Parachute Vision Zero

Cannabis and drug-impaired driving – What's happening in Canada right now?

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Parachute Vision Zero Network has launched a series called **Word on the Street***; one of the elements of the series is a quarterly Case Study that will feature a variety of issues and examples of Vision Zero from across Canada and around the world. We hope that these practical, evidence based case studies will help educate, inform and inspire those who are interested in getting to zero.*

What's in this issue?

In July 2018, the federal government of Canada is set to legalize recreational cannabis. This has many road safety organizations, professionals and advocates concerned about an increased risk for drug-impaired driving. This report provides an overview of cannabis-impaired driving in Canada, including a review of current statistics, the unique challenges for preventing cannabis-impaired driving and what governments are currently doing to address this issue.

Overview

How prevalent is cannabis-impaired driving in Canada?

In Canada, a drug-impaired driving offence is recorded every three hours.[1] Cannabis (also referred to as marijuana) is the most commonly used Illicit drug in Canada[2] and recent data suggests that over one in four cannabis users report driving under the influence.[3]

How does cannabis affect driving performance?

Cannabis negatively affects driving performance, mainly by decreasing the ability to track moving objects, reaction time, visual function, concentration, short-term memory and the ability to divide attention. This can lead to increased variability in lane position, following distance, speed, the ability to monitor and respond to more than one source of

information at a time and handle unexpected events (e.g., pedestrian out on the roadway).[2]

What is the risk for injury?

Numerous studies have shown that the risk of a crash involving injuries, both and fatal and non-fatal, is two to three times higher among cannabis-impaired drivers when compared to non-impaired drivers.[4] This risk increases in a dose-related way with THC[i] concentration or frequency of cannabis use and risk is substantially higher when cannabis and alcohol use are combined.[4] After alcohol, cannabis is the most commonly detected substance among drivers who die in traffic crashes in Canada.[5]

Washington State has seen a twofold increase in fatal crashes involving drivers who are THC-positive since they legalized cannabis (8% in 2013 to 17% in 2014)

Reference:
Tefft, B. C., Arnold, L. S., & Grabowski, J. G. (2016). Prevalence of Marijuana Involvement in Fatal Crashes: Washington, 2010–2014.

Who is most at risk?

Recent survey data shows that young Canadians aged 16 to 24 are more likely to consume cannabis (22% of youth aged 15 to 19 vs. 26% of young adults aged 20 to 24).[6] Furthermore, Canadian youth aged 18 to 19 are more likely to report driving after using cannabis (8.3%) and riding with a driver who has used cannabis (21.5%).[6] A recent study also found that four out of ten drivers aged 16 to 24, who died between 2000 and 2010 in a motor vehicle crash in Canada, tested positive for cannabis.[6] Although this doesn't show evidence of driver impairment, it does indicate the presence of cannabis in young people dying in crashes.

Key Challenges

Establishing safe levels of cannabis consumption for drivers

Cannabis provides many unique challenges that make it difficult to determine at which point it impairs a person's ability to drive. For example, acute impairment from some

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[i] Tetrahydrocannabinol (THC) refers to a psychotropic cannabinoid and is the principal psychoactive constituent of cannabis.

forms of cannabis sets in shortly after use and can persist for up to about six hours, but this can vary depending on the individual's characteristics and constitution, as well as on the potency and type of cannabis used.[4]

In June of 2017, key medical and public health organizations endorsed Canada's Lower-Risk Cannabis Use Guidelines (LRCUG), which recommends that users categorically refrain from driving (or operating other machinery or mobility devices) for at least six hours after using cannabis (some may need to wait longer, depending on the user and the properties of the specific cannabis product used).[4] Despite this, there is currently no evidence for safe levels of cannabis when driving, which may make policy makers hesitant to recommend how much cannabis a person can consume before driving.

> Canada's Lower-Risk Cannabis Use Guidelines (LRCUG) are based on a scientific review by an international team of experts, published in the American Journal of Public Health.

Police capacity to enforce drug-impaired driving laws

In Canada, a drug-impaired driving charge requires evidence of impairment. If a police officer suspects a driver is impaired by drugs he/she can demand they submit to a Standardized Field Sobriety Test (SFST) and an evaluation by a Drug Recognition Evaluator (DRE) to test for the presence of impairing substances.[7]

Trained DRE officers are able to identify the class of drugs responsible for impairment with an accuracy rate of 95%,[2] however, cannabis has a half-life of about two hours and levels of THC in the blood peak about 10 minutes after smoking.[8] This limits the time available for administering SFSTs and drug evaluations, especially when obtaining blood, the gold standard for measuring THC.

There is also a critical shortage of DREs in Canada and their training is both timely and costly. In September 2017, the Canadian Association of Chiefs of Police and other police service members indicated they would not be ready to enforce new laws for legalized cannabis by July of 2018. Some reasons they cited were more time to properly train officers about the new laws, a need to more than double the number of police officers who are certified to conduct roadside drug-impaired driving testing[ii] and more time for public education.

