#### June McHuen

**From:** Ryan The Lion <ryand589@gmail.com> **Sent:** Wednesday, April 26, 2017 11:22 AM

**To:** Clerk of the Board

**Subject:** The Medical Cannabis Briefing Guide PDF File

Greetings,

My name is Ryan Doronila, I'm the Horticulture Student from DVC. I spoke about the subject of consideration for the funding and approval for academic cannabis programs.

DVC has approved a club this semester regarding Cannabis by naming it the "NORML/SSDP Club".

The club consists of two well known organizations that specializes in Cannabis with NORML (National Organization for Reforming Marijuana Laws) and drug education and harm reduction with SSDP (Students for Sensible Drug Policy).

The vision and goal of the club is to open up the subject for discussion. The plan would be to educate and empower students for new job opportunities in this new industry that will effect all sectors: Agriculture, Science, Medecine, Finance, Political Science, etc.

My Horticulture professors and I would like to propose an indoor cultivation course to be offered in DVC with course credits. Alternatively we're open to a trial run class, maybe during the next summer or fall semester as a fee based "lecture only" course.

The purpose of the indoor cannabis cultivation course would be to educate students about the plant and its benefits, the proper basic organic grow techniques as well as proper maintenance, watering, nutrient feeding. Electrical and fire safety hazard training will also be included in the course.

If the state allows 6 plants per household, let's make sure our residents who choose to cultivate, know how to do it the right way. Federal funding will help solidify a credible program for the future by setting up Greenhouses and Science labs for Medical research and testing done by students.

Please contact me for any questions regarding this industry from a cultivating and academic perspective.

Thank you,

Ryan Doronila 925.391.6600

DVC - Horticulture Student (Retail Nursery)

Medical Cannabis Briefing Guide PDF file link:

 $\underline{american\text{-}safe\text{-}access.s3.amazonaws.com/briefingbook115/ASA\_report\_29\_online.pdf}$ 

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## The New Hork Times https://nyti.ms/2oKHhfT

U.S.

## Marijuana Goes Industrial in California

By THOMAS FULLER APRIL 15, 2017

SALINAS, Calif. — This vast and fertile valley is often called the salad bowl of the nation for the countless heads of lettuce growing across its floor. Now California's marijuana industry is laying claim to a new slogan for the valley: America's cannabis bucket.

After years of marijuana being cultivated in small plots out of sight from the authorities, California cannabis is going industrial.

Over the past year, dilapidated greenhouses in the Salinas Valley, which were built for cut flower businesses, have been bought up by dozens of marijuana entrepreneurs, who are growing pot among the fields of spinach, strawberries and wine grapes.

"This is cannabis meets Big Ag," said Steve DeAngelo, the executive director of one the nation's largest marijuana dispensaries, who last year founded Harborside Farms to supply the business.

The 47-acre farm is dotted with greenhouses that emit the pungent smell of thousands of marijuana plants and warehouses where farmworkers who spent their careers tending to raspberry plants now sit in rows delicately trimming the leaves from harvested cannabis buds. When the last greenhouses are built here next year, the facility will be one of the largest legal marijuana farms in the world.

Harborside and other farms like it are a sign of a new chapter for America's cannabis industry, in which marijuana is grown openly, like any other crop. Despite the federal ban on marijuana, leaders of the industry are taking a Manifest Destiny view, believing it is only a matter of time for pot to become as widely accepted as alcohol across the country.

California, with its ideal climate and vast market, is at the vanguard of the movement to normalize the drug and produce it cheaply and in abundance.

"California is destined to do with cannabis what we've done with every other fruit and vegetable," Mr. DeAngelo said. "And that's take half of the national market."

The move to mass-scale farming is occurring just as some members of the Trump administration are advocating a revival of the war on drugs, including marijuana, which is now legal in some form or another in about 30 states. The federal ban precludes growers of California cannabis from legally shipping out of state, although tons of it seeps out anyway.

Terry Garrett, a cannabis analyst based in California, estimates that American consumers spend at least \$50 billion a year on marijuana. By contrast, legal marijuana sales total around \$7 billion, according to data compiled by BDS Analytics, a company that specializes in data on the cannabis market.

American cannabis laws and politics are starkly contradictory: Cannabis growers here, in Colorado and in the other states where cannabis cultivation is legal are regulated and taxed. But Jeff Sessions, the attorney general, recently compared cannabis to heroin. He and others in the Trump administration have threatened a crackdown.

