### Marijuana: Myths & Truths

DIANE LITTERER, MPA, CPS CEO & EXECUTIVE DIRECTOR

NEW JERSEY PREVENTION NETWORK





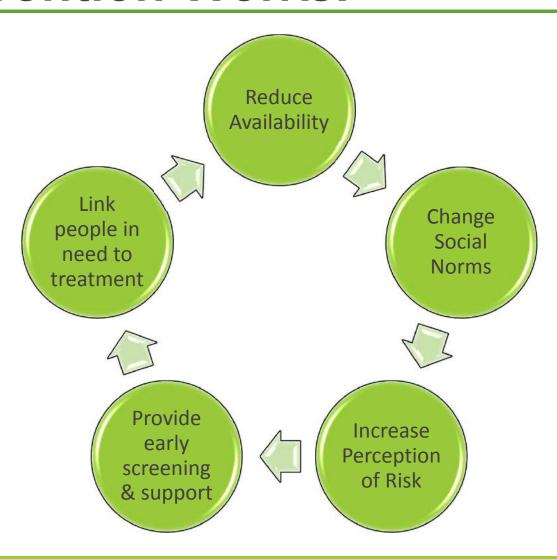
# Truths & Myths about Legalization





#### **Prevention Works!**







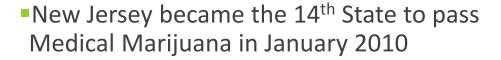
# Current Status of Marijuana in New Jersey





### Medical Marijuana in NJ







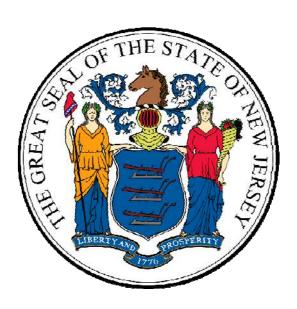
- 5 of the 6 Dispensaries (New Brunswick, Montclair, Manalapan, Bellmar, Burlington, Secausus)
- 325 Physicians Registered to provide Certificates (Active)
- 3,727 registered patients
- 501 Caregivers issued an ID Card





#### Legalize or Decriminalize In NJ?





**A2068:** Ass. Gusciora introduced bill to decriminalize possession of 1 ounce or less of marijuana, imposes civil penalties, and up to 6 plants. 1/27/2016 Introduced, Referred to Assembly Judiciary Committee.

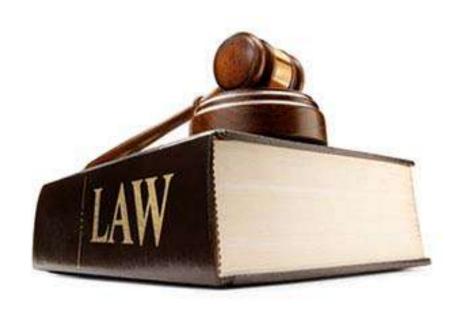
Last Session S1896: Sen. Nicholas Scutari introduced bill that would legalize the sale and possession of pot — and allow people to grow their own.



#### **Current NJ Law**

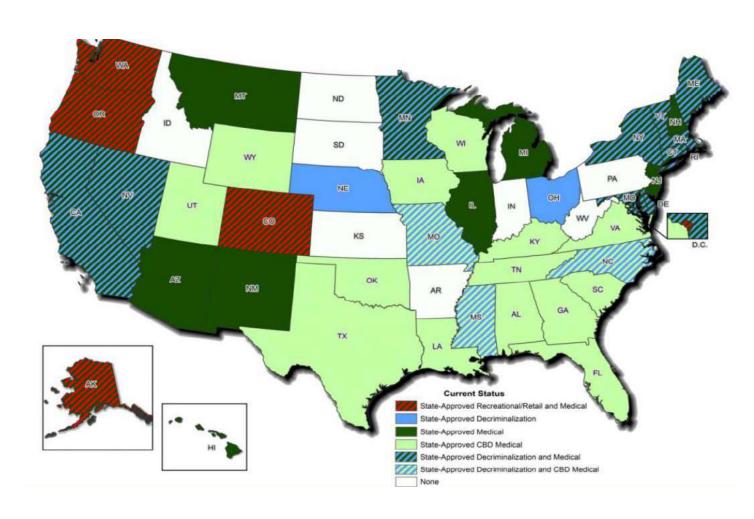


In New Jersey, possession of marijuana for non-medical purposes is punishable by up to 6 months incarceration and up to a \$1,000 fine.



### Marijuana Across the US





Source: DEA

### 2014 in New Jersey





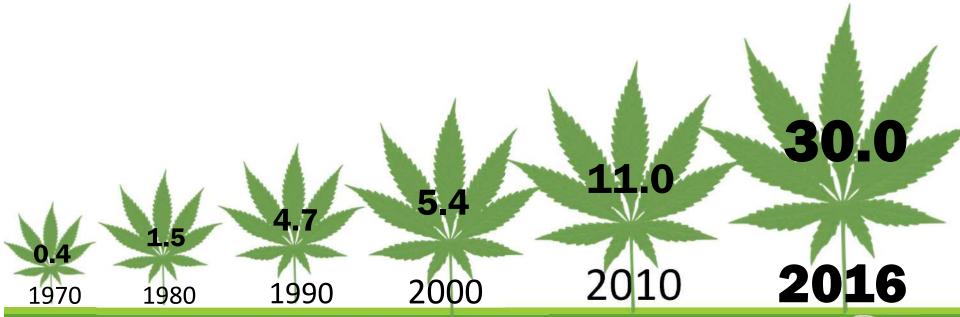




#### **Increased Potency**



Since the 1970s, marijuana increased in potency from .04% to over 30%

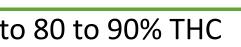


Source: Mehmedic et al., (2010)

