

Negative Outcomes of Recreational Cannabis Legalisation

27 Aug 2019

For 40th ASOD Research Working Group



Scope

- **Recap of countries/states that have legalised recreational cannabis**
- **Trends before and after legalisation of recreational cannabis**
- **Negative outcomes after legalisation of recreational cannabis**
- **Conclusion**



Countries/States That Have Legalised Recreational Cannabis



Canada and Uruguay

Canada

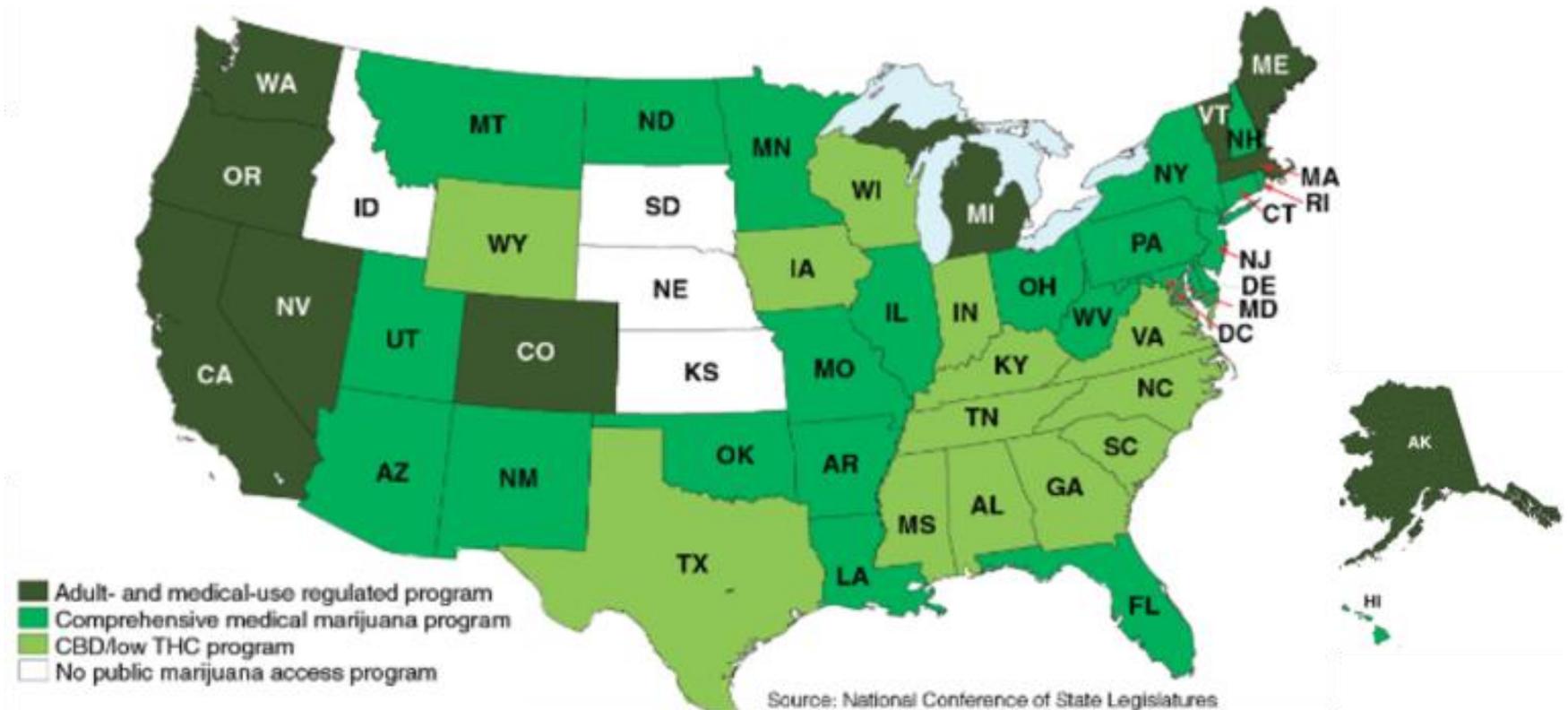
- **Legalised recreational cannabis through the Cannabis Act on 17 Oct 2018**
 - Adults over 18 allowed to buy cannabis oil, seeds and plants and dried cannabis from licensed producers and retailers
 - Grow up to 4 plants per household for personal use
 - Provinces and territories are responsible for determining how cannabis is distributed and sold within their jurisdictions