Greater enforcement of the federal ban does not appear to be imminent. Russ Baer, a spokesman for the Drug Enforcement Administration, said "nothing has changed in terms of our enforcement approach."

The D.E.A. remains concerned about diversion of marijuana to the black market, Mr. Baer said, but its priorities are elsewhere.

"Our attention is so focused on the opioid epidemic right now," he said. "That's where we've committed the vast majority of our resources."

The aggressive moves in the Salinas Valley into large-scale cannabis farming, replete with plans for conveyor belts and high-efficiency Dutch-built greenhouses, are already roiling the industry. Some are worried that the marijuana business is getting too big too fast and predict a glut of California marijuana and sharp price declines. Growers in recent years have already reported steady declines in wholesale prices of marijuana, although retail prices have remained relatively steady.

Small cannabis farmers who have operated for decades and fear they could be wiped out are among the most alarmed.

"We are watching the industrialization of commercial cannabis," said Tawnie Logan, chairwoman of the board of the California Growers Association, an organization that lobbies for cottage growers' access to the market. "For them, the name of the game is the profit margin."

Ms. Logan said small growers were grateful for the legal battles that veterans of the industry like Mr. DeAngelo of Harborside had waged for the industry but felt betrayed by Harborside's move to mass production.

"They say they are fighting for the little guy while they set up a 50-acre farm," Ms. Logan said.

Outside the Salinas Valley, the majority of cannabis farms in California have growing areas that are smaller than 5,000 square feet. The Harborside growing areas will be more than 70 times as large, around 360,000 square feet, and will have a capacity of 100,000 plants, including the nursery.

The industrial cannabis farms in the Salinas Valley are beginning their operations during a period of legal limbo in California. Voters approved recreational marijuana in November, but California lawmakers will be working out detailed regulations in the coming weeks, including the question of whether to put a cap on the size of farms.

Newly passed regulations in Monterey County are forcing cannabis growers to be more public than ever before.

"The industry is cautiously coming out of the shadows," said Mary Zeeb, the treasurer of Monterey County, which is assessing a tax of \$15 per square foot on cannabis cultivators.

Monterey County, which encompasses the Salinas Valley, has received 73 applications for cannabis farm permits, and more than 40 of those are already operational, said Brandon Swanson, a planning manager for the county's Resource Management Agency.

A typical cannabis farm in the valley now operates with two or three greenhouses, and there is plenty of room to expand. "Nobody is at full capacity of what their land can do yet," Mr. Swanson said.

The rush into cannabis farming has been disorienting for neighboring businesses. Gerald Voge, a fifth-generation flower grower, said he had received many unsolicited offers from cannabis businesses to buy his 20-acre nursery, including a recent bid of \$6 million. He is refusing to sell.

His neighbor's run-down, 10-acre nursery recently sold for \$3.9 million to pot entrepreneurs.

"Everyone is running after gold," Mr. Voge said. "I am afraid that in three or four years a lot of people will go belly up."

Maximillian Mikalonis, a former legislative aide in Sacramento who helped write California's medical cannabis regulations, said lawmakers must decide in the coming weeks whether to curb the move toward industrialization.

"It is a critical moment, a defining moment for the future of the industry in California," Mr. Mikalonis said.

The choice, he said, is between a "marketplace for small and boutique operators who have been doing this for generations — or domination by the forces of agribusiness."

Some believe the consolidation of the industry, as has happened across the food industry, is inevitable.

"The effort to protect the little guy is ultimately doomed," said Tom Adams of BDS Analytics. "The retailers are going to have to get big or get out."

Overproduction is also a concern in the industry both because it could push down prices and because California cannabis could flood the markets of other states.

California produces more cannabis than it consumes — three times as much, by conservative estimates.

"The entire experiment will fail if California's continues to sell out of state," said Hezekiah Allen, the executive director of the California Growers Association. "The more product that leaves the state, the more the federal authorities will intervene."

The owners of Harborside Farms say they are acting on the imperatives of the market.

Jeff Brothers, the chief executive of the parent company of Harborside Farms, spent decades in the cut flower business, where he learned the importance of scale, he said.

"Harborside takes grief for being the 800-pound gorilla," Mr. Brothers said. "But if we want cannabis to be widely accepted, we need it to be cheap."

By setting up in Salinas and taking advantage of the agriculture infrastructure, Mr. Brothers said, the company will be able to halve its cost of producing marijuana. He uses a wine analogy to describe the difference between small growers in Northern California and the Big Ag growers in Salinas.

