
- ⁵ Compton, R. & Berning, A. (2009). Results of the 2007 National Survey of Alcohol and Drug Use By Drivers. National Highway Traffic Safety Facts. (DOT HS 811 175) Washington, DC: NHTSA's National Center for Statistics and Analysis.
- ⁶ Moreno, I., & Wyatt, K. (2011, May 9). Driving-while-high bill fails in Colorado. Associated Press. Retrieved June 1, 2011 from <http://denver.cbslocal.com/2011/05/09/pot-dui-bill-back-with-teeth-in-colorado/>
- ⁷ Jones, A.W., Holmgren, A., & Kugelberg, F.C. (2008). Driving under the influence of cannabis: A 10-year study of age and gender differences in the concentrations of tetrahydrocannabinol in blood. *Addiction*, 103(3), 452-461.