

**Written Testimony on Marijuana Legalization  
Aging and Youth Committee  
Pennsylvania State Senate  
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<http://www.learnaboutsam.org>

This testimony is based on my own expertise and that of over a dozen top scientists who serve on the Advisory Board of Smart Approaches to Marijuana (SAM). Co-founded by former U.S. Congressman Patrick Kennedy and Dr. Kevin Sabet, a former three-time White House drug policy adviser, SAM is the leading non-partisan, non-profit national organization offering a science-based approach to marijuana policy.

I have worked in the health care and public health environment for more than a decade, and advised all levels of government on drug policy for more than five years. I have worked in nonprofit clinic systems, large Hospitals, and founded a successful company in the health care technology industry. I am the Executive Vice President of SAM. I received my Bachelor of Arts in Communication from the University of Denver and am currently a Masters Candidate at Johns Hopkins University. I live in the state of Colorado with my wife and two daughters who are five years old and 14 months old. As a Coloradan and a dad, I can tell you the toll of legalized marijuana has been significant, particularly on children and young adults.

Recreational marijuana legalization is bad policy and should be opposed in Pennsylvania.

The policy presents major public health and safety problems for Pennsylvania and will result in many negative consequences, for four main reasons:

- (1) Legalization would disproportionately affect youth from lower-income communities and those of color
- (2) Legalization would increase drug use among Pennsylvania's kids;
- (3) Legalization will reinforce, not diminish, the black market for marijuana, of note especially because this results in the continued saturation of illicit marijuana dealers and access for children.
- (4) Legalization will aggravate drugged driving, creating safety concerns for all including youth.

### **1. Youth in Communities of Color**

Unfortunately, the marijuana industry has targeted communities of color and particularly youth, despite promises to the contrary. This should, perhaps, not be surprising: the tobacco and alcohol industries have long targeted such communities. One Johns Hopkins study revealed that predominantly African-American neighborhoods in Baltimore were eight times more likely to

have carry-out liquor stores than racially mixed or white neighborhoods.<sup>1</sup> And tobacco companies have historically placed larger amounts of advertising in African-American publications, exposing African-Americans to more cigarette ads than whites,<sup>2</sup> and have marketed more harmful and more addictive products to them.<sup>3</sup>

The marijuana industry has always been inundated with influence from big tobacco, another industry that has already proven itself to target minorities and ignore public health costs in their push for profit. Tobacco behemoth Altria, the first major tobacco company to lobby in favor of hemp legalization, is now registered to lobby in favor of marijuana sales in its home state of Virginia;<sup>4</sup> this marks the first time the company has lobbied on marijuana directly on the federal or state level. This activity follows Altria's massive \$1.8 billion dollar investment in the marijuana industry in 2018.<sup>5</sup>

This is just one example of big tobacco's financial and governmental push for legalization. In July 2019, less than one year after the legalization of marijuana in Canada, British tobacco company Imperial Brands paid £75m (\$93.5m USD) for a 19.9% stake in Canadian company Auxly Cannabis Group.<sup>6</sup> In June 2019, San Francisco-based, PAX Labs, the developer of the Juul vaping device, partnered with four Canadian pot stocks to serve as the supplier for "cannabis extracts, resins, and distillates" for its PAX Era pen-and-pod vape system with the goal of being the go-to vaping device in Canada.<sup>7</sup>

The marijuana industry is already copying Big Tobacco's playbook in Colorado. Here, marijuana use is up significantly overall. And in Denver, pot businesses are concentrated in lower-income,

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<sup>1</sup> Johns Hopkins Bloomberg School of Public Health. *Off-Premises Liquor Stores Targeted to Poor Urban Blacks*. 2000.

<sup>2</sup> CDC. African Americans and tobacco use. CDC, 17 Aug. 2016; U.S. Department of Health and Human Services. *Tobacco Use Among U.S. Racial/Ethnic Minority Groups—African Americans, American Indians and Alaska Natives, Asian Americans and Pacific Islanders, and Hispanics: A Report of the Surgeon General*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Office on Smoking and Health, 1998.

