CANNABIS AND MENTAL HEALTH:
Clinical issues

Cross Training
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Disclosure Statement

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Company/organization's name	Type of affiliation	Date
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Foreword: Concurrent Disorder

SIMULTANEOUS OCCURRENCE OF AN ADDICTION AND A MENTAL HEALTH DISORDER

- ✓ High prevalence.
- ✓ Adverse disease course compared to patients with a single disorder.
- ✓ Higher risk of suicide, low patient compliance and poorer response to treatment.

SUB-OPTIMAL USE OF SERVICES

- ✓ Multiple requests for emergency services.
- ✓ Increase in the number and duration of hospital admissions rather than effective and less costly outpatient care.

Adlaf et al., 2005, Kessler et al., 2005, Kairouz et al., 2008, SAMHSA, 2010, Jutras-Aswad, 2017.

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Cannabis Use among Quebecers Aged 15 and Over in the Past Year (2014-2015)

Age group	All (%)	Men (%)	Women (%)
15-17	31.0	31.9	29.9
18-24	41.7	45.2	38.3
25-44	21.0	27.4	14.5
45-64	8.0	10.7	5.2
65 +	1.1	1.7	0.6
Total	**15.2**	**19.0**	**11.5**

Source: *Institut de la statistique du Québec* (ISQ),
Enquête québécoise sur la santé de la population (EQSP), 2014-2015

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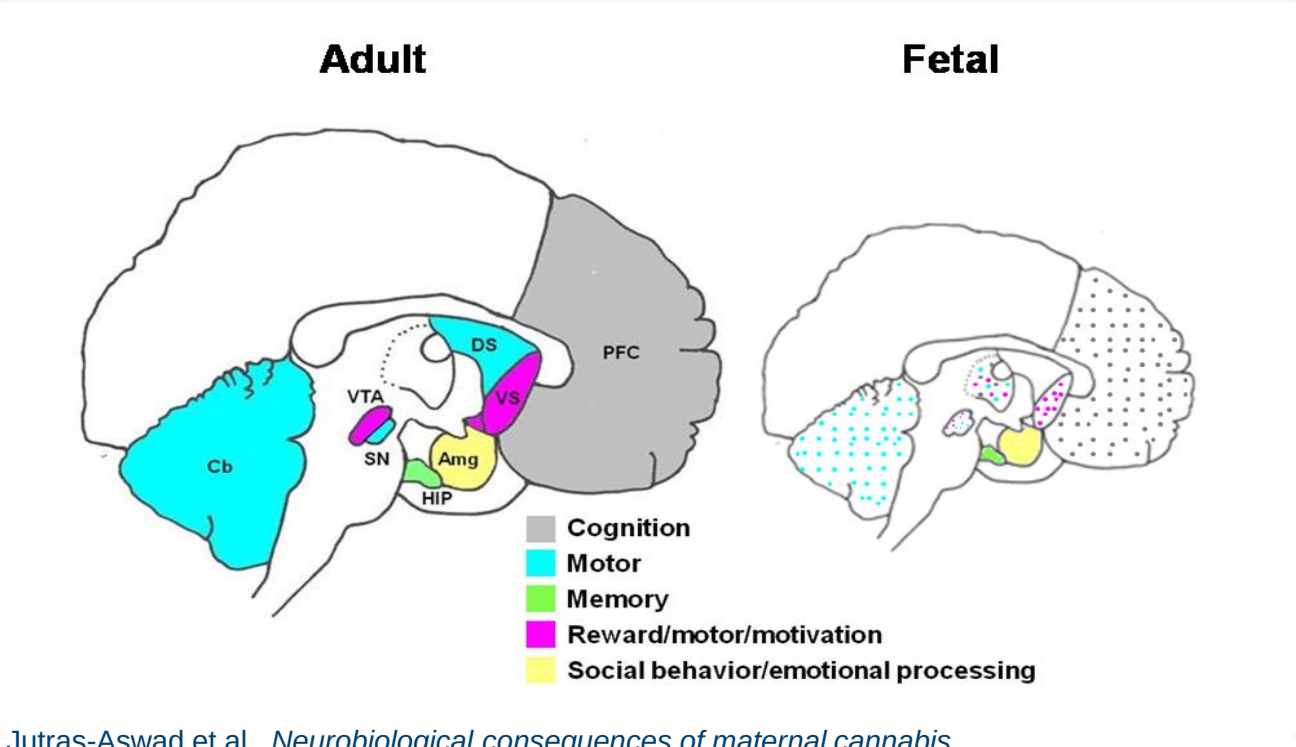
CANNABIS' NEUROBIOLOGICAL TARGETS



