

WWW.LEARNABOUTSAM.ORG

# Marijuana Issues: What You Need to Know

Kevin A. Sabet, PhD,  
President & CEO

Luke Niforatos  
EVP

**SAM** Smart  
Approaches to  
Marijuana  
preventing another big tobacco



**SAM promotes  
an evidence-  
based  
approach to  
marijuana  
policy that  
prioritizes  
public health**



## **NON-PARTISAN BUT HIGH-PROFILE**

founded by former Democratic Congressman Patrick Kennedy and leading Republican pundit David Frum

## **SCIENTIFIC ADVISORY BOARD**

composed of more than 12 leading researchers, professors, and public health/legal experts

## **HUNDREDS OF THOUSANDS OF PRESS MENTIONS**

including major media outlets such as *The New York Times*, NBC News, Slate, BBC News, and FoxNews

# What is SAM?

A 501(c)(3) non-profit, educational organization funded by volunteers and private organizations

## Our Mission:

EDUCATE CITIZENS on the science of marijuana

Promote HEALTH-FIRST, SMART POLICIES and attitudes that decrease marijuana use and its consequences



# Collaboration

SAM has collaborated  
with credentialed and  
reputable groups  
across the country



American Medical  
Association



American Academy  
of Pediatrics



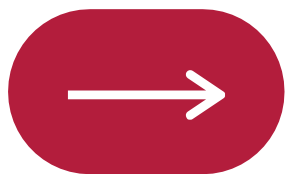
National Business  
Group on Health



American Academy of  
Child and Adolescent  
Psychiatry

Other leading public health authorities





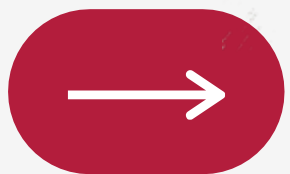
# Ultra Potent Marijuana



# Not this...

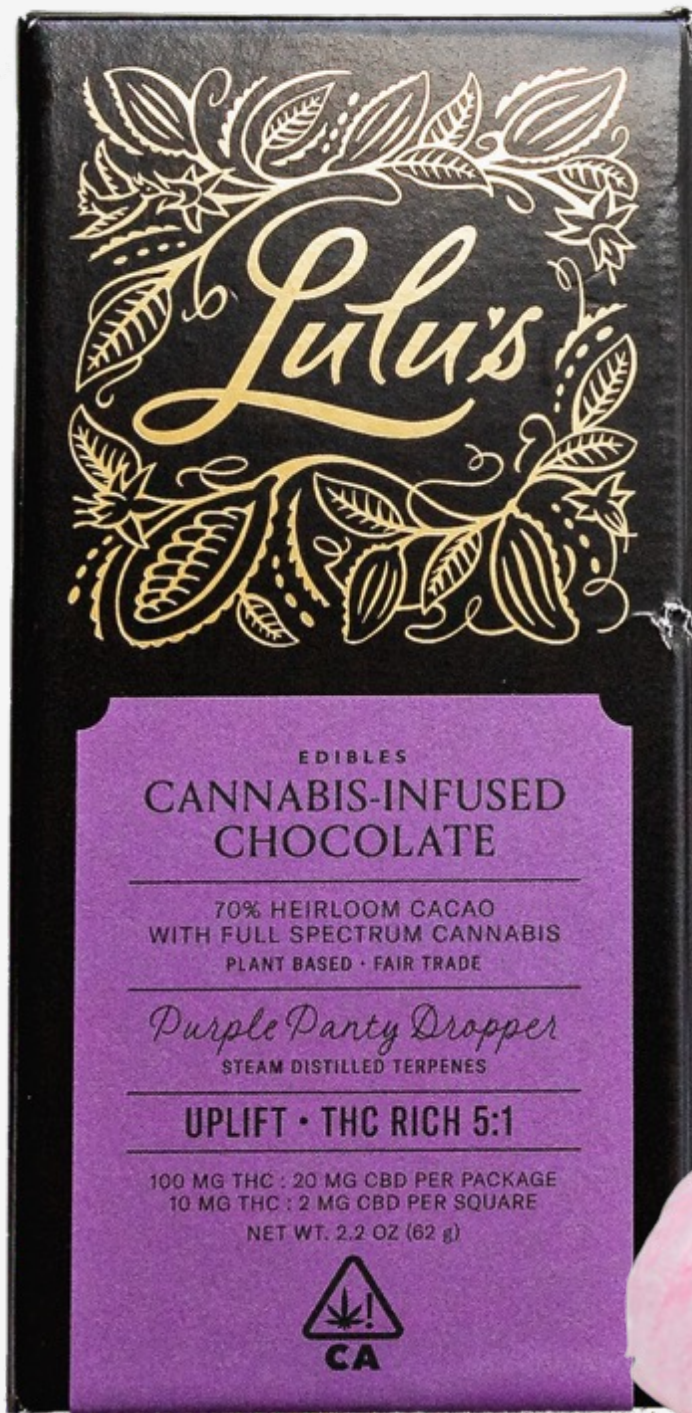


...but this





Source: DEA St. Louis Division Twitter Account, <https://bit.ly/3lgmRsi>



Source: [iheartjane.com/products/15540/kandy-care-cotton-candy-55mg](https://iheartjane.com/products/15540/kandy-care-cotton-candy-55mg)

**SAM** Smart Approaches to Marijuana preventing another big tobacco

## Marijuana Plant Potency

From an average of 3% to an average of nearly 20% THC

8.9%  
2008

18-23%  
2021

95-99%  
2021

## Concentrate Potency

4.7%  
2008

55.7%  
2017

Marijuana Has Become Significantly More Potent Since the 1960s, 70s, 80s, and 90s



"Green Crack" Wax



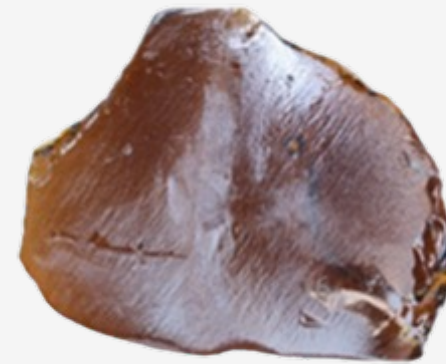
"Ear Wax"



Butane Hash Oil (BHO)



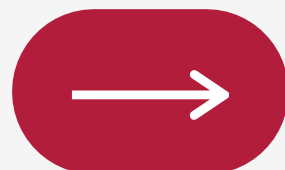
Hash Oil Capsules



"Shatter"



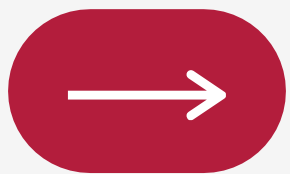
"Budder"



Marijuana is not "just a plant" anymore

Derivatives contain up to 99% THC

**A new kind of  
consumer:  
Drinking 33  
cappuccinos  
to get 65x  
caffeine in one  
20 oz Cola**



Caulkins, 2019



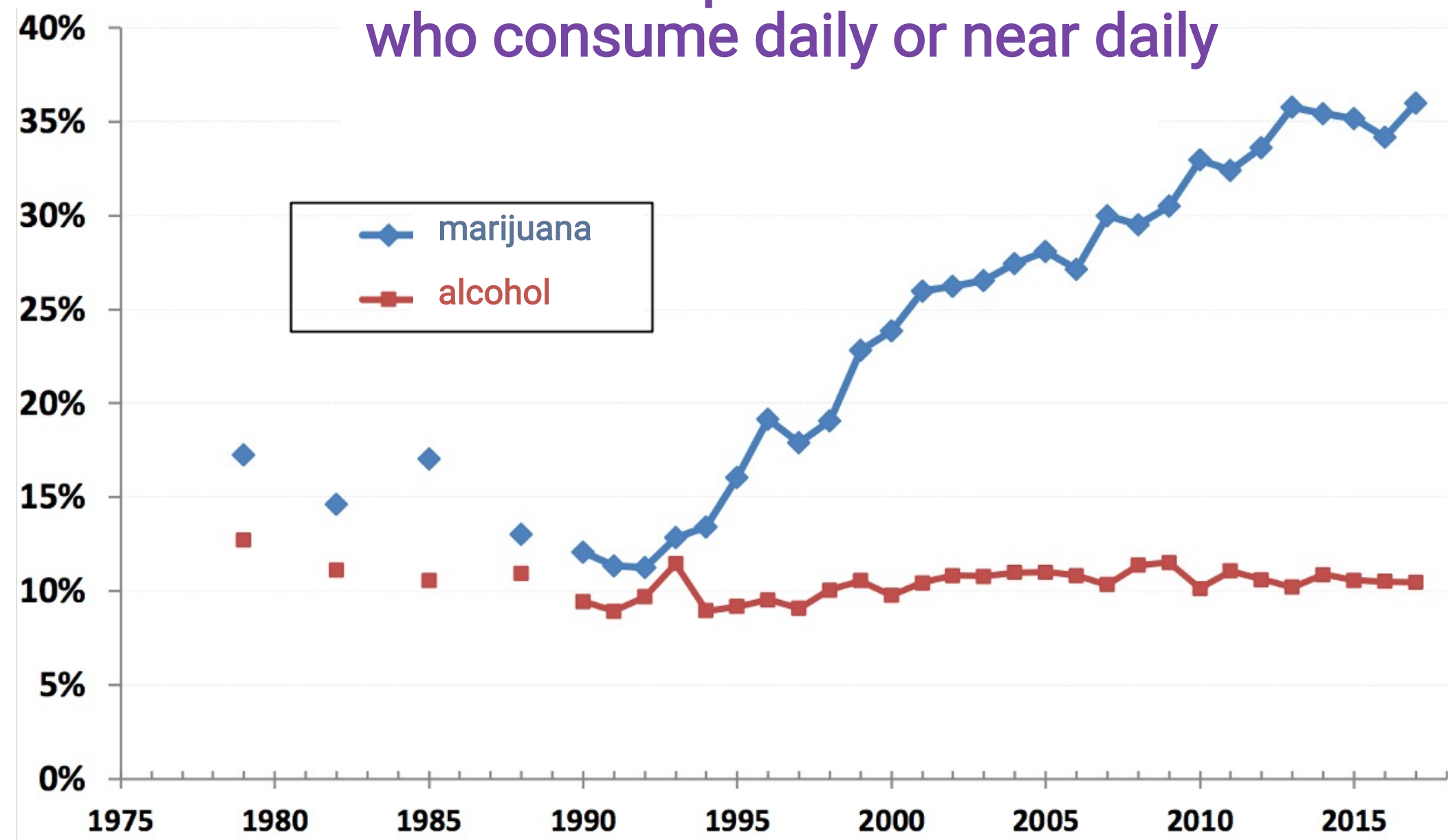
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# Why this matters

Daily and Near-Daily (DND) Use is much more common



Percent of past-month users who consume daily or near daily



Source: Caulkins based on NSDUH

900,000 versus 15 million



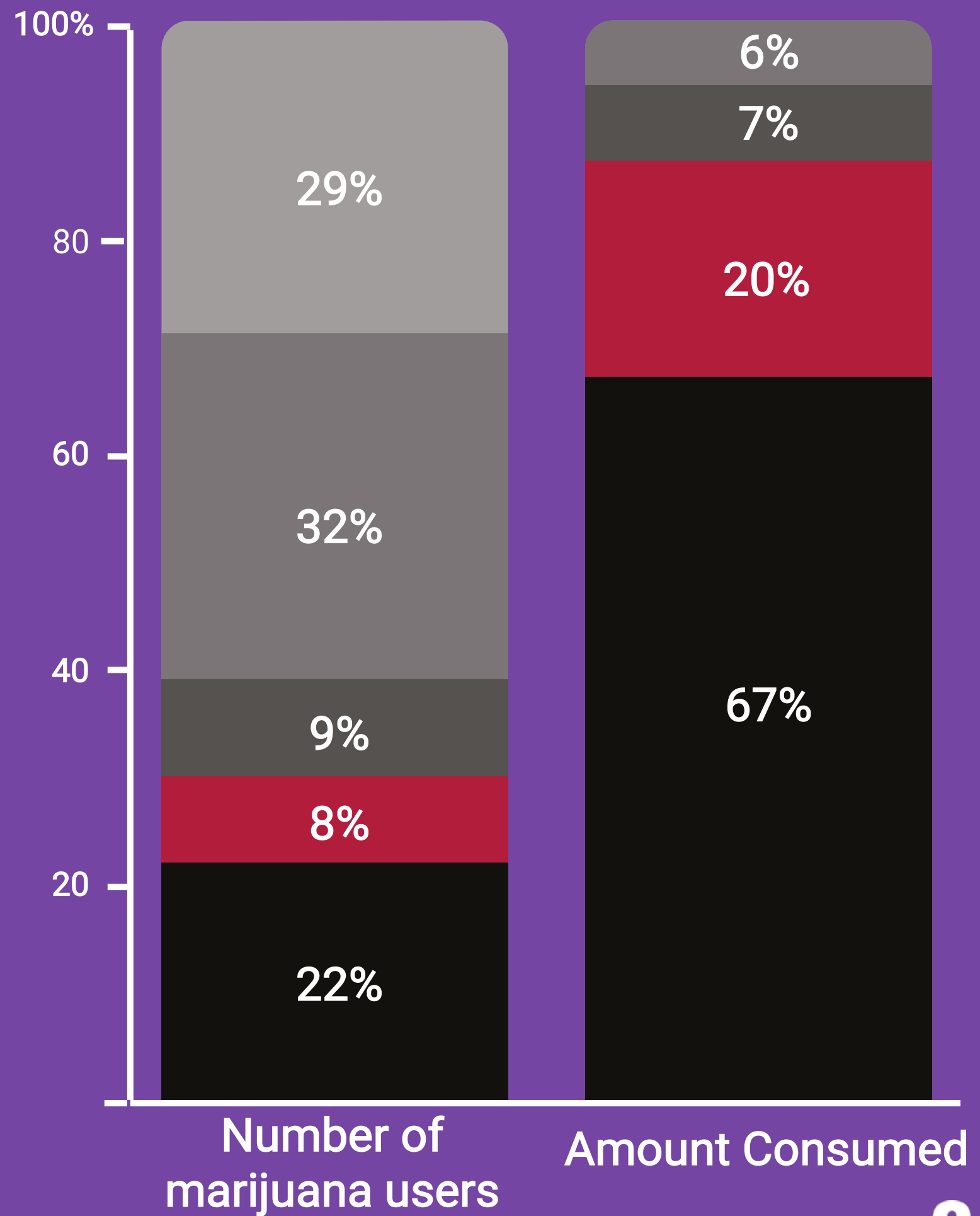
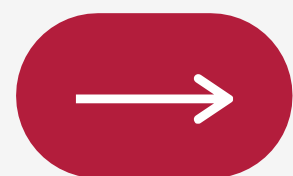
**15**  
Times as many daily users now vs 1992 (12 years old +)

