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**Policy Brief** 

# Cannabis Legalization: 2021–2022 Observations

## **Key Messages**

- Overall, the percentage of people in Canada reporting cannabis use decreased from 2020 to 2021. However, more youth than adults who use cannabis reported changing their patterns of use during the COVID-19 pandemic.
- Despite some month-to-month fluctuation, the legal retail cannabis market continues to grow, with an increase from \$148 million in December 2019 to close to \$355 million in December 2021. Retail sales almost doubled in Ontario between 2019 and 2021, aligning with the lifting of the cap on number of stores.
- While dried cannabis continues to dominate total sales, demand for other product formats, such as edible cannabis and cannabis extracts, is growing.
- Legal retail sales continue to capture an increasing share of the market. Growing consumer preferences for legal cannabis sources shows relative success in diversion from the illicit market.
- There has been a dramatic reduction in cannabis-related incidents and charges since legalization.
- Ongoing monitoring is needed to better understand the impacts of the expanding market and emerging usage patterns on public health, such as problematic use or emergency department visits.

## **Summary**

This policy brief provides an update on the implementation and impacts of cannabis legalization and regulation in Canada. We reviewed publicly available data and published peer reviewed research articles and grey literature to examine the progress toward the *Cannabis Act*'s public health and safety objectives. This brief is intended to inform those involved in advising on or studying cannabis regulation.

Determining the effects of cannabis legalization since 2018 became more complicated in March 2020 with the start of the COVID-19 pandemic. Untangling the combined effects of legalization and the pandemic on cannabis use added to the difficulty. The pandemic influenced all retail operations in Canada, and cannabis sales were no exception from 2021 to 2022 (Canadian Centre on Substance Use and Addiction [CCSA], 2021a). The pandemic also influenced the way people in Canada use intoxicating substances, including alcohol and cannabis (Leger, 2021), However, these changes are not entirely attributable to the ongoing pandemic. The potential effects of the rapid increase in retail outlets on changing consumption patterns must also be considered.

Despite the COVID-19 pandemic, continuing to monitor and learn from the evolution of the regulated cannabis market in Canada remains essential to informing policy makers in Canada and internationally.

### Context

The *Cannabis Act* permitted the sale of cannabis within a legal regulatory system as of Oct. 17, 2018. The federal government is responsible for issuing production, processing, import, export, testing and research licences. The provincial and territorial governments are responsible for retail sales and distribution. Each province and territory established a unique approach. For example, considerable variation exists in public and private sales, licensing policies, number and distribution of retail stores, oversight bodies, pricing and taxation, supply, and places of consumption.

Initially, only dried cannabis and cannabis oils were legal for retail sale. In October 2019, the federal government expanded the range of products to include edible cannabis, cannabis extracts and topical cannabis products. Health Canada conducted public consultations about regulations under the *Cannabis Act* addressing possession limits, limits on flavours in inhaled cannabis extracts, research licences, product testing, product labelling, micro and nursery licensing, and for health products containing cannabis that would not require physician oversight.

The *Cannabis Act* requires the Minister of Health to review the effects of the act and its administration three years after coming into force. The objectives of the act were intended to be a resource for researchers, analysts and interested members of the public. This report is also intended to be a useful resource to those completing the mandatory review of the *Cannabis Act*.

## **Progress Toward Objectives**

The *Cannabis Act* was introduced with a focus on public health and safety. Specific objectives include:

- (a) protect the health of young persons by restricting their access to cannabis;
- (b) protect young persons and others from inducements to use cannabis; (c) provide for the licit production of cannabis to reduce illicit activities in relation to cannabis:
- (d) deter illicit activities in relation to cannabis through appropriate sanctions and enforcement measures; (e) reduce the burden on the criminal justice system in relation to cannabis; (f) provide access to a quality-controlled supply of cannabis; and
- (g) enhance public awareness of the health risks associated with cannabis use.
- (Government of Canada, 2018, Section 7).

This report summarizes the latest evidence about the progress made toward the *Cannabis Act*'s objectives.

## Prevent Young People from Accessing Cannabis

The 2021 Canadian Cannabis Survey (CCS) indicated that the rate of youth ages 16–19 years reporting past-year cannabis use significantly decreased from 44% in 2020 to 37% in 2021 (Health Canada, 2021b). (Due to the recruitment method of the survey [i.e. informing respondents of the topic when recruiting], the CCS may overrepresent people who use cannabis and, therefore, provide higher estimates than other surveys. See Appendix for more information.) Similar trends are present for those aged 20–24 years, where rates of use significantly decreased from 52% in 2020 to 49% in 2021. However, there are preliminary indications that a greater percentage of younger people who used cannabis changed their patterns of use during the COVID-19 pandemic. For example, 46% of

those aged 16–19 years and 40% of those 20–24 years reported increased use, compared with 25% of those aged 25 years and older (Health Canada, 2021b). Also, 27% of those aged 16–19 years reported less use, compared with 25% of those aged 20–24 years and 21% of those aged 25 years and older (Health Canada, 2021b). Conversely, at least in the initial few months of the pandemic (May to July 2020), other research showed minimal change in youth cannabis use in Ontario and Quebec (Leatherdale et al., 2021).