Source: Jutras-Aswad et al., *Neurobiological consequences of maternal cannabis on human fetal development and its neuropsychiatric outcome*.
Eur Arch Psychiatry Clin Neurosci, 259(7), 395-412. 2009

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MAIN EFFECTS OF CANNABIS

Physical

- Bloodshot conjunctiva
- Increased appetite
- Increased heart rate
- Pain modulation

Psychological

- Feeling of well-being and euphoria
- Loss of time awareness

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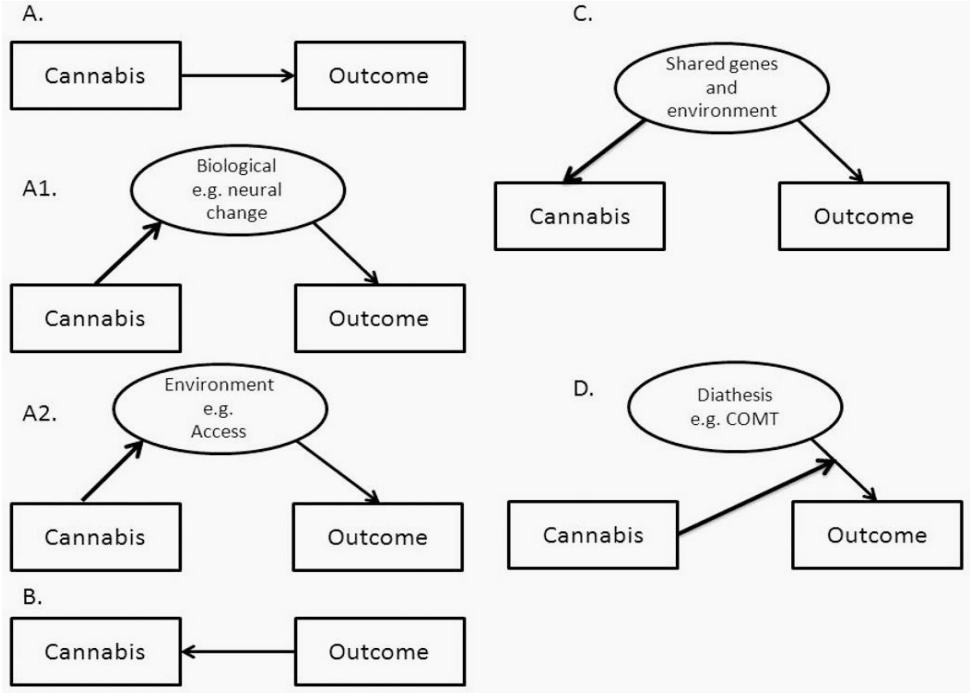
CANNABIS AND ITS EFFECT ON HEALTH: A COMPLEX ASSOCIATION



Source: Agrawal A, Lynskey M. Cannabis controversies: how genetics can inform the study of comorbidity. Addiction. Mar 2014; 109(3):360-70.