<sup>3</sup> CDC. African Americans and tobacco use. CDC, 17 Aug. 2016; National Cancer Institute. *The Role of the Media in Promoting and Reducing Tobacco Use*. Smoking and Tobacco Control Monograph No. 19, NIH Pub. No. 07-6242, June 2008; Gardiner PS. The African Americanization of Menthol Cigarette Use in the United States. *Nicotine and Tobacco Research* 2004; 6:Suppl 1:S55-65; Ton HT, Smart AE, Aguilar BL, et al. Menthol enhances the desensitization of human alpha3beta4 nicotinic acetylcholine receptors. *Mol Pharmacol* 2015;88(2):256-64; Smokefree.gov. *Menthol Cigarettes*. Bethesda (MD): U.S. Department of Health and Human Services, National Institutes of Health, National Cancer Institute, 2015.

<sup>4</sup> "Virginia Conflict of Interest and Ethics Advisory Council. (2021, January 15). Retrieved April 02, 2021, from <http://ethicssearch.dls.virginia.gov/ViewFormBinary.aspx?filingid=82443>

<sup>5</sup> Monica, P. (2018, December 07). Marlboro owner Altria invests \$1.8 billion in cannabis company Cronos. Retrieved April 02, 2021, from <https://www.cnn.com/2018/12/07/investing/altria-cronos-investment-marijuana>

<sup>6</sup> Hancock, A. (2019, July 25). Imperial Brands makes fresh foray into cannabis. Retrieved April 02, 2021, from <https://www.ft.com/content/17531c3e-ae2-11e9-8030-530adfa879c2>

<sup>7</sup> Williams, S. (2019, June 12). Vape Giant PAX Labs Picked 4 Popular Pot Stocks as Its Supply Partners. Retrieved April 07, 2021, from <https://www.fool.com/investing/2019/06/12/vape-giant-pax-labs-picked-4-popular-pot-stocks-as.aspx>

neighborhoods of color—one lower-income neighborhood has a pot business for every 47 residents.<sup>8</sup> This level of saturation has a measurable impact on youth perception of marijuana.

As for Colorado schools, those that had 25% or fewer youth of color had 313 marijuana-related suspensions compared to 658 marijuana-related suspensions for schools comprised of populations with 76% or more youth of color.<sup>9</sup> Moreover, in the two years after Colorado legalized marijuana, the number of Hispanic and Black students arrested for marijuana-related offenses rose 29% and 58%, respectively. In the same period, the number of white kids arrested for identical crimes dropped 8%.<sup>10</sup>

## **2. Increasing Youth Use**

**The long-term harms of legalization on the youth population cannot be minimized. In one study, diagnoses of marijuana addiction for youth in legal marijuana states grew 25% after legalization – far outpacing the rates of non-legal states.<sup>11</sup>**

When marijuana is legalized, youth use generally increases. According to a 2021 study published in the *Journal of Studies on Alcohol and Drugs*, youth who live in California may be more likely to use marijuana since the implementation of marijuana legalization in 2016.<sup>12</sup> In Colorado, regular youth marijuana use among those under 15 rose 14.8% in 2019 versus 2017.<sup>13</sup> State-level data from the 2020 National Survey on Drug Use and Health, the most authoritative study on drug use conducted by the Substance Abuse and Mental Health Administration (SAMHSA), found significant increases in youth marijuana use in several recently legalized marijuana states versus the previous year. At the same time, mental illness indicators worsened across the country while alcohol, cocaine, and tobacco use dropped, especially among young people.<sup>14</sup> A 2020 study published in the *International Review of Psychiatry* found that adolescent-onset marijuana exposure is associated with “short- and possibly long-term impairments in cognition, worse

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<sup>8</sup> Migoya, David, and Baca, Ricardo. “Denver’s pot businesses mostly in low-income, minority neighborhoods”. *The Denver Post*, 2 Jan. 2016.