Some evidence shows that regulation is effectively preventing people who are younger than the minimum legal age from accessing cannabis through legal retail sources. In the 2021 CCS, youth aged 16–19 years reported obtaining cannabis from legal storefronts at lower rates than people aged 20 years and older (Health Canada, 2021b). Data examining perceived ease of purchasing from retail stores in 2019 showed that people younger than the minimum legal age were less likely than people of legal age to report it was easy to purchase from legal retail stores (Wadsworth, Driezen et al., 2022a).

### **Protect Public Health and Safety**

### **Usage Patterns**

CCS data show a significant decrease in usage, with 25% of respondents indicating previous 12-month use in 2021, compared with 27% from the previous cycle (Health Canada, 2021b). Although use among males and females decreased, the decrease was only significant for males. Those ages 16-19 (37%) and 20-24 years (49%) reported previous 12-month use at almost double the rate of those 25 years and older (22%) (Health Canada, 2021b). The CCS also shows that males continue to be more likely than females to report use in the previous 12 months, 29%, compared with 22%).

Frequency of use remained stable from 2020 to 2021. For example, 19% of those who reported previous 12-month cannabis use reported doing so daily in 2021, compared with 18% in 2018 to 2020. A greater percentage of males (29%) reported daily cannabis use in 2021 than females (23%).

Numerous web panel surveys on health-related behaviours conducted during the COVID-19 pandemic have included questions about respondents' cannabis use. The surveys vary in sample size, method and questions. However, these surveys consistently find that about one-third of cannabis consumers reported increasing their use during the pandemic, and that increased use was more common among younger respondents and those with mental health concerns (Health Canada, 2021b; Imtiaz et al., 2021; Leger, 2021; Varin et al., 2021; Wadsworth et al., 2022). Recent research also shows increased cannabis use varies by gender. Transgender and gender diverse individuals living in Canada were more likely to report increased cannabis use than cisgender individuals (Somé et al., 2022). Increased use is often associated with poorer mental health, finances, lack of companionship, stress and boredom (Health Canada, 2021b; Leger, 2021).

In the 2021 CCS and the 2020 International Cannabis Policy Study, which focus specifically on cannabis use, three-quarters of cannabis consumers reported no change to their access to cannabis during the pandemic (Health Canada, 2021b; Wadsworth et al., 2022).

The rate of reported use of and access to legal cannabis sources was increasing before the pandemic. Further study is needed to determine the extent to which this increase was a continuation of a trend associated with legalization and retail expansion, compared with behaviour changes due to the COVID-19 pandemic.

From a public health and safety perspective, the increase in cannabis vaping, with higher rates among youth and young adults, is concerning (Chadi et al., 2021; Fataar & Hammond, 2019; Health

Canada, 2021b). Health Canada's recent consultation on regulatory changes to limit the use of flavours in cannabis extracts may provide an opportunity to reduce the appeal of vaping, particularly for youth.

(See Appendix for additional information on health and consumption data.)

#### **Accidental Cannabis Intoxication**

Data from the Canadian Institute for Health Information (CIHI) on substance use during COVID-19 show increases in emergency department (ED) visits and hospitalizations for cannabis use (CIHI, 2021a). More recent data from October 2020 to June 2021 show a 14% increase in ED visits and hospitalizations for cannabis use (CIHI, 2021b). Table 1 compares data from March to September 2019 with March to September 2020.

Table 1 Emergency department visits and hospitalization for cannabis use, 2019 and 2020

Date	Emergency department visits	Hospitalizations
March to September 2019, n	15,201	10,023
March to September 2020, n	16,470	10,524
Increase, %	8	5

Canadian Institute for Health Information. (2021). Unintended consequences of COVID-19: Impact on harms caused by substance use, self-harm and accidental falls. <a href="https://www.cihi.ca/en/covid-19-resources/impact-of-covid-19-on-canadas-health-care-systems/unintended-consequences">https://www.cihi.ca/en/covid-19-resources/impact-of-covid-19-on-canadas-health-care-systems/unintended-consequences</a>