NJPN

#### Not the Same Old Pot...

Some Concentrates up to 80 to 90% THC



















### "But it's just a plant..."

(80 to 90% THC) Concentrates:



# Marijuana & Your Health

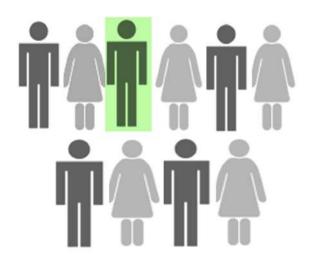




#### Marijuana is Addictive

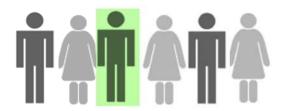


#### **Adults**



1 in 10 adults who try marijuana become addicted.

#### **Adolescents**



1 in 6 adolescents who try marijuana become addicted.

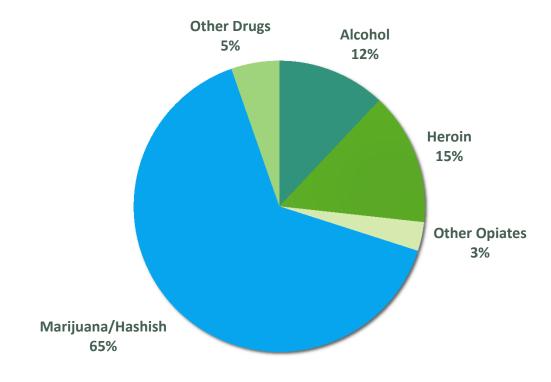


Rates go up to 25 - 50% among daily users.



#### NJ Adolescent Treatment Admissions (2014)

2014 NJ Substance Abuse Treatment Admissions by Primary Drug – Under 18





#### **Harmful Effects**



It affects parts of the brain responsible for:

- memory,
- learning attention,
- and reaction time.

#### Increased risk of mental illness:

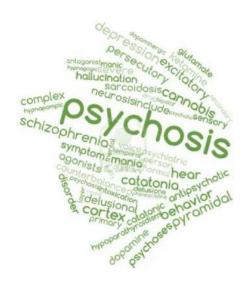
- Schizophrenia (6 fold)
- Psychosis
- Depression
- Anxiety





#### Marijuana & Psychosis



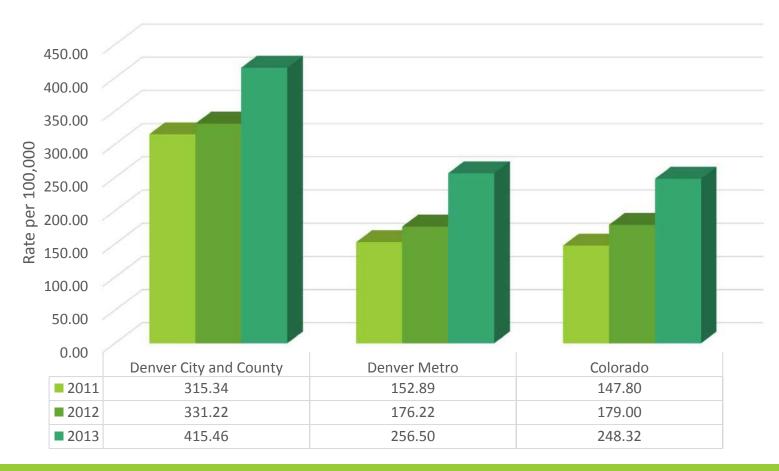


- 15% of all users (higher for heavy users) will experience psychotic symptoms. Half of these users will become chronically schizophrenic if they don't stop using.
- A Finnish Study showed, of 19,000 drug users, marijuana was more likely to cause long term schizophrenia than LSD, Amphetamine, cocaine, meth, PCP or opiates. Three additional European studies showed evidence that marijuana triggered schizophrenia.
- The Lancet Medical Journal review of studies concluded marijuana use doubled the risk of schizophrenia. This risk increased to 6x for heavy users or use of stronger potency pot.

#### **Denver: The Mile HIGH City**



Emergency Department Rate Per 100,000 Marijuana-Related, 2011-2013



# Marijuana & Other Consequences





#### Marijuana and Violence?







### **Gateway Drug or Not?**



- Not all marijuana users go on to use other drugs, but most addicted to drugs started with marijuana.
- Regular marijuana users (50x per year) has hazards of other drug use 59.2 times higher than non-users.





