From Prohibition to Progress: A Status Report on Marijuana Legalization

What We Know About Marijuana Legalization in Eight States and Washington, D.C.

A Drug Policy Alliance release.

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Table of Contents

Executive Summary

On November 6, 2012, Colorado and Washington became the first two states – and first two jurisdictions in the world – to legalize marijuana for adult use. Two years later Alaska, Oregon and Washington, D.C. followed suit. In 2016 voters in four additional states – California, Massachusetts, Maine and Nevada – also approved ballot measures legalizing marijuana. In January 2018, Vermont became the first state to legalize marijuana through a state legislature.[i] More states are expected to legalize marijuana in the near future.

Evidence shows that marijuana legalization is working so far. States are saving money and protecting the public by comprehensively regulating marijuana for adult use. This success has likely contributed to the historically high levels of public support for marijuana legalization in the U.S., which has steadily grown to an all-time high of 64 percent. The majority of Americans, across party affiliations, support legalizing marijuana, with 51 percent of Republicans now in favor.

Arrests and court filings for the possession, cultivation and distribution of marijuana have plummeted since voters legalized marijuana for adult use in eight states and Washington, D.C. These states have saved millions of dollars and prevented the criminalization of thousands of people.

Marijuana legalization has a positive effect on public health and safety. Nationally, and in states that have legalized marijuana, youth marijuana use has remained stable or declined. Legal access to marijuana is associated with reductions in some of the most troubling harms associated with opioid use, including opioid overdose deaths and untreated opioid use disorders. DUI arrests for driving under the influence, of alcohol and other drugs, have declined in Colorado and Washington, the first two states to establish legally regulated adult use marijuana markets. In addition, crash rates in both states have remained similar to those in comparable states that have not legalized marijuana.

At the same time, states are filling their coffers with hundreds of millions of dollars in marijuana tax revenues. These revenues are being allocated for social good – to fund education, school construction, early literacy, bullying prevention, behavioral health and alcohol and drug treatment. In addition, the legal marijuana industry is creating jobs; it currently employs approximately 200,000 full and part-time workers across the country.

Summary of Findings

Marijuana arrests are down. Arrests for marijuana in all legal marijuana states and Washington, D.C. have plummeted, saving states hundreds of millions of dollars and sparing thousands of people from being branded with lifelong criminal records.

- The total number of low-level marijuana court filings in Washington fell by 98 percent between 2011 and 2015.
- The total number of marijuana-related court filings in Colorado declined by 81 percent between 2012 and 2015, and marijuana possession charges dropped by 88 percent.
- In Washington, D.C., marijuana arrests decreased 76 percent from 2013 to 2016, with possession arrests falling by 98.6 percent.
- In Oregon, the number of marijuana arrests declined by 96 percent from 2013 to 2016.
- In Alaska, the number of marijuana arrests for possession and sales/manufacturing declined by 93 percent from 2013 to 2015.

Youth marijuana use is stable. Youth marijuana use rates have remained stable in states that have legalized marijuana for adults age 21 and older.

- In Washington, Colorado and Alaska, rates of marijuana use among high school students largely resemble national rates. These results are promising, suggesting that fears of widespread increases in use have not come to fruition.
- In Oregon, Nevada, California, Maine, Massachusetts and Washington, D.C., marijuana regulatory programs are not yet established or are so new that they are unlikely to have affected youth use rates in an immediately measurable way. While rates of use vary widely in these states, they have mostly stabilized or declined over the years leading up to legalization.

i This report does not include Vermont in its analysis because the state's marijuana legalization law is too new to evaluate.

Marijuana legalization is linked to lower rates of opioid-related harm. Increased access to legal marijuana has been associated with reductions in some of the most troubling harms associated with opioids, including opioid overdose deaths and untreated opioid use disorders.

- In states with medical marijuana access, overdose death rates are almost 25 percent lower than in states with no legal access to marijuana, and the reductions in overdose death rates strengthened over time.
- Legal access to medical marijuana has been associated with a 23 percent reduction in opioid dependence or abuse-related hospitalizations and 15 percent fewer opioid treatment admissions.
- An analysis of opioid overdose deaths in Colorado found that after marijuana was legalized for adult use there was a reduction of 0.7 deaths per month in the state and that the decades-long upward trend of overdoses began to decline after 2014, the first year of marijuana retail sales in the state.

Calls to poison control centers and visits to emergency departments for marijuana exposure remain relatively uncommon.

- In Oregon, less than one percent of calls to the state's poison centers in 2016 were related to marijuana exposure.
- In Colorado, less than one tenth of one percent (0.04 percent) of the state's 2.3 million emergency department visits in 2014 were for marijuana exposure.

Legalization has not made our roads less safe.

- DUI arrests are down in Colorado and Washington. The total number of arrests for driving under the influence, of alcohol and other drugs, has declined in Colorado and Washington, the first two states to regulate marijuana for adult use.
- There is no correlation between marijuana legalization and crash rates. The crash rates in both states are statistically similar to comparable states without legal marijuana.

Marijuana tax revenues are exceeding initial estimates. Marijuana sales in Colorado, Washington, Oregon, Alaska, and most recently in Nevada, began slowly as consumers and regulators alike adjusted to new systems. Once up and running, however, overall sales and tax revenue in each state quickly exceeded initial estimates. (Sales in California started on January 1, 2018, and no data are available yet. Sales in Massachusetts will not begin until July 2018. Sales in Maine are on hold pending approval of an implementation bill for the state's regulated marijuana program. In D.C. no retail cultivation, manufacturing or sales are permitted at this time.)

- Marijuana sales in Washington generated $315 million in tax revenues in the 2016-17 fiscal year.
- Marijuana sales have generated almost $600 million for Colorado since sales began on January 1, 2014.
- By the end of the 2016-17 fiscal year, Oregon collected $70 million, more than double the predicted revenue.

States are allocating marijuana tax revenues for social good.

- Colorado distributed $230 million to the Colorado Department of Education between 2015 and 2017 to fund school construction, early literacy, bullying prevention, and behavioral health.
- Oregon allocates 40 percent of marijuana tax revenue to its state school fund, depositing $34 million into the fund so far. The state also distributes 20 percent to alcohol and drug treatment.
- Nevada's 15 percent wholesale tax is projected to bring in $56 million over the next two years to fund state schools.
- Washington dedicates 25 percent to substance use disorder treatment, education and prevention. The state also distributes 55 percent of its marijuana tax revenues to fund basic health plans.
- Alaska will collect an estimated $12 million annually, which will fund drug treatment and community residential centers.
- California and Massachusetts will invest a share of their marijuana tax revenues in the communities most adversely impacted by drug arrests and incarceration, particularly low-income communities of color, to help repair the harms of unequal drug law enforcement.

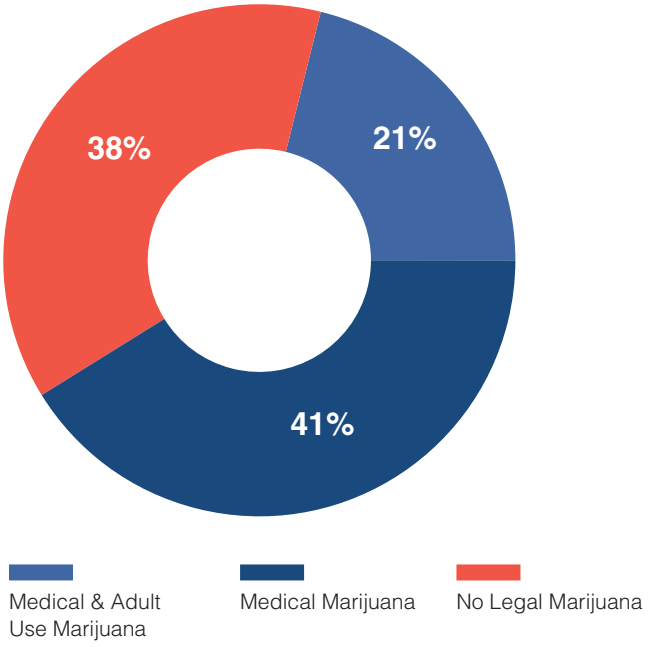
The marijuana industry is creating jobs. Preliminary estimates suggest that the legal marijuana industry employs between 165,000 to 230,000 full and part-time workers across the country. This number will only continue to grow as more states legalize marijuana and replace their unregulated markets with new legal markets.

I. Introduction

Support for marijuana legalization has reached a tipping point. **Nearly two-thirds of Americans (64 percent) are now in favor of marijuana legalization (see Appendix A).**[1] Three–in-five (62 percent) Americans now live in a state with medical marijuana[i] and one-in-five (21 percent) now live in a state that has legalized marijuana use by adults twenty-one years of age and older (see Chart 1 below).[2] The vast majority (75 percent) of U.S. voters – across all party affiliations – oppose federal government enforcement of federal marijuana laws in states that have legalized marijuana for medical or adult use.[3]

Voters in eight states and Washington, D.C. have legalized marijuana for adult use (see Appendix B).[ii] In January 2018, Vermont became the first state to legalize marijuana through a state legislature.[4] This report does not include Vermont in its analysis because the state's marijuana legalization law is too new to evaluate.

Chart 1: Share of U.S. Population with Legal Marijuana



Source: https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=PEP_2016_PEPANNRES&src=pt

Legalization ballot initiatives for the 2018 election have been preliminarily filed in several new states, including Arizona, Florida, Missouri, Nebraska and South Dakota.[5] Additional states – including, Connecticut, Delaware, Illinois, Maryland, New Jersey, New Mexico and New York – have introduced marijuana legalization bills in the 2017 legislative session and are likely to reintroduce them in the 2018 session.[6]

As states consider the implications of marijuana legalization, residents and policymakers alike are looking to see how legalization plays out in Alaska, California, Colorado, Maine, Massachusetts, Nevada, Oregon, Washington and Washington, D.C.

There are variations in state marijuana regulatory programs. All currently permit adults 21 years of age and older to possess marijuana for personal use. Some states have created adult use marijuana markets with retail stores. Others are still establishing regulations and have yet to begin retail marijuana sales (see Appendix B). On January 1, 2018, Colorado – the first state to implement marijuana regulations for adult use – marked its four-year anniversary of retail marijuana sales. Washington, Oregon, Alaska, and to a limited extent, Nevada and California,[iii] have implemented retail sales of marijuana for adult use.[iv] The retail marijuana market has not yet been established in Maine or Massachusetts. Washington, D.C. law prohibits commercial marijuana cultivation and sales and there is no current plan to allow for commercial marijuana businesses.

There has been little systematic evaluation of the impacts of marijuana legalization since few data are available and data collection across states and years is not uniform. As such, it is too early to draw any line-in-the-sand conclusions about the effects of marijuana legalization. However, preliminary evidence suggests that the effects of legalization have been either positive or neutral.[7] This report will examine available data pertaining to the impact of marijuana legalization by focusing on four measures: social justice impacts, public health, road safety, and state economies. It will also review future measures that should be evaluated once data are available, as well as policy considerations states may want to contemplate when drafting marijuana legalization bills or ballot measures.

i For the purpose of this report, "medical marijuana" refers to state laws that that provide patients with meaningful access to marijuana products. This definition does not include states that have legalized CBD only or low-THC marijuana for medical use.

ii Colorado (Measure 64), Washington (Initiative 502), and Washington, D.C. (Initiative 71) on November 6, 2012; Alaska (Measure 2) and Oregon (Measure 91) on November 4, 2014; and California (Proposition 64), Maine (Question 1), Massachusetts (Question 4), and Nevada (Question 2) on November 8, 2016.

iii California started to roll out sales of adult use marijuana on a city-by-city basis on January 1, 2018.

iv Nevada has permitted the sale of adult use marijuana in medical dispensaries since July 1, 2017 while the state establishes adult use marijuana regulations.

II. Social Justice Impacts

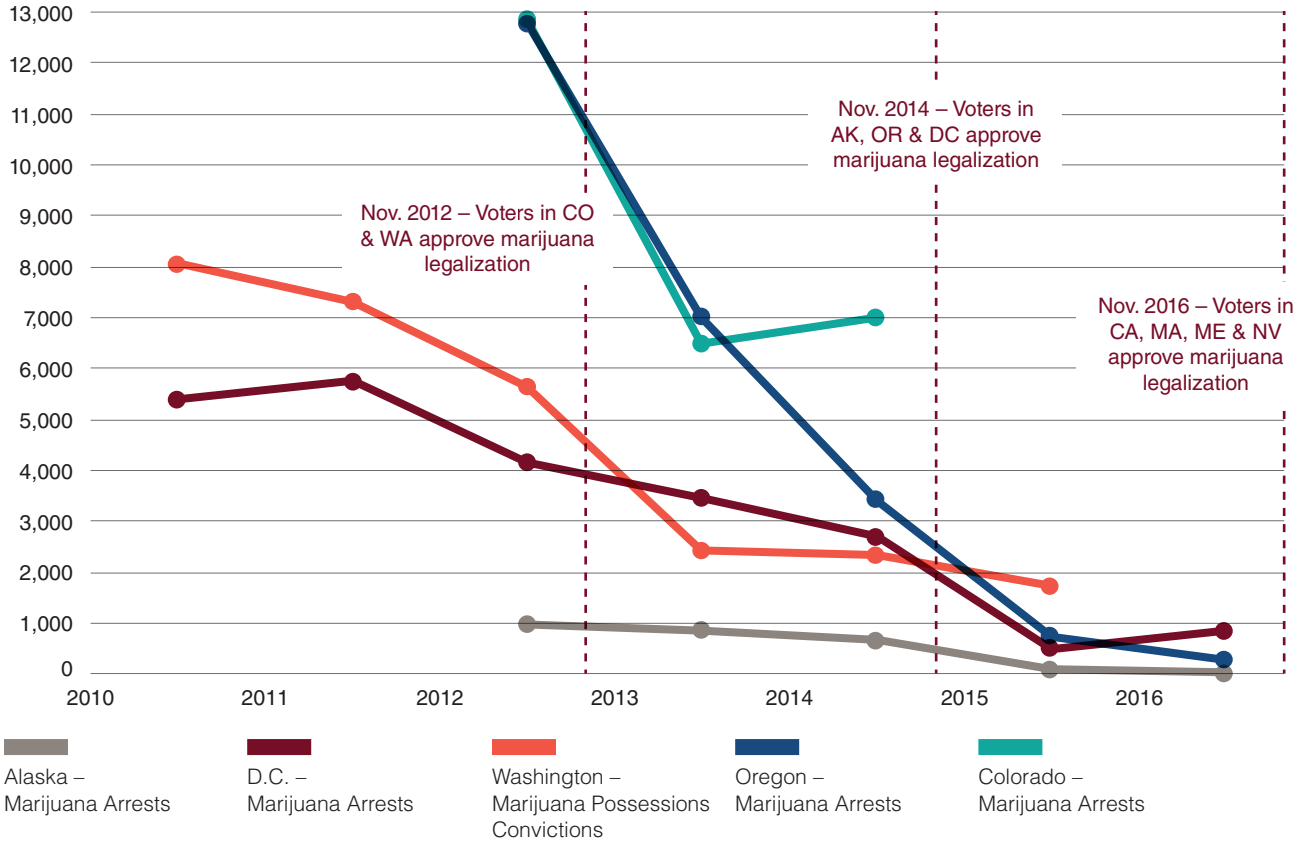
Dramatic Declines in Marijuana Arrests and Court Filings

Arrests[v] in all legal marijuana states and Washington, D.C. for the possession, cultivation and distribution of marijuana have plummeted since voters legalized the adult use of marijuana, saving those jurisdictions hundreds of millions of dollars and preventing the criminalization of thousands of people.

Across legal marijuana states and Washington, D.C. the number of arrests for marijuana law violations has declined dramatically (as shown in Chart 2). In Alaska, the number of marijuana arrests for possession and sales/manufacturing declined by 93 percent from 2013 to 2015, from 845 to 60 (see Appendix C). In Colorado, marijuana arrests declined by 49 percent from 2012 to 2013 (12,894 to 6,502).

The number of marijuana arrests increased by 7 percent in in 2014 (7,004), yet remained 46 percent lower than in 2012 (see Appendix E). The total number of marijuana-related court filings in Colorado declined by 81 percent between 2012 and 2015 (10,340 to 1,954), and marijuana possession charges dropped 88 percent (9,130 to 1,068).[8] In Oregon, the number of marijuana arrests declined by 96 percent from 2013 to 2016 (6,996 to 255) (see Appendix H).[9] The total number of low-level marijuana court filings in Washington fell by 98 percent between 2011 and 2015 (6,879 to 120) (see Appendix I).[10] Marijuana possession convictions in Washington decreased by 76 percent from 2011 to 2015 (7,303 to 1,723).[11] In Washington, D.C., marijuana arrests decreased 76 percent from 2013 to 2016 (3,450 to 840), with possession arrests falling by 98.6 percent, from 2,549 in 2013 to 35 in 2016 (see further discussion of D.C. arrests starting on page 31).[12]

Chart 2: Annual Marijuana Arrests or Convictions by State



v Because marijuana arrest data are not available for Washington, data on the number of marijuana possession convictions were used to demonstrate the decline in marijuana arrests in the state.

The reduction in arrests has resulted in substantial savings, estimated at hundreds of millions of dollars, for law enforcement and the judiciary.[13] For example, Washington spent over $200 million on marijuana enforcement between 2000 and 2010.[14] By no longer arresting and prosecuting possession and other low-level marijuana offenses, states are saving hundreds of millions of dollars and thousands of adults are no longer getting stopped, arrested, charged or convicted simply for possessing a small amount of marijuana.

Revenues Allocated for Social Good

The majority of states first allocate any marijuana tax and/or fee revenue to compensate the regulatory agencies tasked with oversight, to ensure that the industry's revenue covers the government's administrative costs. The manner in which the remainder of the marijuana revenues are allocated varies from state to state. Education and public health programs, including substance use disorder treatment and drug use prevention programs, are the biggest beneficiaries of adult use marijuana tax revenue (see Table 1 on page 7).

Marijuana sales have generated almost $600 million for Colorado since sales began on January 1, 2014 (see Table 2 on page 21).[15] The state has distributed $230 million to the Colorado Department of Education between 2015 and 2017 to fund school construction, early literacy, bullying prevention and behavioral health programs.[16] Oregon allocates 40 percent of marijuana tax revenue to its state school fund, depositing $34 million into the fund so far.[17] Funds from Nevada's 15 percent wholesale tax,[vi] which is paid by both medical and adult use cultivators, is projected to bring in $56 million over the next two years that will fund Nevada schools (see Table 1 on page 7).[18]

State alcohol and drug treatment funds are consistently the next biggest beneficiaries. Oregon distributes 20 percent to alcohol and drug treatment, and Washington dedicates 25 percent to substance use disorder treatment, education, and prevention. Washington also distributes 55 percent of its marijuana tax revenues to fund basic health plans.

The Alaska Department of Revenue estimates the state will collect $12 million annually, which will fund drug treatment and community residential centers.[19] Other states that will begin licensing in 2018 will also distribute a large portion of anticipated tax revenue to substance use disorder treatment. For example, California will allocate marijuana revenues to a community reinvestment grant program beginning with $10 million the first year and increasing by $10 million each year up to $50 million annually thereafter. In addition, after a small disbursements to other funds, California will dedicate 60 percent of its marijuana tax fund toward youth drug use prevention and substance use disorder treatment, and 20 percent to environmental restoration (see Table 1).

Reinvestment in Communities and Youth

In California[vii] and Massachusetts,[viii] revenues generated from adult use marijuana sales are required to be invested in the communities most adversely impacted by drug arrests and incarceration.[20] These revenue allocations are intended to strengthen communities disproportionately harmed by the drug war. Draconian drug laws and their disparate enforcement have had devastating effects on families. Convictions for marijuana offenses have led to loss of freedom, employment, public benefits, housing, and student loans and financial aid, all exclusions that threaten family stability. Revenue allocations in California and Massachusetts are intended to support restorative justice, jail diversion, economic development, vocational training, job placement, mental health treatment, legal services that address barriers to community reentry after incarceration, and access to medical care.

These unique community reinvestment funds target low-income communities of color that suffer high rates of arrest and incarceration.[21] They are meant to help rebuild communities most devastated by the drug war and its emphasis on incarcerating young people, mainly Black and Latinx individuals, by investing in programs that offer people a new start, such as community reentry, job development, mental health, and legal services.

vi The initial ballot measure passed by the voters only included a 15 percent tax on both medical and adult use cultivators. However, shortly before adult use sales began, the legislature passed a bill, which equalized the wholesale tax rate for medical and adult use cultivators and added a 10 percent excise tax to the sale of adult use marijuana.

vii In California, marijuana tax revenues will be distributed to a community reinvestment grants program – which will begin at $10 million the first year and increasing by $10 million each year up to $50 million annually – to be allocated to "communities disproportionately affected by past federal and state drug policies." Cal. Rev. & Tax. Code § 34019(d). The grants are allocated with community buy in and are intended "to support job placement, mental health treatment, substance use disorder treatment, system navigation services, legal services to address barriers to reentry, and linkages to medical care." Ibid.

viii In Massachusetts, a share of tax revenues will be allocated to "programming for restorative justice, jail diversion, workforce development, industry specific technical assistance, and mentoring services for economically-disadvantaged persons in communities disproportionately impacted by high rates of arrest and incarceration for marijuana offenses." Mass. Gen. Laws Ann. ch. 94G § 14(b)(v).

After a small number of off the top disbursements to other funds, California will allocate 60 percent of marijuana tax revenues to youth drug education, drug use prevention, early intervention and substance use disorder treatment.[22] These monies are intended to be allocated as grants to community based programs targeting youth who are at risk of dropping out or developing substance use disorders.[23] The grants can fund a variety of services including, but not limited to, intergenerational drug treatment and counseling services, evidence-based drug education, overdose prevention, mental health therapy, literacy services and vocational training.[24]

Table 1: Marijuana Revenue Allocations by State[ix]

State	Allocation
California[25]	Administrative costs reimbursed Off-the-top disbursements to research, California Highway Patrol and community reinvestment 60%: youth treatment fund 20%: local government 20%: environmental restoration
Colorado[26]	*15% excise tax on wholesale retail marijuana:* $40 million to school construction Remainder to Public School Fund *15% sales tax on retail marijuana:* 10%: Local government 90%: State government (beginning 2018-2019) will be split three ways: (1) $30 million off-the-top to the Public School Fund; (2) 28.15% to the General Fund; and (3) 71.85% to the Marijuana Tax Cash Fund *Regular 2.9% state sales tax on medical marijuana* Marijuana Tax Cash Fund, which funds health care, monitoring health effects of marijuana, substance abuse prevention, treatment, etc.
Washington[27]	Administrative costs reimbursed 25%: Substance use treatment, education and prevention 1%: Marijuana-related research at the University of Washington and Washington State University 50%: State basic health plan trust account 5%: Community health centers for primary health and dental care services Remainder: General fund
Oregon[28]	Administrative costs reimbursed 40%: State School Fund 20%: Mental health, alcohol and drug treatment 15%: State police 10%: Cities, based on population and number of licenses 10%: Counties, based on canopy size + #licensees 5%: State health authority
Alaska[29]	50%: Programs aimed at reducing recidivism 50%: General fund
Nevada[30]	Administrative costs reimbursed Wholesale tax revenue goes to schools Excise tax revenue goes to rainy day fund
Massachusetts[31]	Administrative costs reimbursed; Remaining funds expended for (1) public and behavioral health, including substance use prevention and treatment; (2) public safety; (3) municipal police training; (4) Prevention and Wellness Trust Fund; (5) programming for restorative justice, jail diversion, workforce development, and mentoring services.
Maine	Legislation has not yet been introduced to implement sales of adult use marijuana and define marijuana tax collection and revenue allocation.

ix Retail marijuana sales are not permitted in D.C. and there are no plans to allow them in the near future. Thus, D.C. is excluded from this table.