Recent data show an increase in cannabis-related ED visits and intensive care unit (ICU) admissions legalization, including some cases for children (those under 18 years old). Early data from Alberta following the legalization of edible cannabis and cannabis extracts showed minor increases in ED visits (Yeung et al., 2020). However, these data were collected shortly after the legalization of edible cannabis and may not be representative of longer-term trends. Some evidence that cannabis-related ED visits among youth in Ontario were increasing before legalization, suggesting pre-existing trends (Bechard et al., 2022). Data from one Toronto hospital found that 6.7% of children up to 12 years old presenting to the ED with cannabis intoxication were admitted to the ICU. The ingestion of cannabis edibles was a high predictor for ICU admission (Cohen et al., 2021). More recent data show significant increases in ED visits and hospitalizations for children following the introduction of edible cannabis to the legal market (Myran, Cantor, et al., 2022). These findings highlight the importance of ongoing public education on potential health risks and safe product storage.

The increase in ED visits extends beyond children. Research examining cannabis-attributable ED visits in Ontario showed that visits significantly increased during the COVID-19 pandemic and removal of retail store caps in Ontario (March 2020 to May 2021) (Myran, Pugliese et al., 2022). A mean monthly rate of 12.1 cannabis-attributable ED visits per 100,000 residents was reported between March 2020 and May 2021, compared with 6.6 prelegalization (January 2016 to September 2018) and 9.7 immediately postlegalization (October 2018 to February 2020). The increase in ED visits was greater among those aged 15–24 years. Unfortunately, available data do not show whether ED visits were associated with legal or illegal cannabis.

#### **Mental Health**

Self-reported survey data show that cannabis use is more prevalent and frequent among people with self-reported poorer mental health (Health Canada, 2021b; Konefal et al., 2019; Rup et al., 2021). For example, in the 2021 CCS, 14% (12% female, 16% male) of those who reported excellent mental

health also reported previous 12-month cannabis use, compared with 51% (50% female, 54% male) of those who reported poor mental health (Health Canada, 2021b).

However, given that mental health conditions such as cannabis use disorder take time to develop and to be detected, it may be too soon to see the effects of cannabis legalization on mental health overall. Also, cannabis-related hospitalizations for psychosis were increasing before legalization. For example, research comparing cannabis-induced ED visits in Ontario and Alberta between 2015 and 2019 found that the increase was not associated with legalization (Callaghan et al., 2022). Other research showed that different approaches to retail regulation affect ED visits at different rates (Myran, Pugliese et al., 2022).

People's perceptions of the risk of cannabis use on mental health has changed since legalization. In the 2021 CCS, 65% of people living in Canada perceived daily cannabis use to increase the risk of mental health problems, which was unchanged from 2020 (66%) but significant decreased from 2019 (75%) (Health Canada, 2021b). Perception of risk varied by cannabis use. In 2021, significantly more people who did not use cannabis perceived daily usage to increase the risk of mental health problems compared with people who did use cannabis (Health Canada, 2021b).

### **Cannabis-Impaired Driving**

Overall, self-reported driving after cannabis use remained unchanged after legalization and during the COVID-19 pandemic (Fischer et al., 2021; Health Canada, 2021b; Rotermann, 2021). In the 2021 CCS, driving after cannabis use was unchanged from 2020 estimates. One in five previous 12-month cannabis consumers reported driving two hours after smoking or vaping cannabis, which was unchanged from 2020 (22%) but significantly decreased from 2019 (26%). Similarly, 13% of consumers reported driving four hours after ingesting a cannabis product, which was unchanged from 2020 (13%) but significantly decreased from 2019 (16%). In both 2020 and 2021, 18% of respondents reported driving after consuming both cannabis and alcohol. Driving after cannabis use was more common in males than females for smoking or vaping cannabis, eating cannabis products, and combining cannabis with alcohol. Conversely, recent data from British Columbia show a two-fold increase in delta-9-tetrahydrocannabinol (THC) being detected in injured drivers since legalization The highest increase was in drivers older than 50 years and males (Brubacher et al., 2022), which highlights the need for targeted interventions and education across age groups and by sex and gender.

According to the 2021 Annual National Report to Inform Trends and Patterns in Drug-Impaired Driving, no roadside surveys have been conducted in the provinces or territories since cannabis legalization, limiting our comparisons to prelegalization data (Public Safety Canada, 2022).

