

CANNABIDIOL

MR.PANUPAN SRIPAN

SAFETY

- Need to smoke 1500 lbs in 15 minutes to achieve lethal dose
- Side effects
 - euphoria and easy laughter, temporal and spatial perception alterations and disorientation, drowsiness, dizziness and motor incoordination, confusion, memory lapses and difficulty concentrating
 - tachycardia and hypotension, conjunctival injection, bronchodilation, muscle relaxation, and decreased gastrointestinal motility
- Synthetic cannabinoids are well tolerated



THE RISKS

- Lungs
 - 50% more carcinogens in inhaled marijuana smoke than cigarette
 - One cannabis joint had a similar effect to 2.5–5 tobacco cigarettes in regard to airflow obstruction
 - Exacerbation of pulmonary conditions (asthma, cystic fibrosis, COPD)
- Heart
 - Increased risk of cardiovascular events in people with heart disease
- Reproductive
 - Decreased libido, impotence, decreased sperm count, gynecomastia (man boobs)



THE RISKS

- Brain health
 - Associated with development of schizophrenia in young users
 - Depression and anxiety
 - Permanent reduction in IQ points if smoking from childhood/teens
 - Problems with study design?
 - Problems with attention and concentration and with acquisition of complex new verbal material
 - If used with benzodiazepines, opiates, and tricyclic antidepressants can cause a further decrease in alertness
 - Decrease in brain volume of the amygdala and hippocampus

CONCLUDING REMARKS



WHO? HOW? WHERE?

CURRENT LEGISLATION

The Access to Cannabis for Medical Purposes allow for reasonable access to cannabis for medical purposes for Canadians who have been authorized to use cannabis for medical purposes by their health care practitioner.

HOW: STEP BY STEP (100% LEGALLY)

- Consult a Health Care Practitioner
- Obtain a Medical Document completed by Health Care Professional



Health
Canada Santé
Canada

Your health and
safety... our priority.

Votre santé et votre
sécurité... notre priorité.

Sample Medical Document for the Access to Cannabis for Medical Purposes Regulations

This document may be completed by the applicant's health care practitioner as defined in the Access to Cannabis for Medical Purposes Regulations (ACMPR). A health care practitioner includes medical practitioners and nurse practitioners. In order to be eligible to provide a medical document, the health care practitioner must have the applicant for the medical document under their professional treatment. Regardless of whether or not this form is used, the medical document must contain all of the required information, (see in particular s. 8 of the ACMPR).

Patient's Given Name and Surname

Patient's Date of Birth (DD/MM/YYYY)

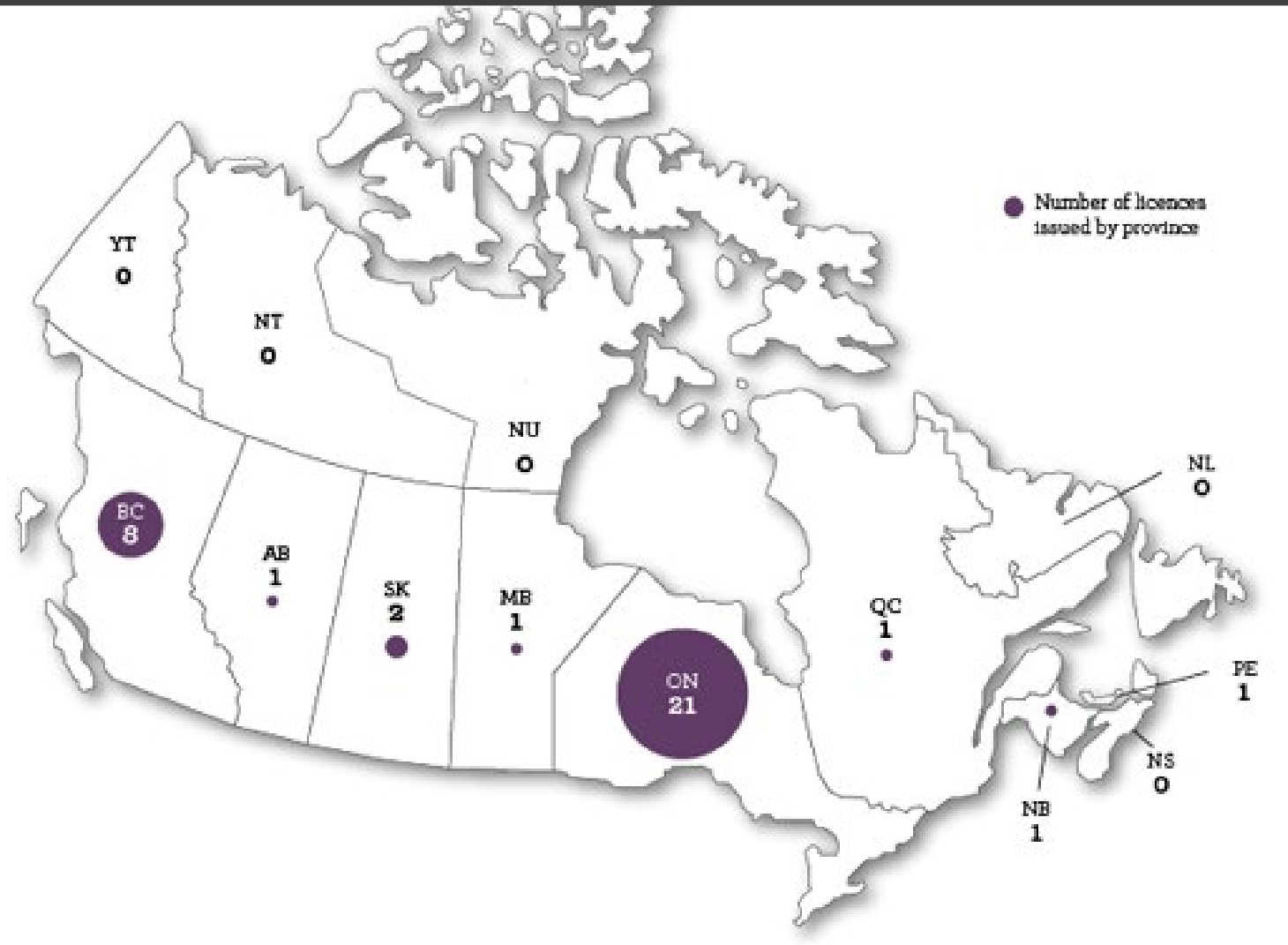
Daily quantity of dried marijuana to be used by the patient: g/day

THE HEALTH CARE PROFESSIONAL

- In BC can be a licensed physician or a nurse practitioner
- Long term treating relationship with the patient
- Not selling or dispensing marijuana for medical purposes to any patient
- Can not authorize through telemedicine (BC specific)





















