

Changes In Canada's Impaired Driving Rates Since 2018

By Michael J. Armstrong

INTRODUCTION

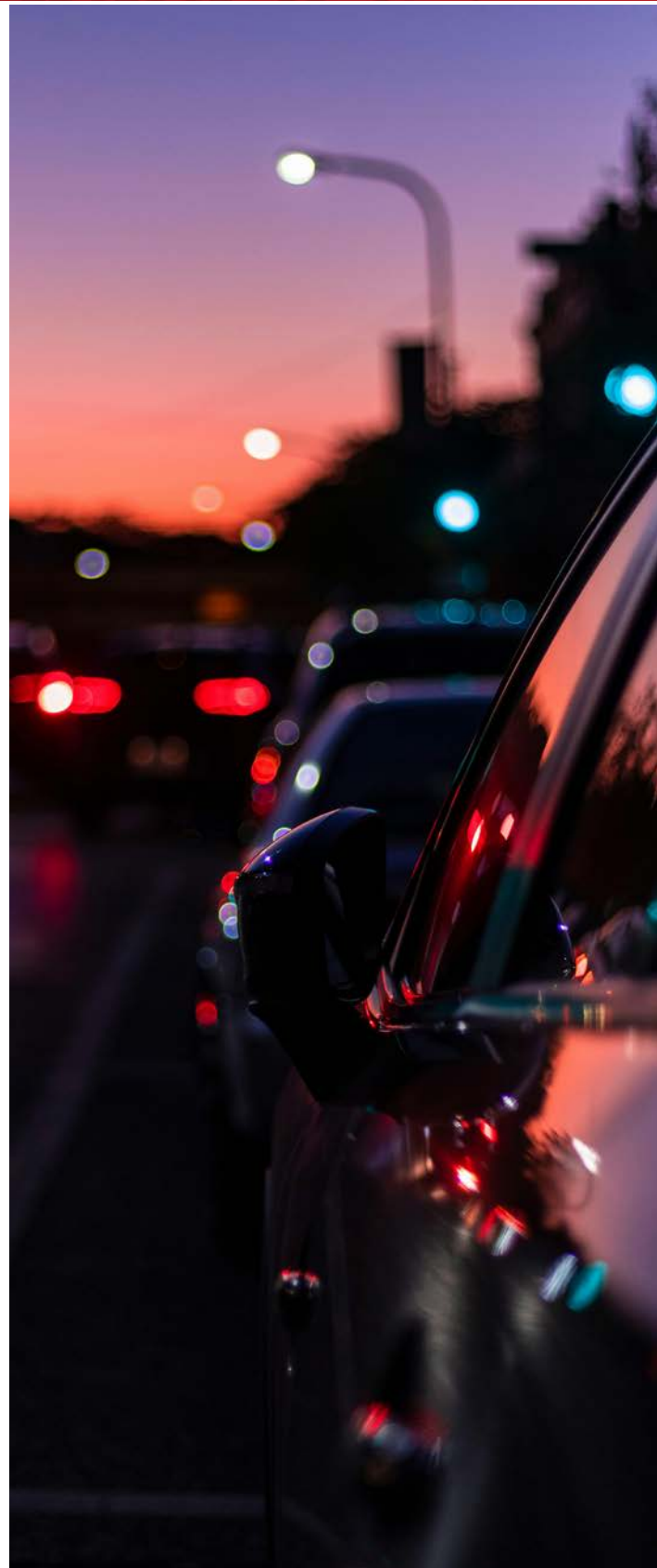
When Canada legalized recreational cannabis in 2018, some people worried that cannabis-impaired driving might subsequently increase (Boicu et al., 2024; Canadian Centre on Substance Use and Addiction, 2025). This was a serious concern, because although other health risks from drug use fall mostly upon its consumers, impaired driving threatens all road users.

As a result, the federal government in 2018 simultaneously enhanced its impaired driving countermeasures. For example, it outlawed impairment by alcohol and drugs in combination, or by unspecified substances, in addition to existing rules against impairment by alcohol or drugs individually. It also gave police more power to obtain blood and breath samples from drivers, and it provided funding to train more of its officers as drug recognition experts (DREs) (Conor et al., 2019; Public Safety Canada, 2024).

Provincial, territorial, and municipal governments were largely responsible for implementing these changes. They trained police, increased roadside checks, and ran ad campaigns to varying degrees. Some allowed police to suspend licences and impound cars instead of laying charges; this got drivers off the road quickly and avoided costly court trials. After legalization, many police forces increased their roadside spot checks to deter or detect cannabis-impaired driving.