Uruguay

- **Legalised recreational cannabis in 2013**
 - Adults over 18 must registered with the government and are allowed to obtain cannabis through pharmacies, cannabis growers' clubs and home production
 - Limit for personal consumption is 40g per month, or growing of 6 plants per household (total annual production does not exceed 480g)



United States



Status	Numbers
Adult and medical use regulated program	11 states and Washington DC
Comprehensive medical marijuana program	22 states
CBD/Low THC program	13 states
No public marijuana access program	4 states



Trends Before And After Legalisation of Recreational Cannabis



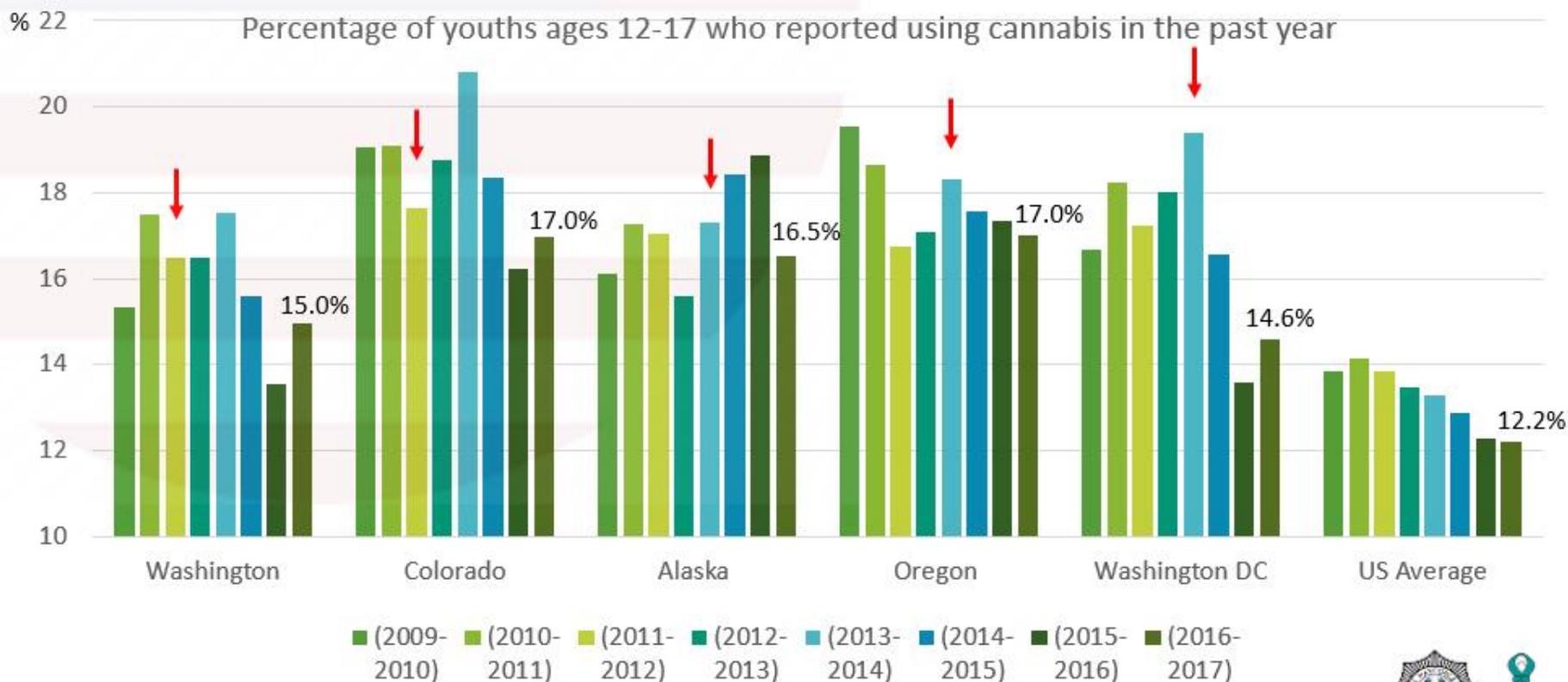
United States: Increased cannabis consumption

