



For or Against?

Struggling with Difficult and Divisive Issues

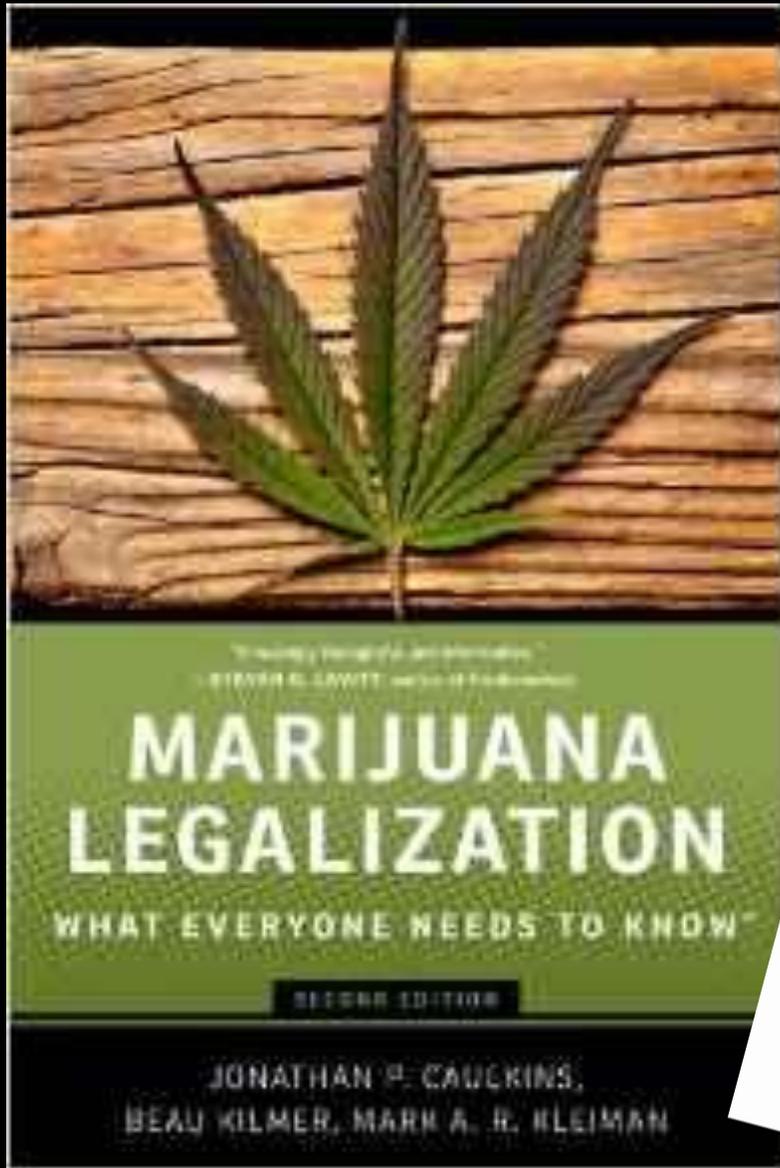
Becky Vaughn

VP of Addictions

**NATIONAL COUNCIL
FOR BEHAVIORAL HEALTH**

STATE ASSOCIATIONS OF ADDICTION SERVICES

Stronger Together.

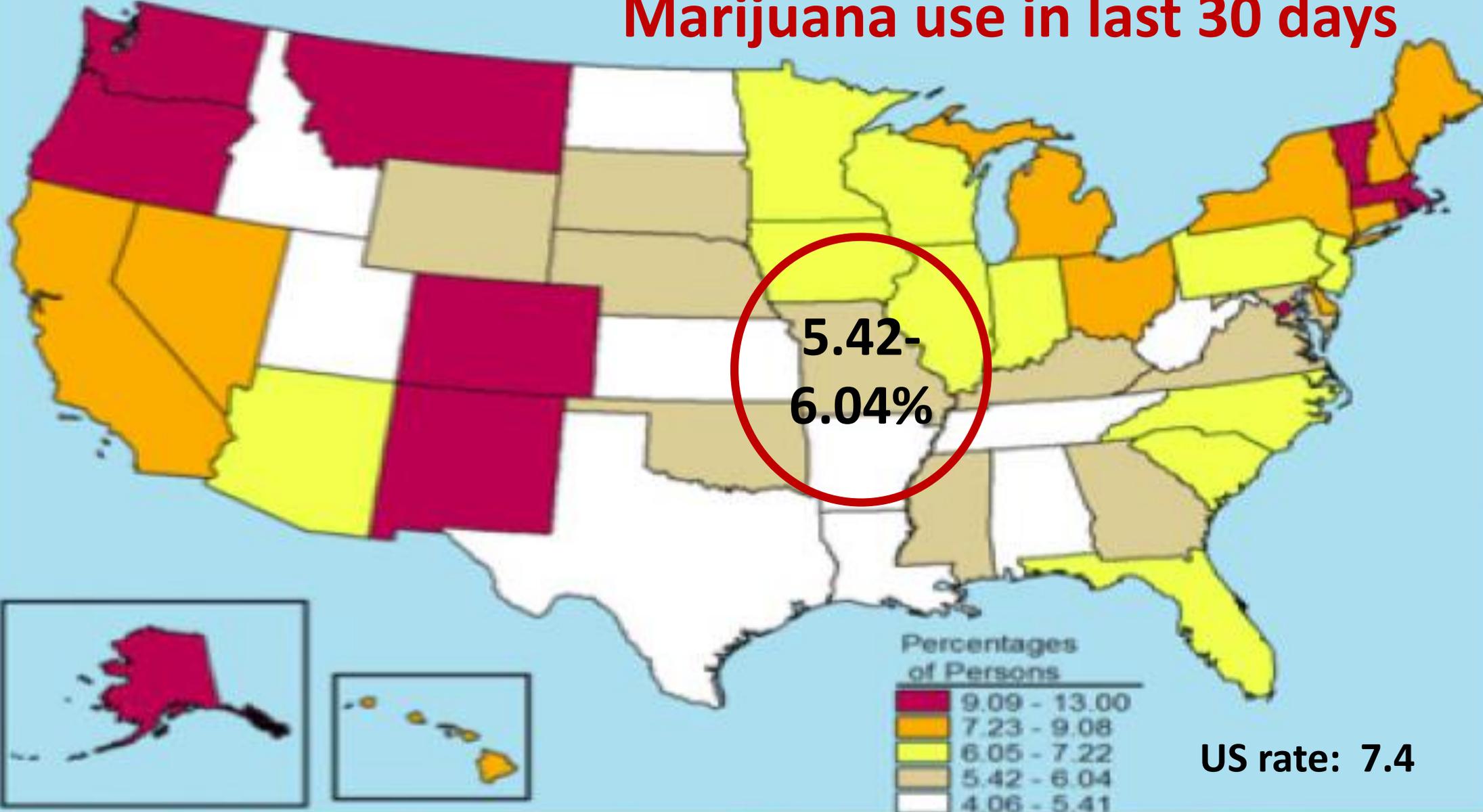


Marijuana (herbal cannabis and cannabis resin-hashish) or **cannabis** is the most commonly used illegal drug in the world. Various forms have been used for thousands of years for medicinal, social, and aesthetic effects and other parts of the plant for food, fuel, and fiber.

What kind of
legalization?

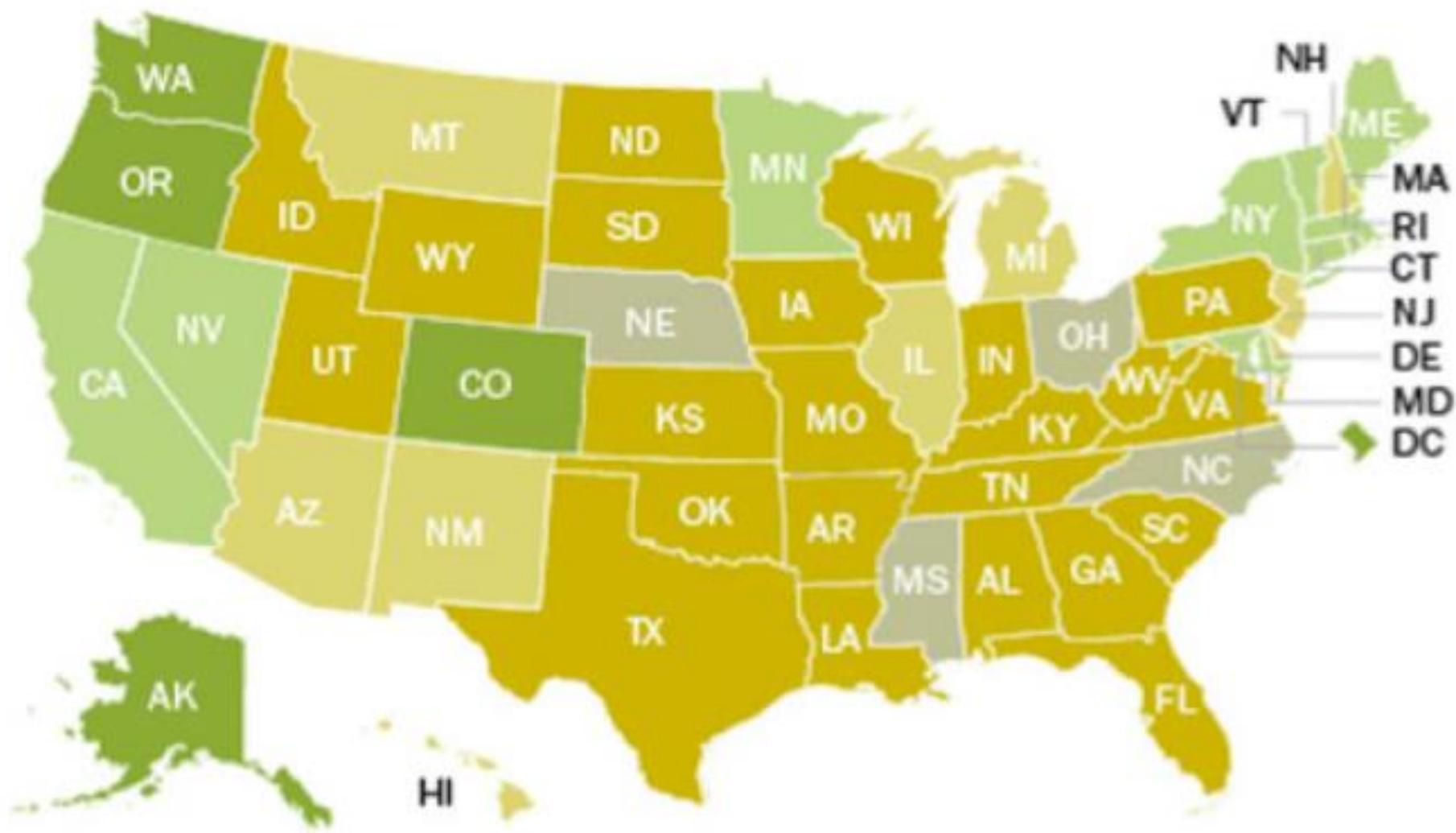
Compared to what
kind of prohibition?