III. Public Health

Youth Marijuana Use

Preliminary data suggest that **youth marijuana use rates have remained stable and have actually gone down in some cases,** both nationally and in states that have legalized marijuana for adults. Many have expressed worry that legalization could make marijuana appear more acceptable and thereby increase its use among youth, yet this is not reflected in recent research. While some youth attitudes toward marijuana may be changing, overall rates of use have not increased. This section will explore data on youth attitudes and recent marijuana use on a national level, in states that have implemented regulated marijuana markets, and in states where retail marijuana sales are just starting or have not yet been established.

National Trends

The three largest-scale surveys[32] of substance use trends in the U.S. demonstrate that recent marijuana use among youth has steadily decreased for younger teens while remaining stable among older teens. Nationally, the majority of youth disapprove of regular marijuana use and many continue to view its regular use as risky or harmful (especially younger teens), although rates of disapproval or perceived risk are not as high as they have been in the past.[33] **Youth across the country are also reporting that marijuana is not as easy to access as it has been in the past, particularly for younger teens.**[34] Taken together, these findings demonstrate that there has been no widespread increase in teen marijuana use rates as more states legalize marijuana.[x]

Youth Use in States with Legalized Marijuana

While eight states and Washington, D.C. have legalized personal possession of limited amounts of marijuana for adult use, it's worth noting that these state policies are quite diverse and are in various stages of implementation. In addition, not all the state-based surveys on youth marijuana use have been updated and released since implementation, making it difficult to track any potential changes. Given these circumstances, it is important to examine youth marijuana use rates in states with fully implemented marijuana markets and up-to-date data separately from use rates for youth living in states with more recent laws, no regulated markets, and where the latest data may not yet be available. Presently, Colorado, Washington, Alaska, Oregon and, to a lesser extent, Nevada and California, have implemented state-level policies and retail marijuana sales, yet up-to-date state-based youth use data are not yet available for Oregon, Nevada, or California. Youth use rates for these three states will be presented along with states that have not yet implemented regulated marijuana markets, namely, Maine, Massachusetts, California and Washington, D.C.

States with Regulated Marijuana Markets and Recent Youth Data (Colorado, Washington and Alaska)

Youth marijuana use has remained relatively stable in the past several years, both nationwide and in states with established marijuana regulatory programs.[35] According to the 2015 Youth Risk Behavior Survey, 21.7 percent of American high school students used marijuana in the past month, and this rate has been consistent over the past decade. Rates of marijuana use by high school students in Washington, Colorado, and Alaska largely resemble these national rates, with few variations. These results are promising, suggesting that fears of widespread increases in use have not come to fruition.[xi]

The Washington State Healthy Youth Survey results for marijuana use by 8th, 10th and 12th graders from 2000 to 2016 suggest that use rates have either remained the same or decreased (see Chart 3).[36] The results indicate that past 30-day use of marijuana by 10th and 12th graders in the state has remained statistically unchanged for the past several years, with legalization having little or no impact on these rates.[37] In fact, rates of use by 10th and 12th graders in Washington, 17 percent and 26 percent respectively, remain similar to or slightly lower than national rates for these grades, 20 percent and 27.6 percent respectively. Recent use among 8th graders has fallen to 6 percent, a 50 percent decline since 2000.

x For example, data from the National Survey on Drug Use and Health show that for teens 12-17 years of age, rates of marijuana use in the past year remained statistically unchanged between 2014-15 and 2015-16 in all of the states that legalized marijuana, except in Washington, D.C. which reported a statistically significant reduction in teen marijuana use. During the same period, the national rate of teen marijuana declined from 12.86 to 12.29 and reduction was statistically significant. National Survey on Drug Use and Health: Comparison of 2014-2015 and 2015-2016 Population Percentages (50 States and the District of Columbia), Substance Abuse and Mental Health Services Administration, Table 1, accessed Dec. 19, 2017, https://www.samhsa.gov/data/sites/default/files/NSDUHsaeShortTermCHG2016/NSDUHsaeShortTermCHG2016.htm.

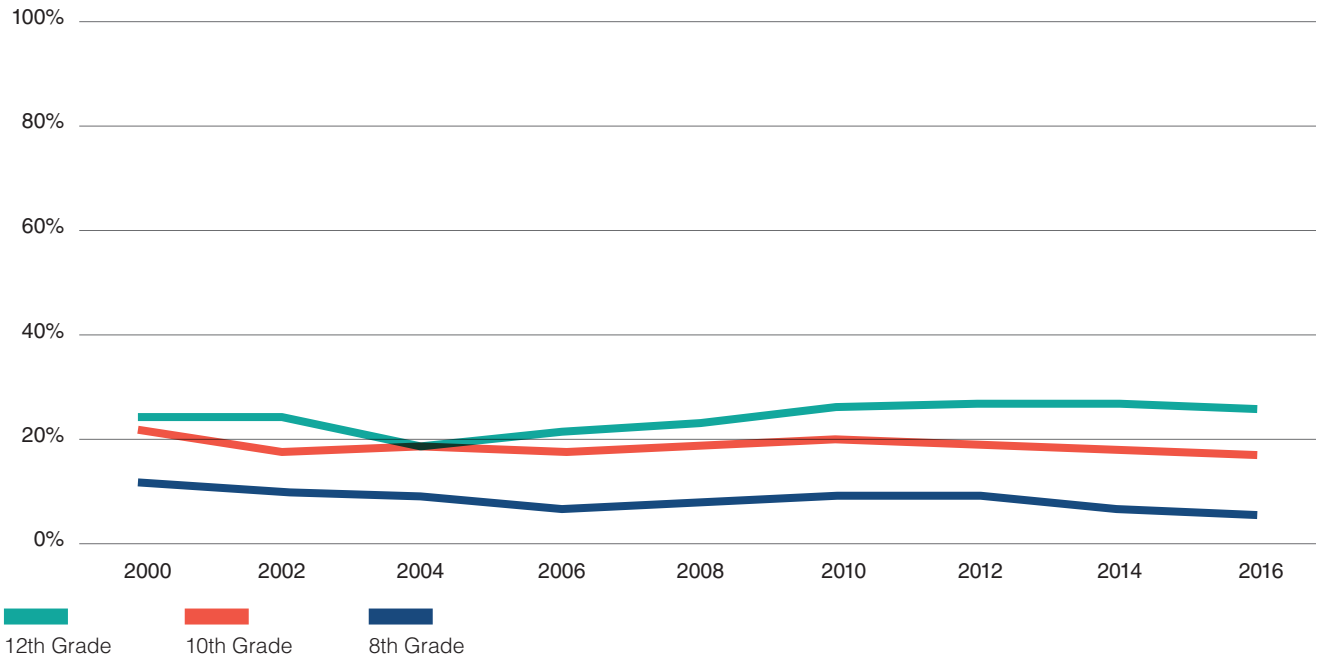
xi There are multiple sources of data on youth marijuana use in the US. State-specific data presented in this report are compiled from individual state-conducted surveys when possible. State trends are compared to national rates derived from the Youth Risk Behavior Surveillance Survey rather than those provided by the Monitoring the Future Survey or the National Survey on Drug Use and Health. This choice was made because the Youth Risk Behavior Surveillance Surveys target the 19 major urban school districts in the US to ensure greater geographical and racial diversity of the sample.

Results from the Healthy Kids Colorado Survey (Chart 4 on the next page) from 2001 to 2015 suggest that the rate of past 30-day use of marijuana by high school students in the state (21.2 percent) has steadily declined since 2001 (30.2 percent).[38] As a result, use rates by high schoolers in Colorado are now comparable to the national average.

Recent use among 9th and 10th graders in Colorado has been virtually unchanged since 2011 and the number of 9th graders in 2015 who reported recent use is less than half the rate in 2001. While it appears that recent use of marijuana among 11th and 12th graders in Colorado might have increased since 2012, these rates are still lower than peak rates in years prior to marijuana legalization. In addition, a secondary analysis of Colorado youth data demonstrated that these changes are not statistically significant and that the opening of adult use marijuana stores has not had an impact on perceived ease of access to marijuana as had been hypothesized.[39]

The Alaska Youth Risk Behavior Survey[xii] results from 2003 to 2017 suggest that past 30-day use rate of marijuana by high school students in the state has remained relatively stable at 21.5 percent since 2010 and is comparable to the national high school rate (see Chart 5).[40] Reported past 30-day marijuana use by 9th graders dipped in 2015 but rose slightly above 2013 peak levels in 2017.[41] Recent use by 10th graders declined over the past decade and is now at 16.3 percent.[42] Meanwhile, use by 11th graders increased slightly since 2013 but remains lower than the peak rate in 2009.[43] While recent marijuana use among 12th graders had been consistent since 2013, it increased in 2015 and stabilized in 2017.[44]

Chart 3: Past 30-Day Marijuana Use in Washington by Grade



xii The survey was not conducted in 2001 and results from 2005 were unavailable because they had not been weighted.

Chart 4: Past 30-Day Marijuana Use in Colorado by Grade

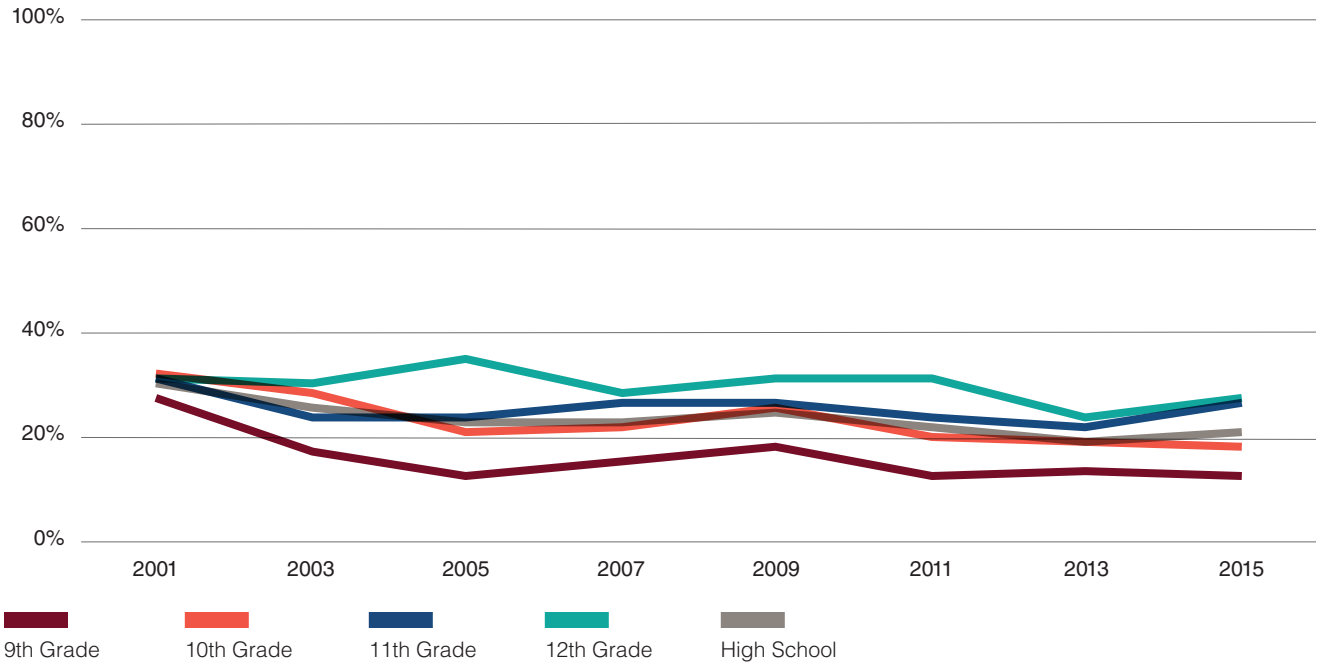
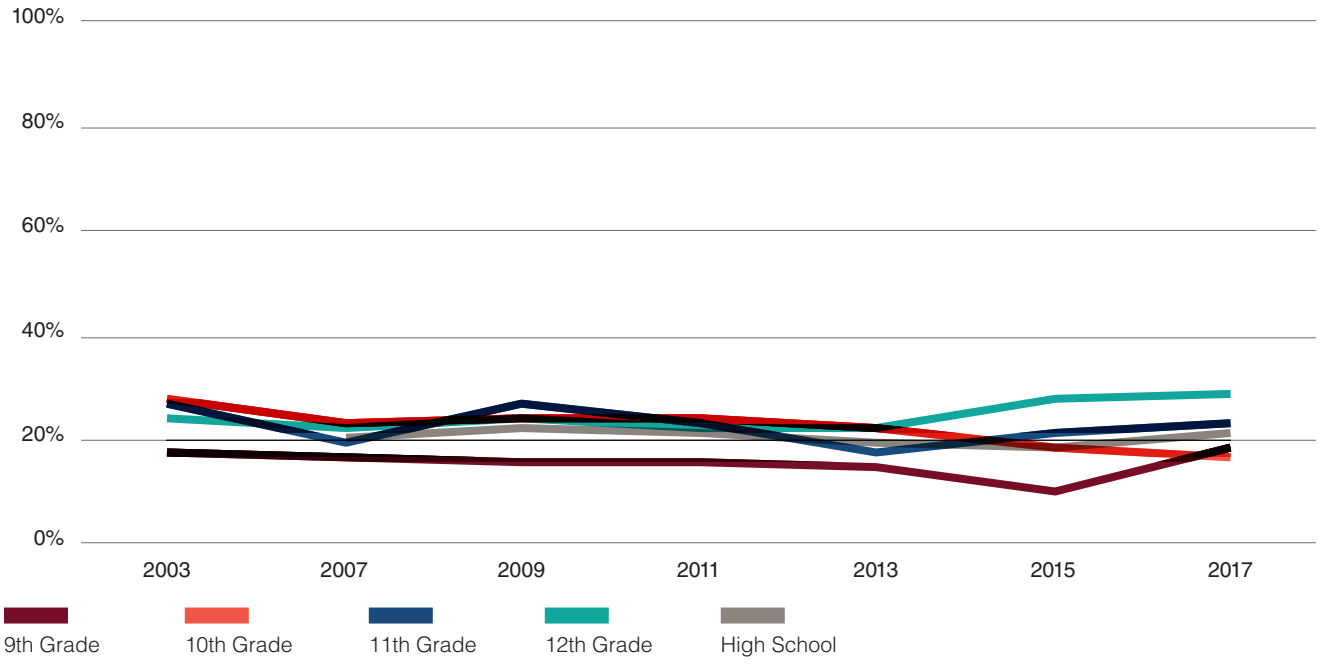


Chart 5: Past 30-Day Marijuana Use in Alaska by Grade

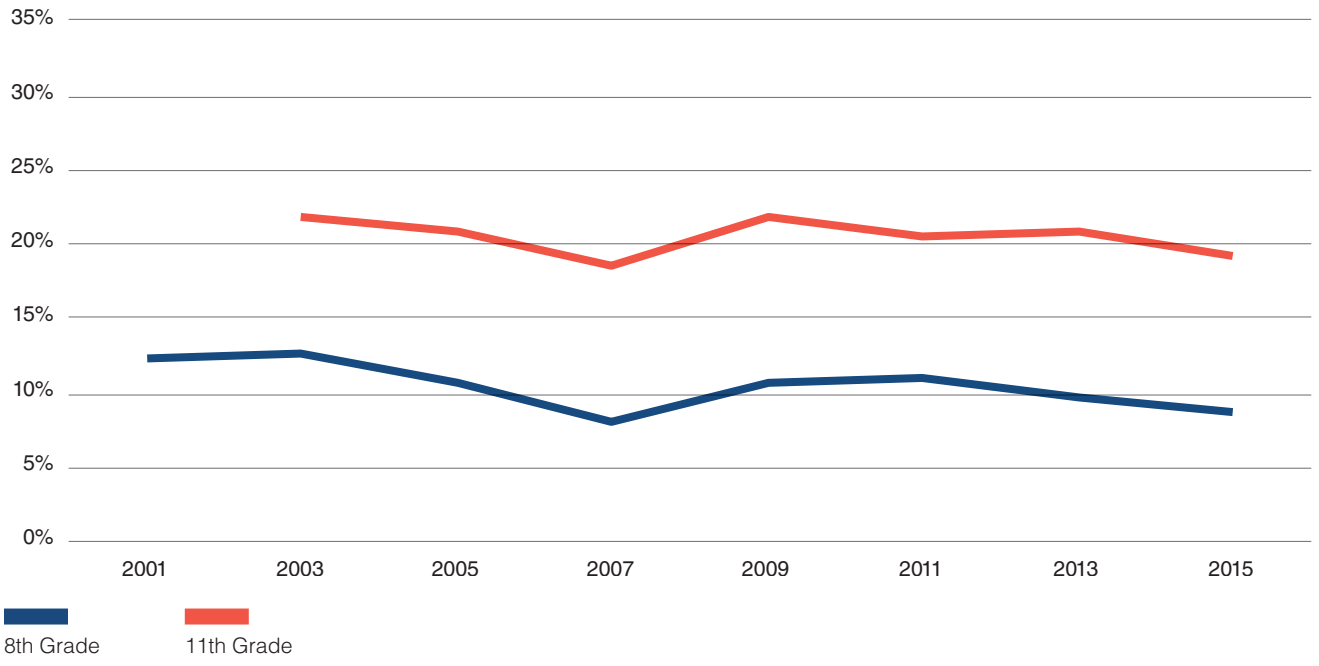


States with Emerging or No Regulated Marijuana Markets[xiii]

In some jurisdictions that have approved legal marijuana, regulations are not yet established or are so new that they are unlikely to have impacted youth use rates in an immediately measurable manner. However, it is important to take stock of baseline rates of youth marijuana use to better assess whether the mere passage of legalization laws has had any impact. While rates of use vary widely in these states, they mostly stabilized or declined over the years leading up to legalization.

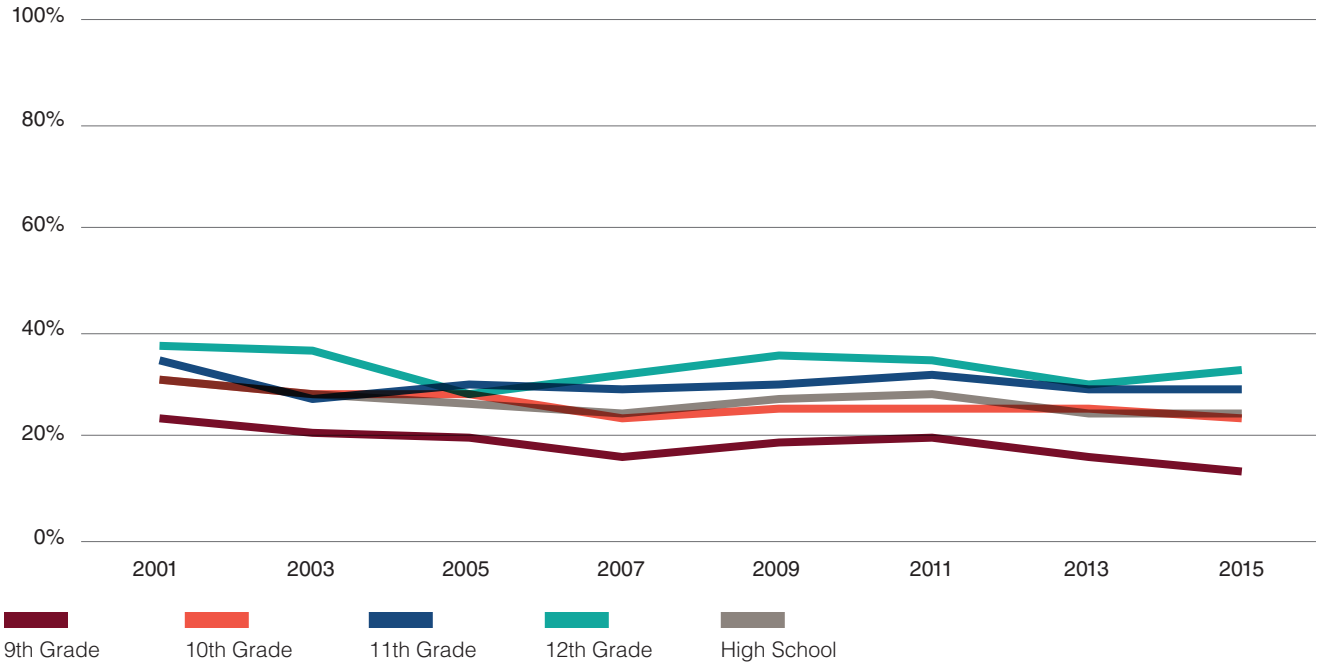
For a number of years preceding legalization, recent marijuana use rates by youth in Oregon, Massachusetts and Washington, D.C. were distinct from national trends, with Massachusetts and Washington, D.C having historically higher rates and Oregon having lower rates. As a result, rates of youth marijuana use in these states cannot be attributed to a specific policy change. For example, the 2015 rates of past 30-day marijuana use by high school students in Washington, D.C. was significantly higher than national averages (32.2 percent), but these rates have been high for some time.[45] Meanwhile, Oregon (see Chart 6) has the lowest rates of use among its surveyed students, 8.8 percent among 8th graders and 19.1 percent among 11th graders in 2015.[46] Of the most recent states to legalize marijuana, teen marijuana use rates appear to be consistent with national averages in California, Nevada and Maine. In contrast, they are higher in Massachusetts and have been for some time (see Chart 7 on the next page).

Chart 6: Past 30-Day Marijuana Use in Oregon by Grade



xiii These states differ in their surveys and data collection methods. Some use the national Youth Risk Behavior Surveillance survey while others use state-based tools. In addition, collection periods vary, with some states collecting biannual data on odd years and others collecting them on even years. In addition, some have years of missing data or periods when no data was collected. Lastly, these states differ in the grades captured – with some states collecting data on just two or three grades, an inconsistent inclusion of middle school grades across states, and others collecting data on all four years of high school.