WHERE TO GET CANNABIS FOR
MEDICAL PURPOSES

LICENSED PRODUCER





DISPENSARIES IN VICTORIA

				603 Gorge Rd. East 851 Johnson Street. 6891 Scoke Road
 Trees Dispensaries 2610 Rock Bay 1056 North Park 546 Yates	 Ocean Grown 1725 Cook Street.	 Victoria's Natural Way 1545 Fort Street.	 BC Pain Society 1719 Quadra Street.	 Cloud Nine Medicinal 778 Fort Street.
 Weeds Social Club 1601 Douglas Street.	 Buds & Leaves 732 Tyee Road	 The Green Ceiling 1625 Quadra Street	 Jupiter THC 619 Johnson Street.	 Cannabis Buyers Club 826 Johnson Street.
 Alternative Aromatic 2641 Quadra Street.	 Nature's Botanicals 1011 Johnson Street.	 V I Compassion Society 853 Cormorant St.	 Beard Brothers Society 849 Fort Street.	 Pineapple Express 608 Esquimalt Road.
 Burnside Dispensary 3175 Harriet Road	 Urban Earth Med 2020 Douglas Street	 Herb's Victoria 1010 Cook Street	 Nature's Aid Medicinal 532 1/2 Figard Street	 Green Buddha Medicinals 2816 Bridge Street

WHO

INDICATIONS FOR MEDICAL MARIJUANA (HC)

- Severe nausea and vomiting associated with cancer chemotherapy
- Cachexia and Anorexia associated with terminal illness, cancer, or HIV/AIDS
- Spasms and pain associated with MS
- Chronic pain
- Severe cancer-associated pain
- Insomnia or depression associated with chronic diseases
- Palliative setting

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- Alzheimer's
- Anorexia
- Anxiety and Depression
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- Arnold-Chiari malformation and syringomyelia
- Arthritis
- Asthma
- Autism
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- Diseases of the Pancreas
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- Multiple Sclerosis
- Muscle spasms
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- Myasthenia gravis
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- Nausea and Vomiting
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- Neuropathies
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CMA POSITION

- The Canadian Medical Association has consistently opposed Health Canada's approach which places physicians in the role of gatekeeper in authorizing access to marijuana.



SOCIAL EFFECTS OF MEDICAL MARIJUANA

- Discuss the controversy
- Case study Colorado
- Explore the difficulty

CANNABISDIGEST.CA – 5 SOCIAL IMPACT

1. Fewer Deaths from Opiates
2. Reduced Crime Rates
3. Reduced Marijuana use in Youth
4. Decrease in Car Crash Deaths
5. Fewer Suicides in Young Men



CANNABISDIGEST.CA – 5 SOCIAL IMPACT

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There is no evidence that implementing medical marijuana laws impacts the rate of adolescent use.

Anderson, D Mark, Benjamin Hansen, and Daniel Rees. "Medical Marijuana Laws and Teen Marijuana Use." Available at SSRN 2067431, (2012).

Caulkins, Jonathan P, Angela Hawken, Beau Kilmer, and Mark AR Kleiman. *Marijuana Legalization: What Everyone Needs to Know*. Oxford: Oxford University Press, 2012.

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Lynne-Landsman, Sarah D., Melvin D. Livingston, and Alexander C. Wagenaar. "Effects of State Medical Marijuana Laws on Adolescent Marijuana Use." *American Journal of Public Health* 103, no. 8 (Aug 2013): e1-e7.

O'Keefe, Karen, and Mitch Earleywine. "Marijuana Use by Young People: The Impact of State Medical Marijuana Laws." Marijuana Policy Project, 2011.

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There is no compelling evidence that marijuana contributes substantially to traffic accidents and fatalities.

Ahlner, J., A. Holmgren, and A. W. Jones. "Prevalence of Alcohol and Other Drugs and the Concentrations in Blood of Drivers Killed in Road Traffic Crashes in Sweden." *Scand J Public Health* 10.1177/1403494813510792 (Nov 21 2013).

Anderson, D. Mark, Benjamin Hansen, and Daniel I. Rees. "Medical Marijuana Laws, Traffic Fatalities, and Alcohol Consumption." *Journal of Law and Economics* 56, no. 2 (2013): 333-69.

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Blows, S., R. Q. Ivers, J. Connor, S. Ameratunga, M. Woodward, and R. Norton. "Marijuana Use and Car Crash Injury." *Addiction* 100, no. 5 (May 2005): 605-11.

Elvik, R. "Risk of Road Accident Associated with the Use of Drugs: A Systematic Review and Meta-Analysis of Evidence from Epidemiological Studies." *Accid Anal Prev* 60 (Nov 2013): 254-67.

Li, Guohua, Joanne E. Brady, and Qixuan Chen. "Drug Use and Fatal Motor Vehicle Crashes: A Case-Control Study." *Accident Analysis & Prevention* 60, no. 0 (11// 2013): 205-10.

Ménétreay, Annick, Marc Augsburger, Bernard Favrat, Marie A. Pin, Laura E. Rothuizen, Monique Appenzeller, Thierry Buclin, Patrice Mangin, and Christian Giroud. "Assessment of Driving Capability through the Use of Clinical and Psychomotor Tests in Relation to Blood Cannabinoids Levels Following Oral Administration of 20 Mg Dronabinol or of a Cannabis Decoction Made with 20 or 60 Mg Δ9-Thc." *Journal of Analytical Toxicology* 29, no. 5 (July 1, 2005 2005): 327-38.

Ramaekers, J. G., G. Berghaus, M. van Laar, and O. H. Drummer. "Dose Related Risk of Motor Vehicle Crashes after Cannabis Use." *Drug and Alcohol Dependence* 73, no. 2 (2004): 109-19.

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Ramaekers, Johannes G, Eef L Theunissen, Marjolein de Brouwer, Stefan W Toennes, Manfred R Moeller, and Gerhold Kauert. "Tolerance and Cross-Tolerance to Neurocognitive Effects of Thc and Alcohol in Heavy Cannabis Users." *Psychopharmacology* 214, no. 2 (Mar 2011): 391-401.