Marijuana use in last 30 days



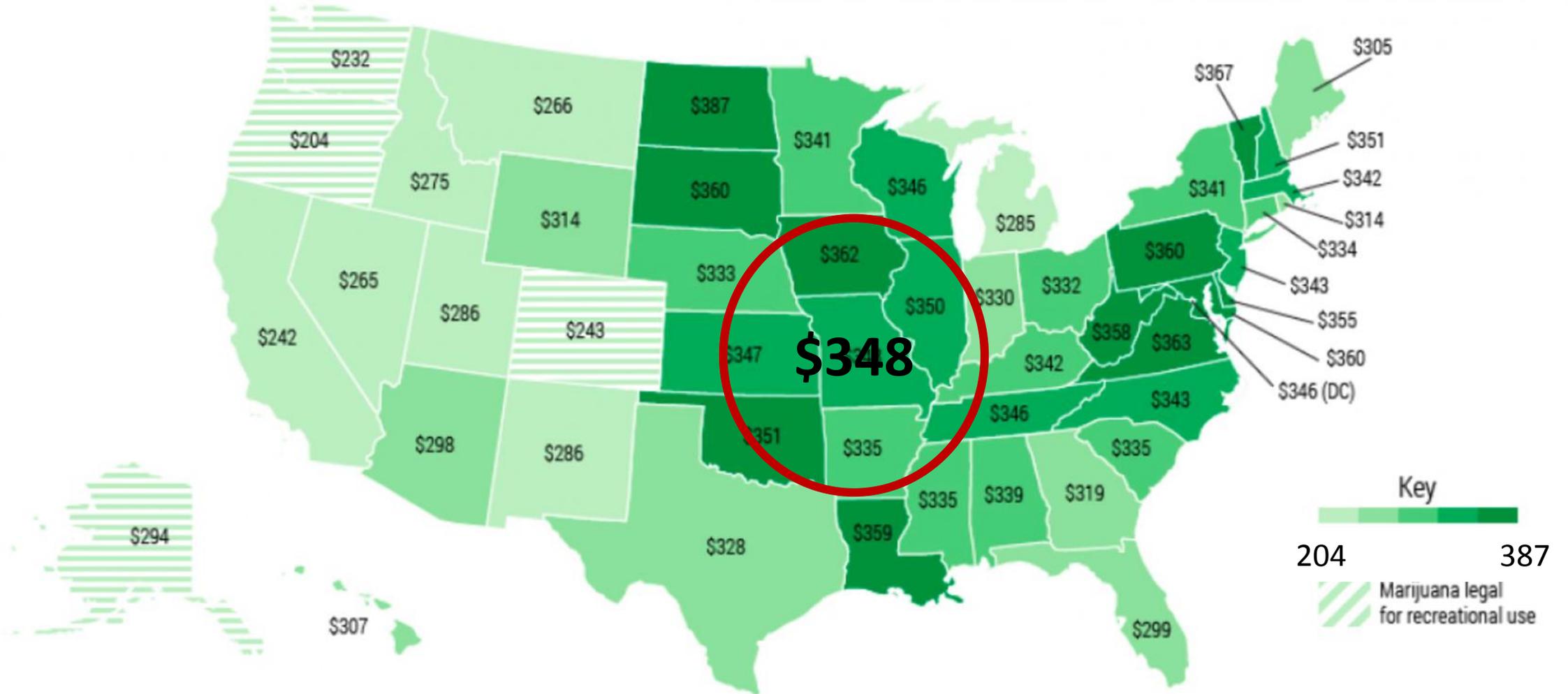
SOURCE: SAMHSA, Center for Behavioral Health Statistics and Quality, NSDUH, 2011 and 2012. Based on annual averages, 2011-2012.

Legal
 Medicinal use only and decriminalized
 Decriminalized
 Medicinal use only
 Illegal



THE PRICE OF WEED IN EACH STATE

The states where the price for an ounce of high quality marijuana are the least expensive are also the states where recreational marijuana is legal.



24+DC





- ✓ Alaska
- ✓ Colorado
- ✓ Oregon
- ✓ Washington
- ✓ DC
- ✓ Guam
- ✓ Portland, ME
- ✓ Detroit, Flint,
Jackson, Lansing
Ferndale, MI



154 million 48.3%

18 million 5.6%



100 million 31.4%



185 million 58%





MUSHROOMS

Crusper Chocolate

FRESH

Colombian Thai MEXICAN

SALES

Cannabis Instant Coffee

Cannabis Chocolate Milk

HERBI

HERBI

HERBI

CannaMint

Canna Biscuits

Canna Biscuits

Canna Biscuits

COCA Candy

COCA Candy

Finest Cocabempy's

Finest Cocabempy's

Finest Cocabempy's

Hemp Biscuits

Hemp Biscuits

Hemp Canna Lollies

HASH pops

Canna Reggae

CANNABIS pops

Hemp PLOLLIES

CANNABIS-L

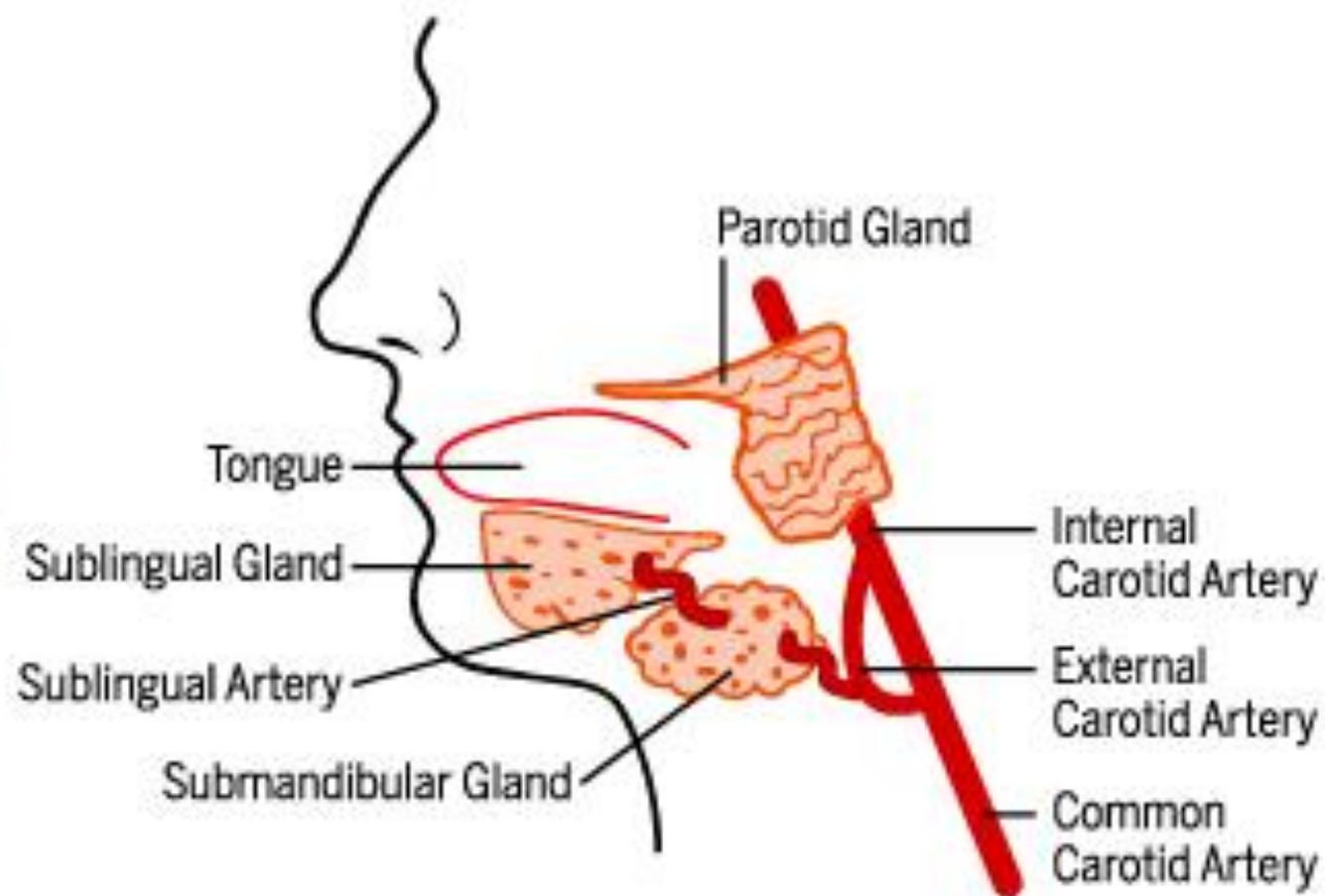
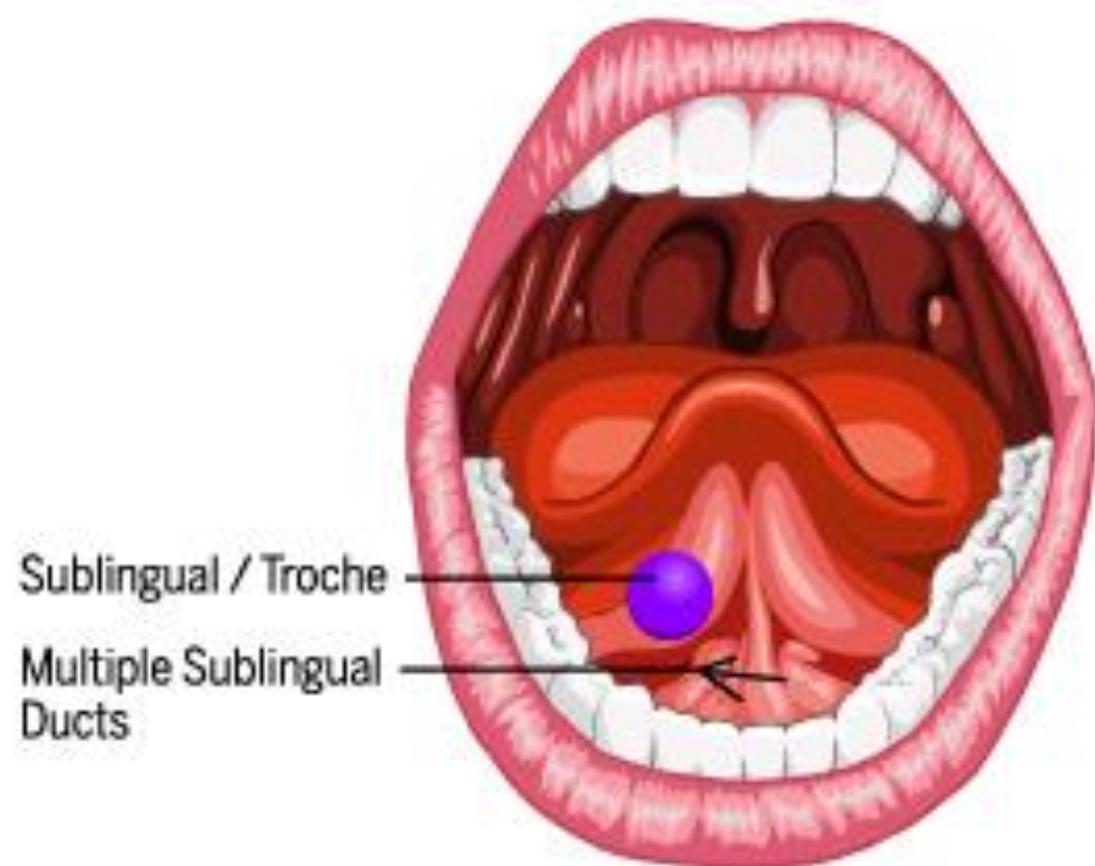
JUMBO