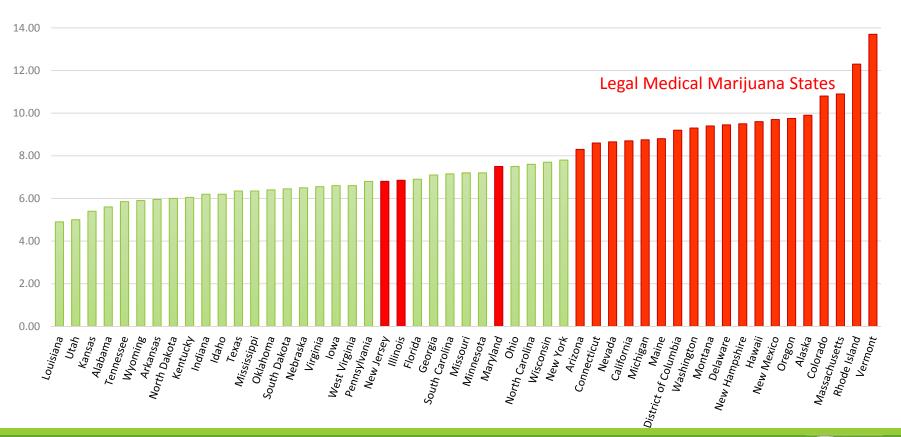
# Will Legalization Increase or Decrease Use?





## Medical Marijuana States = Increased Use

Past Month Usage by 12 -17 Year Olds in Medical Marijuana States 2012

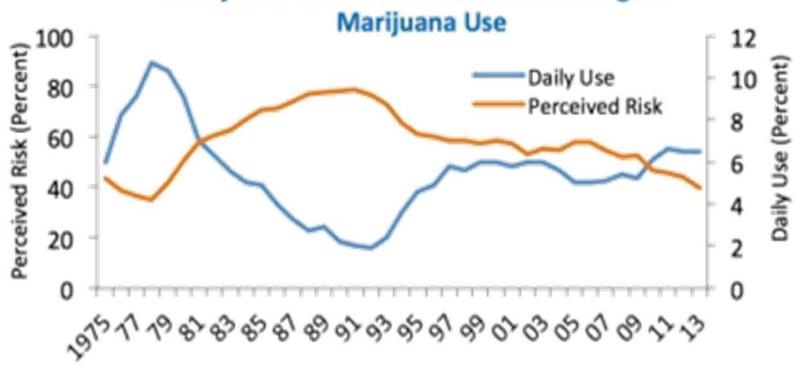




### National Marijuana Use vs. Risk



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





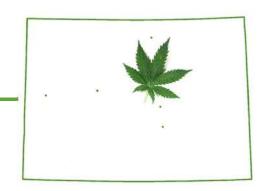
#### **Increased Use Among Teens**



If pot is medicine and allowed by the state, then it must be safe to use.

- In states with medical marijuana law, youth (12-17) marijuana use rates are
  8.6% compared to 6.9% in states without such laws
- In states with medical marijuana laws, adolescents' perception of the harmful effects of marijuana have significantly decreased.

## Marijuana is Easily Diverted



- •Teens who know somebody with a medical marijuana license are more likely than those who don't to report 'fairly' or 'very' easy access to marijuana.
- •74% of Denver-area teens in treatment said they used somebody else's medical marijuana an average of 50 times.





#### 2013 NJSHS Highlights



#### NJ Student Health Survey on Marijuana Use:

- Lifetime Marijuana Use:
   39% used marijuana one or more times during their life.
- Recent Marijuana Use:
   21% used marijuana on one or more of the past 30 days.
- Marijuana Use Before Age 13:
   5% first used marijuana before the age of 13.
- Lifetime Synthetic Marijuana Use:
   10% used synthetic marijuana (aka: K2 or Spice) one or more times during their life.

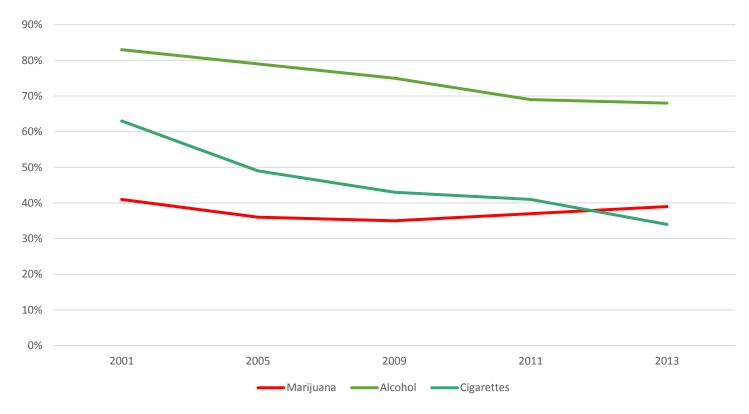




### **Drug Use Among HS Students**



#### NJ HS Student Lifetime Use Trends



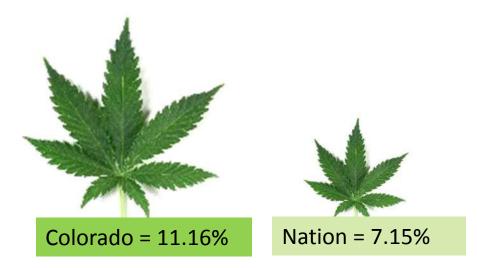


#### **Increased Teen Use**



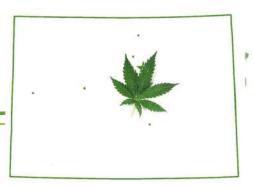
Marijuana use among Colorado teens is currently:

- 5th highest in the nation
- 50% above national average

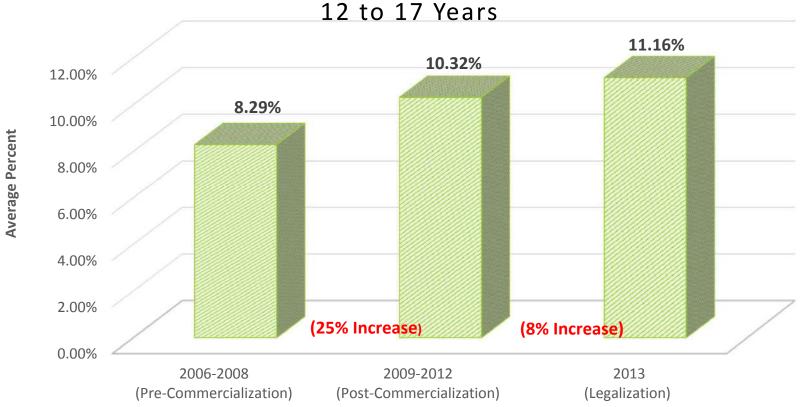




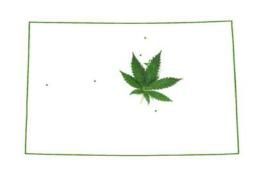
#### Marijuana Use in Youth

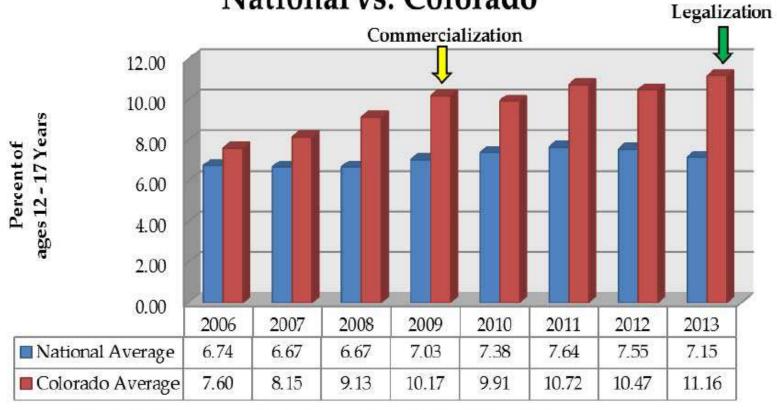


Colorado Average Past Month Use of Marijuana Ages



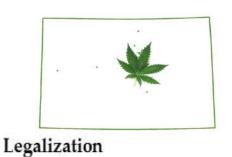
## Youth (Ages 12 to 17 Years) Past Month Marijuana Use National vs. Colorado

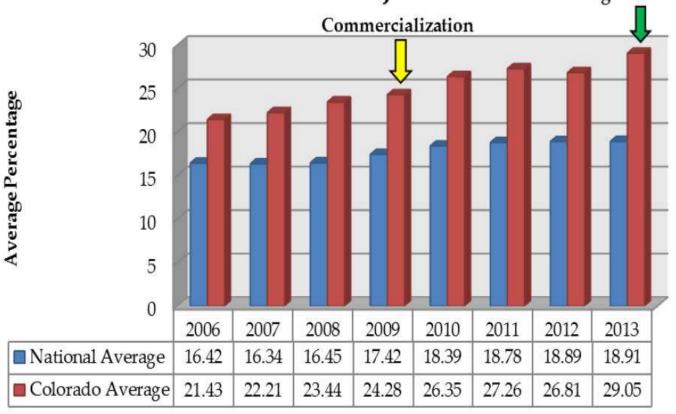




SOURCE: SAMHSA.gov, National Survey on Drug Use and Health, 2006-2013

### College Age (18 to 25 Years-Old) Past Month Marijuana Use

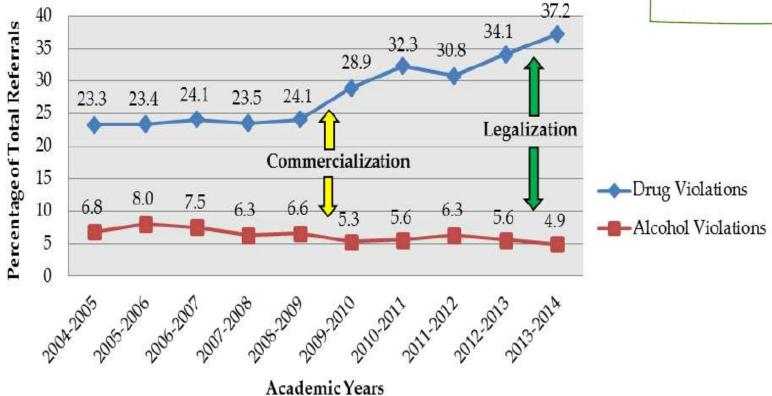




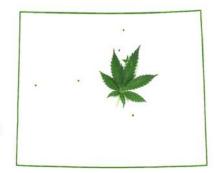
SOURCE: SAMHSA.gov, National Survey on Drug Use and Health, 2006 - 2013

