Report by the Minister of Justice and Attorney General of Canada on the Implementation and Operation of former Bill C-46:

An Act to amend the Criminal Code (offences relating to conveyances) and to make consequential amendments to other Acts

Canada

Message from the Minister of Justice and Attorney General of Canada

It is my pleasure to table this report outlining the early successes and on-going challenges relating to the implementation of former Bill C-46, *An Act to amend the Criminal Code (offences relating to conveyances) and to make consequential amendments to other Acts* (S.C. 2018, c. 21).

This Act has been described as the most significant set of reforms to the law of impaired driving in a generation. It was and remains an ambitious piece of legislation with the laudable and important overriding goals of responding to and, ultimately, reducing the harms caused by impaired drivers on Canadian roads and highways.

This report presents some early findings on the impact of these legislative changes but, as with so much in the past few years, the impact of the COVID-19 global pandemic cannot be overstated. Who could have predicted when this review and report were first being contemplated, nearly 3 years ago, that the data would need to be qualified by such a caveat? However, this is exactly the situation we find ourselves in and I am pleased that, despite the challenges posed by the pandemic, the available data confirm that the legislative changes are having the intended impact.

I recognize, however, that it is not all good news. As reflected in the information from the public opinion research, Indigenous peoples and racialized Canadians report being disproportionately impacted by police traffic stops. I am encouraged by the increasing recognition of the pernicious problem of racial profiling by the courts, and that this will hopefully help lead to a change in police conduct. Efforts are also being made to collect better data on the criminal justice system and the ethnocultural-identity of individuals who come into contact with police and the justice system. I hope this will lead to better decision-making on all areas of public policy, including law and policing.

In the meantime, I am proud of the impact of former Bill C-46 in the area of impaired driving. But this is not the end of the process. Although there is no legislative requirement for continued reports to Parliament on the implementation of Bill C-46, Parliamentarians and the Canadian public can rest assured that we will continue to monitor this area to ensure that the law remains responsive to scientific, judicial, and societal changes.

Drive responsibly everyone.

The Honourable David Lametti, P.C., Q.C., M.P
Minister of Justice and Attorney General of Canada

Contents

List of tables and charts

List of abbreviations

Abbreviation	Explanation
ADSE	Approved drug screening equipment
AI	Approved instrument
AGC	Attorney General of Canada
BAC	Blood alcohol concentration
BDC	Blood drug concentration
CCS	Canadian Cannabis Survey (Health Canada)
DEC	Drug evaluation classification
DRE	Drug recognition expert
ICCS	Integrated Criminal Court Survey (Statistics Canada)
MAS	Mandatory alcohol screening
NCDB	National Collison Database (Transport Canada)
NCS	National Cannabis Survey (Statistics Canada)
NJS	National Justice Survey (Department of Justice public opinion survey)
SFST	Standardized field sobriety test
THC	Tetrahydrocannabinol (primary psychoactive component in cannabis)
UCR	Uniform Crime Reporting Survey (Statistics Canada)

1.0 Executive Summary

In 2018, Parliament enacted former Bill C-46, *An Act to amend the Criminal Code (offences relating to conveyances) and to make consequential amendments to other Acts*, S.C. 2018, c. 21 (hereinafter referred to as "the Act") to create new and stronger laws to combat impaired driving.

The Act introduced a robust drug-impaired driving regime to coincide with the legalization of cannabis, as well as reformed the *Criminal Code* alcohol-impaired driving regime to create a new, modern, simplified and more coherent system to better deter, detect, and prosecute impaired drivers. The Act was introduced with an ultimate objective of reducing deaths and injuries caused by impaired drivers on Canadian roads. The Act came into force in two stages: the drug-impaired driving amendments came into force on Royal Assent on June 21, 2018 and the more comprehensive reform which was a complete repeal and replacement of the transportation regime came into force on December 18, 2018.

The Act requires the Minister of Justice to undertake a comprehensive review of the implementation and operation of the provisions enacted and table a report in both Houses of Parliament.. The review must also include an evaluation of whether the implementation and operation of the Act has resulted in differential treatment of any particular group based on a prohibited ground of discrimination.

In support of the legislative changes, in 2017 the Government also announced $161 million in federal funding to support the new drug-impaired driving regime (the funding initiative). The funding initiative was targeted towards training for frontline officers to detect drug-impaired drivers, building law enforcement capacity, providing access to the newly approved drug screening equipment (ADSE), as well as policy, research, and public awareness activities around drug-impaired driving.

This report draws from multiple existing data sources, which provides national coverage of the extent of alcohol and drug-impaired driving. The report also includes findings from research projects commissioned by the Department of Justice in 2020 to support the legislative review. Data presented in this report cover both the period prior to the coming into force of the Act (2016-2018), as well as post coming into force (2019-2021). The report uses all available data, although the data does not assess every individual amendment. Therefore, the data presented in this report serve as a baseline for some aspects of the Act, as well as a preliminary assessment of other elements of the impaired driving regime introduced under the Act. To gain a broader understanding of the implementation and impact of the Act, further research and data collection would be required over a longer timeframe.

The data presented in this report support the following high-level conclusions:

Road safety and self-reported behaviour and awareness data
- The available data shows that impaired driving traffic fatalities decreased in 2019, the first year following the Act's coming into force.
- Preliminary data shows that mandatory alcohol screening (MAS) is an efficient and effective means of tackling alcohol-impaired driving.
- There have been substantial reductions in the prevalence of alcohol use by drivers over the past twenty years; however, since data on cannabis use among drivers has become available, there has been an increase in the percentage of drivers who tested positive for cannabis.
- Recent results from a national drug-impaired driving study suggest that cannabis use is an emerging problem in Canada that may become more prevalent than alcohol.

- The data indicated there was low public awareness of changes related to impaired driving introduced under the Act.

Criminal justice system
- There was an increase in police-reported rates of alcohol- and drug-impaired driving in the first year after the Act's implementation.
- The COVID-19 pandemic resulted in a decline in impaired driving incidents, including those causing bodily harm and death. Data shows there was not a marked increase in alcohol and drug consumption during the pandemic among people who had previously consumed alcohol or drugs. Though previous users of cannabis were more likely to have increased consumption during the pandemic than users of alcohol.
- Available evidence points to the complexity of the regime around drug-impaired driving; drug-impaired driving incidents rarely led to charges under new blood drug concentration (BDC) limits; it took longer for police to complete drug-impaired driving investigations and these incidents were less likely to end in charges; drug-impaired driving in the courts took twice as long as alcohol cases and were less likely to result in guilty findings.
- The drug-impaired driving funding initiative has made significant progress in meeting its objectives to build law enforcement capacity to recognize the signs and symptoms of drug-impaired driving, and provide access to Approved Drug Screening Equipment (ADSE).

Racial profiling
- Some Indigenous peoples and racialized Canadians are more likely to have concerns about being charged with an alcohol- or drug-impaired driving offence, despite having similar or lower rates of self-reported impaired driving behaviour.
- Evidence from the 2021 National Justice Survey (NJS) suggests that Indigenous peoples are disproportionately impacted by police traffic stops in general, and there is general perception among some Indigenous and racialized people of differential treatment and perceived risk in interactions with police. Efforts currently underway to improve police-reported data collection will contribute to further assessment of the impact of these, and other legislative changes on these groups.

1.1 Introduction

This report is tabled pursuant to section 31.1 of former Bill C-46: *An Act to amend the Criminal Code (offences relating to conveyances) and to make consequential amendments to other Acts*, which provided that the Minister of Justice and Attorney General of Canada must, within three years of coming into force on December 18, 2018, undertake a comprehensive review of the implementation and operation of the provisions enacted by the Act.

The review must also include an evaluation of whether the implementation and operation of the Act have resulted in differential treatment of any particular group based on a prohibited ground of discrimination. This review also provides an opportunity to take stock of the current data on impaired driving and identify early trends, and issues to monitor as part of the on-going work to combat both drug and alcohol-impaired driving.

1.2 Background

The ultimate objective of the Act was to reduce the deaths and injuries caused by impaired drivers on Canadian roads. In addition to needing new tools and offences to address drug-impaired driving, in advance of cannabis legalization, the impaired driving regime in the *Criminal Code* was complex and difficult to apply. It contained overlapping offences, permitted common law defences that encouraged risky conduct, and was an area of law that was among the most heavily litigated, which took up a disproportionate amount of court time.

As such, the Act strengthened the approach to drug-impaired driving and repealed the existing transportation offence regime and replaced it with a new, modernized, simplified, and coherent framework that is intended to make the law easier to understand and enforce, better deter and improve detection of impaired drivers, lead to efficiencies in the criminal justice system, and ultimately save lives.

In support of these legislative changes, in 2017 the Government of Canada also announced $161 million in federal funding to support the new drug-impaired driving regime (the funding initiative). The drug-impaired driving funding initiative was targeted towards training for frontline officers to detect drug-impaired drivers, building law enforcement capacity, providing access to the newly approved drug screening equipment (ADSE), as well as policy, research, and public awareness activities around drug-impaired driving.

The following section provides a high-level overview of some the legislative changes for which some data is available to assess its impact. An in-depth explanation of the changes enacted can be found in the Justice Canada document entitled "Backgrounder for former Bill C-46, *An Act to amend the Criminal Code (offences relating to conveyances) and to make consequential amendments to other Acts*, as enacted" (Department of Justice Canada 2019).

1.2.1 Detection and Deterrence of Impaired Driving

Mandatory Alcohol Screening

One of the changes that received a significant amount of Parliamentary discussion was MAS (now subsection 320.27(2) of the *Criminal Code*). MAS authorizes a peace officer, who has lawfully stopped a

driver under other powers, to demand a preliminary breath sample on an approved screening device to test for alcohol. The Act removed the previous requirement that an officer first had to have reasonable suspicion that the driver had alcohol in their body before they could make the demand. The reasonable suspicion standard was removed because evidence indicates it can be difficult to develop suspicion in a brief interaction at the roadside, resulting in police officers missing a significant number of impaired drivers. MAS is not a stopping power; a driver can only be stopped by a police officer if they are acting within the scope of their other powers, including under the common law and provincial highway traffic powers. It is only once the driver is subject to a lawful stop that the MAS power can be used.

1.2.2 Strengthening Drug-Impaired Driving

Blood Drug Concentration (BDC) Offences and Authorization of Oral Fluid Drug Screeners

In response to concerns that the legalization of cannabis could lead to an increase in people driving under its influence, the Act strengthened the approach to drug-impaired driving by authorizing the use of a new screening tool at the road side and creating three offences of having a BDC at or above a prescribed limit for certain impairing drugs (including THC) within two hours of driving.

The screening tools (approved drug screening equipment) are oral fluid drug screeners which, detect certain impairing drugs at a specified threshold in the oral fluid of suspected impaired drivers. Mandatory drug screening is not currently permitted by law; peace officers can only demand an oral fluid sample if they have a reasonable suspicion that the driver has drugs in the body.

The new offences are based on the concentration of certain prohibited drugs (including THC) in the blood of a driver (the offences are set out in subsection 320.14(1), and the prohibited drug levels are set by regulation (SOR/2018-148)).

The offences are:
- a straight-summary conviction offence that prohibits having between 2 and 5 ng of THC per mL of blood.
- a hybrid offence which prohibit having higher levels of certain drugs alone (i.e., 5ng or more of THC per mL of blood), and
- a hybrid offence which prohibits having a prohibited level of drugs and alcohol when found in combination (i.e., 2.5 ng of THC per mL of blood and 50 mg of alcohol per 100 mL of blood).

The first offence is punishable by a maximum fine of up to $1,000. The second and third offences are punishable in the same manner as the other impaired driving offences, (i.e. a minimum fine of $1,000 and a maximum of 2 years less a day imprisonment for a first offence on summary conviction, and a maximum of 10 years on indictment).

Demands for a Drug Recognition Evaluation

The Act modified the law to clarify and strengthen the drug recognition evaluation (DRE) process. For example, any police officer with reasonable grounds to believe that a drug-impaired driving or a BDC offence has been committed can, instead of making a demand for a DRE, make a demand for a sample of blood. The Act also confirmed that the evidence of the drug recognition expert is admissible at trial, without need to establish that they are an expert in each case, and made collecting blood easier by removing the requirement that it must be overseen by a doctor.

1.2.3 Facilitating the Investigation and Prosecution of Impaired Driving and Creating Trial Efficiencies

Facilitating Proof of BAC

The Act made several changes to the provisions relating to how the Crown proves the driver's BAC in a trial on the offence of having a BAC at or over 80 mg per 100 ml of blood (80 or over) within two hours of driving. This change reflected Parliament's confidence in the accuracy and reliability of AIs that are approved by the Attorney General of Canada. Specifically, the procedures that must be followed, and the necessary results of those procedures are now listed in the *Criminal Code* (subsection 320.31(1)). If the Crown proves that the requirements have been met, then the results of the breath test by an AI is conclusively proven.

In addition to reflecting the scientific reality of the AIs and the confidence of Parliament in their results, this change was intended to create more efficient trials by streamlining and facilitating the proof of the key element of the 80 or over offence (i.e., the BAC of the driver).

Eliminating the bolus drinking defence and limiting the intervening drink defence

Under the former law, the "bolus drinking" defence could be raised when the driver admitted that their BAC was over the limit at the time of testing, but claimed it was not the case at the time of driving. This was because they had consumed a significant amount of alcohol just before or while driving such that the alcohol was still being absorbed while they were behind the wheel. Similarly, the intervening drink defence arose when a driver claimed to have consumed alcohol after operating the vehicle but before testing. This often occurred after an accident, where the driver claimed to have taken the drink or drank to calm their nerves prior to the arrival of police.

The "bolus drinking" defence was removed because it encouraged risky behaviour and the intervening drink defence was limited to exlude intentional conduct aimed at undermining the integrity of the justice system and frustrating a police investigation. However, the Act created an exception for those who innocently consume alcohol after driving, in situations where the same public policy concerns do not arise. It was expected that addressing public policy concerns with these two defences would also lead to efficiencies in terms of the duration of trials.

Clarifying Crown Disclosure Requirements

The Act clarified what the prosecution is required to disclose to the defence in relation to whether the breath tests of an accused provided accurate results. The defence could apply for further disclosure, stating how the material is relevant.

1.2.4. Litigation

Impaired driving is one of the most litigated areas of the criminal law and, as such, extensive litigation on the new law was expected as lawyers, and courts contended with the changes. This includes litigation relating to the interpretation and implementation of the new law, as well as the constitutionality of the provisions. Much of the litigation is currently on-going and neither the Supreme Court of Canada nor the Courts of Appeal have adjudicated on the constitutionality of any of the new provisions.

1.3 Racial profiling and former Bill C-46

Racial profiling - which occurs when race or racial stereotypes about offending or dangerousness are used, consciously or unconsciously, to any degree in suspect selection or subject treatment[1] - is an unacceptable abuse of police power.

The Ontario Court of Appeal has stated that racial profiling is "offensive to fundamental concepts of equality and … human dignity". Racial profiling undermines effective policing, fuels harmful racial stereotyping, offends equality and human dignity, and "operates whenever race or racial stereotypes contaminate decision-making by persons in authority". (*R v Dudhi*, 2019 ONCA 665 at para 65 paraphrasing *Peart v Peel Regional Police Services*, 2006 CanLII 37566 (ON CA)). Racial profiling, among other factors, contributes to issues of systemic racism and overrepresentation of Indigenous and racialized groups in the criminal justice system.

The issue of racial profiling was raised by some witnesses testifying on the Bill during the Parliamentary process, in particular with respect to the MAS power. There was concern that the power to demand a preliminary breath sample from a driver without suspicion that they have alcohol in their body could lead to an increase in drivers being stopped for improper purposes. However, MAS is not a stopping power (the power to randomly stop drivers to determine that a driver is licenced, the car is fit, and the driver is sober has previously been upheld by the Supreme Court of Canada (*R v Ladouceur*, [1990] 1 SCR 1257)), and the legislation specifically requires that MAS can only be used during a lawful stop (that is, a stop that is not motivated by racial stereotypes or racial bias).