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COLORADO – THE IMPACT

The Legalization of Marijuana in Colorado *The Impact*

Volume 4
September 2016

Rocky Mountain High Intensity
Drug Trafficking Area
www.rmhidta.org



COLORADO - THE IMPACT

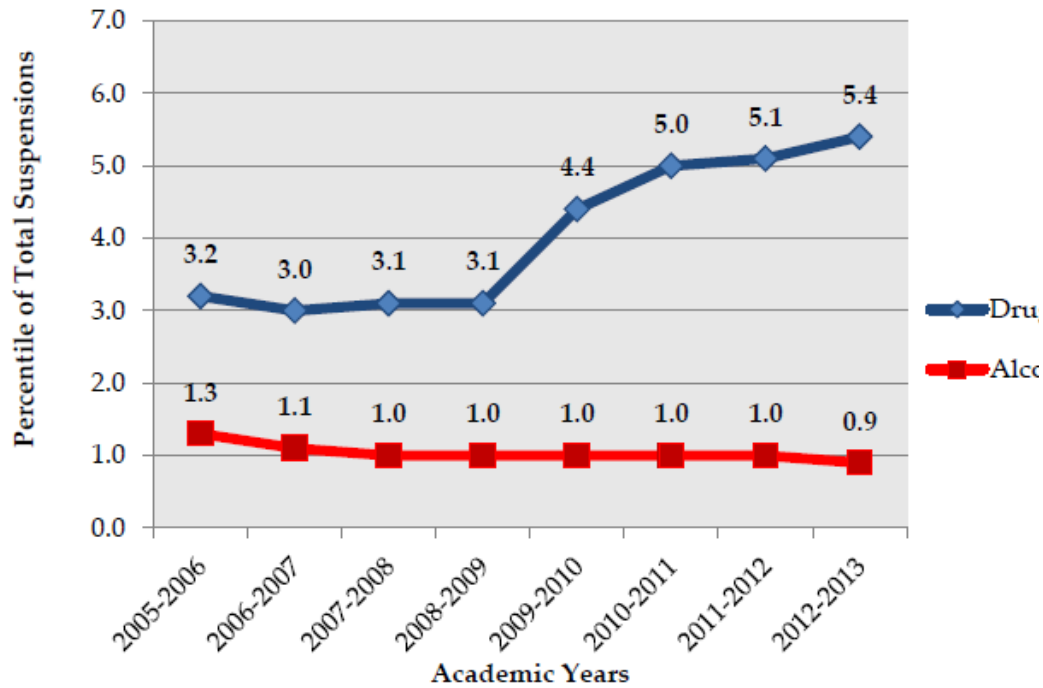
- Dates to remember
 - **2000-2008:** Medical marijuana legalized, 2 oz. & 6 potted plants
 - ~6000 applications
 - No retailers, no dispensaries
 - **2009-current:** Commercialization of medical marijuana
 - 38,000 applicants in 1 year, went from 4800 to 41,000 cardholders
 - by 2012, there were 108,000 cardholders
 - **2013-current:** Recreational marijuana legalized, first retailers Jan 2014

COLORADO - THE IMPACT (2014)

- Traffic fatalities involving operators testing positive for marijuana have increased **100%** from 2007 to 2012
- In 2012, **10.47% of youth ages 12 to 17** were considered current marijuana users compared to **7.55% nationally**. Colorado, ranked 4th in the nation, was **39%** higher than the national average
- Drug related suspensions/expulsions **increased 32%** from school 2008/2009 through 2012/2013
- From 2011 through 2013, there was a **57% increase** in marijuana-related emergency room visits.
- Hospitalizations related to marijuana have increased **82%** from 2008 to 2013

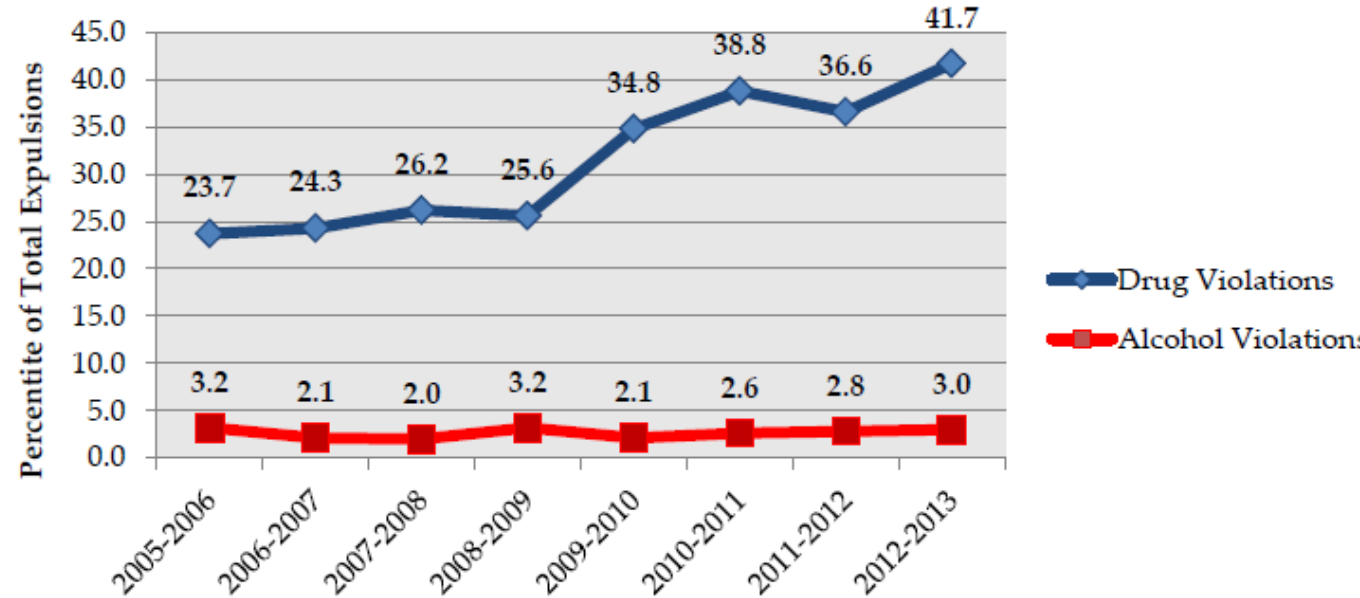
EFFECTS ON YOUTH - SCHOOL

Percentage of *Total Suspensions* in Colorado, 2005 - 2013 School Years



SOURCE: Colorado Department of Education, Academic Years 2006-2013

Percentage of *Total Expulsions* in Colorado 2005 to 2013 School Years



SOURCE: Colorado Department of Education, Academic Years 2006-2013

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Percentage of Total Suspensions in Colorado, 2008 - 2013 School Years

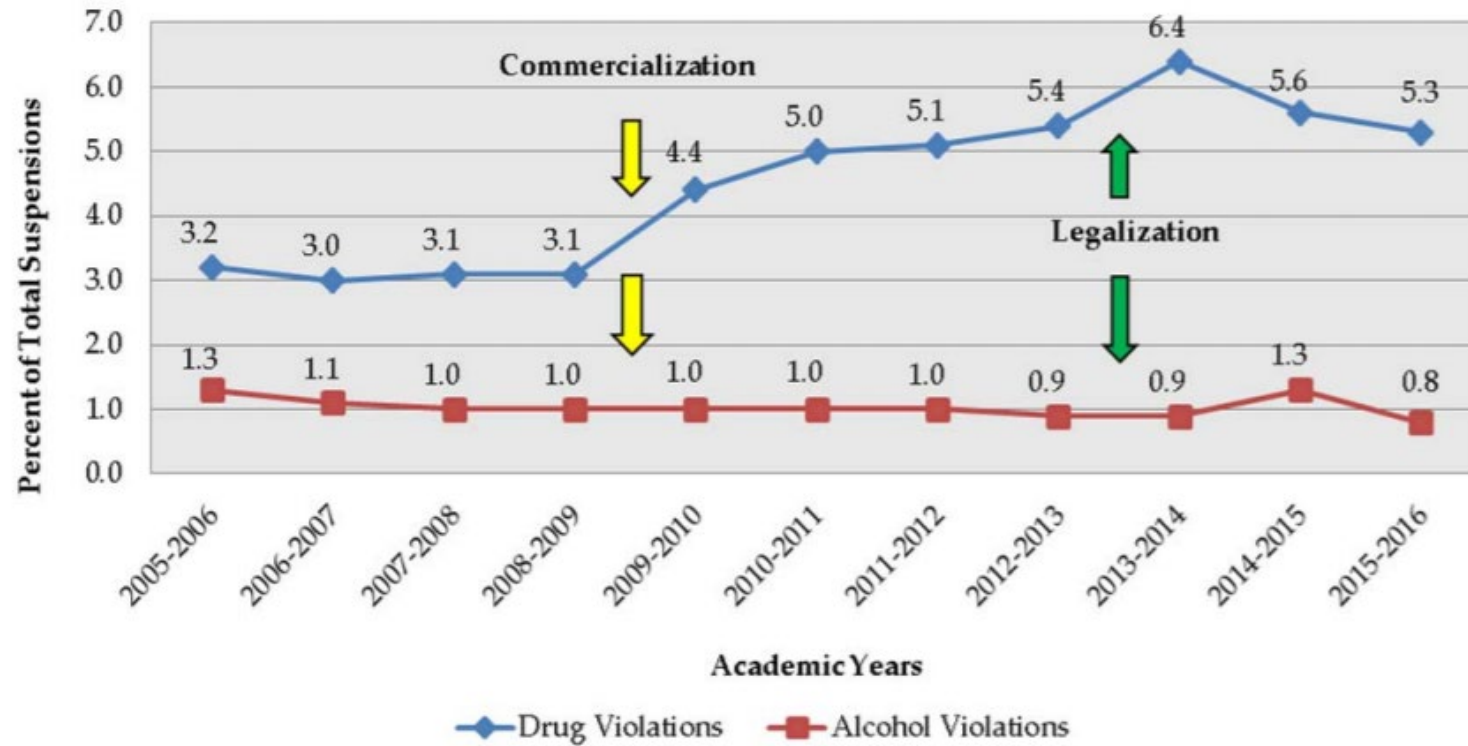
Percentage of Total Expulsions in Colorado 2008 to 2013 School Years