Chart 7: Past 30-Day Marijuana Use in Massachusetts by Grade



Prior to legalization, youth marijuana use rates were stabilizing or even declining in California, Nevada and Maine. For instance, rates of recent use by 11th graders in Nevada (Chart 8 on the next page) fell by one-third between 2001 and 2015 (from 30.8 to 21.8) and overall high school rates fell by over one-quarter in that time period, with 9th grader marijuana use rates declining from 21.6 to 14.6, 10th grade rates declining from 21.8 to 17.8, and 12th grade rates declining from 33.5 to 24.3.[49] In Maine's high schools in 2015, half as many 9th graders reported using marijuana in the past month as they did in 2001, with rates in other grades showing reductions of anywhere from one-quarter to one-fifth of what had been reported in 2001 (see Chart 9).[50]

In addition, Massachusetts' high school marijuana use rate was lower in 2015 (24.5 percent) than in 2001, when 30.9 percent of students reported using marijuana in the past month.[51] Meanwhile, the rates of use by California (Chart 10 on page 14) 9th and 12th graders has remained consistent since 2004.[52]

These rates show a promising trend. Youth marijuana use rates appear to decline or stabilize immediately preceding the complete implementation of marijuana legalization. This suggests that marijuana legalization and regulated adult use marijuana markets do not lead to an increase in use despite many concerns that both would preemptively "normalize" youth marijuana use. It will be particularly important to track whether these trends persist after retail marijuana sales are fully implemented and whether they remain on track with national youth marijuana use trends.

Chart 8: Past 30-Day Marijuana Use in Nevada by Grade

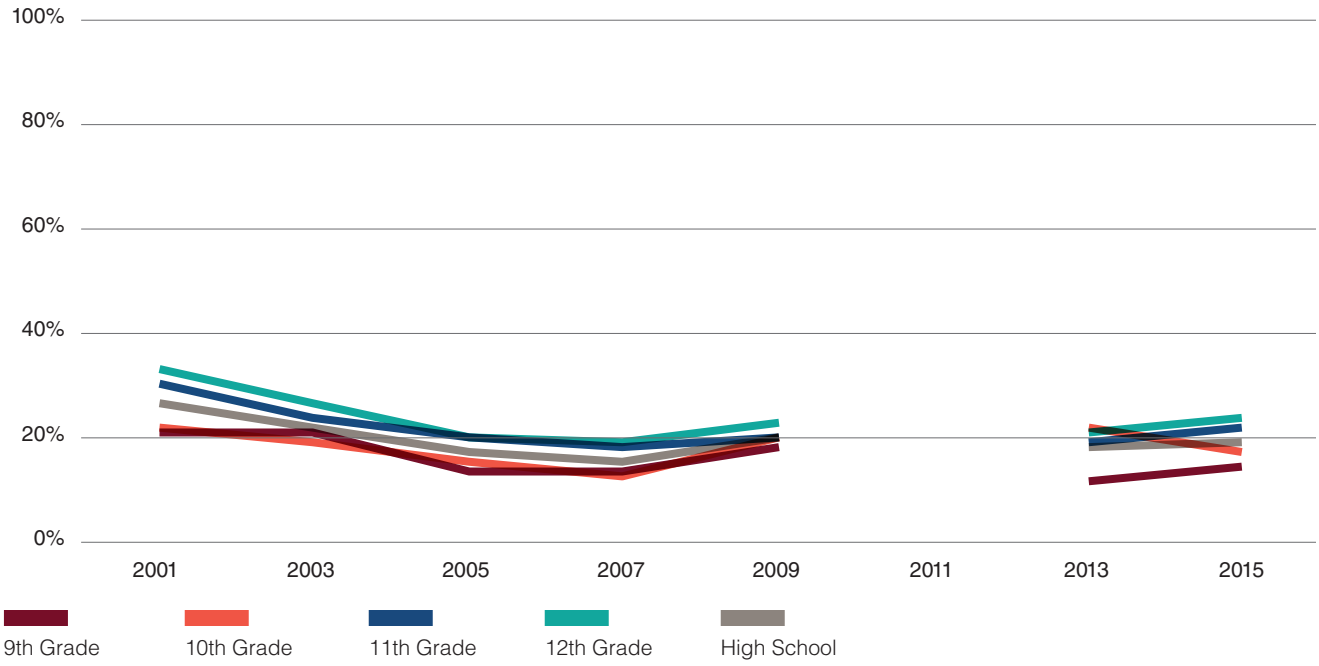


Chart 9: Past 30-Day Marijuana Use in Maine by Grade

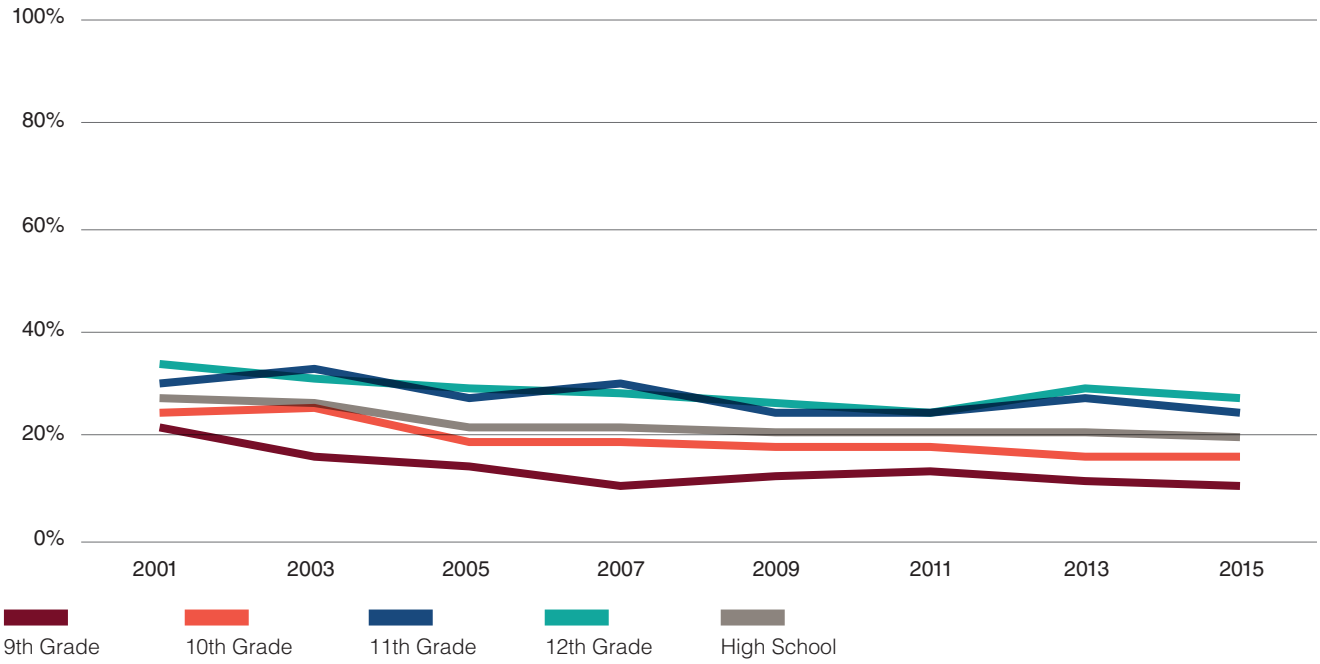
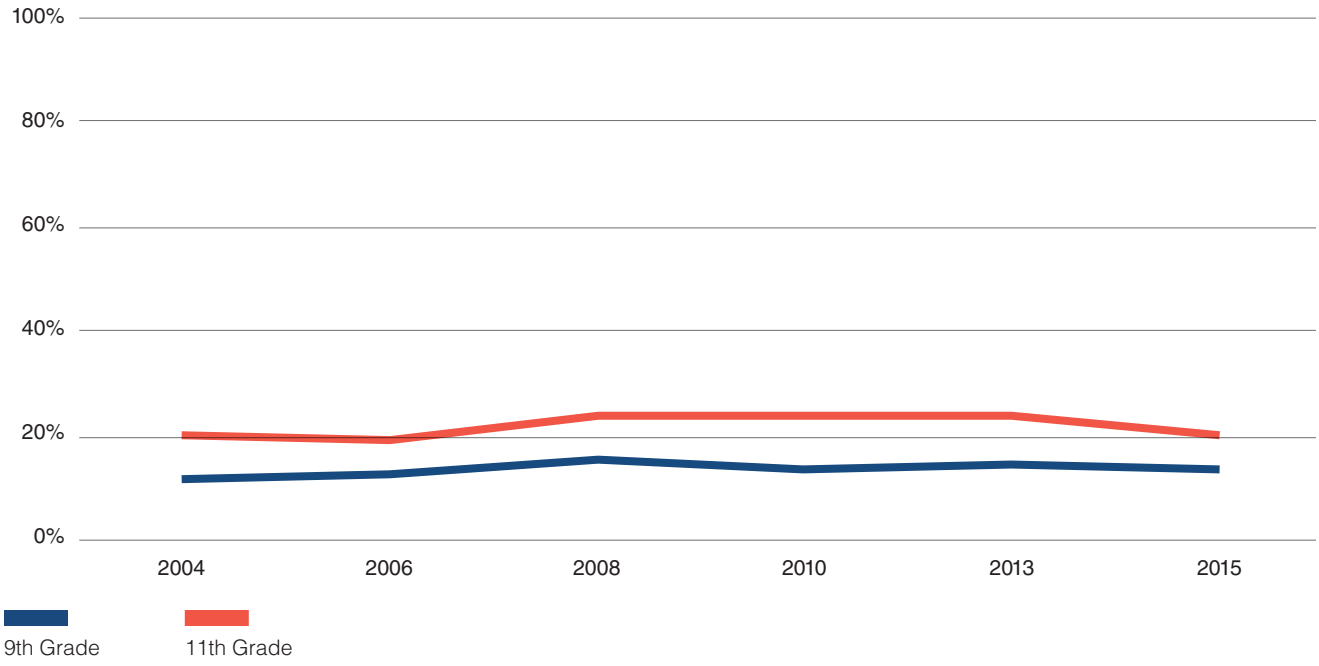


Chart 10: Past 30-Day Marijuana Use in California by Grade



Calls to Poison Control and Emergency Department Visits

Available data show that following marijuana legalization, calls to poison control centers for marijuana exposure remain uncommon compared to calls about exposures to other, more common household products and substances. While marijuana-related calls to poison centers in states that legalized marijuana are higher now than in pre-legalization years, the number of calls related to marijuana make up only a small fraction of the total calls and are dramatically lower than calls for items such as prescription drugs, household cleaning products, and toiletries.

Data on the number of calls to poison centers regarding marijuana exposure are only available in Colorado, Oregon and Washington. In Oregon, for example, less than one percent of the calls to the state's poison centers in 2016 were related to marijuana exposure.[53] After nearly two years of increasing calls, the Oregon Poison Center noted a decrease in the number of marijuana-related calls to its center in the second half of 2016.[54] The state of Washington experienced an increase in calls to its poison center post-legalization for marijuana exposures. Yet, these marijuana-related calls only accounted for 286 of 62,502 calls in 2016.[55] This represented less than half of one percent of the center's annual calls (see chart 11).[56] About 75 percent of individuals calling the Washington poison center for marijuana-related exposures had their cases managed at home, meaning they did not require in-person medical interventions at urgent care centers, emergency departments ("EDs"), or doctors' offices.[57]

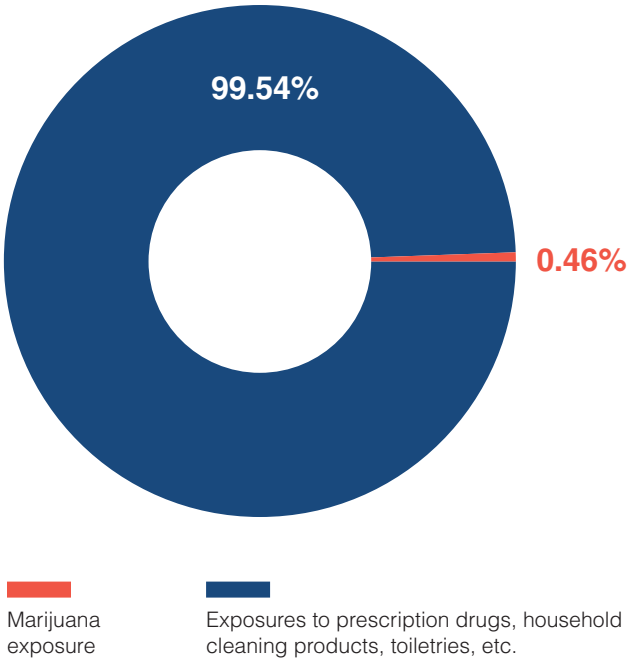
According to the Rocky Mountain Poison Center, in 2016, there were 224 calls to poison centers regarding marijuana exposures in Colorado, compared to 41,137 total calls for the year beginning July 2015 and ending June 2016.[58] Nearly two-thirds (64 percent) of these calls resulted in either minor or no effects on a patient's medical outcome.[59] Just above a quarter of these calls resulted in a moderate or major effect, with no fatalities associated with marijuana consumption.[60] The most commonly reported symptoms involved drowsiness or lethargy (26 percent), tachycardia (increased heart rate) (17 percent), agitation or irritability (12 percent), and confusion (10 percent), most of which are not life-threatening and wear off within a matter of hours after an individual consumes marijuana.[61]

There is a dearth of data on ED visits for marijuana exposure in states that have legalized marijuana. Such data are only available for Colorado, where the number of ED visits for marijuana exposure increased from a rate of 22 per 100,000 people in 2012 to 38 per 100,000 in the first half of 2014, when retail marijuana sales first began in the state.[62] The ED visits for marijuana exposure in 2014, however, only accounted for less than one tenth of 1 percent (0.04 percent) of the state's 2.3 million total ED visits.[63]

Pre-legalization, possession of marijuana for personal use could lead to hefty fines, probation or incarceration. The threat of criminal penalties and the stigma associated with marijuana use may have deterred individuals from seeking medical services or advice when they experienced unpleasant reactions from marijuana consumption.[64] Now, individuals in legal states are likely more comfortable reporting adverse conditions. In addition, people in states with legal marijuana are exposed to new public education campaigns focused on the risks of marijuana consumption and ways to reduce associated harms.[65]

As a result, poison centers and EDs in states that legalized marijuana experienced as expected increases in calls and visits for adverse symptoms to marijuana exposure in the years following legalization. While this might have initially given rise to concern, factors such as a person's reluctance to seek help when criminal penalties existed for marijuana possession might help explain why these numbers were lower pre-legalization. It is unclear whether incidents have increased or simply if the number of people reporting adverse reaction has increased now that there is less risk. An ongoing assessment of marijuana-related calls to poison centers and visits to EDs is necessary as legal marijuana consumption normalizes and new consumers become more familiar with marijuana's effects.

Chart 11: Calls to Washington Poison Center (2016)



IV. Road Safety

It is unlawful to drive while impaired by (or under the influence of) marijuana in every state in the country.[66] How states define or set limits on impairment varies substantially from state to state, including within the group of states that has legalized marijuana. Colorado, Nevada and Washington rely on blood tests to determine the concentration of tetrahydrocannabinol ("THC"), the main psychoactive ingredient in marijuana, or THC metabolites[xiv] in a driver's system as a proxy for impairment.[xv] In contrast, Oregon, Alaska, Washington, D.C., California, Maine and Massachusetts all rely on trained observations of drug recognition experts ("DREs") to determine a driver's impairment.[67] Each of these strategies has limitations and there is not yet consensus on the best manner to determine marijuana impairment.

THC thresholds treat marijuana like alcohol by redefining driving with a quantifiable amount of THC or THC metabolites as "impaired driving."[68] These laws are intended to punish impaired driving by using a specific level of marijuana in the blood as a proxy for intoxication. Support for THC threshold limits is often built on the misperception that THC levels correlate with impairment in much the same way that alcohol does. However, the two substances are metabolized in very different ways[xvi] and are in no way analogous.[69] Unlike alcohol, THC may be present and detectable in blood samples weeks after marijuana use, long after any impairing effects have dissipated.[70]

These arbitrary thresholds fail to establish impairment. There is no clear link between concentration of THC in a driver's system and impairment.[71] Studies[xvii] by the National Highway Transportation Safety Administration ("NHTSA"), the AAA Foundation for Traffic Safety, and academic researchers have all found that, **unlike with alcohol, there is no clear correlation between specific levels of THC in the bloodstream and impairment.**[72] Tests for THC concentration in the blood fail to objectively establish whether the driver is impaired and unsafe to drive.[73]

A recent report by the AAA Foundation for Traffic Safety noted these THC threshold tests are so unscientific that they both under and over punish drivers, meaning that they fail to detect some drivers who are actually impaired and punish other drivers who are not.[74] As a result, tests that detect THC in a driver's blood waste taxpayer dollars, risk unjust arrests and prosecutions, and unnecessarily interfere with the lives of people who are driving safely. At best, the only thing these tests establish is whether a driver consumed marijuana sometime in the past few hours, days, or even weeks.

Effects-based tests, such as Standard Field Sobriety Tests ("SFSTs"), that rely on the observations of trained DREs offer one alternative to THC threshold tests.[xviii] **At present, SFSTs have been validated for identifying alcohol impairment, but their sensitivity to marijuana impairment is not well established.**[75] While some individual components of the tests, such as the Romberg's test (a measurement of time perception) have been documented in the scientific literature to be fairly consistent predictors of marijuana-influenced behavior, other SFST components, such as the walk-and-turn test and the horizontal gaze-nystagmus test, are not reliable methods for properly identifying marijuana-impaired subjects.[76] At

xiv THC Metabolites are compounds created as the body processes THC.

xv Washington and Nevada have both established legal THC thresholds, five and two nanograms of THC per milliliter of a driver's blood, respectively. Drug-Impaired Driving Laws," Governors Highway Safety Association, 2017, accessed November 27, 2017, http://www.ghsa.org/state-laws/issues/drug%20impaired%20driving. Drivers with test results that meet or exceed the relevant limit mean the driver has violated the law. Rev. Code Wash. § 46.61, accessed September 28, 2016, http://apps.leg.wa.gov/rcw/default.aspx?cite=46.61.502. Colorado similarly establishes a threshold of five nanograms of THC per milliliter of a driver's blood, but anything at or above that concentration only triggers a presumption of impairment. A driver may rebut this presumption at trial with evidence of non-impairment. Colo. Rev. Stat. § 42-4-1301(6)(a)(IV), accessed September 28, 2016, https://www.colorado.gov/pacific/enforcement/laws-constitution-statutes-and-regulations-marijuana-enforcement.

xvi Ethyl alcohol (the type of alcohol found in liquor, wine, and beer) is water soluble and, thus, metabolized in a relatively predictable way – with factors such as frequency and amount of chronic alcohol consumption, sex, weight, and food consumption – affecting its rate of absorption and metabolism to some degree. It is the relatively constant degradation rate of alcohol that allows for the widely accepted correlation of blood alcohol levels with impairment. *See, e.g.,* Andrea Roth, The Uneasy Case for Marijuana as Chemical Impairment Under a Science-Based Jurisprudence of Dangerousness, 103 Cal. L. Rev. 841 (2015); Jacob Sullum, Hearing On Stoned Driving Undermines Pot Prohibitionists' Scary Prophecies, Forbes, Aug. 8, 2014; Planes, Trains and Automobiles: Operating While Stoned, Committee on Oversight & Government Reform, July 31, 2014. THC, which is lipid-soluble, is metabolized very differently, and may be present and detectable in blood samples for weeks. *See* Morris Odell et al., *Residual Cannabis Levels in Blood, Urine, and Oral Fluid Following Heavy Cannabis Use,* 249 FORENSIC SCIENCE INT'L 173 (2015); Nat'l Highway Transp. Safety Adm., Roadside Survey of Alcohol and Drug Use by Drivers (February 2015).

xvii For example, studies have shown that regular marijuana users – such as medical marijuana patients – do not show signs of impairment after using marijuana. Johannes G. Ramaekers, et. al., "Neurocognitive Performance During Acute THC Intoxication in Heavy and Occasional Cannabis Users," J. Psychopharmacology 23 (2009): 266-77; Richard Compton, Marijuana-Impaired Driving - A Report to Congress, National Highway Traffic Safety Administration (Jul. 2017) (DOT HS 812 440).

xviii Field sobriety tests include standing on one leg, walking and turning, and touching one's finger to one's nose. *See Per se Limits for Cannabis,* AAA Foundation for Traffic Safety (2016), https://www.aaafoundation.org/sites/default/files/EvaluationOfDriversInRelationToPerSeReport.pdf at 10-15.

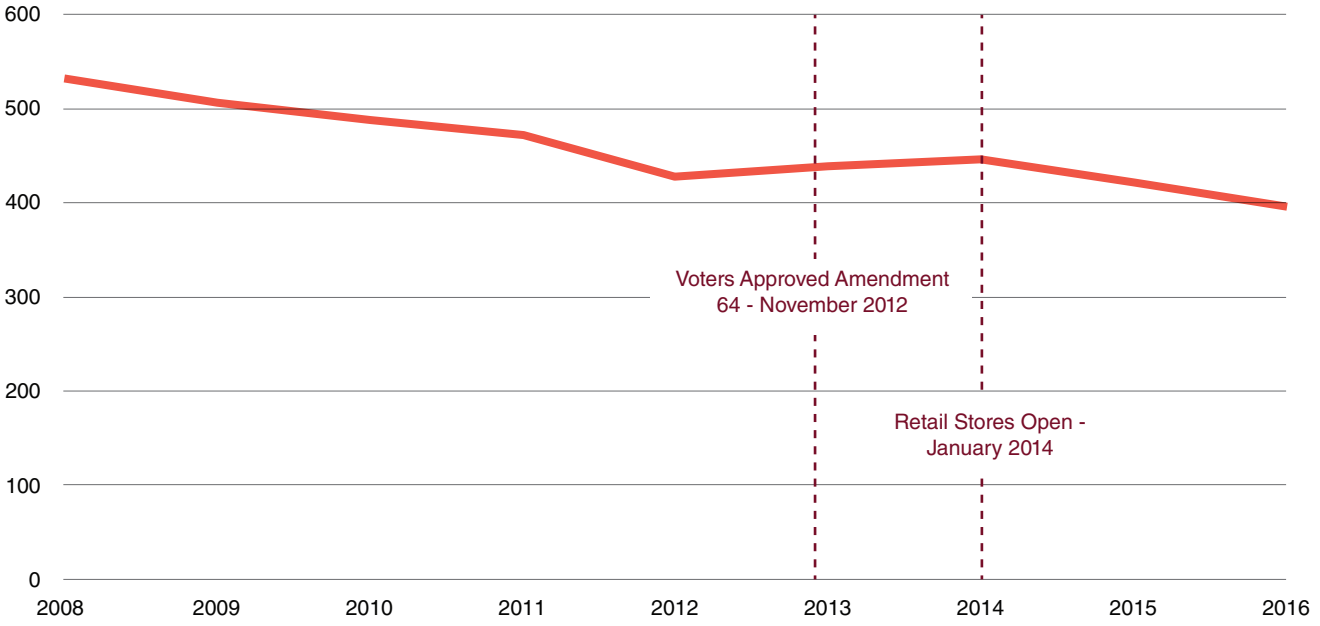
a minimum, these invalid performance measures should be validated for testing marijuana impairment or replaced with more accurate and sensitive tests.[77]

DUI Arrests

The total number of arrests for driving under the influence, of alcohol and other drugs,[xix] has declined in Colorado and Washington, the first two states to regulate marijuana for adult use. According to the Colorado Bureau of Investigation, the number of DUI citations issued statewide declined by 16 percent from 26,146 in 2011, the last year prior to legalization, to 21, 953 in 2016, the second year after legal sales of adult use marijuana began.[78] Despite a small increase between 2012 and 2013, DUI arrests in Colorado have continued their downward trajectory from 2014 to 2016, the first two years of legal sales of adult use marijuana (see Chart 12). In addition, the Colorado State Patrol[xx] reports that DUI marijuana citations declined by one third (33.2 percent) in the first quarter of 2017, from the same period last year.[79]

In Washington, the number of arrests for any type of DUI declined by nearly one-third (32.9 percent) from 34,256 in 2011, the last full year before marijuana legalization, to 22,993 in 2016, two years after legal sales of adult use marijuana began.[80] Moreover, DUI arrest rates have continued to steadily decline since before marijuana was legalized through the establishment of a regulated marijuana market (see Chart 13).