As the Minister of Justice and Attorney General of Canada indicated before the House of Commons Committee on Justice and Human Rights:

> Mandatory alcohol screening would not alter the responsibility that law enforcement has towards training and oversight to ensure fair, equal, and appropriate application of the law. [2]

In Canada, all police officers must exercise their powers in a manner consistent with the *Canadian Charter of Rights and Freedoms*. As the courts have recognized, a stop motivated by racial profiling would constitute an improper purpose and would invalidate the stop, and everything that flowed from the stop. See for example R v Khan, [2004] OJ No 3819. Judicial sanction, including the exclusion evidence is available to address such cases. In addition, the preamble of the Act clearly articulates that all investigative powers must be exercised in accordance with the *Charter*. This sends a clear signal from Parliament that racial profiling in impaired driving investigations is impermissible.

There is currently no national level data available on the Indigenous or ethno-cultural identity of people who are stopped by police, making any assessment of the impact of MAS and other police powers on different groups challenging. Efforts are currently underway to enable the broad, systemic collection of this data, which will allow for a better understanding of the impact of legislative changes on these groups. Specifically, in July 2020, the Canadian Association of Chiefs of Police and Statistics Canada

---

[1] R v Le, 2019 SCC 34, which cites Ottawa Police Service, Racial Profiling (June 27, 2011), Policy No. 5.39 (online), at p. 2.

[2] House of Commons, Standing Committee on Justice and Human Rights, Evidence, 42-1, No 61 (13 June 2017) at 1535 (Hon Jody Wilson-Raybould).

announced a commitment to require the police to report statistics on Indigenous and ethno-cultural groups in police-reported crime statistics to improve the collection of disaggregated data in the criminal justice system. In 2021, Federal, Provincial and Territorial Deputy Ministers Responsible for Justice and Public Safety endorsed the collection and analysis of Indigenous and race-based data as a priority for the National Justice Statistics Initiative. Justice Canada and Statistics Canada also received $ 6.7 million in Budget 2021 to improve the collection and use of disaggregated data to help improve policy responses aimed at reducing the over-representation of Indigenous and racialized people in the criminal justice system. In order to address this data gap for the legislative review, the NJS 2021 was identified as a tool that would allow for the collection of limited data within the legislative review timeframe (i.e. three years after the coming into force of the Act). The project included a survey and interviews to assess whether or not different groups were being disproportionately impacted by police enforcement.

2.0 Research Plan

Data for this report was accessed from multiple existing sources, which provide national coverage of the extent of alcohol and drug-impaired driving in Canada. This includes data from Statistics Canada as well as Public Safety Canada's annual publication on drug-impaired driving produced in support of the funding initiative. Annex 1 provides a full breakdown of research questions, indicators, data sources, and data availability.

Three projects were commissioned by the Department of Justice to contribute to the legislative review and supplement existing gaps in the data. These projects were identified and designed to be completed within the three-year review timeframe. The first of these projects was a study by Dr. Doug Beirness on the initial impact of MAS on alcohol-impaired fatally injured drivers (Beirness 2021). This study used motor vehicle crash files and toxicology results from five provinces to examine differences in driver fatalities pre- and post-implementation of MAS. While there is currently no national level data source on the use of MAS by police, Beirness (2021) identified Edmonton Police Service (EPS) as an organization that has been tracking the use of MAS by officers. The EPS data is used to assess the impact of MAS after one year of operation.

The second study was the Department of Justice's annual public opinion survey, the NJS (Department of Justice 2021). The project included questions about alcohol- and drug-impaired driving as well as police traffic stops. The survey included an oversampling of racialized and Indigenous respondents in order to assess whether or not different groups were being disproportionately impacted by police enforcement. The project also included a small number of interviews to better understand the lived experiences of Indigenous and ethno-cultural groups in the context of police traffic stops.

The Department also commissioned a dedicated Juristat on impaired driving from the Canadian Centre for Justice and Community Safety Statistics (CCJCSS) at Statistics Canada to cover the time period from 2015 to 2019. The article was published in July 2021 (Perreault 2021). The Juristat article covers national level police-reported and court statistics on drug and alcohol-impaired driving. In addition, an annotated bibliography of the legal and social science literature from 2018 (1 year pre-enactment) to 2021 on alcohol- and drug-impaired driving was prepared (Annex 2).

2.1 Data Limitations

There are several limitations to consider in the interpretation of the data presented in this legislative review report. The data available from the post-enactment period covers roughly one year, 2019, in the pre-COVID-19 context. In that year, there may have been varying degrees of implementation by police of the measures introduced under the Act. This is a key factor, which needs to be taken into consideration in the interpretation of the data. The second and third year post-enactment (2020-21) is heavily skewed by the impact of the COVID-19 pandemic. The pandemic affected both the ability to collect data, as well as the interpretation of the data collected in the pandemic context. COVID-19 and the ensuing public health restrictions resulted in fundamental changes to the way society functioned (e.g., both alcohol/drug use and driving behaviours), and the way that police responded to impaired driving incidents (e.g., due to physical distancing requirements). As a result, any data collected in 2020-21 will be skewed and will not provide an accurate picture of the impact of the legislative changes as compared to pre-enactment practices.

Given the data gaps identified, the limited timeframe, and the disruptions that occurred as a result of the COVID-19 pandemic, the data presented in this report serve as a baseline for some aspects of the Act, as well as a preliminary assessment of other elements of the impaired driving regime introduced under the Act. To gain a broader understanding of the implementation and impact of the Act, further research and data collection would be required over a longer timeframe.

2.1.1 Impacts of COVID-19 on Impaired Driving

Available data indicates that for most people there has not been a marked increase in alcohol consumption during the pandemic. Stress and boredom were cited as reasons for some people who had increased consumption, but the pandemic also resulted in fewer opportunities to socialize which led a higher proportion of people to consume less. Previous users of cannabis were more likely to have increased consumption during than pandemic than users of alcohol. Also, of those who did increase their consumption, they were more likely to report abuse. Research conducted during 2020 also found the group most likely to drive impaired, young adults, were more likely to have increased their drug or alcohol consumption during the pandemic (Canadian Centre on Substance Use and Addiction 2020; Statistics Canada 2021a).

A special survey from a sample of police services across Canada was conducted by Statistics Canada to measure the impacts of the COVID-19 pandemic on selected types of crimes and calls for service, including certain offences related to impaired driving (Statistics Canada 2021b). The police services that responded to this survey serve almost three quarters (71%) of the Canadian population. The survey found that impaired driving decreased during the pandemic, from March 2020 to February 2021. There were 57,115 incidents of impaired operation, down 14% from the same period a year earlier. Impaired driving causing bodily harm or death were even more impacted, with a decrease of 33% from the previous year.

From the outset of the COVID-19 pandemic, the operation of the criminal courts has been significantly impacted with courts either temporarily closing or severely restricting their operations starting on March 13, 2020 in some locations. While there have been regional differences in how various courts have reacted to the public health emergency declarations across Canada, in the early stages of the pandemic all jurisdictions were limited to hearing only the most urgent matters, particularly those

involving in-custody accused, and often by video or audio appearances. In-person criminal trials generally started resuming across the country between the end of May and October 2020; however, some court locations have experienced sporadic shut downs since then.

As the country battles subsequent waves of the pandemic, many courts are not able to operate at their pre-pandemic capacity. Once they are able to do so, courts will likely continue to struggle to recover from the backlogs that have built up. The exact impact in terms of accumulated backlogs is yet to be determined and any impacts of the enacted efficiencies cannot be assessed.

3.0 Data to assess the impact of the legislative amendments

This section of the report presents data on impaired driving in Canada relevant to the assessment of the implementation and impact of the Act. The information is organized starting with road safety and traffic injury/fatality data (section 3.1), and prevalence of alcohol and drug use among drivers (section 3.2).

Next, information on self-reported awareness and impact of the legislative changes is presented (section 3.3), followed by a section on criminal justice system data, which includes police enforcement and response to impaired driving (section 3.4), as well as police-reported (section 3.5), and court statistics (section 3.6).

The final section looks at the characteristics of people who drive after using alcohol and drugs (section 3.7), as well as the experiences of Indigenous peoples and racialized groups with police traffic stops (section 3.8).

3.1 Traffic safety, fatalities and injuries on roads in Canada

An overall objective of the Act is to reduce deaths and injuries caused by impaired drivers on Canadian roads. Several data sources were used to assess the impact of the Act on road safety. The first is Transport Canada's National Collision database. There are also two recent studies (Beirness 2021; Brubacher et al. 2021) which provide relevant data on fatalities among alcohol-impaired drivers, and the extent of alcohol and drug use among injured drivers. These data span both the pre- and post-enactment period of the Act, therefore they act both as a baseline for future comparison and an initial assessment of the impact of the Act.

Overall, the data presented show that impaired driving traffic fatalities decreased in the year post-enactment of the Act. The national drug-impaired driving study showed that cannabis and poly-substance use before driving are emerging issues, though the authors suggest that alcohol-impaired driving still poses the greatest crash risk on Canadian roads (Brubacher et al. 2021).

3.1.1 Transport Canada National Collision Database

Transport Canada maintains the National Collision Database (NCDB), which is a dataset on reportable motor vehicle collisions that occurred on public roads in Canada. The provinces and territories provide these data to Transport Canada where it is combined and used to track the number of deaths, injuries and collisions in Canada. Data from the NCDB, obtained via a special data request to Transport Canada, are presented below to show the extent of injuries and fatalities among different types of road users that occurred in collisions involving an impaired driver between 2016 and 2019.

Table 1 shows that the proportion of injuries in collisions involving an impaired driver has remained consistent over time and across all types of road users. Aside from farm/construction vehicles, which saw an increase from 3 to 7% in the pre- and post-enactment time period (2018 to 2019), there are no notable differences for other road users that experienced an injury in a collision involving an impaired driver.

Table 1 — Percent of injuries that occurred in collisions involving an impaired driver by road user, 2016–2019, Canada

	2016	2017	2018	2019
Bicyclist	3.0%	2.6%	3.2%	3.0%
Bus/Street Car	2.3%	1.7%	1.7%	1.6%
Car/Truck/Van/Motorhome	5.9%	5.6%	5.7%	5.8%
Farm/Construction	7.0%	2.9%	3.1%	6.7%
Motorcycle/Moped	3.3%	3.6%	3.1%	3.7%
Pedestrian	2.5%	2.4%	2.1%	2.4%
Snowmobile/Off Road Vehicle	21.1%	18.6%	21.9%	18.4%
Unknown/Not applicable	9.6%	7.5%	9.0%	9.8%
Total	5.6%	5.3%	5.3%	5.5%

Note: Not all jurisdictions report consistently on contributing factors and there is known underreporting. Data in this table includes only persons who were injured in the collision.

Source: Transport Canada, National Collision Database

When looking at fatalities in collisions involving an impaired driver between 2016 and 2019, there is more variation. Specifically, the proportion of fatalities among car/truck/van/motorhome users involving an impaired driver has decreased over the four year period from an average of 27% in the three year period before the Act came into force, to 20% in 2019. There was no notable difference in the overall total percent of fatalities in the timeframe pre-post (2018 to 2019) the Act coming into force (Table 2).

Table 2 — Percent of fatalities that occurred in collisions involving an impaired driver by road user, 2016–2019, Canada

	2016	2017	2018	2019
Bicyclist	28.5%	6.9%	7.6%	20.5%
Bus/Streetcar	0.0%	40.0%	5.2%	0.0%
Car/Truck/Van/Motorhome	33.1%	24.1%	22.6%	20.4%
Farm/Construction	0.0%	0.0%	0.0%	20.0%
Motorcycle/Moped	27.6%	14.6%	15.3%	16.8%
Pedestrian	6.9%	5.0%	12.1%	11.1%
Snowmobile/Off Road Vehicle	44.1%	23.8%	48.1%	39.2%
Unknown/Not Applicable	33.3%	0.0%	33.3%	0.0%
Total	29.3%	20.7%	20.4%	19.3%

Note: Not all jurisdictions report consistently on contributing factors, and there is known underreporting. Data in this table includes only the persons who were fatalities in the collision.
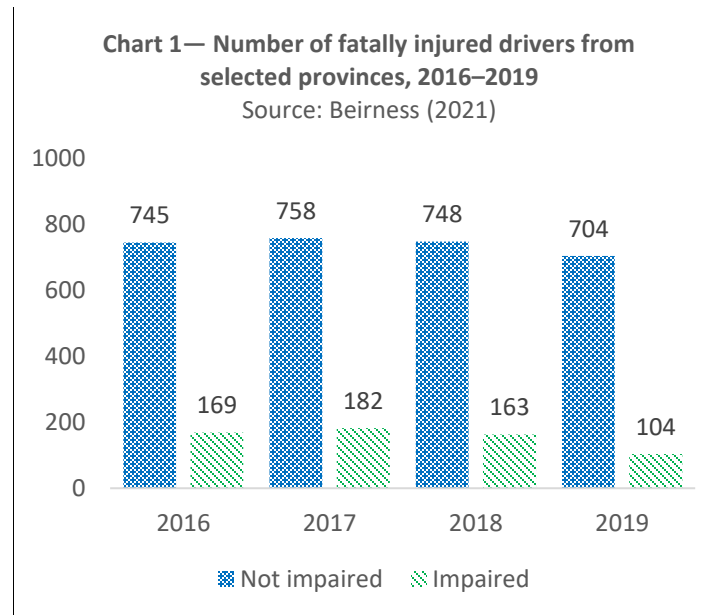The large variations for some categories of road users (i.e., bicyclist, bus/streetcar, farm/construction, snowmobile/off road vehicle) can be attributed to low numbers of incidents.

Source: Transport Canada, National Collision Database

While the NCDB injury data do not show any clear patterns with regards to the impact of the Act on road safety, the data shows a small decrease among car/truck/van/motorhome road users who were fatally injured in collisions involving an impaired driver between 2018 and 2019 when the Act came into force. Additional years of data would be necessary to show if this trend towards decreased fatalities among this group of road users continues.

3.1.2 Impact of MAS on Alcohol-Involved Driver Fatalities

The objective of MAS is to reduce the number of accidents and deaths on the roads caused by impaired drivers, both by intercepting more impaired drivers and deterring those who may have previously thought they could escape police detection. In a study assessing the initial impact of MAS on alcohol-involved driver fatalities, Beirness found a beneficial impact (Beirness 2021). The study examined motor vehicle crash files and toxicology results from British Columbia, Alberta, Saskatchewan, Ontario, and Quebec. Data on alcohol use by drivers fatally injured in crashes between 2016 to 2019 were examined to determine if the number of alcohol-impaired driving fatalities changed pre- and post-implementation of MAS. The analysis found that in the three years prior to the implementation of MAS, the number of non-alcohol-related driver fatalities per year decreased by 6%, from an average of 750 over the three years to 704 in 2019 (Chart 1). During the same time period, there was a 39% decrease in the number of fatalities among drivers deemed to be impaired by alcohol, from an average of 171 over the three years pre-implementation to 104 in 2019 (Chart 1). The data also showed a difference in the proportion of all driver fatalities that were alcohol-involved pre- and post-implementation of MAS. In the period pre-MAS, the proportion of all fatalities that were impaired was 19%, compared to 13% in the time period after MAS came into force.

Chart 1— Number of fatally injured drivers from selected provinces, 2016–2019
Source: Beirness (2021)

Year	Not impaired	Impaired
2016	745	169
2017	758	182
2018	748	163
2019	704	104

While this analysis provides encouraging evidence about the impact of MAS in reducing alcohol-related driver fatalities, further research will be needed to confirm these findings, including in other provinces and territories. Other factors will also need to be assessed to confirm what may be impacting the decline in alcohol-involved fatalities.