#### **Home Cultivation**

Rates of home cultivation have significantly increased following legalization among previous 12-month cannabis consumers (Wadsworth, Cristiano et al., 2022). However, home cultivation rates among previous 12-month consumers from 2020 to 2021 remain unchanged (Health Canada, 2021b). Almost one in 10 cannabis consumers living in Canada reported home cultivation in 2020 (Wadsworth, Cristiano et al., 2022), with men aged 55–64 years reporting the highest rates of home cultivation (Cristiano et al., 2022). In the 2021 CCS, 5% of female and 7% of male respondents reported growing cannabis in their home in the previous 12 months. The 2020 CCS and data from the 2020 International Cannabis Policy Study found that 3% and 2%, respectively, of those reporting home cultivation were not previous 12-month cannabis consumers themselves (Health Canada, 2020a; Wadsworth, Cristiano et al., 2022).

Recent data suggest most home cultivators are growing the cannabis within the *Cannabis Act's* limits (four plants or fewer)(Health Canada, 2021b; Wadsworth, Cristiano et al., 2022). Rates of home cultivation were reportedly lower in Quebec and Manitoba, where home cultivation is prohibited. Further research may be needed to compare legal and illegal sources of seeds and plants, and whether cultivators are consuming or illegally selling their product.

### **Deter Criminal Activity**

By nature, data on criminal activity are difficult to establish. However, available evidence suggests a strong presence for online advertising of illicit products since legalization (Boyd & Reid, 2021). In 2021, most illegal cannabis advertisements were on websites (87%), with a small proportion on social media, single vendor shops and cryptocurrency markets (Décary-Hétu et al., 2021). Resources needed to interrupt these channels are limited and likely require further attention and investment (Boyd & Reid, 2021).

Research is lacking about organized crime and cannabis since legalization. However, recent data show that the percentage of cannabis expenditures for licensed nonmedical cannabis has been slowly increasing since legalization, while expenditures for unlicensed nonmedical cannabis has been slowly decreasing (Bouchard et al., 2021). By the end of June 2021, licensed cannabis expenditures accounted for 55% of cannabis expenditures, suggesting illegal players or organized crime no longer dominate the market but remain a major player (Bouchard et al., 2021).

Self-reported survey data show a similar pattern. The use of the illegal cannabis market appears to be significantly decreasing postlegalization (Health Canada, 2021b; Rotermann, 2021; Wadsworth et al., 2021). For example, in the CCS, 19% of cannabis consumers reported obtaining their cannabis from illegal sources (e.g., storefront, online, dealer) in 2019, compared with 9% in 2020 and 6% in 2021 (Health Canada, 2019; 2020a; 2021b). Conversely, 43% of previous 12-month cannabis consumers reported obtaining cannabis from legal sources (e.g., storefronts or online) in 2019, compared with 54% in 2020 and 63% in 2021. A slightly greater percentage of females (66.8%) usually obtained their cannabis legally in 2021 than males (62.1%) (Health Canada, 2021b).

## Reduce the Burden on the Criminal Justice System

There has been a dramatic reduction in reported cannabis incidents and charges following legalization (Appendix) (Callaghan et al., 2021; Owusu-Bempah et al., 2021). However, the extent of the reductions varies across racialized populations (Owusu-Bempah et al., 2021). Limited available data show that the continuation of the overrepresentation of racialized populations in cannabis charges that preceded legalization.

Reductions in cannabis charges have been particularly evident for those older than 18 years. Youth involved with the criminal justice for cannabis possession have also experienced significant declines in overall possession and trafficking charges, with variation across the provinces and territories and by sex (e.g., males represent most cannabis trafficking and sales charges) (Owusu-Bempah et al., 2021). Moreover, the reduction in youth possession of cannabis federal charges was not counteracted by provincial violations for possession under five grams of cannabis. Although the number of cannabis possession charges has decreased since legalization, research shows that the remaining charges have been harsher. The percentage of possession incidents among youth that resulted in a criminal charge increased from pre- to postlegalization. Since legalization, some provinces (e.g., in Ontario and Prince Edward Island) have created diversion programs to keep youth out of the criminal justice system for cannabis (Owusu-Bempah et al., 2021). More information about the effect of diversion programs on youth is important to inform future policies in alignment with the objectives of the *Cannabis Act*.

One area that has seen increases in charges has been for driving while impaired. Comparing the charges for impaired driving pre- and postlegalization shows a 369% increase from 2015 to 2019 (Owusu-Bempah et al., 2021; Public Safety Canada, 2022). These data include all drugs, not just cannabis, so further research is needed to separate these data. As mentioned previously, recent research among drivers in British Columbia shows that the percentage of injured drivers where THC was detected doubled postlegalization. The increase was greatest among older males (Brubacher et al., 2022). The number of police officers trained in drug recognition has also increased during this time, increasing capacity to lay charges.

Because cannabis legalization is relatively new in Canada, there has been little research conducted on police effectiveness, police workload and the impact on crime (Boyd & Reid, 2021).