"They can be the specialty brands, and we will be Mondavi," Mr. Brothers said.

A version of this article appears in print on April 16, 2017, on Page A1 of the New York edition with the headline: Growers Split As Pot Farms Go Industrial.

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## The New Hork Times https://nyti.ms/2n99Kv4

U.S.

## Marijuana Industry Presses Ahead in California's Wine Country

## Leer en español

By THOMAS FULLER MARCH 18, 2017

SANTA ROSA, Calif. — In the heart of Northern California's wine country, a civil engineer turned marijuana entrepreneur is adding a new dimension to the art of matching fine wines with gourmet food: cannabis and wine pairing dinners.

Sam Edwards, co-founder of the Sonoma Cannabis Company, charges diners \$100 to \$150 for a meal that experiments with everything from marijuana-leaf pesto sauce to sniffs of cannabis flowers paired with sips of a crisp Russian River chardonnay.

"It accentuates the intensity of your palate," Mr. Edwards, 30, said of the dinners, one of which was held recently at a winery with sweeping views of the Sonoma vineyards. "We are seeing what works and what flavors are coming out."

Sonoma County, known to the world for its wines, is these days a seedbed of cannabis experimentation. The approval of recreational cannabis use by California voters in November has spurred local officials here to embrace the pot industry and the tax income it may bring.

"We're making this happen," said Julie Combs, a member of the Santa Rosa City Council, who is helping lead an effort to issue permits to cannabis companies. "This is an industry that can really help our region."

Of the many ways in which California is on a collision course with the Trump administration, from immigration to the environment, the state's enthusiastic embrace of legalized and regulated marijuana may be one of the biggest tests of the federal government's power.

Attorney General Jeff Sessions has equated marijuana with heroin and, on Wednesday, mentioned cannabis in the context of the "scourge of drug abuse."

"I reject the idea that America will be a better place if marijuana is sold in every corner store," he said. "And I am astonished to hear people suggest that we can solve our heroin crisis by legalizing marijuana, so people can trade one life-wrecking dependency for another that's only slightly less awful."

To the ears of many in California and other states where marijuana use has been legalized to varying degrees, the stigma Mr. Sessions attaches to cannabis feels like a holdover from the distant past.

Marijuana, which has been legal for medicinal purposes in California for two decades, can be ordered online for home delivery in the state's largest cities. A former mayor of Oakland, Jean Quan, recently applied to open a marijuana dispensary in San Francisco.

The industry is already immense. Arcview, a company that conducts cannabis research, estimates that the California market alone is worth \$7 billion.

America's divided views on cannabis have produced a strange and uneasy stalemate. Recreational use is legal in eight states, including all those along the West Coast. At the same time, state governments are watching closely for hints on what the Trump administration plans to do.

In the past, the federal authorities have destroyed fields and prosecuted growers. Federal law still calls for a minimum prison sentence of five years for growing more than 100 marijuana plants, although under the Obama administration, the law was enforced only in cases involving violence or gangs.

The White House spokesman, Sean Spicer, recently warned of the possibility of "greater enforcement" against recreational use of marijuana.

Those working in the industry are constantly reminded of the federal government's power to intervene in their business dealings, including severely limiting their access to the banking system.

"They can come in and ruin your whole life," said Mr. Edwards, the marijuana entrepreneur. "They can throw you in prison, take your property."

Yet, like so many others in the cannabis industry here — there are an estimated 9,000 growers in Sonoma County — Mr. Edwards is pressing ahead with his company, which specializes in growing and selling pesticide-free cannabis products. And he is planning more cannabis and wine pairing dinners.

"History favors the bold," he said.

His business's name, Sonoma Cannabis Company, makes no attempt to hide what industry he is in.

Some are skeptical that the Trump administration has the wherewithal to carry out a widespread crackdown on such a huge industry in America's most prosperous state.

"I think it's kind of doubtful right now, looking at the Trump administration," said Terry Garrett, a manager at Sustaining Technologies, a marketing company that researches the cannabis market in Sonoma County. "Let's see them do health care first, round up immigrants, build a wall."

Hezekiah Allen, the executive director of the California Growers Association, a cannabis industry group, said the mood among growers was a mixture of excitement and anxiety. Their primary concerns at the moment have more to do with local tax rates than possible federal intervention, he said.