NSDUH

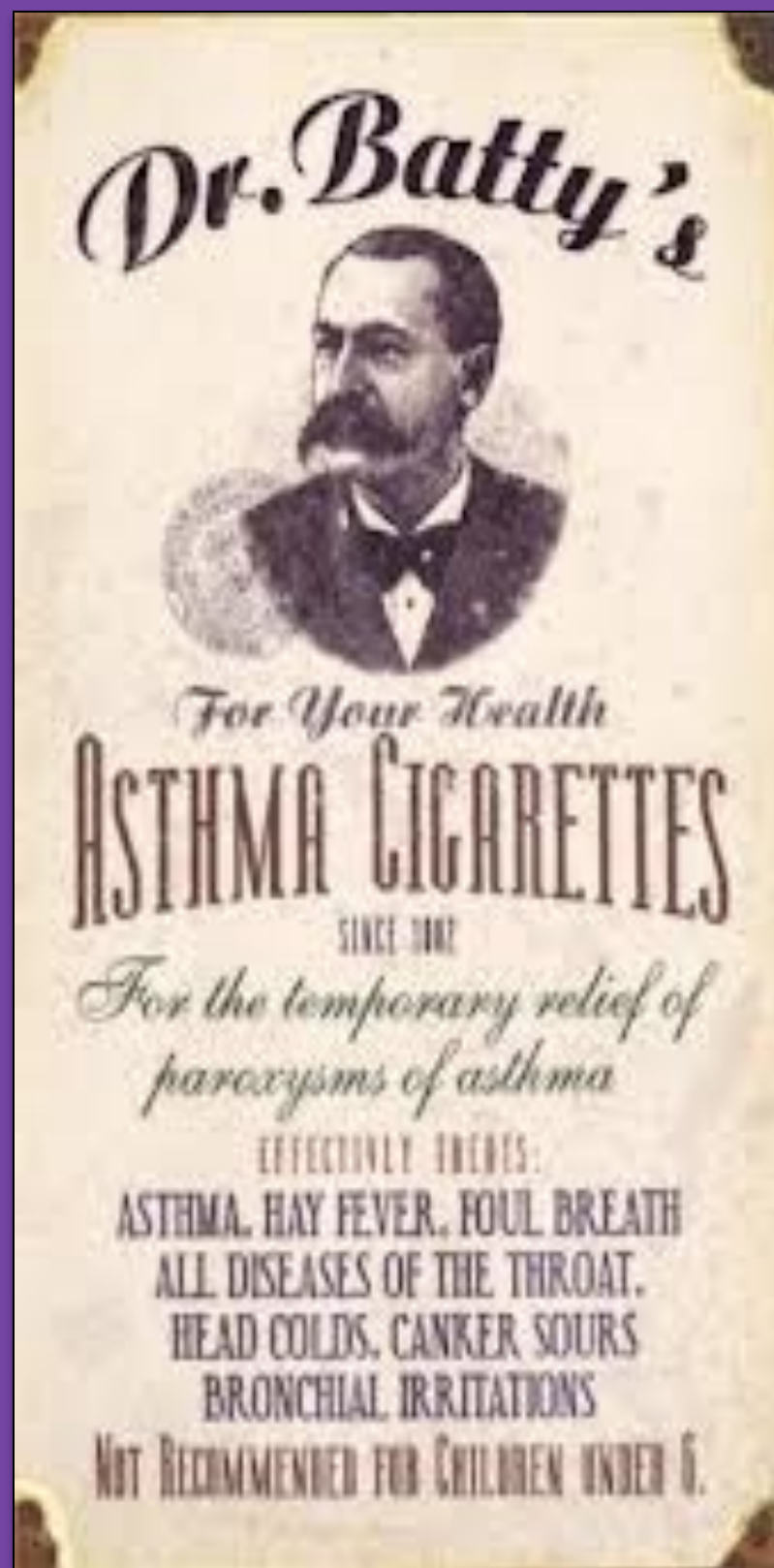
 = 100,000



# The addiction for profit model



# We've Been Here Before



*Dr. Batty's*

*For Your Health*  
**ASTHMA CIGARETTES**  
SINCE 1912

*For the temporary relief of  
paroxysms of asthma*

EFFECTIVELY TREATS:  
ASTHMA, HAY FEVER, FOUL BREATH,  
ALL DISEASES OF THE THROAT,  
HEAD COLDS, CANKER SORES,  
BRONCHIAL IRRITATIONS

NOT RECOMMENDED FOR CHILDREN UNDER 6.

*According to repeated nationwide surveys,*

## More Doctors Smoke **CAMELS** than any other cigarette!

Doctors in every branch of medicine were asked, "What cigarette do you smoke?" The brand named most was Camel!

*You'll know a doctor's decision because he tells doctors what he smokes. I can't tell you what my doctor smokes, but I can tell you what I smoke. My doctor smokes Camels. He says they're the best. They're the only cigarettes that he smokes. They're the only cigarettes that he recommends. They're the only cigarettes that he says are the best. They're the only cigarettes that he says are the best. They're the only cigarettes that he says are the best.*

THE DOCTORS' CHOICE IS AMERICA'S CHOICE!



*For 30 days, test Camels in your "V-Zone" (V for Voice, V for Taste.)*

# Viceroy

**FILTER  
the Smoke!**



As your Dentist,  
I would recommend  
**VICEROYS**



**NOW...Scientific Evidence  
on Effects of Smoking!**

A scientific survey is making regular bi-monthly examinations of a group of people from various walks of life. 42 percent of this group have smoked Chesterfield for an average of more than 20 years.

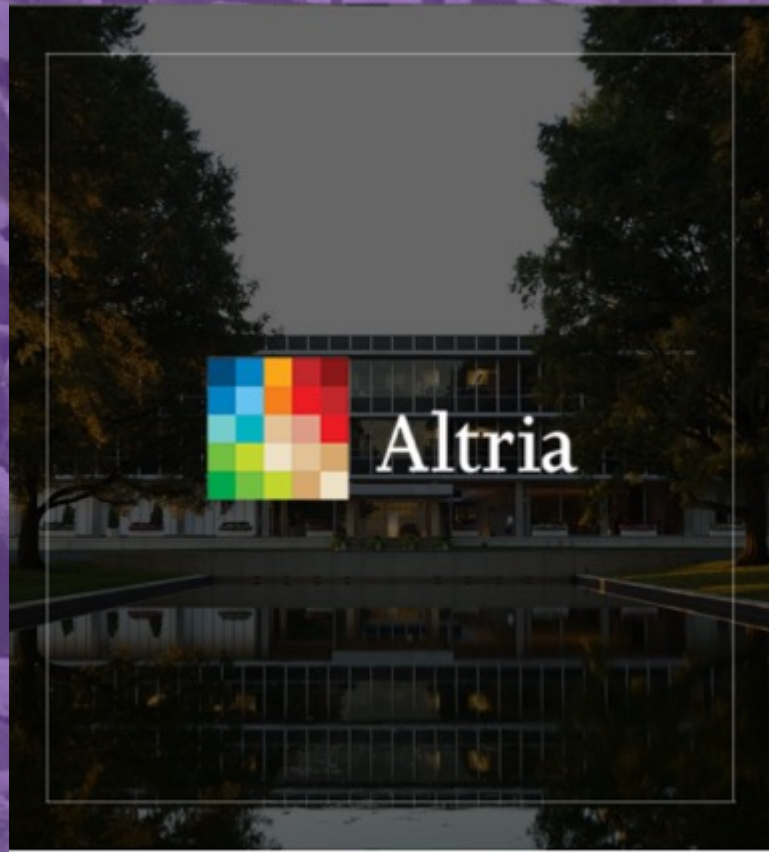
After ten months, the medical specialists reported that they observed:

- no adverse effects on the nose, throat and lungs of the group that smoked Chesterfield.

**MUCH Milder  
CHESTERFIELD  
IS BEST FOR YOU**

First and Only Premium Quality Cigarette in Both Regular and King-Size





[www.learnaboutsam.org/industry-profiles](http://www.learnaboutsam.org/industry-profiles)



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# Altria Makes \$1.8 Billion Investment in Big Marijuana



Altria

Majority shareholder



Cronos Group holds 100% ownership of the only two Canadian companies licensed to cultivate and sell medical marijuana



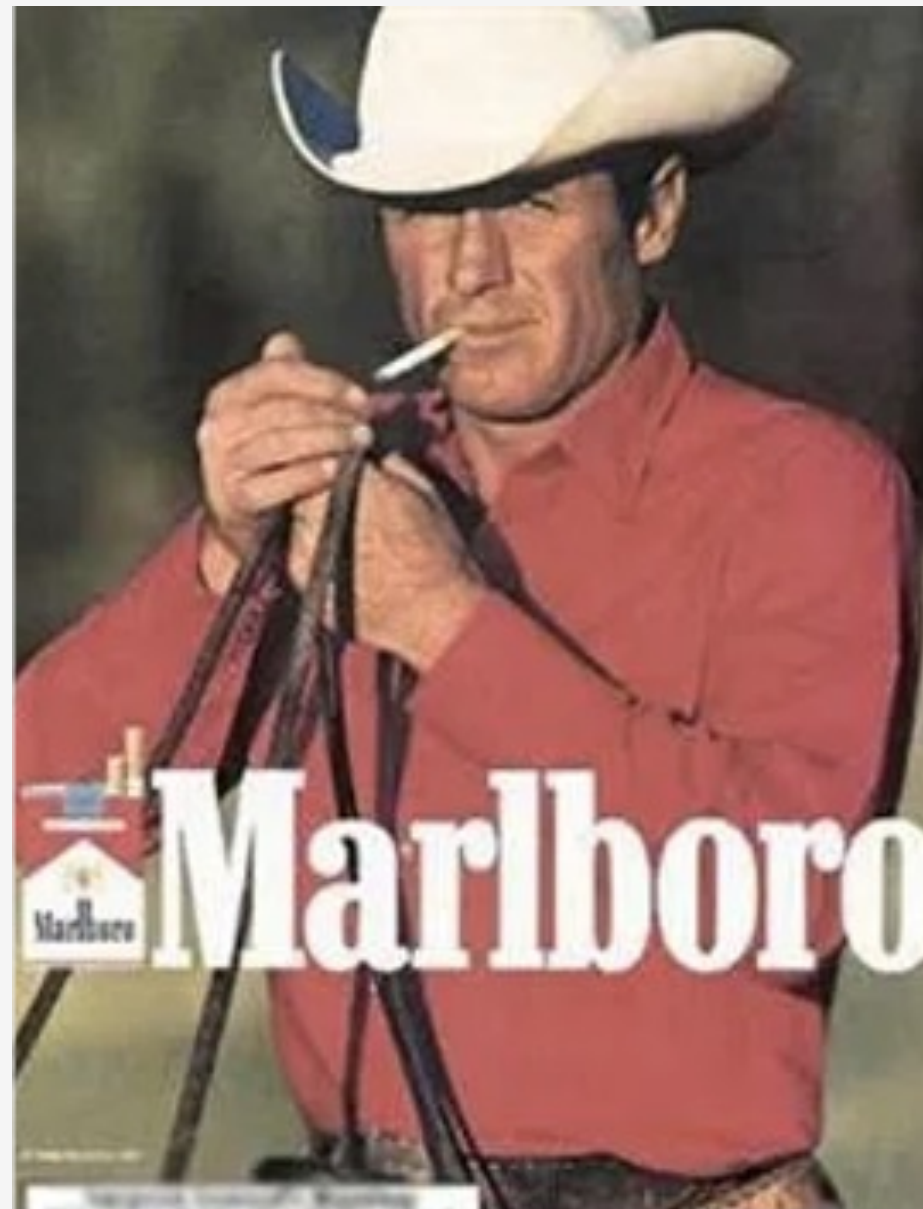
PEACENATURALS  
MEDICINAL CANNABIS



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# Big Tobacco is Big Marijuana

same players, slightly  
different marketing

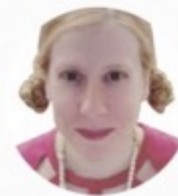


"like it or not Big Tobacco is invading cannabis."

# Forbes

Dec 4, 2018, 09:40am EST

## Potential Big Tobacco Acquisition Causes Cannabis Company's Stock to Soar



**Sara Brittany Somerset** Former Contributor 

Vices

*I cover marijuana, global affairs and the intersection of the two.*

Smart Approaches to Marijuana (SAM)'s legalization opponent [Kevin Sabet](#) may be right: like it or not Big Tobacco is invading cannabis. Altria, the company that invited unwitting consumers for decades to come to where the [cancer](#) is –Marlboro Country– may be looking to shore up stagnant cigarette sales by purchasing Canadian cannabis company Cronos Group.



# 4th Largest Tobacco Company on Earth Invests in Big Marijuana

 **CBCNEWS**

July 25, 2019

## Auxly Cannabis signs \$123M deal with tobacco giant Imperial Brands

<https://www.cbc.ca/news/business/auxly-cannabis-deal-with-tobacco-giant-imperial-brands-1.5224955>



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# Lessons learned?

