

Cannabis

April Trehitt

Agency Lead/Addictions Coordinator

Registered Psychotherapist (RP)



**Canadian Mental
Health Association**
Toronto

Agenda

- ▶ What is cannabis?
- ▶ Cannabis & Psychosis
- ▶ Cannabis & Brain Development
- ▶ Considerations with Legalization

Cannabis Jeopardy

- ▶ 1. What is known as a POPPER?
- ▶ 2. What is known as a COCO PUFF?
- ▶ 3. What is known as Indica?
- ▶ 4. What is known as Sativa?
- ▶ 5. What year did the federal liberals say they were going to legalize CANNABIS?
- ▶ 6. What are some examples of EDIBLES?

Products: Edibles



Products: CBD Oil



What do we know about psychosis?

- ▶ About 1 in 13 people will experience psychosis (about 7.5%)
- ▶ 1 in 100 people will receive a diagnosis of schizophrenia (1%)
- ▶ For people who use cannabis regularly, about 1 in 50 will receive a diagnosis of schizophrenia (2%)

Cannabis and Psychosis

- ▶ Research has found an association but not a cause
- ▶ Some studies have found as much as a 3-fold increase in psychosis with cannabis use, while others have found no differences
- ▶ Results from research studies have been quite varied and the studies are flawed

Cannabis and Psychosis

- ▶ Reverse causation
- ▶ Different strains of cannabis have different effects
- ▶ Types of research studies
- ▶ Other factors....

Other factors...

- ▶ Genetics
- ▶ Childhood trauma (abuse, neglect, bullying, loss, etc.)
- ▶ Age of onset
- ▶ Many more possibilities

Cannabis and brain development / function

What we know...

- ▶ Association between persistent cannabis use over extended period starting in adolescence and changes in...
 - ▶ IQ
 - ▶ Learning
 - ▶ Memory
 - ▶ Executive function
- ▶ Changes more likely in people who start using regularly prior to age 16
- ▶ Some evidence for structural changes in grey matter and white matter prior to age 17

what we do NOT know...

- ▶ What is the level of impact on the brain?
- ▶ Was impairment of brain function present before starting cannabis use (reverse causation)?
- ▶ Does education have an impact on the brain's function?
- ▶ What strains of cannabis have what effects?
- ▶ How much; how often; at what age does cannabis have an impact?
- ▶ Is it reversible?



Cannabis and psychosis

what we know so far...

- ▶ 2% vs 1% will receive a diagnosis of schizophrenia
- ▶ Association is only seen in heavy and regular cannabis use
- ▶ Sometimes seen more often in people who start and continue use early (age 15-18)
- ▶ Rates of cannabis among youth, and THC levels have changed over the past few decades, yet the rates of psychosis and schizophrenia remain the same
- ▶ There are many other factors to consider in why someone may use cannabis, and why someone may experience psychosis