<sup>9</sup> Colorado Department of Public Safety. (2016). *Marijuana legalization in Colorado: Early findings*. Retrieved February 3, 2018, from <https://cdpsdocs.state.co.us/ors/docs/reports/2016-SB13-283-Rpt.pdf>

<sup>10</sup> Colorado Department of Public Safety, Division of Criminal Justice, Office of Research and Statistics. *Marijuana Legalization in Colorado: Early Findings*. Denver, Mar. 2016.

<sup>11</sup> Cerdá, M., Mauro, C., Hamilton, A., Levy, N. S., Santaella-Tenorio, J., Hasin, D., . . . Martins, S. S. (2020). Association Between Recreational Marijuana Legalization in the United States and Changes in Marijuana Use and Cannabis Use Disorder From 2008 to 2016. *JAMA Psychiatry*, 77(2), 165. doi:10.1001/jamapsychiatry.2019.3254  
<sup>12</sup> [Press release]. (2021, February 15). *Teens May Be More Likely to Use Marijuana After Legalization for Adult Recreational Use*. Retrieved April 6, 2021, from <https://www.prnewswire.com/news-releases/teens-may-be-more-likely-to-use-marijuana-after-legalization-for-adult-recreational-use-301227489.html>

<sup>13</sup> Marijuana Health Monitoring Program. (2021, February 1). *Monitoring Health Concerns Related to Marijuana in Colorado:2020* (United States, Colorado Department of Public Health and Environment, Marijuana Health Monitoring Program). Retrieved April 8, 2021, from <https://marijuanahealthinfo.colorado.gov/reports-and-summaries>.

<sup>14</sup> Smart Approaches to Marijuana. (2021, January 12). *New HHS Data Shows Significant Youth Drug Use Increases in Legalized States*. Retrieved April 04, 2021, from <https://learnaboutsam.org/new-hhs-data-shows-significant-youth-drug-use-increases-in-legalized-states/>

academic/ vocational outcomes, and increased prevalence of psychotic, mood, and addictive disorders.”<sup>15</sup>

The addictive nature and negative health effects of marijuana are numerous. There is evidence that associates adolescent marijuana use with long-term negative health and social outcomes. A study of 45,570 Swedish men who were drafted into the military found that men who tried marijuana by age 18 were 2.4 times more likely to be diagnosed with schizophrenia over the next 15 years than those who had not.<sup>16</sup> In the same Swedish study, chronic marijuana users had a significantly higher risk of unemployment and the need for welfare assistance by middle age.<sup>17</sup>

A 2017 report by National Academy of Sciences (NAS) written by top scientists, entitled *The Health Effects of Cannabis and Cannabinoids: Current State of Evidence and Recommendations for Research*, concluded after a review of over 10,000 peer-reviewed academic articles, that marijuana use is connected to a number of problems, including:

- respiratory problems;
- mental health issues (like psychosis, social anxiety, and thoughts of suicide);
- increased risk of car accidents;
- progression to and dependence on tobacco, alcohol, and other drugs;
- learning, memory, and attention loss (possibly permanent in some cases);
- and low birth weight.<sup>18</sup>

A study from March 2017 stated that “clear associations exist between cannabis use status in young adulthood and subsequent mental health and substance use.”<sup>19</sup> Given these findings, expanding the use of marijuana would be irresponsible.

