## Sessions Wrong About Drugged Driving – but Not as Wrong as Factcheck.org

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SciCheck was launched by FactCheck.org to focus on false and misleading scientific claims made by major US political figures. So its December 14, 2017 post<sup>1</sup> on United States Attorney General Jeff Sessions was fair game. Especially since the characterization Sessions made of Dr. Hedlund's report<sup>2</sup> from the Governor's Highway Safety Association and the Foundation for Advancing Alcohol Responsibly was flawed.

But SciCheck's Vanessa Schipani made matters worse by using statistical malpractice to claim that Hedlund's conclusion was the opposite of what he really said. SciCheck's post may not have been written by Schipani. At least part of it appears to have been ghost-written by the marijuana lobby, using cherry-picked studies, some of dubious quality, to exonerate marijuana's role in causing crashes and fatalities.

Statistical malpractice? What else would you call it? Referring to the Hedlund report, Schipani wrote, "The report shows alcohol – not drugs – was present in the system of more drivers killed in car crashes." That is not true. Hedlund reported, "drugs were present in 43% of the fatally-injured drivers with a known test result [emphasis added], more frequently than alcohol was present."

Schipani committed statistical malpractice by making the baseless assumption that all fatally drivers who were not tested were also not positive for either drugs or alcohol. There is absolutely no foundation for this foolish assumption.

Having made that erroneous assumption, Schipani could then rejigger the numbers in Hedlund's report to arrive at her own conclusion that alcohol was present more frequently than drugs in *all* drivers killed in car crashes. Schipani's figures worked out that way because 70.9% of the subjects were tested for alcohol but only 57% of the subjects were tested for drugs other than alcohol. There were simply fewer subjects identified as being positive for drugs than for alcohol. But by no means does that support Schipani's statement which contradicts Hedlund's report.

Then we get into the portion of the post that was written either by the marijuana lobby or someone that is drinking the Kool-Aid. We will analyze two statements:

1. "..unlike alcohol breathalyzers, they [drug tests for marijuana] don't prove a driver was intoxicated at the time of the accident."

Alcohol breathalyzers do not prove that a driver was intoxicated. They prove and quantify the presence of alcohol in the breath. Drug tests prove and quantify the

<sup>1</sup> http://www.factcheck.org/2017/12/sessions-wrong-drugged-driving/

<sup>&</sup>lt;sup>2</sup> http://www.ghsa.org/sites/default/files/2017-07/GHSA DruggedDriving2017 FINAL revised.pdf

presence of drugs in blood. The critical difference between the two is that there is a proven correlation between alcohol levels and impairment levels. No such correlation exists between impairment levels and forensically-determined blood levels of drugs, including marijuana's THC.

Furthermore, a crash caused by a person impaired by either alcohol or drugs is not an "accident." It is a crime. That's why it is properly referred to as a crash, not an accident, at least until it can be stated for certain that there is no culpability attached to the crash.

2. "...marijuana can remain in the body for days, even weeks, after a person consumes the drug."

Marijuana doesn't get into the body, much less remain there. It can't. It's a plant. Roots, stems, leaves and all. Hedlud was more specific when he said "marijuana metabolites can be detected in the body for weeks after use." The primary metabolite tested for and found in blood is 11-nor-9 carboxy tetrahydrocannabinol, commonly referred to as carboxy-THC. Carboxy-THC is the inactive indirect metabolite of the psychoactive compound delta-9-tetrahydrocannabinol, commonly referred to as THC.

Whereas carboxy-THC can indeed be found in a user's blood for days or weeks after consumption, the same is not true of THC, except in cases of addicts and other heavy users of marijuana. Fat-soluble THC is so insoluble in blood that within hours it migrates to highly perfused fatty tissues like the brain, depleting the blood of THC.

At this point in her post, Schipani should have noted that we really don't know if drugs cause more impairment than alcohol. Many drivers use alcohol and drugs (including marijuana) simultaneously, and it is known<sup>3</sup> that the impairing effects of drugs and alcohol can be additive or even synergistic. It is therefore impossible to determine which drug in a cocktail of intoxicants was responsible for impairment and a fatal collision. We should really focus our efforts at combatting impairment regardless of the cause. This is not a contest between alcohol and drugs (including marijuana).

Instead, Schipani took a page from the marijuana lobby and cherry-picked data from several reports to make the case that marijuana may decrease rather than increase crash risk!