The purpose of this policy brief is to summarize research on how impaired driving evolved after 2018's legislative changes. It especially focuses on a recent analysis of police-reported impairment data. Results specific to Ontario or the Niagara area are highlighted where available.

Taken together, the research implies that drivers more often tested positive for cannabis use after 2018, but not necessarily for cannabis impairment. Meanwhile, although police detected substantially more impaired drivers than earlier trends would have projected, that increase seems related more to strengthened enforcement than to legalized cannabis.



PREVIOUS RESEARCH

Impaired-driving researchers have analyzed several types of data, each with its own strengths and limitations. Surveys ask people whether they have done any driving after cannabis use (DACU). Medical records can identify which potentially impairing substances drivers have consumed. Automobile insurance claims can reveal some of the more serious outcomes. Police reports directly track impaired driving incidents.

One challenge in such research is distinguishing legalization-related changes from prior trends and concurrent events. For example, because the legal changes for cannabis use and impaired driving both occurred in 2018, their respective impacts overlapped. Cannabis use was already rising before legalization; afterward, licensed retailing took several years to expand (Armstrong, 2021, 2025a; Rotermann, 2020). As well, the COVID-19 pandemic disrupted patterns of driving, drinking, and policing (Lyon et al., 2024; Myran et al., 2021; Vanlaar et al., 2021).

Below is a summary of findings from various data sources.

Insurance claims

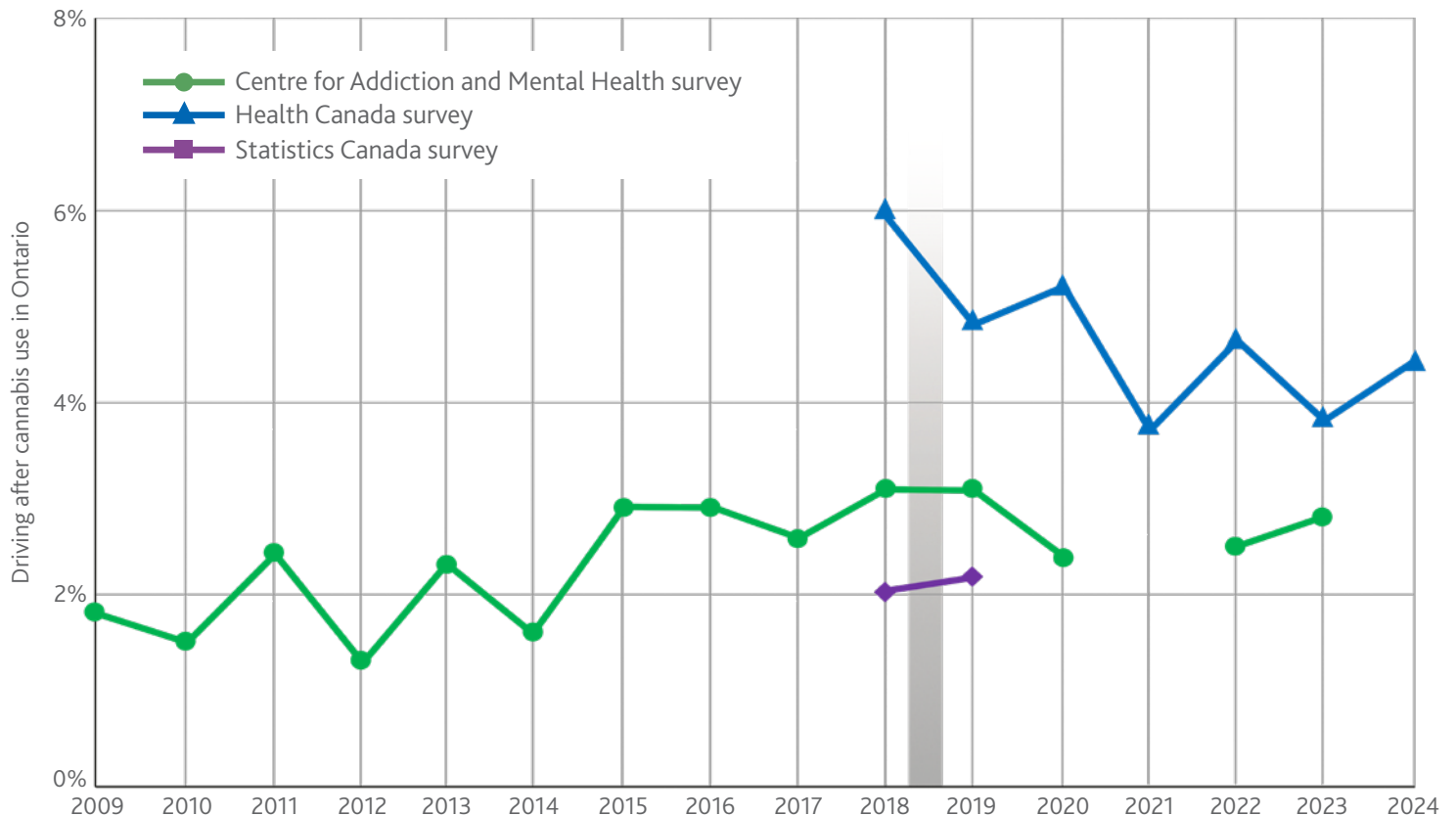
A study of traffic accident insurance claims, impairment-related or not, found no significant changes in Canada from 2016 to 2019 (Lyubchich, 2022).

