



Marijuana and its

**impact
on
youth
and
School**

By Margo Austin, Med, LADC
4 /4/17

- Quick facts
- What's going on out there
- Impact on kids and education
- State of Prevention
- Recommendations

- **Marijuana is a psychoactive, addictive drug**
- **Active ingredient that gets a person high is THC**
- **THC levels have risen from 1-3% to 10-25%**
- **Marijuana is fat soluble (hangs around for a long time)**
- **1 in 6 teens who use marijuana become addicted- for daily users it is 1 in 2**

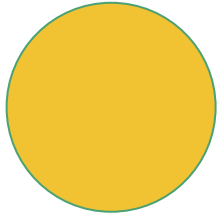


3 Biggest Factors Influencing Substance Use

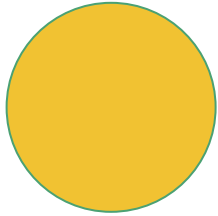
- Availability
- Perception of Harm
- Social norms, policies, laws,

According to the Youth Risk Behavior Survey (YRBS), only 27% of youth grades 9-12 believe they would greatly harm themselves physically or in other ways if they use marijuana on a regular basis.

I hear SO many myths about marijuana from adults and youth!



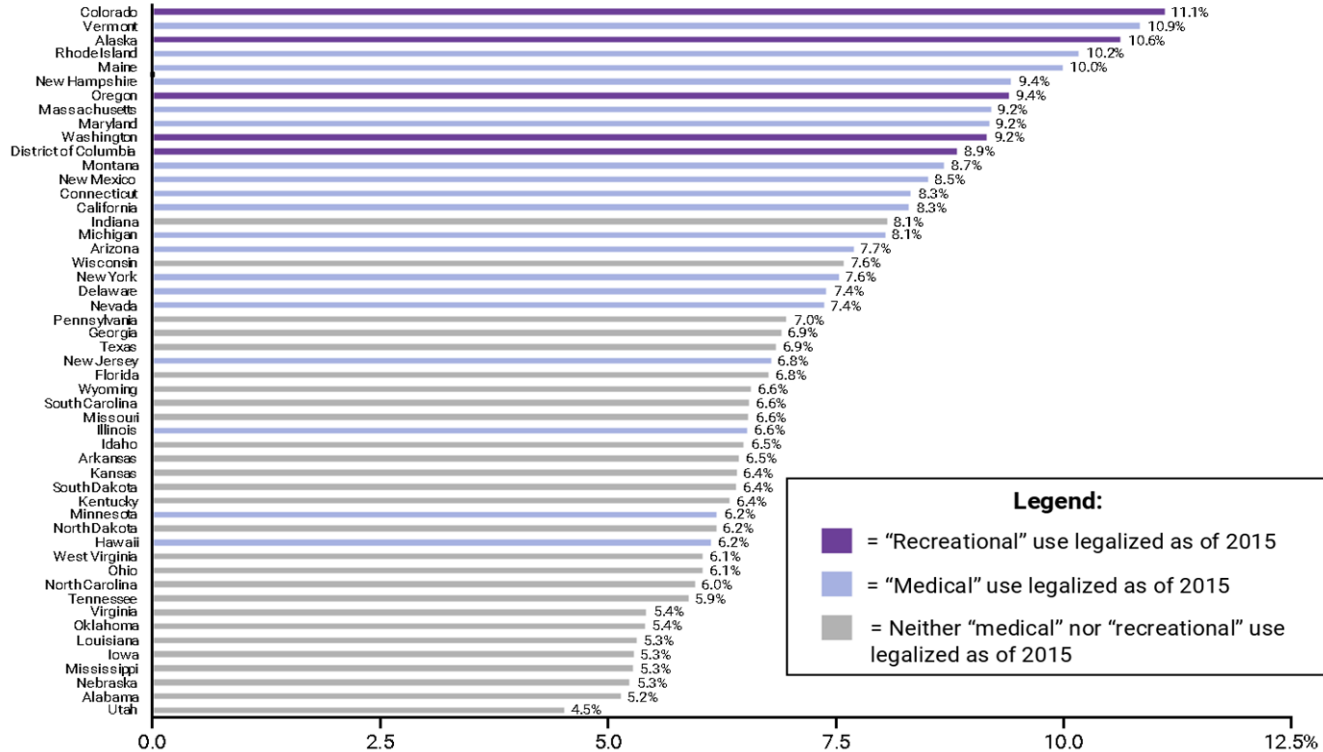
Addiction is an adolescent disease



**Brain is not fully developed until
approximately **25** years of age**