NOTE: THE COLORADO DEPARTMENT OF EDUCATION INCLUDED ALL DRUGS IN THIS DATASET. HOWEVER, DEPARTMENT OFFICIALS REPORTED THAT MOST DRUG-RELATED EXPULSIONS REPORTED SINCE THE 2008-2009 ACADEMIC YEAR HAVE BEEN RELATED TO MARIJUANA.⁷



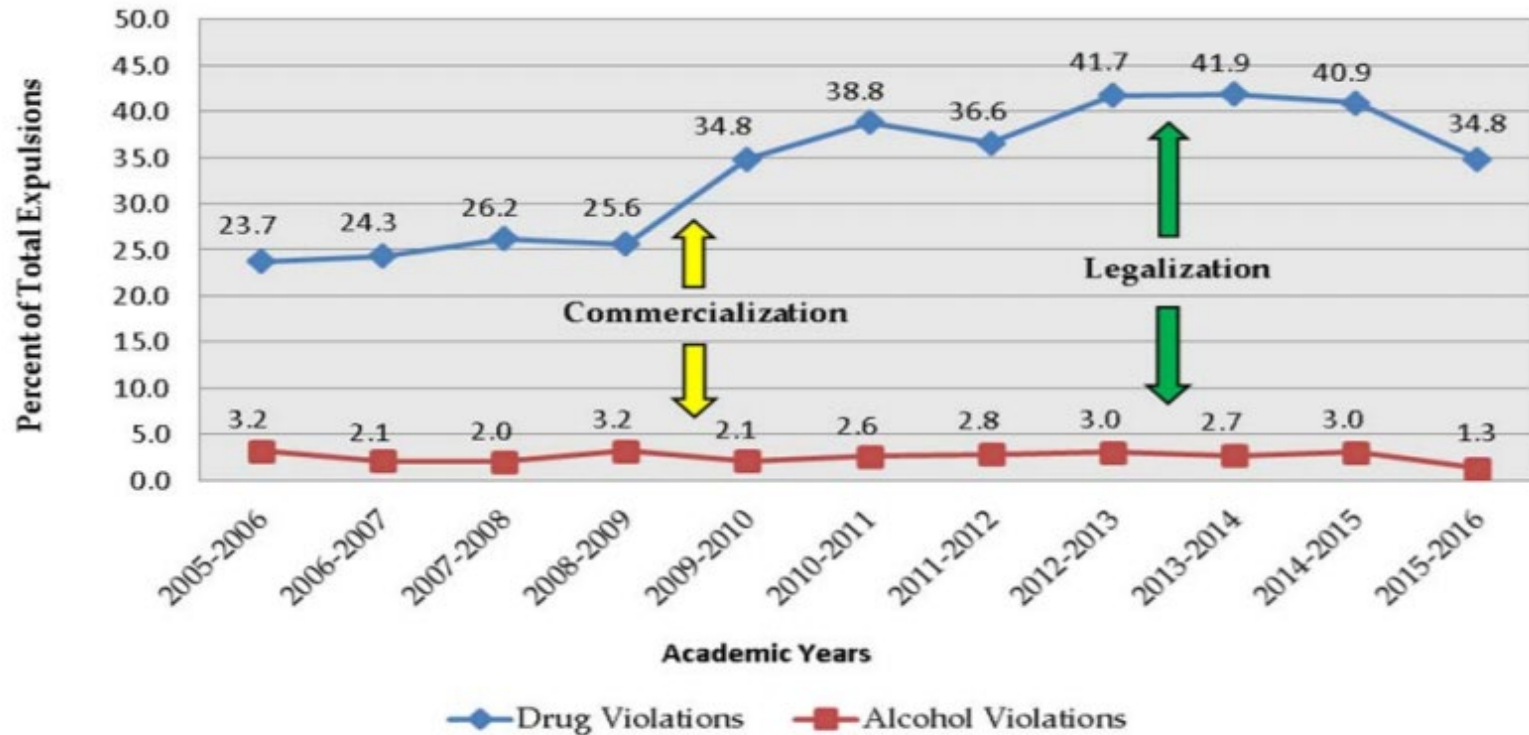
EFFECT ON YOUTH - SCHOOL

Percent of *Total Suspensions* in Colorado



EFFECT ON YOUTH - SCHOOL

Percent of Total Expulsions in Colorado

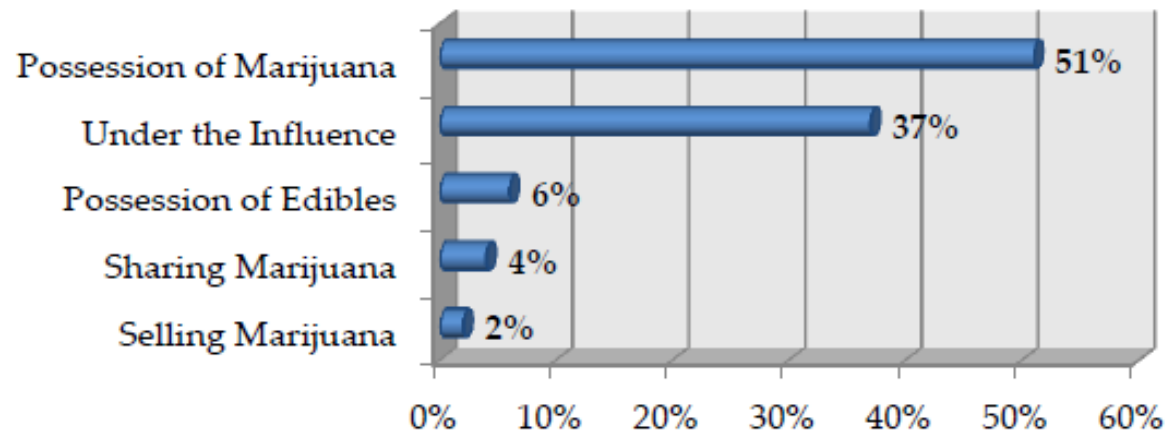


SOURCE:

