The Health Risks and Harms Associated with the Use of Marijuana

Canadian Medical Association:

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ASSOCIATION MÉDICALE CANADIENNE
CANADIAN MEDICAL ASSOCIATION

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The Canadian Medical Association (CMA) is the national voice of Canadian physicians. Founded in 1867, CMA's mission is to serve and unite the physicians of Canada and be the national advocate, in partnership with the people of Canada, for the highest standards of health and health care.

On behalf of its more than 80,000 members and the Canadian public, CMA performs a wide variety of functions. Key functions include advocating for health promotion and disease/injury prevention policies and strategies, advocating for access to quality health care, facilitating change within the medical profession, and providing leadership and guidance to physicians to help them influence, manage and adapt to changes in health care delivery.

The CMA is a voluntary professional organization representing the majority of Canada's physicians and comprising 12 provincial and territorial divisions and 51 national medical organizations.

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The Canadian Medical Association (CMA) is pleased to present this brief to the House of Commons Standing Committee on Health for consideration as part of its study on the health risks and harms associated with the use of marijuana.

Marijuana, or cannabis, is a Schedule II drug under the Canadian Controlled Drugs and Substances Act, and growing, possessing, distributing and selling marijuana is illegal, subject to penalties.

Despite that, according to the latest Canadian Alcohol and Drug Use Monitoring Survey[1], about 10% of Canadians ages 15 years and over had used marijuana at least once in the past year. It is the second most used substance, following alcohol (at 78%). Even though there has been a decrease in marijuana use among youth (ages 15 to 24) in recent years, usage is still double that of the general population, at 20%. A quarter of youth that had used marijuana in the past 3 months, used it daily, however most use is infrequent and experimental. The average age of initiation is 16.1 years, and it is very concerning that continued use is most common among those who initiate use early. In some provinces, about 50% of students in grade 12 have reported using marijuana in the past year.[2]

The 2012 Canadian Community Health Survey – Mental Health[3] reported that 1.3% of people aged 15 and over met the criteria for cannabis abuse[a] or dependence[b] – double that of any other drugs. The lifetime risk of dependence is estimated at about 9%, increasing to almost 17% in those who initiate use in adolescence.[4] Similar estimates for other substances are 15% for alcohol, 23% for heroin and 32% for nicotine.

CMA has longstanding concerns about the health risks associated with smoking marijuana. While our comments have more recently been made in the context of medical marijuana, the core issue is the same: marijuana usage poses serious health risks[5]. Teenagers are particularly at risk for marijuana-related harms, given their brain is undergoing rapid, extensive development.

It is estimated that marijuana contains more than 400 active chemicals, including over 60 cannabinoids, of which delta-9 tetra-hydrocannabinol (THC) is the most often studied due to its psychoactive properties. The concentration of the various chemicals varies for different plants, batches and growth locations, and has varied over time. There is the potential for contamination by pesticides or other substances. Rates and quantities of components absorbed will also vary depending on whether the drug is smoked, used in food, inhaled with a vaporizer or applied topically. This is challenging for research on the health effects of marijuana.

[a] Abuse is characterized by a pattern of recurrent use where at least one of the following occurs: failure to fulfill major roles at work, school or home, use in physically hazardous situations, recurrent alcohol or drug related problems, and continued use despite social or interpersonal problems caused or intensified by alcohol or drugs.

[b] Dependence is when at least three of the following occur in the same 12 month period: increased tolerance, withdrawal, increased consumption, unsuccessful efforts to quit, a lot of time lost recovering or using, reduced activity, and continued use despite persistent physical or psychological problems caused or intensified by alcohol or drugs.

When marijuana is smoked, THC and other components are inhaled and absorbed through the lungs, rapidly entering the bloodstream. Effects are perceptible within seconds and fully apparent in a few minutes. The main feature of its use is that it produces a feeling of euphoria (or 'high') and sensory alterations, but it is also sought out to reduce pain, relieve anxiety, decrease vomiting and increase appetite.

Adverse reactions can occur, such as drowsiness, sedation, blurred vision, photophobia, difficulty breathing and vomiting. However, its acute toxicity is extremely low, as no deaths directly due to acute cannabis use have been reported. Toxic dose-related effects that can occur include anxiety, panic, depression, paranoia or psychosis. Acute impairment typically clears 3-4 hours after use.

Marijuana slows reaction times, impairs motor coordination and concentration as well as the completion of complex tasks. Marijuana use is associated with an increased risk of motor vehicle crashes. Young people, particularly males, are more likely to drive after using marijuana. The Cross-Canada Student Alcohol and Drug Use[6] report states that 14–21% of students in Grade 12 reported having driven within an hour of using marijuana, and more than 33% of Grade 12 students reported having been a passenger in a car where the driver had used the drug.

Chronic use is more common among those that start using as young teens; those that are tobacco smokers and heavy alcohol consumers and have used other illegal drugs. People with a number of pre-existing diseases who are chronic smokers of marijuana are probably at increased risk of exacerbating the symptoms of their diseases. For example, adults with hypertension, ischaemic or cerebrovascular disease could be at increased risk due to the cardiovascular stimulatory effects of marijuana.