- Results from the 2009 – 2017 NSDUH for **4 States (Colorado, Washington State, Alaska, and Oregon) and Washington DC** show:
 - **Youths ages 12-17**
 - **More youths in such states consume cannabis** compared to the national average.
 - **Young adults ages 18-25**
 - **Increased cannabis consumption** after the legalisation of recreational cannabis → **significantly above national average.**
 - **Adults ages 26 years and above**
 - **Increased cannabis consumption** after the legalisation of recreational cannabis → **significantly above national average.**



Average past year use trend for youths aged 12 - 17

In 2016-2017, average past year use by youths for these states/district (16.0%) was about **31% more** than the national average (12.2%)

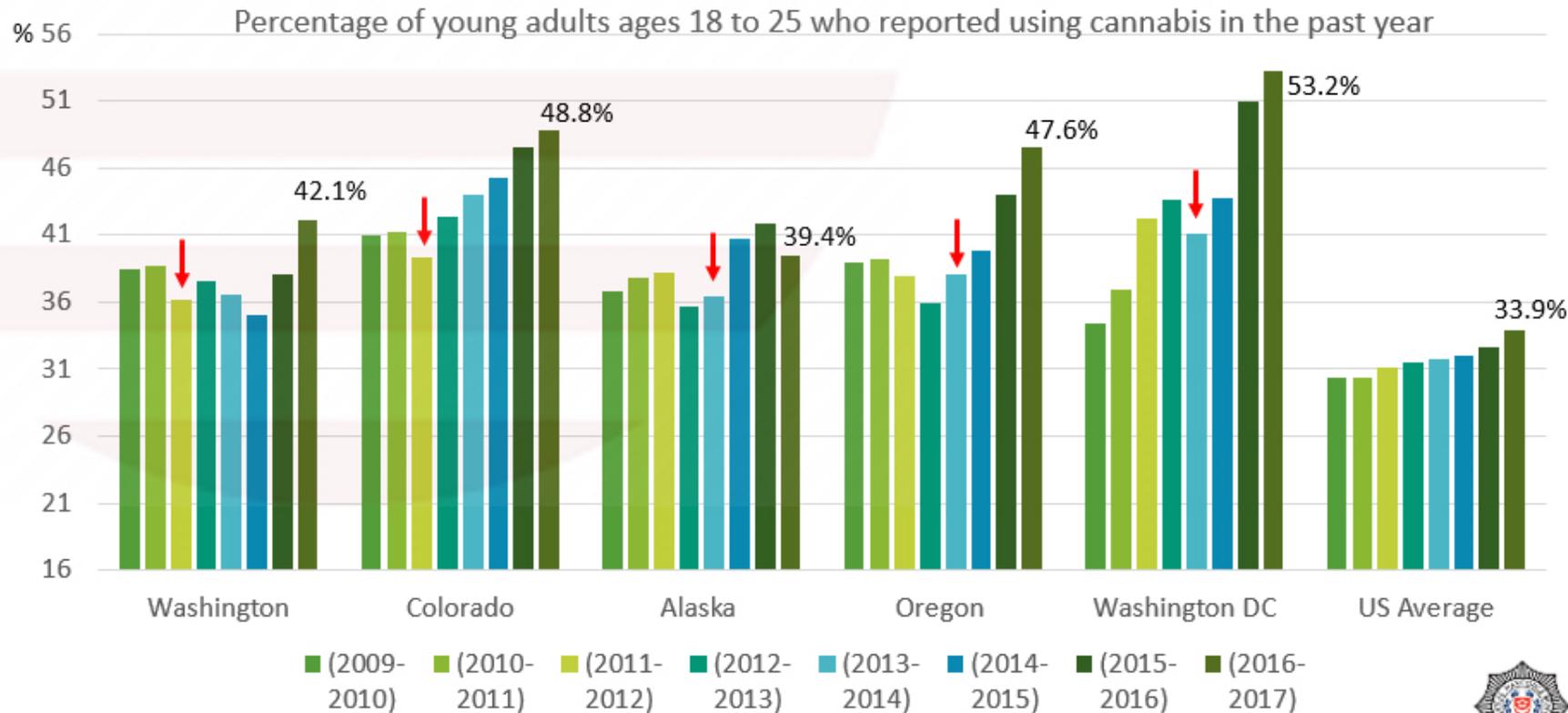


↓ Year recreational cannabis was legalised



Average past year use trend for young adults aged 18 to 25

In 2016-2017, average past year use by young adults for these states / district (46.2%) was about **36% more** than the national average (33.9%)