Coming Soon From Molson  
Coors: Marijuana Beer



US News, Aug. 3, 2018



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# Molson Coors reveals Truss' cannabis-infused beverage line-up

Beverage  
daily.com

Beveragedaily.com, April 15, 2021

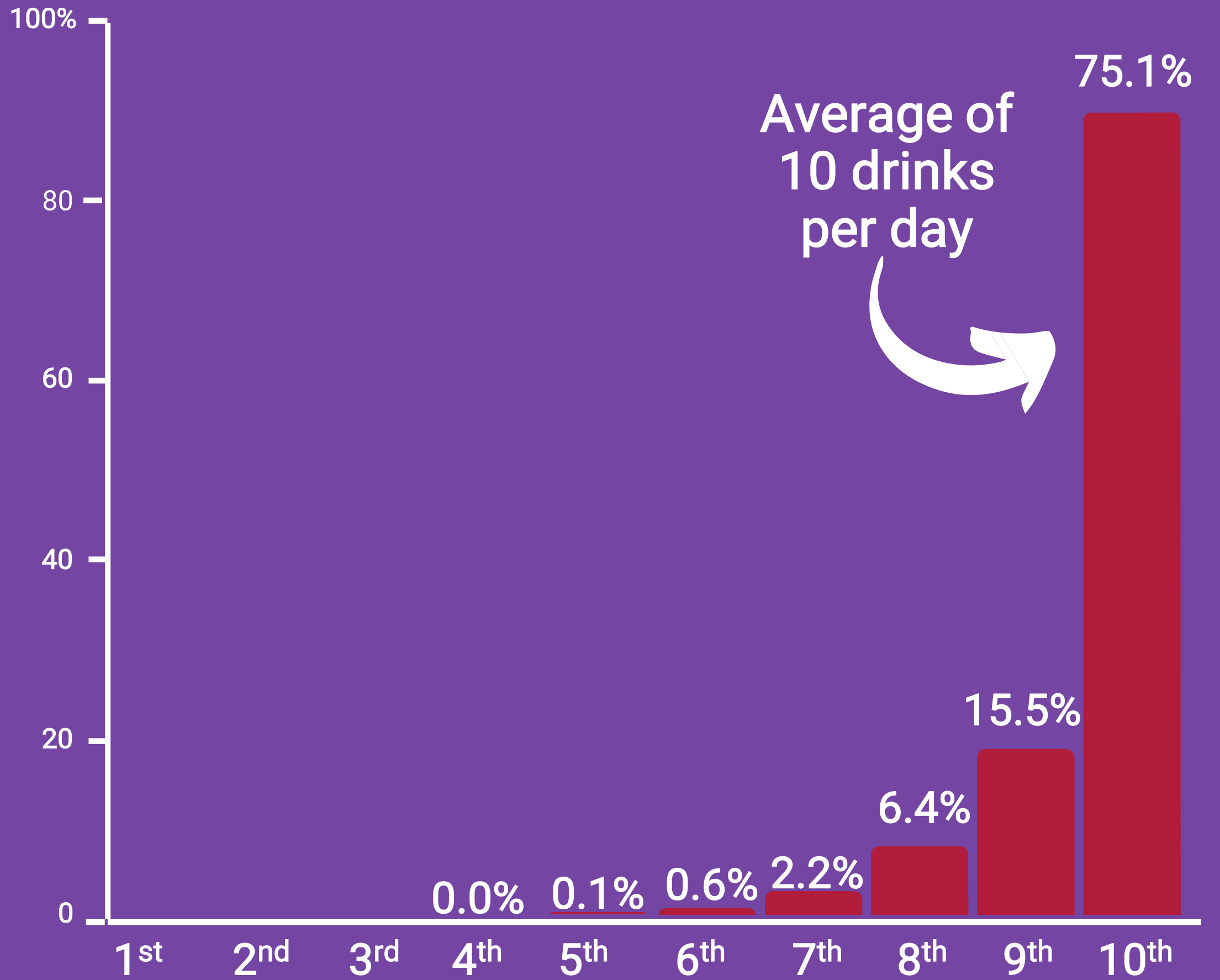


# Lessons learned?



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Top 10% of the population make up 75% of the Alcohol Industry's U.S. Sales



“If only we  
treated  
pot like  
alcohol...”

1.3M

Arrests for alcohol-related  
crimes in 2017, including  
violations of liquor laws and DUI\*

659,700

Marijuana-related  
arrests in 2017

\*does NOT include arrests for alcohol-related violence



Pot arrest rates  
are still  
disproportionately  
biased against  
people of color

The racial disparity in marijuana- related arrests still exists in every state that has legalized or decriminalized marijuana.

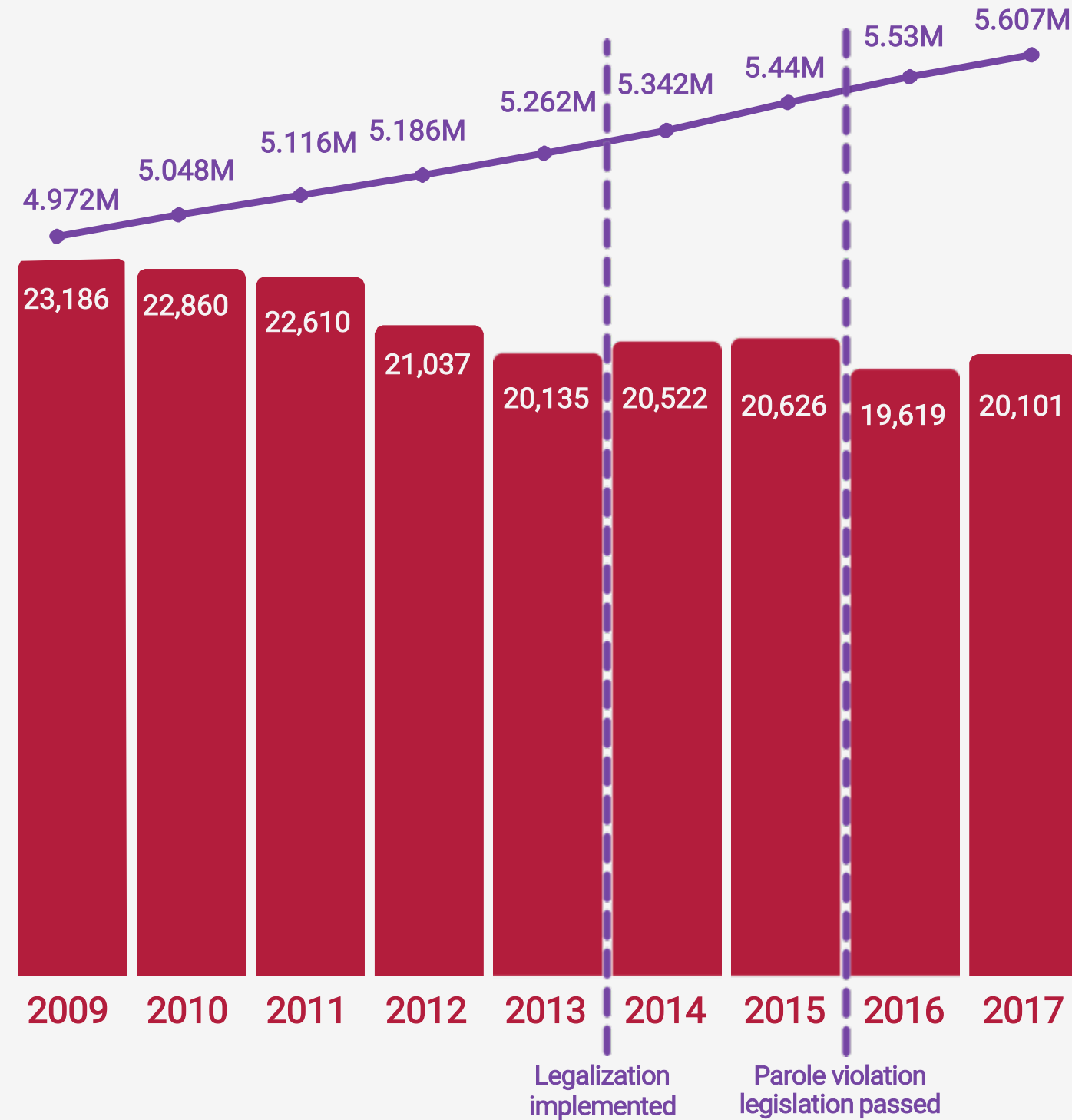
Hispanic and Asian arrest rates have also increased within the same period.



Legalization  
has not  
reduced  
the prison  
population

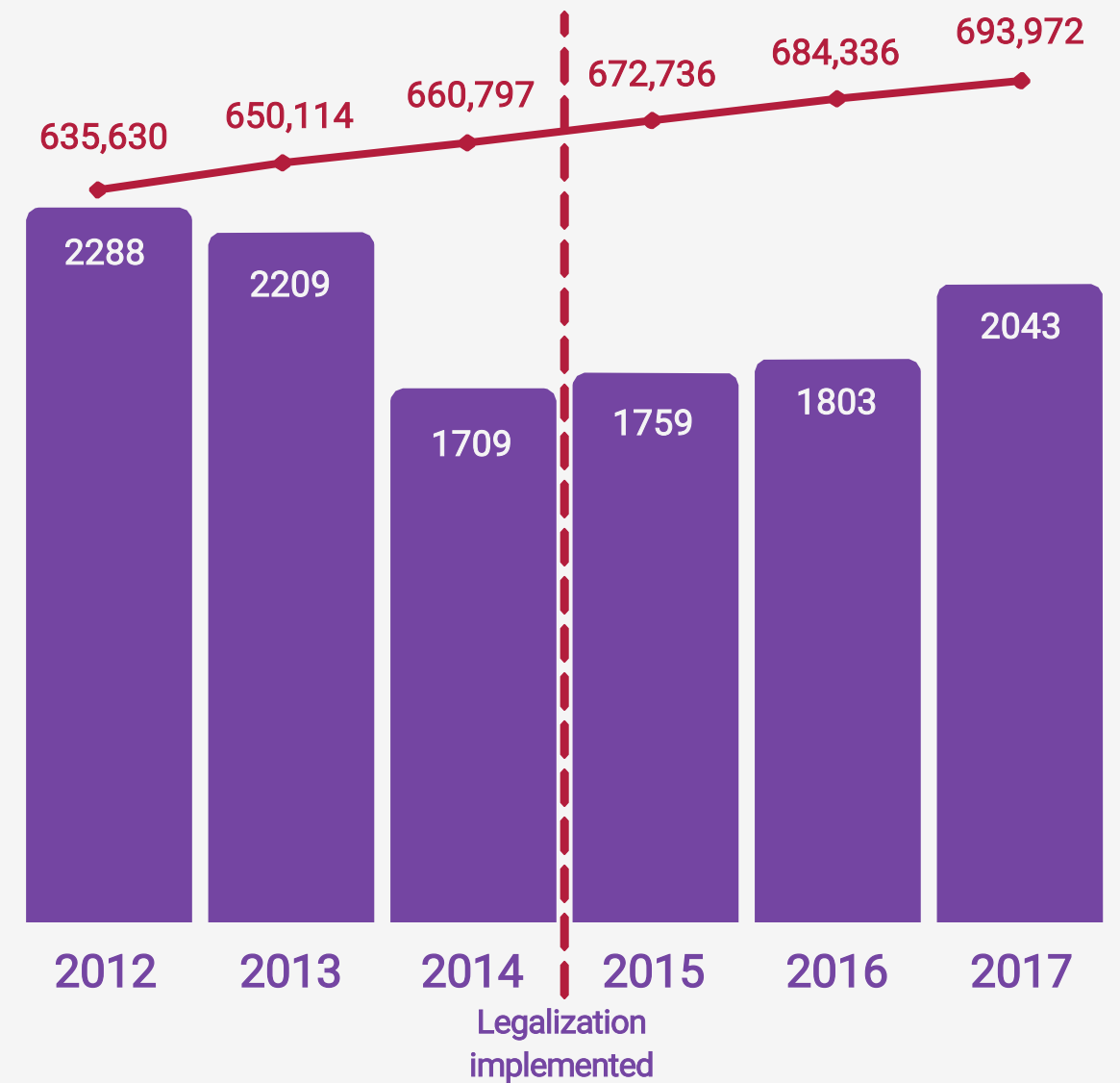


# Colorado



● State population  
■ Prison population

# District of Columbia



● District population  
■ Prison population

In Colorado, African-Americans were disproportionately arrested without a warrant or previous incident report in 2017.



26% ↑



Black on-view arrests were 21% more likely than white on-view arrests in 2017



# OBSERVER

February 10, 2020

Why Isn't Marijuana Legalization Doing Any Good for People of Color?