Notably, NAS report also stated that, “in states where cannabis use is legal, there is increased risk of unintentional cannabis overdose injuries among children.”<sup>20</sup> This connection with children is particularly pertinent given the rise in use by Colorado youth since legalization. The only nationally representative study on marijuana use, the National Survey on Drug Use and

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<sup>15</sup> Hammond, C. J., Chaney, A., Hendrickson, B., & Sharma, P. (2020). Cannabis use among U.S. adolescents in the era of marijuana legalization: A review of changing use patterns, comorbidity, and health correlates. *International Review of Psychiatry*, 32(3), 221-234. doi:10.1080/09540261.2020.1713056

<sup>16</sup> Roberts, B. (2019). Legalized Cannabis in Colorado Emergency Departments: A Cautionary Review of Negative Health and Safety Effects. *Western Journal of Emergency Medicine*, 20(4), 557-572. doi:10.5811/westjem.2019.4.39935

<sup>17</sup> Roberts, B. (2019). Legalized Cannabis in Colorado Emergency Departments: A Cautionary Review of Negative Health and Safety Effects. *Western Journal of Emergency Medicine*, 20(4), 557-572. doi:10.5811/westjem.2019.4.39935

<sup>18</sup> National Academies of Sciences, Engineering, and Medicine. 2017. *The health effects of cannabis and cannabinoids: Current state of evidence and recommendations for research*. Washington, DC: The National Academies Press.

<sup>19</sup> Silins, E., Swift, W., Slade, T., Toson, B., Rodgers, B., & Hutchinson, D. M. (2017). A prospective study of the substance use and mental health outcomes of young adult former and current cannabis users. *Drug and Alcohol Review*. Wiley-Blackwell. <https://doi.org/10.1111/dar.12512>

<sup>20</sup> National Academies of Sciences, Engineering, and Medicine. 2017. *The health effects of cannabis and cannabinoids: Current state of evidence and recommendations for research*. Washington, DC: The National Academies Press.

Health (NSDUH), indicates that Colorado has held the top ranking for first-time marijuana use among youth for multiple years.<sup>21</sup>

Another point of grave concern is the significant increase in marijuana-related emergency room and urgent care visits, especially for adolescents. This is despite national survey data suggesting that the adolescent marijuana use rate is largely unchanged.<sup>22</sup> In Colorado, hospitalization rates involving possible marijuana exposures, diagnoses or billing codes more than quadrupled after the legalization of commercial sales.<sup>23</sup> Marijuana-related emergency department and urgent care visits for teenagers and young adults have increased since legalization, and the majority require behavioral health evaluation.<sup>24</sup>

Additionally, calls to poison control centers have risen 210% between the four-year averages before and after recreational legalization.<sup>25</sup> Colorado's Department of Public Health and Environment found in a recent report that there was a 1000% increase in children aged 0-9 being exposed to marijuana products since legalization in 2019, and tens of thousands of homes in Colorado are not storing marijuana products safely or subjecting their children to second-hand marijuana smoke.<sup>26</sup>

In fact, instances of marijuana-related poison control calls have increased in every legalized state. A 13-year study utilizing National Poison Data System data found the rate of marijuana exposure was 2.8 times higher in legal states compared with states where its use is not legal.<sup>27</sup> Marijuana-related poison control calls doubled after Massachusetts legalized *medical* marijuana.<sup>28</sup> In Colorado, total marijuana exposures in children 0-5 increased by 86% from 2016 to 2018.<sup>29</sup> A 2020 study examining illicit drug exposures in young children revealed that not

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<sup>21</sup> National Survey on Drug Use and Health. (2006-2016). State use estimates [Data file]. Retrieved from <https://www.samhsa.gov/data/population-data-nsduh>

<sup>22</sup> Roberts, B. (2019). Legalized Cannabis in Colorado Emergency Departments: A Cautionary Review of Negative Health and Safety Effects. *Western Journal of Emergency Medicine*, 20(4), 557-572. doi:10.5811/westjem.2019.4.39935

<sup>23</sup> McCoppin, R. (2019, May 31). Recreational marijuana in Colorado: What the numbers say about health, safety and tax dollars. Retrieved April 09, 2021, from <https://www.chicagotribune.com/news/ct-viz-met-colorado-legal-marijuana-by-the-numbers-htlmlstory.html>

<sup>24</sup> Roberts, B. (2019). Legalized Cannabis in Colorado Emergency Departments: A Cautionary Review of Negative Health and Safety Effects. *Western Journal of Emergency Medicine*, 20(4), 557-572. doi:10.5811/westjem.2019.4.39935