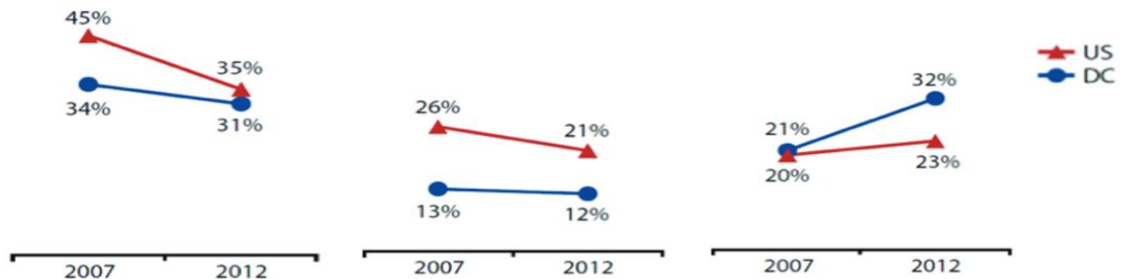
Youth use rates in states that have legalized marijuana outstrip those that have not

Last-month use, ages 12-17 (as of 2015)



INITIATIVE 71 MARIJUANA WORKING GROUP STATUS REPORT FEBRUARY 2016
 GOVERNMENT OF THE DISTRICT OF COLUMBIA
 MURIEL BOWSER, MAYOR

Percentage of High School Students Reporting Past-Month Substance Use by Substance and Year. Data Source: YRBS, 2007 and 2012



Alcohol



DC high school youth had slight, but significant decreases in past month use in 2012.

Binge Drinking



A little more than 1 in 10 District high school students reported binge drinking in both 2007 (13%) and 2012 (14%).

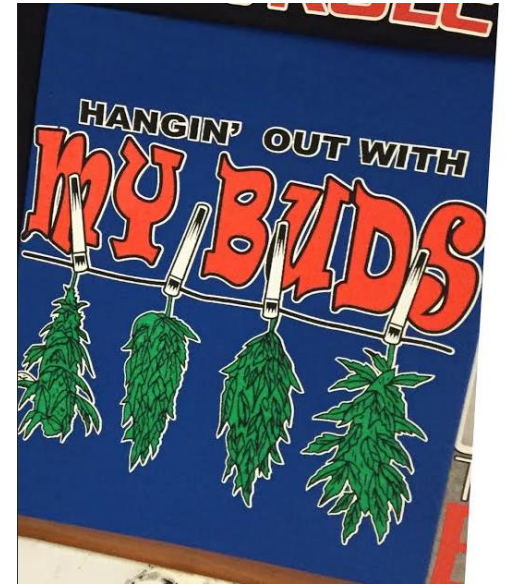
Marijuana



Marijuana use among District high school students increased by approximately 50%. This outpaced the much smaller use increase among U.S. high school students.

In our community...

What's at the u-Mall?

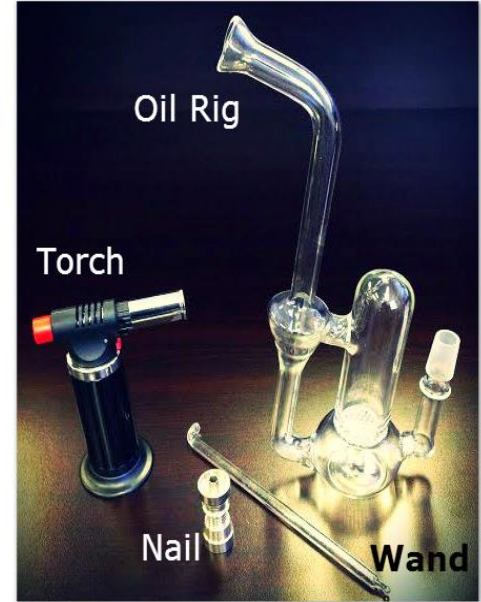


The newest ways marijuana is being “smoked” vaping Butane Hash Oil (BHO) dabs... moves potency to **40-80% THC!**