# The Boston Globe

February 14, 2020

A law said pot taxes should help communities harmed by the war on drugs. That hasn't happened



June 8, 2020

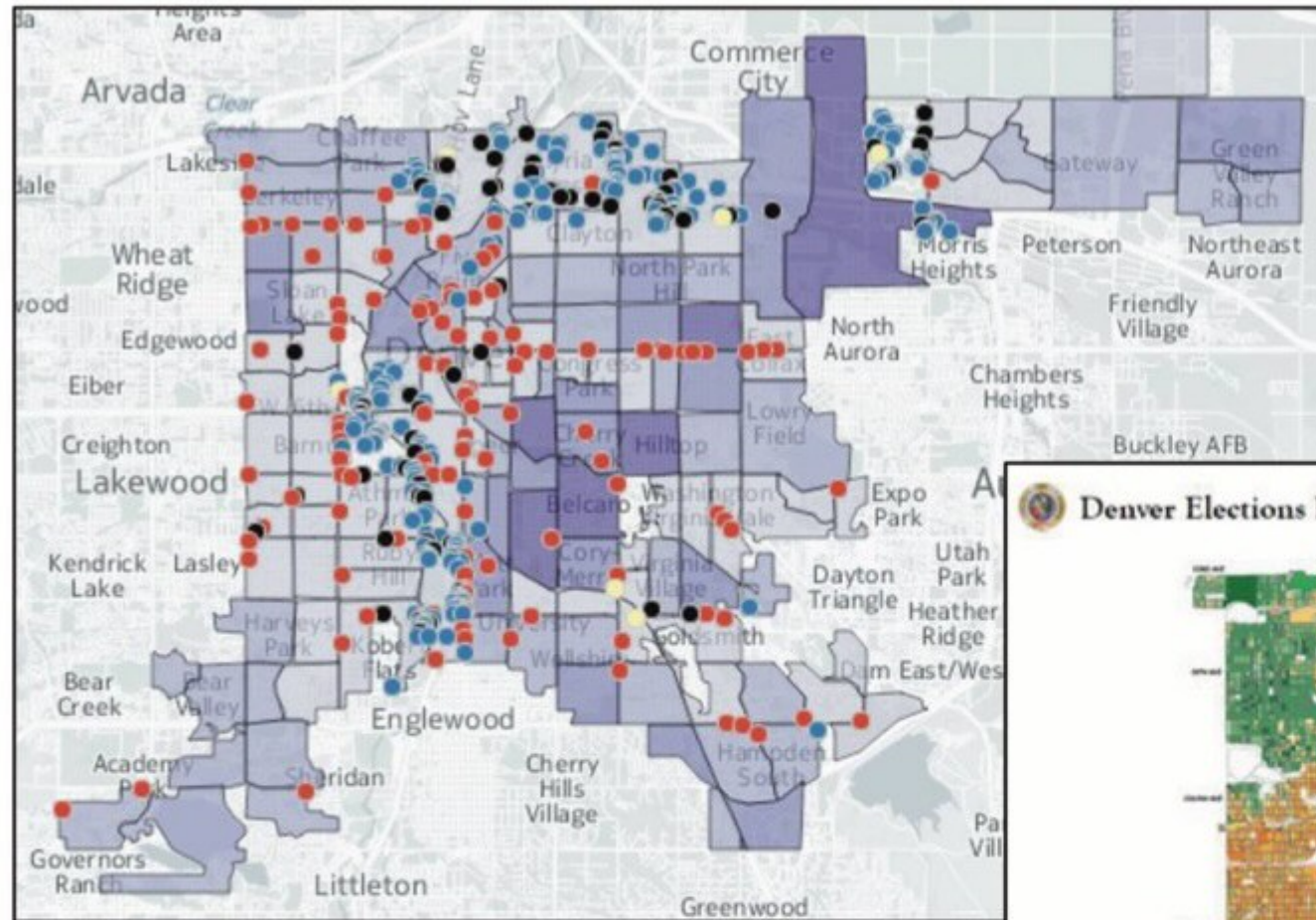
By the numbers: How legalized cannabis fails BlackAmerica



January 30, 2020

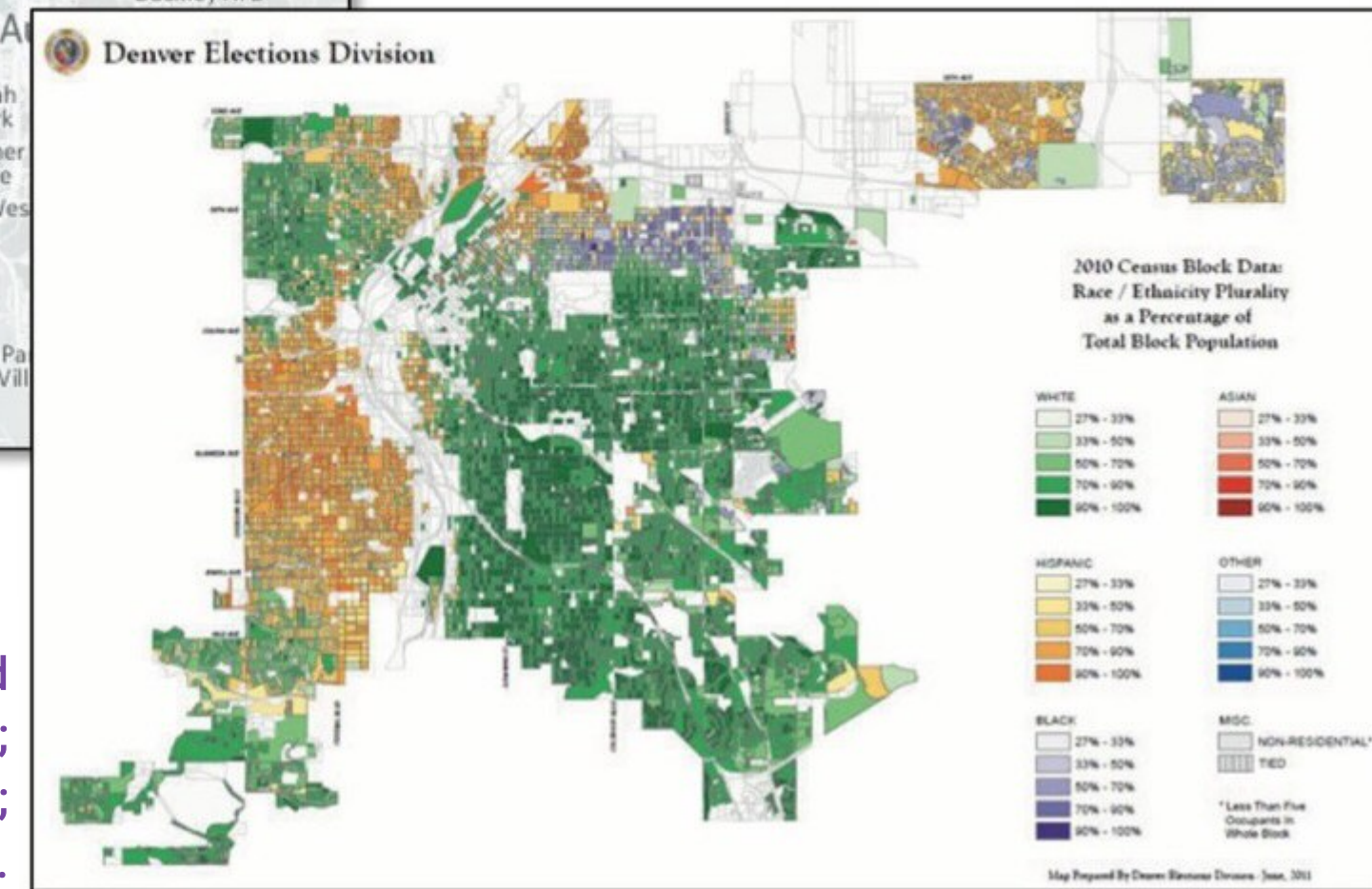
White Weed Entrepreneurs Are Gaming Programs Meant to Help People of Color

# Marijuana businesses in Denver are concentrated in communities of color



Locations of pot businesses. Dots represent businesses; neighborhoods shaded by income, lighter = lower-income.

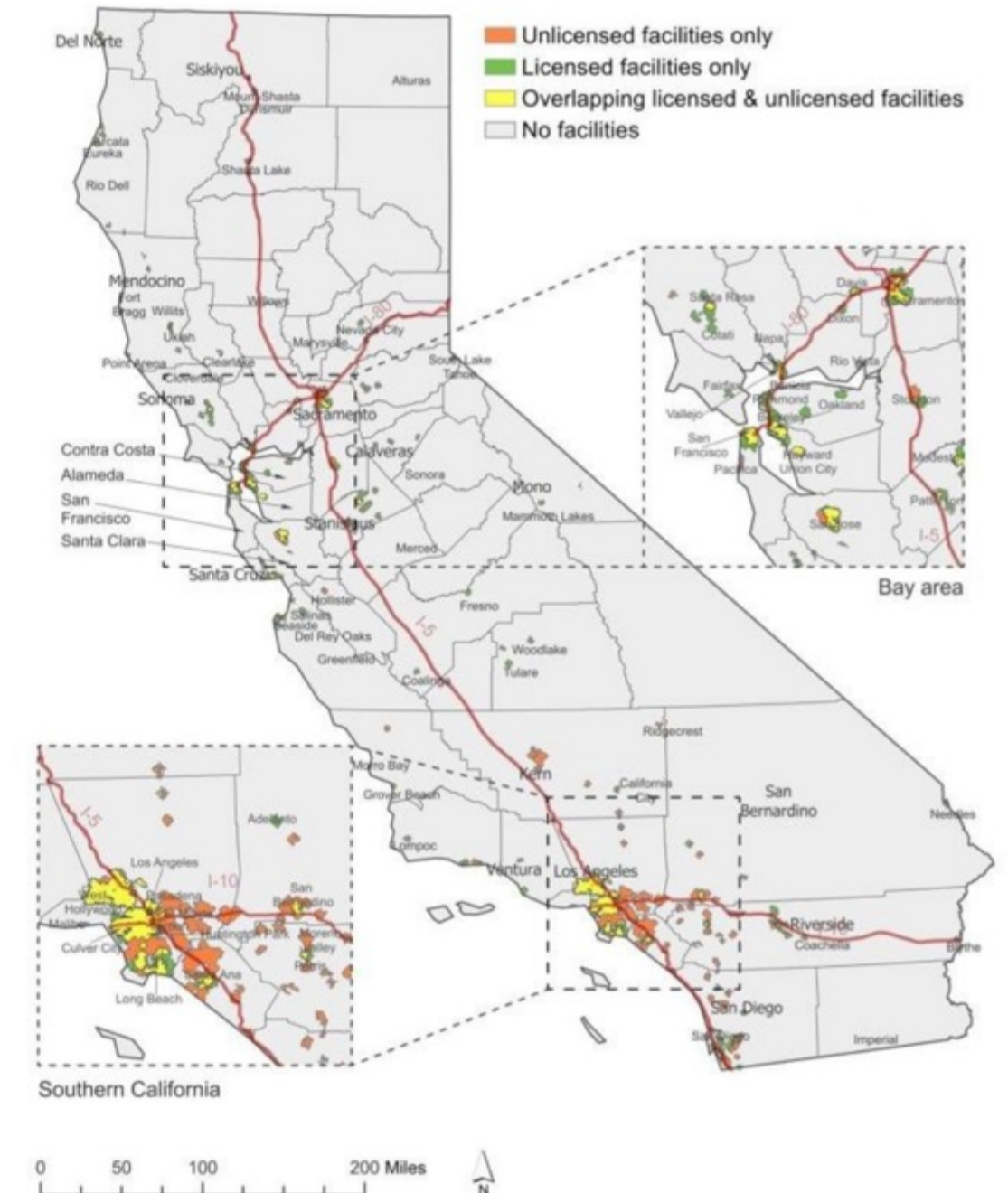
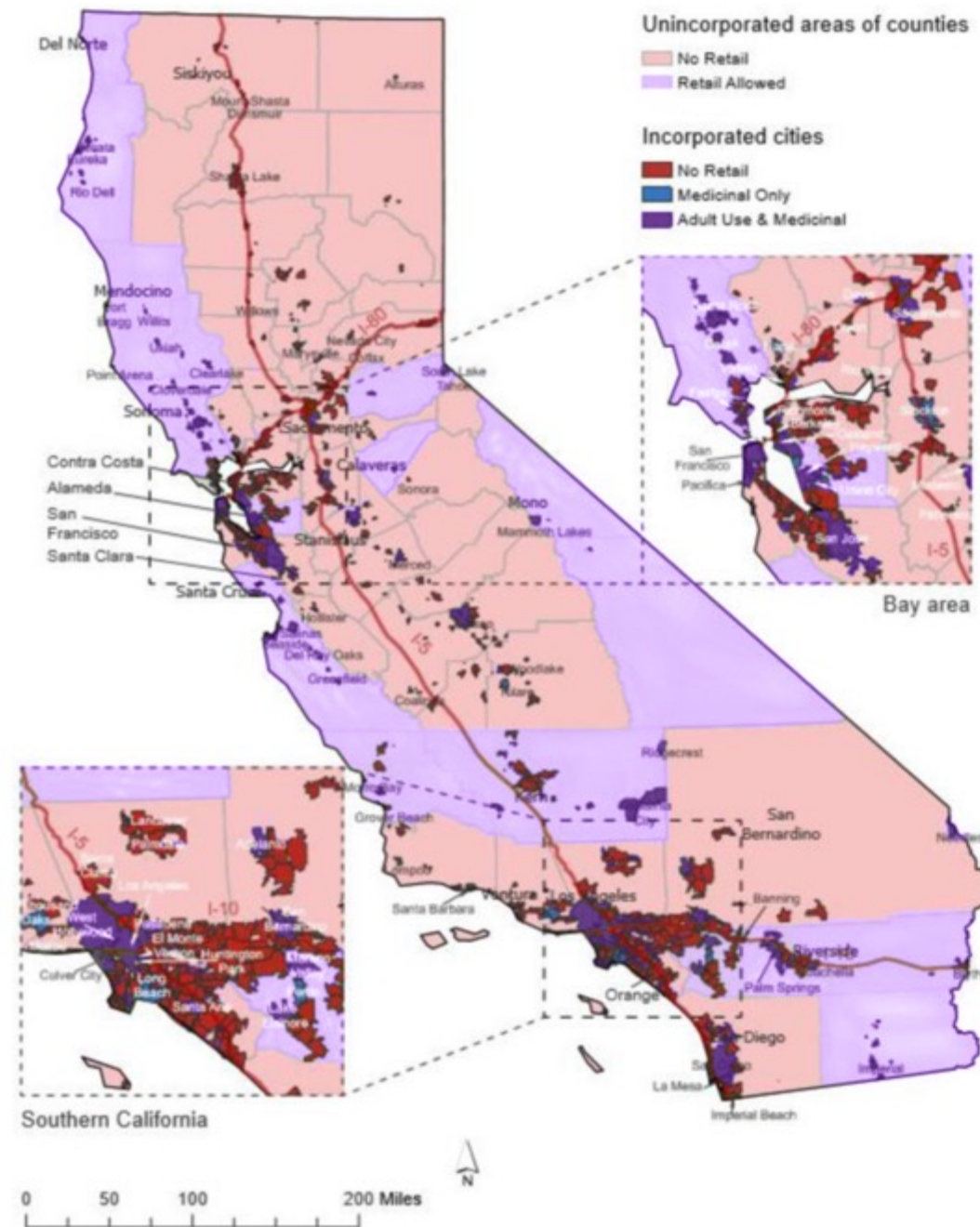
Denver neighborhoods colored by race/ethnicity; green = White; orange = Latino; purple = Black; red = Asian; blue = Other.