SMIRNICE ICE

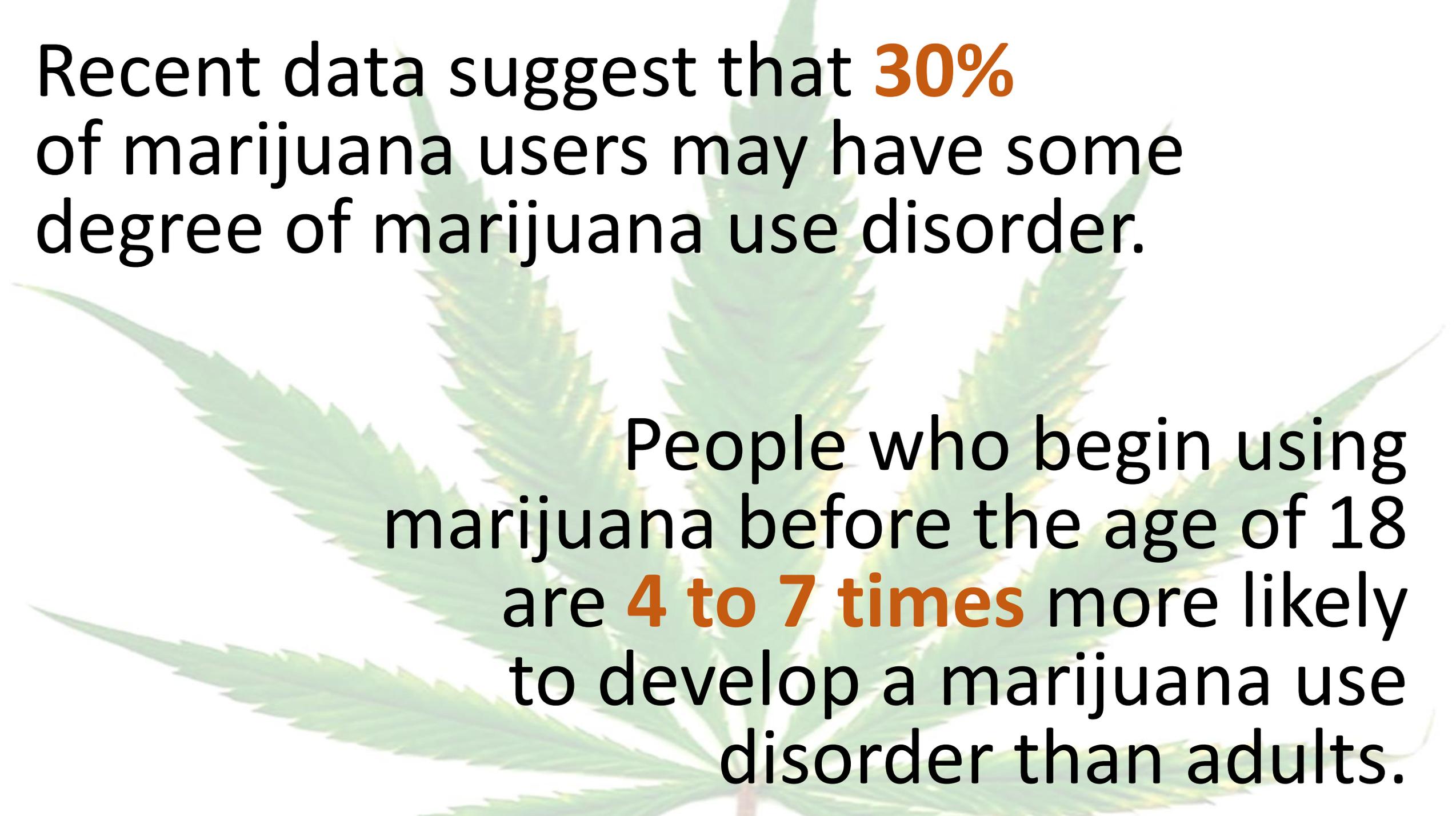
SMIRNICE ICE

LEEU PILSEN

LEEU PILSEN



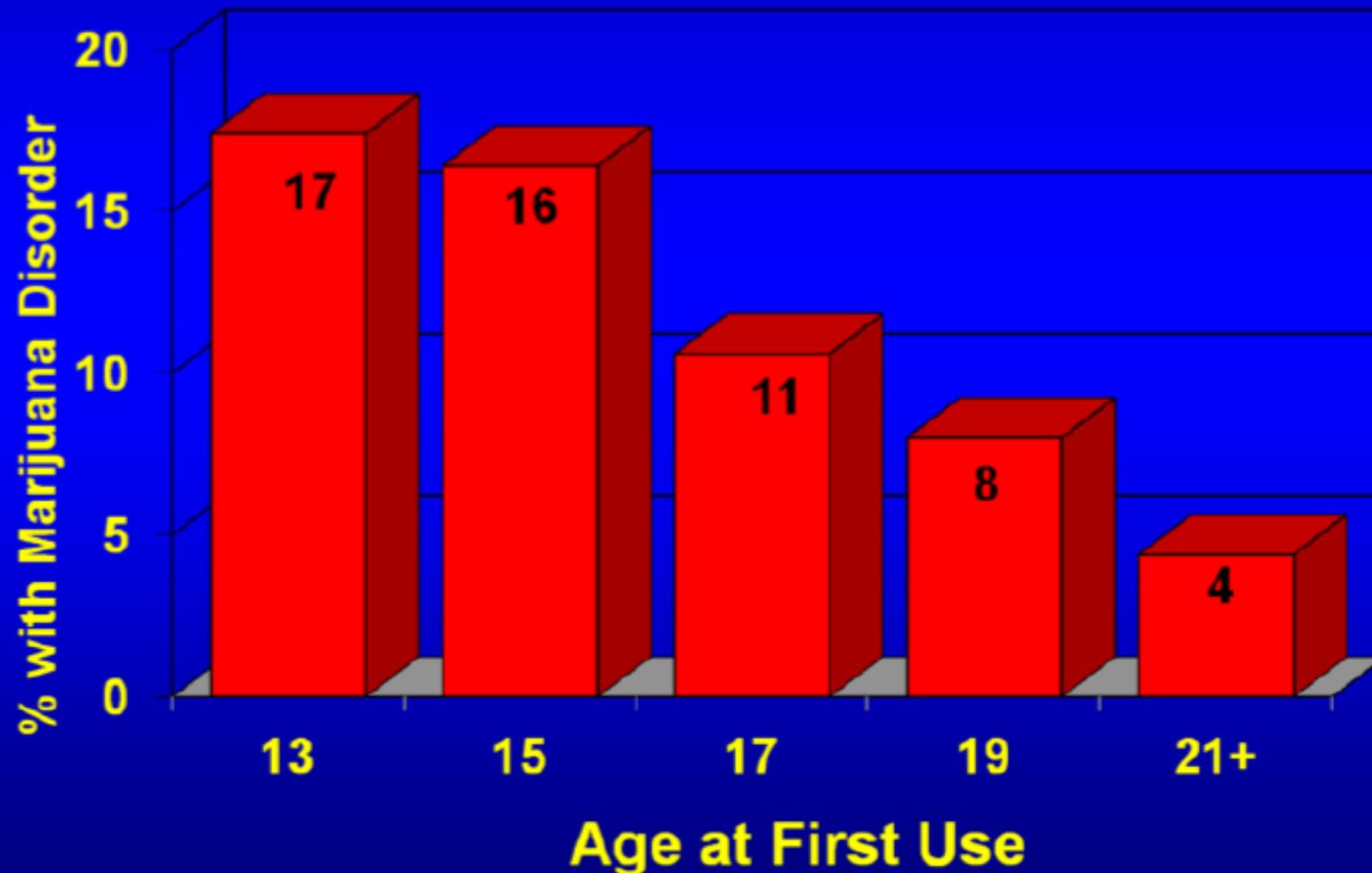




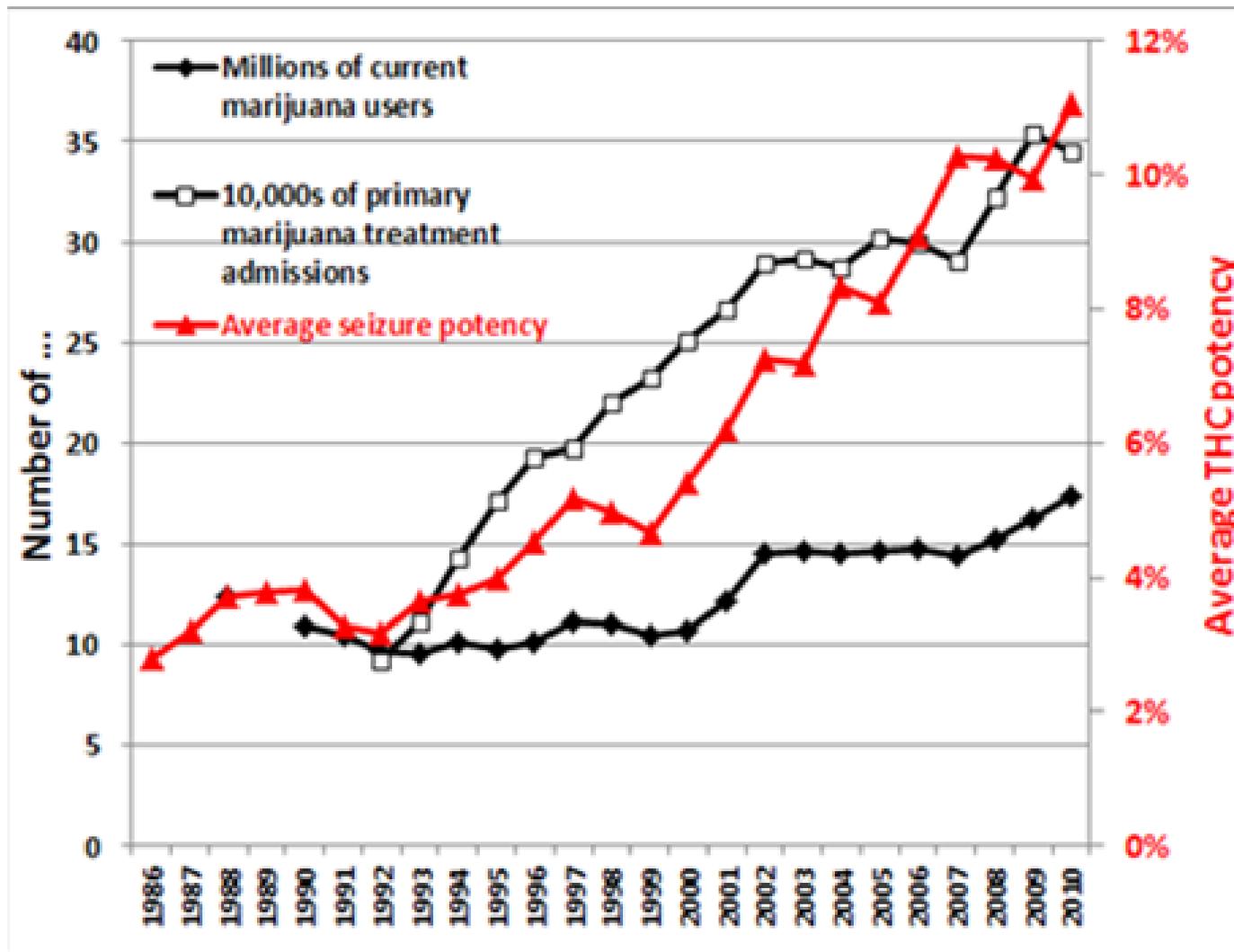
Recent data suggest that **30%** of marijuana users may have some degree of marijuana use disorder.

People who begin using marijuana before the age of 18 are **4 to 7 times** more likely to develop a marijuana use disorder than adults.