[ii] Nationally, the Canadian Association of Chiefs of Police estimates there needs to be at least 2,000 officers with the training, up from about 600 now.

Scientific consensus to support per se laws

In April of 2017, the Federal government announced new legal limits for THC when driving (see more on this below) to go along with existing limits for alcohol (i.e., a Blood alcohol concentration of 80 milligrams of alcohol in 100 millilitres of blood). Per se limits provide law-enforcement with a clear cut-off to determine whether a driver is impaired and alcohol per se laws are associated with an 8–15% reduction in alcohol-related fatal crashes.[9] However, unlike alcohol, there is no scientific consensus for what that the legal limit should be for THC.[8] This opens the door for legal challenges when presenting evidence in court and makes it difficult for drivers to determine how much cannabis they can consume before driving. For more on this, please see our newest blog post by Ed Prutschi, a Toronto defence lawyer who presented at our 2nd Annual Parachute Vision Zero Network Summit in October of 2017.

Youth misconceptions about cannabis

Research has shown that young people have several misconceptions about the risks of consuming cannabis before driving, including:

- ❖ Driving after consuming cannabis is safer than alcohol-impaired driving;[10]

- ❖ Cannabis can increase focus and improve concentration while driving;[10]

- ❖ It's possible to compensate for the effects of cannabis by simply driving slower;[10]

- ❖ Cannabis is not impairing (given lack of visible impairments similar to alcohol);[11]

- ❖ The effects of cannabis on driving depends on the driver;[11]

- ❖ The consequences of drug impaired driving (e.g., getting caught by police or into a crash) seem unrealistic.[11]

To help better understand these, and other misconceptions about cannabis in general, the Canadian Centre on Substance Use and Addiction (CCSA) recently conducted a series of in-depth interviews with Canadian youth across the country and published a research report entitled Canadian Youth Perceptions on Cannabis. They identified several gaps in current evidence-based messaging on cannabis and Table 1 summarizes ideas youth have for improving prevention initiatives (many of which are supported by

additional research. See our [newest infographic on youth perceptions of cannabis-impaired driving](#).

TABLE 1: The "who, what and how" of educating youth on the risks of cannabis

Who should educate youth?	What should we teach them?	How should we do it?
Someone with first-hand experience using cannabis (both positive and negative) who is close in age	Legal consequences of drug-impaired driving	Begin efforts earlier, with consistent follow up
Avoid using authority figures like teachers, police and councillors to deliver prevention messages	The risks of using cannabis and driving	Deliver education in smaller interactive groups (large school assemblies are "not memorable")
Involve youth when developing initiatives and allow them to deliver programming to their peers	Effects of cannabis-impaired driving apart from the effects of alcohol-impaired driving	Avoid scare tactics and the "just say no" approach
Strengthen proactive, parental involvement	Clear limits for when a driver becomes impaired by cannabis	Provide unbiased, evidence-based information on both the positives and negatives of using cannabis
Increase capacity for addressing cannabis use among those working with youth	Skills for critically analyzing facts and scientific information	Focus on harm reduction, not abstinence (akin to promoting birth control in sex ed. class)

Source: McKiernan, A., & Fleming, K. (2017) Canadian Youth Perceptions on Cannabis, Ottawa, Ont.: Canadian Centre on Substance Abuse. https://www.ccsa.ca/sites/default/files/2019-04/CCSA-Canadian-Youth-Perceptions-on-Cannabis-Report-2017-en.pdf (see pages 35-37 and 43-45 for more detail)

What are governments doing to address this problem?

Federal initiatives

Legislation

In the spring of 2017, the Government of Canada introduced legislation that would strengthen impaired driving laws and help ensure the public is better protected from both alcohol and drug-impaired driving. This includes measures to make drug testing and prosecution easier and proposed legal limits for THC.

Education

On Dec 5th 2017, the Federal Government officially launched their "Don't Drive High" national public awareness campaign. The goal of the campaign is to educate Canadians about the safety and legal risks of drug-impaired driving and the primary demographic is young people aged 16-24. Key components of the campaign include a website, a video entitled "In an instant" and a Facebook page. Advertising will run from November 2017 to March 2018, on digital platforms (Facebook, Instagram, Snapchat, Spotify and YouTube), on television, in cinemas and around campuses, bars and transit.

Legal drug limits
Under the new legislation, legal limits for drugs would be set by regulation. For THC, the proposed levels would be:

- ❖ 2 nanograms (ng) but less than 5 ng per 1 millilitre (ml) of blood for the summary conviction offence

- ❖ 5 ng or more per 1 ml of blood for the drug-only hybrid offence

- ❖ 2.5 ng or more per 1 ml of blood combined with 50 mg or more of alcohol per 100 ml of blood for the drugs-with-alcohol hybrid offence

Enforcement and Technology

In June of 2017, Public Safety Canada, the RCMP and the Canadian Council of Motor Transport Administrators (CCMTA) released the results of their Oral Fluid Drug Screening Device Pilot Project. The purpose of the project was to examine the use of oral fluid drug screening devices[iii] in the Canadian climate, within applicable Canadian law

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[iii] Oral screening fluid devices can collect and screen a sample of oral fluid to provide a preliminary indication of drug use at road side and recent studies have shown they can detect cannabis at relatively low levels (e.g., 5 ng/mL), which has traditionally been difficult to do.[12]

enforcement practices, to develop and inform law enforcement training guidelines and standard operating procedures for device use, and to identify possible elements for inclusion as standards for the devices.