### Provide Access to a Quality-Controlled Supply of Cannabis

### **Market Expansion**

Access to regulated product continues to grow as the expansion of the retail market continues to accelerate. The total licensed indoor growing area increased from 1,366,861 square metres in October 2019 to 1,807,536 square metres in March 2021 (Health Canada, 2021a). The growth has not been linear, with reductions in May, September and December 2020, potentially associated with the impacts of the COVID-19 pandemic as well as seasonal variation. Conversely, the licensed outdoor growing area has increased steadily from 232 hectares in October 2019 to 772 hectares in March 2021 (Health Canada, 2021a).

The number of retail locations has also continued to increase across Canada, with the most notable increase in Ontario (Table 1). Ontario initially permitted 25 retail outlets, allocated via lottery, which was subsequently expanded to 67 (also by lottery). As of January 2020, Ontario began accepting licence applications without a cap and reducing restrictions on the number of licences permitted to a single owner (from 10 until January 2020 to 30 in September 2020 and 75 in September 2021). Quebec, Manitoba and Nova Scotia also increased the number of government-operated stores. As of September 2021, Alberta had the most stores per 100,000 residents aged 15 years and older, and Quebec had the fewest.

Table 2 Cannabis retail licences issued or storefronts opened

Jurisdiction	Number of licences as of Aug. 28, 2020	Number of stores per 100K residents aged 15 and older as of Aug. 28, 2020	Number of licences as of Sept. 7, 2021	Number of stores per 100K residents aged 15 and older as of Sept. 7, 2021
British Columbia	282	6.4	399	8.9
Alberta	507	14.1	677	18.7
Saskatchewan	44	4.6	109	11.5
Manitoba	31	2.8	109	9.7
Ontario	58	0.5	1,072	8.5
Quebec	40	0.6	77	1.1
New Brunswick	20	3.0	20	3.0
Nova Scotia	12	1.4	33	3.9
Prince Edward Island	4	2.9	4	2.9
Newfoundland and Labrador	25	5.5	33	7.3
Yukon	5	14.2	5	14.0
Northwest Territories	5	13.8	6	16.4
Nunavut	0	0.0	1	3.7

**Note:** These data represent all licences issued for public and private brick-and-mortar storefronts. They do not include online-only retail operators. All data were retrieved from provincial and territorial retail cannabis oversight body websites or their subsidiaries (CCSA, 2021b). Population estimates were retrieved from Statistics Canada (2022)

Cannabis retail sales have also increased overall, with some month-to-month fluctuations (Figure 1) (Myran, Pugliese et al., 2022). The reduced sales in Ontario during March, April and May 2020 coincide with the first COVID-19 lockdown. Cannabis retail was initially designated as a nonessential service and closed for a brief period (April 4 to 7, 2020), after which stores were able to open with curb-side pickup or home delivery (CCSA, 2021c). Prince Edward Island also deemed cannabis retail a nonessential service, closing stores entirely from March 19, 2020, to May 22, 2020 (CCSA, 2021c).

Unfortunately, retail sales data provided by the provinces and territories do not collect information on the age, sex or gender of those who purchased cannabis legally.

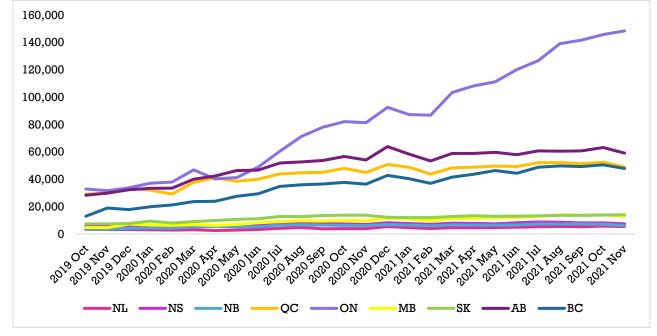


Figure 1 Retail sales (in Canadian dollars) by province, October 2019 to November 2021

Source: Statistics Canada, 2021a

**Note:** Nunavut is not shown as no retail stores were present. Prince Edward Island, Yukon, and Northwest Territories data are not shown as data from all months were not available.

Although the COVID-19 pandemic may have curtailed some in-person retail capacity, it provided an opportunity to expand online sales. For example, before the new directives for online sales and curbside delivery in Ontario, online retail had been restricted to the government-operated Ontario Cannabis Store. Recent data from the *International Cannabis Policy Study* (ICPS) show a slight increase in the proportion of online sales during the start of the pandemic, from 25% of previous 12-month cannabis consumers reporting internet or mail-order purchases in 2019 to about 31% in 2020 (Hammond et al., 2020; Wadsworth & Hammond, 2021). This increase may be attributed to social distancing and lockdown measures as well as to increased availability of legal online sources. In the most recent CCS, 29% of respondents who reported previous 12-month cannabis use had used legal online retailers in 2020, compared with 28% in 2021 (Health Canada, 2021b).