Chart 12: DUI Arrest Rate in Colorado per 100,000 people

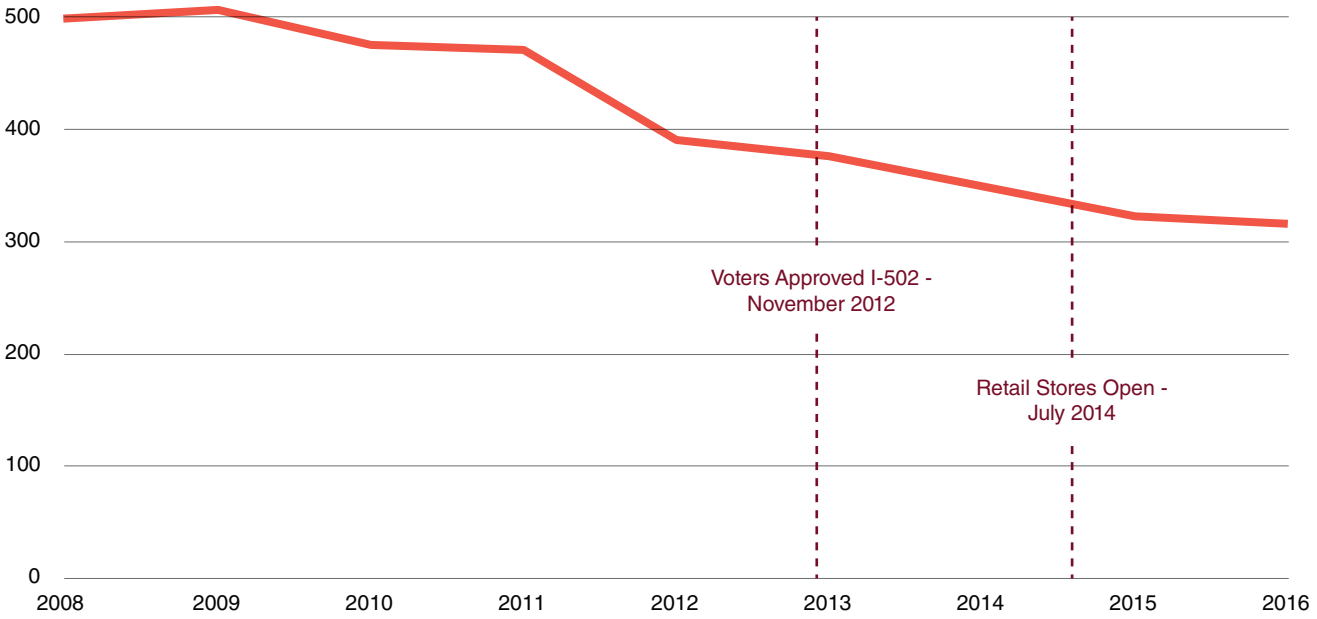


Source: http://crimeinco.cbi.state.co.us

xix Studies suggest that some people use marijuana as a substitute for substances like alcohol and opiates that are more clearly correlated with driving impairment than marijuana. *See e.g.,* Reiman, A. (2009). Cannabis as a substitute for alcohol and other drugs. *Harm Reduction Journal, 6,* 35. https://doi.org/10.1186/1477-7517-6-35

xx According to the "Marijuana Legalization in Colorado: Early Findings" report published by the Colorado Department of Public Safety, the Colorado State Patrol is "the best agency to use as a benchmark for issues related to impaired driving in Colorado," because it accounts for 20 percent of all DUI arrests in the state; the agency began collecting information on the perceived impairing substance(s) of drivers in early 2014, and it has the most DREs of any law enforcement agency in Colorado.

Chart 13: DUI Arrest Rate in Washington per 100,000 people



Source: http://www.waspc.org

Available data show that very few DUIs in Washington (8 percent) or Colorado (4 percent) involved drivers who tested positive for THC or THC metabolites[xxi] only.[81] In addition, in Colorado (2015 data are not yet available in Washington) marijuana was actually involved in slightly fewer DUI arrests in 2015 than in 2014.[82]

In Oregon, Alaska and D.C., the next three jurisdictions to legalize marijuana for adult use in 2014, data are limited for the time periods after legalization, and are lacking for some of the years prior to legalization. In D.C. available data show that legalization does not appear to have increased DUI rates. In Oregon, DUI offenses declined by 25 percent from 17,341 in 2013, the last year prior to marijuana legalization, to 11,882 in 2015, the first year after legalization.[83] Similarly, D.C. DUI arrests declined by 18.3 percent in the same period, from 1,648 DUI arrests in 2013 to 1,346 in 2015.[84] In Alaska, DUI arrests started to increase in 2015 – the year after marijuana was legalized but before retail stores opened – but subsequently declined again in 2016. The number of DUI arrests in Alaska in 2015 (3,161) and 2016 (3,063) are similar to the number of DUI arrests in the state in 2012 (3,133), and are markedly lower than the number of DUI arrests[xxii] in the years leading up to legalization.[85]

xxi These arrests are identified as "involving marijuana," which refer to instances in which a driver may have tested positive for THC or THC metabolites, but may not actually be impaired at the time of the arrest.

xxii There were 5,484 DUI arrests in 2008, 5,452 in 2009, 4,986 in 2010, and 4,445 in 2011.

Crash Rates

There is no clear correlation between marijuana legalization and crash rates. While there was a slight uptick in the number of drivers involved in fatal crashes who tested positive for THC in Washington[86] and Colorado[87] in 2015, there is no causal link between this increase and driver impairment.

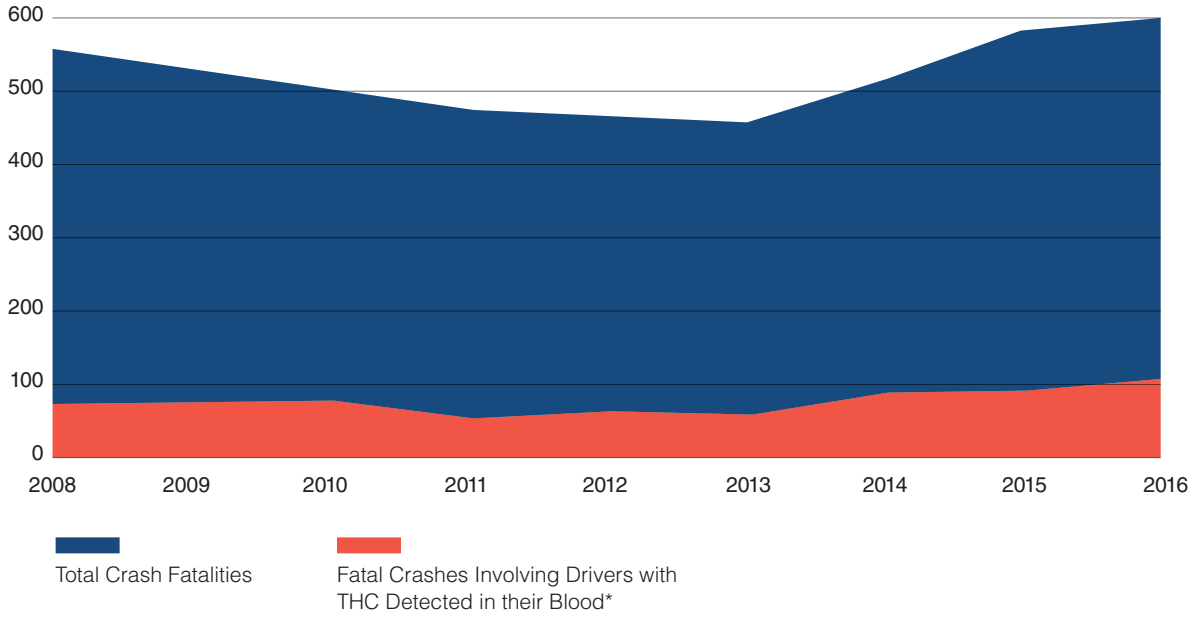
This change in toxicology results may be a consequence of changes to THC screening and data reporting procedures post-legalization. For example, prior to legalization, both states did not routinely test drivers to determine whether THC was involved in a fatal crash and researchers had to retroactively and manually recreate this information.[88] This methodology is subject to a high error rate and cannot be accurately compared to the real time THC tests conducted post-legalization.[89] In addition, these data come from the National Highway Transportation Safety Administration ("NHTSA") Fatality Analysis Reporting System ("FARS") and are limited by wide variations in testing procedures and testing and reporting policies.[90]

Post-legalization, the NHTSA FARS data was manually appended to include THC toxicity information.[91] For these reasons and the lack of historical comparison value, NHTSA warns against comparing these numbers across jurisdictions or years, even within a single jurisdiction.[92]

An increase in drivers testing positive for THC may also demonstrate an increase in marijuana use by adults 21 years of age and older in the states that have legalized. The data only illuminate that tested drivers consumed marijuana hours, days, or weeks prior to the crash, possibly long before the impairment effects wore off – they do not prove that a driver was impaired by marijuana.

Further, research demonstrates that Colorado and Washington's post-legalization fatal crash rates have little to nothing to do with marijuana. The crash rates of both states were statistically similar to comparable non-legal marijuana states.[93] In addition, the increase in fatal crashes in Washington, for example, far outpaces the increase in positive THC results among drivers involved in crash fatalities, thereby suggesting other factors are at play, influencing these crash numbers. (see Chart 14).

Chart 14: Crash Fatalities in Washington (2008 – 2016)



* Fatal Crashes Involving Drivers with THC Detected in their Blood means that a driver tested positive for consumption of THC sometime in the weeks preceding the crash.

Source: Fatality Analysis Reporting System (FARS), WTSC Serious Injury Data Source: Collision Location Analysis System (CLAS), WSDOT.

Crash Risk

Research findings on the extent to which marijuana use impairs driving are inconsistent.[94] While research shows a clear correlation between alcohol and crash risk, marijuana studies demonstrate that THC's effects on crash risk are more ambiguous (see charts 15 A & B).

Some marijuana impairment studies suggest that THC is only associated with a relatively small or uncertain increase in crash risk.[95] Others have demonstrated that heavy marijuana users experience fewer performance impairments than occasional users.[96] Additional studies show that marijuana alone does not lead to any increase in crash risk.[97] Still others report contradictory conclusions on the relationship between THC intoxication and driving impairment.[98]

For example, a study commissioned by the U.S. Department of Transportation and the National Traffic Safety Administration shows that there is no correlation between measured THC levels in a person's blood and impaired driving.[99] Similarly, a study conducted at the University of Heidelberg shows that, even after several days, high-dose marijuana users – such as medical marijuana patients – can still show elevated levels of THC in their blood that meet or exceed the 5 ng/ml limit, even though they demonstrated no signs of impairment.[100] Additional research findings suggest that the higher blood THC levels that are likely to be found in medical marijuana patients do not correlate with functional impairment.[101]

These studies demonstrate that the crash risk associated with marijuana use is uncertain. They also provide further proof that arbitrary THC blood thresholds fail to establish impairment. More research is needed to fully understand the association between marijuana use and driving impairment.

Chart 15 A: Relative Crash Risk of Alcohol

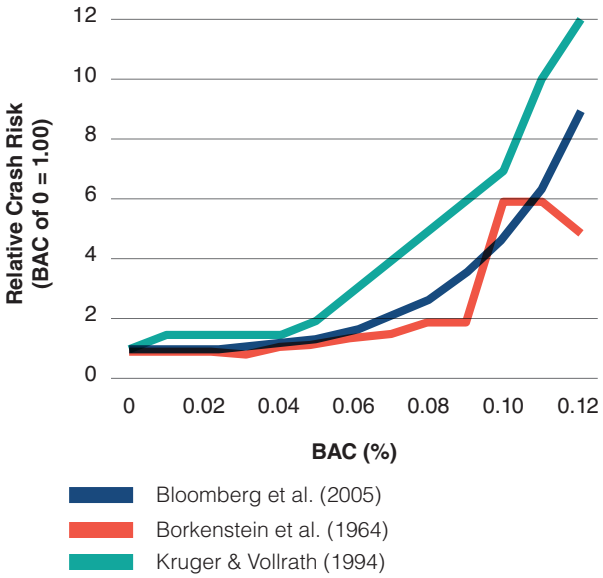
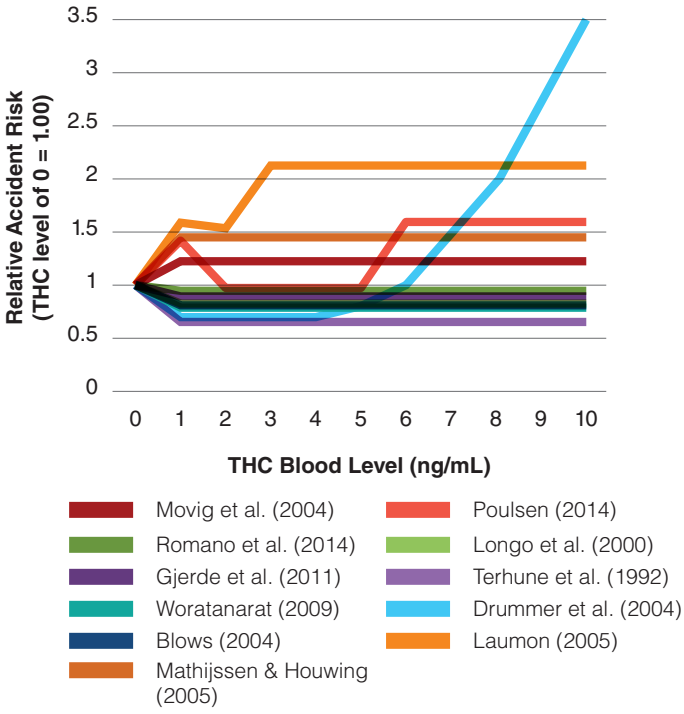


Chart 15 B: Relative Crash Risk of THC



Source: Andrea Roth, The Uneasy Case for Marijuana as Chemical Impairment Under a Science-Based Jurisprudence of Dangerousness, 103 Cal. L. Rev. 841, 908 (2015). (showing the results from fourteen THC blood levels and crash risk studies).

V. Marijuana and the Economy

Taxes and Revenues

By establishing a regulated adult use marijuana market, state and local governments are able to tax marijuana in a manner similar to other goods and services. Marijuana sales in Colorado, Washington, Oregon, Alaska, and most recently in Nevada, began slowly as consumers and regulators alike adjusted to new systems. (Sales in California started on January 1, 2018, and no data are available yet. Sales in Massachusetts will not begin until July 2018. Sales in Maine are on hold pending approval of an implementation bill for the state's regulated marijuana program. In D.C. no retail cultivation, manufacturing or sales are permitted at this time.) Once up and running, however, **overall sales and tax revenue in each state quickly exceeded initial estimates.**

For example, analysts predicted that marijuana sales in Washington would generate $162 million annually for the first two years.[102] In its first fiscal year, the state fell short of estimates and only collected $65 million in marijuana excise tax revenues. By the second year, revenues exceed estimates with $185 million collected in the second fiscal year and $315 million in the third fiscal year (see Table 2).

Table 2: Marijuana Revenues by State

	Projected Revenue	Total Revenue Collected by Year			
		Year 1	Year 2	Year 3	Year 4
Colorado[xxiii] (Calendar year)	$70 Million	$67.6 Million (2014)	$130.4 Million (2015)	$193.6 Million (2016)	$205.1 Million (Jan – Oct '17)
Washington[xxiv] (Fiscal year: Jul 1 – Jun 30)	$162 Million	$64.9 Million (2014–15)	$185.7 Million (2015–16)	$314.8 Million (2016–17)	$91.2 Million (Jul – Sept '17)
Oregon[xxv] (Fiscal year: Jul 1 – Jun 30)	$31 Million[xxvi]	$20.7 Million (2015–16)	$70.3 Million (2016–17)	$18.4 Million (Jul – Sept '17)	–
Alaska[xxvii] (Fiscal year: Jul 1 – Jun 30)	$12 Million[xxviii]	$1.7 Million (Oct '16 – Jun '17)	$1.3 Million (Jul – Aug '17)	–	–
Nevada[xxix] (Fiscal year: Jul 1 – Jun 30)	$60 Million[xxx]	$ 13.2Million (Jul – Sept. '17)	–	–	–

xxiii Taxes, License, and Fee Revenue by calendar year; Jan. 1 to Dec. 31. "Marijuana Tax Data," Colorado Department of Revenue, https://www.colorado.gov/pacific/revenue/colorado-marijuana-tax-data.

xxiv Excise tax by fiscal year; July 1 to June 30. "Marijuana Dashboard," Washington State Liquor and Cannabis Board, https://data.lcb.wa.gov/stories/s/WSLCB-Marijuana-Dashboard/hbnp-ia6v/.

xxv State tax by fiscal year: July 1 to June 30. "Marijuana Tax Statistics," Oregon Department of Revenue, http://www.oregon.gov/DOR/programs/gov-research/Pages/research-marijuana.aspx; Noelle Crombie, "Oregon pays out $85 million in pot taxes to school fund, cops, other services," *The Oregonian,* updated October 11, 2017, http://www.oregonlive.com/marijuana/index.ssf/2017/10/oregon_pays_out_85_million_in_1.html.

xxvi "Research Brief #4-16: Updated Marijuana Tax Revenue Estimates," Legislative Revenue Office, State of Oregon, May 2016, accessed September 28, 2016, https://www.oregonlegislature.gov/lro/Documents/RR%2004-16%20Updated%20Marijuana%20Revenue%20Research%20Brief.pdf.

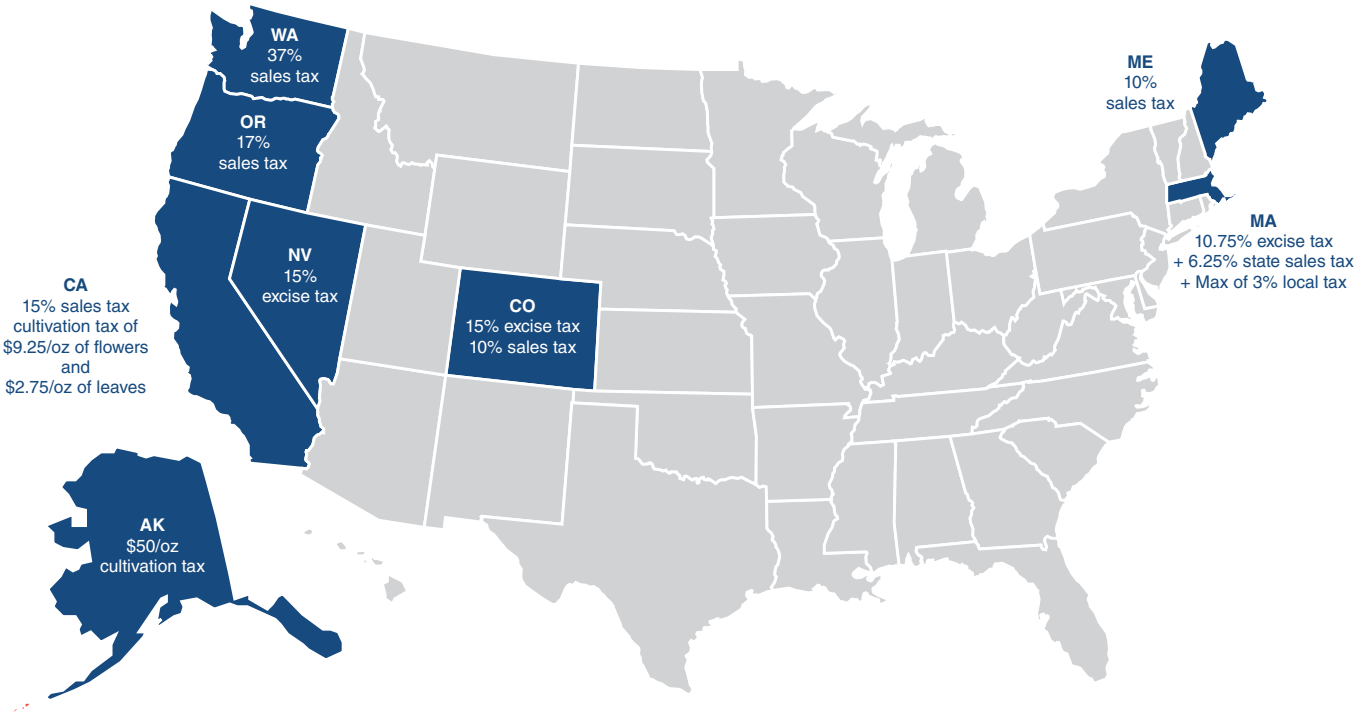
xxvii State tax by fiscal year: July 1 to June 30. http://tax.alaska.gov/programs/programs/reports/monthly/Marijuana.aspx?ReportDate=8/1/2017.

xxviii Laurel Andrews, "Here's Where Half of the Revenue From Alaska's Legal Pot Will Go," Alaska Dispatch News, July 12, 2016, accessed September 28, 2016, http://www.adn.com/alaska-marijuana/2016/07/12/heres-where-half-of-the-revenue-from-alaskas-legal-pot-will-go/.

xxix Retail tax, wholesale tax, and licensing and application fees for July through September 2017 only. State of Nevada, Department of Taxation, accessed December 7, 2017, https://tax.nv.gov/Publications/Publications/.

xxx The State projected marijuana sales would bring in $120 million in revenue over the first two years. News Release, State of Nevada, Department of Taxation, Sept. 28, 2017, accessed December 7, 2017, https://tax.nv.gov/uploadedFiles/taxnvgov/Content/TaxLibrary/July-Marijuana-Sales.pdf.

State Recreational Marijuana Excise Tax Rates, As of January 2017



Marijuana sales have generated almost $600 million for Colorado since sales began on January 1, 2014.[103] Revenue almost doubled from the first year of sales to the second, and is on track to almost triple from the first year of sales to the fourth. In the first year of sales in 2014, the state collected $67 million in revenue. And, in 2017, the state has already collected $205 million through October. This is well over the initial projection of $70 million per year.

Oregon, too, has surpassed revenue expectations. In 2014, the state Legislative Revenue Office predicted the state would collect an average of $23 million gross revenue per year, which was later increased to $31 million per year.[104] In the first fiscal year, state marijuana revenue fell below this prediction, with $20 million collected by the state. Yet by the end of the second fiscal year on June 30, 2017, the state had collected $70 million, which was more than double the predicted revenue.