A ballot measure that passed this month in Sonoma clears the way for the county to issue permits, a big step in bringing the industry out of the shadows.

The policy, known as Measure A, favors small-scale artisanal growers by taxing the acreage under cultivation rather than tonnage and by charging lower rates for smaller plots. But it also gives the county wide latitude to raise taxes without further voter approval.

Even at the lowest rates, state and county taxes add up to half the gross income of a typical grower, Mr. Allen said.

"At the highest rates, the tax would be a de facto prohibition," he said.

The combination of high taxes and the threat of federal intervention could push growers back underground, Mr. Allen and others say. And many regulations still need to be written before the full rollout of recreational marijuana in California.

"Generally speaking, I'm feeling encouraged," Mr. Allen said. "But it's a huge, huge experiment."

A version of this article appears in print on March 19, 2017, on Page A12 of the New York edition with the headline: Pot to Pair With Wines? Sonoma Embraces Possibilities.

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## Journalist's Resource

## Research on today's news topics

https://journalistsresource.org/studies/society/drug-policy/marijuana-legalization-crime-driving-research

## Marijuana legalization: Research review on crime and impaired driving

In November 2016, voters in nine states decided whether to legalize marijuana for medical or recreational use, according to a <u>running tally</u> by *The Cannabist*, a project of *The Denver Post*. Recreational use of the drug is already permitted in a handful of states, and can be prescribed by doctors in over half, though it remains banned under federal law.

Reports on the issue suggest voters were concerned: does marijuana use affect crime rates? A growing body of research addresses the question, tackling arguments used often by opponents and advocates of marijuana liberalization.

Opponents often claim that people who use marijuana are more likely to move on to harder drugs — the "gateway drug" theory — and that users of hard drugs engage in predatory crimes to feed their habits. Critics of legalization also argue that increasing accessibility means more youth will smoke or eat weed, that marijuana shops and growers are attractive targets for criminals, that marijuana use encourages alcohol abuse, and that stoned drivers are a public menace.

On the flip side, advocates for legalization argue it will undercut the black market, which is associated with criminals and violent elements. Crime may fall as police resources are reallocated to other pressing issues, they argue. Researchers have found, moreover, that some people substitute marijuana for alcohol, which means they drink less. And legalization of marijuana may reduce racial disparity in drug arrests. Black men, according to federal data collated by the <a href="Merican Civil Liberties Union">American Civil Liberties Union</a> and widely cited by scholars, are almost four times more likely to be arrested for marijuana possession than whites, even though both groups use the drug at roughly the same rate.

Most research on the link between marijuana and crime finds that medical marijuana laws (often abbreviated as MML) cause a general uptick in the use and availability of marijuana — beyond the patients who are prescribed the drug. "The legalization of marijuana for medicinal purposes approaches de facto legalization of marijuana for recreational purposes," write D. Mark Anderson of Montana State University and Daniel I. Rees of the University of Colorado Denver in the Journal of Policy Analysis and Management. By examining pre- and post-legalization in these MML states, they can "make predictions about what will happen in" states that legalize marijuana for recreational use.

#### Impact on crime

Several studies have found reductions in crime after marijuana is legalized for medical use, demonstrating a relationship, but not necessarily causation.

Showing a "clear connection between medicinal use and reductions in non-drug crime," Arthur Huber III, Rebecca Newman and Daniel LaFave of Colby College <u>link</u> medical marijuana to a 4 percent to 12 percent reduction in property crimes such as theft and burglaries. Crime has fallen across the United States in recent years, but in states with MML it has fallen approximately 5 percent more. Contrariwise, Huber and his colleagues find that depenalization — lowering penalties and, thus, the risk of possession — is linked to an increase in such crimes by 6 percent to 11 percent. That effect is similar to the amount crime would rise during an uptick in unemployment of 2 percent to 3 percent.

In widely cited <u>research</u>, Robert G. Morris of the University of Texas and colleagues see crime fall in every state that has introduced MML. Using FBI data on seven types of crime across states with and without MML, they dismiss concerns about rising crime.

"MML is not predictive of higher crime rates and may be related to reductions in rates of homicide and assault," Morris and colleagues write in the study, published in *PLoS One* in 2014. That may be because people seem to use alcohol less when they have access to pot: "Given the relationship between alcohol and violent crime, it may turn out that substituting marijuana for alcohol leads to minor reductions in violent crimes."

Moreover, contrary to concerns that marijuana dispensaries become magnets for crime, the shops may diminish crime in their immediate vicinity because of their heightened security, cameras and lights.