# Density of marijuana stores in areas of low income and communities of color in California



Minority populations in California are disproportionately exposed to both **licensed** and **unlicensed** marijuana stores



<https://pubmed.ncbi.nlm.nih.gov/32714779/>



Three  
separate  
issues that  
often get  
conflated



1

Penalizing drug users/  
"decriminalization"

2

Medicinal use of  
compounds derived  
from marijuana

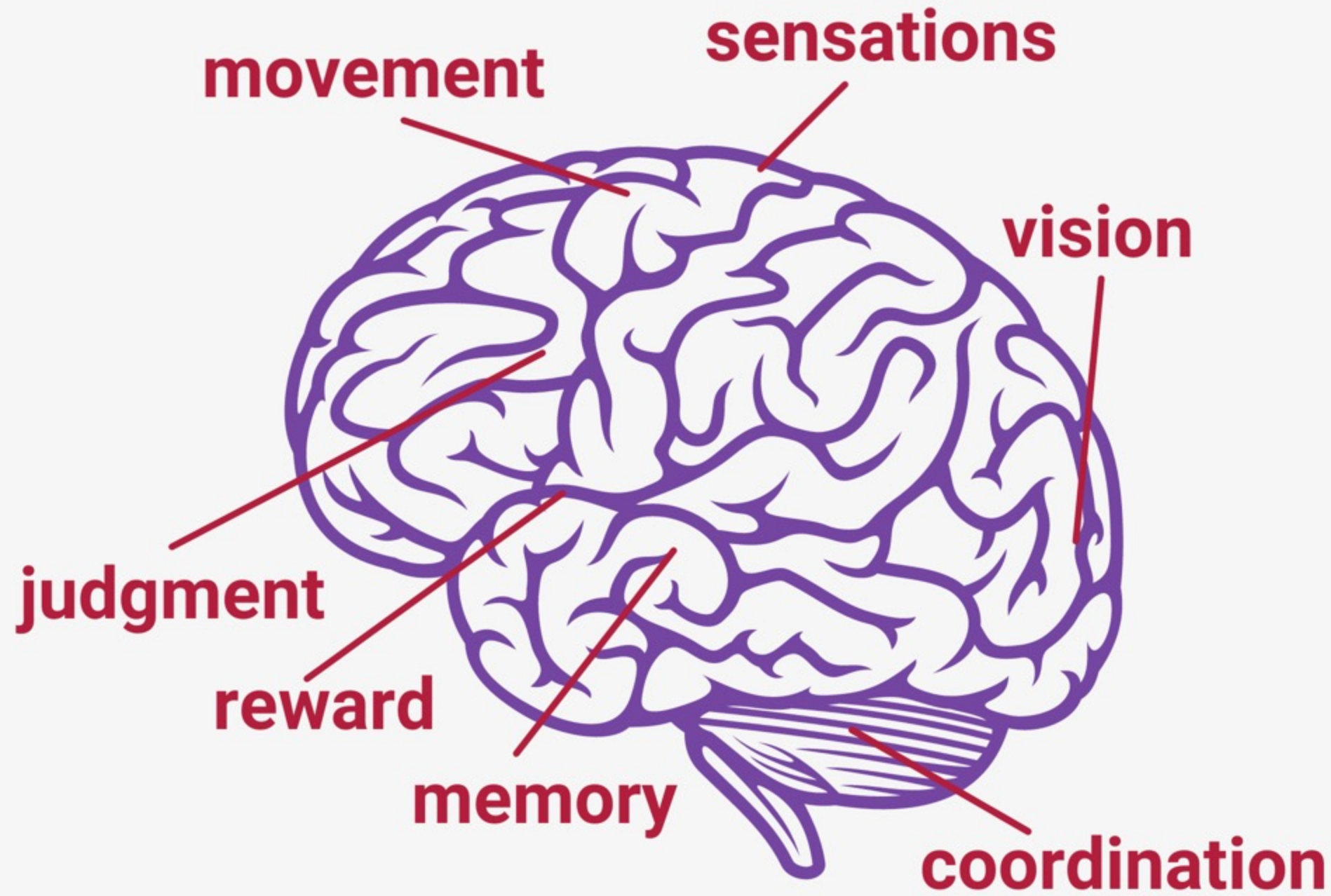
3

Use, sales, production,  
and distribution

# Research Highlights



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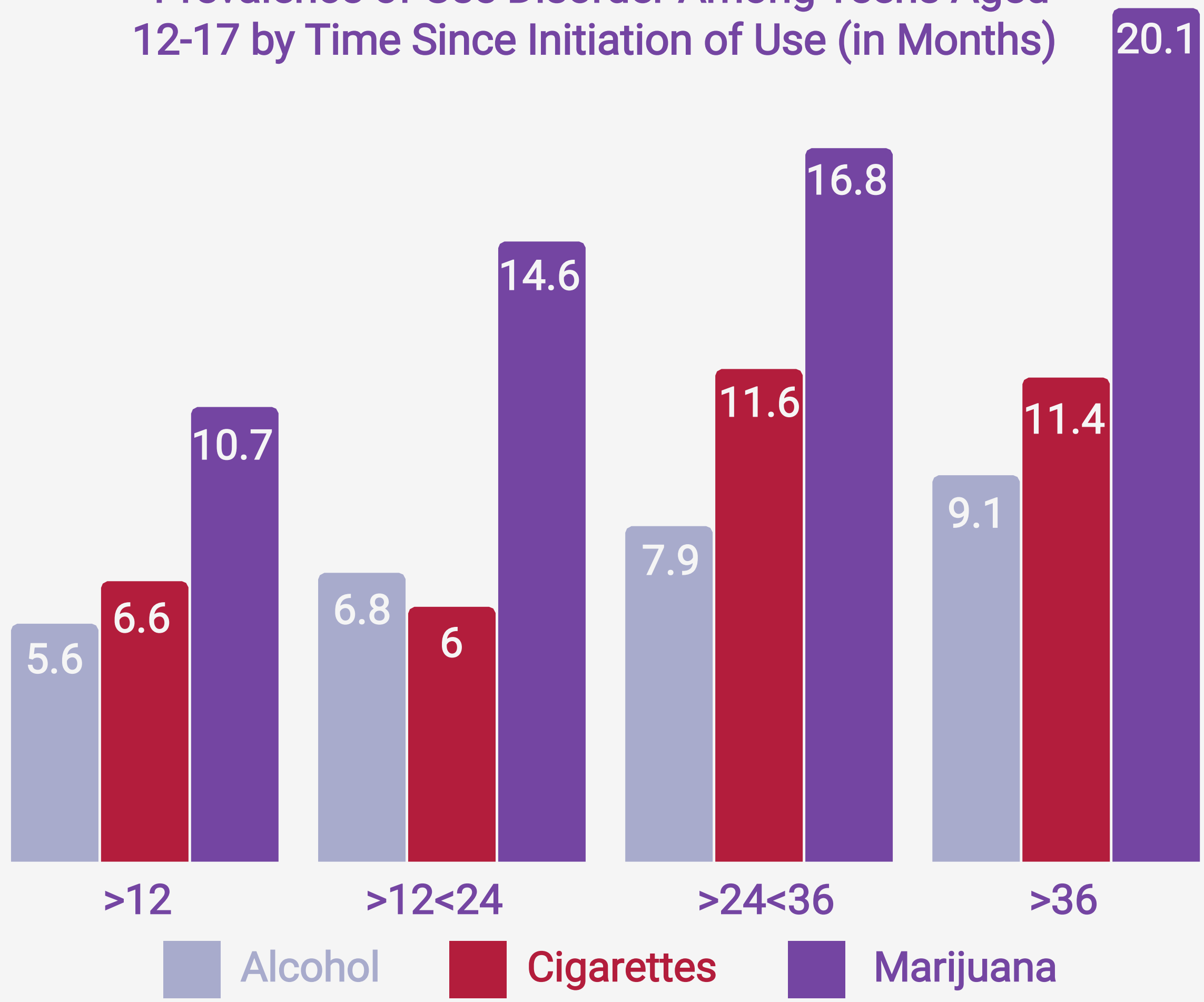


**Cannabinoid Receptors Are Located Throughout the Brain and Regulate a Host of Brain Activity**

**Brain Development  
Memory & Cognition  
Motivation & Reward  
Appetite**

**Immunological Function  
Reproduction  
Movement Coordination  
Pain Regulation & Analgesia**

# Prevalence of Use Disorder Among Teens Aged 12-17 by Time Since Initiation of Use (in Months)



Youth Marijuana Addiction Prevalence Double That of Alcohol & Other Substance Use Disorders



**1 in 3**

Past-Year Users Have  
CUD (Addiction)

1 in 3 who used marijuana in the past year will become addicted (Cannabis Use Disorder)

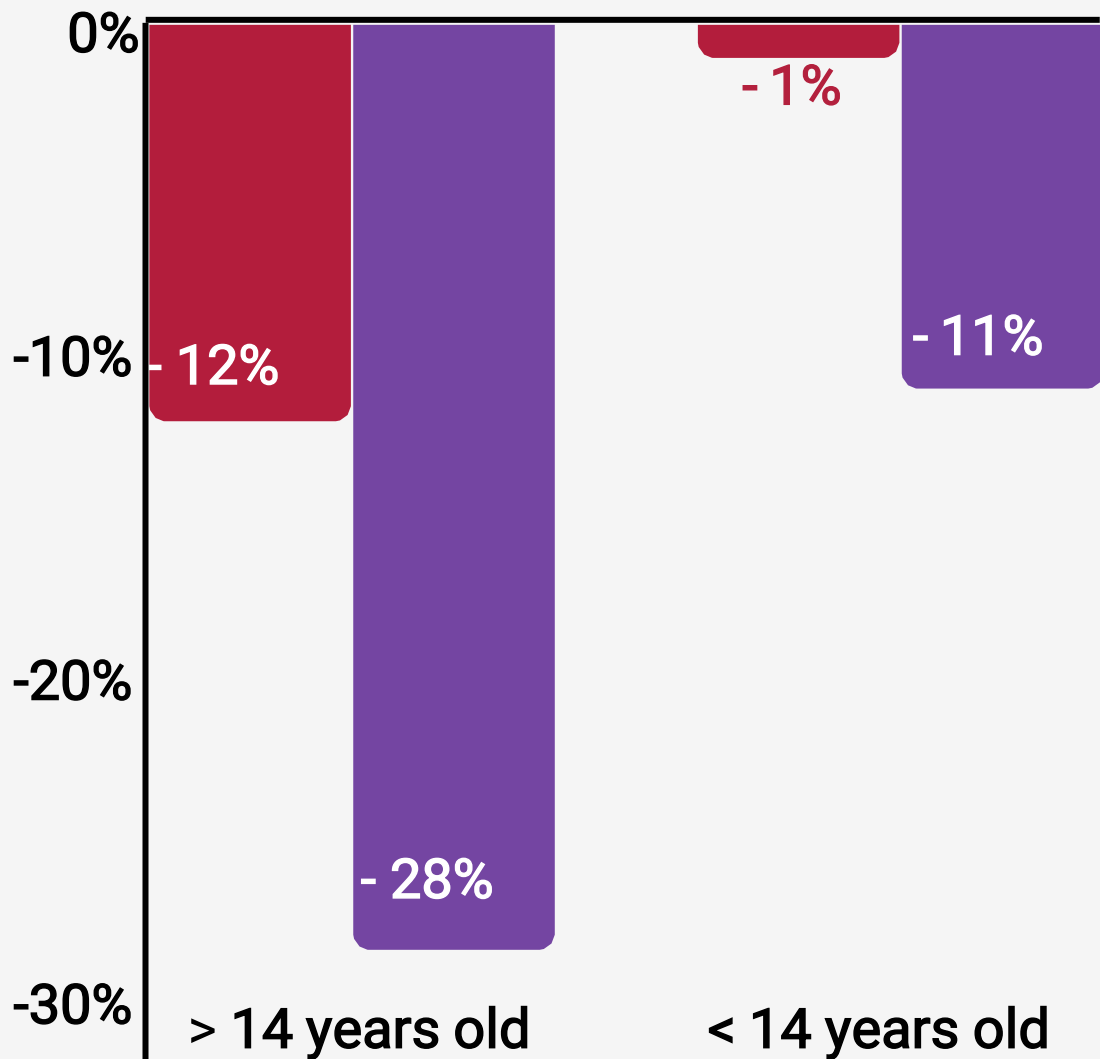
The adolescent brain is especially susceptible to marijuana use

When kids use, they have a greater chance of addiction since their brains are being primed



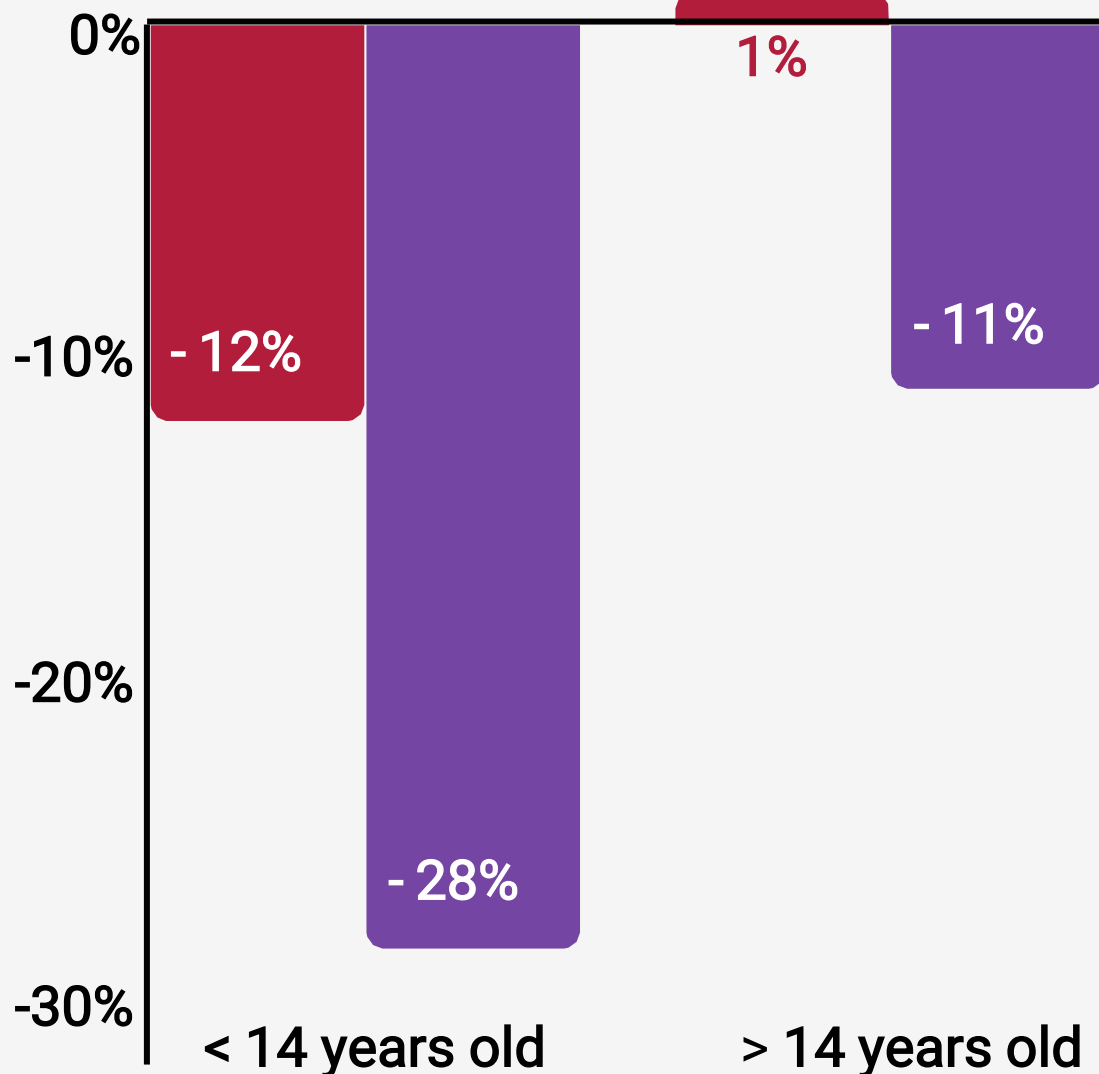
# High School Completion

Marijuana users show much higher high school dropout rates than non-users



# University Entrance Score

Marijuana users that complete high school still do poorly on university entrance tests