There is an increased risk of psychosis, depression and anxiety, particularly among those who have a personal or family history. A persistent lack of energy in chronic users has been referred to as an "amotivational syndrome". Although cognitive impairments (loss of memory, focus and the ability to think and make decisions) are likely reversible a few weeks after discontinued use, this seems not to be true for those who began using in early teen years, while the brain is still developing.

Smoke from marijuana preparations contains many of the same compounds as tobacco cigarettes including increased levels of tar. Smoking marijuana may be more harmful than tobacco, as it often involves unfiltered smoke and deeper, longer inhalation. Chronic users often have shortness of breath after exercise, coughing and chest tightness. It is probably associated with bronchitis and emphysema and may have risks for chronic lung disease and lung cancer, comparable to cigarette smoking. This is less of a problem for those that use vaporizers, as a harm reduction strategy.

The use of marijuana during pregnancy has been shown to affect the development and learning skills of children, more noticeably from the age of three, with these effects lasting into the teen years. Studies have shown an increase in hyperactivity, inattention and

impulsivity. These children will be more prone to addiction and mental health issues as well as decreased cognitive functioning, and could require supports when in school. Some studies point to a lower birth weight.

Besides health concerns, marijuana use can lead to social and interpersonal problems, including difficulties at school, in relationships and with the law.

Awareness of Canadians of the harms of marijuana is generally low. [7] Youth tend to emphasize the drug's ability to help them focus, relax, sleep, reduce violent behaviour and improve creativity. There were also many myths, such as that it would counter cigarette effects, preventing cancer. Many stated that they did not consider marijuana as a drug because it was "natural" and relatively benign compared to other drugs. It is concerning that some teens said that marijuana actually made people better drivers by increasing their focus.

There seems to be skepticism around prevention programs which aim exclusively at abstinence. Feedback has been that effective approaches would involve providing more fact-based information at an earlier age and using programs that aim at reducing the harms of using marijuana. It is essential that youth and users from other age groups be involved in the conceptualization and development of any such programs.

CMA makes the following recommendations to the Committee:

1) Public Health Approach to Psychoactive Substance Use

The CMA recommends that the federal government adopt a public health approach to increase the focus on preventing drug abuse, on treatment of addiction, on monitoring, surveillance and research and on harm reduction.

Addiction should be recognized and treated as a serious, relapsing chronic disease, and substance use is a complex behaviour influenced by many factors. Therefore, a comprehensive multi-factorial strategy is necessary, and lessons can be learned from work that has been done to decrease tobacco and alcohol use and to reduce the harms related to these substances.

A public health approach would place an increased focus on preventing drug abuse and dependence; on the availability of assessment, counselling and treatment services for those who wish to stop using; and on harm reduction to increase the safety for those that are using. It would seek to ensure the harms associated with enforcement are not out of proportion to the direct harms caused by substance abuse. Individuals with drug dependency should be diverted, whenever possible, from the criminal justice system to treatment and rehabilitation.

The CMA believes that resources currently devoted to combating simple marijuana possession through the criminal law could be diverted to public health strategies, particularly for youth.

A public health approach also includes efforts around the monitoring, surveillance and research of marijuana use to better inform the strategy. This is essential to better understand the short and long term harms as well as policy options to address prevention, treatment, harm reduction and enforcement.

2) Comprehensive Education and Awareness Program to Address Marijuana Use

The CMA recommends that the federal government develop, in collaboration with the provinces and territories and key stakeholders, a comprehensive education and awareness program to minimize marijuana use.

A comprehensive program to minimize marijuana use should include, but not be limited to:
- Education and awareness raising of the known and potential harms of marijuana;
- Strategies to prevent early use in adolescence;
- Support for programs that decrease stigma associated with mental health and addiction; and
- Support for health professionals' awareness and evidence-informed practice in the prevention, management and treatment of drug use.

A specific focus on youth is essential, as they are not only more likely than adults to engage in risky drug use, particularly boys, but also disproportionately experience greater harms from that use. It is also particularly important for women of child bearing age, due to the risk to the fetus during pregnancy.

Information that is tailored to the needs of specific populations will help people make informed choices. Efforts to prevent, reduce or delay the use of marijuana could result in a reduction of suffering and costs to the health care system.

Health professionals must be involved and supported in this area, and it is important to ensure the availability of evidence informed clinical practice guidelines, practice tools and continuing medical education resources.

3) Driving Under the Influence Prevention

The CMA recommends that the federal government continue to support, in collaboration with the provinces and territories and key stakeholders, strategies for the prevention of impaired driving.

The CMA believes that comprehensive long-term efforts that incorporate both deterrent legislation and public awareness and education constitute the most effective approach to reducing the number of lives lost and injuries suffered in crashes involving impaired drivers due to marijuana.

Efforts to prevent, reduce or delay marijuana use, especially in youth, are particularly important. Education is also important as many are not aware that marijuana affects driving ability or even that there are procedures that the police can use to identify impairment due to psychoactive substances.

The CMA supports a similar multidimensional approach such as has been adopted with alcohol and driving. However, the specificities of impairment due to marijuana must be understood and investments made in research. Collaboration with key stakeholders such as schools, drivers' education and licensing bodies, as well as enforcement organizations is essential.

In conclusion, the Canadian Medical Association reiterates the concern of Canada's physicians around marijuana use, particularly by young people. We are committed to working with governments and stakeholders to address this issue.

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