<sup>25</sup> Rocky Mountain Poison and Drug Center. (2017). Retrieved December 22, 2017, from <http://www.rmhidta.org/html/FINAL%202017%20Legalization%20of%20Marijuana%20in%20Colorado%20The%20Impact.pdf>

<sup>26</sup> Colorado Department of Public Health and Environment. Monitoring Health Concerns Related to Marijuana in Colorado: 2018

<sup>27</sup> Lewis, B., Fleeger, T., Judge, B., Riley, B., & Jones, J. (2020). Acute toxicity associated with cannabis edibles following decriminalization of marijuana in Michigan. *The American Journal of Emergency Medicine*. doi:10.1016/j.ajem.2020.09.077

<sup>28</sup> Renfrow, J. (2019, August 16). Calls to poison control double after medical marijuana legalized in Massachusetts. Retrieved April 07, 2021, from <https://www.fiercehealthcare.com/regulatory/calls-to-poison-control-double-after-medical-marijuana-legalized-massachusetts>

<sup>29</sup> *United States, Rocky Mountain Poison & Drug Center. (n.d.). Colorado Poison Center Marijuana Data. Retrieved April 9, 2021, from https://www.rmpds.org/system/user\_files/Documents/Colorado%20Poison%20Center%20Marijuana%20Data%202018(1).pdf*

only was marijuana the most common exposure, but instances of exposure are steadily increasing alongside of legalization.<sup>30</sup>

This is why national medical associations do not support marijuana legalization. For example, the American Medical Association states that, “cannabis is a dangerous drug and as such is a public health concern; the sale should not be legalized;”<sup>31</sup> a position the AMA still holds in 2022<sup>32</sup>. The American Academy of Pediatrics and American Academy of Adolescent Psychiatry, and American Society of Addiction Medicine all have serious concerns about marijuana and oppose legalization.<sup>33</sup>

Despite the concerns of many of our nation’s leading medical experts, many youth believe the drug is harmless. Big Marijuana and countless activists have been peddling the narrative marijuana is a wonder drug, and their advertising campaigns have an effect. For instance, a study found, “Almost a fifth of the adolescents reported no perceived risk of harm from using cannabis monthly (19%), 29% reported perceiving a slight risk.”<sup>34</sup>

Additionally, according to the 2020 data from the National Survey on Drug Use and Health (NSUDH), the perceived harms of marijuana change drastically during one’s teenage years. The NSUDH found 49.5% of 12-13 year olds perceived the smoking of marijuana “once or twice a week” to be harmful. However, this dropped to 35.7% among 14-15 year olds, and to 26.8% of 16-17 year olds. Only 14.8% of 18-25 year olds think it is harmful to smoke marijuana “once or twice a week,” which is less than one-third of the initial group of 12-13 year olds.<sup>35</sup> Given the state of the science, this is tragic.

### **3. Exacerbating the Black Market**

Perhaps most importantly, legalization will roll out the red carpet for a larger black market for pot than currently exists, harming youth with more access to illicit marijuana. Although this may initially sound counterintuitive, a closer look at what has happened in California, Colorado (where non-medical marijuana was legalized in 2012), and in Oregon (where non-medical marijuana was legalized in 2014) reveals why.

California Governor Gavin Newsom has declared that the black market is “getting worse, not better” since legalization and has deployed the National Guard to fight cartel activity in the

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<sup>30</sup> Graham, J., Leonard, J., Banerji, S., & Wang, G. S. (2020). Illicit Drug Exposures in Young Pediatric Patients Reported to the National Poison Data System, 2006-2016. *The Journal of Pediatrics*, 219. doi:10.1016/j.jpeds.2019.11.004

<sup>31</sup> Report 2 of the Council on Science and Public Health (I-13), A Contemporary View of National Drug Control Policy. (2013). American Medical Association. Retrieved from <https://www.ama-assn.org/sites/default/files/media-browser/public/about-ama/councils/Council%20Reports/council-on-science-public-health/i13csaph2-summary-only.pdf>.