Considerations

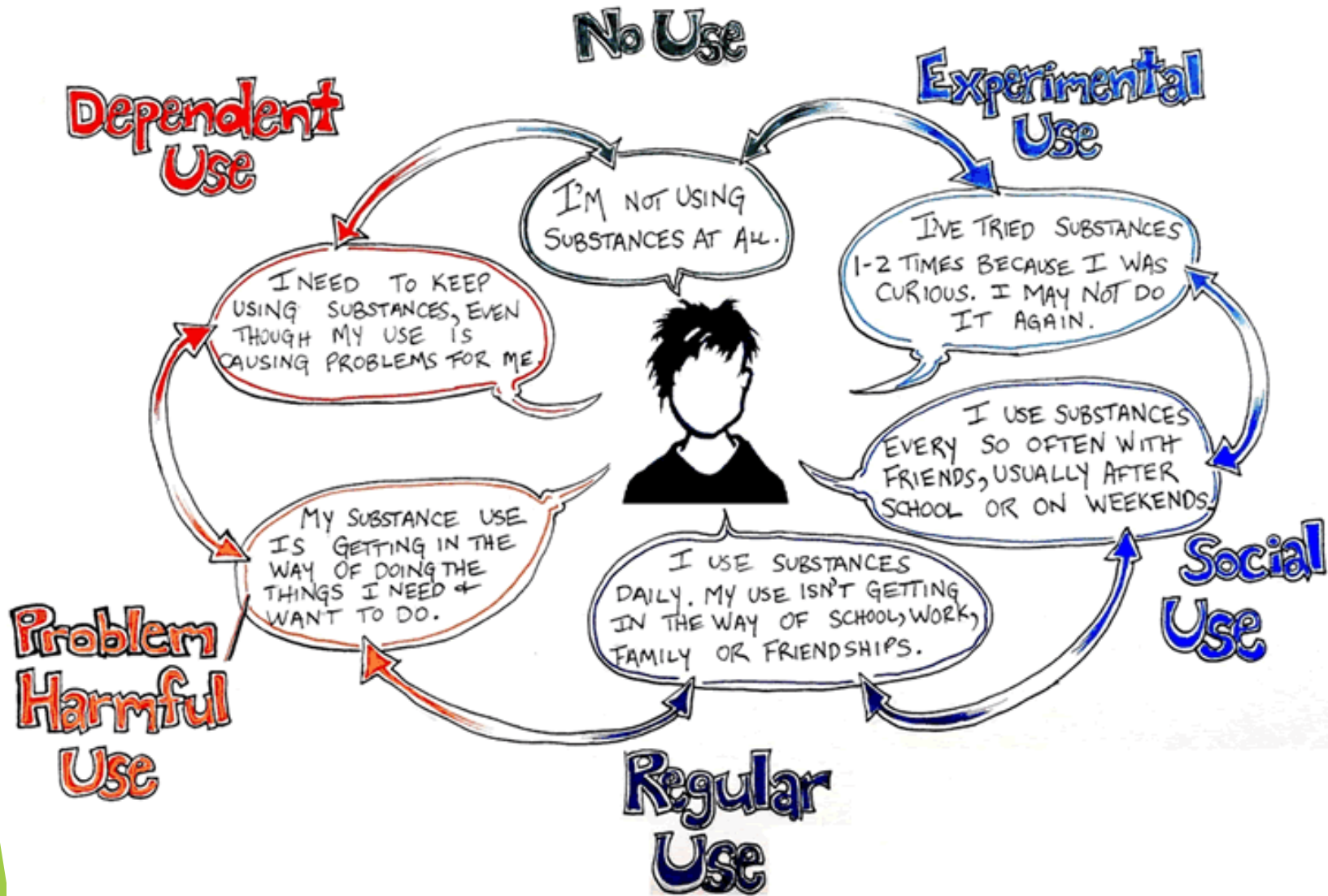
- ▶ Demonization vs. Romanticization of cannabis
- ▶ DOSAGE and Strain
- ▶ Medical benefits of cannabis for physical health concerns (e.g. cancer, MS, IBS, pain management)
- ▶ Normalization of alcohol & tobacco vs. cannabis
- ▶ Taking any drug involves risks. Saying cannabis might be helpful for some people is not to deny it might make others worse
- ▶ Long term use of antipsychotic medication vs. long term use of cannabis

Case Study

- ▶ Young person under the age of 25 who receives mental health and addictions services
- ▶ Diagnosis of Schizophrenia
- ▶ History of Cannabis Use, Heavy Tobacco User, some involvement with justice system, lives with parents
- ▶ Prescribed cannabis with anti-psychotic medication by psychiatrist



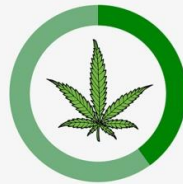
Substance Use Continuum



Cannabis use in Canada

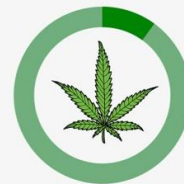
CANNABIS USE IN CANADA

Canada has one of the highest rates
of cannabis use in the world.



40%

OF CANADIANS HAVE
USED CANNABIS



10%

OF CANADIANS HAVE
USED CANNABIS IN
THE PAST YEAR



20%

OF CANADIANS
AGED 15-24 YEARS
USED CANNABIS IN
THE PAST YEAR



70%

OF CANADIAN
CANNABIS USERS ARE
AGE 25 OR OLDER

Cannabis Use in Canada

- ▶ Cannabis is the most commonly used illegal drug in Canada
- ▶ THC vs. CBD
- ▶ Medical vs. recreational substance
- ▶ Cannabis use carries health & safety risks
- ▶ Cannabis-related harm is concentrated in a group of high-risk users
- ▶ Criminalization of cannabis causes additional harms without dissuading use

Criminalization

- ▶ 60,000 Canadians arrested for possession of cannabis every year, nearly 3% of all arrests
- ▶ About 700,000 Canadians carry a criminal record for this offense
- ▶ Equity: current law targets the more marginalized



Taken from Dr. Catherine Zahn, CEO, CAMH presentation on Cannabis

Decriminalization vs. legalization

- ▶ Legalization:
 - ▶ Production, distribution, possession removed from criminal law
 - ▶ Health harm reduction only through legalization + regulation
- ▶ Decriminalization
 - ▶ No criminal penalties/sanctions
 - ▶ No ability to regulate
 - ▶ No ability to bring in income

Licensed Producer vs. Dispensary

- ▶ What are licensed producers ...
- ▶ What is the role of dispensaries ..