Economists Edward M. Shepard and Paul R. Blackley of Le Moyne College <u>find</u> that medical marijuana is associated with significant drops in violent crime. Looking at crime data from 11 states in the west, seven of which had medical marijuana laws before 2009, they see "no evidence of significant, negative spillover effects from MMLs on crime." Instead, they suspect a fall in the involvement of criminal organizations after marijuana is legalized for medical use and conclude, "MMLs likely produce net benefits for society."

Looking at crime data before and after the depenalization of marijuana in the United Kingdom in 2004, Nils Braakmann and Simon Jones of Newcastle University <u>suggest</u> most types of crime, risky behavior and violence fall. But they observe a 5 percent to 7 percent increase in property crimes among 15- to 17-year-olds.

#### More/less alcohol consumption

Katarina Guttmannova of the University of Washington and colleagues examined 15 studies on the relationship between alcohol and marijuana use. Their analysis <u>indicates mixed results</u>, suggesting both substitution — when marijuana is more readily available, people use it and drink less — and complementation — people drink more when they use marijuana.

Substitution would have positive public health implications, assuming, as some researchers do, that alcohol is a more destructive drug with higher costs for society.

#### Driving under the influence

Alcohol accounts for over 30 percent of motor-vehicle fatalities in the U.S. each year — almost 10,000 deaths — according to the U.S. Centers for Disease Control and Prevention.

In the first year after a medical marijuana law comes into effect, traffic fatalities decrease between 8 percent and 11 percent, according to research published in 2013 in *The Journal of Law & Economics*: "The impact of legalization on traffic fatalities involving alcohol is larger and estimated with more precision than its impact on traffic fatalities that do not involve alcohol. Legalization is also associated with sharp decreases in the price of marijuana and alcohol consumption, which suggests that marijuana and alcohol are substitutes."

In their *Journal of Policy Analysis and Management* paper, Anderson and Rees <u>describe</u> the relative dangers of driving while intoxicated or stoned: "While driving under the influence of marijuana is associated with a twofold increase in the risk of being involved in a collision, driving with a blood alcohol concentration (BAC) of 0.08 or greater is associated with a 4- to 27-fold increase in this same risk." The active ingredient in marijuana, tetrahydrocannabinol (THC), impairs driving ability, but users tend to overcompensate and drive slower, whereas alcohol consumers tend to drive faster and take more risks, they write.

Huber and his colleagues at Colby College also chart a fall in DUIs in states with MML laws.

A team of researchers at Stanford University is developing a "potalyzer" to detect THC molecules in drivers' saliva. The portable test could produce results in three minutes, they reported in *Analytical Chemistry* in July 2016.

#### More people will use weed

There is growing <u>evidence</u> that as marijuana is legalized, more people use it. Legal medical marijuana increases both the supply of the drug as well as demand.

Braakmann and Jones see a 4.6 percent increase in cannabis consumption among 15- to 17-year-olds after dependization, which they suspect may be partially an increase in the number of first-time users. They do not see an increase among older groups.

Relatedly, a <u>2014 paper</u> in the *American Journal of Public Health* finds a negative relationship between marijuana and suicide. In states with MML, legalization is associated with a 10.8 percent reduction in the suicide rate of men between ages 20 and 39 — another indication of increased usage, and possibly of decreased alcohol consumption.

#### Gateway drug

Are teenagers who use pot more likely to begin using harder drugs like cocaine and heroin? Research is largely inconclusive and the issue is addressed in many of the studies listed above.

A related question is how MML affect the use and abuse of opioids for pain. Writing in *JAMA Internal Medicine*, Marcus Bachhuber of the Philadelphia Veterans Affairs Medical Center and colleagues <u>find</u> "medical cannabis laws are associated with significantly lower state-level opioid overdose mortality rates." Patients seem to be using these as substitutes, and marijuana is far less addictive and dangerous than drugs derived from the opium poppy. A 2016 study by Columbia

University researchers confirmed those findings and observed that states with MML had fewer opioid-related car accidents.

#### Racial justice

Significant research has shown that young black men are arrested at a much higher rate than white men for the same marijuana-related crimes.

Economists Wesley Austin of the University of Louisiana and Rand W. Ressler of Georgia Southern University <u>explore</u> the relationship between marijuana crimes and arrest in a 2016 paper for *Applied Economics Letters*. They find arrest much more likely if the offender is poor and black, compared with perpetrators who are either poor or black or poor and a member of another race.