National Academies of Science, Engineering and Medicine, January 2017<sup>4</sup>. NASEM studied six systematic reviews but based their conclusions upon the one that was the

<sup>&</sup>lt;sup>3</sup> https://www.ncbi.nlm.nih.gov/pubmed/28286930

<sup>4</sup> https://www.nap.edu/catalog/24625/the-health-effects-of-cannabis-and-cannabinoids-the-current-<u>state</u>

most comprehensive and most recently published, that of Rogeberg and  $Elvik^5$ . Schipani quoted an increased crash risk of 1.04 to 1.18, whereas Rogeberg and Elvik themselves concluded, "While there is heterogeneity across studies, the subsample analyses all show pooled effects in the range of 1.07–1.81 (random effects) and 1.08–1.9 (metaregression), suggesting that the average risk increase after cannabis use is unlikely to be of the magnitude associated with alcohol."

Not noted by Schipani was a September 2017 report in the Annals of Internal Medicine<sup>6</sup> that summarized the same Rogeberg and Elvik report as citing an increased crash risk of 1.36 (1.15-1.61). Nor did she note the May 2017 report in the Annals of Epidemiology that found an increased crash risk of 1.62, or the November 2017 French report in PLOS One citing an increased crash risk of 1.65.

Determining crash risks for THC-positive drivers is fraught with many confounding variables, which has resulted in a wide variety of results ranging from 1 to over 6, with most respected studies being less than 2, but more than 1.2. None find that THC is as impairing as alcohol, but that is of no solace to those killed by a marijuana-impaired driver.

Reporting only the lowest crash risk she could document is a clear sign of Schipani's (or her ghost writer's) intolerable bias.

• National Highway Traffic Safety Administration, February 2015<sup>7</sup>. Schipani reported that the statistical significance of an increased crash risk for THC-positive drivers disappeared after controlling for a number of variables. *Reason* magazine went further, saying, "Landmark Study Finds Marijuana Is Not Linked to Car Crashes." The more accurate statement is that the study *failed to find a link* between crash risk and marijuana use, which is what the report itself said. Failure to find a link is not the same is finding there is no link. The study also failed to find a significant crash risk for opioids, methamphetamine or any other drug (alcohol excepted). This is because the study was not designed to detect drug crash risks, which is why the study has been soundly criticized for its design<sup>9</sup>. Richard Compton of NHTSA has told us<sup>10</sup> that NHTSA is designing a new study to overcome major deficits of the published study.

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<sup>&</sup>lt;sup>5</sup> https://www.ncbi.nlm.nih.gov/pubmed/26878835

<sup>&</sup>lt;sup>6</sup> http://annals.org/aim/fullarticle/2648595/effects-cannabis-among-adults-chronic-pain-overview-general-harms-systematic

https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/812355 drugalcoholcrashrisk.pdf

<sup>&</sup>lt;sup>8</sup> http://reason.com/blog/2015/02/09/landmark-study-finds-marijuana-is-not-li

<sup>9</sup> http://www.duidvictimvoices.org/good-data-bad-statistical-inferences/

<sup>&</sup>lt;sup>10</sup> Personal communication, August 10, 2017

- <u>Journal of Law and Economics, May 2013</u><sup>11</sup>. This paper doesn't even qualify as bad science. Yes, there was a decrease in traffic fatalities in states that passed medical marijuana laws, but that was at a time when there was an overall decrease in traffic fatalities nationwide due in part to less driving caused by the Great Recession. Traffic fatalities are now increasing again.
- American Journal of Public Health, August 2017<sup>12</sup>. This report has been widely embraced by the marijuana lobby, even though it estimates that there were 77 "excess crash fatalities" in Colorado and Washington since marijuana legalization. The authors felt this number was not significant, but admitted, "others might disagree." This report has been criticized, noting that "total traffic fatalities" is a blunt tool to measure the impact of marijuana legalization. <sup>13</sup>

Contrary to Schipani's closing remarks, experts do not disagree about the relationship between marijuana and driving, they only disagree on the magnitude of that relationship. Even the National Organization to Reform Marijuana Laws recognizes that marijuana can impair driving.

Vanessa Schipani has proven herself to be an unqualified scientific reporter for SciCheck. SciCheck must retract and cease this type of biased review if it wishes to earn credibility from anyone other than the marijuana lobby.

<sup>11</sup> http://www.jstor.org/stable/10.1086/668812?seq=1#page scan tab contents

http://ajph.aphapublications.org/doi/10.2105/AJPH.2017.303848

<sup>13</sup> http://www.duidvictimvoices.org/lies-damns-lies-and-statistics/