Younger Age at First Use Has Higher Risk of Marijuana Dependence

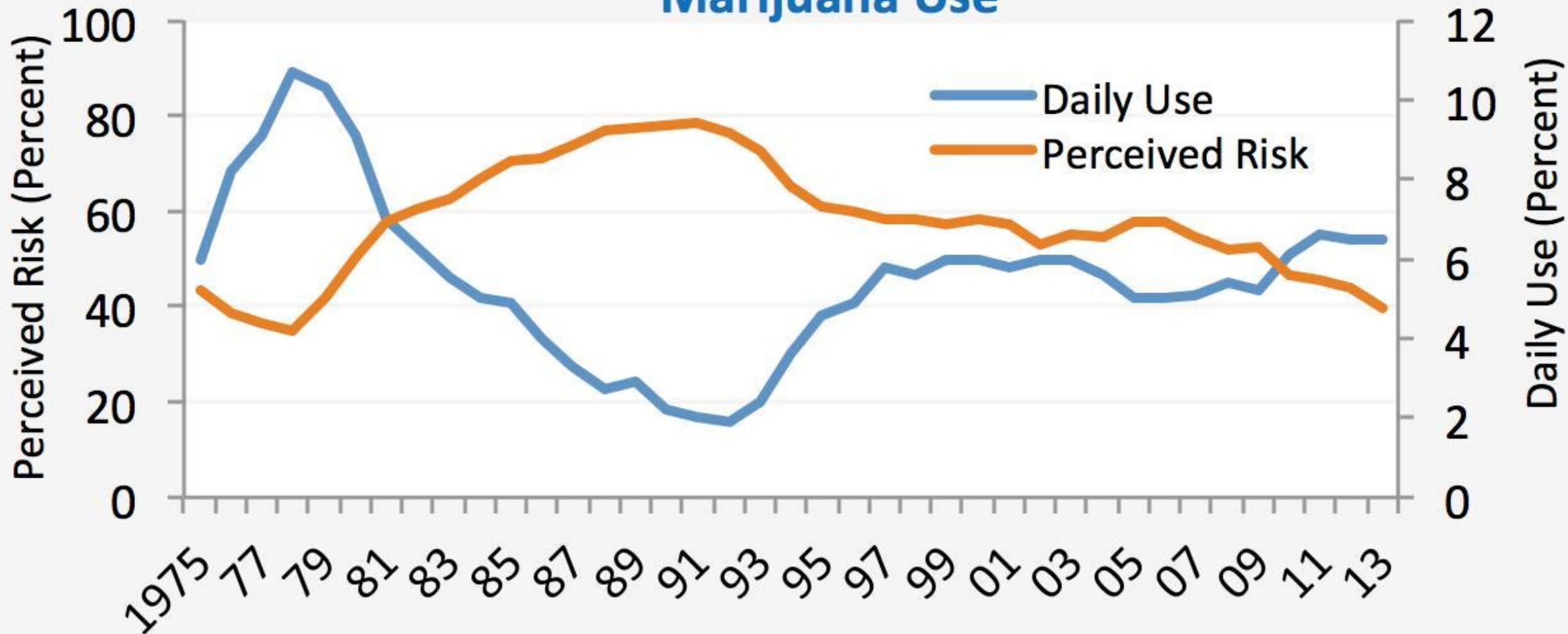


MARIJUANA USERS, TREATMENT ADMISSIONS, AND AVERAGE POTENCY: 1986-2010



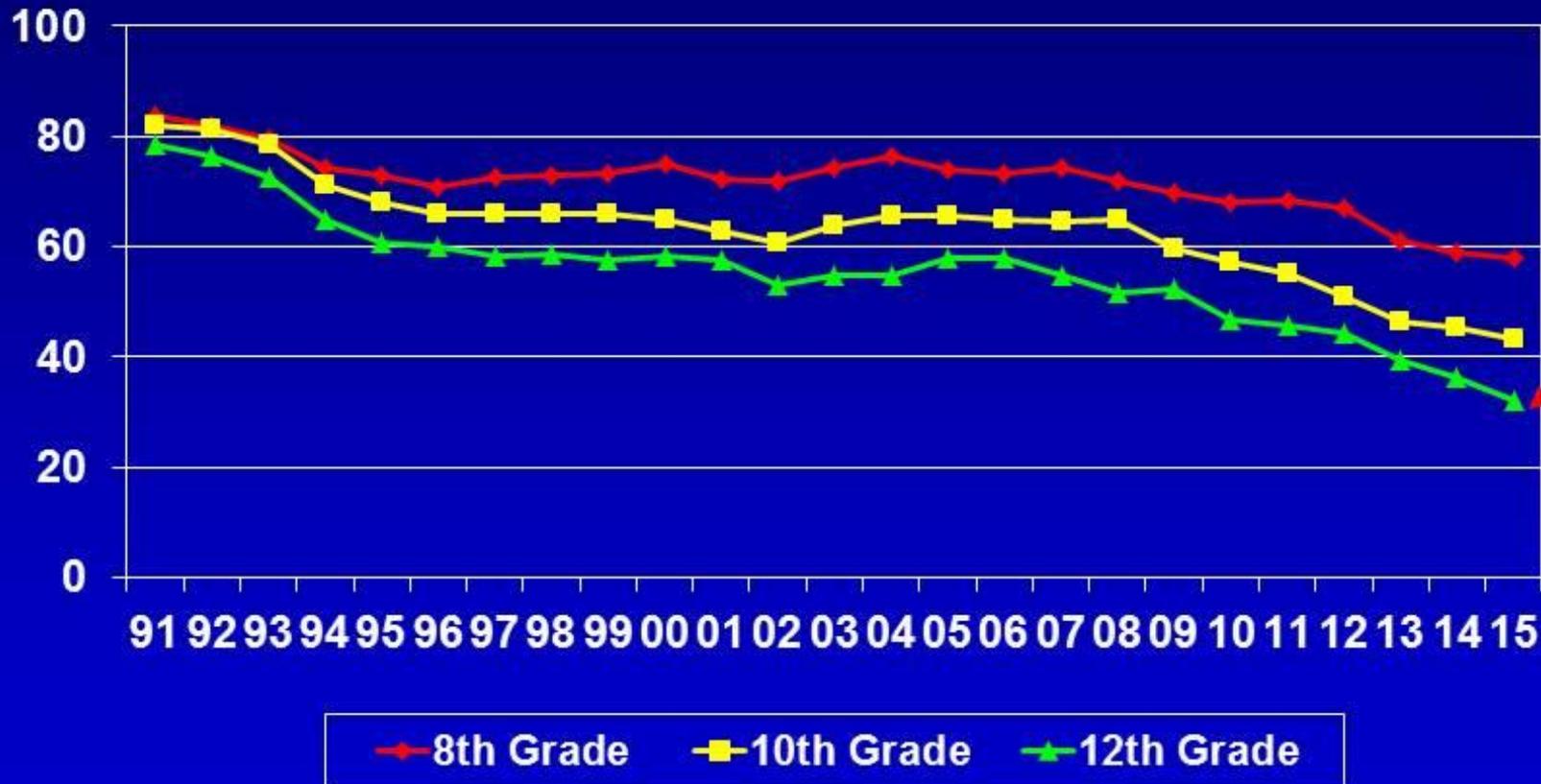
Sources: [NSDUH](#), [TEDS](#), National Seizure System

Percentage of U.S. 12 Grade Students Reporting Daily Marijuana Use vs. Perceived Risk of Regular Marijuana Use



Source: The Monitoring the Future study, the University of Michigan

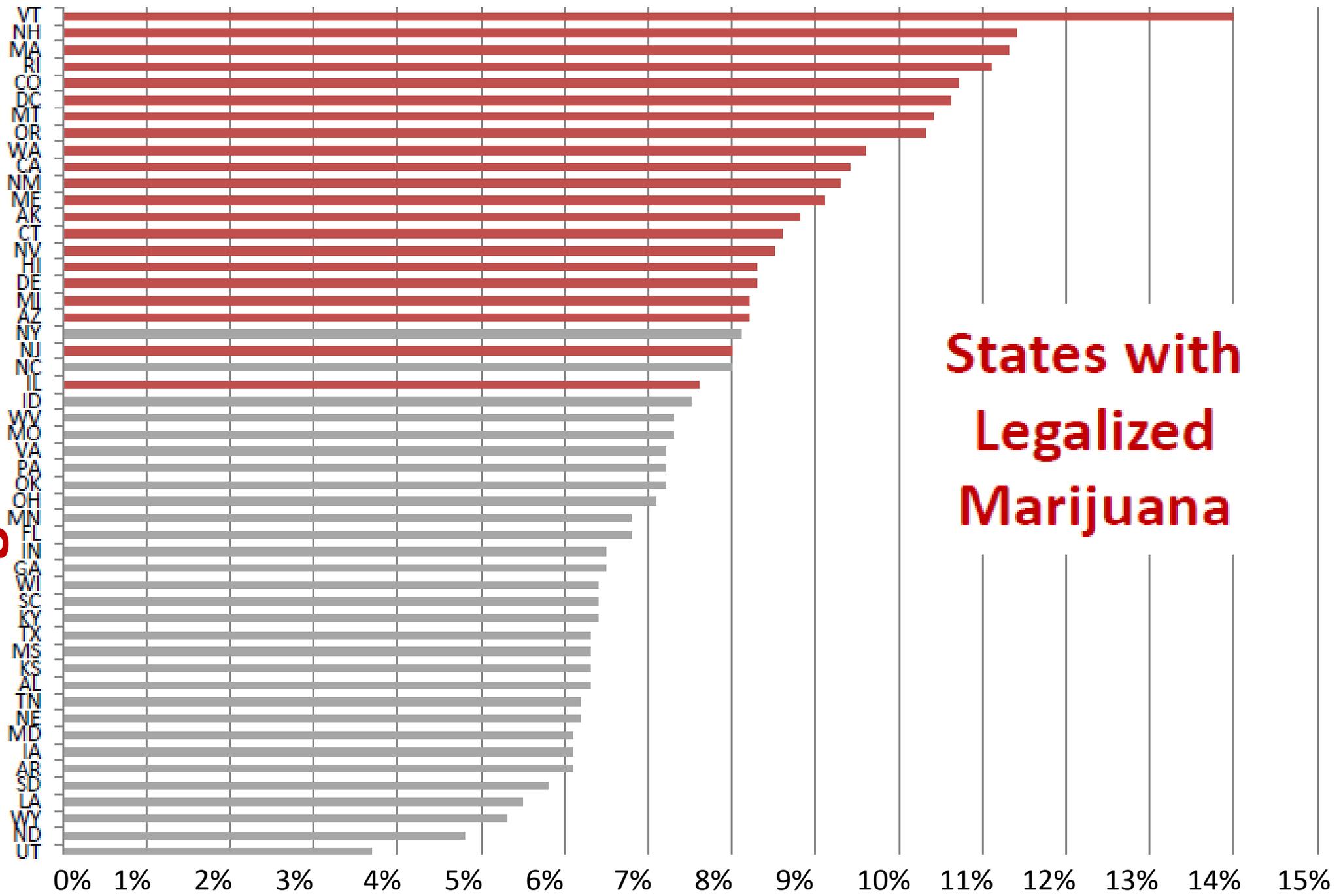
Percent Perceiving Great Risk of Smoking Marijuana Regularly



Denotes significant difference between 2014 and 2015.

SOURCE: University of Michigan, 2015 Monitoring the Future Study

% Using Marijuana Past Month ages 12-17



States with
Legalized
Marijuana

TEEN CANNABIS USERS HAVE POOR LONG-TERM MEMORY IN ADULTHOOD

Heavy use of drug linked to changes in hippocampus, poor memory for life events

March 12, 2015 | by Marta Pizarro

text size A A A

CHICAGO --- Teens who were heavy marijuana users -- smoking it daily for about three years -- had an abnormally shaped hippocampus and performed poorly on long-term memory tasks, reports a new Northwestern Medicine study.

The hippocampus is important to long-term memory (also known as episodic memory), which is the ability to remember autobiographical or life events.

The brain abnormalities and memory problems were observed during the individuals' early twenties, two years after they stopped smoking marijuana.