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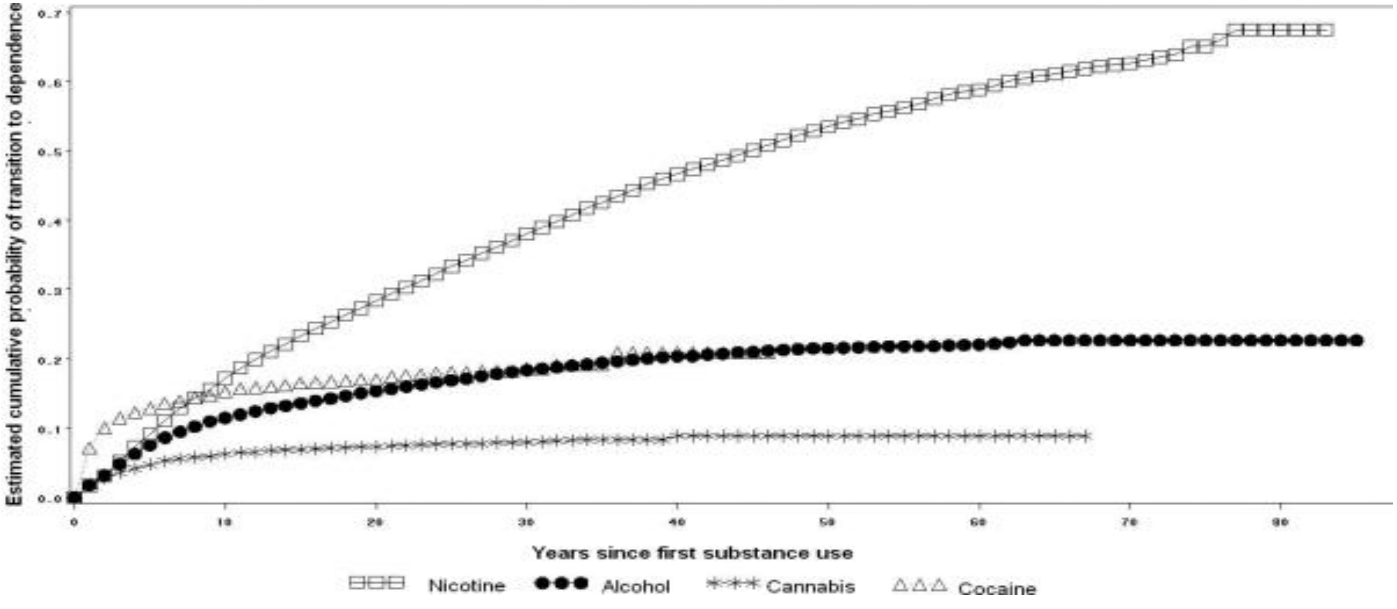
THE ADDICTIVE POTENTIAL OF CANNABIS AND OTHER SUBSTANCES



Source: Lopez-Quintero C, Pérez de los Cobos J, Hasin DS, Okuda M, Wang S, Grant BF, Blanco C. Probability and predictors of transition from first use to dependence on nicotine, alcohol, cannabis, and cocaine: results of the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC). Drug Alcohol Depend. May 1, 2011; 115(1-2): 120–130.

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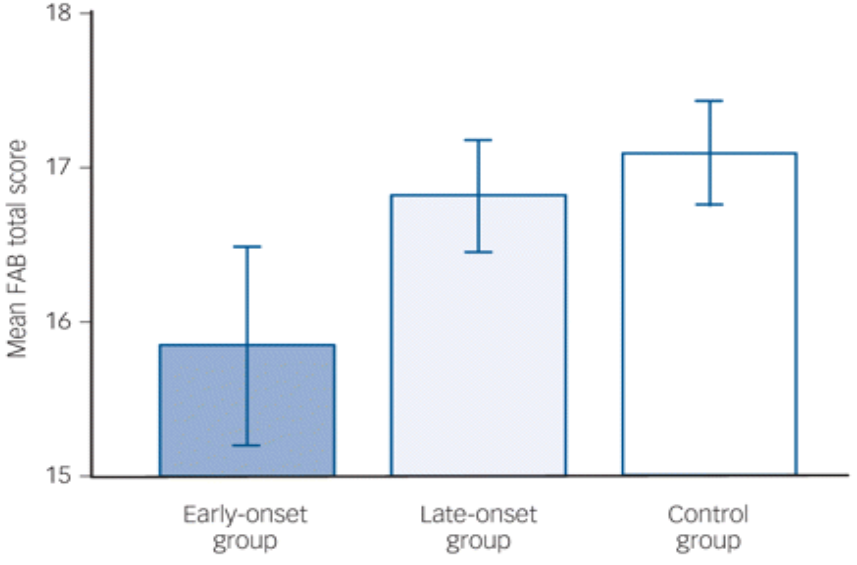
CANNABIS AND COGNITIVE FUNCTIONS

- ✓ Short-term effects on most cognitive functions, most often reversible.
- ✓ Persistence of deficits in some individuals over the medium term.
- ✓ No consensus on possible “permanent” effects.



Source: Fontes MA et al. Cannabis use before age 15 and subsequent executive functioning. Br J Psychiatry. June 2011; 198(6):442-7. Crean RD et al. An evidence-based review of acute and long-term effects of cannabis use on executive cognitive functions. J Addict Med. Mar 2011; 5(1):1-8.