#### Percentage of Total Referrals to Law Enforcement in Colorado from 2004-2014 School Years

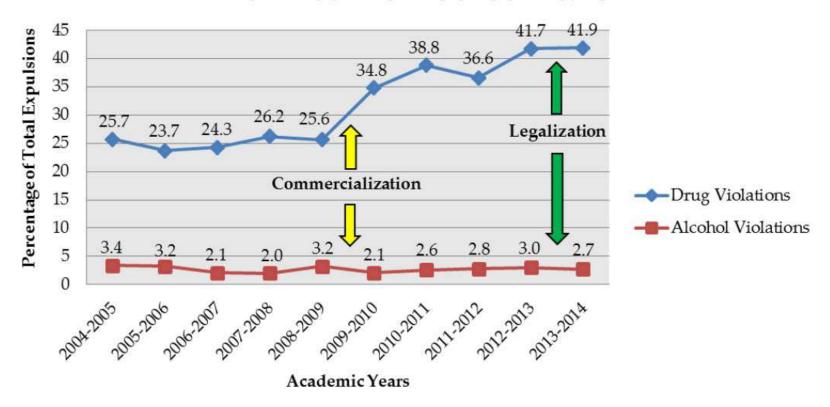




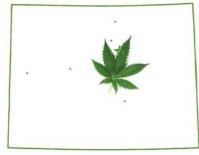
SOURCE: Colorado Department of Education, 10-Year Trend Data: State Suspension and Expulsion Incident Rates and Reasons



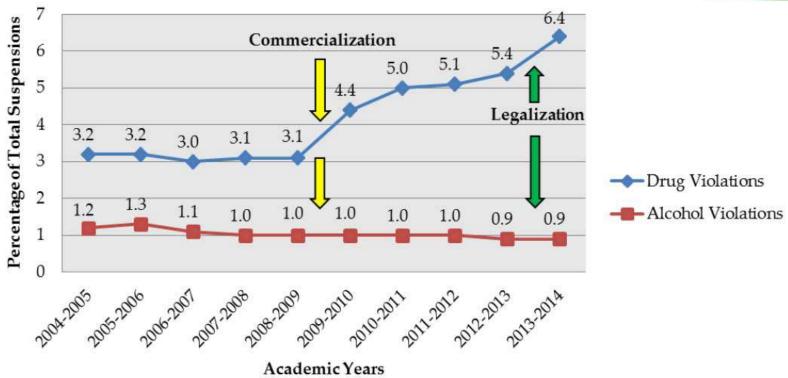
### Percentage of *Total Expulsions* in Colorado from 2004-2014 School Years



SOURCE: Colorado Department of Education, 10-Year Trend Data: State Suspension and Expulsion Incident Rates and Reasons



### Percentage of *Total Suspensions* in Colorado from 2004-2014 School Years



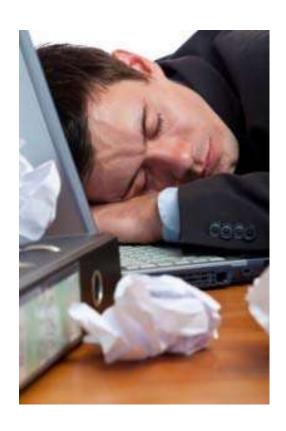
SOURCE: Colorado Department of Education, 10-Year Trend Data: State Suspension and Expulsion Incident Rates and Reasons

## Marijuana & Academic Achievement



### **Limits Future Performance**





Significant negative effects on IQ and ability to learn

•Linked to low productivity and low job performance



# University of Maryland School of Public Health

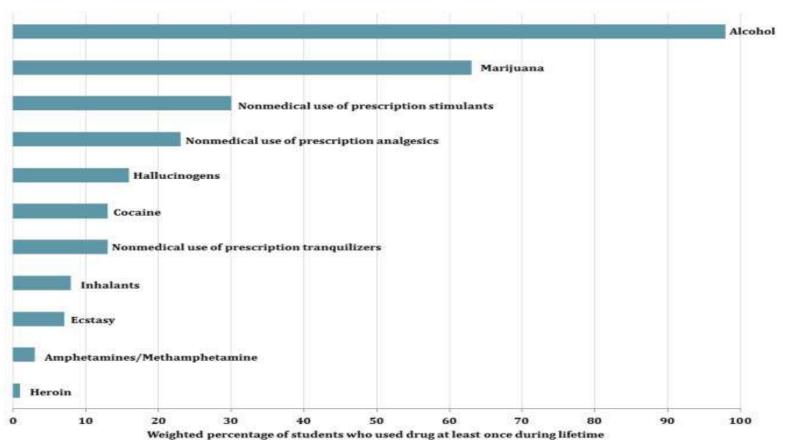
Study followed 1,200 college freshmen over a 10-year period

- •Neurobiological research has identified mechanisms by which excessive drinking and drug use might interfere with academic performance.
- Substance use "hijacks" reward pathways in the brain.
- Over time, rewards of academic achievement are replaced with the temporary rewards of intoxication and getting high.
- •End result is **decreased motivation** to pursue academic goals and disengagement from college.