3.1.3 National Drug Driving Study

The Act strengthened Canada's approach to drug-impaired driving in the *Criminal Code*, particularly in response to the legalization of cannabis in 2018. Brubacher et al. (2021) have been conducting a national drug-impaired driving research project since 2018. The purpose of the project is to study drug use in moderately and severely injured drivers who present to hospital and have bloodwork obtained within six hours of a motor vehicle collision. A project update released in June 2021 provides relevant data on the extent and nature of drug and alcohol use among injured drivers. Data collection began in British Columbia in 2018 and has expanded to 15 hospital sites across the country.[3] The study includes 6,200 cases, of which 4,976 had blood sample analysis.

Table 3 shows that half of the drivers in the study tested positive for at least one impairing substance (51%). Out of the total number of injured drivers, the most common substance found was cannabis, with 19% testing positive for THC (including 8% with THC ≥ 2 ng/mL and 4% with THC ≥ 5 ng/mL). Alcohol was found in 16% of injured drivers (12% with BAC ≥ 0.08%); 11% tested positive for opiates; 11% for recreational drugs (cocaine, amphetamines); and 21% for sedating medications (including common over-the-counter antihistamine).

Demographic information showed that cannabis use was more common in drivers under age 35, with the 19-24 age group making up the highest proportion (36%), and males (22% versus 11% females). Looking at alcohol use among drivers, it was most common in the 19 to 34 age range (23% for 19-24 year olds and 22% for 25-34). Males were more likely to have used alcohol compared to females (18%

---

[3] Hospital sites: Vancouver, New Westminster, Victoria, Kelowna, Calgary, Edmonton, Saskatoon, Regina, Toronto, Ottawa, Montreal, Quebec City, Sait John, Halifax, St. John's.

versus 10%). Similar trends were found for recreational drugs. In contrast, sedating medications were more commonly found among older ages groups (24% among those aged 55+), and in females compared to males (24% versus 19%) (Table 3). The authors note the crash risk associated with other recreational drugs, sedating medications, and opiates is not well defined in the literature, but is suspected to be in the range of that associated with cannabis (Brubacher et al. 2021: 11).

Table 3 — Number (percent) of injured drivers who test positive for impairing substances by age and sex

	National	Age group						Sex	
		15-18	19-24	25-34	35-44	45-54	55+	Female	Male
Total injured drivers	4,976 (100)	165 (100)	654 (100)	1,121 (100)	804 (100)	787 (100)	1,445 (100)	1,614 (100)	3,362 (100)
Alcohol									
BAC > 0	773 (16)	30 (18)	151 (23)	248 (22)	140 (17)	100 (13)	104 (7)	167 (10)	606 (18)
0 < BAC < 0.05%	120 (2)	6 (4)	18 (3)	36 (3)	23 (3)	12 (2)	25 (2)	22 (1)	98 (3)
0.05% ≤ BAC < 0.08%	62 (1)	2 (1)	13 (2)	15 (1)	12 (2)	10 (1)	10 (1)	11 (1)	51 (2)
BAC ≥ 0.08%	591 (12)	22 (13)	120 (18)	197 (18)	105 (13)	78 (10)	69 (5)	134 (8)	457 (14)
Cannabinoids									
COOH-THC > 0[1]	1,513 (30)	69 (42)	322 (49)	461 (41)	236 (29)	169 (22)	256 (18)	346 (21)	1,167 (35)
THC > 0	933 (19)	40 (24)	233 (36)	284 (25)	143 (18)	105 (13)	128 (9)	184 (11)	749 (22)
THC ≥ 2 ng/mL	392 (8)	18 (11)	105 (16)	120 (11)	55 (7)	34 (4)	60 (4)	86 (5)	306 (9)
THC ≥ 5ng/mL	174 (4)	7 (4)	39 (6)	64 (6)	25 (3)	11 (1)	28 (2)	38 (2)	136 (4)
Other recreational drugs[2]	540 (11)	15 (9)	79 (12)	169 (15)	121 (15)	88 (11)	68 (5)	124 (8)	416 (12)
Sedating medications[3]	1,029 (21)	23 (14)	122 (19)	201 (18)	167 (21)	169 (22)	347 (24)	386 (24)	643 (19)
Opiates	547 (11)	16 (10)	53 (8)	126 (11)	100 (12)	84 (11)	168 (12)	161 (10)	386 (12)
Any substance[4]	2,526 (51)	85 (52)	407 (62)	630 (56)	443 (55)	359 (46)	602 (42)	724 (45)	1,802 (54)

Percentages are rounded

1. COOH-THC is the main metabolite (breakdown product) of THC. COOH-THC does not cause impairment and persists in blood and urine long after impairment has resolved. Thus COOH-THC provides evidence of previous cannabis exposure but does not necessarily indicate impairment or recent use.
2. Cocaine, amphetamines
3. Antihistamines, benzodiazepines, Z drugs, antidepressants, anticonvulsants, antipsychotics
4. Alcohol, THC (excludes COOH-THC), other recreational drugs, sedating medications and opiates

Source: Brubacher JR, Chan H, Masud M, Yuan Y, Erdelyi S, Likhodi S, and the National Drug Driving Research Group. The 2021 National Drug Driving Study. Vancouver, BC. Department of Emergency Medicine, University of British Columbia.

The authors view driving after cannabis use as an emerging problem in Canada that may become more prevalent than alcohol, though the current literature is unclear about the crash risk after using cannabis. Among the impairing substances, alcohol remains the biggest crash risk, and the risks associated with cannabis-impaired driving are mitigated by the low THC levels found among drivers testing positive for cannabis use. The authors also highlighted the prevalence of polysubstance use in the study, with 14% of drivers testing positive for more than one impairing substance.

3.1.4 Impacts of cannabis legalization on cannabis-impaired driving

In a paper commissioned by the Canadian Centre on Substance Use and Addiction, Asbridge (2021) looked at the recent evidence on the impact of cannabis legalization on cannabis-impaired driving in Canada. The study examines literature from the past five years, looking at several aspects of cannabis-impaired driving in the pre-post legalization context. Specifically, the paper looks at the prevalence of cannabis-impaired driving pre-post legalization; the impact of cannabis use on driving ability and crash risk; risk perception for driving after the use of cannabis; and the impact of legalization on the policing of cannabis-impaired driving.

When looking at the impact of cannabis legalization on cannabis-impaired drivers presenting to emergency departments in British Columbia between January 2013 and March 2020, there was a significant increase in drivers testing positive for cannabis post legalization. Specifically, there was a 33%

increase in drivers with THC>0 and a 129% increase in drivers with THC≥2ng/mL. There was only a marginally significant increase for drivers with THC≥5ng/mL. Male drivers and those 50 years or older had the highest increase post-legalization (Asbridge 2021).

Another recent study examined the impact of cannabis legalization on traffic injuries, specifically in Ontario and Alberta using data from 2015 to 2019. Callaghan et al. (2021) looked at associations between weekly counts of emergency department traffic injury presentations and cannabis legalization. The data used for the analysis included close to 100% of all emergency visits in the two provinces. The analysis found no association between the implementation of the *Cannabis Act* and any significant changes in the patterns of traffic-injury emergency department visits. This finding was consistent when looking at all drivers and looking at youth drivers separately. The authors reference a number of factors that may have contributed to their finding that cannabis legalization was not associated with any significant differences in emergency department visits. This includes the measures introduced under the Act around cannabis-impaired driving.

3.2 Prevalence of drugs and alcohol on Canadian roads

The ultimate objective of the Act is to reduce deaths and injuries caused by impaired drivers, including by reducing the prevalence of impaired drivers on Canadian roads; however, it can be expected that it may take time for road users to be aware of and deterred by the measures introduced. In fact, NJS 2021 data suggests that public awareness of the Act's changes are low (Department of Justice 2021). Data on the general prevalence of alcohol and drug use on Canadian roads (not just among those who were injured or died) allows for an assessment of the extent to which we see a reduction in alcohol or drug use before driving post-implementation of the Act.

Roadside surveys provide the best data on the extent of impaired driving among the general population because the methodology involves random selection of drivers on the road. Currently, Canadian roadside survey data is available only for the pre-implementation period. These data will serve as a baseline for future comparison. The data presented below show a marked reduction in the prevalence of alcohol use by drivers over the past two decades, and an increase in the number of drivers testing positive for cannabis use since the data became available in 2008.

Other data sources on the prevalence of alcohol and drug use among drivers include self-reported data from public opinion surveys such as the NJS 2021 (Department of Justice 2021), TIRF's Roadsafety Monitor (Ward et al., 2020), MADD Canada's National Survey On Driving After Alcohol, Cannabis Or Illicit Drug Use (MADD Canada 2021), as well as the National Cannabis Survey (Rotermann 2020) and the Canadian Cannabis Survey (Health Canada 2020a). Overall, the self-reported data sources on prevalence of alcohol or cannabis use before driving suggest that there has been a decrease in the behaviour over time.

3.2.1 Roadside surveys

Roadside surveys have been used in jurisdictions across Canada to assess the extent of alcohol and (more recently) drug use by drivers. The Canadian Council of Motor Transport Administrator (CCMTA) developed a standardized methodology to enhance comparability across time and jurisdiction. In anticipation of the legalization of cannabis, CCMTA (CCMTA 2019) conducted an analysis of five roadside

surveys conducted in British Columbia, Manitoba, Ontario, Yukon, and the Northwest Territories to provide a baseline of the extent of drug and alcohol impaired driving in the two years pre-legalization.

Across the five studies, there were 7,265 vehicles randomly selected, with 81% drivers agreeing to participate. Almost all (95%) of those provided a breath sample and 90% an oral fluid sample. The testing found that 4% of drivers tested positive for alcohol, 10% for drugs, and 8% for cannabis (THC). The authors highlight that there have been substantial reductions in the prevalence of alcohol use by drivers when looking at the current results in comparison to roadside surveys over the past twenty years. Consistent with the finding of Brubacher's National Drug Driving Study, there has also been an increase in the percentage of drivers who tested positive for cannabis since drug use was first assessed in British Columbia in 2008 (CCMTA 2019).

3.2.2 Self-reported data on prevalence of alcohol use before driving

The NJS 2021 (Department of Justice 2021) asked respondents about their drinking and driving behaviours. One in four respondents (26%) reported having driven within two hours of consuming (an unspecified amount of) alcohol at some point in the previous two years. Those who reported driving in the two hours after consuming alcohol were also more likely to be aware of recent changes in the legislation (38% were aware). They were also more likely to say that these changes did not have an impact on their decision to drive after drinking (61%); most indicated this was because they limit their consumption (71%) if they expect to be driving. This same segment was less likely to be concerned about the dangers of alcohol-impaired driving. They were moderately more concerned than other respondents, however, about being charged. They indicated that being caught by the police and having a permanent record was their primary concerns associated with drinking and driving.

The Traffic Injury Research Foundation (TIRF) conducts an annual public opinion survey on key road safety issues called the Road Safety Monitor (RSM) (Ward et al. 2020). The online survey is a random, representative sample of Canadian drivers. The RSM also includes data from TIRF's National Fatality Database, which has data on the number of Canadians killed in road crashes involving a drinking driver. The most recent RSM was conducted in 2020, with traffic fatality data dating back to 2017. When asked about self-reported use of any amount of alcohol before driving in the past 30 days, 12% of drivers admitted to doing this in 2020 compared to 15% in 2019. An analysis of trend data showed a gradual decrease from higher prevalence in the early 2010s, especially since 2017. When looking at those who drove when they thought they were over the legal limit of alcohol, in 2020, 8% of respondents admitted doing so in the past 12 months, down from 9% in 2019. The percentages from 2019 and 2020 remain among the highest reported rates since 2004 (Ward et al. 2020).

In 2021, MADD Canada released the results of the first *National Survey on Driving After Alcohol, Cannabis or Illicit Drug Use* (MADD 2021). This was an online national public opinion research survey of 3,002 Canadians aged 18 to 70 with a valid driver's licence. The questions related to consumption of alcohol, cannabis or a non-prescribed illicit use and subsequent driving behaviour. Results found that of the licensed drivers who reported using alcohol in the past 30 days, 10% had driven knowingly impaired by alcohol at least once within the past six months. For licensed drivers who had used cannabis in the last 30 days, 19% had driven knowingly impaired by cannabis at least once within the past six months. For non-prescribed illicit drugs (stimulant, depressant, hallucinogen, opioid, etc.), 29% of licensed drivers who had used them in the past 30 days drove knowingly impaired within the past six months. For all groups, the majority drove impaired with passengers. Consistent with patterns in other surveys,

young males between the ages of 18 to 34 were the most likely group to engage in these behaviours (MADD 2021).

3.2.3 Self-reported data on prevalence of cannabis or other drug use before driving

The 2020 Canadian Cannabis Survey (CCS) found that among people who had used cannabis in the past 12 months, 22% reported that they had driven within two hours of smoking or vapourizing cannabis at any time in the past, (a decrease from 26% in 2019). Thirteen percent of survey respondents reported that they had ever driven within four hours of ingesting a cannabis product (a decrease from 16% in 2019) (Health Canada 2020a).

One in five (19%) respondents reported that they had driven a vehicle within two hours of using cannabis in combination with alcohol, unchanged from 2019. The same people were also asked if they had driven a vehicle within two hours of using cannabis in combination with other drugs. Seven percent (7%) of them reported that they had driven a vehicle within two hours of using cannabis in combination with other drugs, unchanged from 2019 (Health Canada 2020a).

Trend data from the 2020 CCS show that the proportion of people who indicated that they had operated a vehicle after using cannabis in the past 12 months decreased between 2018 and 2020. This decrease went from 27% in 2018 to 24% in 2019 and 19% in 2020 (Health Canada 2020b).

Statistics Canada has conducted the National Cannabis Survey (NCS) every three months (quarterly) since February 2018. Data from 2019 showed that in the three quarters following legalization, 13% of cannabis users with a driver's licence reported driving within two hours of use at least once in the three months preceding the survey. This proportion was similar to that observed in the three quarters in 2018 pre-legalization (14%) (Rotermann 2020).

The NJS 2021 (Department of Justice 2021) found that 8% of Canadians reported having driven within two hours of using cannabis in the past two years. As with alcohol-impaired driving, those who reported this behaviour in the previous two years were also more likely to be aware of the legislative changes (42% regarding roadside screening and 34% regarding THC levels), and to report that they were not concerned about the dangers of driving following drug use (52% were unconcerned), particularly when it came to cannabis use (71% were unconcerned). They were, however, more likely to be concerned about being charged (29%) and to cite getting caught by police (37%) or having increased insurance (25%) as a primary concern when driving after consuming cannabis. The survey also found that among the segment of respondents who indicated they had driven within two hours of using cannabis, 17% said they had driven following a combination of cannabis and alcohol use. This suggests that this occurs among 1% of Canadians over the age of 18, according to survey results.

Table 4 — Summary of survey data on self-reported impaired driving behaviour

|	Alcohol	Cannabis	Other
National Justice Survey, 2021	• 26% of respondents reported having driven within two hours of consuming (an unspecified amount of) alcohol at some point in the past two years. • 1% of respondents had driven following a combination of cannabis and alcohol use in the past two years.	• 8% of respondents reported having driven within two hours of using cannabis in the past two years.	
TIRF Road Safety Monitor, 2020	• 12% of respondents admitted using any amount of alcohol before driving in the past 30 days (2020); compared to 15% in 2019. • 8% of respondents admitted to driving when they thought they were over the legal limit of alcohol in the past 12 months (2020); down from 9% in 2019.		
MADD Canada - National Survey on Driving After Alcohol, Cannabis or Illicit Drug Use, 2021	• 10% of licenced drivers who had used alcohol in the past 30 days had driven knowingly impaired by alcohol at least once within the past six months.	• 19% of licenced drivers who had used cannabis in the past 30 days had driven knowingly impaired by cannabis at least once within the past six months.	• 29% of licenced drivers who had used non-prescribed illicit drugs (stimulant, depressant, hallucinogen, opioid, etc.) in the past 30 days had driven knowingly impaired within the past six months.
Canadian Cannabis Survey, 2020	• 19% of respondents reported that they had driven a vehicle within two hours of using cannabis in combination with alcohol in 2020, unchanged from 2019.	• 22% of respondents had ever driven within two hours of smoking or vapourizing cannabis among those who had used cannabis in the past 12 months (a decrease from 26% in 2019). • 13% of respondents reported that they had ever driven within four hours of ingesting a cannabis product (a decrease from 16% in 2019).	• 7% of respondents reported that they had driven a vehicle within two hours of using cannabis in combination with other drugs, unchanged from 2019.
2019 National Cannabis Survey		• In the three quarters following legalization, 13% of cannabis users with a driver's licence reported driving within two hours of use at least once in the three months proceeding the survey. This proportion was similar to that observed in the three quarters in 2018 pre-legalization (14%).	