Racial profiling is the topic of a <u>2016 paper</u> by Frank R. Baumgartner of the University of North Carolina at Chapel Hill and colleagues. They discover black men far more likely than white men to be searched during traffic stops, yet less likely to be found with contraband. "This discrepancy points strongly toward racial bias in the policing of [North Carolina] motorways," where police use their discretion to decide of a search is warranted. "Blacks in North Carolina appear to have good reasons to be mistrustful of the police, and that these trends appear to be growing over time."

#### Related research:

A 2016 paper <u>profiled</u> by Journalist's Resource finds the U.S. could reap up to \$12 billion in new tax revenues by regulating recreational marijuana. It also finds that access to marijuana is associated with greater usage.

The number of American cannabis users is rising. According to an August 2016 Gallup Poll, 13 percent of Americans say they use the drug, up from 7 percent in 2007. Slightly older data from the U.S. Department of Health and Human Services shows that over 22 million Americans aged 12 or older have used marijuana in the past month. That is 8.4 percent of the population.

Bloomberg Businessweek <u>estimates</u> that edible weed may have made up half the \$5.4 billion in legal marijuana sales in the U.S. in 2015.

The National Institutes of Health (NIH) publishes research on the health impact of cannabis consumption.

According to the Marijuana Policy Project, an advocacy group, there are over 2 million marijuana patients in the U.S.

<u>CannabisWire.com</u> and <u>High Times</u> magazine are among the news outlets that cover the growing legal marijuana business.

#### Citations

"Cannabis Control and Crime: Medicinal Use, Depenalization and the War on Drugs" Huber III, Arthur; Newman, Rebecca; LaFave, Daniel. *The B.E. Journal of Economic Analysis & Policy*, 2016. doi: 10.1515/bejeap-2015-0167.

Abstract: "To date, 27 states and the District of Columbia have passed laws easing marijuana control. This paper examines the relationship between the legalization of medical marijuana, depenalization of possession, and the incidence of non-drug crime. Using state panel data from 1970 to 2012, results show evidence of 4-12 percent reductions in robberies, larcenies, and burglaries due to the legalization of medical marijuana, but that depenalization has little effect and may instead increase crime rates. These effects are supported by null results for crimes unrelated to the cannabis market and are consistent with the supply-side effects of medicinal use that are absent from depenalization laws as well as existing evidence on the substitution between marijuana and alcohol. The findings contribute new evidence to the complex debate surrounding marijuana policy and the war on drugs."

## "Cannabis Depenalisation, Drug Consumption and Crime – Evidence from the 2004 Cannabis Declassification in the UK"

Braakmann, Nils; Jones, Simon. *Social Science & Medicine*, 2014. doi: 10.1016/j.socscimed.2014.06.003.

Abstract: "This paper investigates the link between cannabis depenalization and crime using individual-level panel data for England and Wales from 2003 to 2006. We exploit the declassification of cannabis in the UK in 2004 as a natural experiment. Specifically, we use the fact that the declassification changed expected punishments differently in various age groups due to thresholds in British criminal law and employ a difference-in-differences type design using data from the longitudinal version of the Offending, Crime and Justice Survey. Our findings suggest essentially no increases in either cannabis consumption, consumption of other drugs, crime and other forms of risky behavior."

## "The Effect of Medical Marijuana Laws on Crime: Evidence from State Panel Data, 1990-2006"

Morris, Robert G.; et al. *PLoS ONE*, 2014. doi: 10.1371/journal.pone.0092816.

Abstract: "Background: Debate has surrounded the legalization of marijuana for medical purposes for decades. Some have argued medical marijuana legalization (MML) poses a threat to public health and safety, perhaps also affecting crime rates. In recent years, some U.S. states have legalized marijuana for medical purposes, reigniting political and public interest in the impact of marijuana legalization on a range of outcomes. Methods: Relying on U.S. state panel data, we analyzed the association between state MML and state crime rates for all Part I offenses collected by the FBI. Findings: Results did not indicate a crime exacerbating effect of MML on any of the Part I offenses. Alternatively, state MML may be correlated with a reduction in homicide and assault rates, net of other covariates. Conclusions: These findings run counter to arguments suggesting the legalization of marijuana for medical purposes poses a danger to public health in terms of exposure to violent crime and property crimes."

