

Legal Access to Marijuana and Motor Vehicle Crashes

The evidence for the impact of marijuana commercialization on impaired driving is limited. However, a recent study by Salomonsen-Sautel, et. al. 2014 suggests that having access to legal medical marijuana in Colorado was associated with an increased percentage of drivers in fatal motor vehicle crashes who were marijuana-positive from 1994 to 2011.

(Stacy Salomonsen-Sautel, Sung-Joon Min, Joseph T. Sakai, Christian Thurstone, Christian Hopfer, Trends in fatal motor vehicle crashes before and after marijuana commercialization in Colorado, Drug and Alcohol Dependence, Volume 140, 1 July 2014, Pages 137-144, ISSN 0376-8716, <http://dx.doi.org/10.1016/j.drugalcdep.2014.04.008>. <http://www.sciencedirect.com/science/article/pii/S0376871614008345>)

The study cited above examined data before the first retail stores were opened in January, 2014 that could legally sell marijuana in Colorado.

In Kansas, the evidence to address the question of the effect of marijuana on impaired driving is limited.

In the Salomonsen-Sautel, et. al. study looking at fatal crashes, it was noted that “legal medical marijuana has been commercially available on a widespread basis in Colorado since mid-2009”. In their methods, they used July 30, 2009 as the definition for post commercialization of medical marijuana. The trauma registry does not have data for the same time period of this study (1994–2011), but we used the same definition of pre-commercialization and post-commercialization of medical marijuana to look at whether or not there has been increased reporting of positive marijuana derivatives on drug screens for drivers who sustained traumas.

The table below shows the proportion of motor vehicle and motorcycle drivers who sustained a trauma by marijuana derivatives on a drug screen and suggests that there may be an increased amount of marijuana use over time for trauma patients ($\chi^2 = 4.858$, $df = 1$, $p = .028$). (Please note: traumas include people who lived and died). It should be noted that from 2006 to June, 2009 that 37.7% of drivers with traumas were tested for drugs and from July, 2009 to 2013 that the percentage increased to 41.1% of drivers with traumas being tested for drugs.

Number of Reported Traumas by Marijuana Drug Test Results * Kansas Trauma Registry 2006 to 2013		
	No marijuana derivatives	Marijuana Derivatives
2006 to June 30, 2009 (pre-commercialization of marijuana in Colorado)	1282 (82.2%)	278 (17.8%)
July, 2009 to December, 2013 (post-commercialization of marijuana in Colorado)	1674 (79.4%)	435 (20.6%)
* Includes cases where drug test was performed. (More than ½ of drivers with traumas are coded as not being tested for drugs in both time periods)		