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

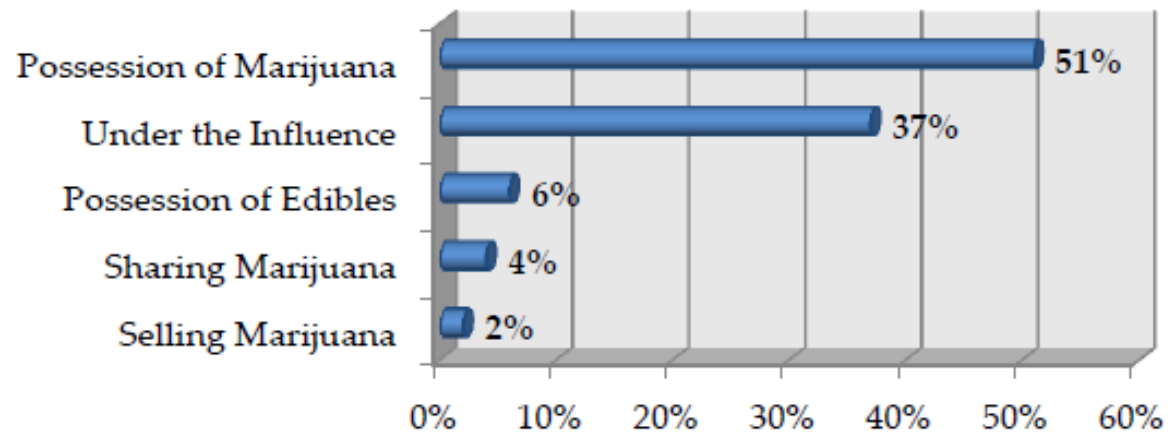
EFFECT ON YOUTH - SCHOOL

Most Prominent Marijuana Violations on Campus

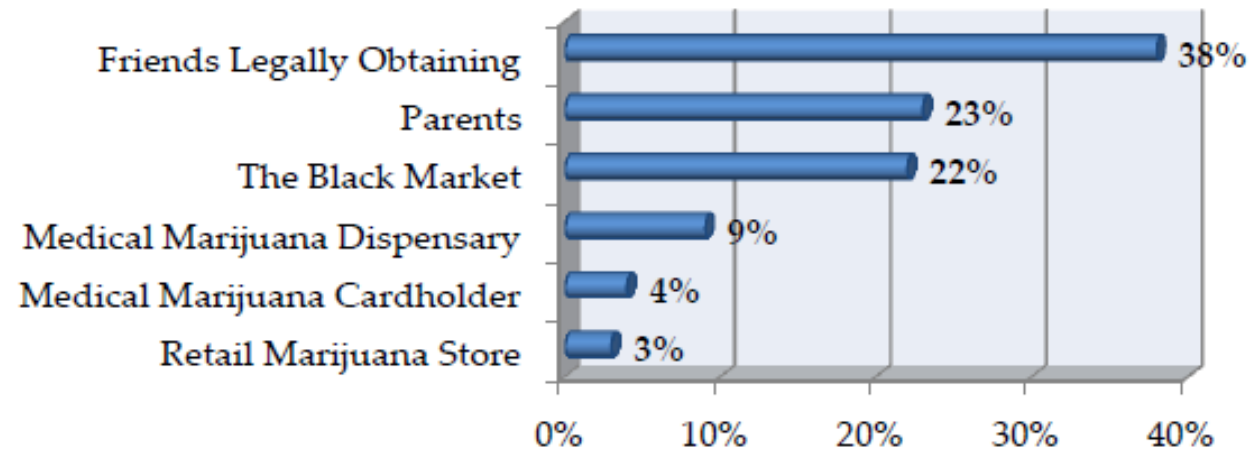


EFFECT ON YOUTH – SCHOOL (2014)