3.3 Self-reported awareness and impact of legislative changes

The ultimate objective of the Act is to reduce deaths and injuries caused by impaired drivers, including by reducing the prevalence of impaired drivers on Canadian roads. In the time period subsequent to the passage of the Act, it can be expected that there may be a period of time when awareness of the measures is low. During this time, more impaired drivers may be detected because police investigative powers increased, and any deterrent effect of the provisions may not be in effect. The NJS 2021 included questions to better understand Canadians' awareness of the measures introduced under the Act (Department of Justice 2021).

After being provided with a brief description of MAS, 30% of Canadians said they were aware that it was introduced in December of 2018 (Chart 2). Awareness of MAS increased with age, with those 65 years old or older least likely to say they were not aware. Awareness was also higher among those self-reporting as Métis (41%), compared with non-Indigenous people (29%)(Department of Justice 2021).

Chart 2 — Self-reported awareness of impaired driving legislative changes
Source: National Justice Survey, 2021
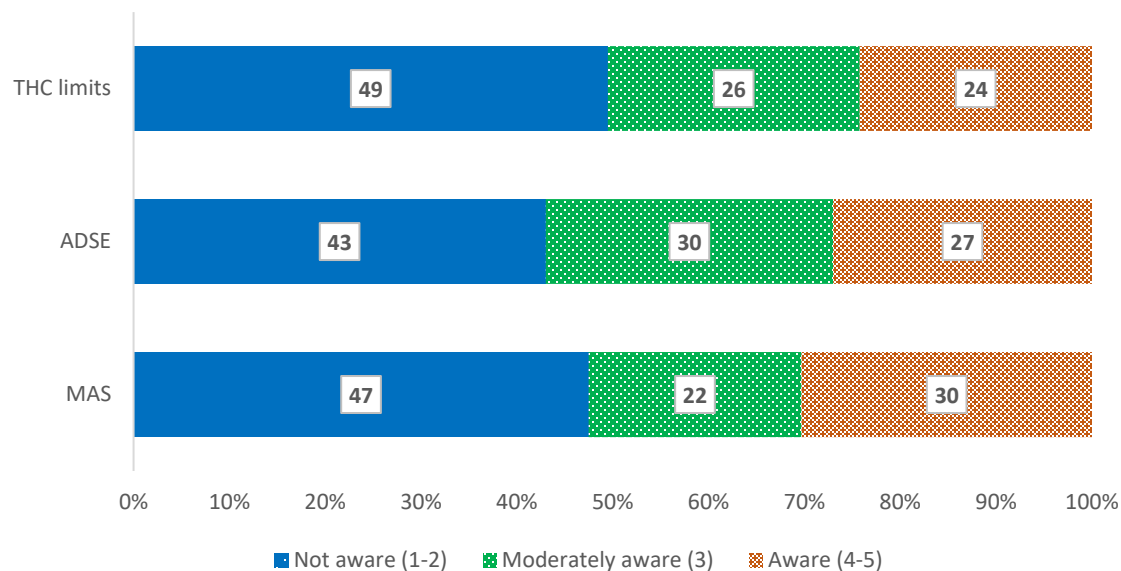
Respondents were asked if knowing that the police have the authority to demand a roadside breath sample without suspicion of alcohol use would have an impact on their decision to drive after consuming alcohol. Just over one in three (35%) said that it was not applicable to them since they do not have a licence or they do not drive after consuming alcohol. Among the remaining 65%, 20% said it would have a major impact, and another 19% said it would have a moderate impact on any decision to drive after consuming alcohol. Black (41%) and South/West Asian (35%) respondents were more likely than by White respondents (18%) to report MAS having a major impact (Department of Justice 2021).

Respondents who drive and who also drink alcohol were asked if they were concerned about being charged with an alcohol-impaired driving offence. While the majority (75%) said that they were not personally concerned, 7% said they were moderately concerned and 17% said they were concerned

(4%), or very concerned (14%). Black respondents (47%), South/West Asian (37%), and East/Southeast Asian (29%) were more likely to be concerned, compared with those who identified as White (14%) (Department of Justice 2021).

Public awareness of legislative changes related to drug-impaired driving was similar to awareness of legislative changes related to alcohol-impaired driving, where 30% of respondents indicated being aware of the changes. About one in four indicated awareness of new legislation on the introduction of ADSE and prohibited THC levels (27% and 24%, respectively), with 30% and 26% saying they were moderately aware of these changes. Nearly half of respondents, however, were unaware of these two changes (Chart 2). Awareness of the new roadside testing was higher among First Nations respondents (35%) compared with non-Indigenous respondents (27%). When asked about their concern about personally being charged with a drug-impaired driving offence, overall 13% of Canadians said they were concerned. East/Southeast Asian respondents (37%), Black respondents (34%) and South/West Asian respondents (31%) were significantly more likely to be concerned about being charged compared with White respondents (8%) (Department of Justice 2021).

Overall, there was low public awareness of the legislative changes related to impaired driving introduced under the Act. The data show some key differences among Indigenous peoples and racialized groups, with higher levels of awareness, and higher likelihood that the measures would impact their decision to drive impaired, and higher levels of fear around being charged with an impaired driving offence compared to White respondents.

3.4 Police enforcement and response

To help achieve another objective of the Act, which was to create efficiencies in the system, the Government of Canada committed to further training police officers to become DREs, and provided funding and training to help the provinces and territories with the cost of acquiring the ASDE. The goal of this technology and training is to better equip officers with the tools necessary to detect and deter drug-impaired drivers. In addition, MAS was introduced, allowing officers to demand that any lawfully-stopped driver provide a preliminary breath sample to test for alcohol without reasonable suspicion that the driver has alcohol in their body.

The data in this section show steady progress has been made in meeting targets for police officer training on impaired driver detection. There is not currently sufficient data available through the funding initiative to assess police use of SFST, DRE, ADSE, and blood analyses. The study commissioned by the Department of Justice looking at police implementation of MAS in detecting alcohol-impaired drivers shows MAS is an efficient and effective tool (Beirness 2021).

3.4.1 Police officer training

In 2020, as part of its work on the implementation of the drug-impaired driving provisions of the Act, Public Safety Canada produced the first annual report on the trends, implementation, and impacts of the drug-related elements of the impaired driving legislative regime. The second edition of this report, *Annual National Data Report to Inform Trends and Patterns in Drug-Impaired Driving, 2021* (Public Safety Canada 2021)*,* includes statistics to show the progress on the federal government's drug-impaired driving regime using data from 2018-2019. The 2021 edition of the report includes data

covering 2019 and the 2020 calendar year. The report outlines the progress made toward meeting set training targets for police officers.

Under the funding initiative, a national target was set where 33%, or roughly 21,000 frontline law enforcement officers would be trained in Standard Field Sobriety Testing (SFST) over five years. SFST is a battery of three physical tests performed at the roadside to screen drivers for alcohol or drug impairment. At the end of 2020, almost 21% of frontline police officers across the country (approximately 11,100), had been trained in SFST, achieving roughly 60% of the 5-year goal. This excludes Quebec, where 100% of officers are trained in SFST. Among the remaining provinces/territories where data were available, the proportion of officers trained in SFST ranged from over 90% in Nova Scotia to 23% in Saskatchewan.

The Drug Recognition Expert Program is a systematic and standardized 12-step procedure used by trained DRE officers to recognize and evaluate behaviors and physiological indicators associated with the seven different drug categories: central nervous system depressants and stimulants; inhalants; dissociative anesthetics; cannabis; hallucinogens; and narcotic analgesics. Unlike the SFST, it is used more often at the police station to gather evidence of an impaired driving offence. Under the federal drug-impaired driving initiative, provinces and territories established that by the end of 2025, there will be 1,250 trained DRE officers. Annual statistics from the RCMP's national DRE program show that as of 2020, there were 1,077 trained DRE officers, reaching 86% of the 2025 target. The RCMP also established a training curriculum on the approved drug screening equipment (ADSE) introduced as part of the 2018 drug-impaired driving regime. As of the end of 2020, eleven provinces and territories had purchased and deployed ADSE: British Columbia (48), Alberta (6), Saskatchewan (30), Manitoba (20), Ontario (178), Nova Scotia (22), and Prince Edward Island (3), Newfoundland and Labrador (21), Nunavut (1), Northwest Territories (2) and Yukon (6).

3.4.2 Police Use of SFST, DRE, ADSE

As part of the funding initiative's objective to improve data collection around drug-impaired driving, efforts are underway to improve the collection and availability of data on police interventions such as the use of SFST, DRE, ADSE, and blood analyses. There is currently insufficient data available on the use of SFST and ADSE to make any clear assessments. Data on blood analyses were also minimal. This is an indication of the significant time required to conduct blood analyses in the laboratories, which is estimated to be about six months (Public Safety Canada 2021). Data from the RCMP indicates that the 1,389 DREs completed 5,948 DRE evaluations on suspected impaired drivers in 2020.

The purchase and use of ADSE across the country is still low, with only seven jurisdictions reporting on their use by law enforcement in 2020 (Alberta, Saskatchewan, Manitoba, Ontario, Nova Scotia, Newfoundland and Labrador, and the Northwest Territories). The ADSE was used 37 times in Saskatchewan between September 20 December 2020, with 29 cases positive for THC and 3 positive for cocaine and THC. (Public Safety Canada 2021).

3.4.3 Police Use of MAS

One of the objectives of MAS is to reduce the prevalence of alcohol-impaired drivers on Canadian roads. While no national-level statistics are available on the implementation and use of MAS, Beirness (2021) collected data from the Edmonton Police Service (EPS) from 2014 to 2019 on the use of suspicion-based screening versus MAS at police alcohol checkpoints (known as "Checkstop").

EPS officers were directed to use MAS during every officer-driver interaction beginning on December 21, 2018. Table 5 summarizes the results of the analysis. The table compares the data from Checkstops in the three years prior to the introduction of MAS (2014-2018) and the one year (2019) after MAS was introduced (this includes five Checkstops that were undertaken in 2018 after MAS introduced). The data shows that officers using suspicion-based screening administered ASD tests to 12% of drivers during the pre-MAS period. This increased to 99% when MAS was adopted. These data show that MAS power was successful in allowing testing on virtually every driver stopped, and the number of vehicles checked per Checkstop operation did not differ pre-post introduction of MAS (an average of 299 versus 301 vehicles stopped). This indicates that the time required to screen almost all drivers did not adversely affect the number of vehicles checked. Further, the time required for a MAS stop was found to be minimal when a driver was not detained, ranging from 30 to 95 seconds, including the ASD test (Beirness 2021).

Table 5 — Comparison of pre-post MAS Edmonton Police Service Checkstop Statistics, 2014–2019

	ASD/vehicle checked	Total enforcement actions taken[1]	Enforcement actions/vehicle checked	Enforcement actions/Checkstop Operation	Suspended arrests/Total vehicles checked
Pre-MAS (2014-2018)	12%	1,535	3%	10	0.3%
Post-MAS (2019)	99%	530	4%	13	0.3%

[1] Enforcement actions include: arrests, immediate roadside suspensions, and graduated driver licence suspensions.
Source: Beirness (2021)

In order to examine the impact of MAS on enforcement actions in the pre-post MAS periods, Table 5 shows the number of enforcement actions both as a percentage of the number of vehicles checked, and as a proportion of Checkstop operations. Looking at the enforcement actions as a percentage of vehicles checked, in the pre-MAS period enforcement actions were taken with 3% of the vehicles checked, compared to 4% of vehicles checked after MAS was introduced. Looking at the enforcement actions as a proportion of the Checkstop operation, in the pre-MAS period there were 10 enforcement actions per Checkstop operation, compared to 13 enforcement actions per Checkstop operation after MAS was adopted. Both indicators show a 33% increase in enforcement actions between the pre-MAS (2014-2018) and post-MAS (2019) period. This suggests that MAS is "considerably more efficient in detecting drinking drivers than suspicion-based screening (Beirness 2021: 8)." Further, Beirness used the data in Table 5 to estimate the number of enforcement actions that could have been taken, or would have been missed in the pre-post MAS periods. Beirness found that if MAS had not been used in Checkstops in 2019, that 143 impaired drivers would likely have gone undetected. Similarly, if MAS had been used between 2014 and 2018, an estimated 532 additional impaired drivers would have been subject to enforcement actions.

The EPS data show that MAS increased both the efficiency and effectiveness of police in detecting drivers who had been drinking. While the EPS data are not necessarily indicative of the impact of MAS at a national level, it provides an encouraging picture of the potential benefits of MAS. Further research will be necessary to compare these findings with police services across Canada.

3.5 Police-reported statistics

The Act included reforms aimed to help police officers better detect alcohol- and drug-impaired drivers. Statistics Canada's Uniform Crime Reporting Survey (UCR) provides national level data on criminal incidents, which reflect reported crime that has been substantiated by police. Data is available from 2019 and 2020, the first two years after the coming into force of the Act. Data referenced in this section are primarily from the Statistics Canada Juristat article, commissioned by Justice Canada, entitled *Impaired Driving in Canada, 2019* released in July 2021 (Perreault 2021).[4] Data from 2020 are also provided where available (Moreau 2021). Data from 2020 should be interpreted in the context of COVID-19 and the ensuing public health restrictions which resulted in fundamental changes to the way society functioned (e.g., both alcohol/drug use and driving behaviours). The pandemic also impacted the way that police responded to impaired driving incidents (e.g., due to masking and physical distancing requirements).

The data show an increase in police-reported rates of both alcohol- and drug-impaired driving in 2019. This suggests that the investigative powers afforded to police under the Act may have resulted in more impaired drivers being detected in the first year after the coming into force of the Act. Data from 2020 show a decrease in impaired driving incidents, with 8,200 fewer incidents reported compared to 2019 (Moreau 2021). Further years of data would be required to assess the post-enactment trends, and whether there are other contributing factors.