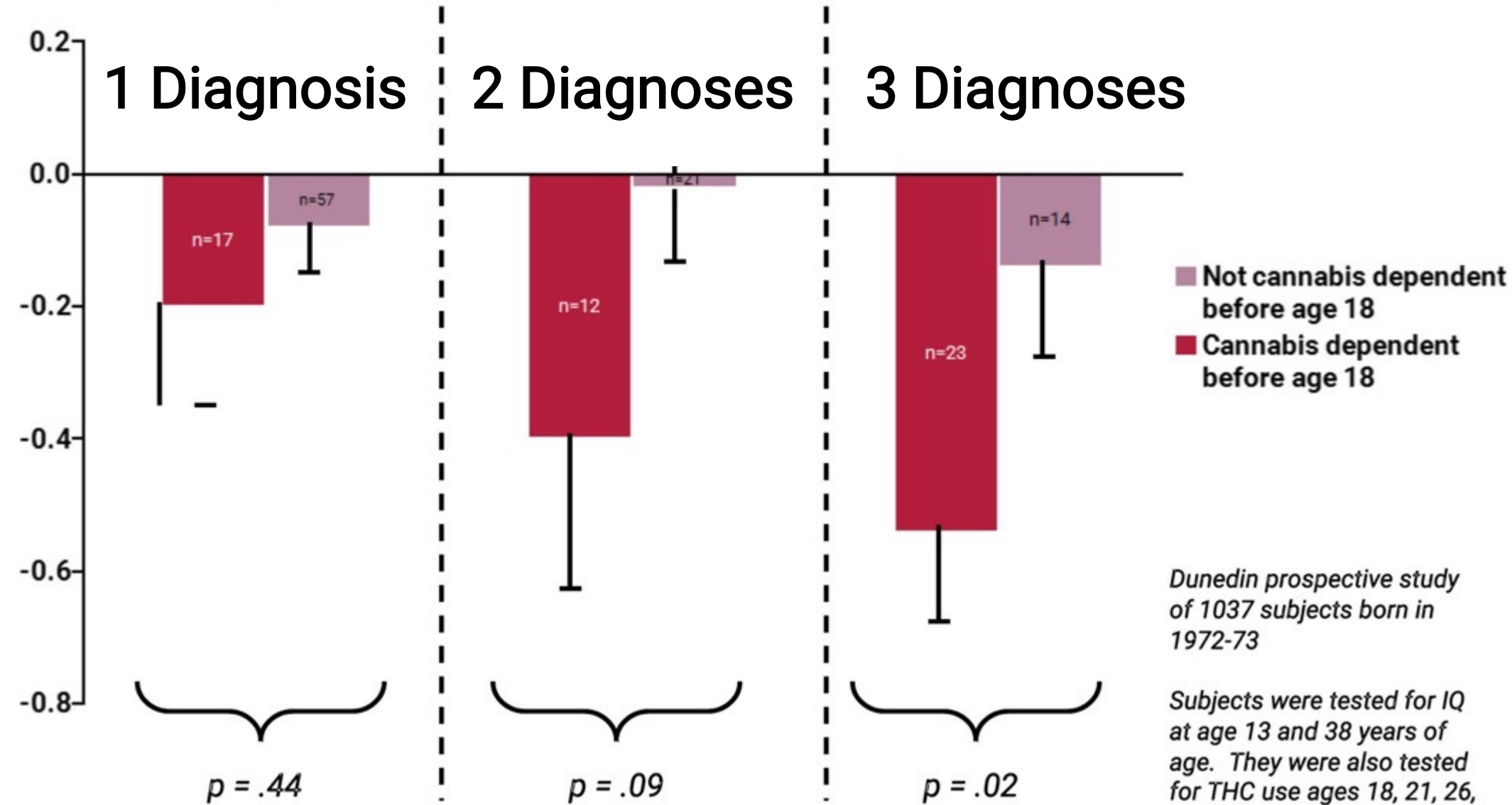


Low-intensity use  
Medium/high-intensity use

# Early Marijuana Use and Intensity of Use are Associated with Lower Educational Attainment

Source: Cobb-Clark et al. <http://ftp.iza.org/dp7790.pdf>

Change in full-scale IQ  
(standard deviation units)



Dunedin prospective study  
of 1037 subjects born in  
1972-73

Subjects were tested for IQ  
at age 13 and 38 years of  
age. They were also tested  
for THC use ages 18, 21, 26,  
32 and 38 years of age.

Marijuana  
use is also  
associated  
with lower IQ  
among  
adolescents





# What have we learned?



# Children At Risk



# Dispensary Denver



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TODAY

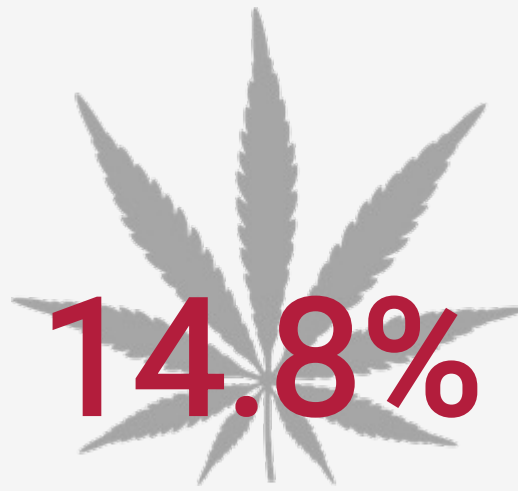
# Corporate Accountability



MARIJUANA  
ACCOUNTABILITY  
COALITION



# 2021 & 2019 Colorado Health Department Reports



14.8% increase in youth under age 15 using marijuana over the past 2 years



400% increase in marijuana poisonings of children 0-9 years of age

Marijuana vaping and dabbing up 40+% among youth



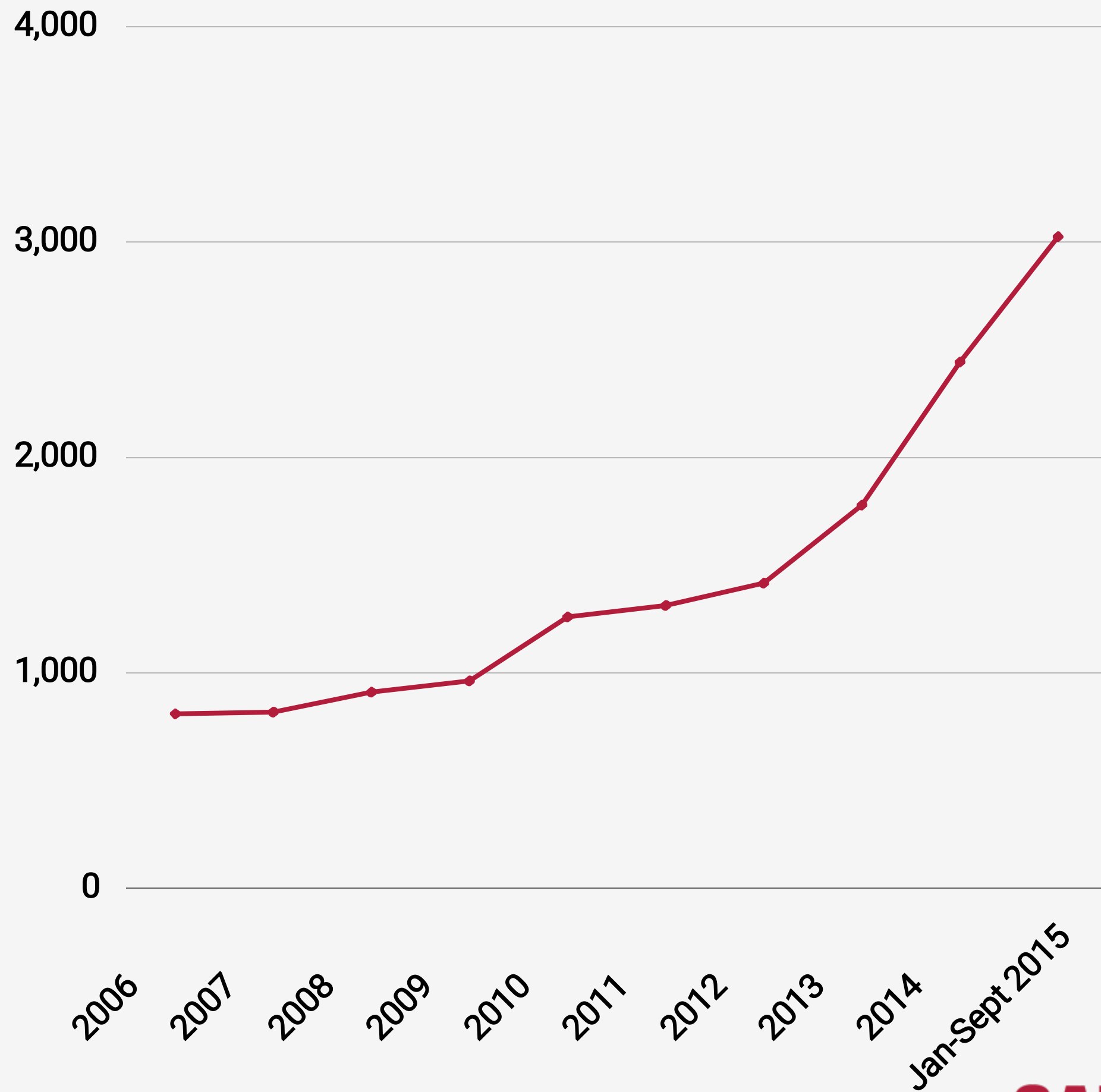
32,800 homes where children 1-14 years of age are exposed to second-hand marijuana smoke



23,009 homes with children are not storing marijuana products safely



# Colorado Hospitalization Rates Related to Marijuana



# Marijuana Exposure Calls to Colorado Poison Control Centers

CDPHE, 2019



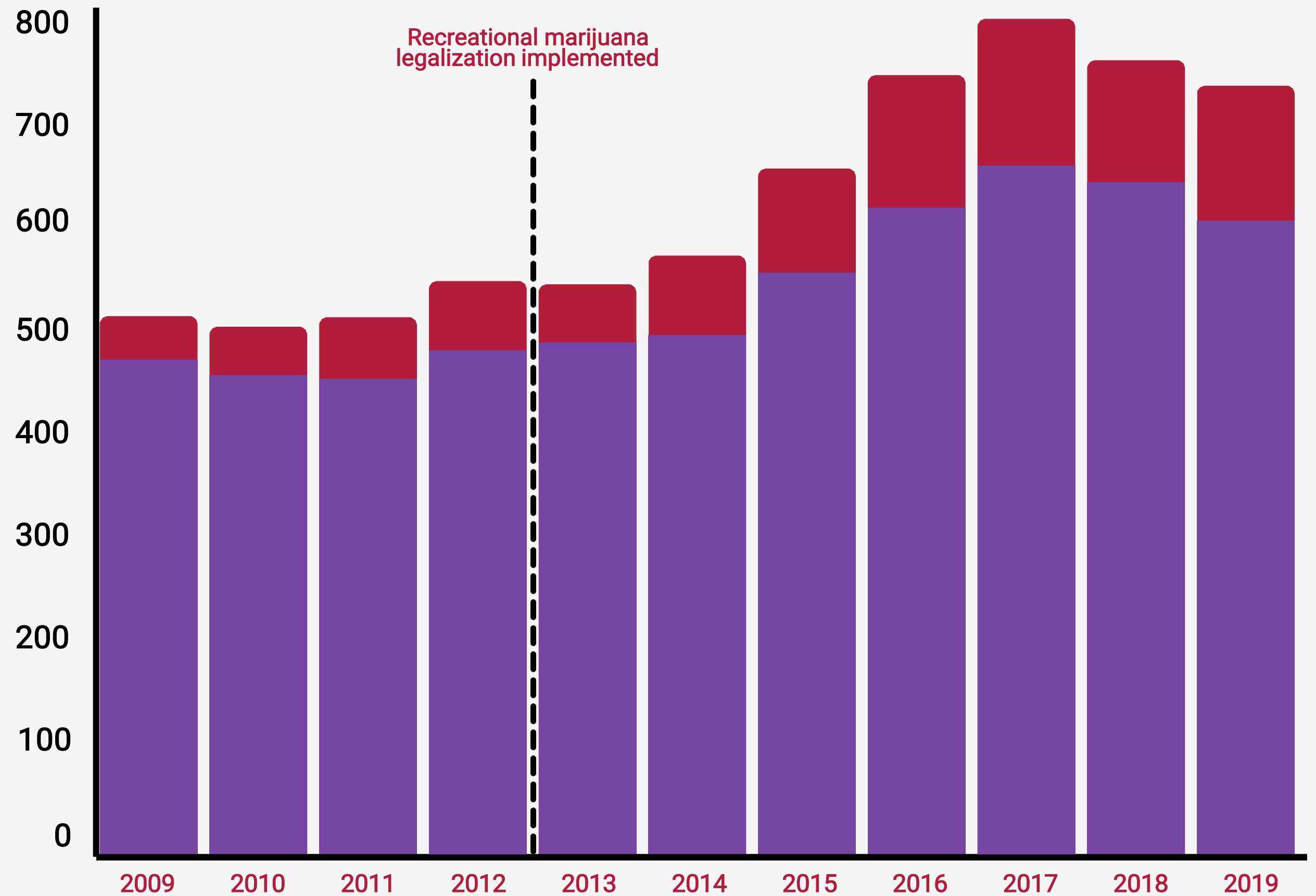
110 Calls  
(2012)

276 Calls  
(2019)

 = 10 calls

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# Colorado Traffic Fatalities where the Driver Tested Positive for Marijuana



■ Traffic Fatalities  
■ Traffic Fatalities, Driver Tested Positive for Marijuana

Colorado Department of Transportation, 2020

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“

# AAA opposes the legalization of marijuana for recreational use

because of its inherent traffic safety risks and because of the difficulties in writing legislation that protects the public and treats drivers fairly.