Tax Rates

Finding the ideal tax rate for marijuana requires striking a balance between generating sufficient revenue to compensate state and local governments for regulating marijuana and disincentivizing heavy marijuana consumption, while not taxing it so heavily that consumers purchase marijuana from the unregulated market where marijuana is not taxed.[105] Establishing the appropriate tax rate has required flexibility from state lawmakers, consumers and marijuana businesses. Some states have had to reduce or increase their overall marijuana tax rate to better reduce consumer reliance on the illicit market or generate more revenue for the state.[106] Calculating the appropriate rate in a nascent and growing industry with significant price volatility is complicated.[107]

Colorado, Washington, Oregon and Alaska have all taken steps to amend their overall marijuana tax rate after marijuana sales began.[108] In 2016, Colorado lawmakers approved a reduction in the special marijuana sales tax to better curb the unregulated market, but reversed course in 2017 and

approved an increase in the special marijuana sales tax instead to generate more revenue.[109] Washington initially imposed a complicated tax structure that imposed a tax at each point in the supply chain, but later switched to an effective 37 percent excise tax.[110] Oregon lawmakers also switched from a weight-based wholesale tax to a retail tax on sales of marijuana.[111] Nevada, the most recent state to implement retail sales, learned from these states and added an excise tax to retail sales before implementation even began.[112] And similarly, concerned that the tax rate set by voters in the ballot measure was too low to generate revenue, policymakers in Massachusetts have raised the tax rate well before sales even begin.[113]

Medical marijuana remains less taxed, and less expensive, than retail marijuana (see Table 3). In some states, such as Oregon, medical marijuana is not subject to any tax. In others, like Colorado, medical marijuana is not subject to a steep excise tax, but is subject to a state sales tax. While the reasons for the lower tax rate make sense – medical marijuana is used as medicine and other prescription drugs are exempted from taxation – the disparate treatment between medical and retail marijuana can lead to a smaller tax base and lower revenue for the state.[114]

Table 3: Tax Rate by State (Medical vs. Adult Use Marijuana)

State	Type/Amount Of Tax (Adult Use)	(Medical)[115]
Colorado[116]	*Beg. July 2017:* 15% (exempted from 2.9% state sales tax) + 15% wholesale excise tax	2.9% state sales tax
Washington[117]	37% excise tax on retail sales + 8% state sales tax	For certain types of marijuana and low-THC products and high CBDs: 37% excise tax *Exempt from sales and use tax*
Oregon[118]	17% excise tax	No tax
Alaska[119]	$50/ounce of of marijuana cultivation tax	No tax
Nevada[120]	Excise tax on first wholesale: 15 percent + Retail excise tax (adult): 10 percent	Excise tax on first wholesale: 15 percent 2% excise tax
California[121]	Wholesale weight tax: $9.25/ounce of flowers; $2.75/ounce of leaves + 15% excise tax + 7.25% state sales tax + Any local tax	Wholesale weight tax: $9.25/ounce of flowers; $2.75/ounce of leaves + 15% excise tax *Exempt from state sales tax of 7.25%*
Massachusetts[122]	10.75% excise tax + 6.25% state sales tax + Max of 3% local tax	No tax
Maine	To be established by the state legislature	No tax

Employment

The marijuana industry is undoubtedly growing and generating hundreds of millions of dollars in tax revenue for states. In addition, this growth in legal marijuana commerce is generating hundreds of thousands of new jobs. Preliminary estimates suggest that the legal marijuana industry employs between 165,000 to 230,000 full and part-time workers across the country.[123] This number will only continue to grow as more states legalize marijuana and replace their unregulated markets with legal marijuana markets.

One study by the Marijuana Policy Group ("MPG") reports that the legalization of marijuana in Colorado created 18,005 full-time jobs in 2015.[124] The majority of these jobs (12,591) were directly involved with the marijuana business, including jobs with stores, dispensaries, and cultivation or manufacturing operations. The remaining positions (5,414) were ancillary jobs created by the industry, including security, consulting and legal services.[125] MPG further estimates that the majority of growth is not the result of an increase in demand for marijuana, but rather from a reduction of the unregulated, illicit market.[126] The study also estimated that 9,936 direct jobs and another 4,272 ancillary jobs were created in 2014.[127] Another study by the Cato Institute found this job creation resulted in a small measurable decline in unemployment in Colorado. The seasonally adjusted unemployment rate fell dramatically after the beginning of 2014, which is when that state's retail marijuana sales began.[128]

Employment continues to grow in other states that have legalized marijuana. The Washington State Institute for Public Policy estimates that the state's marijuana businesses employed 10,894 people in the fourth quarter of 2016.[129] Licensed marijuana businesses employed 66 percent more full-time employees and paid 63 percent more in wages in the last quarter of 2016 than in the first quarter of 2016.[130] A report requested by Oregon lawmakers estimated that as of February 1, 2017, there were approximately 12,500 jobs associated with the marijuana industry in the state. This estimate only includes jobs that directly touch marijuana and does not include auxiliary businesses.[131]

These findings make clear that states that have established[xxxi] regulated marijuana markets have benefited economically by creating thousands of new jobs.[xxxii]

xxxi Regulated adult use marijuana markets have not opened yet in Massachusetts or Maine, and D.C. law does not permit marijuana regulation.

xxxii Data are not yet available on the demographic makeup of marijuana industry owners and employees. However, the need for equity in the regulated marijuana market is discussed in detail in on page 27 and 28.

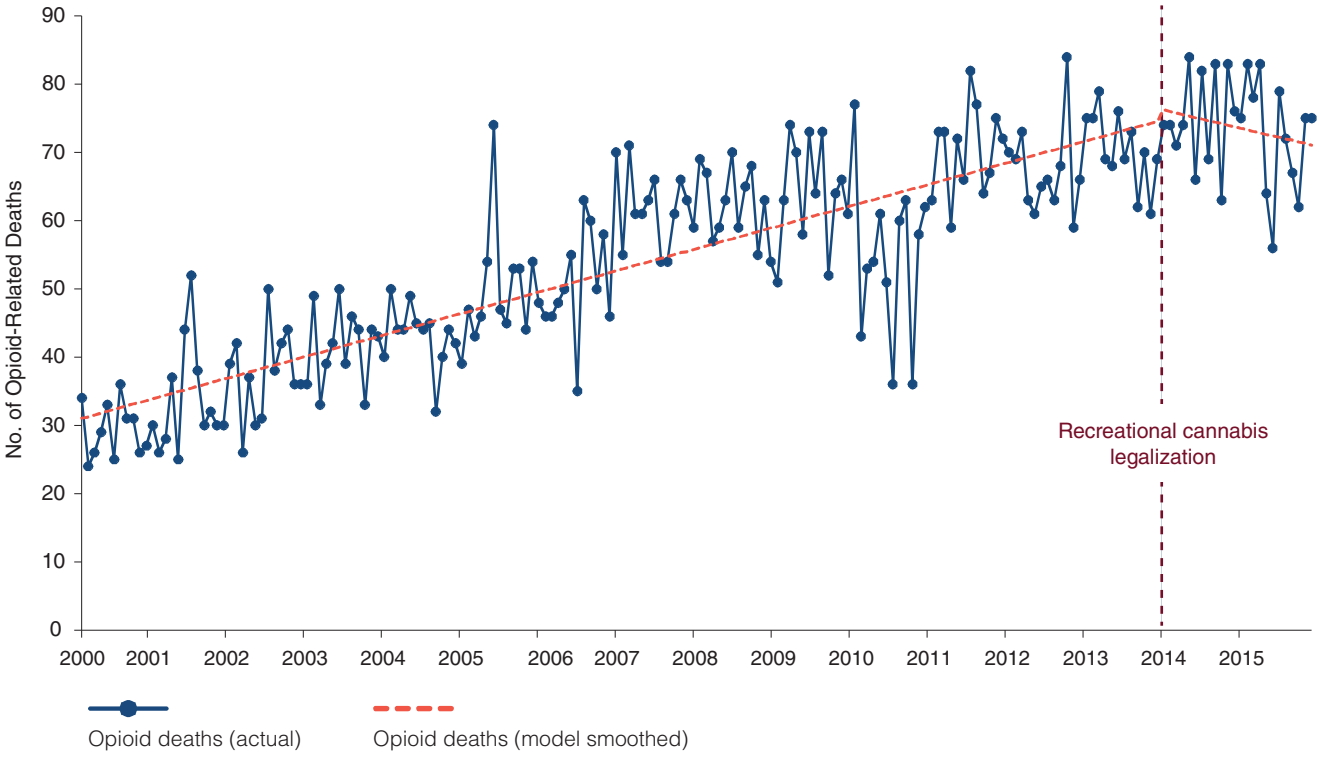
VI. Going Forward: Other Measures to Evaluate Impact

The first marijuana legalization law passed only five years ago and the first regulated marijuana market was established just four years ago.[132] It is imperative that additional measures are analyzed as legalization moves forward and more data are made available. This type of evaluation is necessary to quantify the breadth of outcomes associated with legal marijuana. Such measures include, but are not limited to, opioid overdose and treatment admission rates, the effect of the adult use marijuana market on medical marijuana, the impacts of social consumption spaces, and efforts to repair past harms from marijuana criminalization and improve equity in the marijuana market. It is also necessary to evaluate the impacts of the unique sentencing reform and environmental protection provisions that were included in Proposition 64, California's Adult Use of Marijuana Act.

The Relationship Between Marijuana Legalization and Opioid-Related Harm

An increasing body of research suggests that legal access to marijuana can help to address a number of public health harms associated with opioids.[133] In fact, there are signs across the country that this is already happening – increased access to marijuana has been correlated with reductions in some of the most troubling harms associated with opioids, including opioid overdose mortality and untreated opioid use disorders. Many people are seeking lower-risk alternatives to opioids for pain and finding that marijuana is a viable substitute.

Chart 16: Changes in Monthly Opioid-Related Deaths Following Marijuana Legalization for Adult Use in Colorado (2000 – 2015)



Source: Livingston, M. D., Barnett, T. E., Delcher, C., & Wagenaar, A. C. (2017). Recreational cannabis legalization and opioid-related deaths in Colorado, 2000-2015. *American Journal of Public Health,* 107, 1827-1829.

Over the past several years, early studies have revealed a correlation between state marijuana laws and lower rates of opioid overdose mortality, both in states with access to medical[134] and adult use[135] marijuana. **In states with medical marijuana access, overdose mortality rates are almost 25 percent lower than in states with no legal access to marijuana,** and the reductions in mortality rates strengthened over time.[136] An analysis of opioid overdose mortality in Colorado including the years prior to and following the legalization of adult use marijuana found that there was a post-legalization reduction of 0.7 deaths per month in the state and that the decades-long upward trend of overdoses trended downwards after 2014 (see Chart 16).[137] In addition, **legal access to medical marijuana has been associated with a 23 percent reduction in opioid dependence or abuse-related hospitalizations[138] and 15 percent fewer opioid treatment admissions.[139]**

Researchers hypothesize that these trends suggest a substitution effect, meaning people with opioid use disorders or those who engage in risky opioid use may have chosen to use legally accessible marijuana in place of illicitly acquired opioids or other drugs. Several studies demonstrate that people who use medical marijuana find that it is a lower-risk alternative to opioids, has fewer harmful side effects, helps manage pain symptoms, lowers likelihood of withdrawal, and is easier to access.[140]

The efficacy of marijuana for treating chronic pain is becoming increasingly recognized and established.[141] Studies are finding that some patients transition away from opioids through marijuana use, or supplement marijuana so that they can use fewer opioids.[142] A study of chronic pain patients found that using medical marijuana was ultimately associated with a 64 percent reduction in prescription opioid use among members of the sample.[143] Another found a 44 percent reduction in prescription opioid use after using medical marijuana for chronic pain.[144]

Given that 98 percent of Americans already live in states with some form of legal access to marijuana[145] – 21 percent with both medical and adult use access, 41 percent with medical access only, and 35.4 percent with access to low-THC or limited CBD formulations – researchers are well-positioned to evaluate how marijuana may fit into a broader strategy for addressing the current opioid crisis. Since medical marijuana policies vary so widely from state-to-state, (i.e. approved number of conditions, acceptable forms for use, etc.), it is likely that broader marijuana legalization may open up access for people to use marijuana as a substitute beyond the limits of their state's own medical marijuana policies.

Impact on Medical Marijuana

Medical marijuana sales have remained static in Colorado since adult use sales began, which contradicts early predictions that retail marijuana sales would drastically reduce medical marijuana sales.[146] Some analysts believe that the lower tax rate on medical marijuana incentivizes consumers to seek unnecessary doctor's recommendations to obtain a discount.[147] The Colorado Department of Revenue similarly suggests that this tax differential is the reason medical marijuana sales remain constant.[148] Other analysts believe that customers may be willing to pay additional tax to avoid the hassle of obtaining a doctor's recommendation.[149]

The medical marijuana system in Washington faced significant changes once retail marijuana was legalized in 2012. Medical marijuana in Washington was largely unregulated, without licensure or permits, from 1998 until 2015 when lawmakers merged the two systems.[150] Once adult use sales began, consumers found that medical marijuana sold at dispensaries was significantly cheaper than commercial marijuana sold at retail stores.[151] Adult use marijuana operators were forced to comply with regulations, inspections, testing and taxation that increased their operating costs and thus, the price of their product whereas medical operators, who operated without regulation, had far lower operating costs and cheaper products.[152]

The lesson learned by Washington – and for other states legalizing adult use marijuana – is that it is best to have a regulated, stabilized medical marijuana market before legalizing marijuana for adult use. This is the order in which Nevada, Massachusetts and Maine will proceed. Alternatively, California simultaneously began adult use and medical marijuana sales under a newly regulated system on January 1, 2018, and chose to apply almost all marijuana taxes to both types of marijuana, thus eliminating incentives for consumers to unnecessarily seek out medical marijuana.[153]

Onsite Consumption Spaces

Consuming marijuana in public is illegal in all jurisdictions that have legalized marijuana for adults 21 and older. It is a misdemeanor in Nevada and Washington, D.C., and a civil penalty subject to fines and fees in in all other states which have legalized marijuana for adult use.[xxxiii] These misdemeanor offenses and fines and fees pose a fundamental challenge to fair marijuana enforcement, because they disproportionately burden poor people with financial sanctions.[154] People who lack the means to pay the fines and fees risk being jailed for consuming a lawful substance.[xxxiv] This means that individuals who do not have homes or live in federally subsidized housing may be vulnerable to criminal justice sanctions for marijuana consumption – even in states where public consumption is only subject to a civil fine – because they are often unable to afford the associated fines and fees. Public use violations are also disproportionately enforced against people of color, particularly Black people (as discussed in the context of Washington, D.C. on pages 31 to 32).[155] Further, tourists visiting states with regulated marijuana markets may lawfully purchase marijuana, but may have no place to legally use it unless they have access to a state resident's private property.[156]

To address these concerns, several states that legalized marijuana for adult use have also allowed "social use" clubs or retail stores to be permitted for onsite marijuana consumption. However, the rollout of these onsite consumption businesses has been slow. It is imperative that these businesses are permitted so that all people have safe places to consume marijuana, free from criminal justice intervention. Once onsite consumption establishments are permitted, it is essential to measure their impacts on arrests, public health and government savings.

Equity in the Legal Marijuana Market

Until recently, marijuana legalization laws have inadequately addressed the lasting impacts of decades of harsh marijuana prohibition and punishment and much progress can still be made. This is illustrated by the current lack of diversity in the regulated marijuana market. The communities most harmed by marijuana criminalization have struggled to overcome seemingly insurmountable barriers to fully participate in this market. In light of this, some states[xxxvii] and cities are implementing rules aimed at reducing barriers to entry in the marijuana industries. For example, in California, a stated intent of the state's marijuana legalization initiative was to "reduce barriers to entry into the legal, regulated market."[157] A prior drug felony in California cannot be the sole basis for denying a marijuana license.[158] This mitigates the harms to low-income, Black and Latinx people who have borne decades of disproportionate arrests and convictions for marijuana-related offenses. Several jurisdictions, including Massachusetts

xxxiii In Alaska, California, Colorado, Maine, Massachusetts, Oregon, and Washington, using marijuana in public is subject to a civil penalty. ALASKA STAT. ANN. § 17.38.020; CAL. HEALTH & SAFETY CODE § 11362.1; COLO. CONST. ART. XVIII, § 16; OR. REV. STAT. 475B.010 et seq.; ME. REV. STAT. TIT. 7, § 2452; MASS. GEN. LAWS ANN. ch. 94G, § 7; WASH. REV. CODE ANN. § 69.50.4013. In Nevada and Washington, D.C. public marijuana use is punishable as a misdemeanor offense. D.C. Law 20-0126; D.C. Official Code § 48-1201, *et seq.;* NEV. REV. STAT. ANN. § 453D.110.

xxxiv Failure to pay a fine can result in a person being jailed. "Confronting Criminal Justice Debt: A Guide for Policy Reform," Criminal Justice Policy Program, Harvard Law School, September 2016, http://cjpp.law.harvard.edu/assets/Confronting-Crim-Justice-Debt-Guide-to-Policy-Reform-FINAL.pdf at 26.

xxxv Social use clubs are shared spaces where people can collectively gather to consume marijuana they bring with them or that others share with them. Marijuana is not typically sold at these clubs.

xxxvi For example, California, Massachusetts, and Nevada allow local governments to permit onsite consumption licenses. CAL. HEALTH & SAFETY CODE § 11362.1; MASS. GEN. LAWS ANN. ch. 94G, § 7; Brenda J. Erdoes and Asher A. Killian to Senator Richard "Tick" Segerbom. September 10, 2017. Legislative Building, 401 S. Carson Street, Carson City, Nevada. https://www.scribd.com/document/358620398/Legal-Opinion-Nevada-Marijuana-Lounges?irgwc=1&content=27795&campaign=VigLink&ad_group=3073860&keyword=ft500noi&source=impactradius&medium=affiliate. Maine law allows for marijuana social clubs. ME. REV. STAT. TIT. 7, § 2452. In Colorado, most municipalities have banned onsite marijuana consumption; however, Denver is the first city in the state to permit social marijuana use licenses and received its first application on December 11, 2017. Kathleen Foody, "Coffee Shop Wants to Be Denver's First Legal Marijuana Club," *U.S. News,* December 11, 2017, https://www.usnews.com/news/best-states/colorado/articles/2017-12-11/coffee-shop-wants-to-be-denvers-first-legal-marijuana-club; Alaska is in the process of establishing onsite consumption rules, https://www.commerce.alaska.gov/web/amco/MarijuanaRegulations.aspx. Oregon lawmakers are considering legislation to permit onsite consumption businesses. SB 380 (OR 2017). And, neither Washington nor Washington, D.C. permit onsite consumption businesses. WASH. REV. CODE ANN. § 69.50.4013; Benjamin Freed, "'DC Bans Private Marijuana Clubs, Making Legalization Even Murkier," The Washingtonian, April 19, 2016, https://www.washingtonian.com/2016/04/19/dc-bans-private-marijuana-clubs-making-legalization-even-murkier/.

xxxvii Several states with medical marijuana programs have also expanded access to the regulated market by making equity a priority when issuing licenses. For example, Maryland's medical marijuana law requires its Medical Cannabis Commission to "actively seek to achieve racial, ethnic, and geographic diversity" when it licenses dispensaries. Md. Code Ann., [Health-Gen.] § 13-3307 (c)(2) (West 2015). Ohio requires 15 percent of its cultivation and retail dispensary licenses be set aside for residents who are members of one of four "economically disadvantaged groups," including, "Blacks or African Americans, American Indians, Hispanics or Latinos, and Asians." Ohio Rev. Code Ann. § 3796.09 (C) (West 2016); Ohio Rev. Code Ann. § 3796.10 (C) (West 2016).

and several cities – such as Portland, Oregon and Oakland, San Francisco, Sacramento, and Los Angeles – are implementing or considering adopting programs to increase equity in the marijuana industry and remedy past harms.[159]

The goal of these equity programs is to increase representation in the regulated market of people most harmed by marijuana criminalization. This goal can be most easily achieved through a state-level equity program because marijuana business licenses are issued at the state level. For example, Massachusetts' Question 4, the Regulation and Taxation of Marijuana Act, requires the state authority tasked with marijuana oversight to adopt "procedures and policies to promote and encourage full participation in the regulated marijuana industry by people from communities that have previously been disproportionately harmed by marijuana prohibition and enforcement and to positively impact those communities."[160] Other states, such as Florida,[xxxviii] Ohio[xxxix] and Pennsylvania have adopted state-level equity programs for their medical marijuana markets.[161]

Cities are also adopting programs to increase equity and inclusion in the marijuana market. For instance, Oakland, California launched the nation's first "Equity Permit Program," which sets aside 50 percent of medical and adult use medical marijuana business permits for equity applicants during the first phase of permitting.[162] Several additional cities are considering a range of factors when making an equity determination, such as an applicant's conviction history for past marijuana-related offenses, low-income status, gender, veteran status, and residency in an area that has experienced a disproportionate number of marijuana arrests.[163] Portland, Oregon passed an ordinance that allocates a portion of its adult use marijuana sales tax revenue to fund women-owned and minority-owned marijuana businesses.[164]

Another barrier to employment in the marijuana industry, as well as other industries, is having a prior marijuana conviction. This can be particularly challenging for individuals who have been convicted of marijuana offenses, which might now be legal in their states. In response to this, states such as California, Colorado and Oregon are allowing individuals with past marijuana convictions to retroactively change their records to reflect the eliminated or reduced marijuana penalties following legalization.[165] This helps people shed the often-lifelong collateral consequences associated with criminal convictions that may prevent them from obtaining occupational licenses.

Priority licensing programs and record clearing remedies are necessary to begin repairing the disparate harms of marijuana criminalization, yet true equity cannot be achieved unless there are low barriers to entering the marijuana market and until low-income persons have access to start-up capital. Lower barriers to entry can be achieved by establishing smaller licensing categories,[xlii] such as cultivator licenses for small farms, and scaling the application fees based on the size of the business.[166] Limiting market concentration can also increase the number of small businesses participating in the marijuana market.[167] This can be done by restricting the number of marijuana businesses any one licensee may own, or by limiting the size of the businesses that can be licensed.[168]

xxxviii The Florida medical marijuana equity program sets aside one of the ten new medical marijuana treatment center licenses for a member of the Black Farmers and Agriculturists Association-Florida Chapter. It requires the Department of Health to identify applicants with strong diversity plans to compete for medical marijuana treatment center licensure. In addition, the Florida program requires all medical marijuana treatment center license applicants to demonstrate involvement by people of color or veterans in ownership, management, and employment of the proposed medical marijuana treatment center. Fla. Stat. Ann. § 381.986(7)(d).

xxxix The Ohio medical marijuana equity program requires that 15 percent of medical marijuana cultivator, processor, laboratory, and retail licenses are issued to members of "the following economically disadvantaged groups: Blacks or African Americans; American Indians; Hispanics or Latinos; and Asians." Ohio Rev. Code Ann. §§ 3796.9(C), 3796.10(C). A complaint was recently filed challenging the equity program as an unconstitutional quota. PharmaCann Ohio, LLC v. Jacqueline T. Williams, No. 17CV010962, the Court of Common Please, Franklin County, Ohio, December 12, 2017.

xl In Pennsylvania the Department of Health is required to adopt policies that ensure diverse groups have equal opportunities to obtain permits and employment in the medical marijuana market and to conduct outreach to diverse communities. The Department of Health must also publish annual reports detailing the diversity of the medical marijuana permittees and employees. 35 Pa. Stat. Ann. § 10231.615.

xli In California, individuals who are serving a sentence for a marijuana offense that is now legal or for which the penalties have been reduced are eligible to be resentenced. Cal Health & Saf Code § 11361.8. In addition, persons who have completed their sentences for a pre-legalization marijuana conviction are eligible to have their records reduced or cleared to reflect the post-legalization penalty. Ibid. In Colorado, persons with pre-legalization misdemeanor marijuana convictions are eligible to have the convictions sealed if the conduct is now legal. Colo. Rev. Stat. § 24-72-710. In Oregon, individuals convicted of marijuana offenses pre-legalization may qualify to have their records changed to reflect current law if the conviction occurred before July 2013. Or. Rev. Stat. § 161.705. These retroactive processes are not automatic. Individuals must petition the courts and pay applicable filing fees to benefit from reduction, dismissal, or sealing.

xlii Microbusiness licenses, which are unique to Prop. 64, are another example of a small license category with lower barriers to entry. Microbusiness licensees may grow limited amounts of marijuana, manufacture it, and sell it to retail customer, much like a boutique winery or microbrewery.