<sup>32</sup> Bailey, S. (2021, April 09). Questions still surround cannabis use and public health. Retrieved April 9, 2021, from <https://www.ama-assn.org/about/leadership/questions-still-surround-cannabis-use-and-public-health>

<sup>33</sup> Public Health Organizations’ Position on Medical Marijuana. [Web post, Smart Approaches to Marijuana]. (2016) Retrieved from <https://learnaboutsam.org/the-issues/public-health-organizations-positions-on-medical-marijuana/>.

<sup>34</sup> <https://www.sciencedirect.com/science/article/pii/S2211335521001261>

<sup>35</sup> <https://www.samhsa.gov/data/sites/default/files/reports/rpt35323/NSDUHDetailedTabs2020/NSDUHDetailedTabs2020/NSDUHDetTabsSect3pe2020.htm>

state.<sup>36</sup> Licensed pot shops in California cannot keep up with the influx of illicit product and in some cases are being forced out of business.<sup>37</sup> As a result, this year the *Associated Press* has stated the industry is on the brink of “collapse.”<sup>38</sup>

Not all illicit marijuana is illegally produced; in fact, legally produced medical and recreational marijuana is regularly diverted to the illicit market.<sup>39</sup> The legalization of hemp in the 2018 Farm Bill has further enabled the illicit market, especially in legal marijuana states. According to the DEA’s 2020 National Drug Threat Assessment, a “significant number” of hemp businesses are owned and operated by DTOs who illegally produce and traffic marijuana. Traffickers operate under the cover of state issued hemp documentation to cultivate large scale marijuana grows. Because marijuana and hemp look identical to the naked eye, “large hemp grows are sometimes used to hide marijuana plants interspersed throughout the hemp plants.”<sup>40</sup>

Hemp is only one example. Even though states set transactional limits on how much marijuana can be purchased at a dispensary, it is still possible to make multiple transactions on the same day. These purchases can then be diverted to the illicit market.<sup>41</sup> The illicit market cannot be regulated away; it circumnavigates aggressive bureaucracy and legalization only hinders existing law enforcement efforts to curtail illicit drug trafficking and the criminal activity associated with illicit drug trafficking.

A leaked January 2017 report from the Oregon State Police states that “cannabis legalization has not had a noticeable effect on Mexican [drug trafficking organizations’] illicit cannabis cultivation operations on public lands.”<sup>42</sup> It also indicates that “only 30 percent of [Oregon’s marijuana] market activity is captured in legal transactions.”<sup>43</sup> *That means more than two-thirds of Oregon’s marijuana transactions remain illegal.*

Similarly, in February 2015, years after legalization passed, Colorado Attorney General Cynthia Coffman told reporters: “The criminals are still selling on the black market... We have plenty of cartel activity in Colorado [and] plenty of illegal activity that has not decreased at all.”<sup>44</sup>

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<sup>36</sup> “‘Getting Worse, Not Better’ Illegal Pot Market Booming in California Despite Legalization.” Fuller, Thomas. *The New York Times*. 27 April 2019.

<sup>37</sup> Fuller, T. (2019, April 27). Getting Worse, Not Better’: Illegal Pot Market Booming in California Despite Legalization. *New York Times*. Retrieved April 5, 2021, from iv.

<https://www.nytimes.com/2019/04/27/us/marijuana-california-legalization.html?auth=login-email&login=email>

<sup>38</sup> <https://www.seattletimes.com/business/california-pot-companies-warn-of-impending-industry-collapse/>

<sup>39</sup> Drug Enforcement Administration. (2021). *2020 National Drug Threat Assessment* (pp. 47-58) (United States, Department of Justice, Drug Enforcement Administration). Drug Enforcement Administration.