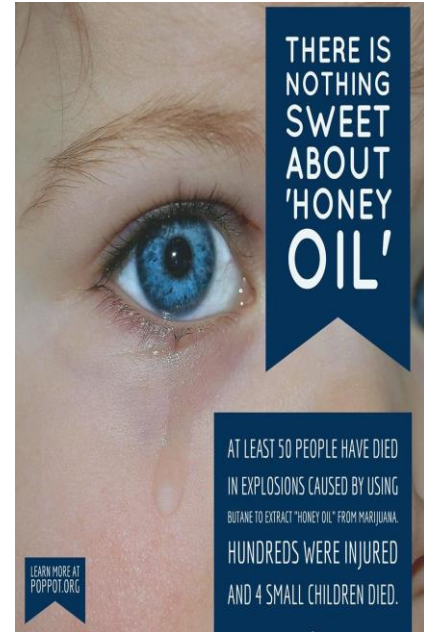
710
OIL

710 UPSIDE DOWN SPELLS
OIL A COMMON ACRONYM
FOR DABS AND A FORM
DABS OFTEN TAKE. 7/10
HAS COME TO REPRESENT
THE DAY OF DABS
IN RECENT YEARS





Wayne Winkler, who suffered burns to 12 percent of his body when butane fumes ignited while he was making hash oil at home, sits for a portrait at his home in Denver, May 1, 2014. Winkler agreed to talk to The Associated Press to send a message that making hash oil at home is highly dangerous. Since marijuana became legal on Jan. 1, the state has seen nearly **three dozen explosions** caused by people making pot concentrates at home, and authorities are grappling with what to do about it.







Cartridge Filled With
CO2 Extracted Concentrated
Cannabis Oil

3 Best Weed Pens





Champ Vapes

84
PEARL

VAPE
SHOP
E CIGS
E JUICE

MODS
TANKS
CHARGERS
BATTERIES
ACCESSORIES

OPEN

Cognitive Degradation

Marijuana Intoxication Can Impair Higher Brain Function

- Impairs **learning, working memory**
- Reduces **attention span and concentration**
- Reduces **ability to plan**
- Reduces **organizational skills**
- Reduces **problem solving**
- Reduces **decision making**
- Reduces **perception of facts**
- Reduces **emotional control**
- Reduces **behavioral control**
- Impairs **motor coordination**
- Increases **impulsivity**
- Increases **hunger**
- **Distorts perception of time, distance, sounds**
- **Promotes euphoria, relaxation, sedation**

Predictions of Legalization?

General Health Care

Impact of non-medical marijuana use on health	Improve, no change or worsen?	Evidence strength
Motor vehicle accidents	Worse	Very strong
Child poisoning	Worse	Fair [strong]
Bronchitis	Worse	Strong
Pregnancy	Worse	Strong
Stroke, heart attack	Worse	Fair
Cancer	?	Limited

Predictions of Legalization?

Mental Health Care

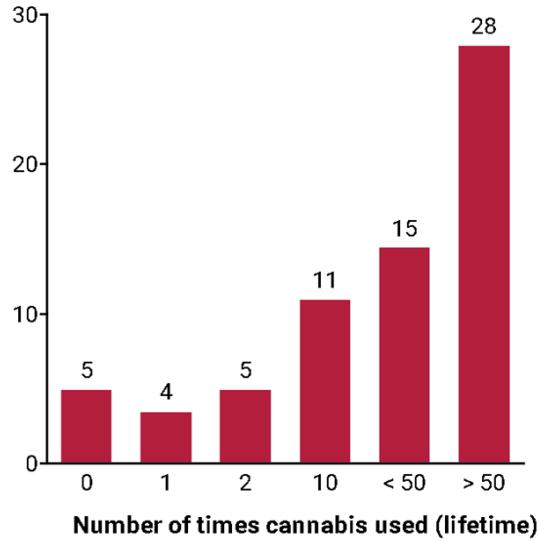
Impact of non-medical marijuana use on health	Improve, no change or worsen?	Evidence strength
Psychosis, psychotic symptoms	Worse	Very strong
Brain function	Worse	Strong
Psychosocial function	Worse	Strong
Addiction	Worse	Very Strong
Addiction other drugs	Worse	Strong
Schizophrenia	Worse	Fair
Anxiety	Worse	Fair-weak
Depression	Worse	Fair-weak

Health Impact Assessment: Marijuana Regulation in Vermont; Vermont Dept. of Health 2016
 HealthVermont.gov; BK Madras edits