Consumer surveys

Statistics Canada surveys conducted in 2018 and 2019 found no immediate change in the percentage of Canadians admitting to DACU (Cristiano et al., 2022; Rotermann, 2020; Wrathall et al., 2024). However, longer-running surveys by Health Canada and other researchers found DACU fell between 2018 and 2023 (Kucera & Hammond, 2025; Public Health Agency of Canada, 2024).

Ontario's results (Figure 1) mirrored the national ones. Health Canada surveys said DACU rates had declined there, while those by Statistics Canada and academic researchers found no significant changes (Imtiaz et al., 2024; Nigatu & Hamilton, 2023).

Figure 1: Percentage of Ontario survey respondents aged 16-plus saying they drove after cannabis use. The vertical grey bar marks when cannabis became legal.



Medical records

Medical studies analyzing national data found no significant changes between 2018 and 2021 in traffic-injury visits to hospital emergency departments overall, impairment-related or not (Walker et al., 2023). When the body fluids of injured drivers in Canada were tested between 2019 and 2023, some 33 per cent contained one potentially impairing substance, and 22 per cent had several: depressants and tetrahydrocannabinol (THC) were the most common (Brubacher et al., 2025). Single-province studies reported similar results. In Alberta, there was also no change in traffic-injury visits overall between 2018 and 2019 (Callaghan et al., 2021). In British Columbia, the percentage of injured drivers testing positive for THC rose between 2018 and 2020, whereas the percentage for alcohol remained steady (Brubacher et al., 2022).

In Ontario, traffic-injury visits to hospital emergency departments were also unchanged from 2018 to 2019 (Callaghan et al., 2021). Among such visits from 2018 to 2020, where patient records specifically mentioned cannabis or alcohol, impairment-related or not, there was no change for alcohol and mixed results for cannabis (Myran et al., 2023). In body-fluid samples from drug-impaired driving suspects from 2008 to 2019, 12 per cent had one potentially impairing drug and 86 per cent had several; THC and cocaine were the most common (Beirness et al., 2024).

Police-reported incidents

The most recent study analyzed impaired driving rates reported by police between 2009 and 2023 in four substance categories: alcohol, drugs, alcohol-and-drugs mixed, and unspecified substances (Armstrong, 2025b). Note: “drugs” here includes cannabis but also other chemicals like amphetamines and opioids; the data did not name the specific drug(s) involved.

National results

The analysis indicated that Canada’s overall impaired driving rate declined from 2009 to 2018, jumped noticeably in 2019, and then resumed its downward trend thereafter. Police subsequently reported 31-per-cent more incidents on average between 2019 and 2023 than the earlier 2009-2018 trend would have projected.

Drug impairment increased more in percentage terms, averaging 42-per-cent above its projected trend, whereas alcohol impairment averaged only 17-per-cent above its trend. But alcohol grew more in terms of drivers: the increase in the number of drinking drivers was four times the increase in drugged drivers. The new offences for impairment by alcohol and drugs together or by unspecified substances

added further incidents. Consequently, as of 2023, 83 per cent of impairment incidents involved only alcohol, nine per cent involved only drugs, and 11 per cent involved either alcohol-with-drugs or unspecified substances.