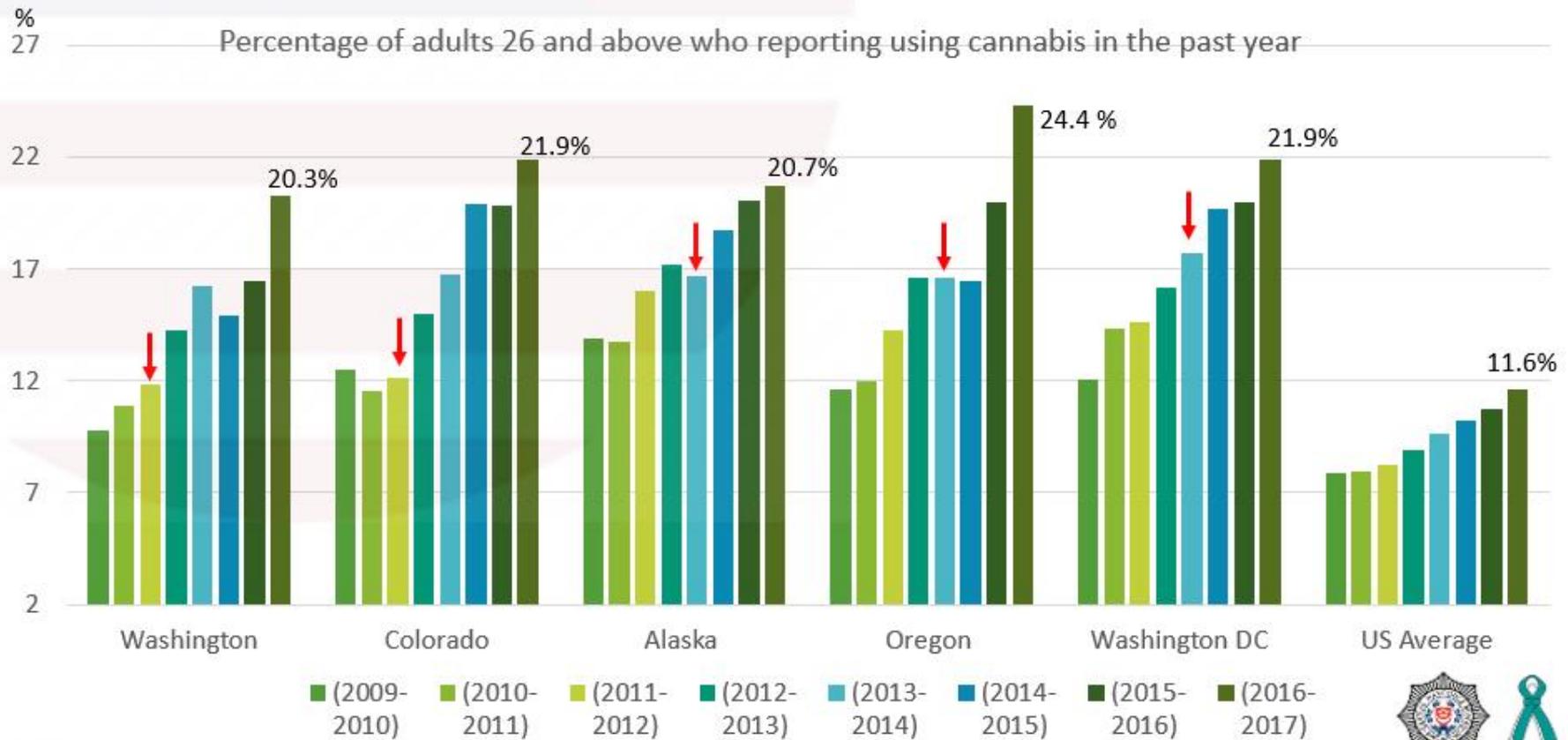


↓ Year recreational cannabis was legalised



Average past year use trend for adults aged 26 and above

In 2016-2017, average past year use by adults for these states/district (21.8%) was about **88% more** than the national average (11.6%)



↓ Year recreational cannabis was legalised



United States: Increasing potency and reducing prices after legalisation

- **Higher potency** of cannabis products
- **Lower prices** of cannabis products
 - Due to the market demand for high potency cannabis products and increasing competition as more cannabis businesses enter the market.