# Prevalence of Alcohol and Drug Use by 4<sup>th</sup> Year of College





Source: College Life Study, unpublished data. See the following papers for more information:

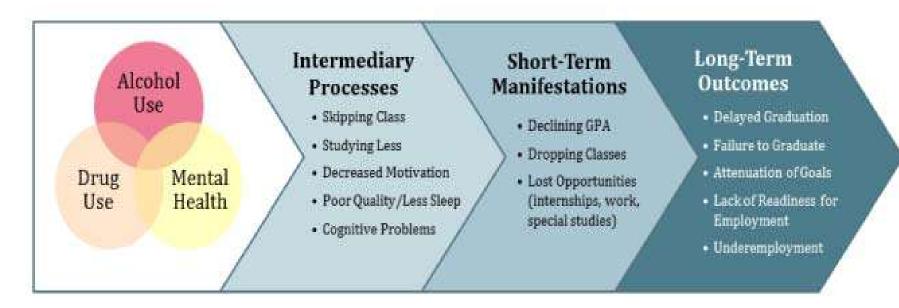
Arria AM, Caldeira KM, O'Grady KE, Vincent KB, Fitzelle DB, Johnson EP, Wish ED. Drug exposure opportunities and use patterns among college students: Results of a longitudinal prospective cohort study. Subst Abus. 2008;29(4):19-38.

Vincent KB, Kasperski SJ, Caldeira KM, Garnier-Dykstra LM, Pinchevsky GM, O'Grady KE, Arria AM. Maintaining superior follow-up rates in a longitudinal study: Experiences from the College Life Study. Int J Mult Res Approach. 2012;6(1):56-72.



### **Cascade of Effects**





Alcohol use, drug use, and mental health outcomes have a cascade of effects on college students' academic outcomes



# Marijuana & Impaired Driving



# Marijuana & Driving



- Marijuana impairs motor coordination, reaction time, attentiveness, and perception of time and speed.
- Drivers testing positive for marijuana use are over 2 times more likely to be involved in a crash.
- Habitual marijuana users were 9.5 times more likely to be involved in a crash.



## Cannabis Effects on Driving Skills





- Experimental data show that drivers attempt to compensate by driving more slowly after smoking cannabis, but control deteriorates with increasing task complexity.
- Cannabis smoking increases lane weaving and impaired cognitive function.
- Critical-tracking tests, reaction times, dividedattention tasks, and lane-position variability all show cannabis-induced impairment.
- Despite purported tolerance in frequent smokers, complex tasks still show impairment.
- Combining cannabis with alcohol enhances impairment, especially lane weaving.

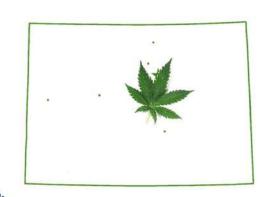
### **DWI to DUI**



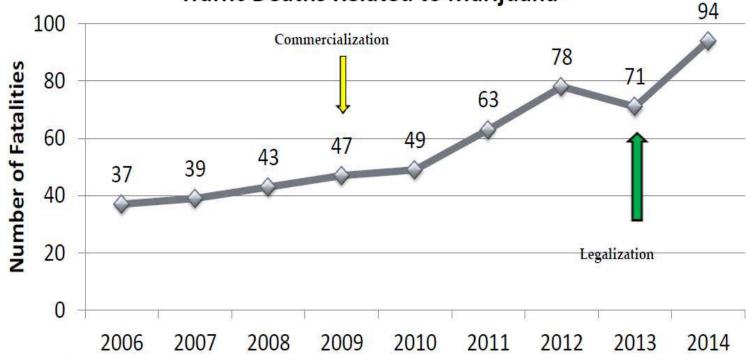
- Legalizers are promoting that marijuana is not as bad as alcohol
- Kids are hearing these political messages and it is influencing their health decisions
- Perception and messaging kids are more likely to drive with someone under the influence of marijuana



### **Colorado Traffic Deaths**







\*Number of Fatalities Involving Operators Testing Positive for Marijuana

SOURCE: National Highway Transportation Safety Administration, Fatality Analysis Reporting System (FARS), 2006-2013 and CDOT/RMHIDTA 2014. NOTE: Cannot confirm 100% reporting prior to 2012.

# **Effects of Legalization**





# Legalization Influences Youth



Legalization Negatively Effects all Known Risk Factors of Drug Use:

- Low Perception of Risk (Health Risks & Consequences)
- Favorable Attitudes Regarding Use (Parental/Peer Use)
- Social Norm
- Availability
- Early First Use





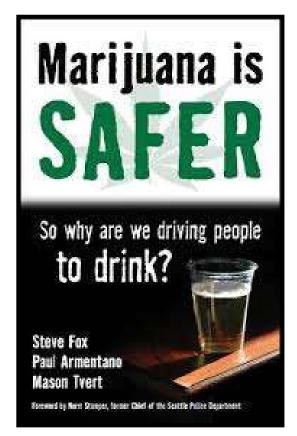
# Legalization Brings...



- Extensive promotion to our youth
- False claims of a harmless product
- Increase use among youth and adults
- Increased harmful consequences



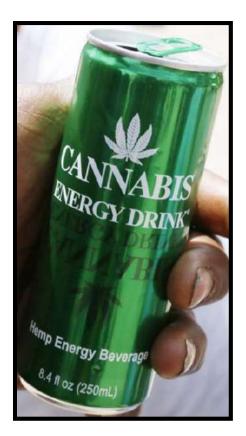






# Legalization = Public Promotion

by a Well Funded Industry









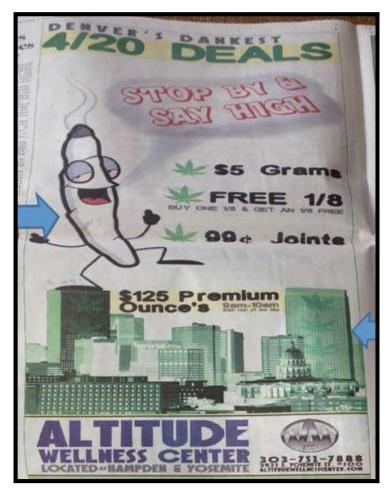


# **Advertising & Coupons**













# **Industry Promoting to Our Youth**



















## **Promotion & Sale of Edibles**



- Brownies, carrot cake, cookies, peanut butter, granola bars, ice cream...
- •Marketed with cartoons and characters appealing to children.