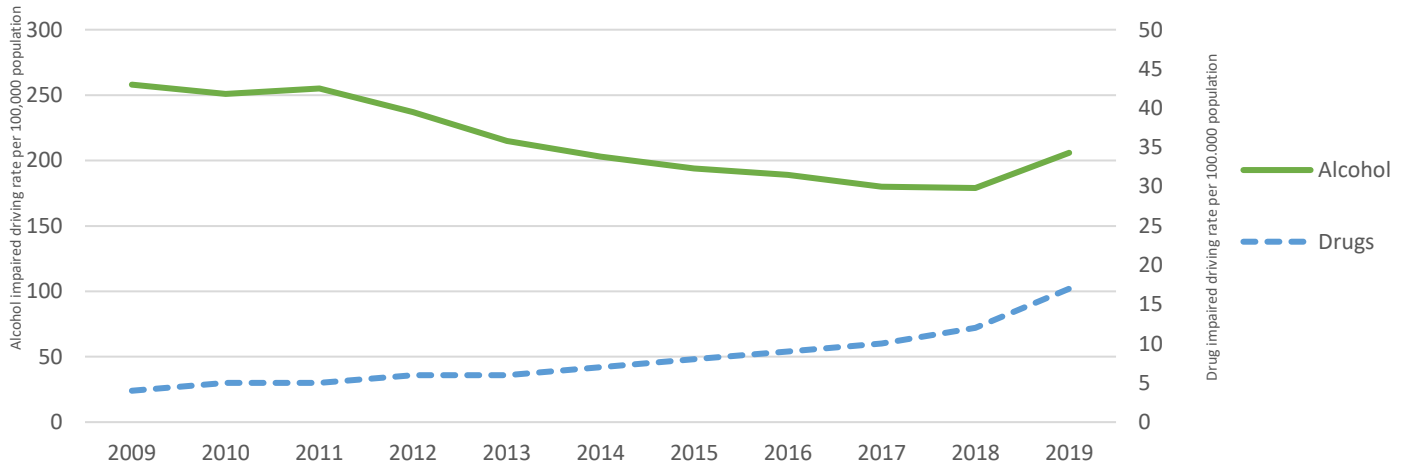### 3.5.1 Police-reported incidents of alcohol- and drug-impaired driving

In the first year after implementation of the Act, there was an increase in police-reported rates of both alcohol- and drug-impaired driving (Chart 3). In 2019, there were 85,673 police-reported incidents of impaired driving. This was the highest number of incidents since 2011. This represents a rate of 228 incidents per 100,000 population, an increase of 19% from 2018, and 21% higher than the low reported in 2017. The increase in incidents seen in 2019 may be at least in part attributable to better detection of impaired driving by police as a result of the Act's amendments. There were just over 77,600 incidents of impaired driving in 2020, down 8,200 from the previous year. The majority of these incidents (79%) involved alcohol, while 10% involved drugs, and 9% involved a combination of alcohol and drugs. There has been a shift in recent years with a growing proportion of impaired driving incidents involving drugs or a combination of alcohol and drugs (Moreau 2021).

Police-reported data on drug-impaired driving showed 6,453 incidents in 2019, a rate of 17 incidents per 100,000 population. Drug-impaired driving incidents represented just 8% of all impaired incidents, but the number of these incidents increased 43% from the previous year, and was four times higher than in 2009 (4.3 incidents per 100,000 population). The rate of drug-impaired driving violations continued to increase in 2020, up 15% from the previous year (a total of 7,510 incidents in 2020) (Moreau 2021). There were 40 incidents of drug-impaired driving causing death or bodily harm in 2019, a number which remained stable in 2020 and over the previous three years, but was double that of a decade ago (Perreault 2021; Statistics Canada).

---

[4] Police-reported crime statistics presented in this report may be slightly different from those in other reports or tables, as Statistics Canada updates previous year data every time new crime statistics are released.

Chart 3 — Rate of police-reported impaired driving, by substance causing impairment, Canada, 2009–2019

In 2019, the rate of impaired driving incidents involving a combination of alcohol and drugs was 12 incidents per 100,000 population. The new offences introduced under the Act which introduced *per se* limits for certain drugs (paragraphs 320.14(1)(b) (c) and (d)) were rarely used by police in 2019 to lay or recommend charges. In 2020, the number of incidents involving a combination of alcohol and drugs continued to increase, up 59% from the previous year from 4,479 to 7,105 incidents (Moreau 2021).

3.5.2 Police-reported incidents of impaired driving causing bodily harm or death

Incidents of impaired driving causing bodily harm or death are more likely to come to the attention of police due to the serious nature of these offences. There were 66 incidents of impaired driving causing death in 2019, which remained consistent in 2020, down from 105 the previous year, and the lowest reported since data were first collected in 1986. The rate of impaired driving causing bodily harm has also been decreasing over time, with a rate of 1.28 per 100,000 population in 2019, which was half the rate of 10 years earlier and almost five times lower than in 1986 (6.06 incidents per 100,000 population) (Chart 4). The rate decreased in 2020 to 1.13 per 100,000, which may be a result of the COVID-19 pandemic (Statistics Canada).

Chart 4 — Rate of police-reported impaired driving causing death or bodily harm, Canada, 1986–2019
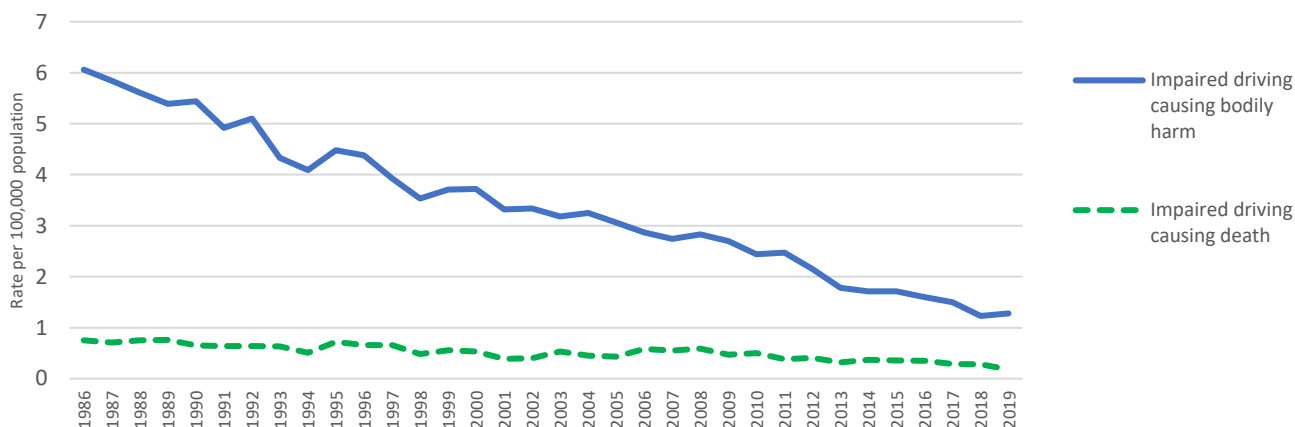
Note: The different ways in which police services deal with traffic violations can impact police-reported statistics. Counts are based on the most serious offence in the incident. One incident can involve more than one traffic violation under the Criminal Code.

Source: Statistics Canada, Canadian Centre for Justice and Community Safety Statistics, Uniform Crime Reporting Survey.

3.5.3 Number and proportion of impaired driving incidents cleared by charge

In 2018 Statistics Canada updated the definition of "founded" and "unfounded" criminal incidents in police-reported statistics. The definitions reflect a more-victim centred approach, and include more incidents where there is no credible evidence that an incident *did not* take place, as well as those based on reports by third parties (e.g., a road user reporting a potentially impaired driver). This change, while being gradually implemented by police, has likely resulted in an increase in the number of police-reported impaired driving incidents.

In 2019, 56% of impaired driving incidents reported to police were cleared by charge, roughly 10% were cleared without charge, and 33% were not cleared (i.e., open/still under investigation, insufficient evidence to proceed, or victim/complainant declines to proceed). During the same time period, 49% of drug-impaired driving incidents were cleared by charge, 46% of incidents were not cleared, and 5% were cleared without charge. The proportion of incidents cleared by charge decreased between 2009 and 2019, a trend consistent for both alcohol- and drug-impaired driving incidents. This decrease translates mostly to an increase in the proportion of incidents not cleared, which rose from 22% to 33% of incidents of police-reported impaired driving between 2018 and 2019. The vast majority of these incidents were not cleared due to insufficient evidence. The changes to the definitions of founded and unfounded incidents may have led to this increase in uncleared incidents.

3.5.4 Time to clear impaired driving incidents

Drug-impaired driving incidents are both, less likely to be cleared by charge and are more likely to take longer to clear than alcohol-related incidents. In 2019, 59% of drug-impaired driving cases were cleared in one day or less, compared to 76% of alcohol-impaired incidents, and 84% of incidents involving both alcohol and drugs. The average time to clear a drug-impaired driving incident has nearly tripled since 2009 (incidents that required at least 180 days to clear went from 10% to 29%), while remaining almost unchanged for alcohol-impaired cases (Chart 5). As indicated, significant time is required to conduct

blood analyses in the laboratories, which is estimated to be about six months. As a result, laboratory delays would have a greater impact on drug-impaired driving charges than they would on alcohol-impaired charges because laboratory analyses are not used as frequently in alcohol-impaired driving cases.

Chart 5 — Average elapsed time between when impaired driving incidents came to the attention of police and when these incidents were cleared, by substance causing impairment, Canada, 2009–2019
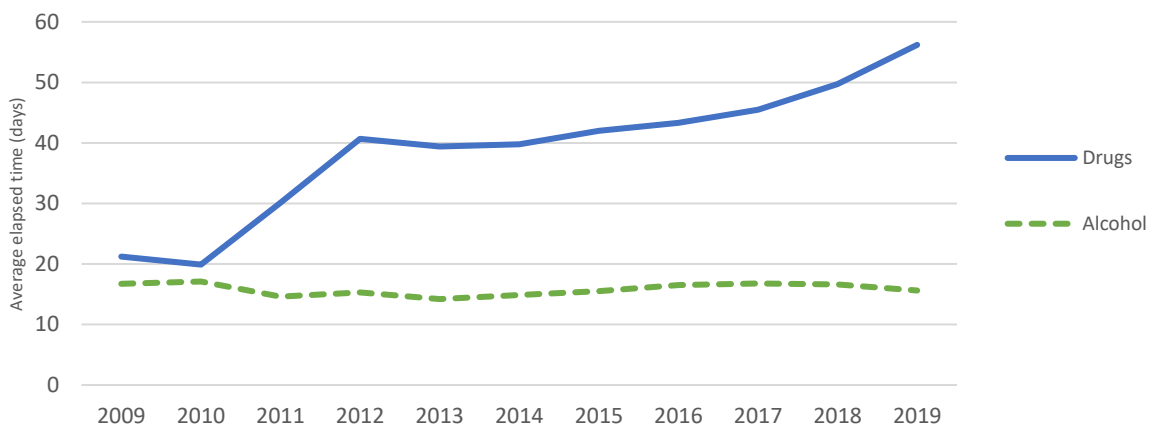
Note: Includes incidents cleared by charge or cleared otherwise. The different ways in which police services deal with traffic violations can impact police-reported statistics. Counts are based on the most serious offence in the incident. One incident can involve more than one traffic violation under the *Criminal Code*. Alcohol category includes impaired driving involving both alcohol and drugs.
Source: Statistics Canada, Canadian Centre for Justice and Community Safety Statistics, Uniform Crime Reporting Survey.

3.6 Court statistics

The impaired driving provisions are among the most litigated in the *Criminal Code*. As such, the measures enacted were intended to create efficiencies in the criminal justice system and facilitate prosecutions, resulting in faster trials. Statistics Canada's Integrated Criminal Court Survey (ICCS) provides national level data on appearances, charges and cases in adult and youth criminal courts. Currently, data from the ICCS are available for the 2018-19 fiscal year, meaning there would be few cases subject to the Act that would have made it to the courts. While the data currently available do not allow for an assessment of any impacts of the Act on court efficiencies, they provide a baseline for comparison in future years. All data in this section are from the Juristat article, *Impaired Driving in Canada, 2019* (Perreault 2021). In this section, impaired driving offences include: impaired operation, failure to comply, impaired driving causing bodily harm, and impaired driving causing death.

3.6.1 Case processing times

In 2018-19, impaired driving offences made up the second highest proportion of all offence types before adult criminal courts in Canada. They were also most likely to exceed the presumptive ceilings for case processing time in criminal courts. Chart 6 shows the median number of days to complete impaired driving cases over the past decade by substance type. The median number of days to complete alcohol-impaired driving cases has remained relatively stable over the past three years, with a median of 115 days in 2018-19. Drug-impaired driving cases take almost twice the median time to complete as alcohol-

impaired driving cases (211 days versus 115 days). Despite this, in 2018-19, the median time for completing drug-impaired driving cases decreased for the first time in four years by 14% (from 247 to 211).

In 2018-19, drug-impaired driving cases took an average of 7.8 appearances to complete, which is higher than cases involving alcohol, which took 5.5 appearances. These averages have remained consistent over the past decade. When looking at cases involving a combination of alcohol and drugs, these cases took a median of 64 days to completion, down 25% from the previous year.

Chart 6 — Median length of impaired driving cases in criminal courts, by substance causing impairement, Canada 2010/2011–2018/2019
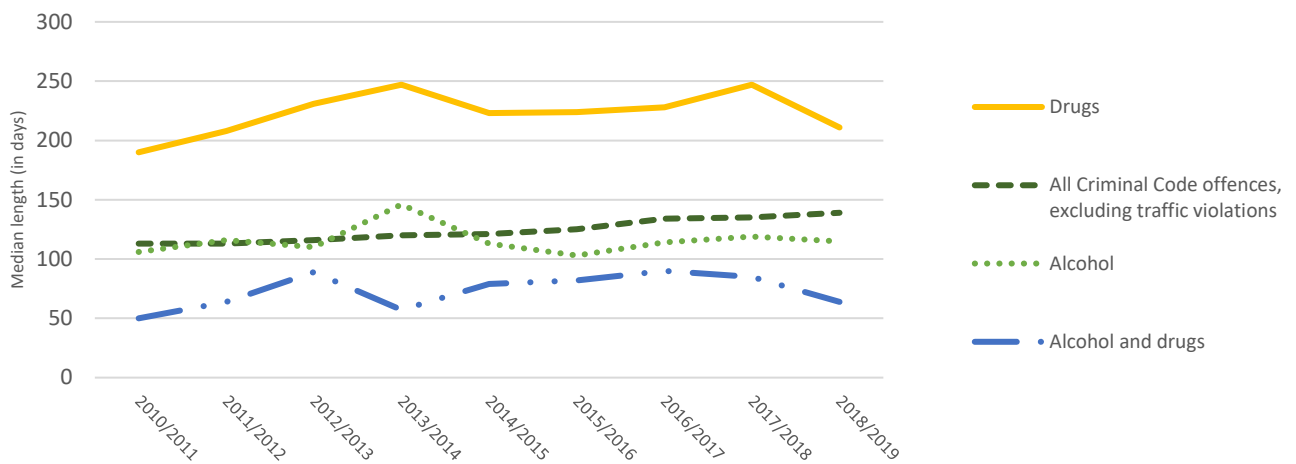
Note**:** Includes completed cases in adult criminal courts. A case is defined as one or more charges against an accused person that were processed at the same time and received a final decision. Includes cases where impaired driving was the most serious offence. Data exclude incidents where police noted impairment by an unspecified substance. Before 2019, the Uniform Crime Reporting Survey did not include a code for impaired driving involving a combination of alcohol and drugs. However, police could provide up to four offence codes. As a result, in this analysis cases where police had provided an offence code for alcohol-impaired driving and another for drug-impaired driving were classified in the "Alcohol and drug-impaired driving" category. The data exclude information from the superior courts of Prince Edward Island (years before 2018/2019), Quebec, Ontario, Manitoba and Saskatchewan and the municipal courts of Quebec because of the unavailability of data.
Source: Statistics Canada, Canadian Centre for Justice and Community Safety Statistics, Uniform Crime Reporting Survey and Integrated Criminal Court Survey (combined file).

While impaired driving cases involving drugs took longer in the courts, 62% of these cases involved only one charge, in comparison to alcohol cases which most often involved two charges. Specifically, alcohol-impaired driving cases most often lead to charges under the *Criminal Code* section dealing with impaired driving in general and the section which establishes the *per se* limit for alcohol. Drug-impaired cases typically only lead to charges under the first section, though until 2018 there was no alternative charge for drug-impaired driving.

3.6.2 Court outcomes and sentencing

Drug-impaired driving cases are less likely to result in a guilty finding in court, which is likely a reflection of the greater complexity of these cases in comparison to alcohol-impaired driving cases. During the period from 2010-11 to 2018-19, around 82% of alcohol-impaired cases resulted in a guilty finding compared to 64% of drug-impaired cases. When looking only at cases where a not guilty plea was

entered, this trend remained, with 41% of alcohol-impaired cases and only 30% of drug-impaired cases resulting in a guilty finding. Notably, the proportion of drug-impaired cases resulting in a guilty finding has increased over time, from 64% in 2010-11 to 70% in 2018-19.