CANNABIS

CAMH recommends legalization with strict regulation

CAMH offers **10 basic principles** to guide regulation of legal cannabis use.



ESTABLISH A GOVERNMENT MONOPOLY ON SALES

Control boards provide an effective means of controlling consumption.



SET A MINIMUM AGE

Sales or supply of cannabis products to underage individuals should be penalized.



LIMIT AVAILABILITY

Place caps on retail density and limits on hours of sales.



CURB DEMAND THROUGH PRICING

Pricing policy should curb demand while minimizing the continuation of black markets.



CURTAIL HIGHER-RISK PRODUCTS AND FORMULATIONS

This would include higher-potency formulations and products designed to appeal to youth.



INVEST IN EDUCATION AND PREVENTION

Need both general and targeted initiatives for specific groups e.g. adolescents, people with a history of mental illness.



PROHIBIT MARKETING, ADVERTISING AND SPONSORSHIP

Products should be sold in plain packaging with warnings about risks of use.



PRODUCT INFORMATION SHOULD BE CLEARLY DISPLAYED

In particular, products should be tested and labelled for THC and CBD content.



ADDRESS & PREVENT CANNABIS-IMPAIRED DRIVING

Develop a comprehensive framework that includes prevention, education and enforcement.



ENHANCE ACCESS TO TREATMENT AND EXPAND TREATMENT OPTIONS

Include a spectrum of options from brief interventions for at-risk users to more intensive interventions.

WeedMaps

- ▶ <https://weedmaps.com/earth/us/on/toronto>
- ▶ Weedmaps is an online legal marijuana community that allows users to review and discuss cannabis strains and local dispensaries.

Legalization in Canada

- ▶ Legalization & Regulation of Cannabis in Canada Report
- ▶ Experiences of **Washington** and **Colorado** where cannabis is legalized

Legalization in Canada

- ▶ What are the tensions? Benefits? Drawbacks? Considerations
- ▶ What would service providers need to know?

Questions, thoughts ...



References

- ▶ Fusar-Poli, P., Crippa, J. A., Bhattacharyya, S., Borgwardt, S. J., Allen, P., Martin-Santos, R., McGuire, P. K. (2009). Distinct effects of Δ^9 -tetrahydrocannabinol and cannabidiol on neural activation during emotional processing. *Archives of General Psychiatry*, 66(1), 95.
- ▶ Cannabis Use and Youth: A Parent's Guide
- ▶ CCSA Canadian Drug Summary Cannabis 2016 pdf
- ▶ CCSA Medical Use of Cannabis Report 2016 pdf
- ▶ Fusar-Poli, P., et al. (2017). Deconstructing vulnerability for psychosis: Meta-analysis of environmental risk factors for psychosis in subjects at ultra high-risk. *European Psychiatry*, 40. 65-75.
- ▶ Gage, S. et al. (2016). Association Between Cannabis and Psychosis: Epidemiologic Evidence. *Biological Psychiatry*, 79. 549-556.
- ▶ Gruber, S. et al. (2012). Age of Onset of Marijuana Use and Executive Function. *Psychology of Addictive Behaviours*, 26(3), 496-506.
- ▶ Meier, M. et al. (2012). Persistent cannabis users show neuropsychological decline from childhood to midlife. *PNAS*, 109(40). E2657-E2664.
- ▶ One in 13 people May Have a Psychotic Experience. (2016, April 25). Retrieved from <https://www.psychiatry.org/news-room/apa-blogs/apa-blog/2016/04/one-in-13-people-may-have-a-psychotic-experience>
- ▶ Pope, H. et al. (2002). Early-onset cannabis use and cognitive deficits: what is the nature of the association?. *Drug and Alcohol Dependence*, 69(2003), 303-310.
- ▶ Solling Wils, R., et al. (2016). Antipsychotic medication and remission of psychotic symptoms 10 years after a first-episode psychosis. *Schizophrenia Research*, 182. 42-48.
- ▶ Varese, F. et al. (2012). Childhood Adversities Increase the Risk of Psychosis: A Meta-analysis of Patient-control, Prospective- and Cross-sectional Cohort Studies. *Schizophrenia Bulletin*, 38(4). 661-671.
- ▶ Volkow, N. et al. (2016). Effects of Cannabis Use on Human Behaviour, Including Cognition, Motivation, and Psychosis: A Review. *JAMA Psychiatry*, 73(3). 292-297.