# Medical Marijuana Dispensaries

And Now Recreational Marijuana Dispensaries?











# "High Profits" Series on CNN





# Will Legalization Solve Overpopulated Prisons?





#### How Many Are Jailed for Simple 9 Possession? Only 0.2% are for drug possession Other **Drug Offense** 82% 18% **Trafficking** 99.8%

#### Among sentenced prisoners under State Jurisdiction in 2008...

- 18% were sentenced for drug offenses.
- Of those 18%, 99.8% were sentenced for drug trafficking and Only .2% for possession.



# Legalization Less Arrests



**Alcohol-related Arrests** (only Liquor Law & DUI)



Marijuana-related Arrests





# Will Legalization Yield High Tax Revenue?

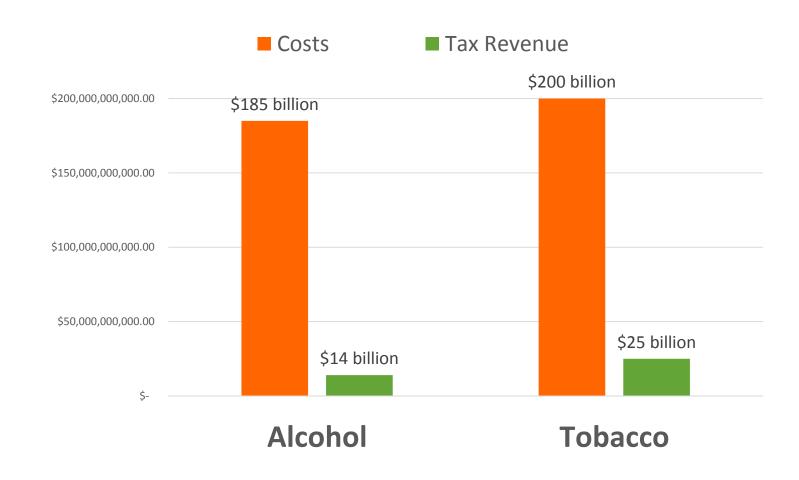




## Alcohol & Tobacco:

# Ø

### **Money Makers or Dollar Drainers?**



## **Cartels & Black Market**





There will always be consumers wanting:

- •Stronger strains and different compounds that are more potent to "get higher" than legal products provide.
- **Cheaper** than store price that includes the tax and other retail costs.
- •Access if they are not yet 21 years of age.



# Who Will We Believe This Time?

# 2?

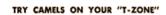
### 1964:

# More Doctors smoke Camels than any other cigarette

very branch of medicine—113,597 in all itionwide study of cigarette preference, rganizations made the survey. The gist cigarette do you smoke, Doctor? \*\* total Came!

d cool mildness of Camel's superb blend to have won the same favor in medical f smokers the world around. If you are ference among doctors will hardly surwell, try Camels now.

ELS Costlier



That's T for Taste and T for Throat...the most critical Talaoratory" for any eigerette. See how your taste responds to the rich, full thavor of Camel's costlier tolaceos. See how your throat reacts to Camel's cool mildness. On the basis of the experience of many

experience of many millions of smokers, we believe Camels will sait your "T-Zone" to a "T."

> E. J. Reviselle Telepon Co Witness Spines, N. C.

## **Today:**

#### MARIJUANA IS MEDICINE/SAFE:





# Will Another Industry Do the Right Thing?



# **Alcohol and Tobacco: A Model?**

0

- Both industries promote addiction and target kids
  - 70% of alcohol sales are from problem drinkers and youth
- Youth alcohol use is much higher than marijuana
- Since medical marijuana and legalization discussions, marijuana is starting to exceed tobacco use among youth.





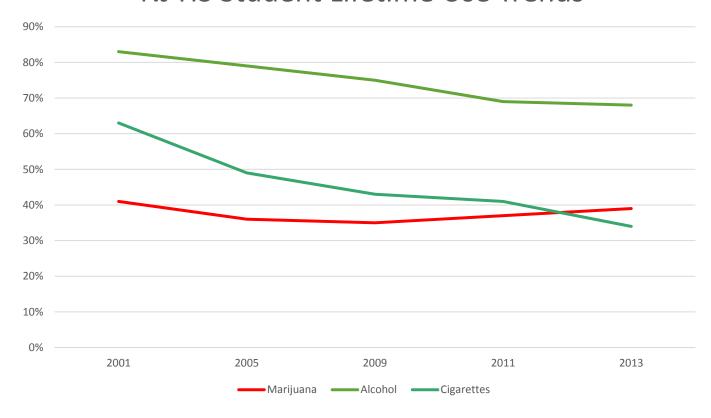




# **Drug Use Among HS Students**



#### NJ HS Student Lifetime Use Trends





# Marijuana Surpasses Cigarette Use



Percentage of U.S. 12th Grade Students Reporting
Past Month Use of Cigarettes and Marijuana,
1975 to 2013





# **Another Big Tobacco...**



- **RJ Reynolds report** "Younger adults are our only replacement smokers. Repeated Government studies have shown that:
  - Only one third of smokers start after the age of 18 years of age.
  - Only 5% start after the age of 24 years of age."
- **Brown and Williamson**, 1972 *Youth Cigarette Project* created apple flavored and sweet flavors like honey.
- \*\*1989 statement From David Goerlitz, former model of Winston Cigarettes "Of course youth are not the only target of the tobacco industry. Once when I asked an RJ Reynolds executive why he and his colleagues didn't smoke he responded point-blank, 'We don't smoke the sh#%, we just sell it... We reserve that right for the young, the poor, the black and the stupid."