Most Prominent Marijuana Violations on Campus

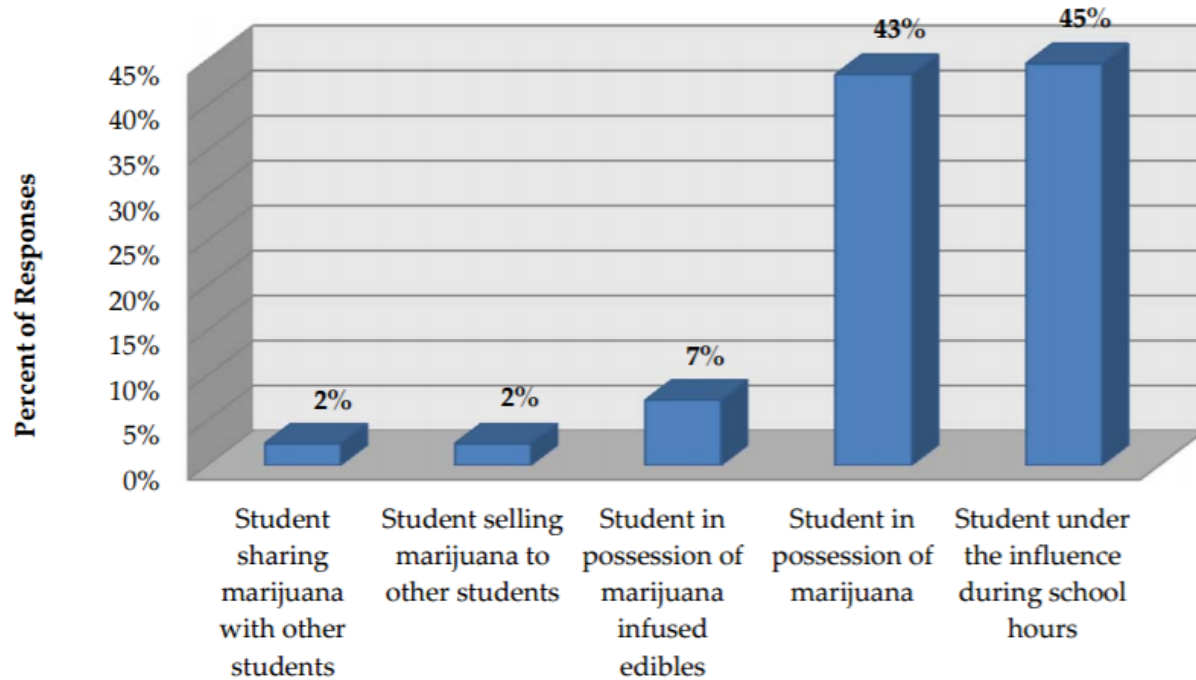


Where Marijuana is Obtained



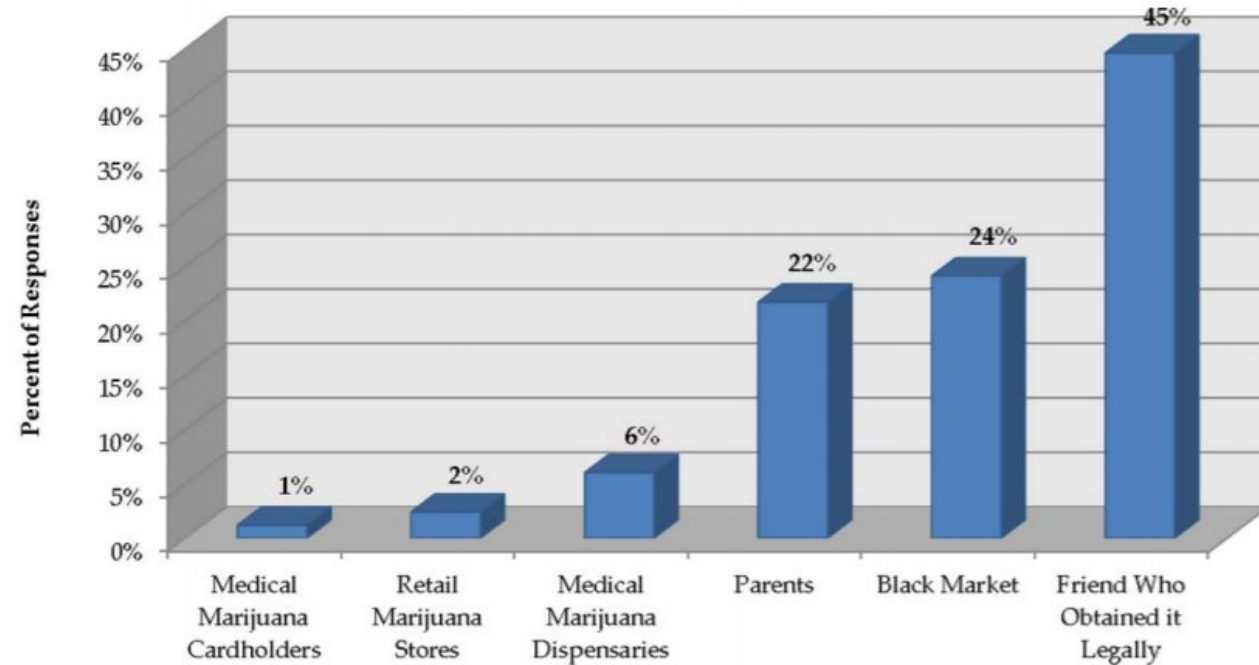
EFFECT ON YOUTH – SCHOOL (2016)

Predominant Marijuana Violations, 2016



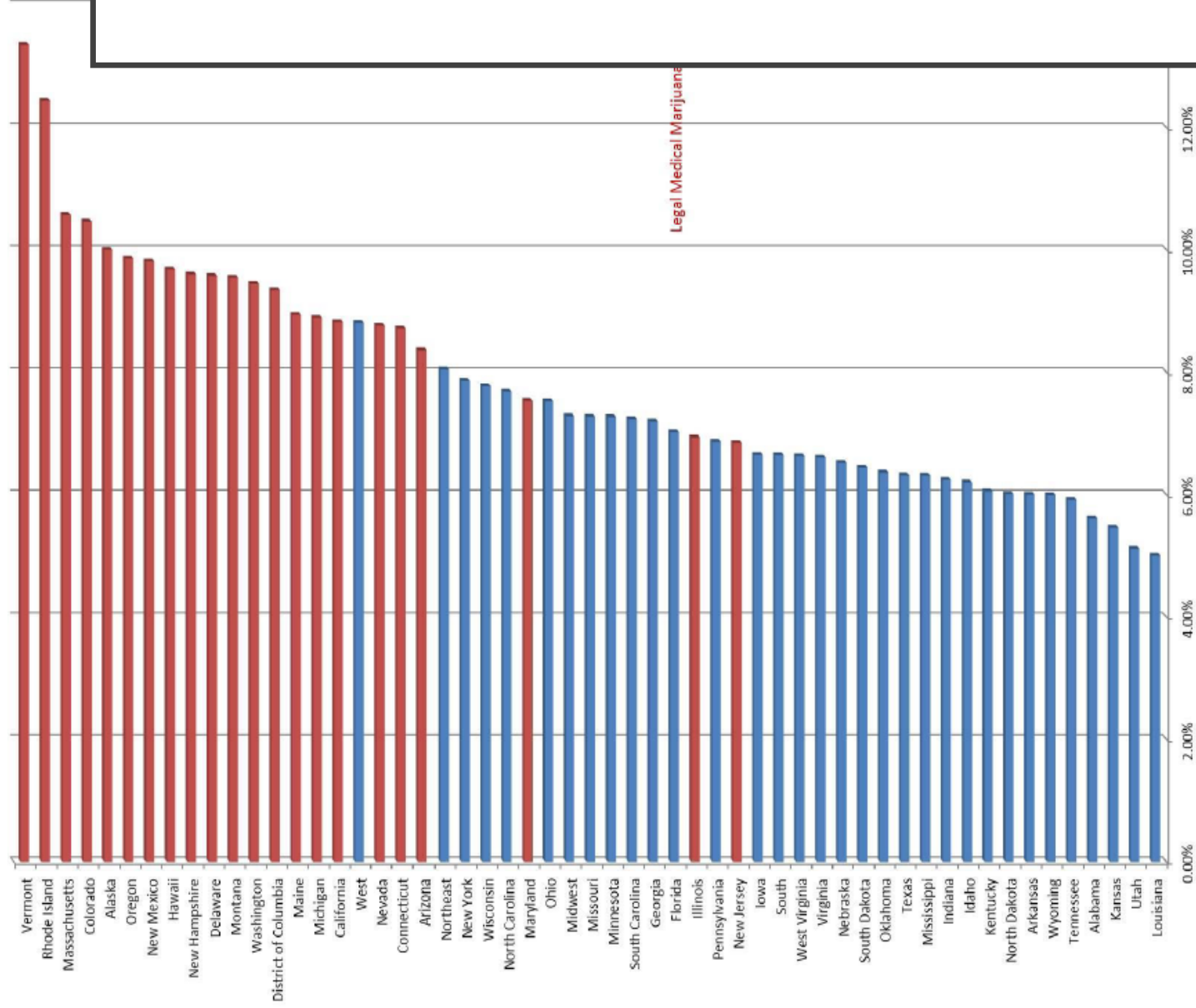
SOURCE: Colorado Association of School Resource Officers (CASRO) and Rocky Mountain HIDTA

Student Marijuana Source, 2016



SOURCE: Colorado Association of School Resource Officers (CASRO) and Rocky Mountain HIDTA