Colorado

- Average THC content for cannabis flowers
- Average THC content for concentrates (e.g. hash, hash oil)



- Average price per gram of cannabis flowers
- Average price per gram of concentrates (e.g. hash, hash oil) (\$)



Oregon

- Average THC content for all cannabis products



- Average price per gram for all cannabis products

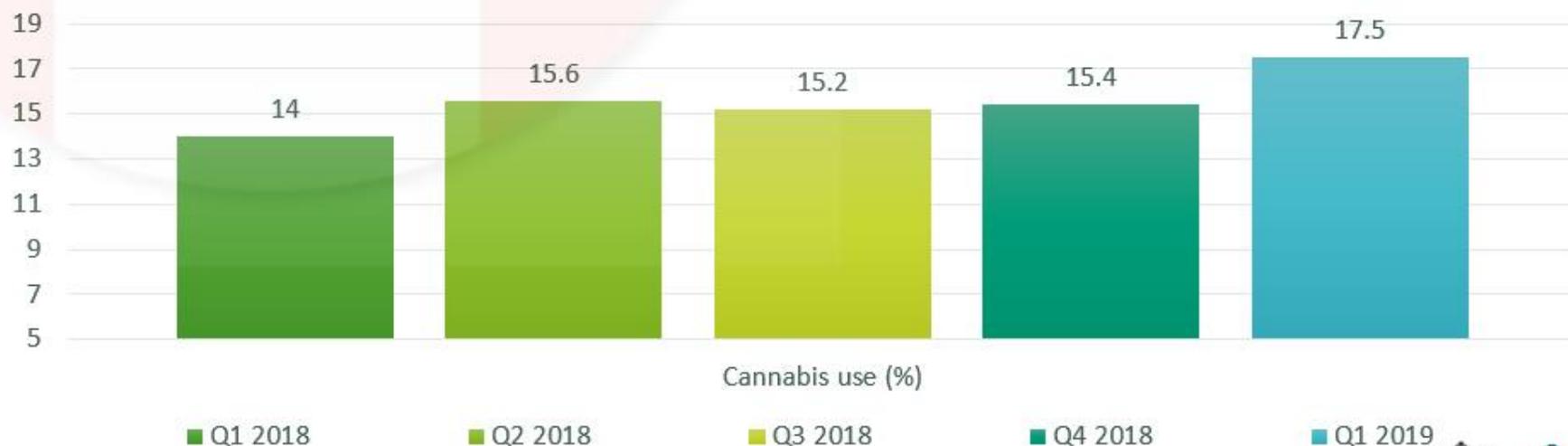


First-time and overall cannabis consumption for Canadians ages 15 and above increased

In Q1 2019:

- According to Canada's National Cannabis Survey, **646,000 respondents** reported trying cannabis for the first time in the last three months. This is **almost double** the 327,000 figure for Q1 2018.
- Close to **1 in 5 (17.5%)** survey responders reported having consumed cannabis in the last three months, up from 14% in Q1 2018 (25% increase).

Percentage (%) of Canadians who reported cannabis use in the last three months among Canadians ages 15 years old and above



Canada: Increase in consumption by certain age group after legalisation

Percentage (%) of Canadians who reported cannabis use in the past three months by different age groups



	1Q 2018	2Q 2018	3Q 2018	4Q 2018	1Q 2019
15 to 24	23.2	32.7	27	27.4	29.5
25 to 34	26.1	26.9	24.5	23.2	28.7
35 to 44	15.9	14.9	16.5	17.5	18.8
45 to 54	8.2	10.6	12	12.8	12.5
55 to 64	9.4	10	9.9	10.4	15.3
65 and over	4	3.4	4.9	5.2	4.4

Top 3 increase in age group

- Ages 55 to 64 (↑55%)
- Ages 25 to 34 (↑17%)
- Ages 35 to 44 (↑14%)



Negative outcomes after legalisation of recreational cannabis



Increased risk of addiction & psychosis

- More affordable cannabis, → likely **increase overall demand** and may also **increase addiction** rates
- People who use cannabis on a daily basis may be at **increased risk of developing psychosis** and progression to **cannabis use disorder**, particularly if they use high potency cannabis.
 - E.g. In 2017 2.2% (557,000) of Americans ages 12 to 17, 5.2% (1.8 million) of those ages 18 to 25 and 0.8% (1.7 million) of those 26 years and older suffered from a cannabis use disorder in the past year.