Young adults who abused cannabis as teens performed about 18 percent worse on long-term memory tests than young adults who never abused cannabis.

"The memory processes that appear to be affected by cannabis are ones that we use every day to solve common problems and to sustain our relationships with friends and family," said senior author Dr. John Csernansky, the Lizzie Gilman professor and chair of psychiatry and behavioral sciences at Northwestern University Feinberg School of Medicine and Northwestern Memorial Hospital.

The **study** was published March 12 in the journal *Hippocampus*.

The study is among the first to say the hippocampus is shaped differently in heavy marijuana smokers and the different looking change is directly related to poor long-term memory performance. Previous studies of cannabis users have shown either the oddly

HIGHLIGHTS

- Study links oddly shaped hippocampus to poor long-term memory in former marijuana users
- The longer teens used cannabis, the more abnormal the hippocampus as adults
- Former users perform 18 percent worse on long-term memory test
- Cannabis affects short and long-term memory

Marijuana Use Among Pregnant Women

Percentage Use in Past Month by **Pregnancy Status**

Drug	Total Sample	Non-pregnant Women	Pregnant Women
Illicit drugs	10.5	10.7	5.9
Marijuana and Hashish	8.2	8.3	5.2
Cigarettes	24.2	24.6	15.9
Alcohol	53.8	55.5	8.5

