

EDC ECONOMICS

# HIGH HOPES FOR THE MEDICAL CANNABIS MARKET IN CANADA

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## Summary

**Canada has a first-mover advantage for products derived from medical cannabis, along with a technical advantage flowing from the recreational cannabis industry.**

- From the public sector, Canada has a legal, regulatory and institutional framework and trained personnel to administer a medical cannabis system.
- From the private sector, there are market mechanisms and investor interest to foster growth for the domestic market with an eye to expand into global markets.

**Led by Europe and Australia, there's increasing global demand for such products to treat chronic health problems and manage pain.**

- An aging global population is driving increases in health expenditure and research, which is adding to potential markets for medical cannabis use.

**Canada currently accounts for about 16% of the global cannabis market, although the medical cannabis market is only 3% of the global total.**

- Despite having a comparatively prominent position, shipment volumes have declined in recent quarters and projections show continued declines through 2024.

**Notwithstanding challenges, Canada has good prospects for future growth if companies expand via trade or direct investment into markets abroad.**

- Larger, vertically integrated companies have the greatest potential to penetrate new markets and boost trade in goods and services.
- Small- to medium-sized enterprises (SMEs) are more likely to succeed if they focus on niche products and the “extractor” role, which is less investment-intensive.

## Introduction

This report describes the medical cannabis market in Canada. The report summarizes industry data, and profiles prospects for exports. The focus is on the medical and health-related segment of the market, not the recreational segment.

## Medical cannabis outlook

The global medical cannabis industry generated an estimated \$17 billion in sales in 2020. According to recent market data for Canada, cannabis revenues approximated \$2.6 billion in 2020, a 120% increase from 2019. Therefore, the Canadian market accounts for about 16% of the existing global market. But medical cannabis is only a small share of this. In 2020, medical cannabis revenues approximated \$470 million, or 18% of total Canadian cannabis revenues and 3% of the global market.

Medical cannabis is a high-growth market, with one estimate projecting sales by 2025 of \$56 billion, a 23% compound annual average growth rate<sup>1</sup>. Growth is expected in all regions of the world as medical

uses expand and are increasingly legalized and scrutinized by regulatory authorities. Products have been approved for medical use in Australia and are pending approval in Canada, Israel and Spain. Uses include treatment for pain management, neuronal disorders, muscular and joint pains, and nausea for chemotherapy patients.

### Outlook for SMEs

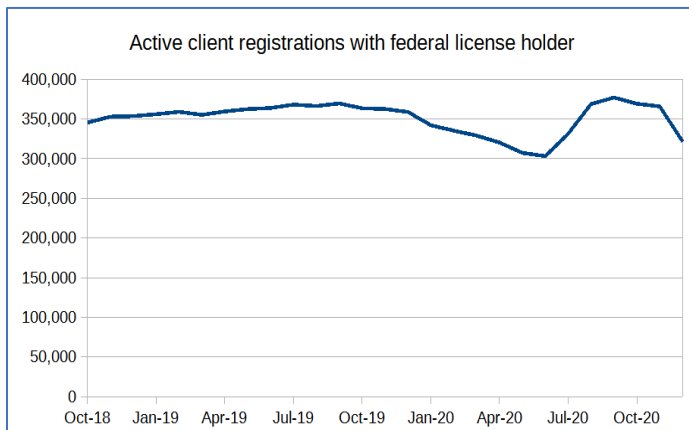
Opportunities for SMEs in Canada relate to how they build extraction capabilities from different parts of the cannabis plant to create a host of products, including oils, capsules, topicals, vapes and beverages. More broadly, the process of growing marijuana or being a vertically integrated manufacturer is capital-intensive and less feasible for most SMEs.

Being an extractor allows a SME to operate with less investment and deliver targeted value to a medical user. A medical cannabis user will, in many cases, find it difficult to smoke the plant directly. As an extractor, SMEs can refine chemicals to control the response they have on the user and treat a specific ailment.

## Canada’s medical cannabis industry

Cannabis for medical use was legalized in Canada in 2001, but not until 2013 did Health Canada begin issuing licenses for production. In 2018, the *Cannabis Act* was passed, making Canada the second country after Uruguay to legalize recreational marijuana. Canada witnessed significant growth in the recreational market following legalization.