The impairment changes showed positive correlations with the number of trained DREs: when provinces added more DREs, they caught more drugged drivers and more drunk drivers.

Impairment changes showed diverging correlations with COVID-19 pandemic restrictions: when provinces tightened restrictions, alcohol impairment fell but drug impairment rose.

As expected, alcohol impairment was uncorrelated with the percentage of Canadians consuming cannabis or with the amount of cannabis legally sold. But interestingly, drug impairment was also uncorrelated with cannabis consumption and only weakly correlated with legal sales. This might be partly due to cannabis contributing to only a minority of drug cases. For example, police DREs identified cannabis as the impairing drug in only 20 per cent of single-drug cases in 2023; stimulants and narcotics were both more common (International Association of Chiefs of Police, 2025; Public Safety Canada, 2024).

Regional variations

The post-2018 impairment changes varied from province to province (Table 1). Impairment rates more than doubled in Prince Edward Island but declined marginally in Quebec.

Table 1: Provincial impairment rate changes during 2019–2023 relative to 2009–2018 trends.

Province	%Change
Newfoundland	117%
P.E.I.	136%
Nova Scotia	37%
New Brunswick	73%
Quebec	-5%
Ontario	26%
Manitoba	48%
Saskatchewan	1%
Alberta	17%
British Columbia	107%

Ontario's trends resembled the national averages. From 2019 to 2023, police reported 26-per-cent more incidents than projected. The 2023 substance breakdown was 74-per-cent only alcohol, nine-per-cent only drugs, and 17-per-cent alcohol with drugs or unspecified substances.

In the Niagara area (Figure 2), rates averaged 22-per-cent higher than projected. The 2023 substance breakdown was 83-per-cent alcohol, 15-per-cent drugs, and two per cent alcohol-with-drugs or unspecified substances. (Note: municipal estimates are based on less data and should be viewed as approximations.)

In Hamilton (Figure 3), impairment was 12-per-cent higher than projected. The 2023 breakdown was 75-per-cent alcohol, eight-per-cent drugs, and 17-per-cent alcohol-with-drugs or unspecified.

One limitation of police-reported rates is that they are affected by police behaviour. For example, because alcohol impairment is easier to prosecute than drug impairment, police typically test for alcohol first; only if that comes up negative do they test for drugs. Consequently, they likely underreport drug impairment (Perreault, 2021).

DISCUSSION & RECOMMENDATIONS

Since 2018, Canada has experienced substantial increases in the number of impaired drivers detected by police. But that increase seems related more to strengthened enforcement and pandemic disruptions than to legalized cannabis. This implies that governments should focus less on cannabis-impaired driving specifically and instead view it more as just one component of drug-impaired driving overall.

The differences among research results might reflect their differing underlying data sources. For example, Health Canada's 2024 survey implied that 1.6 million Canadians drove after cannabis use at least once per year. By comparison, police that year reported only 13,676 impaired driving incidents potentially involving drugs in general, of which only 116 involved injuries or deaths. **These figures imply that police detect less than one per cent of what cannabis consumers do, and that hospital records capture less than one per cent of what police detect.**

It is reassuring that police-reported impairment and self-reported DACU both trended downward after 2019. But it is worrisome that drugged drivers increasingly appear

Figure 2: Approximate impaired driving incidents per million, people aged 16-plus, reported by police in the Niagara area. The vertical grey bar represents when cannabis became legal.