Pot use is strongly correlated with psychosis

MORE CANNABIS USE CORRELATES WITH HIGHER RATES OF SCHIZOPHRENIA

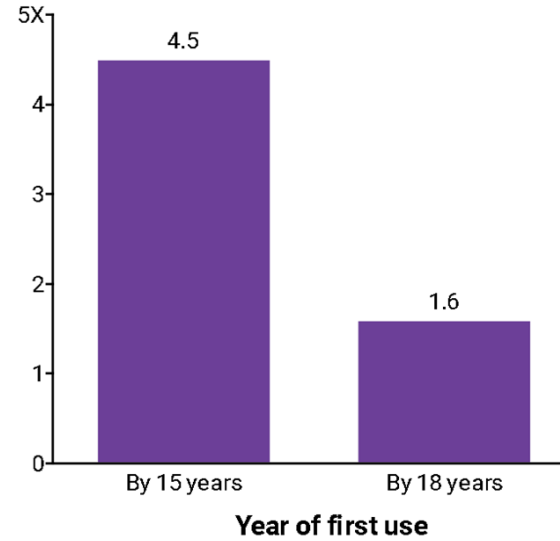
Cases of schizophrenia per 1,000 people



Study of Swedish Conscripts (n=45570)

EARLIER AGE OF USE CORRELATES WITH INCREASED SCHIZOPHRENIA RISK

Risk multiple for schizophrenia-like psychosis at age 26



Longitudinal prospective Dunedin study (n=1037)

Predictions of Legalization?

Society and Welfare

Impact of non-medical marijuana use on health	Does condition improve, no change or worsen?	Evidence strength
Academic performance	Worse	Strong
Welfare	Worse	Strong
Life Satisfaction	Worse	Good
Employment, economic	Worse	Good
Workplace	Worse	Limited

Prevention in schools/communities:

- Only ONE semester of health is required 9-12 grade ONLY 5-7 classes are dedicated to substance use
(maybe ½ class or 1 class on marijuana-that is it)
- Dept of Education used to have 12 staff dedicated to substance prevention. Now, NOT ONE staff is dedicated to substance abuse prevention.
- ACT 51 mandatory two day teacher training-GONE

Prevention infrastructure/programs that are **GONE**:

- Green Mountain Prevention Projects (GMPP)-**GONE**
- Vermont Teen Leadership Safety Program (VTLSP), and Students Against Destructive Decisions (SADD)-**GONE**
- Governor's Youth Leadership Conference (GYLC)- **GONE**
- Vermonter's Impact Panel-**GONE**

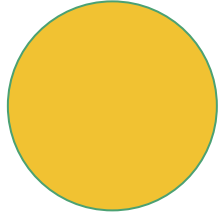
Prevention infrastructure/programs with MAJOR REDUCTIONS:

- Student Assistance Programs (SAP) /Counselors: at its height: 92 grants were awarded to school districts compared to 20 this year
- Prevention Coalitions: at its height 32 coalitions existed across VT, now it is only 22

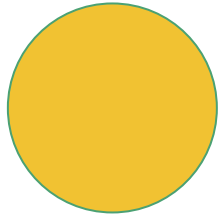
It will take at least **5-15 years** to get enough data from states that have further liberalized their marijuana laws to have true evidence of longitudinal impact. To leap now is a cross your fingers and hope approach.



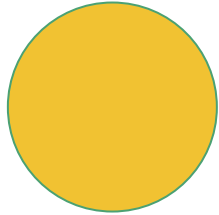
If H170 passes.....



What will increased access actually do?



Increased use... to teenagers?



Possible decrease of age of onset?

Questions for you to consider?

- **How will H.170 IMPROVE health and safety for Vermonters?**
- **Do we have all the mechanisms in place to safeguard, protect, improve public health and safety for all Vermonters?**
- **When will we find the WILL to adequately fund prevention? How bad does it have to get first? What are we “ok” with? Vermont ranks #2 for youth marijuana use rates**
- **What message do you want to send the next generation? Is legalizing another psycho-active drug the legacy you want to leave? One generation and we will think nothing of potweiser ads on during the superbowl-nothing**

Recommendations

- Comprehensive and sustained prevention, intervention and treatment services in every community
- A public service awareness campaign that starts to chip away at the myths about marijuana

Search Institute:

<http://www.search-institute.org/content/40-developmental-assets-adolescents-ages-12-18>

Compelling research
Be Informed



[Dr. Bertha Madras' presentation is now available!](#)

password :

NLF2016

(not case sensitive)

Sources:

National Survey on Drug Use and Health

Dr. Bertha Madras

Professor of psychobiology in the Department of Psychiatry and the chair of the Division of Neurochemistry at Harvard Medical School

Vermont Department of Health

Youth Risk Behavior Survey (YRBS), 2015

Health Impact Assessment (HIA) on Marijuana, 2016

National Academies of Sciences, Engineering and Medicine

World Health Organization

Search Institute