Since the announcement, officially registered users of medical marijuana have declined as earlier

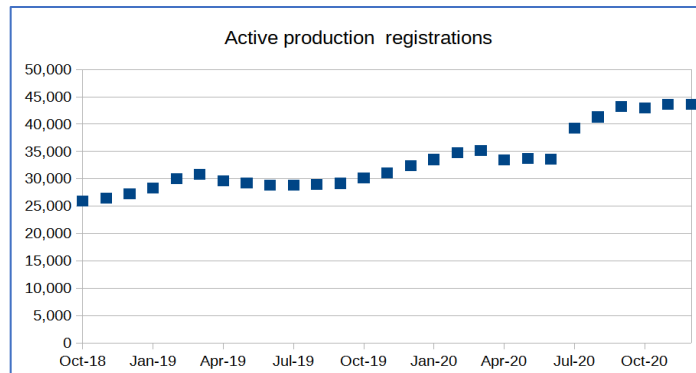


consumers felt comfortable buying cannabis available for recreational uses. Client registrations<sup>2</sup> peaked at nearly 370,000 in September 2019, dropping to a low of 303,000 in June 2020. However, growth has resumed and Canadian medical cannabis registrations have averaged about 351,000 since October 2018, roughly 1% of the Canadian population. Ontario (51 %) and Alberta (24%) account for three-quarters of the Canadian total. Meanwhile, medical

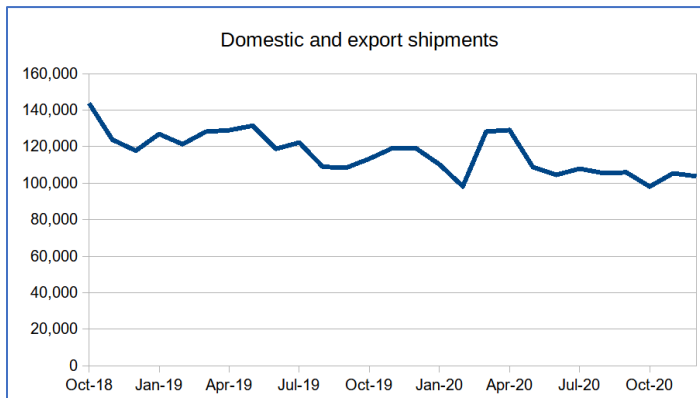
cannabis has indirectly benefited from the legalization of recreational cannabis due to increased investment. This has attracted bigger players and has brought a cultural shift towards increased use of cannabis.

Cannabis is a highly regulated industry threatened by the illegal market. With competition intensifying and high barriers to entry, there's still a large illegal market for cannabis. However, this graphic shows licensed production<sup>3</sup> has steadily grown since late 2018, apart from a levelling of licensing when COVID-19 hit.

The growth of medical cannabis products is heavily influenced by the qualifying conditions that cannabis can treat. As the list grows, so too will the potential patient base. As patients with treatment-resistant conditions become frustrated with traditional medications, pressure has mounted on regulators to legalize medical cannabis. Access is aided further by health-care schemes to support patients with prescription costs. Additionally, ease of use of cannabidiol (CBD)-based oils, topicals and edibles is increasing the demand among patients.



But while production has increased, shipments of medical cannabis have shown declines in recent



quarters<sup>4</sup>. Producers have surplus inventories that have also triggered reduced prices in some cases, impinging on margins.

The graphic on domestic and export shipments shows the volume of shipments within Canada, as well as to export markets. The data are consolidated, so it isn't possible to present exports separately. The data are also presented as units rather

than in financial terms. More than half of shipments originate from Ontario and about a quarter of shipments are from Alberta. All other provinces and territories combined account for the remaining quarter of volume produced and shipped.

## Cannabis as a product

Cannabis plants have naturally occurring compounds in them known as cannabinoids. The best-known cannabinoids are THC (tetrahydrocannabinol) and CBD. These two elements are psychoactive, but have very different reactions when consumed. THC, the common chemical associated with recreational cannabis, creates a euphoric "high" in the body. CBD doesn't produce a similar effect. Rather, products with high CBD concentration help to alleviate medical distress without pushing the patient into a euphoric "high." The health benefits of cannabis are being researched, but evidence suggests modest benefits for chronic pain and multiple sclerosis.

## Canadian advantage

Legalization of recreational cannabis puts Canada in a position of increased cultural and social acceptance of cannabis use, along with resources and capabilities to produce world-class products that benefit patients. Canada is also in a position to achieve production scale, investment and demand that can potentially be leveraged to create new medical products, which could increase exports.

