...working to legalize responsible adult use...
National Organization for the Reform of Marijuana Laws

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Testimony from the National Organization for the Reform of Marijuana Laws
In Regard to:
HB 1236 / SB 891: Constitutional Amendment
HB 1185 / SB 928: Marijuana Legalization

# Marijuana Legalization and Effects on Highway Safety:

*US National Highway Traffic Safety Administration reports no statistically significant crash risk increase in marijuana-positive drivers.*

Concerns with regard to marijuana's potential adverse impact on driving performance are not unfounded, but deserve to be placed in proper context.

First, it should be stressed that driving under the influence of marijuana is already a criminal offense in Maryland. Doing so will remain a criminal traffic safety violation when the state decides to legalize adult-use.

Second, numerous scientific studies exist assessing marijuana-positive drivers and accident risk. In fact, the largest ever controlled trial assessing marijuana use and motor vehicle accidents, published in 2015 by the US National Highway Traffic Safety Administration, reports that marijuana positive drivers possess virtually no statistically significant crash risk compared to drug-free drivers after controlling for age and gender.[1] By contrast, drivers with detectable levels of alcohol in their blood at legal limits possess nearly a four-fold risk of accident, even after adjusting for age and gender.

[1] US Department of Transportation, National Highway Traffic Safety Administration. *Drug and Alcohol Crash Risk*. February 2015.

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This finding is consistent with prior meta-analyses of crash risk data. For example, a review of 66 separate crash culpability studies published in the journal *Accident Analysis and Prevention* reported that THC-positive drivers possessed a crash risk on par with drivers testing positive for penicillin (Odds Ratio: 1.10 for cannabis versus OR: 1.12 for penicillin)[2] This risk is far below that associated with driving with two or more passengers (OR=2.2)[3] and is comparable to the difference between driving during the day versus driving at night.[4]

Further, data from states that have liberalized marijuana's legal status show no uptick in motor vehicle crashes. Writing in December in the *American Journal of Public Health*, investigators at Columbia University reported, "[O]n average, medical marijuana law states had lower traffic fatality rates than non-MML states. .... Medical marijuana laws are associated with reductions in traffic fatalities, particularly pronounced among those aged 25 to 44 years. ... It is possible that this is related to lower alcohol-impaired driving behavior in MML-states."[5]

A review of federal FARS data (Fatal Analysis Reporting Systems) further finds that trends in motor vehicle accidents in Colorado and Washington post-legalization are no different than crash trends in control states (similar states that did not legalize marijuana) over this same period of time.

Nevertheless, the use of marijuana prior to driving ought to be discouraged and better efforts ought to be made to identify drivers who may be under the its influence. These include greater use of, and funding for, trained Drug Recognition Evaluators, the use of modified roadside field sobriety tests, and potentially the provisional use of roadside cannabis-sensitive detection technology, such as saliva test or breath test technology. These efforts should not include the imposition of *per*

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[2] Rune Elvik. 2013. *Risk of road accident associated with the use of drugs: A systematic review and meta-analysis of evidence from epidemiological studies*. Accident Analysis and Prevention: 60: 254-267.

[3] McEvoy et al. 2007. *The contribution of passengers versus mobile phone use to motor vehicle crashes resulting in hospital attendance by the driver*. Accident Analysis and Prevention: 39: 1170-1176: http://www.sciencedirect.com/science/article/pii/S000145750700036X

[4] Statement of Dr. Rune Elvik to The Marshall Project, published here: https://www.themarshallproject.org/2017/01/16/when-are-you-too-stoned-to-drive?ref=hp-1-112#.DRKawaFHd

[5] Santaella-Tenorio et al. 2016. *US traffic fatalities, 1985-2014, and their relationship to medical marijuana laws.* American Journal of Public Health: 107: 336-342: http://ajph.aphapublications.org/doi/abs/10.2105/AJPH.2016.303577?journalCode=ajph

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*se* thresholds for THC or its metabolites, as such limits are not scientifically correlated with driver impairment.[6]

Efforts should also be made to better educate the public with regard to the existing traffic safety laws, as well as to the evidence surrounding marijuana's potential influence on driving. In particular, this messaging should stress that combining marijuana and alcohol greatly impacts driving behavior and is associated with far greater risk of accident than the use of either substance alone.[7]

Specifically, these public awareness campaigns should be aimed at and marketed toward the younger driving population aged 18 to 25, as this group is most likely to consistently use cannabis and is also likely to acknowledge having operated a motor vehicle shortly after consuming the substance. In addition, this population possesses less actual on-road driving experience, may be more prone to engaging in risk-taking driving behavior, and may be more naïve to the marijuana's psychoactive effects. Such an educational campaign was implemented nationwide in Canada[8] by the Canadian Public Health Association and could readily be replicated in the United States and promoted by groups like the American Automobile Association.

In addition to increasing public safety, implementing these steps would help assuage concerns that regulating the adult use of marijuana could potentially lead to an increase in incidences of drugged driving or limit the state's ability to successfully identify and prosecute such behavior.

Thank you for your time and consideration.

ATTACHMENTS:

US Department of Transportation, National Highway Traffic Safety Administration. *Drug and Alcohol Crash Risk*. February 2015.

Rune Elvik. 2013. *Risk of road accident associated with the use of drugs: A systematic review and meta-analysis of evidence from epidemiological studies*. Accident Analysis and Prevention: 60: 254-267.

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[6] Paul Armentano. 2013. *Should per se limits be imposed for cannabis?* Humboldt Journal of Social Relations 35: 45-55. http://norml.org/pdf_files/per_se_limits_for_cannabis.pdf
[7] Poulsen et al. 2014. *The culpability of drivers killed in New Zealand road crashes and their use of alcohol and other drugs*. Accident Analysis and Prevention: 67: 119-128.
[8] Canadian Public Health Association, "The Pot and Driving Campaign" -- http://www.cpha.ca/en/programs/potanddriving.aspx