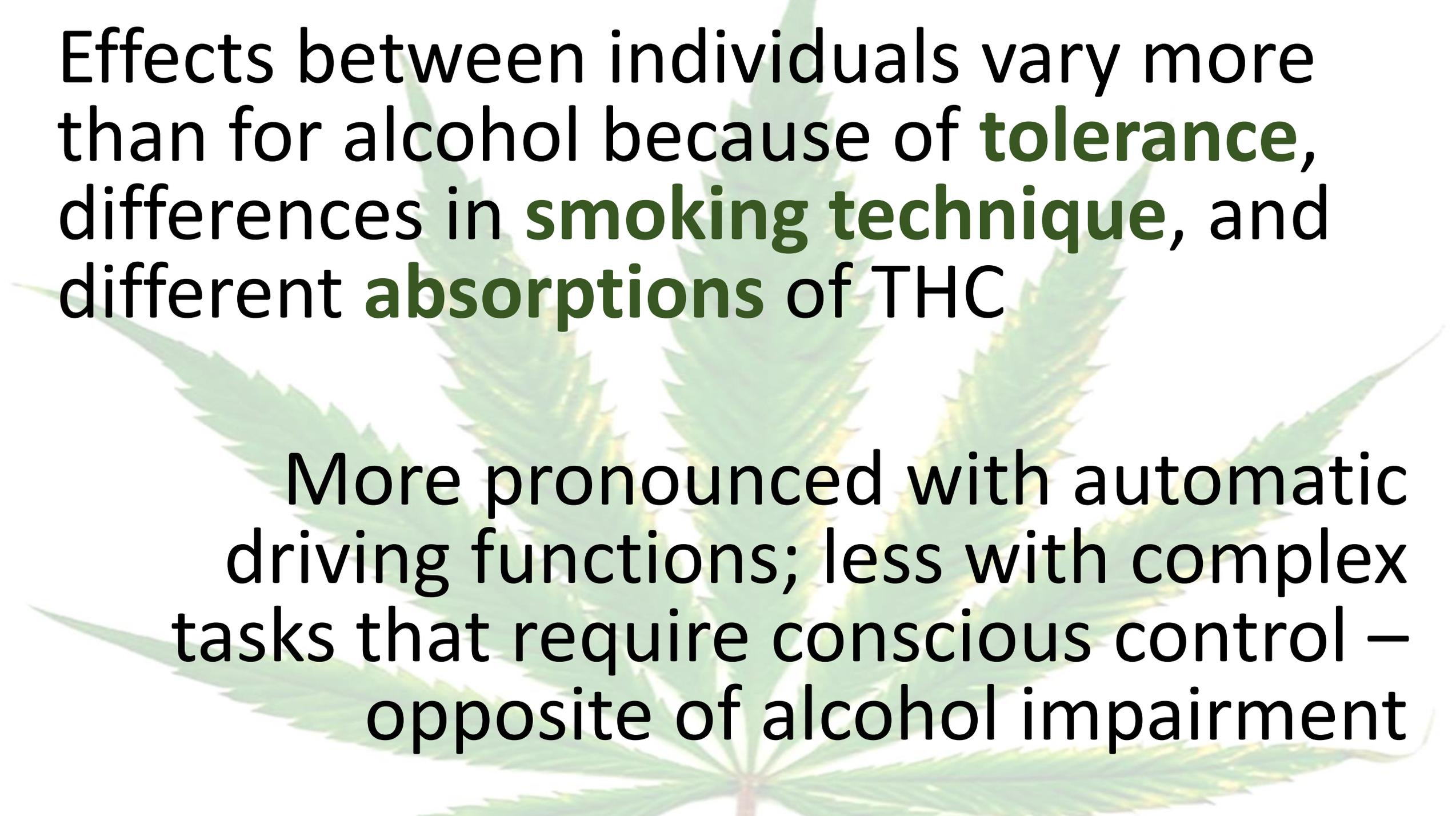


10 pilots + 8 hr simulator + 19mg THC + 24 hrs =

mean performance on flight tasks showed impairment in all variables, some showed significant impairment



pilots reported no awareness of impaired performance



Effects between individuals vary more than for alcohol because of **tolerance**, differences in **smoking technique**, and different **absorptions** of THC

More pronounced with automatic driving functions; less with complex tasks that require conscious control – opposite of alcohol impairment



National Institute
on Drug Abuse

DRUGGED DRIVING

Car crashes are a leading cause of death and injury among young people, and alcohol, drugs, or some combination are frequently a contributor to those crashes. Large numbers of U.S. high school (HS) seniors and college students put themselves and others at great risk of harm by driving after using illicit drugs or drinking alcohol; they also put themselves at risk by riding in a vehicle whose driver is intoxicated.

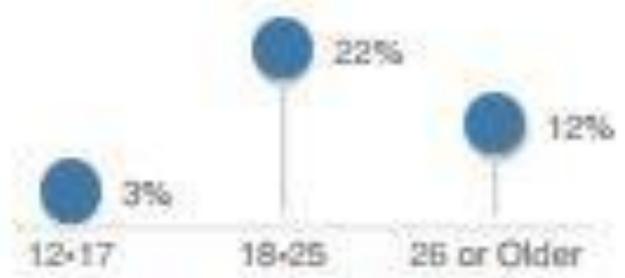
WARNING

Acute marijuana use can impair driving by affecting critical thinking and motor skills^{1,2}



32,000,000 people drove after drug or alcohol use in 2012

The highest rate was among 18- to 25-year-olds³



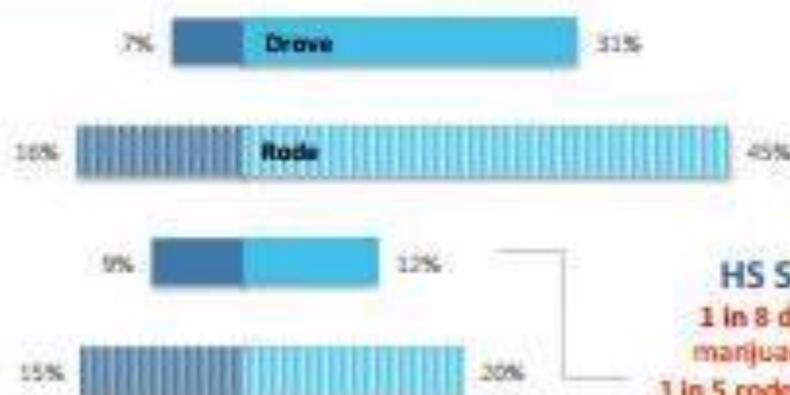
Impaired Driving by Age

Driving after marijuana use surpasses drunk driving

College and HS seniors who drove or rode with a driver after marijuana use

ALCOHOL

MARIJUANA



College Students

Nearly 1 in 3 drove after marijuana use and nearly 1 in 2 rode with a driver who had been using.⁴

HS Seniors

1 in 8 drove after marijuana use and 1 in 5 rode with a driver who had been using.⁵

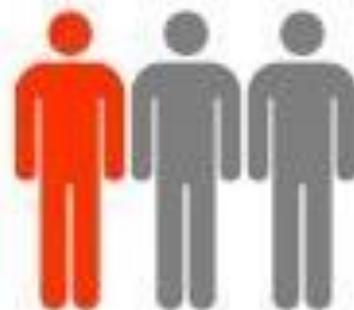
2X

HS seniors who smoke marijuana are 2X more likely to receive a ticket

65%

and 65% more likely to get into a car crash than those who don't smoke.⁵

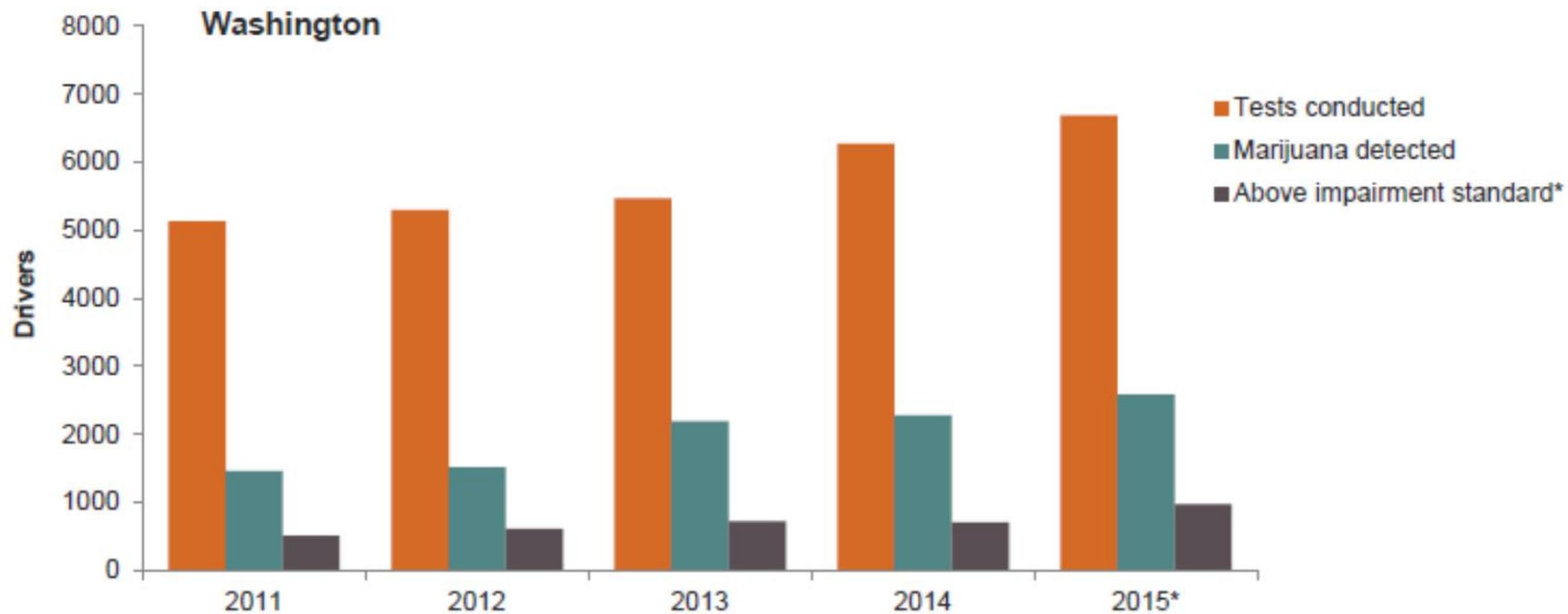
In 2009, 1 in 3 fatally injured drivers tested positive for drugs.⁶



¹Hartman & Huestis, 2013; ²Sewell et al., 2009; ³SAMHSA, NSDUH; ⁴Whitehill et al., 2014; ⁵O'Malley & Johnston, 2013.