The most common sentences in cases of both alcohol- and drug-impaired driving were fines, seizure orders or prohibition orders (about nine in ten cases). This is in line with the minimum penalties for these offences of a $1,000 fine and a one year driving ban. Less than 10% of cases involving alcohol- or drug-impaired driving resulted in a custody sentence. This was slightly higher (11%) for cases involving a combination of alcohol and drugs.

3.7 Characteristics of people who drive after using alcohol or drugs and experiences with traffic stops

One of the objectives of the legislative review is to assess "whether the [Act's] implementation and operation have resulted in differential treatment of any particular group based on a prohibited ground of discrimination." As previously noted, work is underway to expand police-reported statistics to disaggregate by Indigenous and ethno-cultural groups to better assess the impact of policy and legislative changes on different groups. Since these data are not yet available, current police-reported statistics as well as some national surveys (i.e., the National Cannabis Survey and Canadian Cannabis Survey) only provide data on sex and age of drivers who use alcohol or drugs before driving. The NJS 2021 included an oversampling of Indigenous peoples and racialized respondents in order to assess whether or not different groups were being disproportionately impacted by police enforcement. The project also included a small number of interviews to better understand the lived experiences of Indigenous peoples and ethno-cultural groups in the context of police traffic stops.

Findings show that Indigenous peoples and racialized groups are more likely to have concerns about being charged with an alcohol- or drug-impaired driving offence, despite having similar or lower rates of self-reported impaired driving behaviour. The study also found Indigenous peoples were more likely to experience a police traffic stop compared to White people (Department of Justice 2021). While these data do not provide definitive conclusions about the impact of the Act, they provide an initial assessment that will require further research to confirm and understand.

### 3.7.1 Police-reported statistics on characteristics of drivers accused in impaired driving incidents

Police-reported UCR data (Perreault 2021) show that impaired drivers in Canada are predominately men and young adults. In 2019, 77% of impaired driving charges were against men, which includes alcohol-impaired driving or driving with a combination of alcohol and drugs. This proportion has decreased over time, from 92% in 1986 and 84% in 2009. This trend is also true for drug-impaired drivers; in 2019, 77% of people charged with drug-impaired driving were men, down from 81% in 2009.

The age group most often accused of impaired driving are those aged 20 to 34, who represented 44% of drivers accused of alcohol- or a combination of alcohol- and drug-impaired driving and 25% of licensed drivers in 2019. This age group also represented the highest proportion of drug-impaired driving charges, with 44% of these charges falling in the 20 to 34 age group.

The youngest drivers have seen the biggest decreases in alcohol- and a combination of alcohol- and drug-impaired driving incidents since 2009 (Chart 7). Licensed drivers under 20 years of age saw a

reduction of 71% since 2009, those aged 20 to 24 years saw a reduction of 53% (compared to a 39% reduction overall).

Chart 7— Persons accused of alcohol-impaired driving (or impairment by a combination of alcohol and drugs), by age group, Canada, 2009 and 2019
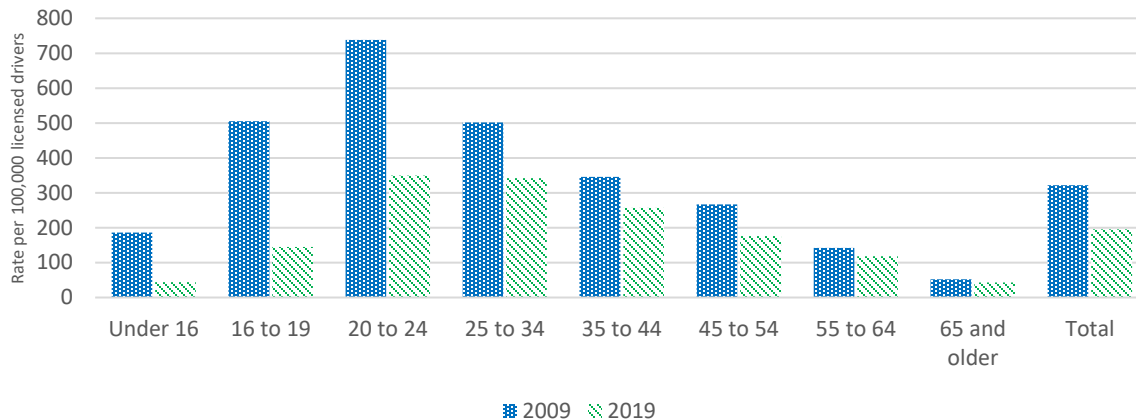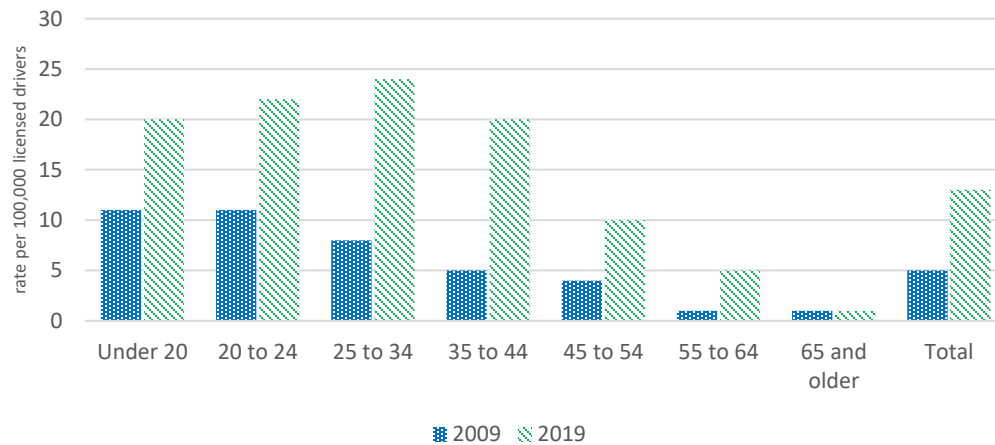

Note: The different ways in which police services deal with traffic violations can impact police-reported statistics. Counts are based on the most serious offence in the incident. One incident can involve more than one traffic violation under the *Criminal Code*. Data on licensed drivers are taken from the report Canadian Motor Vehicle Traffic Collision Statistics, 2009 and 2018, published by Transport Canada. Rates for 2019 were calculated based on the number of licensed drivers in 2018, as 2019 data were not yet available. Includes accused aged 12 to 89 years.
Source: Statistics Canada, Canadian Centre for Justice and Community Safety Statistics, Uniform Crime Reporting Survey.

In contrast, from 2009 to 2019 the drug-impaired driving rate doubled (from 11 to 22 incidents per 100,000 population) among drivers aged 20 to 24, and tripled amount those aged 25 to 34 (from 8 to 24 incidents per 100,000 population) (Chart 8). The rate of police-reported drug-impaired driving incidents increased the most among those aged 35 to 44 (an increase of 281%) and those aged 55 to 64 (an increase of 292%) and increased the least in those under age 20 (an increase of 90%). For the under 20 group, the smaller decrease may be related to provincial policies that have expanded their zero tolerance polices for alcohol use before driving to include drug use. At the time of legalization of cannabis in 2018, there were also significant education and awareness campaigns introduced in high schools.[5]

---

[5] https://www.publicsafety.gc.ca/cnt/rsrcs/pblctns/2020-did-fad/2020-did-fad-en.pdf

Chart 8 — Persons accused of drug-impaired driving, by age group, Canada, 2009 and 2019

Note: The different ways in which police services deal with traffic violations can impact police-reported statistics. Counts are based on the most serious offence in the incident. One incident can involve more than one traffic violation under the *Criminal Code*. Data on licensed drivers are taken from the report Canadian Motor Vehicle Traffic Collision Statistics, 2009 and 2018, published by Transport Canada. Rates for 2019 were calculated based on the number of licensed drivers in 2018, as 2019 data were not yet available. Includes accused aged 12 to 89 years.
Source: Statistics Canada, Canadian Centre for Justice and Community Safety Statistics, Uniform Crime Reporting Survey.

3.7.2 Characteristics of people who have operated a vehicle after consuming alcohol

The NJS 2021 findings were consistent with police-reported statistics showing that alcohol-impaired driving is most prevalent among young men. The NJS 2021 found that the incidence of driving within two hours of consuming alcohol was higher among men (33%) than women (20%), and was highest for those aged 35 to 44 (33%). The findings also show that driving within two hours of consuming alcohol was lower among First Nations respondents (16%) compared with non-Indigenous respondents (27%). Also, East/Southeast Asian (9%) respondents, Black (10%) respondents, and South/West Asian (16%) were considerably less likely than White (30%) respondents to report driving within two hours of consuming alcohol.

3.7.3 Characteristics of people who have operated a vehicle after consuming cannabis in combination with alcohol or other drugs

Men were more likely than women to report driving within two hours of combined use of alcohol and cannabis (21% vs. 11% of women). The incidence peaked among the college-educated (24%), and was lower among those with a university-level (17%) or high school education (11%). Those previously arrested or charged with a crime were more likely to have driven within two hours of cannabis consumption (23%) than others involved in the criminal justice system in other ways (e.g. as a victim or a witness) (5% to 12%), or those not involved in the system (6%). There were no statistically significant differences found among Indigenous and racialized groups with regards to using cannabis before driving (Department of Justice Canada 2021).

The 2020 CCS also found that driving within two hours of smoking or vaping cannabis or within four hours of ingesting a cannabis product was more prevalent among males (28% for smoking versus 15% for females) and those 20 to 24 years (22%) and 25 years and older (23%) (Health Canada 2020a). Data from the NCS also found that in 2019, males were more likely to report driving within two hours of using cannabis than females (16% compared to 9%, respectively). The proportion who reported driving within two hours was also more than five times higher among drivers who reported daily or almost daily cannabis use than it was among drivers who used less than daily or almost daily (e.g., 29% compared to 5%, respectively in 2019). The survey also found no changes in the age range of those who reported driving within two hours of using cannabis before or after legalization (Rotermann 2020).

A 2020 Canadian Centre on Substance Use and Addiction study examined the characteristics of drugged drivers and the circumstances of the crashes they become involved in. The study used data from self-report surveys and data on drivers arrested for drug-impaired driving. The author notes that research to identify those at risk of drug-impaired driving lags behind alcohol-impaired driving. While there may be overlap in the characteristics and motivations among those who engage in drug or alcohol-impaired driving, further research is needed to draw conclusions and identify effective ways to deal with the behaviours. While young males were identified most commonly, there was a variety of other factors involved that varied according to the substance used. The study found that those who drive after drug use are generally younger than those who drive after alcohol use. Drug-impaired drivers tend to engage in risky behaviours such as tobacco smoking, use of other drugs, as well as being a passenger with a driver who has used alcohol or drugs (Beirness 2020).

3.8 Indigenous peoples' and racialized groups' experiences with police traffic stops

The NJS was in the field between February 1 and March 5, 2021, and qualitative interviews were held in March. The survey included a sample of 3,211 Canadians 18 years and older, with an oversampling of Indigenous and racialized groups. The survey is largely generalizable to the Canadian population.[6] A total of 27 interviews were conducted, each lasting 20 to 30 minutes. Specifically, interviews were conducted with seven participants self-identifying as Black, seven as Indigenous (four Métis and three First Nation), five as White, four as East/Southeast Asian and four as South/West Asian. Six interviews were conducted in French, and the balance were conducted in English. Participants were asked to describe their experiences with police traffic stops and general impressions of trends in this area.

Findings showed that Indigenous peoples were more likely to experience a police traffic stop than non-Indigenous people in the past two years. Twenty-two per cent of Canadians had been stopped by the police at least once in the past two years; First Nations respondents (30%) were more likely than non-Indigenous respondents (21%) to have been stopped in the last two years. Overall, 59% were stopped for a minor driving infraction while the other 41% were stopped at a roadside checkpoint in the past five years. Forty per cent of those stopped were given a ticket (Department of Justice 2021).

Most of the qualitative interview participants were stopped by police for traffic violations, and some were aware of why they were being stopped even before speaking to police. Most interview participants indicated that the traffic stop was fairly "routine" and did not perceive that they were being targeted in any way by being stopped by the police. For those few who were pulled over at a roadside check stop,

---

[6] The randomly recruited probability sample carried a margin of error of +/-1.7%, and the margin of error for most sub-groups was between 2.6% and 7.0% at a .95 confidence interval (i.e., 19 times out of 20).

they perceived that all vehicles were being pulled over in an equal manner and did not feel targeted for any reason. Overall, there were few instances of perceived racial profiling during traffic stops since December 2018, either through experience or discussions with friends or family. However, a few Indigenous participants said that they were pulled over for no apparent infraction, a few South/West Asian participants perceived differential treatment, and many Black participants said they were conscious of a personal risk during traffic stops. All interview participants had observed news coverage of police interactions, in terms of aggressive behaviour of police officers towards racialized groups. This was particularly notable in news coverage of events taking place in the United States, although participants perceived that this also occurs in Canada with Indigenous peoples and Black Canadians (Department of Justice 2021).

A study released in 2020 by Wortley and Jung for the Ontario Human Rights Commission found similar results related to Black people's experiences with police traffic stops. In looking at Toronto Police Service arrest and charge data from 2013 to 2017, the analysis found Black people were over-represented in "out-of-sight" driving offences (e.g., driving without a valid licence, driving without valid insurance, driving while suspended). They represented only 9% of Toronto's population, but made up 35% of those involved in the "out-of-sight" driving charges, meaning they were four times more likely to be charged with an "out-of-sight" driving offence than their representation in the general population would predict. Both White people and people from other racialized groups were under-represented (Wortley and Jung 2020).

4.0 Conclusion

While there are limitations to consider in the interpretation of the data presented in this legislative review report, it includes findings covering both the period prior to the coming into force of the Act (2016-2018), as well as the first few years post enactment (2019-2021). This allows for some assessment of the implementation and impact of the changes. Due to the time and resource intensive nature of data collection, post-implementation data is not currently available to assess all aspects of the Act. Therefore, the data presented serve as a baseline for some aspects of the Act, as well as a preliminary assessment of other elements of the impaired driving regime introduced under the Act.

In meeting its ultimate objective of reducing deaths and injuries caused by impaired drivers on Canadian roads, available data from the first year post-implementation indicate that impaired driving fatalities decreased. Police-reported statistics show an uptick in the number of impaired driving incidents reported by police, which may be attributable to the increased police investigative powers under the Act. A study commissioned for this report (Beirness 2020) shows promising early data that MAS is an efficient and effective tool for combatting alcohol-impaired driving.

The Act was also designed to create a more efficient impaired driving legislative framework, partially to address efficiencies in criminal courts associated with impaired driving cases. There is not currently a sufficient amount of court data available from the post-implementation period to assess the impact of the Act on efficiency in the courts.

The Act created a new and strengthened drug-impaired driving regime to coincide with the legalization of cannabis in 2018. Available data shows targets set for police training are on track or being exceeded. Road safety data (Brubacher et al. 2021, Asbridge 2021) indicates that cannabis-impaired driving is an emerging issue that needs to be monitored, though alcohol-impaired driving remains the greatest crash

risk on the roads. Early evidence from criminal justice system data shows the complexity of the drug-impaired driving regime (cases take longer to be cleared, and were less likely to be cleared by charge), and to date, the new BDC provisions have led to few police-reported incidents.

Research commissioned for this report to assess the impact of the Act on Indigenous peoples and racialized groups show that these groups are more likely to have concerns about being charged with an alcohol- or drug-impaired driving offence, despite having similar or lower rates of self-reported impaired driving behaviour. The study also found Indigenous peoples were more likely to experience a police traffic stop compared to White people (Department of Justice 2021).

The Minister of Justice will continue ongoing efforts with the provinces and territories to monitor the implementation of the Act and impact of the changes, including through further research and data collection.

References

Asbridge, M. 2021. *Cannabis-impaired driving*. Canadian Centre on Substance Use and Addiction. (forthcoming).

Beirness, D. 2021. *Assessment of the Initial Impact of Mandatory Alcohol Screening on Alcohol-involved Driver Fatalities in Canada.* Department of Justice Canada (forthcoming).