**Note: effect of daily cannabis use and use of high-potency products are not always immediately observable, it is likely that the outcome will only be visible on a longer term*



United States: Increased harms from prenatal exposure

➤ Legalisation may lead **pregnant women to think cannabis is safe** and increase prenatal exposures to the harms of cannabis

- More pregnant women found to consume cannabis in US

Frequency of cannabis consumption	2002-2003	2016-2017	% Increase
Daily use in past month	0.9%	3.4%	278%
Past month use	3.4%	7.0%	106%

1st Trimester

Increase from 1.8% to 5.3%

2nd Trimester

increase from 0.6% to 2.5%

3rd Trimester:

increase from 0.5% to 2.5%

Source: [JAMA](#)

➤ Cannabis dispensaries were also found to give **misleading information**:

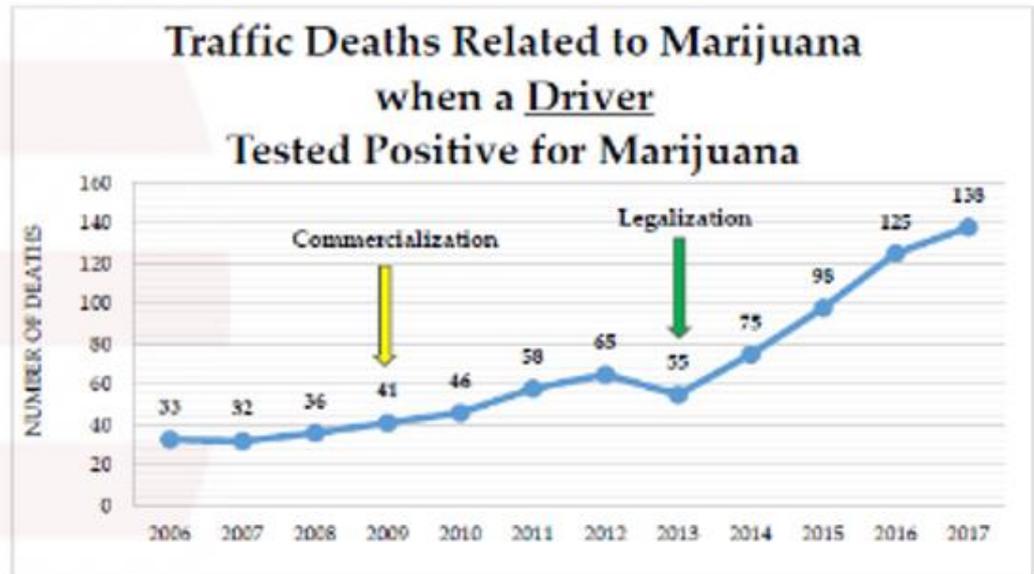
- One-third endorsed marijuana as being safe during pregnancy.
- 69% recommended cannabis to relieve nausea.



United States: Increase in cannabis related traffic accidents

COLORADO

- 151% increase in cannabis-related Traffic deaths (from 2013 to 2017)



SOURCE: National Highway Traffic Safety Administration, Fatality Analysis Reporting System (FARS), 2006-2011 and Colorado Department of Transportation 2012-2017

COLORADO, WASHINGTON STATE, and OREGON when compared to neighbouring states that had not legalised recreational cannabis

- 6% higher rate of car accident claims (2012 to 2017)
- 5.5% higher rate of police reported crashes (2012-2016) .



United States: Increase in cannabis related poisoning and hospitalisations

➤ Increased calls to Poison Centres

- **COLORADO –76% increase in cannabis-related calls** in 2017, compared to 2012 when recreational cannabis was just legalized. For youths (0-18 years) → **81% increase.**
- **WASHINGTON STATE–133% increase** in cannabis related calls compared to 2012 when recreational cannabis was legalized. For children (0-5 years) → **a 320% increase**
- **OREGON –147% increase in cannabis-related calls** in 2017, compared to 2014 when recreational cannabis was legalized. For children (0-12 years) → **271% increase**

➤ Cannabis related hospitalisations

- **COLORADO – 38% increase** in cannabis related hospitalisations in 2017, compared to 2012
- **OREGON – 85% increase** in rate of cannabis related emergency room visits in 2015, compared to 2014



United States: Illicit cannabis activities

➤ Increase in organised crime groups and underage possession

COLORADO

- **277% increase** in 2017, up from 2012 when recreational cannabis was legalized.
- **Overwhelming increase of underage possession of cannabis** (< 21 years) - 3502 cases in 2017, from 3 in 2013 and 0 in 2012