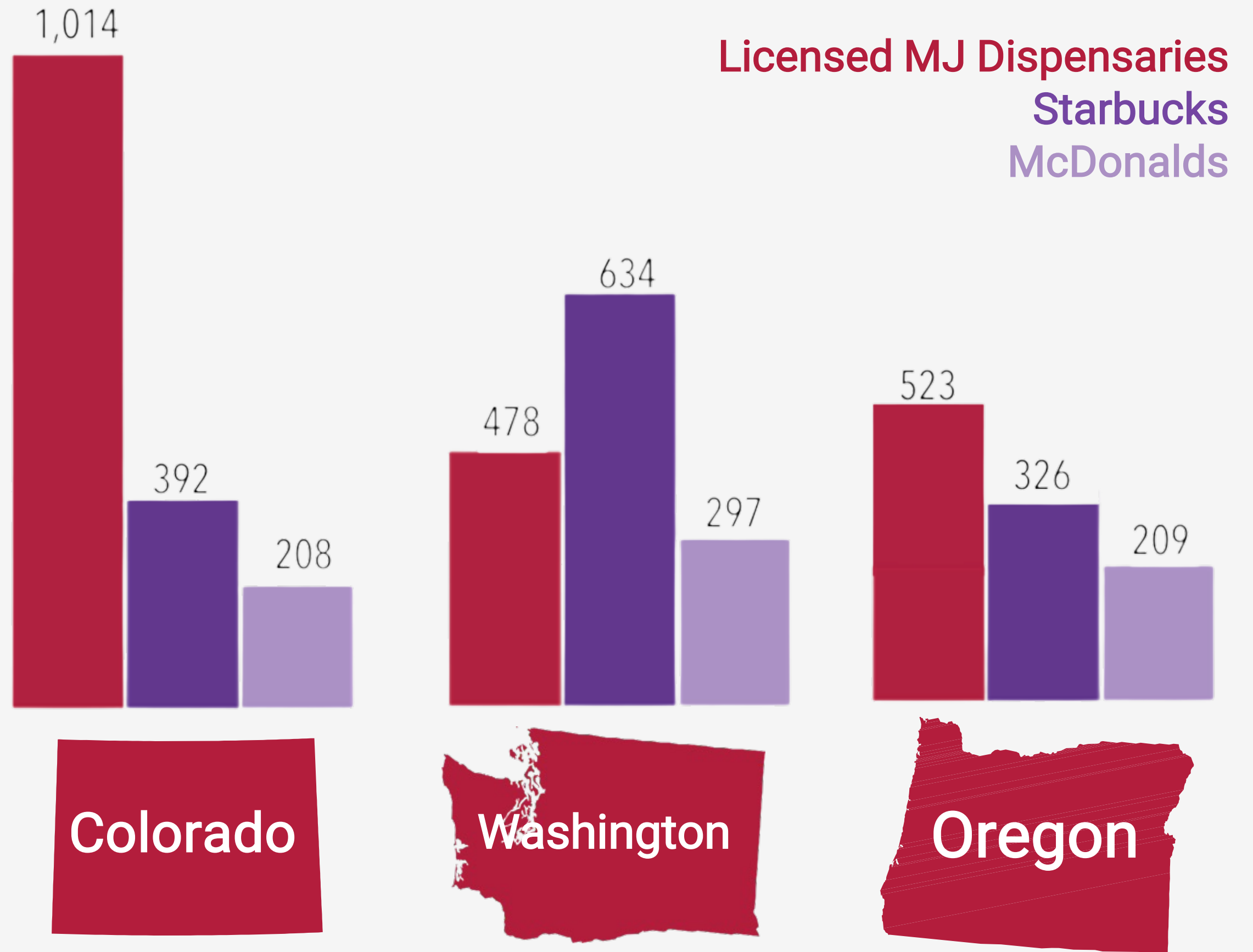
”

AAA Foundation for Traffic Safety (2020)



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# A Dispensary on Every Corner



2017 Data

Colorado Department of Revenue; Starbucks Coffee Company, Corporate Office Headquarters; McDonalds Corporation, Corporate Office

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# Results of Legalization



## Commercialization

Colorado is consistently one of the top states for youth initiation to marijuana in the country

Rampant advertising/  
commercialization

A thriving underground market –  
white, grey, and black

## Promotion of Special Interests

THC caps have failed (Colorado)

Limit on number and location of stores  
has failed (Denver)

Money diverted to general fund  
(Washington)



Non-Medical Marijuana Legalization (NML) is associated with an increased likelihood of youth marijuana and alcohol use.

Researchers accounted for an overall downward trend in youth substance use across the nation to more closely scrutinize use in NML states, a factor that previous studies may have missed.

The adjusted odds ratios of youth use of marijuana and alcohol in states with NML were 6.85 and 3.38, respectively.



“Among teens, NML may be working against hard-won, population-level decreases in the prevalence of marijuana and alcohol use.”

Bailey et al., 2020

# Legalization reversing downward trend in youth use

Study of 1,087 twenty-four-year-olds who reported recent marijuana use, found that users of high potency marijuana were:

# Association of High-Potency Cannabis Use With Mental Health and Substance Use in Adolescence

**4x**

more likely to abuse marijuana

**2x**

as likely to develop anxiety disorders

JAMA Psychiatry (2020)

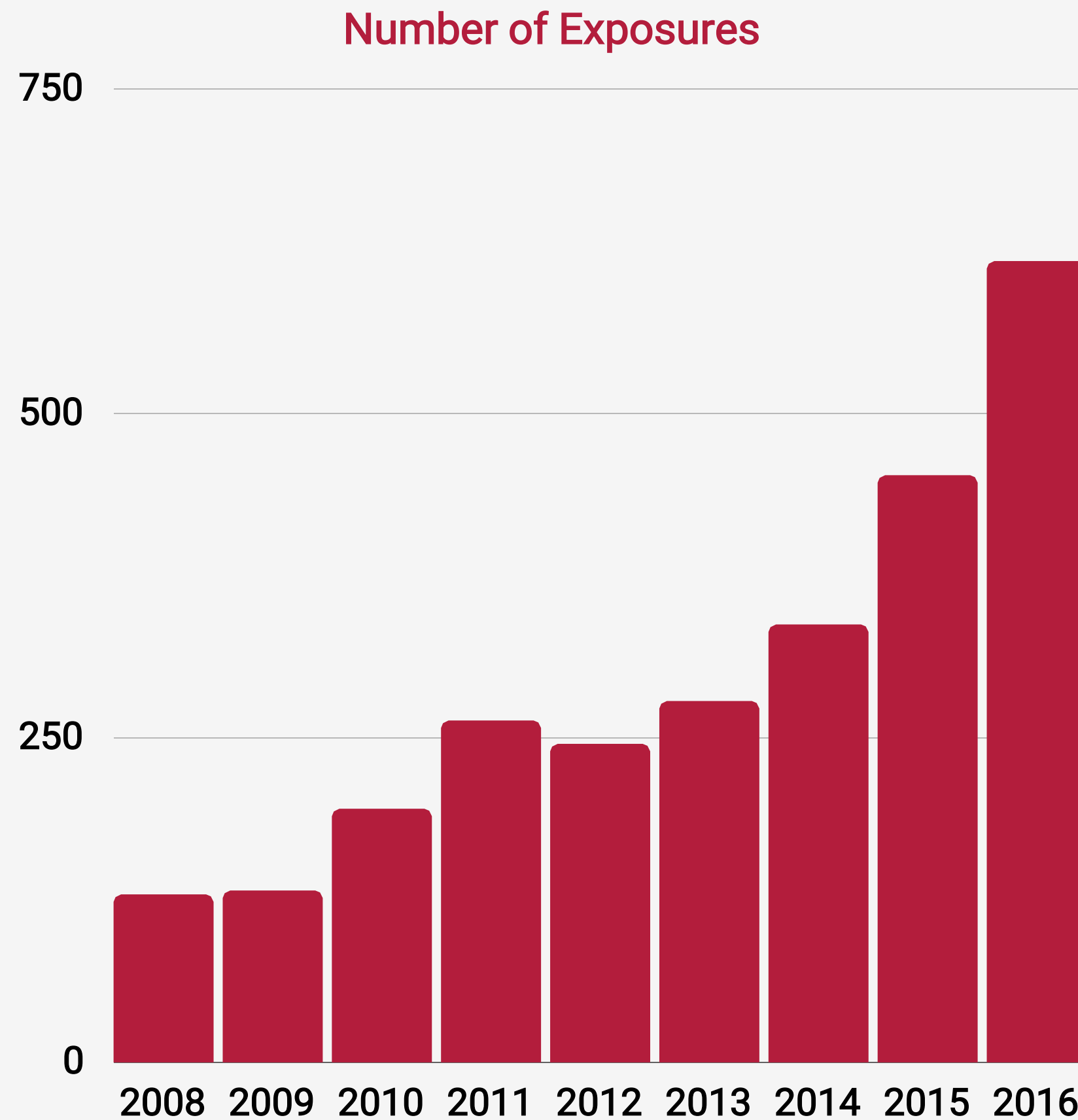


The rate of children aged 5 and younger exposed to marijuana increased by 147.5%



## Marijuana exposures are increasing across the country

The increased occurrence of accidental exposure to marijuana among children is attributed largely to states where medical and recreational marijuana had been legalized.





**75%**

of exposures were attributed to accidental ingestion of marijuana products

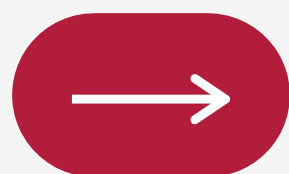
**78%**

Children younger than age 3 accounted for 78 percent of the exposures

National Center on Addiction and Substance Abuse – 2018



Percent increase  
in calls made to  
poison control  
center for  
marijuana  
exposures  
following  
legalization in  
the state



Colorado  
112.8%↑  
2013-2019

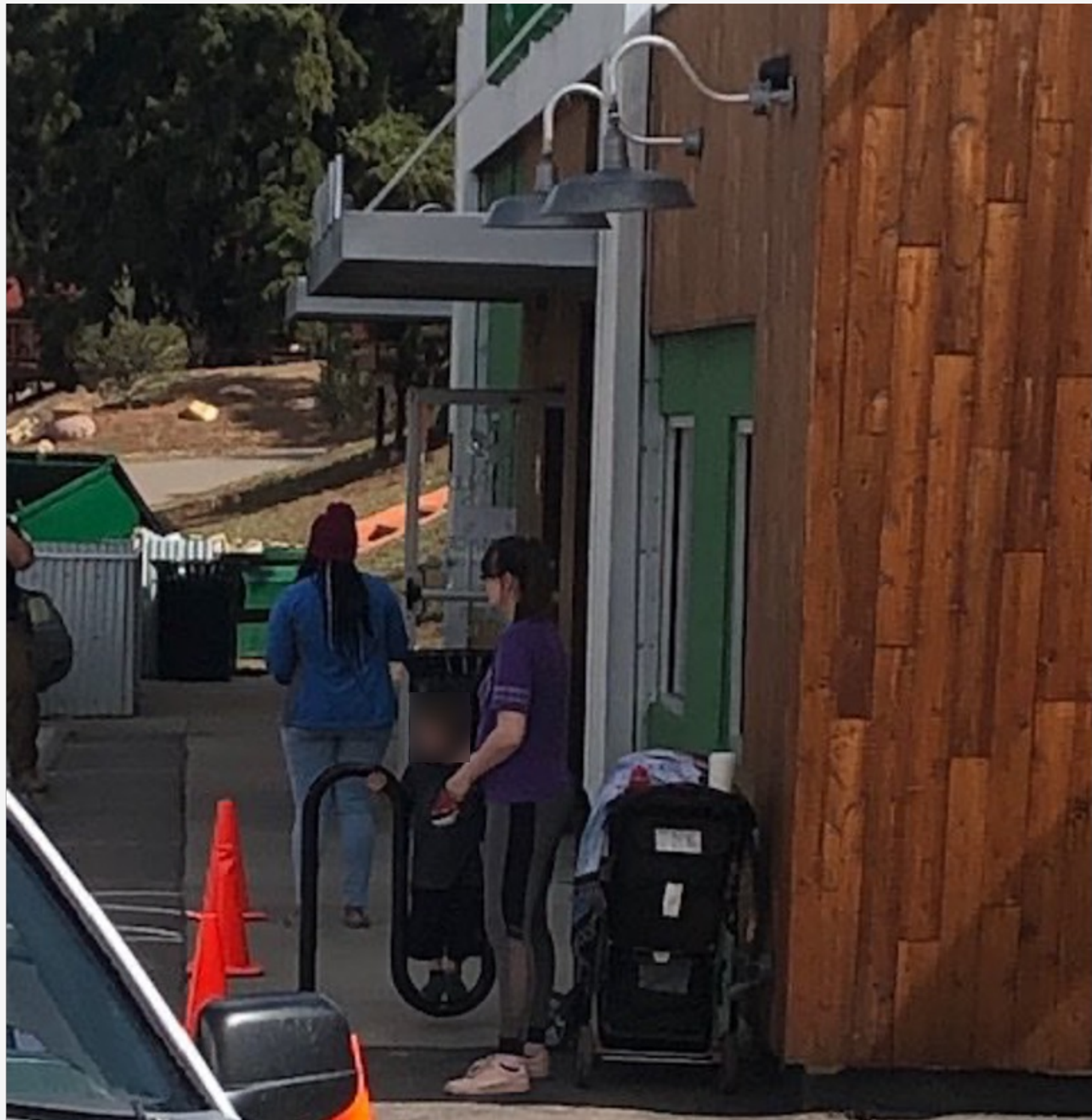
Washington  
103.2%↑  
2013-2019

Massachusetts  
140%↑  
2016-2019

In Oregon and California, pre-k and kindergartens aren't considered "schools"



# Scenes from a dispensary in Manitou Springs, Colorado





# It's All About the Industry



# The Industry Today



**Kid-friendly:** comes in shapes and colors attractive to children, like candy and soda



**Potent:** often made with concentrates of up to 95% pure THC (joints are ~18-23% THC)

**Aggressive Marketing:** free samples, billboard advertising, and other Big Tobacco tactics



**Contaminants:** in 2015, Colorado recalled hundreds of thousands of edibles containing banned pesticides

**Fighting regulation:** the pot industry has lobbied hard against common sense regulations such as warning labels, dosing rules, and bans on targeting children



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Big Tobacco's  
playbook is  
(still) addiction  
for profit



## Tobacco giant Altria takes 35% stake in Juul, valuing e-cigarette company at \$38 billion

December 20, 2018



"The all-cash deal announced Thursday has drawn criticism for Juul, which has positioned itself as an enemy of Big Tobacco.