Beirness, D. 2020. *Who Drives after Using Drugs? A review of Prominent Characteristics.* Canadian Centre on Substance Use and Addiction. Ottawa, Ontario.

Brubacher JR, Chan H, Masud M, Yuan Y, Erdelyi S, Likhodi S, and the National Drug Driving Research Group. 2021. *The 2021 National Drug Driving Study*. Vancouver, BC. Department of Emergency Medicine, University of British Columbia.

Callaghan, R C, Sanches, M, Vander Heiden, J, Asbridge, M, Stockwell, T, Macdonald, S, Hughes Peterman, B, and Stephen J. Kish. 2021. *Canada's cannabis legalization and drivers' traffic-injury presentations to emergency departments in Ontario and Alberta, 2015-2019.* Drug and Alcohol Dependence 228.

Canadian Centre on Substance Use and Addiction. 2020. *COVID-19, Alcohol and Cannabis Use (Infographic).* Ottawa, Ontario.

Canadian Council of Motor Transport Administrators. 2019. *A Compilation of Jurisdictional Roadside Surveys Conducted Prior to Cannabis Legalization*. Ottawa, Ontario.

Department of Justice Canada. 2021. National Justice Survey 2021. Library and Archives Canada.

Department of Justice Canada. 2019. Backgrounder for former Bill C-46, *An Act to amend the Criminal Code (offences relating to conveyances) and to make consequential amendments to other Acts*, as enacted. https://www.justice.gc.ca/eng/cj-jp/sidl-rlcfa/c46b/c46-eng.pdf

Health Canada. 2020a. *Canadian Cannabis Survey 2020: Summary*. Ottawa, Ontario.

Health Canada. 2020b. *Data Blog: Cannabis Use for Non-medical Purposes Among Canadians (Aged 16+).* Ottawa, Ontario.

MADD Canada. 2021. *National Survey on Driving After Alcohol, Cannabis or Illicit Drug Use.* Oakville, Ontario.

Perreault, S. 2021. "Impaired driving in Canada, 2019." *Juristat*. Statistics Canada Catalogue no. 85-002-X.

Moreau, G. 2021. "Police-reported crime statistics in Canada, 2020." *Juristat*. Statistics Canada Catalogue no. 85-002-X.

Public Safety Canada. 2021. *Annual National Data Report to Inform Trends and Patterns in Drug-Impaired Driving.* Catalogue no. PS15-2E-PDF.

Rotermann, M. 2020. *What has changed since cannabis was legalized?* Statistics Canada Catalogue no. 82-003-X.

Statistics Canada. 2021a. "Alcohol and cannabis use during the pandemic: Canadian Perspectives Survey Series 6." *The Daily*, March 4, 2021.

Statistics Canada. 2021b. "Selected police-reported crime and calls for service during the COVID-19 pandemic." Table 35-10-0169-01.

Statistics Canada. Table 35-10-0177-01 Incident-based crime statistics, by detailed violations, Canada, provinces, territories and Census Metropolitan Areas.
https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3510017701

Ward, G.M., V., et al. 2020. *Road Safety Monitor 2020 : Drinking and Driving in Canada.* Traffic Injury Research Foundation. ISBN: 978-1-989766-49-1.

Wortley, S., and Jung, M. 2020. *Racial Disparity in Arrests and Charges: An analysis of arrest and charge data from the Toronto Police Service.* Ontario Human Rights Commission.

Annex 1: Table of indicators and data sources

(updated September 2021)

Report Section	Research Questions	Indicators	Data Sources	Data Availability (timeframe, ease of access, limitations, etc.)
Police Enforcement and response	What are the numbers of trained officers?	• Number of SFST trained officers (completed) • Number of DRE trained officers (completed) • Rate of SFST/DRE/Alcohol certified officers per 100,000 population	• Public Safety Annual Report on Drug-Impaired Driving • CCJCSS Police Administration Survey (PAS)	• Annual; Public Safety Annual Report on drug-impaired driving – Available January 2021 (with 2018-2019 data); 2020 data potentially available late 2021 • Annual; CCJCSS PAS – 2019 data available Fall 2020; 2020 data available fall 2021 • Justice Canada-commissioned CCJCSS dedicated Juristat on Impaired Driving, published July 2021
	What tools are available in the jurisdictions?	• Number of screening devices purchased • Number of screening devices in service • Number of screening devices deployed	• Public Safety Annual Report on drug-impaired driving	• Annual; Public Safety Annual Report on drug-impaired driving – Available January 2021 (with 2018-2019 data); 2020 data potentially available late 2021

Police Investigative procedures	What tools and techniques are used in impaired driving investigations?	• Number of times when SFST used (total; by police force when possible) • Results of SFST (% positive) • Number of times when ADSE used (total; by police force when possible) • Results of ADSE (% positive) • Number of requests for DRE (total; by police force if possible) • Results of DRE (% positive; by type of substance) • Number of requests for blood samples (total; by police force if possible)	• Public Safety Annual Report on drug-impaired driving	• Annual; Public Safety Annual Report on drug-impaired driving – Available January 2021 (with 2018-2019 data); 2020 data potentially available late 2021 • Limitation – limited extent of data coverage for alcohol-related incidents
		• Number of mandatory alcohol screenings (MAS) conducted	• Individual police organization tracking	• This data is not collected/reported at a national level; there are at least some police forces that are tracking MAS (e.g. OPP, Calgary), but it is unknown the extent of coverage • Beirness 2021
	What is the outcome of the investigative procedure?	• Results of blood analyses (% positive; by type of substance) • Number of *Criminal Code* charges laid; P/T administrative sanctions imposed	Public Safety Annual Report on drug-impaired driving	• Annual; Public Safety Annual Report on drug-impaired driving – Available January 2021 (with 2018-2019 data); 2020 data potentially available late 2021

				• Limitation – unknown extent of data coverage for alcohol-related incidents
Police data: Founded and unfounded incidents and drivers charged	What are the characteristics of drivers stopped by police?	• How many drivers are stopped and person cleared • Age; • gender; • ethnicity; • citizenship; • previous criminal and driving history;	• Local police services tracking	• Beirness 2021 • 2021 National Justice Survey – Public Opinion Survey oversampling racialized groups; some information will be gathered about experiences with traffic stops
	Characteristics of drivers charged with impaired driving?	• Age; • gender; • marital status; • ethnicity; • citizenship; • previous criminal / driving history;	• Uniform Crime Reporting Survey (UCR) includes age and gender variables • Other characteristics: potentially available through linkage with UCR and tax/census (or other)	• Annual; 2019 UCR data will be released in fall 2020; 2020 UCR data published July 2021 • Justice Canada-commissioned CCJCSS dedicated Juristat on Impaired

	What are the police-reported impaired and dangerous driving trends?	• Number of impaired driving incidents (differentiate by alcohol, drug, or both) • Number of dangerous driving incidents • Number of impaired driving causing death incidents (differentiate by alcohol, drug, or both) • Number and proportion of impaired driving incidents cleared by charge (differentiate by alcohol, drug, or both) • Number and proportion of dangerous driving incidents cleared by charge • Number and proportion of impaired driving causing death incidents cleared by charge (differentiate by alcohol, drug, or both) • Time to clear impaired driving incidents (differentiate by alcohol, drug, or both)	data in CCJCSS social data linkage environment (SDLE)	Driving, published July 2021.
Courts	What are the court trends on impaired driving in Canada?	• Number of impaired driving cases (differentiate drugs and alcohol) • Proportion of impaired driving cases with a guilty verdict • Drug-impaired driving vs. alcohol-impaired driving • Driver previously accused; by gender • Average fine amount (dollars)	• Integrated Criminal Court Survey (ICCS)	• Annual; 2018-2019 ICCS (court) data will be released in fall/winter 2020; 2019-2020 court data released in fall/winter 2021 • Justice Canada-commissioned CCJCSS dedicated Juristat on Impaired

			Driving, published July 2021.
	Impaired driving case efficiencies	• Time to complete impaired driving cases • Drug-impaired driving vs. alcohol-impaired driving • Average number of appearances		
Traffic safety, fatalities and injuries on roads in Canada	What are the collision trends in Canada? And, how have they changed?	• Number of collisions • Number of fatalities • Number of injured	• Transport Canada - National Collision Database (NCDB). The NCDB contains data on all reportable motor vehicle collisions in Canada that the provinces and territories provide each year.	• The 2017 figures were published in 2019. Next release: 2018 data expected in 2020; preliminary 2019 data by special request to Transport Canada.
	What are the road fatality and injury trends in Canada? And, how have they changed?	• Fatalities by Road User Class (driver, passenger, pedestrian, bicyclist, motorcyclist)		
	What are the road fatality and injury trends in Canada involving alcohol or drugs, or both? And, how have they changed?	• Number and proportion of injured drivers (by age and gender) with a drug, cannabis in particular, detected in their body fluids, alone or in conjunction with another substance, and level • Number and proportion of fatally injured drivers (by age and gender) with a drug, cannabis in particular, detected in their body fluids, alone or in conjunction with another substance, and level	• Public Safety Annual Report on drug-impaired driving • Traffic Injury Research Foundation's (TIRF) National Fatality Database	• Annual; Public Safety Annual Report on drug-impaired driving – Available January 2021 (with 2018-2019 data); 2020 data potentially available late 2021 • Limitation – unknown extent of data coverage for alcohol-only incidents • TIRF's database includes police-reported crash data combined with alcohol and

				drug test data collected from coroners and medical examiners in every jurisdiction. Most recent data from 2017 released in late 2020.
Prevalence of drugs and alcohol on Canadian roads	What is the prevalence of cannabis use in the general population?	• % of Canadians age 15 and older who have used cannabis in the past 12 months	• Canadian Tobacco, Alcohol and Drugs Survey (CTADS) inactive as of 2017) – As of 2017 CTADS will be separated into two independent surveys. These two surveys were conducted in 2019, starting with the Canadian Alcohol and Drugs Survey (CADS (record number : 5289), followed by the Canadian Tobacco and Nicotine Survey (CTNS; record number 5305).Canadian Student Tobacco, Alcohol and Drugs Survey (CSTADS). • Done by Statistics Canada on behalf of Health Canada every 2 years	• CADS 2019 survey data expected in (unknown release date) • CTNS – 2020 data released in March 2021 • CSTADS -2018/19 data is available, next survey expected to be conducted during 2020/21 school year
	What is the prevalence of cannabis use in the general population?	• % of Canadians age 15 and older who have used cannabis in the past 3 months	• National cannabis survey (Statistics Canada quarterly survey)	• Quarterly; 2020 data released in April 2021

Prevalence of alcohol use in the general population	• % of Canadians age 12 and older who reported consuming 5 or more drinks (male) or 4 or more drinks (female) on one occasion, at least once a month in past year	• Canadian Community Health Survey (Statistics Canada annual survey)	• Annual; 2019 data released in summer 2020; 2020 data released fall 2021
What are the characteristics of people who have operated a vehicle after consuming alcohol and how frequently do people drive after consuming alcohol?	• Self-reported driving after consuming 2+ alcoholic beverages 1 hour before driving • Number of times driving after consuming 2+ alcoholic beverages 1 hour before driving in the past 12 months	• Canadian Community Health Survey (Statistics Canada annual survey)	• Annual; 2019 data released in summer 2020; 2020 data released fall 2021.
What are the characteristics of people who have operated a vehicle after consuming cannabis and how frequently do people drive after consuming cannabis?	• Self-reported driving within two hours of using cannabis • Self-reported passenger in a vehicle with a driver who used cannabis in the previous two hours • Drivers who had an interaction with law enforcement related to driving under the influence • Opinion on how cannabis impacts driving • Opinion on likelihood of being caught driving under the influence of alcohol or cannabis	• Canadian cannabis survey (annual since 2017) (Health Canada)	• Annual; 2020 data released in December 2020
What are the characteristics of people who have	• Self-reported driving within two hours of using cannabis in combination with alcohol		

	operated a vehicle after consuming cannabis in combination with alcohol or other drugs?	• Self-reported driving within two hours of using cannabis in combination with other drugs		
Hospitals and drug/alcohol testing labs	What are the characteristics of injured drivers visiting emergency rooms in Canada?	• % of injured drivers with alcohol or other drugs in their blood obtained at hospital	• National Drug Driving Study	Brubacher's publications and project list HERE

Annex 2: Annotated Bibliography

Impaired Driving Annotated Bibliography

Citation

Beirness, D.J. et al. (2021). Cannabis, alcohol and other drug findings in fatally injured drivers in Ontario. Traffic Injury Prevention, 22(1), 1-6.

Purpose

This article examines the prevalence of cannabis, alcohol and other drug use in Ontario drivers who died in crashes between January 2016 to December 2018.

Methodology

Researchers examined toxological results from the blood samples of 921 fatally injured drivers submitted to the Center of Forensic Sciences for analysis. The sample represents 86.7% of driver fatalities in Ontario over the time period.

Findings

- Males outnumbered females 4 to 1 among the sample of fatally injured drivers.
- Over half of driver fatalities tested positive for alcohol and/or drugs (53.7%).
- The most common substances detected were THC (27%) and alcohol (26%).
- The authors highlight the higher proportion of drivers positive for THC than alcohol as well as the notable proportion of fatalities testing positive for multi-substance use. The crash and driver characteristics differ between alcohol and drug-impaired fatalities, suggesting differing approaches are required for prevention.
- Findings highlight the need for greater attention and research on cannabis and other drug use among drivers.

Citation

Fell, J. (2019). Approaches for reducing alcohol-impaired driving: Evidence-based legislation, law enforcement strategies, sanctions, and alcohol-control policies. Forensic Science Review, 31(2), 161–184.

Purpose

The purpose of this article is to provide a summary of the current research regarding the policies and programs created to help minimize the number of impaired driving highway accidents.

Methodology

Researchers examined what current policies and programs offer effective ways to reduce impaired driving incidents.

Findings

- The most impactful way to reduce impaired driving is to have checkpoints and random breath testing that are "highly publicized, visible, and frequent"
- Globally, "lowering the legal blood alcohol concentration (BAC) limits for driving to 0.05 g/dL" has shown to have a positive effect in lowering impaired driving accidents
- In the US and other countries, making the legal drinking age older (increasing) has shown to help reduce the amount of fatal impaired driving incidents resulting in death
- for those who have been involved in impaired driving incidents, special Driving Under the influence/Driving While Intoxicated courts, programs which offer mandatory alcohol-monitoring check-ins consistently, and "mandatory alcohol ignition interlocks" are all injunctions/measures which have shown to lower recidivism rates in impaired-driving accidents.

Citation

Yost, G. (2020). Evidential breath testing for alcohol, Parliament, the science and the courts (Part 2). Canadian Society of Forensic Science Journal, 53(2), 83–94.

Purpose

As follow-up to Yost's first article, this report focuses on the parliamentary response leading up to the Supreme Court of Canada's decision in 2018 regarding impaired driving records.

Methodology

This article looks at the legal, scientific, and government's responses to previous impaired driving records and current changes being made.

Findings

- In 2008, the "two-beer" defence was eliminated as it has shown to not be safe in minimizing impaired driving accidents
- In 2018, the laws changed regarding BAC and the need for proof using breath testing was put in place
- On December 18, 2018, Bill C-46came fully into force. Part VIII.1 replaced all previous provisions regarding transportation offences.

- This new part now accounts for "*per se* drug driving offences, authorizes roadside screening for drugs, harmonizes penalties and prohibitions, simplifies prosecution of drug-impaired driving offences, authorizes mandatory screening for alcohol at roadside, sets out new rules for proving BAC, and establishes rules for disclosure."
- "The new Part therefore makes BAC at the time of testing conclusively proven if, for the two tests of the driver, the system blank tests gave a BAC of no more than 10, the calibration checks were within 10% of the target value, there were at least 15 min between the two tests and the BACs produced by the tests were within 20 of each other."