### **Products and Availability**

Since their introduction to the market, cannabis extracts, edibles and tinctures have increased in sales. Following an initial scale-up period that saw limited availability of edible cannabis in particular, new products and formats, such as cannabis beverages, are now widely available. As illustrated in Figure 2, dried cannabis remains dominant, with edible cannabis experiencing the most rapid increase in units sold, closely followed by cannabis extracts (Health Canada, 2021c). Clones and seedlings have played a very small part in the market to date; however, seeds have seen an increase in units sold from 689 in December 2019 to 8,450 in March 2021. The shift in product preference is also supported by survey data. In the CCS, 68% of previous 12-month cannabis consumers reported using dried cannabis in 2021, a significant decrease from 74% in 2020 and 77% in 2019 (Health Canada, 2021b). Comparatively, 53% of consumers reported using edible cannabis, a significant increase from 49% in 2020 and 44% in 2019.

Product preference also varies by sex. A greater percentage of males (74%) reported consuming dried cannabis in 2021 compared with females (61%), whereas a greater percentage of females reported consuming edible cannabis (58%) in 2021 compared with males (50%) (Health Canada, 2021b).

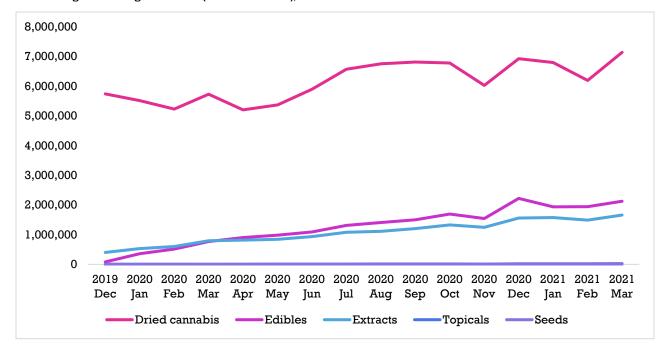


Figure 2 Packaged units sold (non-medical retail), December 2019 to March 2021

Source: (Health Canada, 2021c)

The introduction of new product formats brought new challenges for determining equivalencies for possession limits. In the regulations, all equivalencies, except for seeds, are based on weight rather than dosage or amount of THC (*Cannabis Act, SC 2018, c 16*, Schedule 3). Considerable variation in product composition (THC, cannabidiol [CBD], and other cannabinoids and terpenes) results in considerable variation across product types for intoxication potential, health risks and monetary value within the permitted possession limit of 30 grams or its equivalent. Product composition, consumption trends and health implications information will be important for a detailed understanding of the effects of regulation.

## **Additional Impacts and Observations**

## Economic Impact

Sales from regulated cannabis continue to increase as more consumers transition to the legal market. Despite the COVID-19 pandemic, where most retail operations of non-essential goods experienced significant contractions in sales, the legal cannabis market continued to grow. Data comparing monthly sales increases from December 2019 to December 2020 show significant growth across jurisdictions, with an increase from \$148 million sold in December 2019 to nearly \$300 million in the same month of 2020 (Statistics Canada, 2021a).

### **Production and Retail Models**

Significant industry growth continues to be led by a select number of large producers. Efforts have been made at the federal level to open the door to smaller producers through 'micro-cultivation' licences. Individual jurisdictions are also introducing opportunities for small-scale producers with the intention of increasing their ability to compete with larger operations. Ontario, New Brunswick, and British Columbia have introduced farmgate programs to allow approved processors to sell directly from their production facilities (Government of British Columbia, 2021; CBC News, 2021).

On the retail side, rapid market expansion in numerous provinces with private distribution chains have seen varying degrees of market capture among the largest corporations. A scan of Ontario retail shows that the top 10 retail licence holders accounted for 30% of retail licences (Ontario Cannabis Store, 2021). Alberta previously had a limit of 15% allowable market share for any single licence holder; however, this cap was removed in 2020.

### Advertising and Promotion

Health claims related to cannabis products continue to be prohibited under the *Cannabis Act*; however, research indicates a growing prevalence of sellers marketing products based on potential health benefits, particularly related to CBD content (Zenone, Snyder & Crooks, 2021). For example, in research examining product descriptions of CBD products in 2020, over half of product descriptions made a therapeutic claim for medical conditions (Zenone, Snyder & Crooks, 2021). In 2019, Health Canada demonstrated through consultations with people living in Canada that there is a strong interest for cannabis health products (CHP) that do not require practitioner oversight, e.g., cannabidiol (CBD) products (Health Canada, 2020b). Growing interest in CHPs, particularly around CBD products, has brought increased attention to this market, without corresponding research to establish their safety and efficacy. Requiring robust and objective scientific research to support health claims made on CBPs is important for consumer protection.