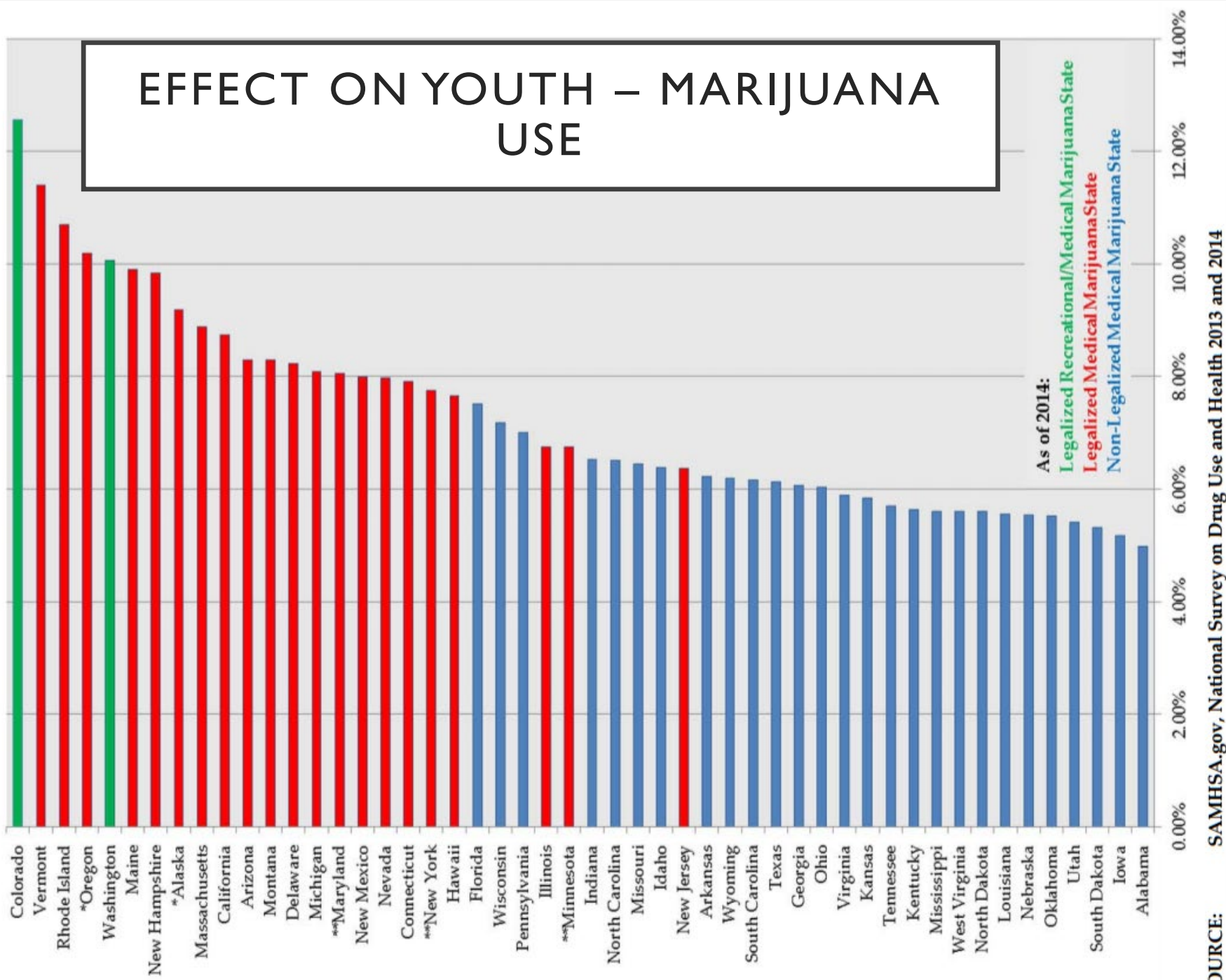
Past Month Usage by 12 to 17-Year-Olds in Medical Marijuana States, 2012