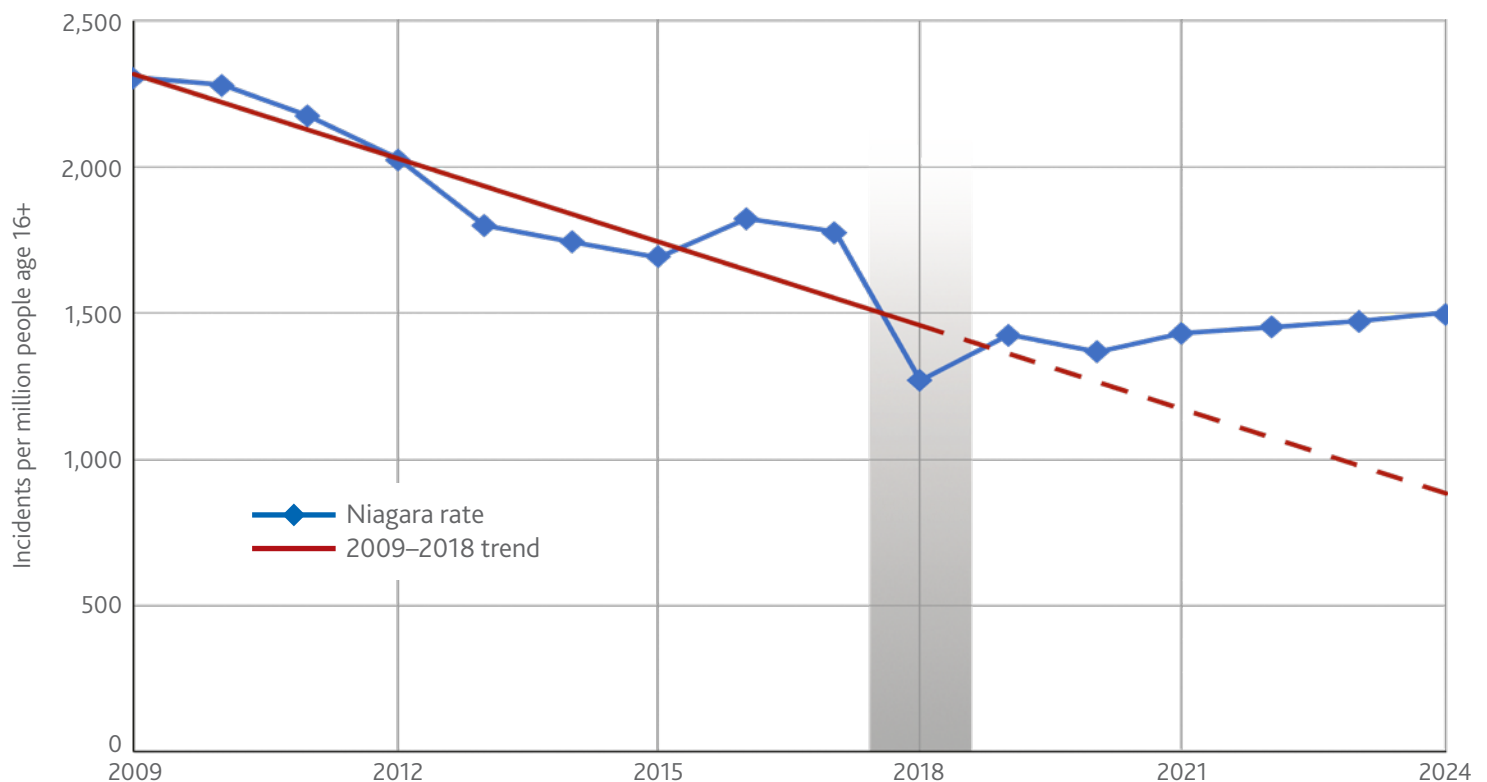
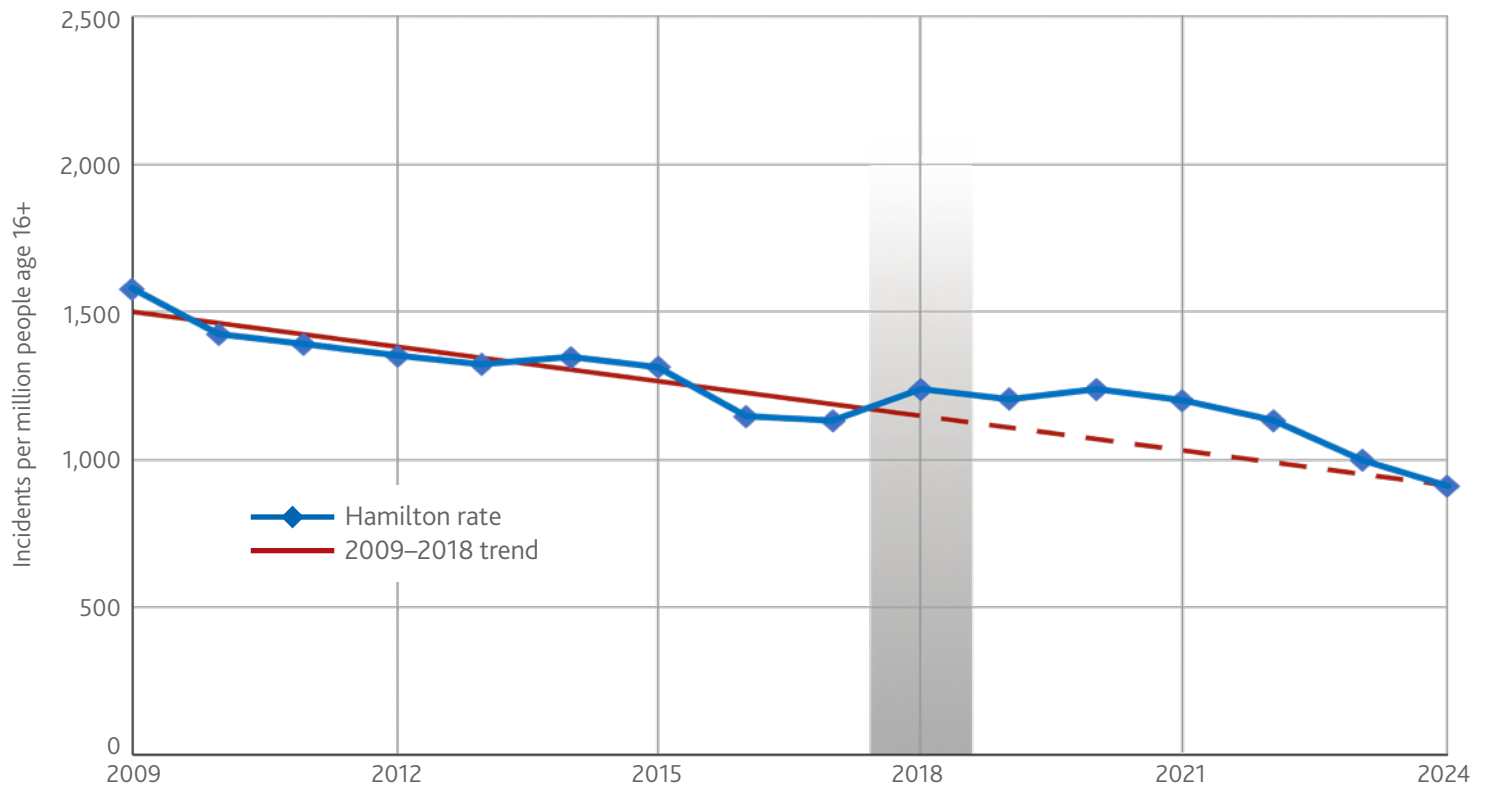