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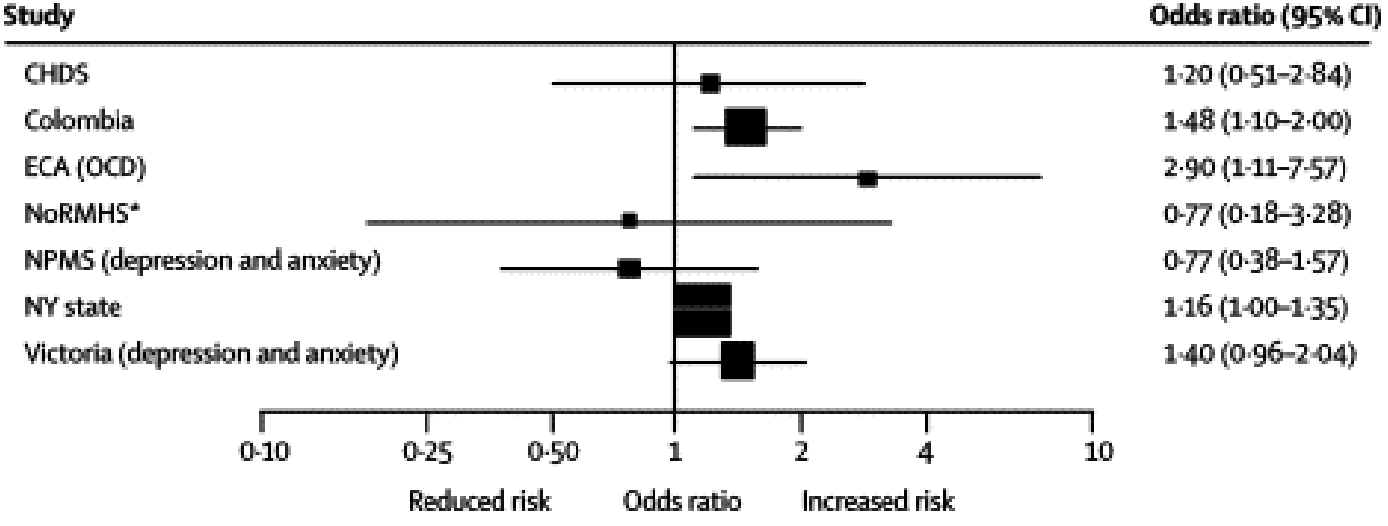
CANNABIS AND ANXIETY DISORDERS



- ✓ Association between cannabis and some anxiety symptoms/disorders.
- ✓ Cannabis associated with both anxiolytic and anxiogenic effects.
- ✓ Cannabis content and individual factors may partly explain this variability.

Source: Moore 2007; Fusar-Poli 2009; Crippa 2009.

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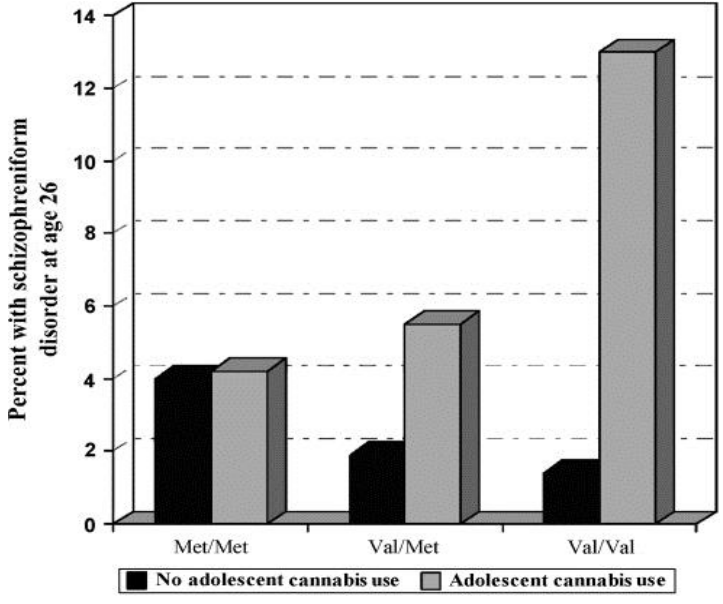
CANNABIS AND SCHIZOPHRENIA



- ✓ Proven association between cannabis use and schizophrenia.
- ✓ Some data suggest that people with risk factors for psychosis may be more vulnerable in this regard.
- ✓ Studies needed to identify stronger risk markers: it is not yet possible to predict who will develop a psychotic disorder.