"The Legalization of Recreational Marijuana: How Likely Is the Worst-Case Scenario?" Anderson, D. Mark; Rees, Daniel I. *Journal of Policy Analysis and Management*, 2013. doi: 10.1002/pam.21727.

Summary: This literature review looks at the concerns of those opposing legalization. It concludes that legal recreational marijuana is a net benefit for society because it is associated with a reduction in alcohol-related traffic deaths and alcohol use more generally, and thus also a reduction in crime. The usage of marijuana will increase, though, the authors expect.

"Medical Marijuana and Crime: Further Evidence From the Western States" Shepard, Edward M.; Blackley, Paul R. *Journal of Drug Issues*, 2016. doi:10.1177/0022042615623983.

Abstract: "State medical marijuana programs have proliferated in the United States in recent years. Marijuana sales are now estimated in the billions of dollars per year with over two million patients, yet it remains unlawful under federal law, and there is limited and conflicting evidence about potential effects on society. We present new evidence about potential effects on crime by estimating an economic crime model following the general approach developed by Becker. Data from 11 states in the western United States are used to estimate the model and test hypotheses about potential effects on rates of violent and property crime. Fixed effects methods are applied to control for state-specific factors, with adjustments for first-order autocorrelation and cross-section heteroskedasticity. There is no evidence of negative spillover effects from medical marijuana laws (MMLs) on violent or property crime. Instead, we find significant drops in rates of violent crime associated with state MMLs."

"Impacts of Changing Marijuana Policies on Alcohol Use in the United States" Katarina Guttmannova; et al. *Alcoholism: Clinical and Experimental Research*, 2015. doi: 10.1111/acer.12942.

Abstract: "Results: The extant literature provides some evidence for both substitution (i.e., more liberal marijuana policies related to less alcohol use as marijuana becomes a substitute) and complementary (i.e., more liberal marijuana policies related to increases in both marijuana and alcohol use) relationships in the context of liberalization of marijuana policies in the United States. Conclusions: Impact of more liberal marijuana policies on alcohol use is complex, and likely depends on specific aspects of policy implementation, including how long the policy has been in place. Furthermore, evaluation of marijuana policy effects on alcohol use may be sensitive to the age group studied and the margin of alcohol use examined. Design of policy evaluation research requires careful consideration of these issues."

## "A Micro-Temporal Geospatial Analysis of Medical Marijuana Dispensaries and Crime in Long Beach, California"

Freisthler, Bridget; et al. Addiction, 2016. doi: 10.1111/add.13301.

Abstract: "Aims: To determine whether the density of marijuana dispensaries in California, USA, in 2012-13 was related to violent and property crimes, both locally and in adjacent areas, during a time in which local law enforcement conducted operations to reduce the number of storefront medical marijuana dispensaries. Design: Data on locations of crimes and medical marijuana dispensaries as well as other covariates were collected for a sample of 333 Census block groups. [...] Findings: After adjustment for covariates, density of medical marijuana

dispensaries was unrelated to property and violent crimes in local areas but related positively to crime in spatially adjacent areas [incident rate ratio (IRR) = 1.0248, CI (1.0097, 1.0402) for violent crime, IRR = 1.0169, CI (1.0071, 1.0268) for property crime. Conclusions: Using law enforcement to reduce medical marijuana dispensaries in California appears to have reduced crime in residential areas near to, but not in, these locations."

## "Medical Cannabis Laws and Opioid Analgesic Overdose Mortality in the United States, 1999-2010"

Bachhuber, Marcus A.; et al. *JAMA Internal Medicine*, 2014. doi: 10.1001/jamainternmed.2014.4005.

Conclusions and Relevance: "Medical cannabis laws are associated with significantly lower state-level opioid overdose mortality rates. Further investigation is required to determine how medical cannabis laws may interact with policies aimed at preventing opioid analgesic overdose."

#### "Medical Marijuana Laws, Traffic Fatalities, and Alcohol Consumption"

Anderson, D. Mark; Hansen, Benjamin; Rees, Daniel I. *The Journal of Law & Economics*, 2013. doi: 10.1086/668812.

Abstract: "To date, 19 states have passed medical marijuana laws, yet very little is known about their effects. The current study examines the relationship between the legalization of medical marijuana and traffic fatalities, the leading cause of death among Americans ages 5-34. The first full year after coming into effect, legalization is associated with an 8-11 percent decrease in traffic fatalities. The impact of legalization on traffic fatalities involving alcohol is larger and estimated with more precision than its impact on traffic fatalities that do not involve alcohol. Legalization is also associated with sharp decreases in the price of marijuana and alcohol consumption, which suggests that marijuana and alcohol are substitutes. Because alternative mechanisms cannot be ruled out, the negative relationship between legalization and alcohol-related traffic fatalities does not necessarily imply that driving under the influence of marijuana is safer than driving under the influence of alcohol."