⁶Drug test results were among drivers tested. Traffic Safety Facts: Drug Involvement of Fatally Injured Drivers, 2010.

Positive driver tests increased in Colorado and Washington.



Alcohol

Negative response with high dose

Low dose may have benefits

1 hour of effect, 3 hours of metabolism

Opioids

Treats severe pain

Predictable side effects

Known dose response curve

Study in Australia tracked 1600 girls for 7 yrs

Those who used marijuana **every day** were **5 times** more likely to suffer from depression and anxiety

Teenage girls who used the drug at least **once a week** were **twice** as likely to develop depression

Cannabis use **increased the risk of developing schizophrenia symptoms** – specific to cannabis and early onset – **prior to age 15**

1. Marijuana smoke contains several of the **same carcinogens** as tobacco smoke
2. Benzopyrene is in marijuana tar at **higher concentrations** than tobacco tar
3. Marijuana smoking involves inhalation of **3 times** the amount of tar as tobacco smoke
4. Head and Neck Cancers--Risk **2.6** fold greater in cannabis users and **3 fold** greater increase in those **< 55 yrs**
5. Among non-tobacco smokers, marijuana smokers had increased risk for **prostate** cancer and **cervical** cancer
6. Increased risk of **malignant primary adult-onset glioma** for marijuana smokers

Most countries forbid growing, selling,
and possessing which makes lawbreakers
out of the more than

125 million

people who have used in the past year,
and also those who supply them.



\$40 billion

*“Legalizing would
replace illicit markets
with aboveboard
industry and provide
revenue”*

1. Use tolerated, but production/sale forbidden
2. Possession of small amounts a civil violation—
decriminalization
3. Use and sale of small quantities tolerated but production
and wholesale distribution forbidden (Netherlands)
4. Production, sale and use permitted only for certain
specific medical purposes
5. Activity restricted to noncommercial with users growing
their own or forming coops
6. Commercial legalization includes more or fewer
restrictions on sale/use as compared to alcohol or
caffeine

“compassionate use” program

1976-1992

public empathy for battling cancer and AIDS

1980s and 1990s

SB420

2003

1960s

1970s and 1980s

1992

1996

state legislation to enable therapeutic research

San Francisco-
“lowest priority”

CA--The person’s health would benefit from the use of marijuana in the treatment of cancer, anorexia, AIDS, chronic pain, spasticity, glaucoma, arthritis, migraine, or any other illness for which marijuana provides relief.

How Medical is medical-marijuana?

3%

.4%

.04%

How Medical is medical-marijuana?

2000

20

8

How Medical is medical-marijuana?

No limit

4

2

1996-2000

Ballot initiative

2000-2009

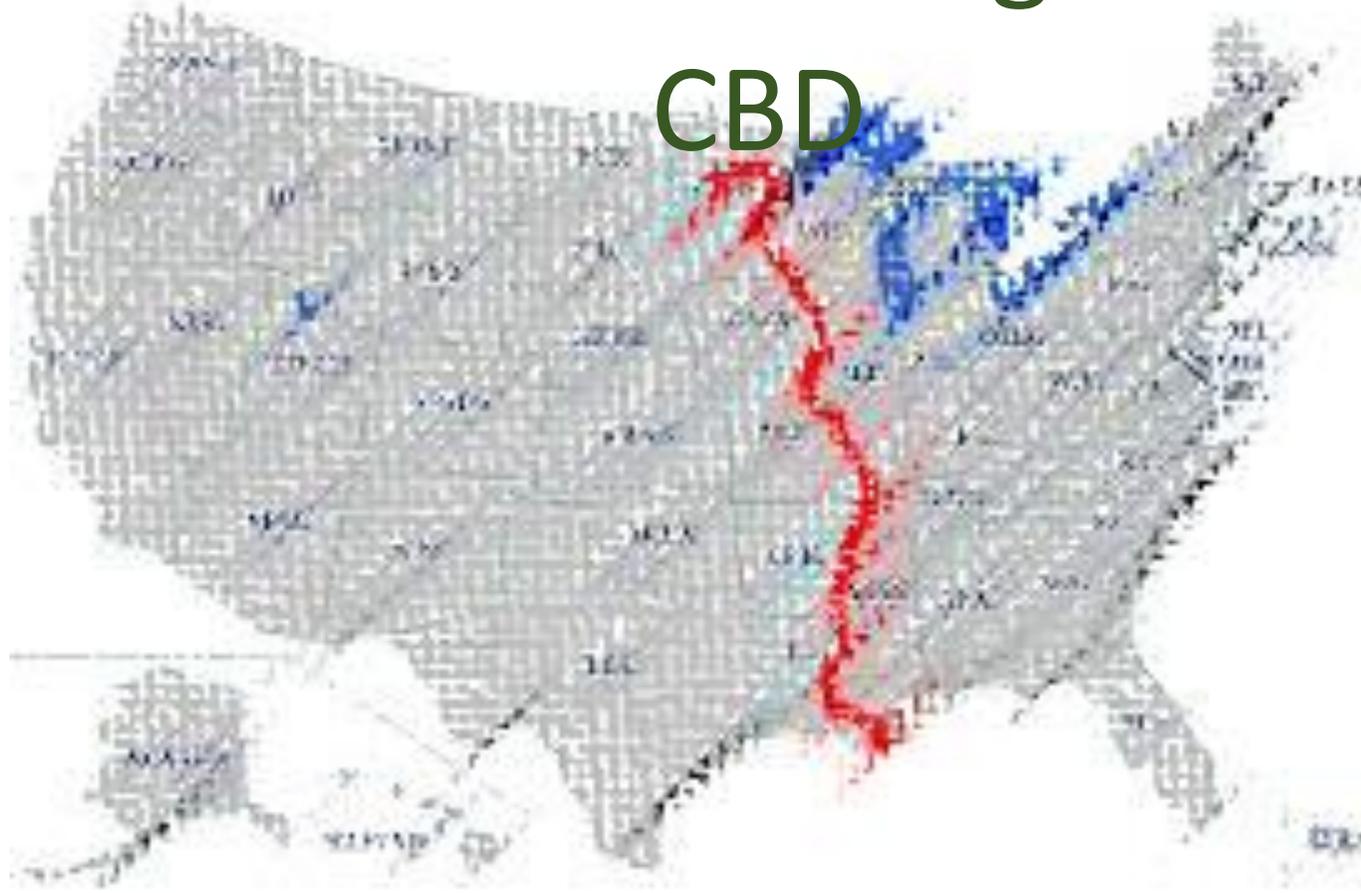
Early legislative

2009-2014

Late legislative

2014-

CBD



Are CBD laws really about marijuana?

- Yes** access to products derived from cannabis
- No** no potential for use/dependence
- Yes** convenient and nonthreatening door-opener
- No** laws target specific conditions and operate as defense against prosecution with no provision for production or sale



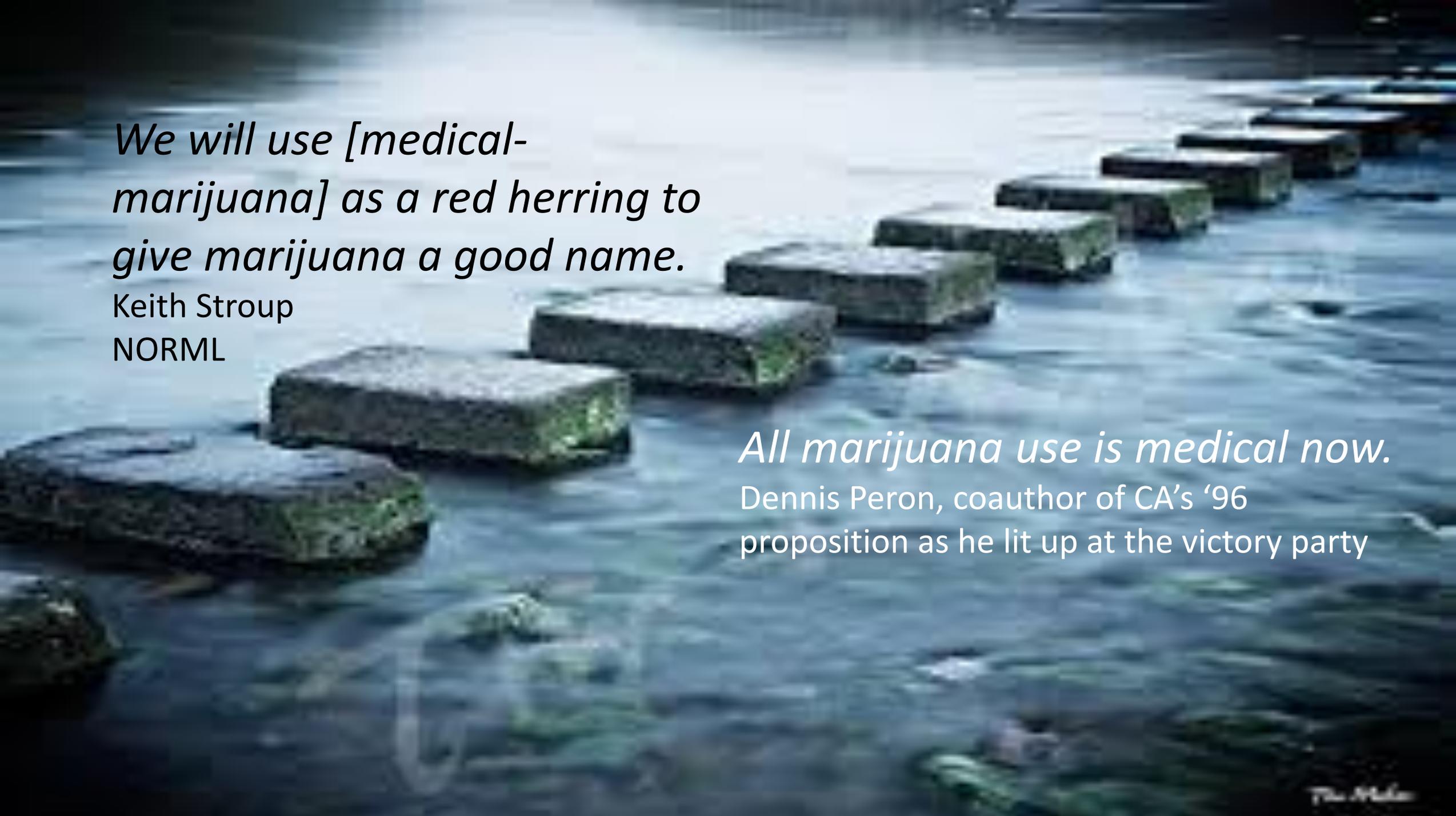
SANJAY
GUPTA | MD

Who's recommending/"prescribing"?