Source: Caspi A. Moderation of the effect of adolescent-onset cannabis use on adult psychosis by a functional polymorphism in the catechol-O-methyltransferase gene: longitudinal evidence of a gene X environment interaction. Biol Psychiatry. May 15, 2005; 57(10):1117-27;
Gage SH et al. Association Between Cannabis and Psychosis: Epidemiologic Evidence. Biol Psychiatry. Apr 1, 2016; 79(7):549-56.

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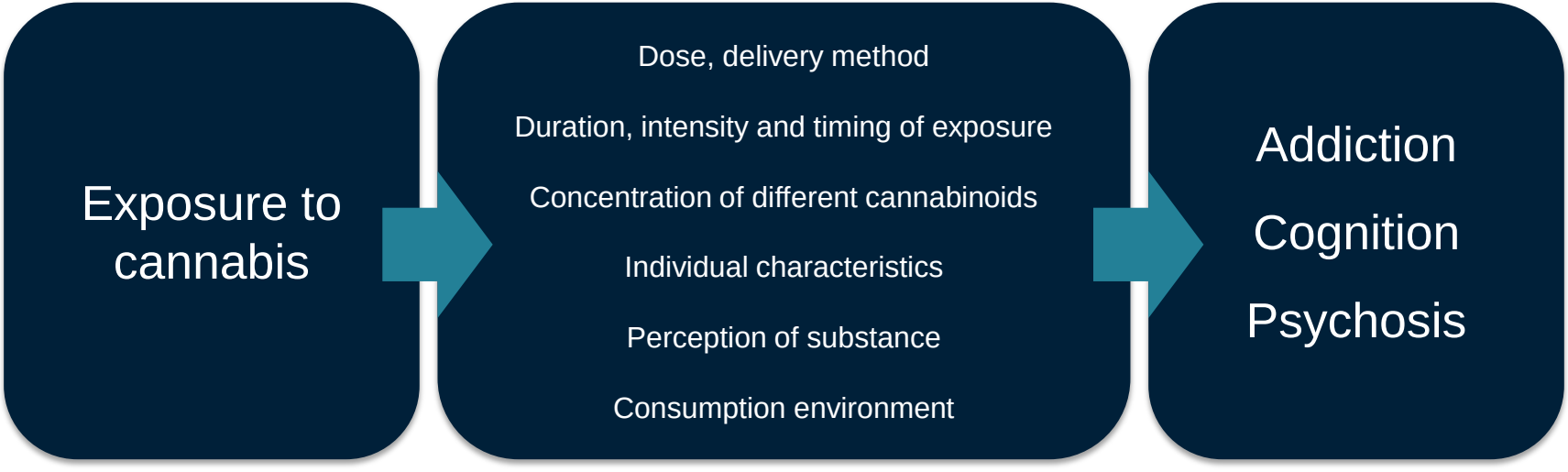
A COMPLEX ASSOCIATION



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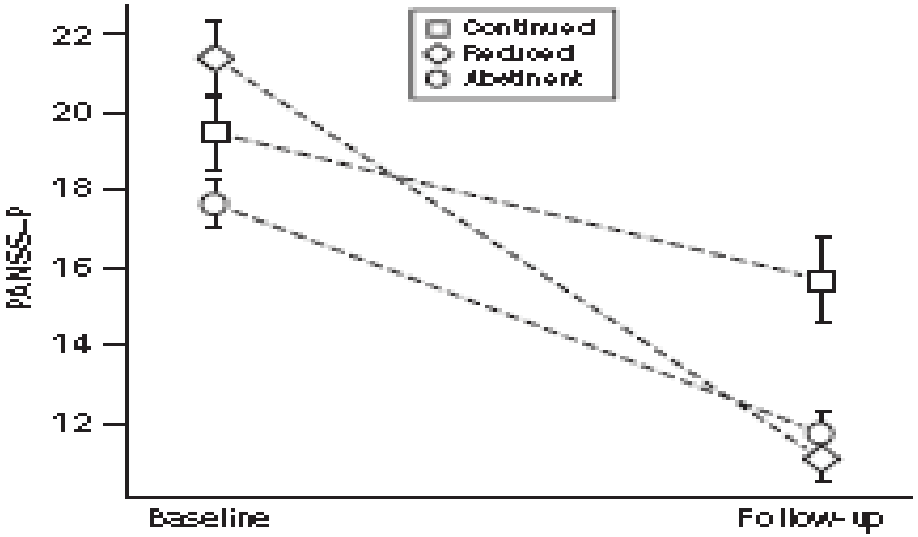
Psychological Medicine (2014), 44, 491–505. © Cambridge University Press 2013
doi:10.1017/S0033291713000833

ORIGINAL ARTICLE

Cannabis use and first-episode psychosis: relationship with manic and psychotic symptoms, and with age at presentation

J. M. Stone[1,2]*, H. L. Fisher[3], B. Major[4], B. Chisholm[5], J. Woolley[5], J. Lawrence[6], N. Rahaman[7,8], J. Joyce[9], M. Hinton[10,11], S. Johnson[10,11] and A. H. Young[1,2] on behalf of the MiData Consortium



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Maxime’s story…

WHERE TO START?