<sup>40</sup> (Ibid.) Drug Enforcement Administration. (2021). *2020 National Drug Threat Assessment* (pp. 47-58) (United States, Department of Justice, Drug Enforcement Administration). Drug Enforcement Administration.

<sup>41</sup> (Ibid.) Drug Enforcement Administration. (2021). *2020 National Drug Threat Assessment* (pp. 47-58) (United States, Department of Justice, Drug Enforcement Administration). Drug Enforcement Administration.

<sup>42</sup> Oregon State Police. *A Baseline Evaluation of Cannabis Enforcement Priorities In Oregon*. 2017, available at: <http://media.oregonlive.com/marijuana/other/2017/03/20/statepolicesmaller.pdf>.

<sup>43</sup> *Id.*

<sup>44</sup> “Special report, ‘Clearing the haze:’ Black market is thriving in Colorado.” *Colorado Springs Gazette*, 20 Mar. 2015. Retrieved from <http://gazette.com/special-report-clearing-the-haze-black-market-is-thriving-in-colorado/article/1548305>.

To further reinforce the spread of black market activity, a special media investigation revealed in 2018 that a record number of packages were mailed to or from Colorado through the U.S. Postal Service, up to 934 from 805—the number was 234 in 2012.<sup>45</sup> The issue is especially troubling in rural areas due to the difficulties involved in distinguishing between legal and criminal marijuana farms. About \$6.5 million worth of illegal marijuana was confiscated by federal agencies in the White River National Forest in Aspen, Colorado, and 9,200 illegal marijuana plants were found growing on islands in the middle of the Colorado River.<sup>46</sup>

The surge in black marketeering derives from organized criminal groups “hiding in plain sight” in legalized states.<sup>47</sup> Marijuana growing and sales no longer attract the type of attention they did prior to legalization—and the taxes imposed on state-legalized pot necessary to pay for all the bureaucratic oversight create a large demand for cheaper product that the black market easily fills.

#### 4. Increasing Stoned Driving

Marijuana-impaired driving is rising while the perception of its negative consequences is simultaneously decreasing. The Centers for Disease Control and Prevention found that, in 2018, 12 million U.S. residents, or 4.7% of the driving population, reported driving under the influence of marijuana. This represents 4.7% of the driving population.<sup>48</sup> A 2020 study authored by researchers at New York Medical College and Harvard University found marijuana commercialization was associated with an increase of 2.1 traffic fatalities per billion vehicle miles traveled (BVMT). **Meaning, if marijuana were legalized nationwide, it would be associated with 6,800 excess stoned driving deaths each year.**<sup>49</sup>

In Colorado, marijuana is now involved in more than one of every four deaths on the road, and that number is rising.<sup>50</sup> Traffic deaths involving drivers who tested positive for marijuana more

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<sup>45</sup> Larson, D. (2018). Record number of mailed marijuana packages caught by feds in Colorado last year. *Denver 7 News*. Retrieved February 9, 2018, from <https://www.thedenverchannel.com/news/investigations/record-number-of-mailed-marijuana-packages-caught-by-feds-in-colorado-last-year>

<sup>46</sup> Associated Press. (2017, September 29). Federal agencies raid pot grow operation in Aspen area. *Denver News*. Retrieved February 3, 2018, from <https://www.usnews.com/news/best-states/colorado/articles/2017-09-29/federal-agencies-raid-pot-grow-operation-in-aspen-area>

<sup>47</sup> Durbin, Kaitlin. “Colorado Springs mayor: Day of reckoning coming for city’s illegal marijuana growers,” *Colorado Springs Gazette*. 28 May 2016; Gurman, Sadie. “Drug traffickers ‘hiding in plain sight’ amid legal Colorado marijuana.” *The Cannabist*. 28 Jan. 2016.