CO—**12** physicians accounted for
over half of the **100,000+** registrations

"kush docs" "420 docs" advertise
and pricing is competitive

"regular" physicians resist—**lack** of
lab-testing, standardization,
side effects, liability

A row of rectangular concrete stepping stones is laid out in a shallow, rippling stream. The water is a clear, light blue-grey color, and the stones are a dark grey with some green moss or algae growing on their surfaces. The stones recede into the distance, creating a sense of depth and perspective.

*We will use [medical-
marijuana] as a red herring to
give marijuana a good name.*

Keith Stroup
NORML

All marijuana use is medical now.
Dennis Peron, coauthor of CA's '96
proposition as he lit up at the victory party

Regulatory area	Goals	Regulatory Examples
Cultivation, production, and processing	Manage cultivation, limit supply, product standardization, quality control, eliminate diversion, protect the environment	Licensure, canopy limits, location (e.g., distance from schools), plant tracking, use of pesticides, employee age and criminal history, flower/trim tracking, concentrates/extracts standards, waste management, THC/CBD restrictions, packaging, employee age and criminal history, owner/employee residency requirements, product labeling, warning labels
Sale, consumption, and possession	Limit access by youth, reduce arrests, eliminate diversion	Age restrictions, product sale limits, inventory control, age of seller and employee restrictions, outlet types and density restrictions, product pricing, advertising, nonresident sale/use, hours of operation, advertising, gifting, home grows, use in public, personal possession of amounts above state limits
Taxes/finance	Limit abuse and dependence, raise revenue, limit illegal markets, prevent diversion	Excise taxes; licensure fees; use of proceeds, i.e., general fund and/or earmarking of marijuana tax revenue for prevention, treatment, regulatory enforcement, and research
Public health/public safety	Limit abuse and dependence, quality control, prevent impaired driving	Use and driving, workplace use, prevention and treatment programs, use/consequences monitoring and evaluation
Governance	Oversee and ensure compliance, mount public information campaign focused on legalization costs and benefits	State regulatory oversight, regulatory enforcement, marijuana policy outcome monitoring, regulatory flexibility

	Alaska	Colorado	Oregon	Washington	DC
Age	21 and older	21 and older	21 and older	21 and older	21 and older
Resident sales	Up to 1 ounce	Up to 1 ounce	Up to 1 ounce	Up to 1 ounce	Sales illegal
Sales to minors	Determined by Marijuana Control Board	License revocation or up to \$100,000 in fines	License cancellation and \$4,950 fine	License cancellation and \$2,500 fine	N/A
Public consumption “tourist” distinction	Unlawful	Unlawful	Unlawful	Unlawful	Unlawful
Personal use growing	Permitted	Permitted	Permitted	Not permitted	Permitted
Local ordinances	Permitted	Permitted	Local governments may not prohibit sales or use, except by general election	Permitted	Congress can intervene

	Colorado	Washington
Tax rates	15% excise 10% special sales	37% retail sales
State sales tax	2.9%	6.5%
Taxes on medical marijuana	Only sales tax	Same
Projected FY2016 recreational marijuana tax revenue (millions)	\$125.0	\$115.1
Actual receipts, first quarter fiscal year 2016 (millions)	\$34.0	\$38.6

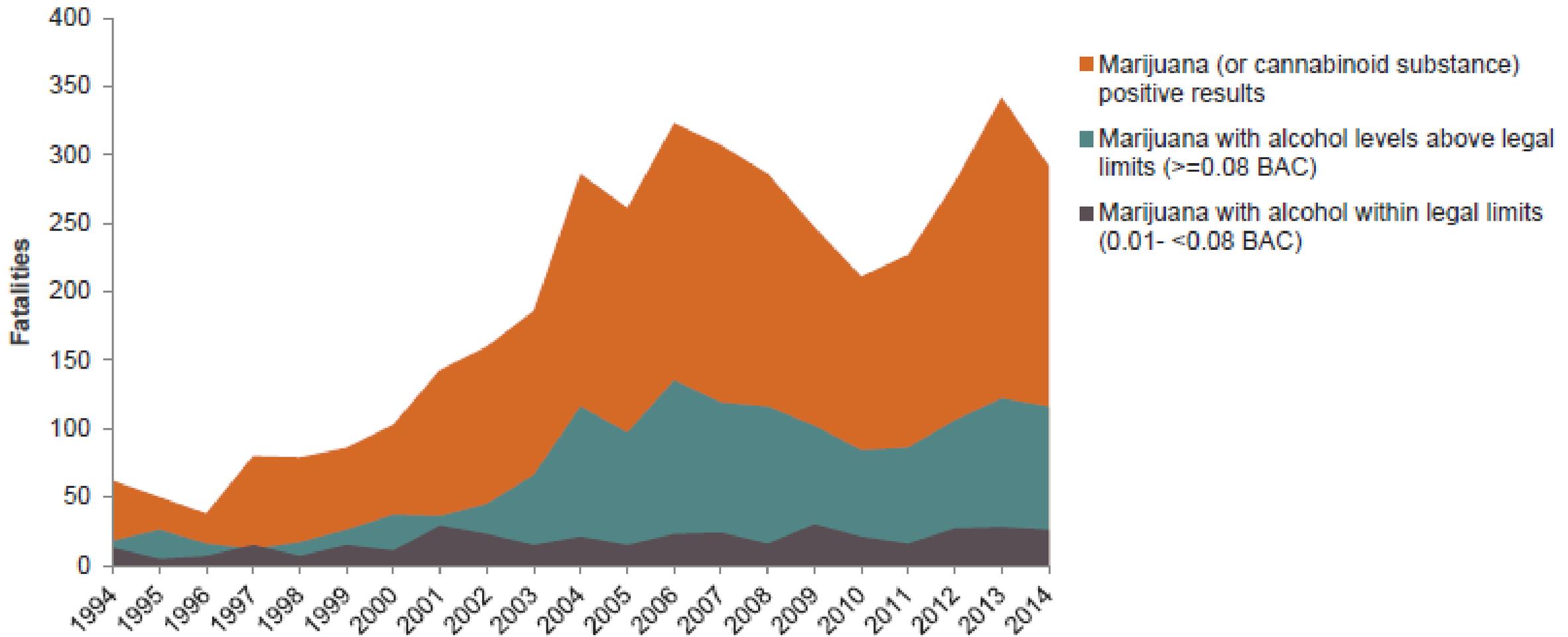
Public Safety and Public Health

Drugged Driving

Protecting Young people

Preventing abuse and addiction

Testing for marijuana and alcohol in California traffic fatalities



Source: [Fatality Analysis Reporting System](#), National Highway Traffic Safety Administration.

Public Safety and Public Health

Drugged Driving

Protecting Young people

- Deterrence and education
- CA prohibits ads promoting physician recommendations
- Packaging requirements—more stringent than alcohol/tobacco, not “attractive to children”, caution labels

Preventing abuse and addiction

Public Safety and Public Health

Drugged Driving

Protecting Young people

Preventing abuse and addiction

- More users/easier access =
More abuse/addiction
- SBIRT

Governance and Accountability

Regulatory area	Data elements
Cultivation and production	Number of business licenses; business characteristics such as location, size, number of employees; major business cost categories; production tracking by product and potency; environmental violation citations.
Sales, consumption, and possession	Population-based drug incidence and prevalence estimates; measures of attitudes and perceived risk from drug use; drug product prices along the supply chain; drug purities at point of sale for marijuana and marijuana-infused products.
Taxes and finance	Revenues projected and realized by revenue source, such as tax types, license fees, fines, penalties; total sales.
Public health and safety	Drugged driving arrests and accidents; treatment admissions; emergency department admissions; calls to poison control; school dropout rates, expulsions, and absenteeism; marijuana arrests; public use citations.
Governance	Number of regulatory inspections; regulatory workforce size; number and types of violations; budget earmarked for data collection and research; process and outcome studies on benefits and costs, social costs, diversion, demand, and other topics.



"Mr. Marlin, you said 'on the other hand' three times.
How many hands do you have?"

*It's tough to make
predictions, especially
about the future.*

Yogi Berra

More states will legalize production for non-medical use

Public support has crossed the 50% line

Organized and well-financed advocacy

Commercial sector with a business interest in expansion

Next wave: CA, MD, MA, VT

US is a common market

Opposition is poorly financed, politically fractured,
and lacking prominent leaders and rallying event

Policy reversal by next President unlikely

But this model is not sustainable



National Council for Behavioral Health

NATCON CONFERENCE

April 3-5, 2017

Seattle, WA

Becky Vaughn, VP of Addictions
beckyv@thenationalcouncil.org

WE HAVE A
**STRATEGIC
PLAN**

IT'S CALLED

★ **DOING** ★
THINGS.

-HERB KELLEHER