- ✓ SBIRT: “Evidence-based practice used to identify, reduce, and prevent problematic use, abuse, and dependence on alcohol and illicit drugs”
- ✓ Screening
- ✓ Brief Intervention
- ✓ Referral to Treatment

http://www.integration.samhsa.gov/clinical-practice/SBIRT

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CHALLENGES OF DIAGNOSING A PRIMARY PSYCHOTIC DISORDER IN THE SUBSTANCE ABUSE PATIENT

- ✓ Cannabis intoxication syndrome with psychosis-like symptoms.
- ✓ Difficulty in obtaining a detailed history of symptomatology.
- ✓ Prejudice/stigmatization of the substance abuse population.

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CANNABIS-INDUCED PSYCHOTIC DISORDER

PROGNOSIS

- ✓ 535 patients
- ✓ Diagnosis of cannabis-induced psychosis
- ✓ Three-year follow-up
- ✓ Other psychotic episode during follow-up: 77.2%
- ✓ Dx of schizophrenia-spectrum psychosis: 44.5%

	n (%)
Paranoid schizophrenia (F20.0)	167 (31.2)
Hebephrenic schizophrenia (F20.1)	16 (3.0)
Catatonic schizophrenia (F20.2)	6 (1.1)
Undifferentiated schizophrenia (F20.3)	44 (8.2)
Simple schizophrenia (F20.6)	14 (2.6)
Schizophrenia unspecified (F20.9)	114 (21.3)
Schizophrenia disorder (F21)	31 (5.8)
Schizoaffective disorder (F25)	19 (3.6)
Persistent delusional disorder (F22)	67 (12.5)
Acute and transient psychotic disorder (F23)	128 (23.9)
Other non-organic or unspecified psychotic disorder (F28.x or F29.x)	29 (5.4)
Manic episode bipolar affective disorder (F30 or F31)	30 (5.6)

Arendt et al., Br J Psychiatry, 2005.

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DIAGNOSING A MENTAL HEALTH DISORDER (PRIMARY OR INDUCED) IN THE PATIENT

- ✓ Rigour with respect to the chronology and history of use, psychotic symptoms and the relationship between the two.
- ✓ Avoid preconceptions leading to over- or under-diagnosis.
- ✓ Keep in mind that patients with addictions are vulnerable/at risk for psychosis.
- ✓ Tolerate doubt and complexity in the diagnosis.

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INDICATIONS IN SUPPORT OF A PRIMARY RATHER THAN INDUCED DISORDER

- ✓ Onset of psychiatric symptoms before substance use begins.
- ✓ Persistence of psychiatric symptoms after resolution of acute intoxication or substance withdrawal symptoms.
- ✓ More intense symptoms and of a different nature from what is expected for a given substance.
- ✓ Positive family history for primary psychiatric disorder(s).

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SCREENING/DIAGNOSTIC

- ✓ Importance of detecting that there are two issues to address.
- ✓ Don’t let yourself be paralyzed by the difficulty of quickly making accurate diagnoses.
- ✓ Establish an intervention plan without neglecting either one of the two issues.

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Where to treat?