## "Medical Marijuana Laws and Suicides by Gender and Age"

Anderson, D. Mark; Rees, Daniel I.; Sabia, Joseph J. *American Journal of Public Health*, 2014. doi: 10.2105/AJPH.2013.301612.

Conclusions: "Suicides among men aged 20 through 39 years fell after medical marijuana legalization compared with those in states that did not legalize. The negative relationship between legalization and suicides among young men is consistent with the hypothesis that marijuana can be used to cope with stressful life events. However, this relationship may be explained by alcohol consumption. The mechanism through which legalizing medical marijuana reduces suicides among young men remains a topic for future study."

## "Who Gets Arrested for Marijuana Use? The Perils of Being Poor and Black"

Austin, Wesley; Ressler, Rand W. *Applied Economics Letters*, 2016. doi: 10.1080/13504851.2016.1178838.

**Abstract:** "We explore the relationship between income, race and the probability of being arrested. Our data set is comprised of individuals who have all violated federal marijuana laws, some of whom have been arrested. We reason that the cost of arresting a poor individual with diminished social status is lower. Our empiricism reveals that the probability of arrest is higher when the law breaker is poor and African American."

## "Targeting Young Men of Color for Search and Arrest During Traffic Stops: Evidence from North Carolina, 2002–2013"

Baumgartner, Frank R.; et al. *Politics, Groups, and Identities*, 2016. doi: 10.1080/21565503.2016.1160413.

Abstract: "North Carolina mandated the first collection of demographic data on all traffic stops during a surge of attention to the phenomenon of 'driving while black' in the late 1990s. Based on analysis of over 18 million traffic stops, we show dramatic disparities in the rates at which black drivers, particularly young males, are searched and arrested as compared to similarly situated whites, women, or older drivers. Further, the degree of racial disparity is growing over time. Finally, the rate at which searches lead to the discovery of contraband is consistently lower for blacks than for whites, providing strong evidence that the empirical disparities we uncover are in fact evidence of racial bias. The findings are robust to a variety of statistical specifications and consistent with findings in other jurisdictions."

Keywords: Cannabis, medical marijuana laws, recreational marijuana, crime, anti-social behavior, gateway theory, risk-taking, legalization, weed, pot, dope, edibles

Drug Policy, Health Care, Inequality, Public Health Alcohol, crime, Drunk driving, Medical marijuana, Suicide

Writer: David Trilling | Last updated: September 23, 2016



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## **PURPOSE:**

As communities throughout California begin implementing recreational marijuana legalization, we have the opportunity to be proactive and prevent adverse consequences in our youth. This summit will bring together existing research, experts, and partners from public health, policy development and speakers with practical experience from other states. The focus of this summit is providing participants with effective tools to assist in the prevention of youth marijuana use.

### **TOPICS INCLUDE:**

- Solutions and practices aimed at mitigating the impacts of legalization in schools and on youth.
- Prop 64 and local ordinances/policies needed to fill in the gaps, such as promising practices for retail dispensaries, advertising, and other issues.
- Evidence-based and promising practices focused on youth prevention and harm reduction.
- Cannabis-Impaired Driving, Youth and Public Safety. Trends, updates, and policy considerations.
- Marijuana Use Disorder, Brain Science and Addiction. Identification, Early Intervention and Treatment. What the research says and what's next.
- Prevention and the Cannabis Industry. Working together to find common ground in preventing youth access to marijuana and use. Challenges, opportunities, and success stories from communities.

## WHO SHOULD ATTEND?

Local and State Policymakers, such as Mayors, Town and City Managers, Planning Commissions, Board Supervisors, and Lawmakers and other Decision Makers. Stakeholders including Commissioners, Attorneys, Cannabis Working Groups, Prevention Educators, Public Health, Law Enforcement, School Superintendents, Directors and Administrators, Health and Wellness Teachers. Mental and Behavioral Health Counselors, Social Workers, Treatment Providers. Hospital Administrators and Program Managers. Coalitions and Civic Groups.

## **CREDITS:**

BBS, BRN, POST and Other CEU's Pending





