"We are taking significant action to prepare for a future where adult smokers overwhelmingly choose non-combustible products over cigarettes by investing \$12.8 billion in Juul, a world leader in switching adult smokers," Altria CEO Howard Willard said in a statement."

<https://www.cnbc.com/2018/12/20/altria-takes-stake-in-juul-a-pivotal-moment-for-the-e-cigarette-maker.html>

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Silicon Valley start-up, Juul, used savvy social media marketing strategies to promote a trendy image associated with their products. They are currently under investigation by the FDA.



JUUL **JUUL** ✓  
@JUULvapor Follow

Having way too much fun at the #JUUL launch party #LightsCameraVapor #NYC



7:58 PM - 4 Jun 2015

**JUUL** **JUUL**  
January 12, 2016 · San Francisco, CA · 🌐

Looks like JUUL, Katy Perry and Orlando Bloom were hanging out at the Golden Globes! Read about it here from Vanity Fair!



VANITYFAIR.COM  
Katy Perry and Orlando Bloom Share a Vape Pen at Golden Globes, Ignite Dating Rumors

17

5 Shares

Like Comment Share

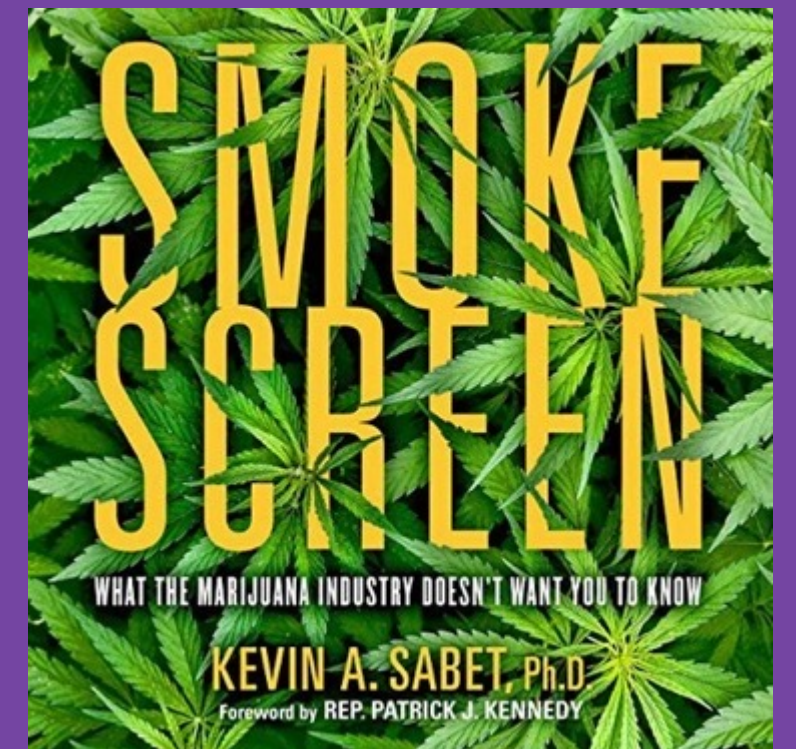
**JUUL** @JUULvapor · 28 Aug 2017  
Do you brûlée? RT if you enjoy dessert without the spoon with our Creme Brulee #JUULpods bit.ly/2wvDk38



preventing one of our big tobacco

# The Marijuana Underground

## Chapter 8



Despite  
legalization,  
the illicit pot  
market has  
grown



Photo: NBC News



The New York Times

April 27, 2019

"Getting worse,  
not better"

Illegal Pot Market Booming in  
California Despite Legalization

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 = 10,000 kg

Source: Oregon State Police

Just 18 to 30  
Percent of  
Oregon's  
Marijuana is  
Sold Legally

Former U.S. Surgeon General Jerome Adams warns against marijuana use by pregnant women, teens:

“This isn’t your mother’s marijuana; the marijuana of today is significantly more potent.”



“A dangerous drug”

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# Lancet 2019 Population-Level Study Conclusions

**5X**

more likely to  
develop psychosis

Compared to 3 times  
more likely for regular  
users of lower potency  
marijuana of the past.

Di Forti et al [https://doi.org/10.1016/S2215-0366\(19\)30048-3](https://doi.org/10.1016/S2215-0366(19)30048-3)



“Public policy is outpacing science when it comes to marijuana.

What we know is that marijuana is in fact addictive... this may come as a surprise to some people... We don't at this point have high-quality evidence that tells us that in fact, marijuana is both safe and effective for use for medical purposes.”

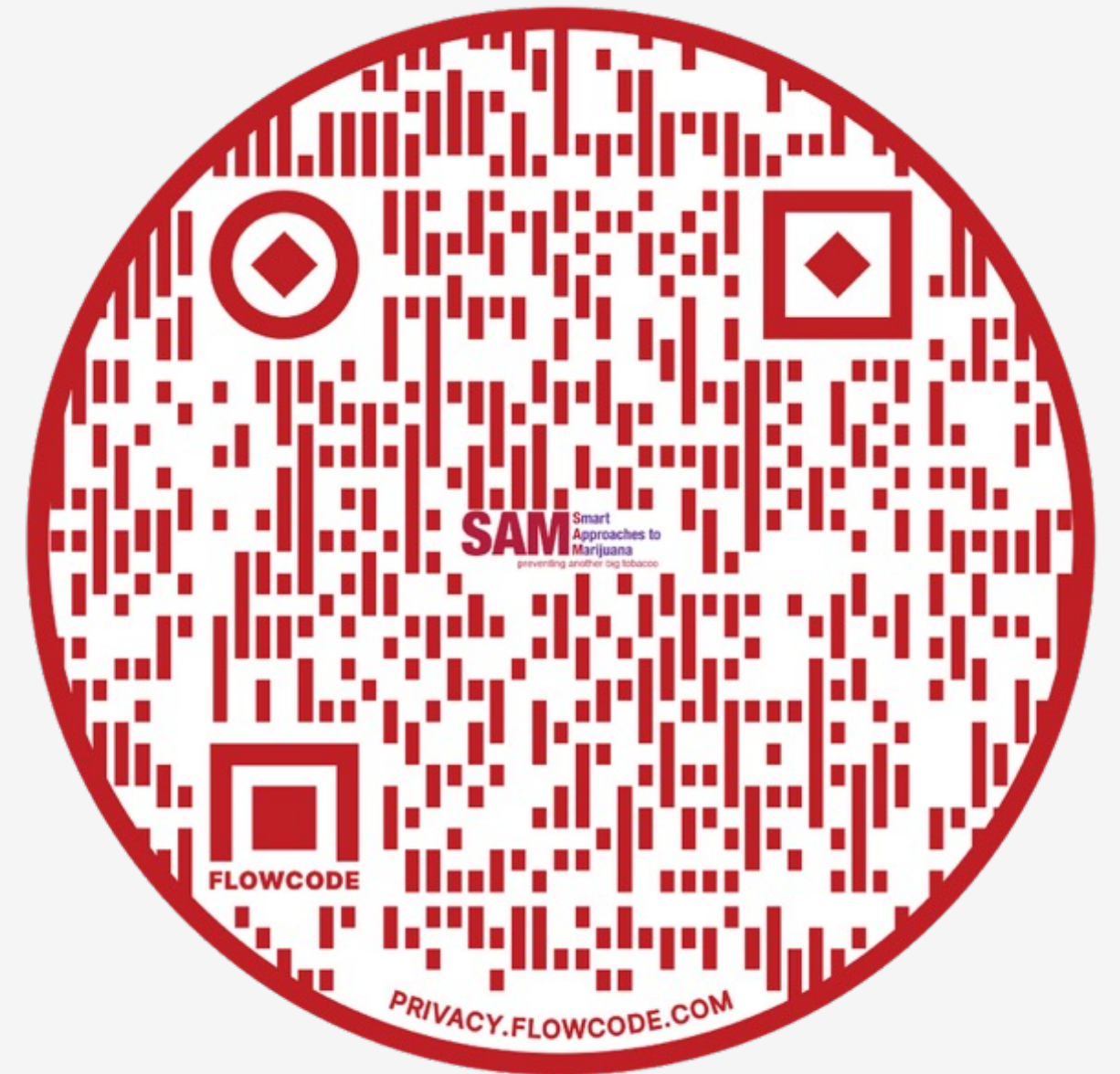
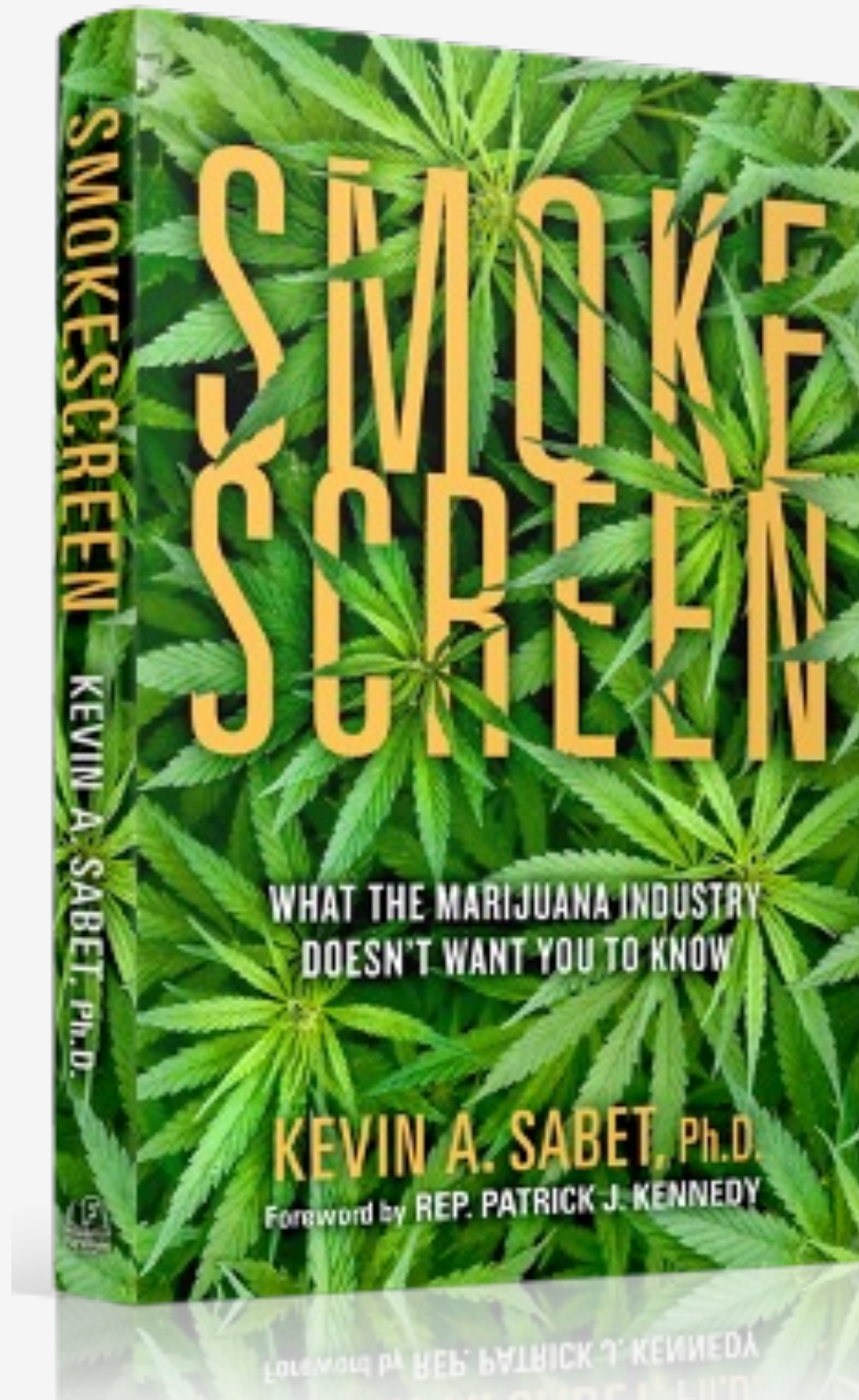
U.S. Surgeon General Vivek Murthy  
July 27, 2017

“[M]arijuana is, in fact, addictive”



Scan to  
purchase  
now!

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