To increase access to capital, the federal banking issue must be resolved, so that low-income people can obtain small business loans. Current federal banking laws restrict low-income persons' ability to obtain small business loans or grants to start a marijuana company. Unlike any other type of business, medical and adult use marijuana businesses are unable to access banking services, because marijuana remains illegal under federal law.[169] As a result, many would-be marijuana entrepreneurs are unable to obtain loans from or conduct financial transactions with banks to start and maintain marijuana businesses.[170] Meaning that presently, only individuals with money can easily enter the marijuana industry. Until banking becomes available for people in the marijuana industry, marijuana accelerator programs or other private funding may be the only way that low-income people will be able to access the capital necessary to start a marijuana business.[xliii]

Repairing the Harms of Criminalization on Communities

California's Prop. 64 included several novel provisions, such as significant sentencing reform. The law eliminated or substantially reduced most marijuana penalties. For youth under 18 years of age, all penalties became infractions punished with drug education rather than incarceration (as discussed in more detail on pages 33 to 34). These sweeping reductions in criminal penalties were retroactive. This means that individuals serving sentences for marijuana offenses at the time of legalization qualified to be resentenced under the post-legalization penalties. In addition, people with past marijuana convictions may petition the court to reduce or remove their penalties from their criminal records. In the first year of marijuana legalization, California counties have reported that nearly 5,000[xliv] people have either been resentenced, and likely released from state supervision, or their marijuana convictions were reduced on or removed from their criminal records.[171]

While California was the only state, thus far, to include retroactive record clearing provisions in its marijuana legalization law, additional states have passed or are working to pass[xlvi] such provisions through the legislature. For example, the Oregon legislature passed a bill in 2015 allowing people convicted of marijuana offenses to retroactively clear their records.[172] In addition, Colorado passed a bill in 2017 allowing prior marijuana misdemeanors to be expunged from a person's record.

Repairing the Harms of Prohibition on the Environment

California's Prop. 64 also included unique provisions aimed at protecting and repairing the state's natural resources. These include environmental protection and remediation provisions to rectify decades of environmental harm caused by illegal marijuana cultivation. Under state law, marijuana industry licensees must comply with environmental regulations or risk losing their license and facing civil fines or criminal prosecution. In addition, millions of dollars in marijuana tax revenues are directed to clean up the environment and improve the state parks. These environmental harms are not unique to California, but occur nationwide, and these provisions must be evaluated to see if they can, in practice, improve the state's water, land and natural resources. The effectiveness of these provisions will help inform future marijuana laws.

xliii *See, e.g.,* "Gateway: Accelerating the Future of Cannabis, The Premier Cannabis Startup Accelerator & Venture Fund," https://www.gtwy.co/.

xliv These numbers are voluntarily reported by each of the state's 58 counties and several counties have failed to report these numbers for one or more period. As a result, these numbers are likely much higher than reported.

xlv Persons serving sentences in California may be in jail or prison, or on probation, parole, or post release community supervision.

xlvi Lawmakers in Massachusetts are currently considering marijuana expungement bills. H.R. 2785, 190th Leg. (Mass. 2017); S.R. 1075, 190th Leg. (Mass. 2017).

VII. Going Forward: Areas of Growth

With overwhelming popular support for marijuana legalization, the time is ripe to advance reforms beyond marijuana legalization and to begin repairing ancillary harms related to marijuana criminalization. This includes reforming police practices to reduce the racial disparities in remaining marijuana arrests, limiting the extent to which marijuana can be used as an excuse for police to stop individuals, and removing criminal sanctions for minor marijuana-related activities by young people under age 21.

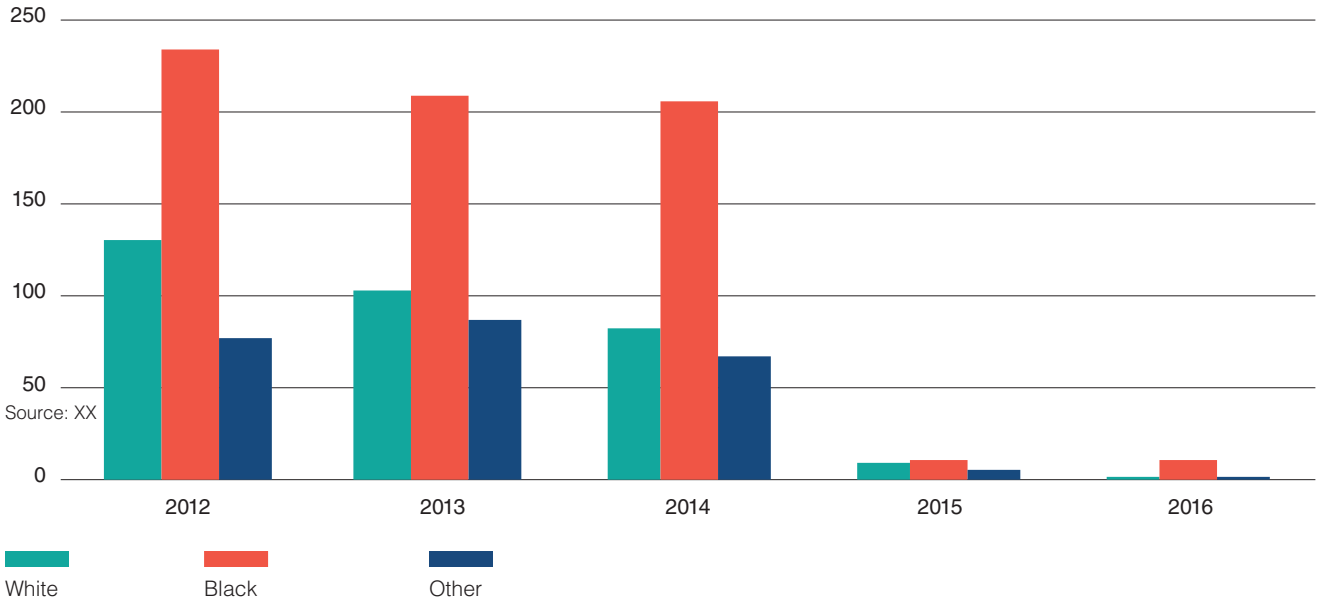
Racial Disparities Persist

It is widely acknowledged that racial disparities exist in the enforcement of marijuana laws in this country – Black and Latinx people are more likely to be arrested for marijuana law violations than White people, despite similar rates of use and sales across racial groups.[173] Marijuana legalization has dramatically reduced the number of Black and Latinx people arrested for marijuana-related conduct, yet racial disparities persist. Initial data show that while legalization substantially reduced the total number of Black and Latinx people arrested for marijuana offenses, it did not eliminate the forces that contributed to the disparity in the first place, such as the over-policing of low-income neighborhoods, racial profiling, and other racially motivated police practices.[174]

In Colorado, for example, White people benefitted most from the declines in marijuana arrests, which decreased by 51 percent, compared to 33 percent for Latinx people, and 25 percent for Black people between 2012 and 2014. The marijuana arrest rate for Black people (348 per 100,000) in Colorado was nearly triple that of White people (123 per 100,000) in 2014.[175] The post-legalization arrest rate for Black individuals in Washington is reported to be double the arrest rate for other races and ethnicities.[176] In Alaska, both Black and White people experienced dramatic declines in marijuana arrests between 2013 and 2015, 95 and 92 percent respectively, yet disparities remain (see Chart 17 below). Of the 17 marijuana arrests in Alaska in 2016, 29 percent were of Black people (a racial group that comprises only 4 percent of the state's population). Alaska's marijuana arrest rate for Black people (17.7 per 100,000) is ten times greater than that of White people (1.8 per 100,000).[177] A similar pattern has emerged in Washington, D.C., and is discussed in more detail on the next page.

Marijuana legalization can dramatically reduce the number of Black and Latinx individuals arrested and convicted for marijuana offenses, but it cannot change police practices. Police reform is required to end the racial disparities in marijuana enforcement (as discussed on page 33).

Chart 17: Marijuana Possession Arrest Rates in Alaska by Race (2012 – 2015)



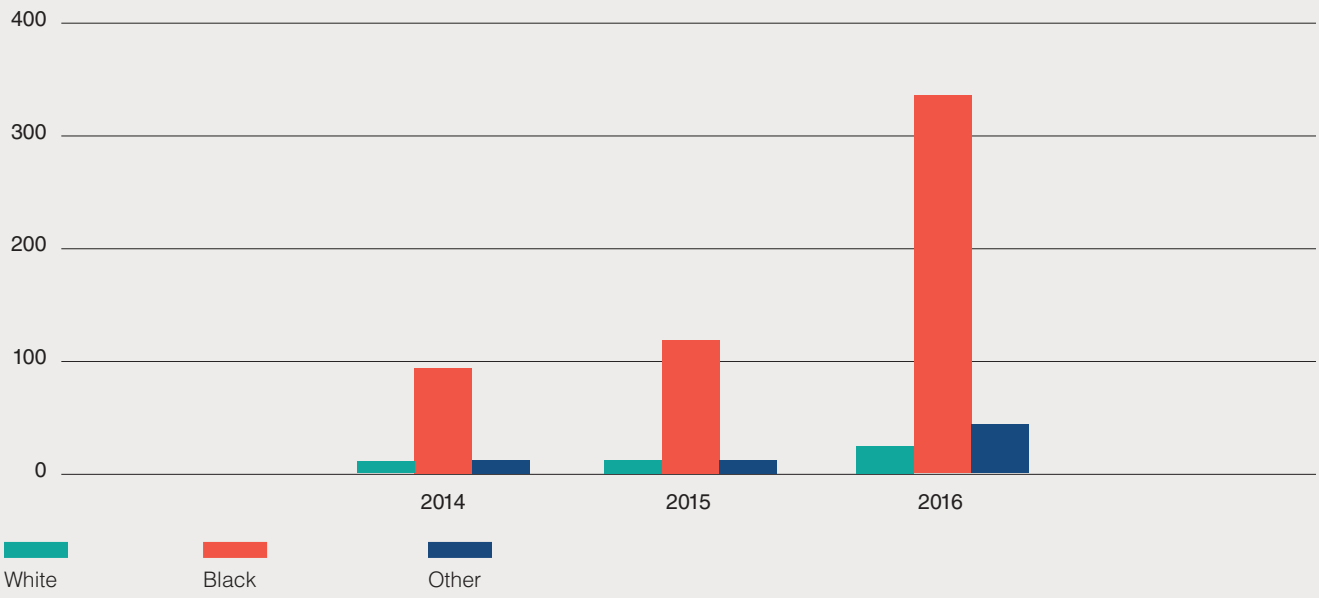
Source: "Crime in Alaska," Uniform Crime Reporting Program, Department of Public Safety, http://www.dps.alaska.gov/.

Case Study: Arrests in Washington, D.C.

In Washington, D.C., marijuana was decriminalized effective July 2014[178] and legalized for adults 21 and older in February 2015.[179] This has led to mixed results. Total marijuana arrests dramatically declined in the first year after legalization, but subtly increased in 2016. Arrests in D.C. declined by 83 percent from 2014 to 2015,[180] with possession arrests falling by 97 percent from 1,840 in 2014 to 61 in 2015. In 2016, marijuana possession arrests further declined to 35. Arrests for possession with intent to distribute declined from 599 to 170 in 2015 and have stayed relatively stable at 179 in 2016.[181] Distribution arrests initially declined from 124 in 2014 to 81 in 2015, but then they increased by 81 percent to 224 in 2016.[182]

Despite marijuana legalization in D.C., public consumption of marijuana is a criminal misdemeanor.[xlvii] It was outlawed on July 17, 2014.[183] From that date to the end of 2015 there were 259 arrests for public consumption.[184] They increased 182 percent from 142 in 2015 to 402 in 2016 and disproportionately impacted Black men (see Chart 18 below). Of the 661 public consumption arrests, 547 were of Black people (82.8 percent), 580 were of males (87.7 percent), and 480 (72.6 percent) were of Black males.[185] In 2016, one in every 970 Black people were arrested for public consumption of marijuana, while only one in every 10,331 White people were.[186] That means **a Black person in D.C. is 11 times more likely than a White person to be arrested for public consumption of marijuana** (see Charts 19 and 20). This is despite the fact that Black residents only make up around 49 percent of D.C.'s population, and use marijuana at similar rates to White residents.[187]

Chart 18: Public Consumption of Marijuana Arrests in Washington, D.C. by Race (2014 – 2016)



Source: Metropolitan Police Department.

xlvii D.C. prohibits marijuana consumption in public space or in "any place to which the public is invited." Marijuana Possession Decriminalization Amendment Act of 2014, effective on July 17, 2014. D.C. Law 20-0126; D.C. Official Code § 48-1201, et seq. The bill originally imposed a civil fine for public consumption violations, but was amended to a criminal misdemeanor punishable by up to 60 days jail or up to a $500 fine. Government of the District of Columbia, "Initiative 71 and DC's Marijuana Laws," http://mayor.dc.gov/sites/default/files/dc/sites/mayormb/release_content/attachments/I-71-FAQ.pdf. Prior to this legislation, public consumption was not considered a separate offense, and was likely charged as possession. In November 2014 voters passed Ballot Initiative 71, the Legalization of Possession of Minimal Amounts of Marijuana for Personal Use Initiative of 2014, effective February 26, 2015. D.C. Law 20-153; 62 DCR 3599. I-71 legalized marijuana use, possession, and home cultivation for adults 21 years of age and older. I-71 did not place any restrictions on adult marijuana use, and did not limit consumption to the home. Rather than interpreting the new law as superseding the Decriminalization Act, the Council interpreted I-71 as amending the Controlled Substances Act. The Council made small alterations to language in I-71 when transmitting the measure to Congress to reflect this interpretation. This left in place the criminal penalties for public consumption established under the Decriminalization Act.

Case Study: Arrests in Washington, D.C., cont.

Marijuana enforcement in Washington, D.C. has historically been racially biased.[188] The advent of the new public consumption charges shows drug laws still disproportionately target communities of color in D.C. The trend in marijuana arrests in D.C. points to an increasing number of public consumption arrests, with the vast majority targeting Black men.

These arrests demonstrate the need for legal marijuana jurisdictions to allow for the social consumption of marijuana use at approved businesses. Otherwise, persons with no private place to use marijuana – such as tourists and individuals with government-subsidized or no permanent housing – and individuals who have long been the targets of racially biased policing, primarily Black people, will continue to be vulnerable to arrest for using a legal substance.

Chart 19: Public Consumption of Marijuana Arrest Rates per 100,000 in Washington, D.C. by Race (2016)

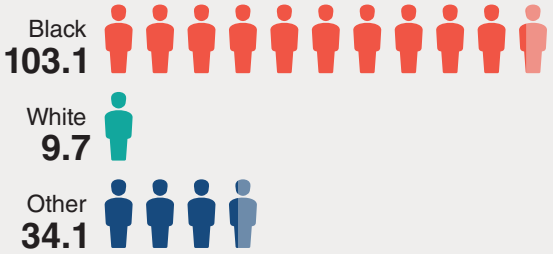
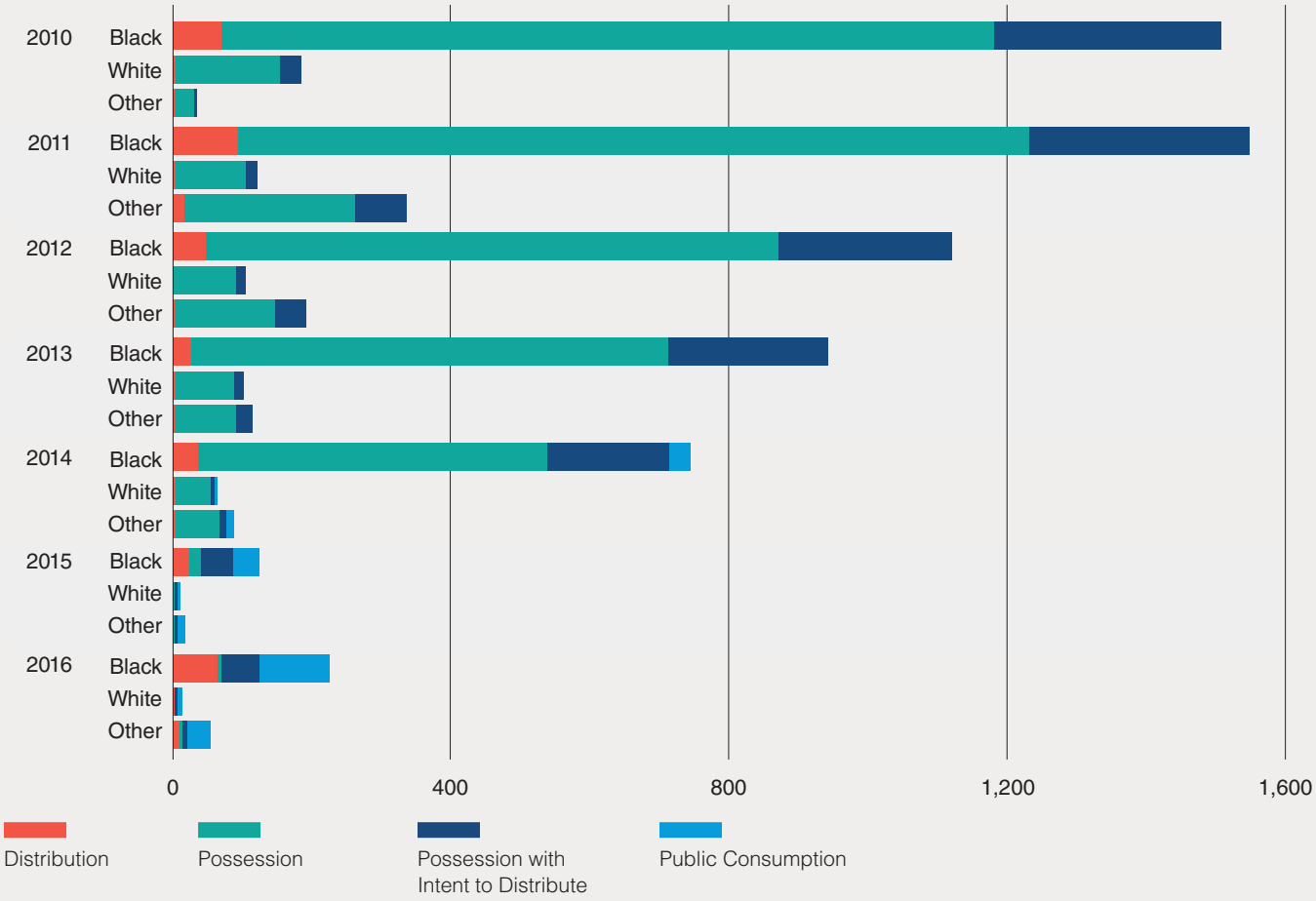


Chart 20: Marijuana Arrest Rates per 100,000 in Washington, D.C. by Charge and Race (2010 – 2016)



Source: Census Quick Facts; Metropolitan Police

Police Reform

Even after legalization, racial disparities in the enforcement of the remaining marijuana-related offenses have persisted. This can be mitigated by language in state laws limiting the extent to which law enforcement may use marijuana as the basis for detention, search or arrest.[xlviii] But, to fully remedy the unequal enforcement of marijuana laws, police practices must be reformed.

Racial profiling [xlix] needlessly entangles communities of color, youth and young adults, in the criminal justice system for nonviolent activities that are not enforced in other communities, such as public marijuana use. The targeted enforcement of minor marijuana-related activities (as well as other petty offenses) ensnarls hundreds of thousands of people in the criminal justice system while breeding mistrust of the police in these targeted communities, thereby reducing public safety. Police departments should, thus, adopt model policies that prohibit officers from engaging in racial profiling and educate them on the harms of discriminating based on race.[189]

In addition, police departments should promote accountability and transparency by collecting search, citation and arrest data including, but not limited to, the age, gender, race and ethnicity of the individual stopped; the date, time and location of the stop; the duration of and reason for the stop; whether and what type of citation was issued or arrest made; and the identification of the officers involved. These data should be compiled, made available to the public, and evaluated so that police policies can be developed to reduce racial disparities in enforcement practices.[190]

Marijuana Arrests of Youth and Young Adults

In several states, marijuana legalization for adult use has had the unintended consequence of reducing historically high numbers of youth (under 18 years of age) and young adults (between 18 and 20 years old) stopped and arrested for marijuana offenses. However, these reductions are inconsistent from state-to-state and, in some circumstances, youth now comprise a growing number of people charged with marijuana offenses.

Between 2012 and 2015, marijuana court filings in Colorado fell 86 percent for adults 21 years of age and older, and they declined by 69 percent for youth under 18 years of age and 78 percent for young adults 18-to-20 years old.[191] Arrests followed a similar trend in the state between 2012 and 2014 wherein the marijuana offense arrest rate for adults 21 and older decreased by 79 percent and young adults 18-to-20 years old experienced a 34 percent decrease in marijuana arrest rates.[192] At the same time, the number of youth under 18 years of age cited for marijuana offenses increased by five percent, which amounts to a one percent increase in the rate per 100,000.[193]

In Oregon, marijuana arrest rates declined by 92 percent between 2013 and 2015 for adults 18 years of age and older, compared to 80 percent for youth under 18 years of age (See Chart 21). In 2016, the marijuana arrest rate for Oregon youth (19.1 per 100,000) was nearly 7 times the adult rate (2.8 per 100,000).[194] Similarly, in Washington, marijuana possession convictions declined by 99.1 percent for adults 18 years of age and older and 56 percent for youth under 18 years of age between 2012 and 2015. In 2015, 98 percent of all marijuana possession convictions in Washington (1,691 of 1,723) were of youth (See Chart 22).