# **The Tobacco Industry Connection**



"The use of marijuana ... has important implications for the tobacco industry in terms of an alternative product line...

[We] have the land to grow it, the machines to roll it and package it, the distribution to market it. In fact, some firms have registered trademarks, which are taken directly from marijuana street jargon. These trade names are used currently on little-known legal products, but could be switched if and when marijuana is legalized...

Estimates indicate that the market in legalized marijuana might be as high as \$10 billion annually."

From a report commissioned in the 1970's by cigarette manufacturer Brown and Williamson (now merged with R.J. Reynolds).





# **Smokescreen for Legalization**



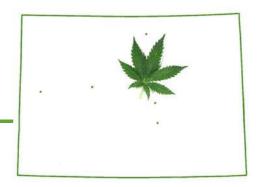
"We will use [medical marijuana] as a red-herring to give marijuana a good name."

- Keith *Stroup*Head of *NORML* to the Emory Wheel, 1979

# What has happened in Colorado?



# **Colorado History**



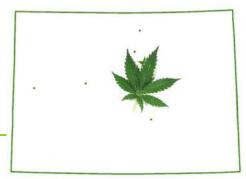
#### Marijuana Legalization History:

- 2006-2008 Early Medical Marijuana Era
- 2009-PresentMedical Marijuana Commercialization& Expansion Era
- 2013-Present Recreational Marijuana Era





# Marijuana Businesses



# Medical Marijuana (January 1, 2015)

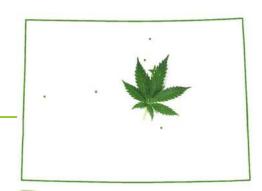
- 497 licensed dispensaries
- 748 marijuana cultivation facilities
- 163 infused products (edibles) businesses



# Recreational Marijuana (January 1, 2015)

- 369 licensed marijuana retail stores
- 397 licensed marijuana cultivation facilities
- 98 licenses for infused product (edibles) businesses

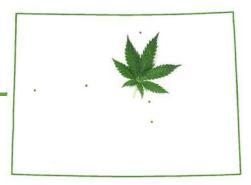
# **Perspective**



#### **Colorado:**

- ✓ Medical Marijuana Centers = 497
- Recreational Marijuana Stores = 369
- ✓ Starbucks Coffee = **405**
- ✓ McDonalds = 227
- ✓ Pharmacies = 117

## **Current Colorado Market**



- There are an estimated <u>485,000 Colorado adult regular marijuana users</u> (at least once per month),
  - which is **9**% of the total Colorado population of all ages (5.363 million).
- <u>Heavy users</u> who consume marijuana nearly daily make up the top **21.8%** of the user population but account for **66.9%** of the demand for marijuana.
- <u>Out-of-state</u> visitors represent about **44**% of the <u>metro area</u> marijuana retail sale of marijuana and approximately **90**% of sales in heavily-visited <u>mountain communities</u>.
- Colorado has **23**% of its users consume <u>nearly daily</u> compared to **17**% nationally. That is **35.29**% higher.



# What is the Answer?





# Do We Agree?



- Youth and adults should <u>not</u> be put in jail for simple possession.
- We do <u>not</u> want to create another Big Tobacco Industry that will promote marijuana to our youth and disparate communities.
- We do <u>not</u> want our youth to have marijuana available to them nor to start using marijuana.
- Research is showing that there are some medicinal benefits to components of marijuana <u>but</u> more research is needed with FDA Regulations.

## **Prevention Works!**



- Over 25 years of research guides the prevention field.
- Research has identified strategies that reduce drug use and the consequences associated with it
- National research leaders oppose legalization.
- •\$1 spent on prevention saves \$10 in treatment costs and up to \$20 in societal costs









# **Prevention Strategies Work!**



#### **Community Coalitions**

 implementing comprehensive evidencebased approaches

#### Individual/Family

- Youth education on the risk of use
- Life skills Education
  - self control, self esteem, decision making, conflict resolution, academic achievement, etc.
- Parenting Skills
  - parent-child bonding, family communication, consistent discipline





# **Prevention Strategies Work!**



#### Community/School

- Create consistent educational and treatment alternatives to traditional criminal justice response
- Stronger school drug policies with supportive services
- Restrict drug paraphernalia and drug promotional products
- Community & parent education reducing social acceptance
- Screenings for early first use and problem identification





## **Treatment Works!**





- Marijuana is addictive.
- •Addiction is a disease and treatment does work.
- Large unmet need for treatment services.
- Early screening and intervention can save lives and money.

# Thank you



njpn.org Dianelitterer@njpn.org