➤ High and increasing levels of black market activity

“The popularity of marijuana use along with the ease of abuse of some state laws entice diverse sizes and types of criminal organizations to become involved with illegal marijuana cultivation and distribution in the United States” *DEA's 2018 National Drug Threat Assessment Report*

- **OREGON** - Between July 2015 and Jan 2018, approximately \$48 million worth of black market cannabis believed to originate from Oregon was seized in 37 states
- **WASHINGTON STATE** – Between 2012 where recreational cannabis was legalised to March 2017, **more than 8 tons of black market cannabis believed to originate from Washington State was seized** in 733 individual seizures in 38 states
- **CALIFORNIA** – The demand for cannabis has led to **the growth of the “Grey market” comprising of unlicensed cannabis business** that do not register with the government and pay taxes

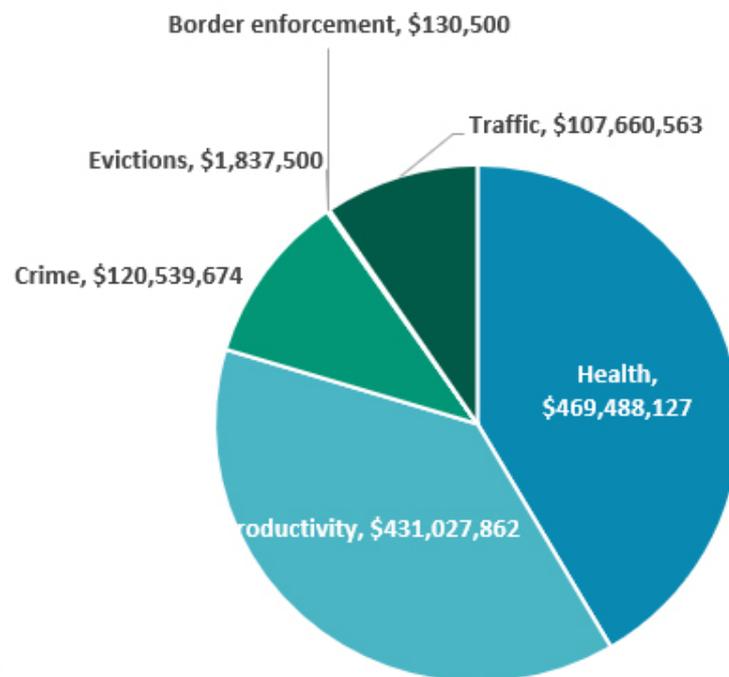


Colorado: Social costs outweighs tax revenue

Social cost

- Coloradans spent ~ \$4.50 to mitigate the effects of legalisation for every \$1 in tax revenue.
 - There was ~\$1.1 billion social costs vs ~\$247 million tax revenue from commercial cannabis.
- largely due to **costs to the healthcare system + high school drop-outs** (classified under productivity)
- Other social cost include: **traffic fatalities** and accidents, increased **court costs for impaired drivers, juvenile use** and **employer related costs**.

2017 Costs



Source: Centennial Institute, 2018



Canada: Increase in cannabis poisoning and continued high levels of black market activity

➤ Increase in poisoning cases

- From Oct to Dec 2018, **89 cases** of cannabis poisoning were received by the Quebec Poison Control Centre, a **256%** increase from Oct to Dec 2017 (25 cases)

➤ Illicit cannabis trafficking continues

- 92 kg of cannabis packages coming from Canada were reported to be seized in Hong Kong between Oct 2018 – Feb 2019, more than the total amount seized in 2016-2018.
- **Border smuggling of cannabis** into Canada → **no signs of slowing down** after legalisation
- Drug enforcement officers **continue to seize large quantities of dried marijuana** even after legalised recreational use in Oct 2018.

➤ Traffic accidents

- Studies have found that cannabis use **impairs attention and lengthens reaction time**, → **increases the risk of a fatal traffic accidents** by two to seven-fold



Conclusion

Legalisation of Cannabis especially for recreation use

- **Increased** consumption rates (including youths, pregnant women)
- **Increased** social harms (cannabis poisoning, traffic accidents, hospitalisation)
- **Increased** diversion of cannabis for illicit purpose





FACT #1

Little evidence to support the use of cannabinoids for most medical conditions

Cannabinoids are chemical substances in cannabis plant



CANNABIS IS ADDICTIVE

10%
of cannabis users are going to get addicted.