While the reduction in youth arrests following legalization is a positive step, more reform is needed. The impact of criminal convictions on the education, employment, and other life opportunities for young people can be severe, even for marijuana offenses. Decriminalizing marijuana-related activities for youth and young people remains an area that marijuana reform advocates could explore, as was done in California and is explained in detail below.

xlviii For example, see Cal. Health & Safety Code 11362.1(c).

xlix "'Racial profiling' refers to the act of selecting or targeting a person(s) for law enforcement contact (including stop, frisk, search, and arrest) based on the individual's real or perceived race, ethnicity, or national origin rather than upon reasonable suspicion that the individual has or is engaged in criminal activity. Racial profiling includes policies or practices that unjustifiably have a disparate impact on certain communities." "The War on Marijuana in Black and White," ACLU, June 2013, accessed September 28, 2016, at p. 116, https://www.aclu.org/files/assets/aclu-thewaronmarijuana-rel2.pdf.

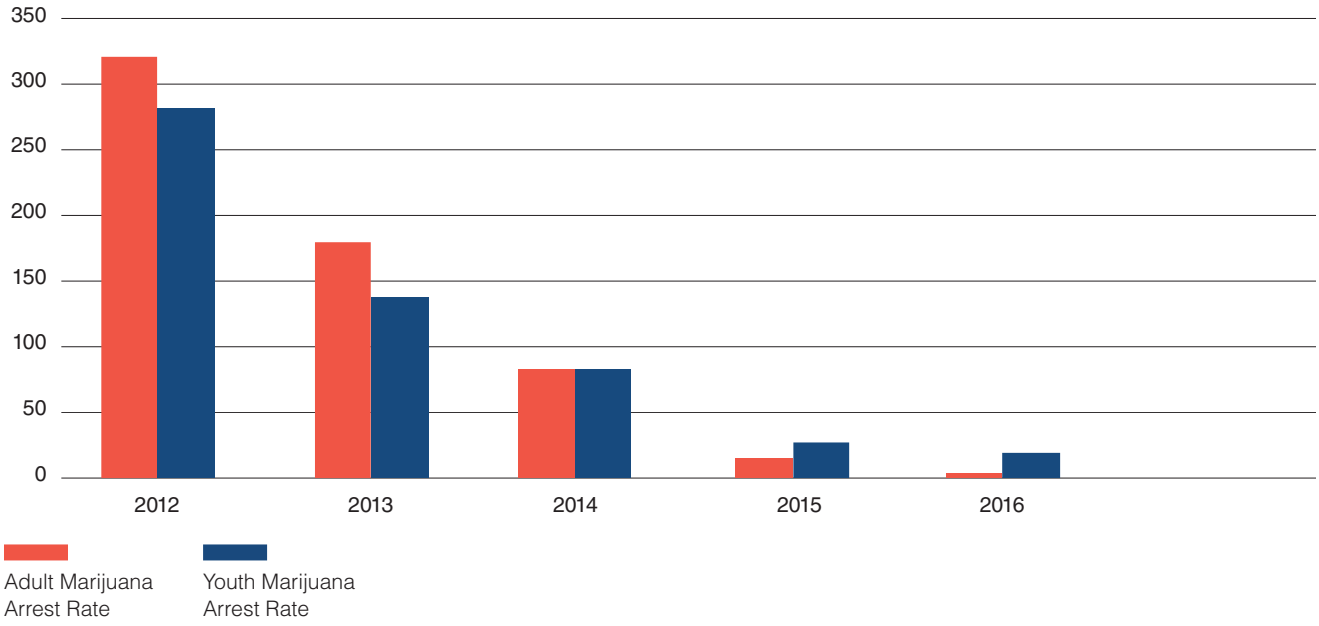
Marijuana Decriminalization and Penalty Reductions for Youth and Young Adults

Possession of marijuana for personal use became an infraction in California in 2011. But young people of color, particularly Black youth and young adults, continued to experience hugely disproportionate enforcement.[195] Now, under Prop. 64, California youth under the age of 18 may only be charged with infractions for marijuana offenses.[196] They are no longer threatened with incarceration or financial penalties; instead, youth are required to attend drug awareness education, counseling, or community service. All marijuana offenses will be automatically expunged from a youth's record when they turn 18.[197] Thousands of California teens will no longer be saddled with a drug arrest record. The law will protect young people from the long-term effects of felony charges and convictions that arise from the choices they make as youth and ongoing racial discrimination by police.

California's law also uniquely protects young adults from criminal justice involvement for marijuana-related activities. While young adults 18-to-20 years old in California do not enjoy all of the benefits of marijuana decriminalization or legalization, the penalties for most marijuana-related activities were either decriminalized or reduced for this group.[xlx,198] California's approach is too new to be evaluated, but it appears to be a good step toward reducing young adults' risk of criminal justice involvement for marijuana-related conduct.

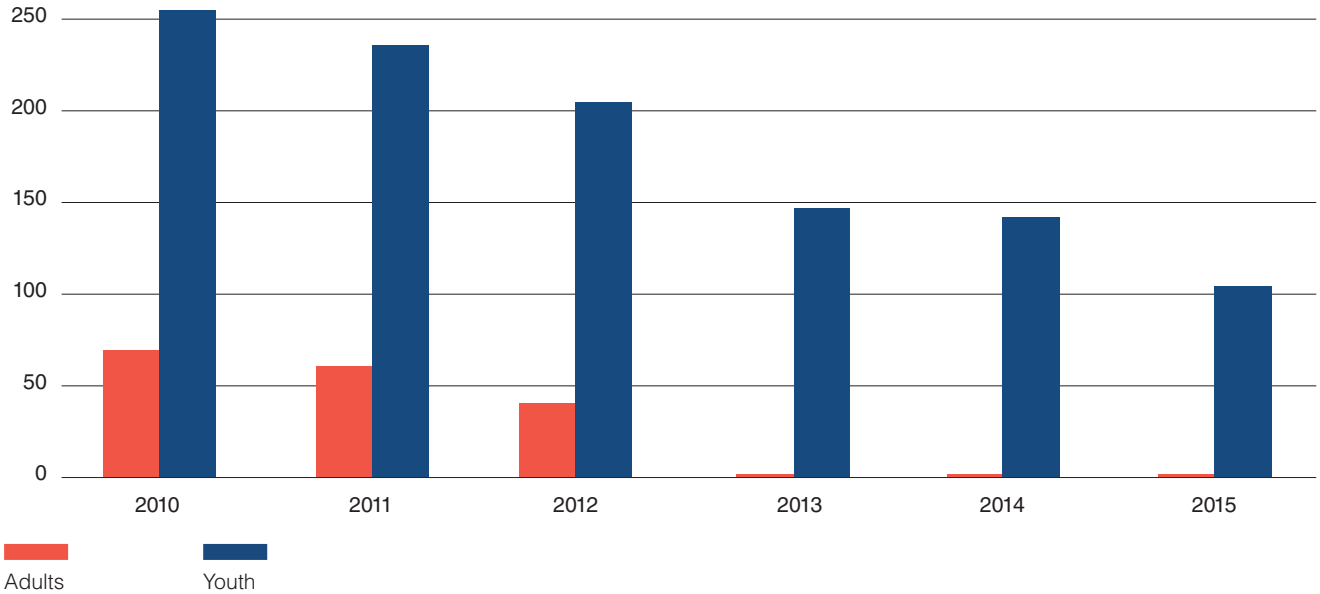
xlx In Colorado, the marijuana arrest rate for white 10- to 17-year-olds dropped by nearly 10 percent from 2012 to 2014, yet arrest rates for Latino youth rose more than 20 percent and arrest rates for black youth rose more than 50 percent during the same period. This highlights the need to decriminalize youth marijuana use and provide law enforcement with strong training and oversight. Harry Cockburn, Marijuana Arrests in Colorado Fall for White Teens but Soar Among Black Teens Since Legalization," The Independent (May 15, 2016), http://www.independent.co.uk/news/world/americas/marijuana-arrests-in-colorado-fall-for-white-teens-but-soar-among-black-teens-since-legalisation-a7030071.html.

Chart 21: Marijuana Arrest Rates in Oregon by Age (2012 – 2016)



Source: Oregon State Police, CJIS Division, Law Enforcement Data System.

Chart 22: Public Consumption of Marijuana Arrests in Washington, D.C. by Race (2014 – 2016)



Source: Washington State Institute for Public Policy

VIII. Conclusion

With marijuana legalization's success and overwhelming public support, the question is no longer whether to legalize marijuana, but how. There is a clear need to prioritize policies focused on repairing the unequal and racially discriminatory harms of marijuana criminalization and enforcement.

This necessarily involves increasing equity and inclusion in the regulated marijuana industry by reducing barriers to full participation, clearing individuals' records of past marijuana convictions, and permitting people with past drug convictions to obtain licenses and employment.

States, including those that have already legalized, must address the persistently unequal enforcement of marijuana offenses. This requires laws that limit the extent to which law enforcement may use marijuana as the basis for detention, search or arrest. Police practices must be reformed, such as ending the practice of racial profiling. Demographic data must also be collected for all remaining marijuana arrests and made publicly available so they can be evaluated for racial disparities.

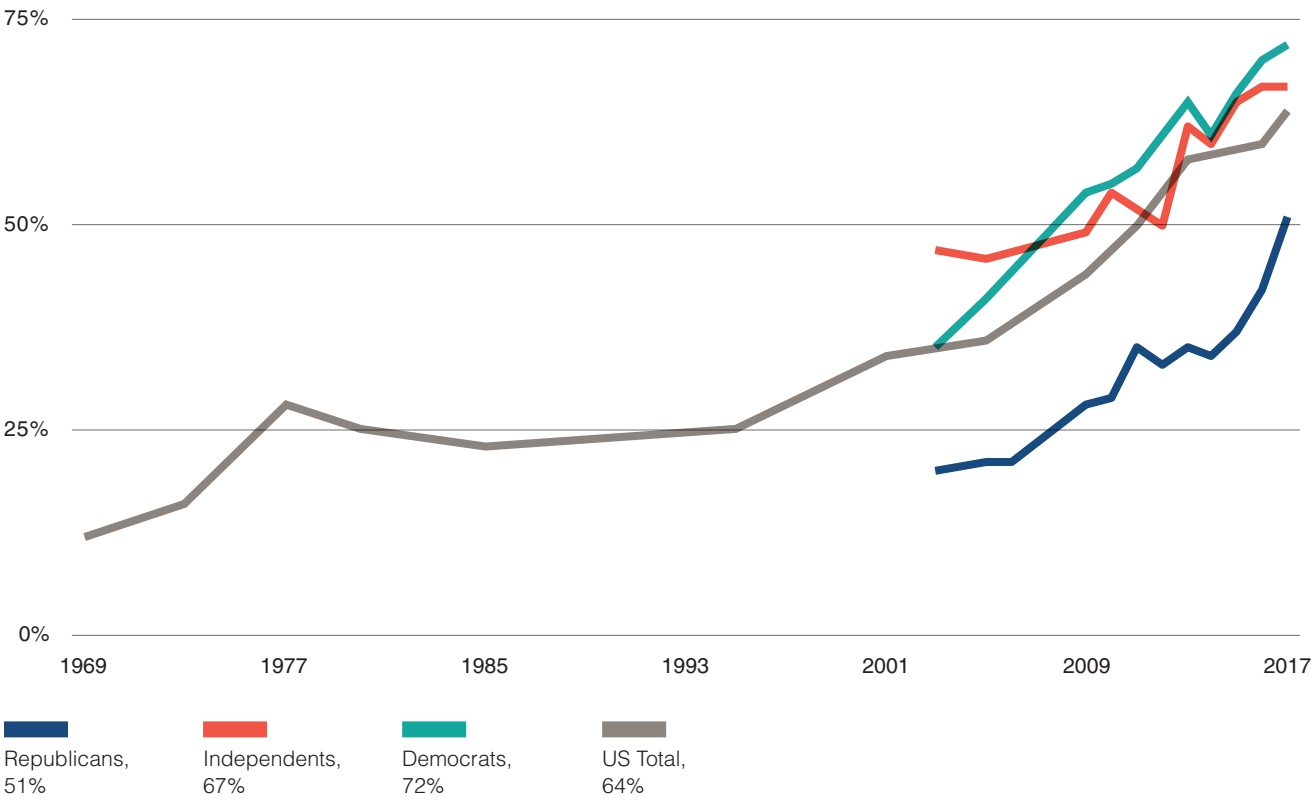
Post-legalization, public consumption of marijuana violations are an increasing concern. Low-income, Black and Latinx individuals are arrested or cited for public consumption of marijuana at disparately high rates. To address these disparities, fines for public consumption violations must not be excessive and onsite consumption stores must be permitted. Such stores will alleviate these disparities by providing adults 21 and older with a place to lawfully consume marijuana, thereby reducing the number of people who consume in public because no private spaces are available to them.

Marijuana should be decriminalized for youth (under age 18) and young adults (18 to 20 years of age) so that a minor marijuana law violation no longer results in a young person getting caught up in the criminal justice system. In several states, marijuana legalization has had the unintended consequence of reducing historically high numbers of youth and young adults stopped and arrested for marijuana offenses. However, these reductions are inconsistent from state-to-state. In some circumstances, youth now comprise a growing number of people charged with marijuana offenses. These reforms should extend to schools so that marijuana use no longer leads to school suspensions and expulsions, which increases the likelihood of future criminal justice involvement and unemployment. Instead, youth inside and out of school should be provided with resources and services that reduce their likelihood of problematic drug use and improve their educational and vocational prospects.

Finally, the tax revenues collected from marijuana sales must be reinvested in the communities most harmed by marijuana criminalization. These monies are essential to help rebuild communities most devastated by mass incarceration and the decades-long drug war by investing in programs that offer people a new start.

Appendix

Appendix A: Support for Marijuana Legalization



Source: Gallup

Appendix B: Marijuana Legalization and the Start of Adult Use Retail Sales by State

Ballot Measure	Date Ballot Measure Passed	Date Possession Legalized	Date Retail Sales Began	Number of Non-Medical Retail Stores in Operation as of 11/7/2016
Alaska (Ballot Measure 2)	11/4/2014	2/24/2015	10/1/2016	147
California (Proposition 64)	11/8/2016	11/9/2016	State-level retail licenses are expected to start being issued on 1/1/2018; issuance of local licenses will vary by locality.	None
Colorado (Amendment 64)	11/6/2012	12/10/2012	1/1/2014	504
Maine (Question 1)	11/8/2016	1/30/2017	Retail licenses are expected to be issued on 2/1/2018	None
Massachusetts (Question 4)	11/8/2016	12/15/2016	Retail sales are expected to commence on 7/18/2018	None
Nevada (Question 2)	11/8/2016	1/1/2017	Sales through existing medical marijuana outlets started on 7/1/2017	37
Oregon (Measure 91)	11/4/2014	7/1/2015	Early retail sales of marijuana to adults 21 and over began at medical marijuana dispensaries on 10/1/2015 and licenses for adult use retailers began issuing on 10/2/2016.	507
Washington (Initiative 502)	11/6/2012	12/6/2012	7/8/2014	516
Washington, D. C. (Initiative 71)	11/4/2014	2/26/2015	Retail sales remain unlawful	None

l "MJ Licenses by Status," State of Alaska, Department of Commerce, Community, and Economic Development, Alcohol and Marijuana Control Office, accessed November 7th, 2016, https://www.commerce.alaska.gov/web/portals/9/pub/MCB/

li "MED Licensed Retail Stores as of November 1, 2017," Colorado Department of Revenue, Enforcement Division, accessed November 7th, 2016, https://www.colorado.gov/pacific/sites/default/files/Stores%2011012017.pdf.

lii "FULL LIST: Marijuana dispensaries licensed for recreational sales in Nevada," News 3 Las Vegas, accessed November 7th, 2016, http://news3lv.com/news/marijuana-in-nevada/full-list-marijuana-dispensaries-in-las-vegas.

liii "Oregon Marijuana Tax Statistical Report, January – March 2016," Oregon Department of Revenue, December 2016, http://www.oregon.gov/DOR/programs/gov-research/Documents/marijuana_tax_report-2016-Q1.pdf

liv "Active Marijuana Retail Licenses Approved as of 10/6/2017," Oregon Liquor Control Commission, accessed November 7th, 2016, http://www.oregon.gov/olcc/marijuana/Documents/Approved_Retail_Licenses.pdf.

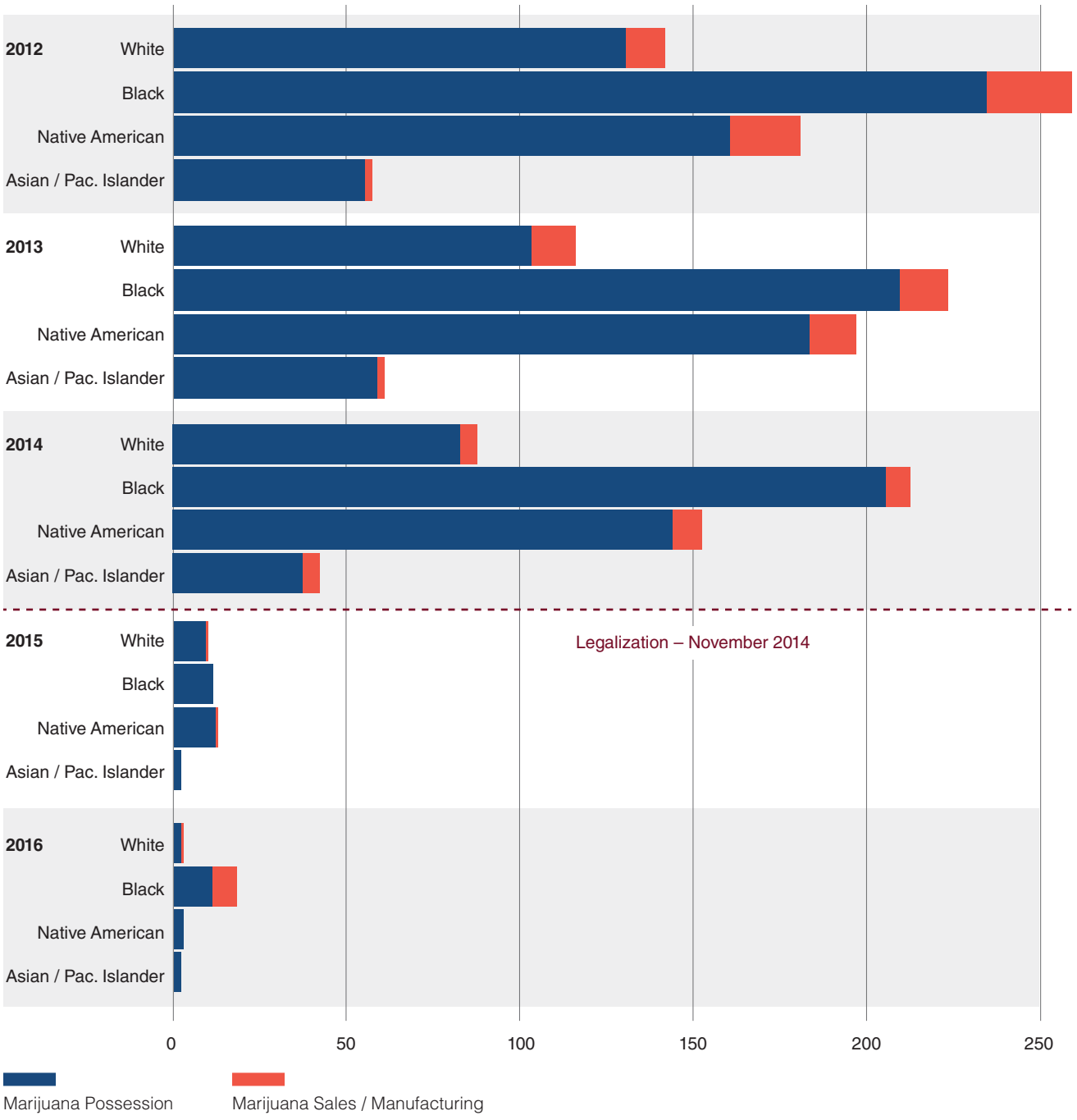
lv "Marijuana Dashboard," Washington State Liquor and Cannabis Board, accessed November 7th, 2016, https://data.lcb.wa.gov/stories/s/WSLCB-Marijuana-Dashboard/hbnp-ia6v/.

Appendix C-1: Marijuana Arrest Rates in Alaska per 100,000 people (2012 – 2016)

		2012	2013	2014	2015	2016
Marijuana Possession		**117.1**	**103.2**	**83.2**	**7.7**	**1.9**
Gender	Male	176.5	154.9	123.2	11.3	1.8
	Female	52.0	46.6	39.3	3.7	2.0
Race	White	130.2	102.9	82.6	8.8	1.5
	Black	234.1	209.3	205.7	10.6	10.6
	Other	77.0	87.2	66.9	5.1	1.5
Age	18+	113.5	105.1	84.9	7.9	0.5
	<18	127.8	97.9	78.1	7.0	5.9
Marijuana Sales/Manufacturing		**11.1**	**10.6**	**4.9**	**0.4**	**0.4**
Gender	Male	16.8	15.5	6.4	0.3	0.8
	Female	4.8	5.4	3.1	0.6	0.0
Race	White	11.2	13.0	4.8	0.4	0.2
	Black	24.8	14.2	7.1	0.0	7.1
	Other	8.7	5.8	4.4	0.4	0.0
Age	18+	11.2	11.5	5.4	0.5	0.4
	<18	10.7	8.0	3.2	0.0	0.5
Total		**128.2**	**113.9**	**88.0**	**8.1**	**2.3**
Gender	Male	193.3	170.4	129.6	11.6	2.6
	Female	56.8	52.0	42.4	4.2	2.0
Race	White	141.4	115.8	87.4	9.3	1.8
	Black	258.9	223.5	212.8	10.6	17.7
	Other	85.7	93.0	71.2	5.4	1.5
Age	18+	124.7	116.6	90.3	8.5	0.9
	<18	138.5	105.9	81.3	7.0	6.4

Sources (C-1 and C-2):
"Crime in Alaska 2012," Uniform Crime Reporting Program, Department of Public Safety, http://www.dps.alaska.gov/getmedia/0d5aab2d-719c-498a-a41d-e94f0260d6b8/UCR_2012;.aspx, at 67, 70.
"Crime in Alaska 2013," Uniform Crime Reporting Program, Department of Public Safety, http://www.dps.alaska.gov/getmedia/b19234d2-7875-4282-8ec1-9284ef9a22ef/UCR_2013;.aspx, at 66, 69.
"Crime in Alaska 2014," Uniform Crime Reporting Program, Department of Public Safety, http://dps.alaska.gov/getmedia/4aa0361e-9348-4a0d-9cf1-9ee0953274ad/UCR_2014;.aspx, at 63-66.
"Crime in Alaska 2015," Uniform Crime Reporting Program, Department of Public Safety, http://dps.alaska.gov/getmedia/fd4b27c3-7660-4527-9d88-fcbaf6438cf0/2015-CIAK-Revised-02-08-2017;.aspx, at 65-68.
"Crime in Alaska 2016," Uniform Crime Reporting Program, Department of Public Safety, http://dps.alaska.gov/getmedia/d31723ba-5195-432b-854f-9991025f25b4/CIAK2016-for-publication-REV-09-06-17;.aspx, at 66, 69.