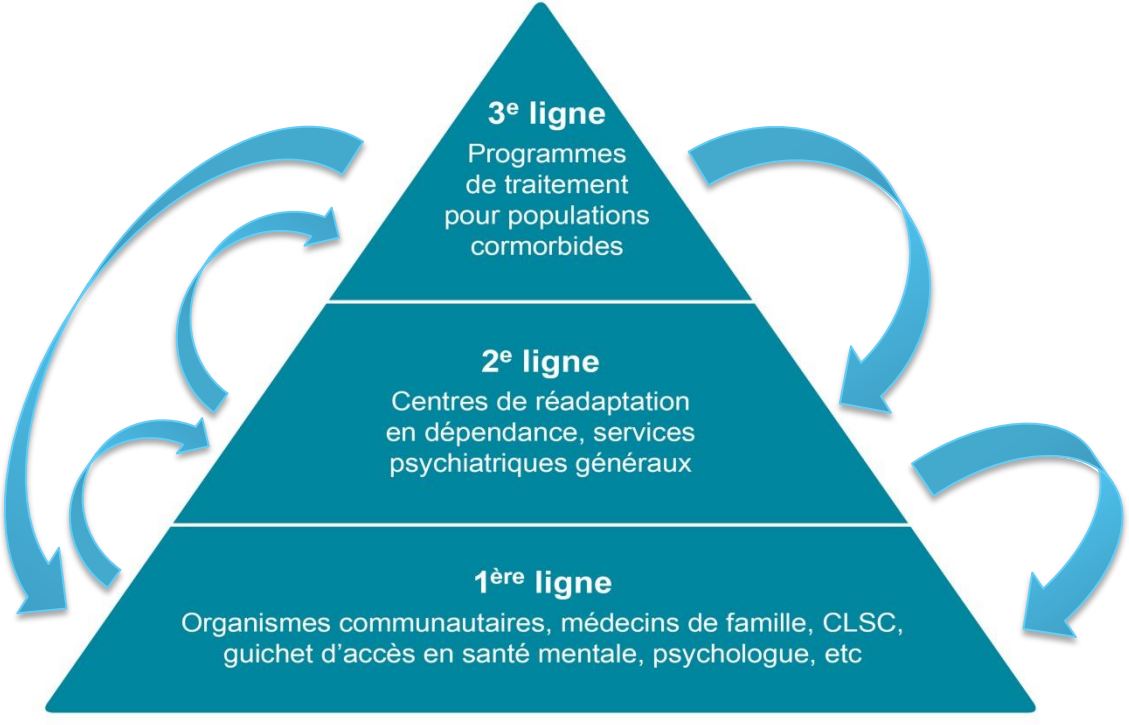
“How far can I go and what can I do for this person given my expertise?”

vs.

“Does this person meet our criteria?”

“Where should I refer the patient?”

WHERE TO TREAT: IMPROVING SERVICE CAPACITY AT ALL LEVELS



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CENTRE D'EXPERTISE ET DE COLLABORATION EN TROUBLES CONCOMITANTS DU RUIS DE L'UdeM

- ✓ Several services to support teams in treating people with concurrent disorders
  - ✓ Advisory/support services for mental health and addiction facilities and teams
  - ✓ ECHO® Telementoring Program for concurrent disorders
  - ✓ Information and training service, information monitoring
  - ✓ Annual scientific activity
- ✓ Web site: http://www.ruis.umontreal.ca/CECTC

Source: Government of Canada
Legalizing and strictly regulating cannabis: the facts, 2017

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PHARMACOLOGICAL TREATMENT OF MENTAL HEALTH DISORDERS IN THE COMORBID PATIENT

- ✓ Weak evidence for the superiority of one molecule over the other.
- ✓ Most data are open-label studies or studies with multiple types of substance abuse.
- ✓ Evidence suggests:
  - Possible benefit of atypical antipsychotics and clozapine for psychosis;
  - Possible superiority of injectable products due to medication compliance issues.
- ✓ The treatment of mental health disorders is often not enough to improve substance use: it is therefore necessary to treat not only mental health disorders in patients suffering from addiction, but also their addiction!

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DRUG INTERACTIONS WITH CANNABIS

- ✓ THC is metabolized by CYP2C9 and CYP3A4.
- ✓ CBD is a substrate of CYP3A4 and CYP2C19.
- ✓ Low ability of cannabis to induce CYP1A2.
- ✓ Caution with tobacco smokers.
- ✓ Conclusion: cannabis use is no reason to stop taking prescription drugs!

