

Public Health Implications of Medical Marijuana Commercialization in Colorado

Currently, 23 states have legalized or decriminalized marijuana to various degrees. In November 2016, it is likely that Californians will vote on whether to legalize marijuana for recreational use. The Obama Administration opposes the legalization of marijuana and other illegal substances, citing that it “runs counter to the public health approach to drug policy.” Marijuana use has been associated with adverse effects. Some of these effects have been substantiated with a high level of confidence within the literature, while other adverse events show only moderate evidence¹. The substantiated adverse effects include addiction to marijuana and other substances, diminished lifetime achievement, bronchitis symptoms, and motor vehicle accidents¹. There is a high degree of evidence substantiating the dangers of using marijuana while driving. Chart 1 below displays the impact of the large-scale commercialization of medical marijuana (MM) in Colorado that began in mid-2009 on motor vehicle fatalities.

Chart 1: Impact of Colorado Medical Marijuana (MM) Laws on Cannabis-related Motor Vehicle Fatalities 2007-2011²

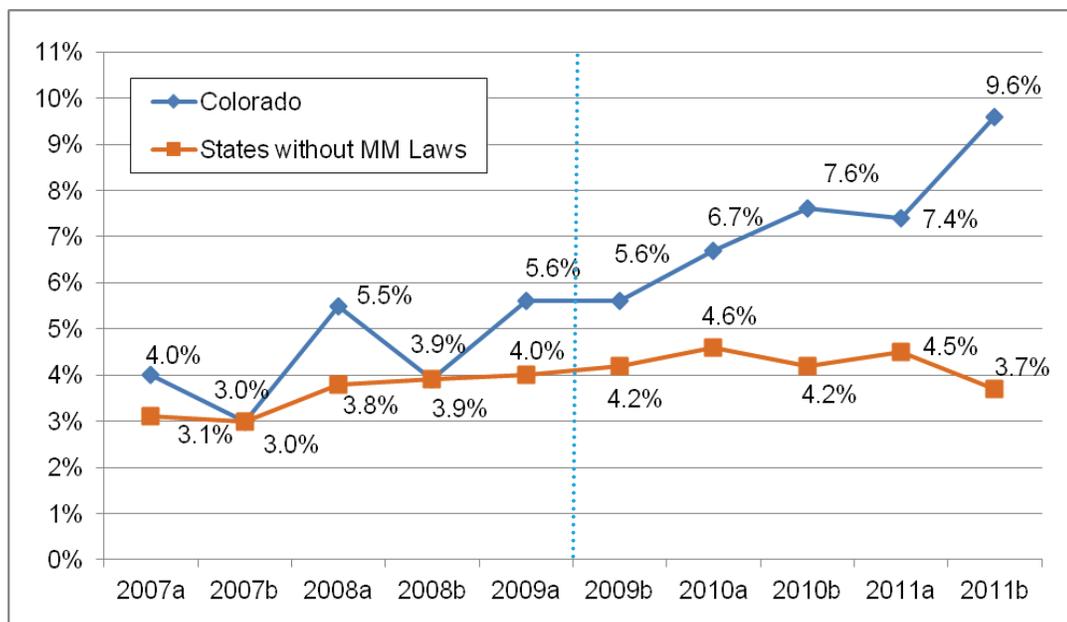


Chart 1 indicates a positive correlation between MM commercialization and the proportion of drivers in fatal motor vehicle crashes who were marijuana-positive². The proportion of marijuana-positive drivers in motor vehicle fatalities increased by 140% in Colorado from 2007 to 2011. Conversely, this type of fatality in other states without MM laws increased by 19% during the same period.

In 2012, Amendment 64 legalized marijuana in Colorado. It is unclear how this policy has impacted public health and safety. However, a report by Maxwell & Mendelson³ (2016) indicates that cannabis-related motor vehicle fatalities increased by 13% from 2012-2013. Further, treatment admissions for marijuana declined by 26% from 2008-2014. National data also suggest that perceptions of the risks of smoking marijuana decreased significantly between 2002-2006 and 2012-2013³. As a result, marijuana users may be less likely to seek help for their use. Marijuana’s legal status in Colorado may result in fewer criminal justice referrals to treatment for marijuana. Consequently, Maxwell & Mendelson note that with “the decreased perception of risk, increased prevalence of marijuana use, and the increase in ‘early warning’ indicators (e.g., ED visits, etc.), it is likely that Colorado may see increased numbers of cases of marijuana misuse and treatment admissions in the future, which are important components of deleterious public health outcomes³”. However, there is a dearth of studies presenting a deeper understanding of the impact of marijuana legalization on public health and how society will address potential consequences of such policy changes.

References: (1) Volkow, N. D., Baler, R. D., Compton, W. M., & Weiss, S. R. (2014). Adverse health effects of marijuana use. *New England Journal of Medicine*, 370 (23), 2219-2227; (2) Salomonsen-Sautel, S., Min, S. J., Sakai, J. T., Thurstone, C., & Hopfer, C. (2014). Trends in fatal motor vehicle crashes before and after marijuana commercialization in Colorado. *Drug and Alcohol Dependence*, 140, 137-144; (3) Maxwell, J. C., & Mendelson, B. (2016). What do we know now about the impact of the laws related to marijuana? *Journal of Addiction Medicine*, 10(1), 3-12.