Among daily abusers,
50% are going to get addicted.



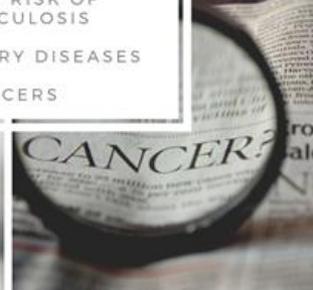
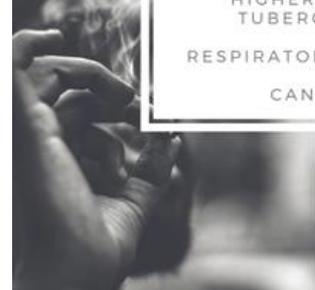
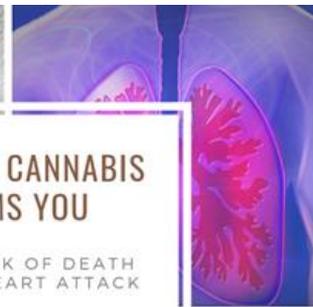
SMOKING CANNABIS HARMS YOU

HIGHER RISK OF DEATH AFTER A HEART ATTACK

HIGHER RISK OF TUBERCULOSIS

RESPIRATORY DISEASES

CANCERS



There is inconclusive evidence on the effectiveness of cannabis for medical use

Source: A Literature Review on Medical Cannabis
Conducted in 2015, by a team of psychiatrists and researchers from the Institute of Mental Health, Singapore:
Dr Jimmy Lee, Dr Christopher Cheok, Dr Gomathinayagam Kandasami, Dr Attilio Rapisarda, Dr Ho New Fei



DOES LEGALISATION MEAN THAT CANNABIS IS SAFE?

Source of photo: Business Insider Australia, 6 Sep 2012, Ex-Cop Calls Marijuana 'The Filthiest Drug On The Street' But Would Still legalise It

Long-term use impairs memory & decision-making

THC (tetrahydrocannabinol) is the psychoactive substance in cannabis. It can lead to smaller brain size and poor memory.



CNB Facebook Video on The Impact of Cannabis Legalisation

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Got 2 minutes to spare? Learn what really happens when cannabis (or pot, or marijuana, or ... See More



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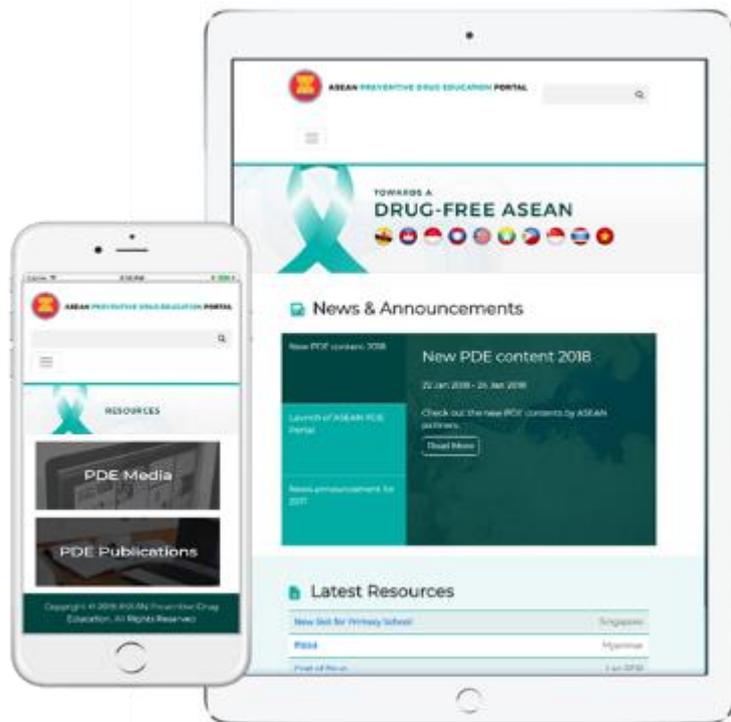


or click on the link below:

<https://www.facebook.com/CNB.DrugFreeSG/videos/307243943472709/>



ASEAN PDE Portal



Easy access via mobile devices

- Accessed via www.aseanpde.org
- Hosted and managed in Singapore
- Supports the implementation of Preventive Education activities in the **ASEAN Work Plan on Securing Committees against Illicit Drugs 2016-2025**



Thank You



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