Preliminary research suggests that youth are directly exposed to cannabis advertisements. A pilot study conducted between March 2020 and February 2021 reported youth were exposed to an average of two cannabis advertisements over a nine-day period (Noël et al., 2021). Advertisements were commonly seen online and from public figures. Further examination of advertisement content and targeted populations, as well as federal capacity for monitoring and enforcement, will be helpful in informing approaches to ensure compliance with regulations.

## **Jurisdictional Authority**

Cannabis production and sales in First Nations communities continue to raise questions about jurisdictional authority. The three-year legislated review will provide further opportunity to continue this dialogue, with one of the three objectives of the review being "the impact of cannabis on Indigenous persons and communities."

Home cultivation continues to be permitted in all jurisdictions except for Quebec and Manitoba. Limitations on home cultivation in Quebec are currently under review by the Quebec Court of Appeals and may open the door for regulatory amendments to allow home cultivation in the province. Reversal of restrictions within Quebec could potentially have implications for regulatory change in Manitoba.

Some jurisdictions, including British Columbia and Ontario, have begun to explore the introduction of on-premise cannabis consumption spaces, such as cannabis cafes, lounges and tasting rooms. Should on-premise use move forward, maintaining a public health and safety lens in the chosen

approach will help mitigate potential harms and unintended consequences (Barrass, Kilborne & Jesseman, 2021).

### **Equity**

Equity plays an important role in evaluating the impact of the Cannabis Act, including equitable access to the regulated cannabis supply, equitable market participation, and equitable health and social impacts or lack thereof, including criminal justice contacts. Recent data suggest that high outlet density is more likely to have occurred in low-income areas (Myran et al., 2021), with the potential to result in variation in use and harms (Myran et al., 2019). Tighter controls on outlet density at the municipal level may alleviate high concentrations and help to mitigate related health and social impacts.

International evidence points toward opportunities to increase representation at all levels within the sector from diverse populations, including racialized, female-identified, and those disproportionately impacted by the effects of prohibition (Perkins, 2021). CCSA is currently funding research to inform best practices and opportunities for building equity into the cannabis sector in Canada.

#### Research

Certain restrictions in access to government data have raised concerns about the barriers to researching the impacts of legalization. For instance, in a recent analysis of Canada's legal cannabis market, Armstrong (2021a) expressed the lack of access in provincial legal sales and pricing data, restricting the precision of post-legalization market estimates. Provincial governments report these data to Health Canada, but it is not readily available to researchers, stakeholders, or the public (Armstrong, 2021b).

Another barrier to research is the lack of data on the illegal market, which is notoriously difficult to collect and often unreliable.

While there remain significant research gaps on the impacts of legalization, efforts are ongoing to address key policy questions. Health Canada has invested \$10 million in research on cannabis and mental health, undertaken by Mental Health Commission of Canada. Other partnerships made available through Health Canada funding are providing critical evaluations of policy directions, particularly to better inform the legislated three-year review and continued regulatory amendments. Key areas of focus include, but are not limited to, consumer product preferences and consumption patterns, ongoing activities in the illicit market, the impact of legalization on youth consumption, and consumer knowledge of product composition and associated health impacts.

### Conclusion

The information provided in this brief is primarily observational. There are numerous studies underway that will dive more deeply into the existing data and create new data sources. Efforts to increase data access and sharing across jurisdictions, as well as improved data collection, will enhance our understanding of the impacts of cannabis legalization.

Ongoing data collection at the federal and institutional level are key to evaluating the impacts of legalization. Targeted cross-jurisdictional efforts, such as the CCS and the ICPS are important to our understanding of key gaps and challenges with legalization. And as the COVID-19 pandemic continues alongside the expansion of retail availability, it will also be important to maintain a focus on changing consumption patterns, reasons for use, and impacts on public health and safety.

As we move forward, ongoing research into cannabis legalization impacts will be critical for informing policy direction both in Canada and internationally. The three-year legislative review will examine the administration and operation of the *Cannabis Act*, and in particular its impacts on public health, mental health, the health and consumption patterns of young persons, the impact on Indigenous persons and communities, and on the impact of home cultivation.