<sup>48</sup> Azofeifa, A., Rexach-Guzmán, B. D., Hagemeyer, A. N., Rudd, R. A., & Sauber-Schatz, E. K. (2019). Driving under the influence of marijuana and illicit drugs among persons aged ≥16 years—United States, 2018. *Morbidity and Mortality Weekly Report*, 68(50), 1153–1157. <https://doi.org/10.15585/mmwr.mm6850a1>

<sup>49</sup> Kamer, R. S., Warshafsky, S., & Kamer, G. C. (2020). Change in traffic fatality rates in the first 4 states to legalize recreational marijuana. *JAMA Internal Medicine*, 180(8), 1119. doi:10.1001/jamainternmed.2020.1769

<sup>50</sup> Rocky Mountain High Intensity Drug Trafficking Area. (2019). *The legalization of marijuana in Colorado: The impact*. <https://rmhidta.org/files/D2DF/FINAL-Volume6.pdf>

than doubled from 2013 to 2019.<sup>51</sup> Furthermore, 47% of Colorado drivers who tested positive for marijuana at a level of 5.0+ THC, also had a BAC of 0.08 or higher.<sup>52</sup>

According to the biological results of Washington’s Roadside Survey, “nearly one in five daytime drivers may be under the influence of marijuana, up from less than one in 10 drivers prior to the implementation of marijuana retail sales.”<sup>53</sup>

Vehicle crashes and traffic fatalities have surged after the legalization of marijuana. Research by the Highway Loss Data Institute found that the legalization of recreational marijuana in Colorado, Oregon, and Washington coincided with an increase in collision claims.<sup>54</sup> A recent report released by AAA found that the number of drivers who tested positive for marijuana after a fatal crash doubled after legalization in Washington state. Researchers found that in the five years prior to legalization in the state, marijuana-impaired drivers comprised around 8.8% of all drivers implicated in traffic fatalities. In the years following, the rate jumped to around 18%.<sup>55</sup> The AAA writes, “AAA opposes the legalization of marijuana for recreational use because of its inherent traffic safety risks and because of the difficulties in writing legislation that protects the public and treats drivers fairly” (Stratton, 2020)

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<sup>51</sup> Rocky Mountain High Intensity Drug Trafficking Area. (2019). *The legalization of marijuana in Colorado: The impact*. <https://rmhidta.org/files/D2DF/FINAL-Volume6.pdf>

<sup>52</sup> Colorado Division of Criminal Justice. (2019a). *Driving under the influence of drugs and alcohol*. [http://cdpsdocs.state.co.us/ors/docs/reports/2019-DUI\\_HB17-1315.pdf](http://cdpsdocs.state.co.us/ors/docs/reports/2019-DUI_HB17-1315.pdf)

<sup>53</sup> Grondel, D., Hoff, S., & Doane, D. (2018). Marijuana use, alcohol use, and driving in Washington State. Washington Traffic Safety Commission. [http://wtsc.wa.gov/wp-content/uploads/dlm\\_uploads/2018/05/Marijuana-and-Alcohol-Involve-ment-in-Fatal-Crashes-in-WA\\_FINAL.pdf](http://wtsc.wa.gov/wp-content/uploads/dlm_uploads/2018/05/Marijuana-and-Alcohol-Involve-ment-in-Fatal-Crashes-in-WA_FINAL.pdf)

<sup>54</sup> Highway Loss Data Institute. (2018). Recreational marijuana and collision claim frequencies. [https://www.iihs.org/media/e0028841-76ee-4315-a628-32a704258980/gmJeDw/HLDI%20Research/Bulletins/hldi\\_bulletin\\_35-08.pdf](https://www.iihs.org/media/e0028841-76ee-4315-a628-32a704258980/gmJeDw/HLDI%20Research/Bulletins/hldi_bulletin_35-08.pdf)

<sup>55</sup> Stratton, J. (2020, January 30). Fatal crashes involving drivers who test positive for marijuana increase after state legalizes drug. AAA NewsRoom. <https://newsroom.aaa.com/2020/01/fatal-crashes-involving-drivers-who-test-positive-for-marijuana-increase-after-state-legalizes-drug/>