Figure 3: Approximate impaired-driving incidents per million, people aged 16-plus, reported by police in Hamilton. The vertical grey bar represents when cannabis became legal.



in both police and medical reports. Also, while 86 per cent of Canadians agree that cannabis impairs driving, only 23 per cent believe cannabis-impaired drivers will get caught (Public Health Agency of Canada, 2024). So, impaired driving remains a concern for road users.

Policymaking and law enforcement face several challenges on this issue. One is that many impairment risk factors for cannabis differ from those for alcohol, and so might need different responses (Brubacher et al., 2023). For example, alcohol impairment is much more common at night than during the day, and on weekends than on weekdays; by contrast, cannabis impairment shows less variation across times of the day or days of the week. Furthermore, cannabis impairment is harder to measure than alcohol impairment, as blood THC levels only weakly correlate with physical intoxication (Fitzgerald et al., 2025).

With the above issues in mind, this policy brief concludes with the following recommendations.

1. It would help if governments at all levels made impaired-driving data more accessible to researchers, while preserving drivers' privacy. This would make it easier to quantify trends, detect changes, and reveal

causes (Canadian Centre on Substance Use and Addiction, 2022).

For example, Statistics Canada publishes impairment incident counts online, but only as annual totals. This makes it difficult to detect when trends change: e.g., did rates increase in October 2018 when cannabis became legal, or in December 2018 when the impaired driving law changed? Similarly, because it only provides counts for all drugs combined, it is impossible to know the contribution of any given drug: e.g., how much of Canada's 42-per-cent increase in drug impairment involved cannabis impairment?

2. Provincial and municipal governments could similarly improve data availability. For example, the Toronto Police Service posts a wealth of detailed crime data on its website. Unfortunately, that data currently does not include impairment incidents.
3. Improving drug education among youths and young adults might also help. Younger Canadians sometimes lack knowledge about the ways cannabis can harm driving ability (Donnan et al., 2022). Unfortunately, while public education efforts are good at raising awareness, they seem less effective at changing behaviours (Colonna et al., 2025).

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