The Canadian cannabis retail market remains years away from stability, particularly with the impact of the COVID-19 pandemic. Regulatory development will continue at all levels of government. Close monitoring of the public health, public safety, and broader social impacts of legalization is essential to minimizing harms and maximizing benefits of legalization. Key trends to monitor identified in this brief include:

- New product trends, including the increase in vaping among youth and young persons,
- Consumer transition from the illegal to the legal market,
- Consumer awareness and understanding of product composition and effects,
- Mental health and cannabis-related presentations to EDs,
- · Impaired driving and
- Illegal online sales.

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## **Appendix**

### Health and Consumption Data

There are several national surveys collecting data on patterns of consumption. The National Cannabis Survey (NCS), conducted by Statistics Canada among people living in Canada aged 15 and older, is a representative survey initiated in the first quarter of 2018 and completed its final quarterly data collection in the fourth quarter of 2019. The survey was also conducted in the fourth quarter of 2020 (Rotermann, 2020). The Canadian Cannabis Survey (CCS) is conducted annually since 2017 by Health Canada among people living in Canada aged 16 and older. Due to the method (i.e., informing respondents of the topic when recruiting), the CCS may over-represent people who use cannabis and therefore provide higher estimates than other surveys. The International Cannabis Policy Study is a repeat cross-sectional survey among people living in Canada aged 16-65, led by a research team at the University of Waterloo, conducted annually since 2018 (Hammond et al., 2020).

Additional data sources include targeted private surveys focusing on retail purchase patterns and broader health surveys that include questions on cannabis consumption.

Unfortunately, there are very little data available on demand for and access to treatment for individuals experiencing problematic cannabis use (CCSA & MHCC, 2021). Hospitalizations associated with cannabis use are captured by the Canadian Institute for Health Information.

### Criminal Justice Data

While the *Cannabis Act* has legalized cannabis for people living in Canada aged 18 and older, there are certain activities that remain an offence, such as unlicensed sale and distribution of cannabis or possession for minors. Statistics Canada publishes annual incident-based crime statistics (Moreau, 2021; Statistics Canada, 2021b). Table A1 and Figure A1 provide a brief example of the data available, with additional statistical, charge, and geographical breakdowns available up to 2020. Table A1 presents select data for 2020, the two years in which offences under the *Cannabis Act* were in place. As shown in Figure A1, all charges under the *Controlled Drugs and Substances Act* were clearly declining before legalization and continued to decline after cannabis was legalized. It is important to note that incident data are not a direct indication of the prevalence of illegal activities as they also reflect police priorities and resources. There are also significant gaps in racial and sex/gender data required to conduct equity-based analysis, which is critical in evaluating the impact of the *Cannabis Act* on populations such as racialized youth and Indigenous peoples.

CCSA and others conducted additional analyses of criminal justice data. CCSA will also be updating the Costs of Substance Use and Harms study in 2022 to include 2019 and 2020 criminal justice estimates for cannabis-related costs.<sup>1</sup>

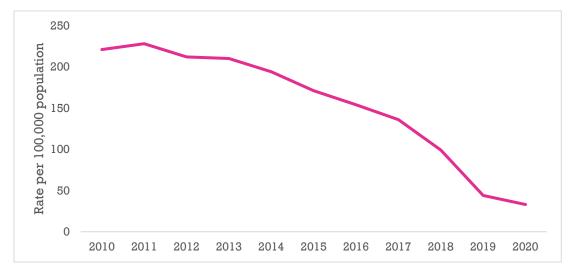
<sup>&</sup>lt;sup>1</sup> For the previous report including data up to 2017, please see <a href="https://www.ccsa.ca/canadian-substance-use-costs-and-harms">https://www.ccsa.ca/canadian-substance-use-costs-and-harms</a>

Table A1: Incident-based crime statistics for Cannabis Act offences, 2020

Rate per 100,000 population	Total Cannabis Act offences	Possession	Distribution	Sale	Import/ export	Production	Anything for use in production/ distribution	Use of young person in commission	Other Cannabis Act
Total incidents	32.78	3.63	2.90	2.28	19.87	2.68	0.42	0.16	0.84
Persons charged (12+)	8.43	1.84	2.65	1.84	0.09	1.73	0.07	0.03	0.19
Adults charged (18+)	8.29	1.58	2.70	1.80	0.09	1.86	0.05	0.02	0.18
Youth charged (12-17)	10.19	5.07	2.05	2.29	0.00	0.04	0.25	0.20	0.29
Youth not charged (12-17)	12.56	9.41	0.98	1.23	0.04	0.08	0.00	0.08	0.74

Source: Statistics Canada (2021b). Table: 35-10-0177-01

Figure A1: Cannabis offences for Controlled Drugs and Substances Act and Cannabis Act, police reported rates in Canada, 2010-2020



Cannabis offences include possession, trafficking, production, distribution, sale, importation or exportation, and "other." Source: Statistics Canada (2021c)

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