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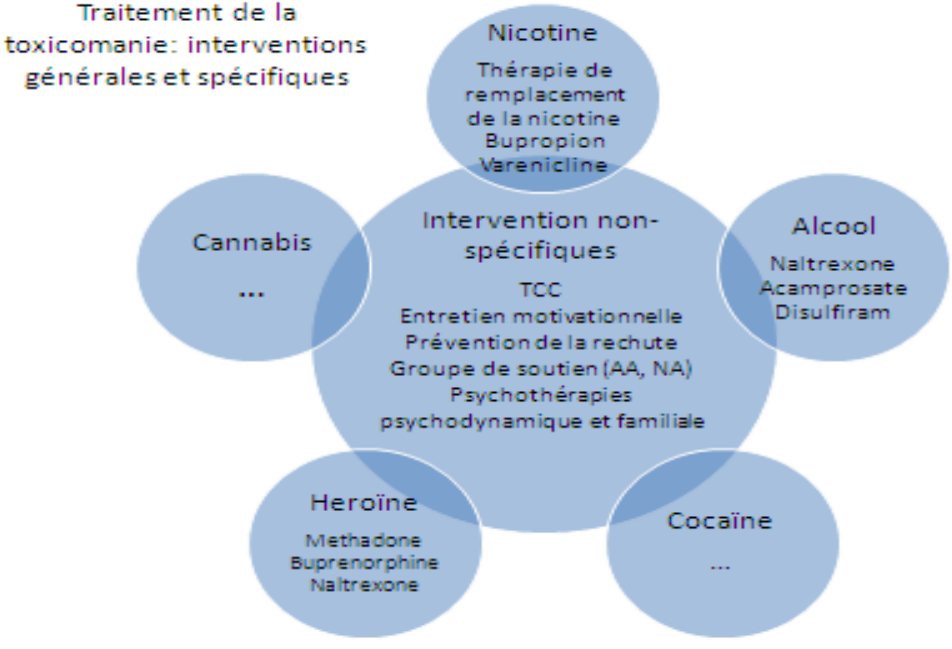
SUBSTANCE ABUSE TREATMENT: AN OVERVIEW

- ✓ No specific pharmacotherapy can be recommended for the treatment of cannabis UD at this time.
- ✓ Some drugs under study
  - ✓ CB1R Agonists
  - ✓ N-Acetylcysteine
  - ✓ Guanfacine
  - ✓ Gabapentin



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TREATMENT OF CANNABIS USE DISORDER IN PEOPLE WITH SEVERE MENTAL HEALTH DISORDERS

- ✓ No evidence to support the use of new non-pharmacological interventions.
- ✓ Little evidence, at this time, that extending the usual interventions produces a clear benefit.
- ✓ Existing non-specific drug addiction treatment strategies (i.e., contingency approach, motivational interview, relapse prevention) may be helpful.

McLoughlin et al., Cochrane, 2014.

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TREATMENT OF CANNABIS USE DISORDER IN PEOPLE WITH SEVERE MENTAL HEALTH DISORDERS

- ✓ Expert Consensus: treatment programs for co-morbid patients generally combine several modalities :
  - Contingency approach
  - Motivational interviewing
  - Relapse prevention (CBT)
  - Peer support
- ✓ Pragmatic approach: flexibility, recognition of patient limitations (e.g. cognitive) and facilitation of compliance to the treatment.
- ✓ Inclusion of standard pharmacological and non-pharmacological treatments for mental health disorders.

McLoughlin et al., Cochrane, 2014.

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WHAT DO YOU NEED TO REMEMBER?

- ✓ Don’t be intimidated: the data indicate that both issues need to be addressed, but that this can generally be done by applying the standard best practice principles for both conditions.
- ✓ Consider both issues, and do not ignore one for the sake of the other.
- ✓ Networking: knowing resources/people with different and complementary expertise.
- ✓ Improving yourself: training/mentoring/support to refine one’s ability to treat people with concurrent disorders.

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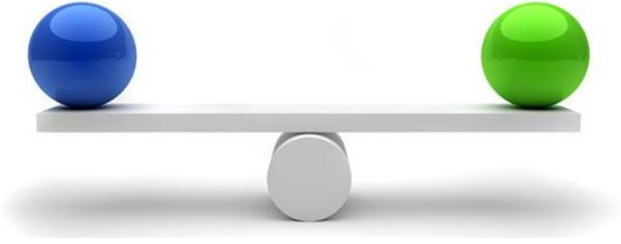
SOME ISSUES RELATED TO LEGALIZATION

- ✓ Effective and graduated awareness building.
- ✓ Implementation/acceleration of well-targeted prevention strategies.
- ✓ Increasing effectiveness and access to treatment for people with cannabis use disorders (and adapting it as needed for people with co-morbidities).
- ✓ Regulation modalities centred on public health.
- ✓ Access to quality data to adjust regulation modalities.



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QUESTIONS?
COMMENTS?

Thank you!

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