Citation

Solomon, R., MacLeod, L. & Dumschat, E. (2020). The shifting focus of Canadian impaired driving enforcement: The increased role of provincial and territorial administrative sanctions. Canadian Criminal Law Review, 25(1), 25–58.

Purpose

This report looks at the increasing role that licence suspensions and vehicle impoundments play in enforcing impaired driving laws and sanctions.

Methodology

Researchers examined current impacts of Administrative Licence Suspension (ALS) and Administrative Vehicle Impoundments (AVI) and their relationship with deterring impaired driving. A literature review was also conducted.

Findings

- The courts have recognized that the provinces have autonomy to authorize and establish their own impairment-related administrative sanctions. Provinces have increasingly moved in this direction to ensure swift removal of potentially unsafe drivers who pose a risk of impaired driving, as well as to limit those convicted of impaired driving related charges.
- The article offered various recommended practices, namely that ALSs and AVIs should be broken down into three categories for implementation:
  - mandatory 24-hour ALSs and discretionary 24-hour AVIs
    - police should use to get those suspected of being impaired (alcohol or drugs) off of the roads
  - mandatory seven-day ALSs and mandatory seven-day AVIs
    - alcohol
      - used for anyone who shows a BAC of .05% to .079% or fails a field sobriety test
    - drugs
      - used for anyone who fails an oral fluid test or a field sobriety test
    - mandatory 90-day ALSs and mandatory 30-day AVIs

        o   used for anyone who fails with a BAC of .08% or more on an ASD

Citation

Train, A., & Snow, D. (2019). Cannabis policy diffusion in Ontario and New Brunswick: Coercion, learning, and replication. Canadian Public Administration, 62(4), 549–572.

Purpose

Policy diffusion refers to the interdependent nature of the policymaking process, through which policy decisions made by one government affect policymaking in other governments. This study examines the factors that affected the diffusion of recreational cannabis policy in Canada, spefically focused on two provinces, Ontario and New Brunswick.

Methodology

The authors analysed committee hearings, Hansard debates, and federal and provincial government reports to assess what mechanisms facilitated the diffusion of cannabis policy from the federal government (and other jurisdictions) to Ontario and New Brunswick.

Findings

- Using the social learning framework developed by Hall (1993), the factors identified as most important in the diffusion of cannabis policy to Ontario and New Brunswick were "coercion", which is when a more powerful or influential jurisdiction encourages and/or incentivises another jurisdiction to adopt a policy; and "learning" which is when governments use the successes or failures from other jurisdictions as guidance. The authors also found these provinces replicated comparable policies (such as those for alcohol and tobacco) from their own jurisdiction.
- The authors highlighted that "the framework for cannabis legalization was driven entirely at the federal level." Though for provincial governments the possible variations in policy were regarding "place of use, retail, distribution, workplace safety, and minimum age", although the minimum age could not be less than 18 years of age.

Citation

Lancione, S., Wade, K., Windle, S., Filion, K., Thombs, B., & Eisenberg, M. (2020). Non-medical cannabis in North America: an overview of regulatory approaches. Public Health (London), 178, 7–14.

Purpose

The purpose of this study was to look at the current regulations regarding non-medical cannabis legalization in North America in order to better enforce future policy.

Methodology

In June 2019, researchers conducted an internet search for available published public health resources (since January 1, 2012).

Findings

- Bill C-46 has put in place impaired driving penalties for drivers who exceed threshold limits for THC (2e5 ng/mL and >5 ng/mL), and for those with alcohol also present in their systems (>2.5 ng/mL THC with blood alcohol concentration >0.5).
- Police are also now permitted to do roadside impairment tests (a saliva test for THC and other substances) – if a driver fails a field sobriety test or a saliva test, police can also request a blood sample.
- One concern that presented itself was that in those with a high tolerance for THC who use frequently, they may not show signs of impairment whereas someone who does not use cannabis frequently may be significantly impaired.

Citation

Wigmore, J. (2020). Mandatory breath alcohol screening in Canada - No more "Reasonable Suspicion." Forensic Science Review, 32(1), 6–7.

Purpose

The purpose of this article was to examine the new Bill C-46 and Mandatory Alcohol Screening (MAS).

Methodology

A review of (former) Bill C-46 and literature/laws regarding MAS was conducted.

Findings

- Under Bill C-46, MAS does not require reasonable suspicion, however, it does require "the vehicle to be stopped lawfully, the driver to be in care and control of the vehicle, and the police must have the approved screening device close at hand".
- This mandatory screening is only approved at roadside stops.
- MAS has been shown to demonstrate a decrease in the number of impaired drivers and an increase in stopping/catching those driving impaired.
- Media has highlighted mandatory screening as an infringement on individual rights and freedoms as seen in various news stories/articles (page 7).

Citation

Windle, S., Sequeira, C., Filion, K., Thombs, B., Reynier, P., Grad, R., Ells, C., & Eisenberg, M. (2021). Impaired driving and legalization of recreational cannabis. Canadian Medical Association Journal (CMAJ), 193(14), E481–E485.

Purpose

The purpose of this article is to examine the relationship between the legalization of recreational cannabis and fatal accident rates (motor vehicles).

Methodology

An examination and review of statistics and literature was conducted.

Findings

- Although the legalization of cannabis is projected to account for a small increase in fatal motor vehicle collisions, the increase is still considered significant as it will also account for thousands of injuries from non-fatal accidents while using cannabis recreationally.
- THC threshold driving limits, as well as good public awareness are thought to help decrease the amount of impaired motor vehicle collisions.
- Public awareness and education provided by health care professionals will play a crucial role in the minimization of collisions both fatal and non-fatal.

Citation

Solomon, R. & Chamberlain, E. (2018). The road to traffic safety: Mandatory breath screening and Bill C-46. Canadian Criminal Law Review, 23(1), 1–42.

Purpose

The purpose of this article is to examine and discuss mandatory alcohol screening with the implementation of the new Bill C-46

Methodology

A review of current laws and literature was conducted.

Findings

- In order for a comprehensive mandatory alcohol screening program to be successful, many more drivers will have to be stopped, as well as have their breath screened.
- Mandatory alcohol screening globally has been shown to minimize the risk of fatal impaired driving accidents, injuries from non fatal impaired collisions, and overall percentages of the population engaging in impaired driving.
- MAS programs should be "well-publicized" and promoted politically.

Citation

Brubacher, J., Chan, H., Erdelyi, S., Zed, P., Staples, J., & Etminan, M. (2021). Medications and risk of motor vehicle collision responsibility in British Columbia, Canada: a population-based case-control study. The Lancet. Public Health.

Purpose

This was a study examining the risk of collision while taking various medications.

Methodology

Researchers reviewed "linked driving and health records in British Columbia, Canada from Jan 1, 1997, to Dec 31, 2016." Participants were drivers involved in an "incident collision" resulting in a police report. Risk factors for collisions were then compared across various medications the drivers were taking (new vs past users).

Findings

- The highest risk of collision was associated with the use of cholinergic drugs, anticholinergic agents for Parkinson's disease, dopaminergic agents, and anticonvulsants.
- Current drivers who were prescribed benzodiazepines/high-potency opioids were deemed a higher risk of being responsible for accidents/collisions.

Citation

Herrera-Gómez, F., García-Mingo, M., Colás, M., González-Luque, J., & Álvarez, F. (2018). Opioids in oral fluid of Spanish drivers. Drug and Alcohol Dependence, 187, 35–39.

Purpose

The purpose of this study was to examine the "presence and concentration" of opioids in Spanish drivers, with the combined use of other drugs.

Methodology

Mandatory roadside breath screening and oral fluid screening took place in Spain and the results were then examined to find links between specific drugs and their combined use in drivers.

Findings

- Opioids were confirmed in 8.6% of positive cases, notably 7.2% were positives to 6-acetylmorphine (6-AM), 6.5% to morphine, 5.4% to codeine, and 4.1% to methadone. The majority of the confirmed tests for morphine (96.5%), codeine (88.4%) and methadone (81.9) were also positive for 6-AM.
- Cocaine and cannabis were also commonly seen as being used in conjunction with opioids.
- Drivers who were stopped and tested positively for morphine, codeine, and methadone had a higher likelihood for also testing positive for heroin, THC, cocaine, and other elicit drugs.

Citation

Herrera-Gómez, F., García-Mingo, M., & Álvarez, F. (2020). Prevalence of alcohol and other psychoactive substances in motor vehicle drivers in Spain, 2018: Cross-sectional dataset analysis with studies from 2008 and 2013. Forensic Science International, 313, 110266–110266.

Purpose

The purpose of this report is to examine frequency/presence of positive breath tests for alcohol and psychoactive substances in Spanish drivers.

Methodology

Roadside positive test reports were reviewed for the years 2008, 2013, and 2018.

Findings

- 2008 reports has more positive cases for alcohol presence/drug use than those in 2013 and 2018.
- Reports showed that impaired driving occurred more frequently when using cannabis than alcohol.
- The occurrence of drivers using various drugs (multiple positive tests for different drugs) without the presence of alcohol was more prevalent in 2018 than in 2008.
- The presence of mandatory screening decreased the amount of impaired drivers using drugs.

Citation

Solomon, R., MacLeod, L., & Dumschat, E. (2020). The increasing role of provincial administrative sanctions in Canadian impaired driving enforcement. Traffic Injury Prevention, 21(5), 298–302.

Purpose

The purpose of this article is to record the changes taking place in Canada in regards to the shift in impaired driving enforcement, as well as the deterrent impact of these implementations.

Methodology

- Looking at license suspensions (ALS) and vehicle impoundments (AVI), this paper offers a comprehensive examination of their deterring impacts on impaired driving.

Findings

- In both British Columbia and Alberta, roadside screening and ALS/AVI sanctions have shown to be beneficial in deterring and eliminating impaired driving within the provinces.
- Monetary penalties and license-reinstatement fees have also shown to be beneficial in deterring impaired driving.

Citation

Wadsworth, E., & Hammond, D. (2019). International differences in patterns of cannabis use among youth: Prevalence, perceptions of harm, and driving under the influence in Canada, England & United States. Addictive Behaviors, 90, 171–175.

Purpose

The purpose of this study was to look at trends in cannabis use by youths in Canada, England, and the United States.

Methodology

Researchers conducted an online study in July of 2017 of youths aged 16-19. The survey consisted of questions regarding their cannabis use, their understanding of the harms associated with cannabis use, accessibility to cannabis, and driving under the influence of cannabis.

Findings

- Survey data showed that youth from the US reported higher rates of consumption, and driving following cannabis use, and lower rates of perceived harm than youth from both England and Canada.
- Canadian youth data reported having easier access to cannabis, more frequent rates of driving after using, and higher usage rates than youth in England.
- Overall, both American and Canadian data showed higher rates of consumption, driving after consumption, and having easier accessibility to cannabis than the data from youth in England.
- Researchers considered more lenient policy in the US and Canada in comparison to that in England as a potential explanation of the data trends found.

Citation

Masud, M., Chan, H., Erdelyi, S., Yuan, Y., & Brubacher, J. (2020). Epidemiology of drug driving: protocol from a national Canadian study measuring levels of cannabis, alcohol and other substances in injured drivers. BMC Public Health, 20(1), 1070–1070.

Purpose

The purpose of this article was to examine current limitations, which exist in current research regarding the regulation of impaired driving ("drug driving").

Methodology

In this study, researchers used "left-over" samples of blood that were taken from injured drivers who were involved in non-fatal collisions. This blood was collected from emergency departments following the collisions. Consent was obtained in order to proceed with toxicology.

Findings

- By using blood samples, rather than saliva or urine samples, toxicology was able to show stronger correlations with drug impairment.
- Blood samples offer better results than roadside impairments tests as they are able to show more accurate perceptions of probable impairment.
- By using blood sample that were taken shortly after the collisions took place, the results from toxicology are more accurate "approximate drug levels at time of the crash".

Citation

Porath, A., & Beirness, D. (2019). Predicting categories of drugs used by suspected drug-impaired drivers using the Drug Evaluation and Classification Program tests. Traffic Injury Prevention, 20(3), 255–263.

Purpose

Researchers conducted this study in order to understand the best way(s) to predict what drugs the impaired driver may be under the influence, using known symptoms of drug impairment from the Drug Evaluation and Classification (DEC).

Methodology

Researchers examined 1512 DEC evaluations of drivers suspected of being impaired, who had "ingested central nervous system (CNS) depressants, CNS stimulants, narcotic analgesics, and cannabis." Evaluations were also completed on a set of participants who were "drug-free." "Clinical, behavioural, and observational measures", which predict possible impairment and can indicate the category of drugs one may be under the influence of.

Findings

- Researchers found 13 indicators that were predictive of the "drug category":
  - "being under the care of a doctor or dentist, condition of the eyes, condition of the eyelids, mean pulse rate, assessment of horizontal gaze nystagmus (HGN), convergence, performance on the One Leg Stand (OLS) Test, eyelid tremors, pupil size in darkness, reaction to light, presence of visible injection sites, systolic blood pressure, and muscle tone"
- The indicator with the largest impact on drug category prediction was "appearance and physiological response of the eye".

Citation

Brubacher, J., Chan, H., & Staples, J. (2020). Cannabis-impaired driving and Canadian youth. Paediatrics & Child Health, 25(Supplement_1), S21–S25

Purpose

The purpose of this article was to examine and explain why cannabis may have more severe impacts of impaired driving on those who are younger and inexperienced with cannabis use.

Methodology

A literature review was conducted.

Findings

- "Cannabis impairs the psychomotor skills required for safe driving."
    - o Although cannabis is known for its relaxing/euphoric effect, people's experiences with cannabis are unique and many experience anxiety/paranoia.
    - o Driving simulators have shown that those impaired by cannabis are seen to "weave" in and out of traffic more than those who are not impaired. Cannabis also affects "attention, coordination, and reaction time". Those impaired also struggled with maintaining their speed/the speed limit.
- "Combined use of cannabis with alcohol is very dangerous."
    - o Impairment by both alcohol and cannabis combined has shown to be more dangerous and cause more serious impairment than cannabis or alcohol alone.
    - o The combination of substances has also shown an increased risk for crashing/collisions.

Citation

Brubacher, J., Chan, H., Erdelyi, S., Macdonald, S., Asbridge, M., Mann, R., Eppler, J., Lund, A., MacPherson, A., Martz, W., Schreiber, W., Brant, R., & Purssell, R. (2019). Cannabis use as a risk factor for causing motor vehicle crashes: a prospective study. Addiction (Abingdon, England), 114(9), 1616–1626.

Purpose

This study was conducted to examine whether drivers who test positive for THC (or other drugs) at a collision contribute more than those who test negative.

Methodology

Participants were people who needed blood tests following a collision; blood was tested for THC, alcohol, or other drugs. The positive/negative tests were then compared to see if those who tested positive where more likely to have been deemed "responsible" for the collision or "non-responsible."

Findings

- Of the non-fatal injured drivers, those who tested THC < 5ng/mL did not show any evidence for increased responsibility in the collision
    - o However, those who tested THC > 5ng/mL did show some evidence for having increased risk of responsibility for the collision
- It was also found that driving impairment from alcohol or other impairing substances have higher risk factors for roadside collisions than impairment from THC.

Citation

Watson, T., Mann, R., Wickens, C., & Brands, B. (2019). Deterring driving under the influence of cannabis: Knowledge and beliefs of drivers in a remedial program. Canadian Journal of Criminology and Criminal Justice, 61(3), 1–20.

Purpose

The purpose of the article was to review literature and previous studies conducted in order to inform the efficacy of remedial programs for driving under the influence of cannabis.

Methodology

A study was conducted using participants in a remedial program for "drink-driving" as well as literature review.

Findings

- Road-side driving under the influence of cannabis (DUIC) check-points have shown to have the greatest deterring effects for driving under the influence.
- Participants voiced concern regarding THC roadside drug testing as those who use cannabis more frequently may have a higher tolerance than those who do not – therefore they may test positive for THC levels of the legal limit, but may not be impaired.