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

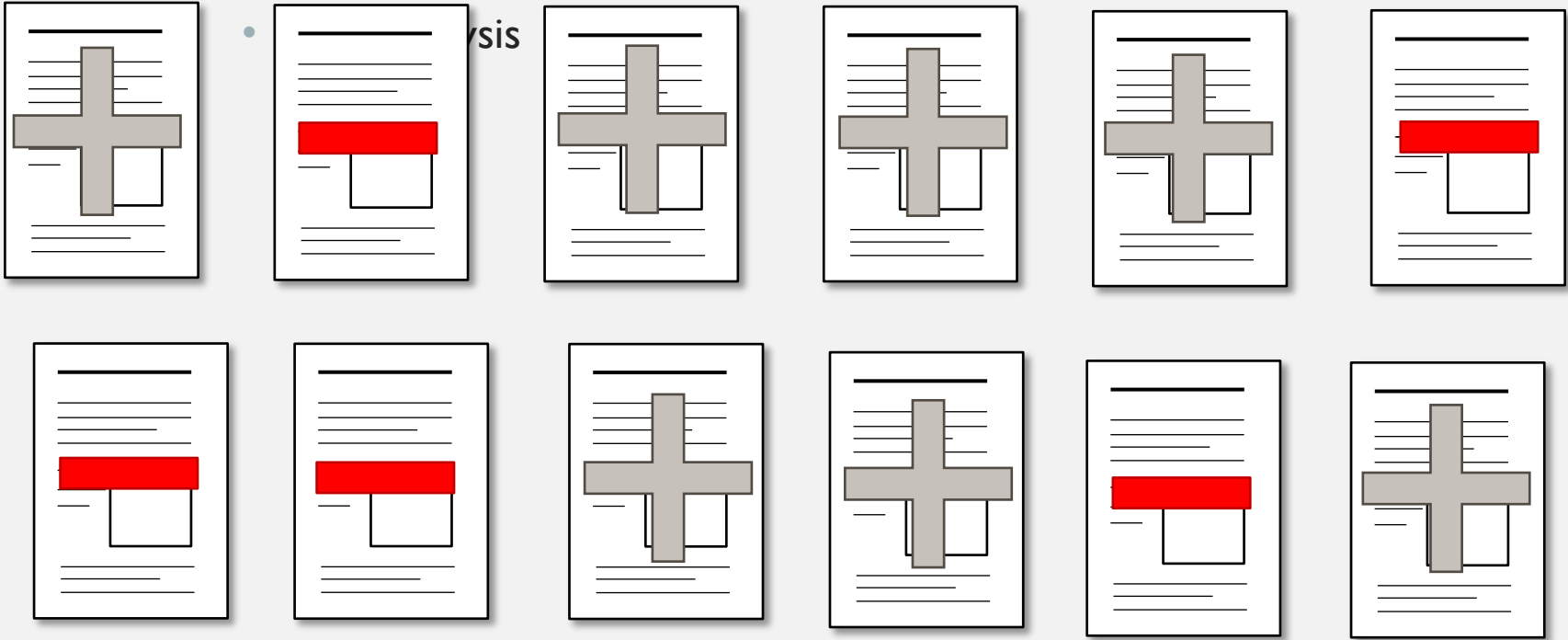
EFFECTS ON YOUTH – MARIJUANA USE

Past Month Usage, 12 to 17 Years Old, 2013/2014



SOURCE: SAMHSA.gov, National Survey on Drug Use and Health 2013 and 2014

TRAFFIC





ODDS RATIO

Group A

Group B

children who go trick-o-treating

children who **do not** go trick-o-treating

children who are out of control the morning following Halloween

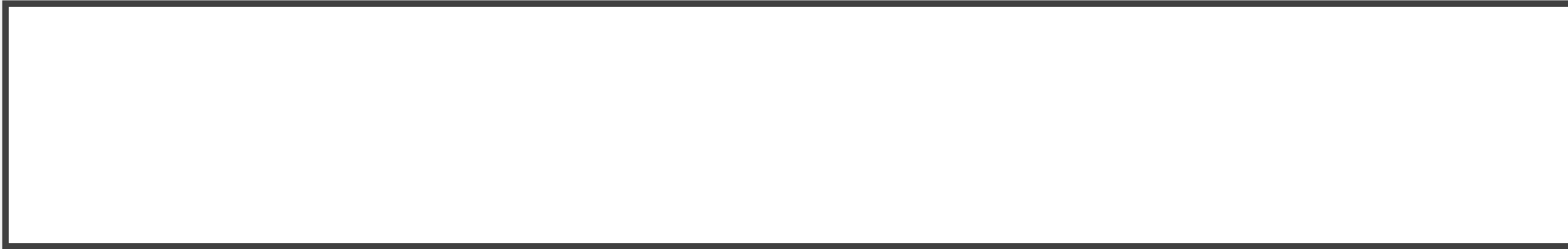
ODDS RATIO

children who go trick-o-treating

children who are out of
control the morning following Halloween

children who **do not** go trick-o-treating

children who are out of
control the morning following Halloween



Risk of road accident associated with the use of drugs: A systematic review and meta-analysis of evidence from epidemiological studies

Rune Elvik, 2012

Accident Analysis & Prevention

Table 6

Summary estimates of relative risk of accident involvement associated with the use of various drugs. Based on meta-analysis.

Drug	Accident severity	Number of estimates	Best estimate of odds ratio ^a	95% confidence interval	Best estimate adjusted for publication bias ^a	95% confidence interval
Amphetamine	Fatal	8	5.61	(2.74, 11.49)	5.17	(2.56, 10.42)
	Injury	2	6.19	(3.46, 11.06)	6.19	(3.46, 11.06)
	Property damage	1	8.67	(3.23, 23.32)	8.67	(3.23, 23.32)
Analgesics	Injury	8	1.06	(0.92, 1.21)	1.02	(0.89, 1.16)
Anti-asthmatics	Injury	6	1.33	(1.09, 1.62)	1.31	(1.07, 1.59)
Anti-depressives	Injury	20	1.39	(1.17, 1.70)	1.35	(1.11, 1.65)
	Property damage	5	1.28	(0.90, 1.80)	1.28	(0.90, 1.80)
Anti-histamines	Injury	7	1.12	(1.02, 1.22)	1.12	(1.02, 1.22)
Benzodiazepines	Fatal	10	2.30	(1.59, 3.32)	2.30	(1.59, 3.32)
	Injury	51	1.65	(1.49, 1.82)	1.17	(1.08, 1.28)
	Property damage	4	1.35	(1.04, 1.76)	1.35	(1.04, 1.76)
Cannabis	Fatal	10	1.31	(0.91, 1.88)	1.26	(0.88, 1.81)
	Injury	15	1.26	(0.99, 1.60)	1.10	(0.88, 1.39)
	Property damage	17	1.48	(1.28, 1.72)	1.26	(1.10, 1.44)
Cocaine	Fatal	4	2.96	(1.18, 7.38)	2.96	(1.18, 7.38)
	Injury	3	1.66	(0.91, 3.02)	1.66	(0.91, 3.02)
	Property damage	4	1.44	(0.93, 2.23)	1.44	(0.93, 2.23)
Opiates	Fatal	7	2.13	(1.23, 3.72)	1.68	(1.01, 2.81)
	Injury	18	1.94	(1.51, 2.50)	1.91	(1.48, 2.45)
	Property damage	1	4.76	(2.10, 10.80)	4.76	(2.10, 10.80)
Penicillin	Injury	5	1.12	(0.91, 1.39)	1.12	(0.91, 1.39)
Zopiclone	Fatal	1	2.60	(0.89, 7.56)	2.60	(0.89, 7.56)
	Injury	4	1.42	(0.87, 2.31)	1.42	(0.87, 2.31)
	Property damage	1	4.00	(1.31, 12.21)	4.00	(1.31, 12.21)

^a Estimates shown in bold are statistically significant at the 5% level.

Table 6

Summary estimates of relative risk of accident involvement associated with the use of various drugs. Based on meta-analysis.

Drug	Accident severity	Number of estimates	Best estimate of relative risk ^a	95% confidence interval	Best estimate adjusted for publication bias ^a	95% confidence interval
Amphetamine	Fatal	4	2.60	(2.74, 25.48)	2.67	(2.74, 26.42)
	Injury	2	2.00	(3.46, 11.06)	2.00	(3.46, 11.06)
	Property damage	1	2.67	(3.25, 29.52)	2.67	(3.25, 29.52)
Alcohol	Injury	4	1.00	(0.92, 1.21)	1.00	(0.92, 1.21)
	Fatal	4	1.00	(1.04, 1.42)	1.00	(1.07, 1.39)
Anti-depressants	Injury	20	1.00	(1.17, 1.76)	1.00	(1.11, 1.40)
	Property damage	2	1.20	(0.98, 1.46)	1.20	(0.98, 1.46)
Anti-convulsants	Injury	7	1.00	(1.02, 1.22)	1.00	(1.02, 1.22)
	Fatal	10	2.00	(1.56, 3.12)	2.00	(1.56, 3.12)
Benzodiazepines	Fatal	11	1.00	(1.46, 1.62)	1.07	(1.06, 1.26)
	Injury	4	1.00	(1.04, 1.71)	1.00	(1.04, 1.71)
	Property damage	4	1.00	(1.04, 1.71)	1.00	(1.04, 1.71)
Cocaine	Fatal	10	1.11	(0.91, 1.36)	1.26	(0.88, 1.81)
	Injury	15	1.26	(0.99, 1.60)	1.10	(0.88, 1.39)
Cannabis	Fatal	10	1.31	(0.91, 1.88)	1.26	(0.88, 1.81)
	Injury	15	1.26	(0.99, 1.60)	1.10	(0.88, 1.39)
	Property damage	17	1.48	(1.28, 1.72)	1.26	(1.10, 1.44)
Opioids	Fatal	7	2.00	(1.25, 3.72)	2.00	(1.09, 2.61)
	Injury	16	1.00	(1.11, 2.76)	1.00	(1.06, 2.40)
	Property damage	1	4.76	(2.38, 10.00)	4.76	(2.38, 10.00)
Propranolol	Injury	3	1.12	(0.91, 1.38)	1.12	(0.91, 1.38)
	Fatal	1	2.00	(0.66, 7.56)	2.00	(0.66, 7.56)
Tricyclics	Fatal	4	1.42	(0.67, 2.91)	1.42	(0.67, 2.91)
	Injury	4	1.42	(0.67, 2.91)	1.42	(0.67, 2.91)
	Property damage	1	4.00	(1.31, 12.21)	4.00	(1.31, 12.21)

^a Estimates shown in bold are statistically significant at the 5% level.