Appendix C-2: Marijuana Arrest in Alaska per 100,000 by Race (2012 – 2016)

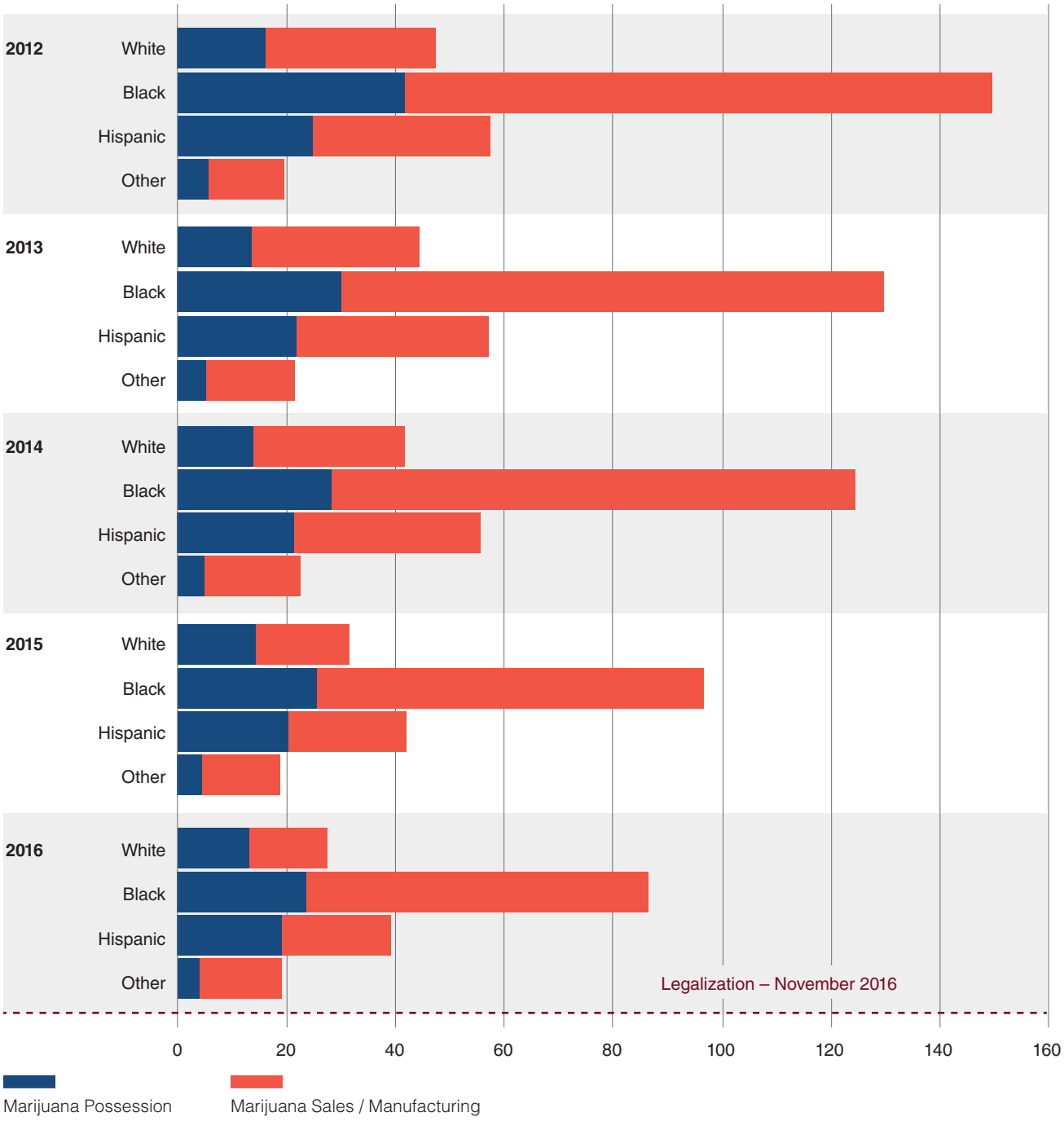


Appendix D-1: Marijuana Arrest Rates per 100,000 in California (2012 – 2016)

		2012	2013	2014	2015	2016
Marijuana Misdemeanor		**19.8**	**16.7**	**16.3**	**16.0**	**14.9**
Gender	Male	33.1	27.3	26.4	26.2	24.1
	Female	6.6	6.3	6.4	5.9	5.9
Race	White	16.2	13.8	13.8	14.2	13.3
	Black	41.9	30.1	28.1	25.7	23.9
	Hispanic	25.0	21.8	21.3	20.5	19.2
	Other	5.8	5.4	4.8	4.6	4.3
Age	18+	8.2	6.6	7.4	9.6	8.8
	<18	58.1	50.2	45.8	37.1	35.3
Marijuana Felony		**34.2**	**35.1**	**33.9**	**22.6**	**20.3**
Gender	Male	61.9	62.9	60.8	40.7	35.8
	Female	6.9	7.7	7.3	4.7	4.9
Race	White	31.2	30.5	27.9	17.3	14.0
	Black	107.6	99.5	96.4	71.0	62.4
	Hispanic	32.4	35.5	34.4	21.8	20.1
	Other	13.7	16.0	17.9	14.3	14.9
Age	18+	39.0	40.5	39.5	26.5	24.1
	<18	18.4	17.1	15.2	9.7	7.6
Total		**54.0**	**51.8**	**50.2**	**38.6**	**35.2**
Gender	Male	95.1	90.2	87.2	66.9	59.9
	Female	13.5	13.9	13.7	10.6	10.8
Race	White	47.4	44.3	41.7	31.6	27.4
	Black	149.5	129.6	124.5	96.7	86.3
	Hispanic	57.5	57.3	55.7	42.3	39.3
	Other	19.5	21.3	22.8	18.8	19.2
Age	18+	47.2	47.2	47.0	36.1	32.8
	<18	76.4	67.3	61.0	46.7	42.9

Source: "Crime Data," State of California, Department of Justice, https://oag.ca.gov/crime.

Appendix D-2: Marijuana Arrest in California per 100,000 by Race (2012 – 2016)



Source: "Crime Data," State of California, Department of Justice, https://oag.ca.gov/crime.

Appendix E: Marijuana Arrest Rates per 100,000 in Colorado (2012 – 2014)

		2012	2013	2014	% change 2012–2014
Total		**249**	**123**	**131**	**-47%**
Arrest Type	Possession	219	103	112	-49%
	Unspecified	20	14	11	-44%
	Sales	6	4	4	-26%
	Production	3	2	3	-5%
	Smuggling	<1	<1	0	--
Age Group	10 to 17 years old	591	561	598	1%
	18 to 20 years old	1490	997	978	-34%
	21 years or older	170	29	35	-79%
Race/Ethnicity	White	260	123	123	-52%
	Hispanic	219	124	140	-36%
	African-American	468	275	348	-26%
	Other	71	35	44	-37%
Gender	Male	403	200	206	-49%
	Female	93	47	56	-40%

Note: Denver under-reported marijuana arrests in 2012 and 2013, due to an issue with different arrest and citations systems. Denver over-reported arrests in 2014 due to including a non-criminal civil citation.
Source: Colorado Bureau of Investigation, National Incident-Based Reporting System data.

Marijuana Offense Rates per 100,000 in Colorado (2012 – 2014)

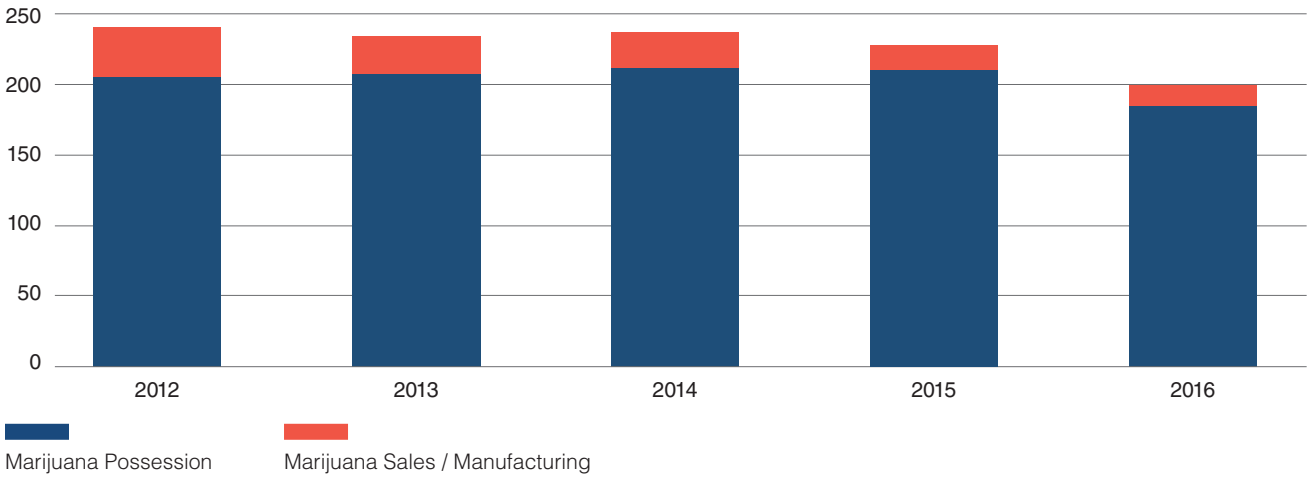
		2012	2013	2014	% change 2012–2014
Total		**373**	**186**	**202**	**-46%**
Offense type	Possession	352	172	187	-47%
	Producing	8	3	6	-26%
	Sales	12	9	9	-25%
	Smuggling	0	1	0	15%
Age Group	10 to 17 years old	394	362	409	4%
	18 to 20 years old	2331	1473	1466	0
	21 years or older	243	47	57	1
Gender	Male	591	295	315	-47%
	Female	152	74	87	-0.42

Note: Race/ethnicity of suspect is not captured accurately for offenses and is not reported in this table.
Source: Colorado Bureau of Investigation, National Incident-Based Reporting System data.

Appendix F-1: Marijuana Arrest Rates per 100,000 in Maine (2012 – 2016)

		2012	2013	2014	2015	2016
Marijuana Possession		**205.3**	**208.0**	**211.8**	**209.9**	**184.5**
Age	18+	217.6	221.3	227.8	228.2	200.8
	<18	153.4	151.4	143.9	132.5	115.6
Marijuana Sales/Manufacturing		**35.1**	**26.3**	**26.0**	**17.9**	**14.7**
Age	18+	38.6	27.9	28.3	19.1	16.0
	<18	20.1	19.7	16.1	12.6	9.4
Total		**240.4**	**234.3**	**237.8**	**227.8**	**199.3**
Age	18+	256.2	249.2	256.1	247.3	216.8
	<18	173.4	171.0	160.0	145.1	125.0

Appendix F-2: Marijuana Arrest Rates in Maine (2012 – 2016)



Source (F-1 and F-2):
"Crime in Maine 2012," State of Maine, Department of Public Safety, http://www.maine.gov/dps/cim/crime_in_maine/2012pdf/Crime%202012.pdf, at 91.
"Crime in Maine 2013," State of Maine, Department of Public Safety, http://www.maine.gov/dps/cim/crime_in_maine/2013pdf/Crime%202013.pdf, at 90.
"Crime in Maine 2014," State of Maine, Department of Public Safety, http://www.maine.gov/dps/cim/crime_in_maine/2014pdf/Crime%202014.pdf, at 91.
"Crime in Maine 2015," State of Maine, Department of Public Safety, http://www.maine.gov/dps/cim/crime_in_maine/2015pdf/089%20Drug.pdf, at 91.
"Crime in Maine 2016," State of Maine, Department of Public Safety, http://www.maine.gov/dps/cim/crime_in_maine/2016pdf/Crime%202016.pdf, at 93.

Appendix G: Marijuana Arrest Rates in Nevada (2012 – 2016)

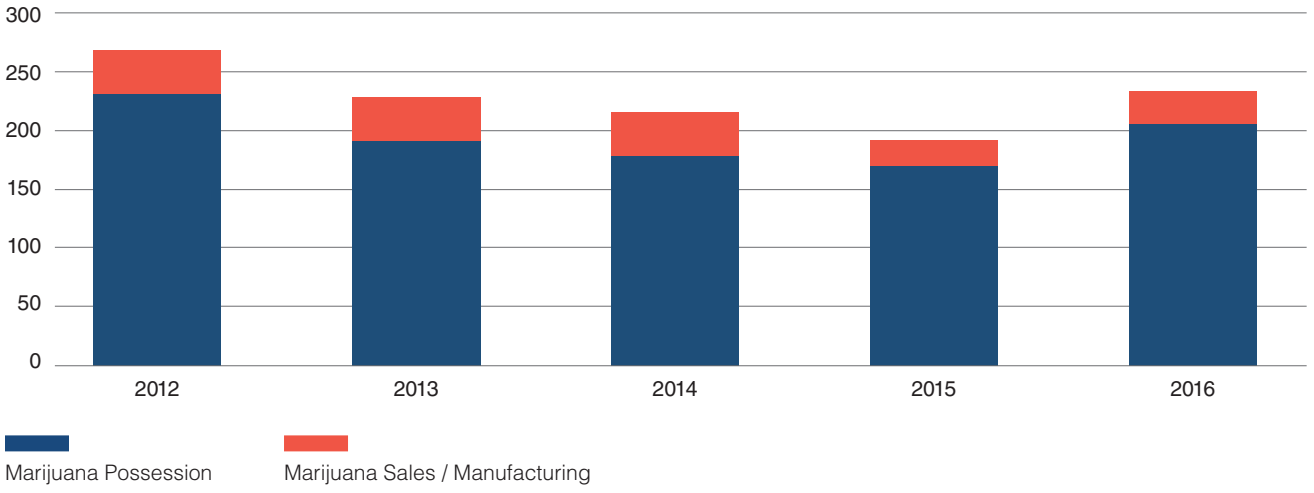
		2012	2013	2014	2015	2016
Marijuana Possession		**230.9**	**190.9**	**178.0**	**170.5**	**206.1**
Gender	Male	N.A.	N.A.	288.1	282.4	N.A.
	Female	N.A.	N.A.	67.5	58.3	N.A.
Race	White	N.A.	N.A.	219.8	208.8	243.3
	Black	N.A.	N.A.	660.8	645.2	816.3
	Native American	N.A.	N.A.	76.5	74.4	80.8
	Asian	N.A.	N.A.	40.3	30.9	50.0
	Pacific Islander	N.A.	N.A.	21.3	68.0	76.5
Ethnicity	Hispanic/Latino	N.A.	N.A.	67.1	116.8	108.7
	Not Hispanic/Latino	N.A.	N.A.	114.3	176.6	198.3
Age	18+	249.2	216.7	202.2	193.6	239.9
	<18	169.6	104.5	97.2	93.3	92.7
Marijuana Sales/Manufacturing		**37.2**	**37.4**	**37.0**	**21.0**	**27.7**
Gender	Male	N.A.	N.A.	288.1	282.4	N.A.
	Female	N.A.	N.A.	67.5	58.3	N.A.
Race	White	N.A.	N.A.	219.8	208.8	243.3
	Black	N.A.	N.A.	660.8	645.2	816.3
	Native American	N.A.	N.A.	76.5	74.4	80.8
	Asian	N.A.	N.A.	40.3	30.9	50.0
	Pacific Islander	N.A.	N.A.	21.3	68.0	76.5
Ethnicity	Hispanic/Latino	N.A.	N.A.	67.1	116.8	108.7
	Not Hispanic/Latino	N.A.	N.A.	114.3	176.6	198.3
Age	18+	249.2	216.7	202.2	193.6	239.9
	<18	169.6	104.5	97.2	93.3	92.7

Continued next page

Appendix G-1: Marijuana Arrest Rates in Nevada (2012 – 2016), cont.

		2012	2013	2014	2015	2016
Total		**268.1**	**228.3**	**215.0**	**191.6**	**233.7**
Gender	Male	N.A.	N.A.	353.6	318.7	N.A.
	Female	N.A.	N.A.	75.9	63.9	N.A.
Race	White	N.A.	N.A.	257.9	233.5	272.7
	Black	N.A.	N.A.	837.9	729.2	944.2
	Native American	N.A.	N.A.	93.5	82.9	91.4
	Asian	N.A.	N.A.	48.1	36.4	56.3
	Pacific Islander	N.A.	N.A.	21.3	68.0	80.8
Ethnicity	Hispanic/Latino	N.A.	N.A.	75.5	126.6	121.5
	Not Hispanic/Latino	N.A.	N.A.	139.1	201.6	230.5
Age	18+	289.0	256.8	245.0	217.7	272.0
	<18	197.9	132.8	114.8	104.0	105.6

Appendix G-2: Marijuana Arrest in Nevada (2012 – 2016)



Notes: * The number of marijuana sales/manufacturing and possession arrests in 2012 and 2013 are estimated based on the total number of sales/manufacturing and possession arrests each year, by age group, and the share of each arrest by age group in 2014-16.

Sources (G-1 and G-2):
"Crime in Nevada 2012," Nevada Department of Public Safety, http://rccd.nv.gov/uploadedFiles/gsdnvgov/content/About/UCR/CrimeInNV_UCR2012.pdf, at 152;
"Crime in Nevada 2013," Nevada Department of Public Safety, http://rccd.nv.gov/uploadedFiles/gsdnvgov/content/About/UCR/CrimeInNV_UCR2013.pdf, at 194; "2014 Crime in Nevada," Nevada Department of Public Safety, https://www.leg.state.nv.us/Division/Research/Library/Documents/ReportsToLeg/2015-2017/119-16.pdf, at 135-6;
"2015 Crime in Nevada," Nevada Department of Public Safety, http://rccd.nv.gov/uploadedFiles/gsdnvgov/content/About/UCR/2015%20Crime%20In%20Nevada.pdf, at 147-8.
"2016 Crime in Nevada," Nevada Department of Public Safety, http://rccd.nv.gov/uploadedFiles/gsdnvgov/content/About/UCR/2016%20Crime%20In%20Nevada%20Book%20(Online)with_pages.pdf, at 324, 428.

Appendix H: Marijuana Arrest Rates per 100,000 in Oregon (2012 – 2016)

		2012	2013	2014	2015	2016
Total		**312.9**	**170.9**	**82.5**	**17.1**	**6.2**
Gender	Male	503.8	282.3	132.9	27.4	9.6
	Female	125.7	61.7	33.0	7.0	3.0
Age	18+	321.4	179.8	82.4	14.4	2.8
	<18	281.3	137.9	82.9	27.2	19.1

Sources:
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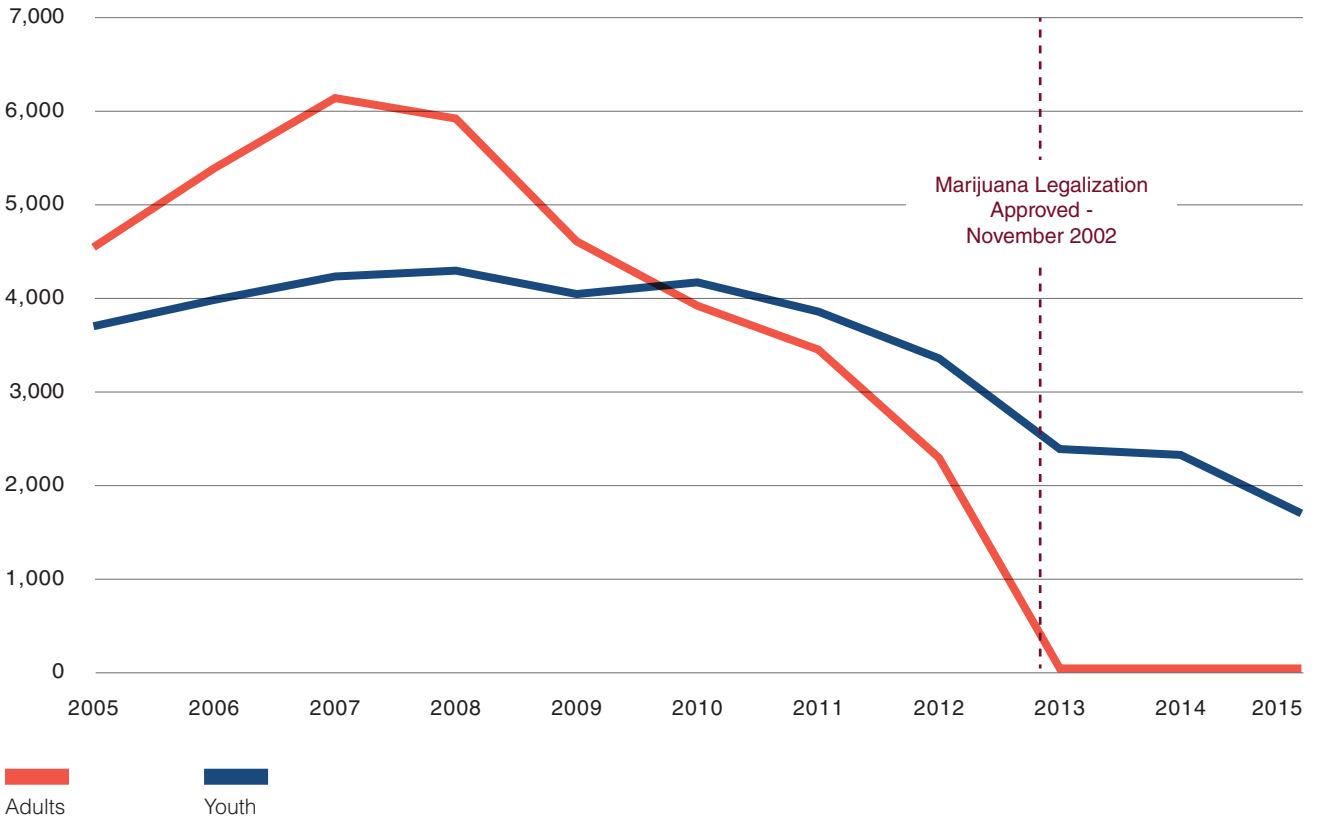
Appendix I: Marijuana Possession Convictions in Washington by Age Group (2005-2015)



Source: Washington State Institute for Public Policy

Appendix J: Marijuana Arrest Rates per 100,000 in Washington, D.C. by Charge and Race (2010 – 2016)

Year	Race	Distribution	Possession	Possession with Intent to Distribute	Public Consumption
2010	Black	72.0	1,109.8	324.1	N.A.
	White	4.4	151.6	30.2	N.A.
	Other	2.4	27.0	3.2	N.A.
2011	Black	94.2	1,136.0	319.2	N.A.
	White	3.2	102.4	15.3	N.A.
	Other	15.1	246.8	75.4	N.A.
2012	Black	47.7	823.6	248.1	N.A.
	White	0	91.6	12.9	N.A.
	Other	4.0	144.4	42.1	N.A.
2013	Black	27.4	685.4	228.4	N.A.
	White	3.2	83.9	13.7	N.A.
	Other	1.6	90.5	20.6	N.A.
2014	Black	35.1	502.6	175.4	28.9
	White	2.4	51.2	6.0	4.4
	Other	3.2	63.5	11.1	9.5
2015	Black	24.0	16.6	48.0	36.3
	White	1.2	2.0	2.4	4.8
	Other	0	1.6	6.3	9.5
2016	Black	64.0	8.0	51.4	103.1
	White	2.0	2.0	0.8	9.7
	Other	8.7	3.2	7.9	34.1

Source: Census Quick Facts; Metropolitan Police Department.

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