Legalization of Cannabis: Let’s Protect Future Generations
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**REFERENCES**
L’Association des médecins psychiatres du Québec (AMPQ) brings together over 1150 psychiatrists who practice in Québec. It focuses on the organization of mental health care, and on the professional framework of psychiatrists. One of AMPQ’s mandates consists of promoting the most stringent professional and scientific standards in the exercise of psychiatry. It also aims at creating a better understanding of psychiatry and mental health in the public, and to promote access to psychiatric services for everyone in the entire province.
The Association des médecins psychiatres du Québec is concerned about the impacts of the legalization of cannabis on young adults, in particular among those who are most vulnerable. Based on their clinical experience, Québec psychiatrists propose modifications to the draft legislation to limit the health risks for future generations.

The President,

Dr. Karine J. Igartua
1. The Political Context

In the 2015 Speech from the Throne, the government of Canada committed itself to legalize cannabis, and to regulate the access to marijuana for recreative uses.

On June 30, 2016, the Minister of Justice, Ms. Jody Wilson Raybould, announced the set-up of a Workgroup on legalization and regulation of marijuana, presided by Ms. Anne McLellan, and composed of nine experts in public health, addiction, law implementation and justice. This Workgroup tabled its final report on November 30, 2016.

On April 13, 2017, the ministers of Health, Public Safety, and Justice announced the introduction of Draft Bill C-45, an Act respecting cannabis and to amend the Controlled Drugs and Substances Act, the Criminal Code and other Acts.

Draft Bill C-45 proposes, among other things:

1. That the legal age is established at 18 for the purchase of cannabis, while recognizing the right of provinces and territories to harmonize such regulations with their own statutes concerning the minimum age for alcohol consumption;

2. The same restrictions on publicity as those affecting tobacco;

3. A ban on product packaging that might be considered attractive to young people;

4. « Heavy » penalties for distribution to minors.
Several professional associations produced papers or submitted press releases to inform the government on the maximum effort needed to limit health risks generated by the new legislation.

- The Canadian Medical Association;
- The Canadian Psychiatric Association, which produced a position paper supported by:
  - The Canadian Academy of Child and Adolescent Psychiatry;
  - The Canadian Academy of Geriatric Psychiatry;
  - The Canadian Academy of Psychiatry and the Law;
  - The Canadian Academy of Psychosomatic Medicine;
- The Association québécoise des programmes pour premiers épisodes psychotiques;
- The Canadian Paediatric Society and;
- The Canadian Consortium for Early Intervention in Psychosis.

Given that significant risks concern mental health, more specifically for young people, the Association des médecins psychiatres du Québec wishes to join the public debate on the dangers of the proposed legalization of cannabis, and on the means to limit such risks.

In this context, the AMPQ conducted a poll with its members, on May 8–12, 2017, in which 314 members participated, that is 27% of all Québec psychiatrists. Thus, the present position paper does reflect the argumentation of all Canadian major associations listed previously, as well as the opinion of Québec psychiatrists.
2. The Clinical Context

The development of the human brain

Scientific research has demonstrated that the human brain continues to develop until the approximate age of 25. This is driven by changes in brain grey matter (GM) due to synaptic pruning (elimination of underutilized or unnecessary neural connections), and white matter (WM) due to myelination, which accelerates neural connections. The frontal lobes are responsible for executive functions, and they are among the last structures to achieve maturity. Therefore, it is a recognized fact that teenagers do not have the intellectual capacity of adults, to manage impulses, to organize, to anticipate causes and effects, to make decisions, and to exercise moral judgment.\(^1\)

The effects of consuming cannabis on mental health

The endocannabinoid system is one of many neurotransmission systems in the brain. It plays a role in the maturation of neuronal networks. Exposition to cannabis (specifically tetrahydrocannabinol or THC) submerges the receptors of this system, resulting in a network that is less efficient or, sometimes even, in neuronal damage. In brain imaging, one can see the lesions caused by THC in teenagers, including a reduction in brain volume, a sliming of the cortex, reduced neuronal connectivity, and changes in the structure of the white matter. Moreover, functional imaging shows that such brains need to work harder to execute tasks, thus compensating for the lesions.\(^2\)

Clinically, the regular use of cannabis among young persons translates into deficits in attention, in memory, in the speed of information processing, and in intelligence.\(^3\) Such disorders can lead to school failures.\(^4\)

Moreover, the use of cannabis increases the risk of developing psychotic disorders such as schizophrenia. Indeed, studies show the risk of developing psychosis increases by 40% among those who have used cannabis at least once in their lifetime. This risk climbs to 390% among heavy users. The use of cannabis can also trigger the disorder, which begins on average 2.7 years earlier among users.

Furthermore, 50% of those affected by toxic psychosis (e.g.: acute symptoms such as hallucinations, delusions and disorganization linked to intoxication) will develop a psychotic disorder in the following ten years. Among young patients

\[\text{In brain imaging, one can see the lesions caused by THC in teenagers, which included a reduction of brain volume, a sliming of the cortex, a reduced neuronal connectivity, and changes in the structure of the white matter.}\]
with a psychosis, the continuous use of cannabis worsens symptoms, and increases functional deficits.\(^{(2, 3, 4)}\) As a rule, risks are additive—that is, the higher the THC concentration and the frequency of use, the higher the risks of developing a psychotic disorder.