The pilot lasted 3 months, with police collecting 1141 oral fluid samples across Canada and analyzing them at roadside using two oral fluid drug screening devices. The pilot was considered a success with police officers reporting positive feedback on usability, troubleshooting, ability to deploy in variable weather conditions and standard operating procedures. Read the Final Report on the Oral Fluid Drug Screening Device Pilot Project.

Finally, on November 1st the Canadian Society of Forensic Science Drugs and Driving Committee (DDC) (an advisory body to the Department of Justice with respect to issues of drug impaired driving) posted their Oral Fluid Standards and Evaluation Procedures. The deadline for indicating an intent to submit a device for evaluation was November 30th, 2017.

Oral Fluid Screening Devices

Pros:

Provides a good indication of recent drug use (when compared to urine)

Less intrusive than collecting blood samples

Easy to administer at roadside

Cons:

Not 100% accurate

Devices are expensive

Can only detect a limited amount of drugs (cannabis, cocaine, methamphetamine and opioids)

For more see CCSA Policy Brief on Oral Fluid Drug Screening

New provincial legislation

Some provinces have strengthened their drug-impaired driving laws to better align themselves with the new measures set forth by the federal government and prepare for the legalization of cannabis. The following is a brief summary of the newest legislative initiatives.

Ontario

On December 12th, 2017 Ontario announced legislation to strengthen drug-impaired driving laws. These included:

❖ Zero tolerance rules prohibiting young (21 and under), novice and commercial drivers, from having the presence of a drug in their system, as detected by a federally approved oral fluid screening device;

❖ Escalating monetary penalties for drug-impaired drivers who fail a roadside Standardized Field Sobriety Test or as determined by an evaluation from a Drug Recognition Expert.

The Ministry of Transportation is also currently working several educational initiatives to raise awareness about drug-impaired driving. This includes collaborating with MADD on a provincial campaign that highlights the legal consequences of drug-impaired driving and with Arrive Alive Drive Sober and the Canadian Automobile Association (CAA) on a new drug-impaired educational video ("Feel the Evidence"), which will be shared with every high school in Ontario by March 2018.

Alberta

On November 29th 2017, Alberta [updated their impaired-driving offences and sanctions](#) to include drug-impaired driving. Specific changes include:

❖ Zero tolerance for cannabis, cannabis/alcohol combination and illegal drugs in the blood stream for drivers in the Graduated Driver Licensing (GDL) program;

❖ Provincial sanctions for drivers with a blood drug concentration or blood drug/alcohol concentration over [the limits outlined in regulations under the Criminal Code of Canada](#);

❖ An immediate 90-day, fixed-term license suspension for drivers who meet the criteria to be charged for impaired driving under the Criminal Code of Canada, followed by participation in a one-year provincial ignition interlock program.

See a detailed comparison of [Alberta's Current and Proposed Impaired Driving Laws](#).

New Brunswick

On November 9th, 2017, the government introduced a bill to [amend the Motor Vehicle Act](#) in order to establish a drug-impaired driving program. Proposed measures include:

- ❖ Immediate short-term roadside suspensions;

- ❖ An administrative licence suspension program for those charged with or convicted of drug-impaired driving;

- ❖ Discretionary and mandatory vehicle impoundment for short-term and administrative licence suspensions;

- ❖ Participation in a re-education course for drug-impaired drivers;

- ❖ Licence reinstatement fees for drug-impaired drivers.

The Government also recently passed the Cannabis Education and Awareness Fund Act, which will support the development, implementation and delivery of education and awareness programs for harm reduction and the responsible use of cannabis for recreational purposes.

Saskatchewan

On November 28th, 2017, the Government of Saskatchewan became the first province to introduce new legislation that includes zero tolerance for all drivers impaired by drugs. They have also taken steps to align penalties for alcohol and drug-impaired driving, which was widely supported by the results of their public, online cannabis survey.

Summary

- ❖ Cannabis is the most commonly used illicit drug in Canada and recent data suggests that over one in four cannabis users report driving under the influence;

- ❖ Young people are more likely to consume cannabis, drive after using cannabis and ride with a driver who has used cannabis;

- ❖ The federal government has proposed new legal limits for THC when driving but there is currently no evidence for safe levels of cannabis when driving;

- ❖ To help law enforcement prepare for the legalization of cannabis, more trained Drug Recognition Evaluation (DRE) officers and tools for roadside testing (e.g., oral screening fluid devices) are needed;

- ❖ Ontario, Alberta, New Brunswick and Saskatchewan have all recently introduced new measures to strengthen drug-impaired driving laws.

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