Even though it’s not as clearly established as for psychosis, there seems to be an association between the daily use of cannabis and depression and anxious disorders among young persons.\(^{(2, 3)}\)

Finally, the earlier a person is introduced to cannabis, the higher the risk will be of developing an addiction. In some cases, the use of cannabis is linked to an increased risk of addiction to other “street drugs.”\(^{(3)}\)

### The Colorado and Washington Experience

In 2012, the states of Colorado and Washington both legalized cannabis for adults 21 years old and over. Even though the use of cannabis remained illegal for teenagers, its use has increased among young persons in Washington, and, in both states, the awareness of the dangers associated with the use of cannabis has decreased. This is in contrast with other states where its use remains illegal, and where the prevalence of use has diminished. Legalization seems to have trivialized the use of cannabis, and probably created greater availability of the product, even among underage persons.\(^{(5)}\)

### The Situation in Québec

According to a 2010 study involving 43 western countries\(^{(3)}\), young Canadians are among those who use cannabis the most. For the 15–17 age group, the prevalence is 20% and climbs to 33% among 18–24 age group. In Québec, the prevalence of use, for all ages, is slightly below the average federal level (11.9 vs 12.2%). Two percent of the 15–17 age group, and 5% of the 18–24 age group admit to being daily users.
THE APPREHENSIONS OF QUÉBEC PSYCHIATRISTS

AMPQ’s poll of its members clearly demonstrates that Québec psychiatrists have a series of concerns about the legalization of cannabis, all based upon their clinical experience:

- **89%** of psychiatrists believe that legalization will lead to an increase in its use among legal-age young adults as well as among underage youth (**78%**).

- **79%** of psychiatrists think that the legalization of cannabis will hinder the functionality and the recovery of their patients.

- **76%** of psychiatrists believe that legalization will darken the prognosis of their patients.

- **72%** of psychiatrists are convinced that legalizing cannabis will lead to an increase in the needs for psychiatric and psychosocial care.

- **In terms of psychotic disorders**, **77%** of psychiatrists believe that legalizing cannabis will lead to an increase in prevalence, while **75%** believe that the severity of the disorders will increase, and **72%** worry about a lowering of the average age of first symptoms.

- **In terms of addiction and drug abuse**, **76%** of psychiatrists believe that legalizing cannabis will cause an increase in the prevalence of addiction, while **63%** believe that the severity of addiction will increase, and **72%** worry about a lowering of the average age of first symptoms.

- **In terms of mood and anxiety disorders**, **63%** of psychiatrists believe that legalizing cannabis will create an increase in the frequency of disorders, while **63%** believe that the severity of disorders will increase, and **60%** worry about a lowering of the average age of first symptoms.

*In–house poll done by AMPQ, May 8–12, 2017. 314 psychiatrists on 1150 responded—27% participation.*
Possible solutions to protect mental health

To limit access to cannabis by young persons, and to send the message that its use is not trivial, the AMPQ recommends that the minimum legal age for the purchase and the use of cannabis be 21.

Over 80% of psychiatrists who were polled think that the legal age to consume cannabis should be more than 18. The proposition to establish 21 as the minimal age to buy and use cannabis is, in a sense, a compromise between the arbitrary and traditional age of maturity in Canada, and science, which indicates that the brain reaches maturity at 25 years of age.

This compromise on age is also advocated by the Canadian Psychiatric Association, by the Canadian Medical Association, and by the Association québécoise des programmes pour premiers épisodes psychotiques.

Moreover, our poll reveals that psychiatrists wish that the government takes very strict precautionary measures to protect the mental health of young people and the population in general. As an example, 95% of polled psychiatrists believe that the government should initiate actions to limit the exposition of users to high concentrations of THC in marijuana, by legally limiting concentration, and 98% of psychiatrists are in favour of prohibiting any publicity, which would promote the use of cannabis.
3. Recommandations

Production, promotion and distribution of cannabis

1. **Set minimum age** to buy and use cannabis at **21**.
2. Determine a **maximum THC concentration** of any cannabis product legally on sale in Canada.
3. Impose the obligation to indicate clearly THC and CBD concentrations on packages.
4. **Prohibit any form of publicity** aiming at promoting the use of cannabis, and impose neutral packaging.
5. **Prohibit home growing** for non-medical purposes.
6. To promote public health objectives, adopt a rigorously regulated **model of distribution** of cannabis, which would not be linked to **any profit- or growth-based approach of sales activities**. The selected model for distribution should, among others, include:
   - a strict control of the localization of **sales outlets**, far from educational institutions of all kinds, youth houses, recreation facilities, and high-risk populations;
   - An **Education program** for employees to provide them with tools to detect users who show signs of mental disorders or addiction;
   - a referral system such as a **service corridor** towards specialized resources in addiction treatment and first psychotic episodes services for users who present signs of vulnerability.
Prevention and treatment

7. Develop an educational program in school curricula, at the very start of high school, on the consequences of drug use.
8. Develop tools for parents to help them discuss the risks of cannabis with their teenager, to detect early signs of psychosis, and to know how and where to consult.
9. Deploy publicity campaigns against the trivialization of the use of cannabis, and aimed at making consumption less socially acceptable by young persons.
10. Ensure adequate funding to provinces for additional resources in the treatment of the effects of cannabis, such as the first episode psychosis programs and addiction treatment centers.

Finally, the AMPQ remains available to work in partnership with both governments to develop preventive educational programs, and for the organization of psychiatric care.
References

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8. Poll done by AMPQ