The creation of edibles or beverages delivers the benefits of cannabis in a familiar form to consumers and expands the cannabis market. It's not economically feasible or competitive for Canada to export the cannabis plant due to regulations, the currently prominent role played by the black market, and perishability of the product. But exports are possible through research and development (R&D) and processing, and the export of goods or services.

In the case of goods, derivative products offer a niche opportunity to deliver value competitively on a global scale. This is true for large-scale companies, as well as SMEs. With services exports, contracts need to protect intellectual property rights, should manufacturing occur outside Canada.

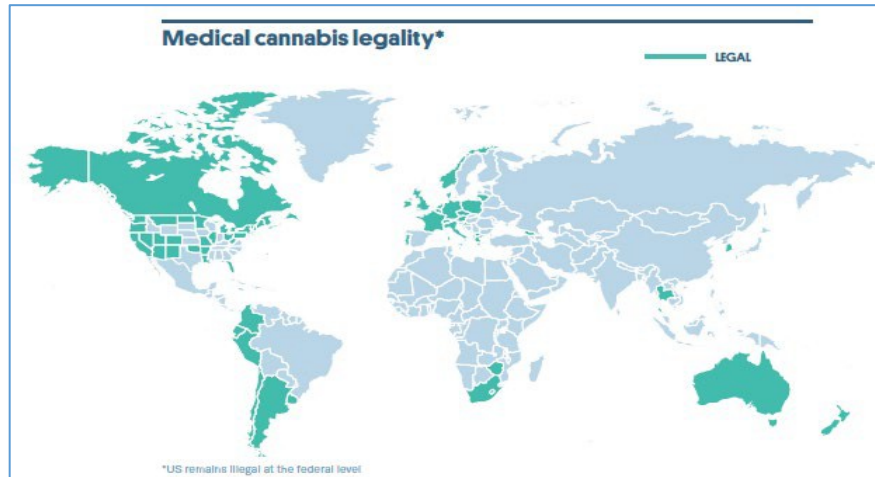
## Target markets

Cannabis is legal in 25 countries, mainly high-income Organisation for Economic Co-operation Development (OECD) countries in Europe and Australia, as well as Latin American markets where there are substantial middle classes with high levels of purchasing power. Several U.S. states have legalized cannabis. These markets represent significant potential targets for Canadian medical cannabis exports, including SMEs. Where there are regulatory barriers to cross-border trade, there's also the possibility of Canadian outward foreign direct investments, enabling medical cannabis producers to establish upstream facilities in markets abroad where R&D and local production and processing can occur.

Market drivers by region:

- North America—including Mexico—represents the largest market. This is driven by research into medical treatments supported by laboratories, clinics, hospitals, and pharmaceutical, bio-tech and other companies.
- The same drivers are expected for Europe, which has a larger and, on average, older population than North America, and may portend higher growth in the coming years.
- In Asia-Pacific, demographics are driving growth of the market, where cancer rates are rising among the elderly, and medical cannabis is used for pain management for the rising number of victims in car accidents.
- In Latin America, growth is being spurred by the ability to produce high-quality products more cheaply than in northern hemisphere markets, and to build needed facilities more cheaply to support needed infrastructure.
- In Africa and the Middle East, a growing number of countries are increasing investment and health expenditure, serving as potential demand for medical cannabis.

Countries where cannabis for medical uses is legal are highlighted below.



Source: Prohibition Partners

## Industry drivers

There are two key industry drivers specific to the medical side of the cannabis market:

- Growing health expenditure and research into alternative treatments for a range of illnesses. This includes chronic diseases, like cancer and brain disorders, as well as milder treatments to alleviate pain and suffering. Some research shows that medical cannabis can kill cancer cells. Migraine headaches, arthritis and other ailments are also treatable with medical cannabis.
- The aging population in many countries. Medical cannabis is being viewed as a way to treat pain and other ailments that commonly afflict the aged such as sleep disorders, anxiety, and pain caused by chronic illnesses.

### Constraints to industry growth and exports

While many countries (and states) have legalized medical cannabis, broader institutional frameworks aren't fully in place, including:

- regulations;
- quality assurance and supervision;
- trained staff; and
- integrated information systems that link to health authorities, standards associations, and retail distributors.

Until these mechanisms are in place and operational, market development will remain slow.

In Canada, quantities of cannabis exported or imported are governed by the *Cannabis Regulations*. The holder of an export or import permit must provide information related to the shipment to the Minister of Health, including the quantity of cannabis that was imported or exported, within 15 days after the date of exportation or importation.

These factors are relevant for global trade, as the above constraints also mean that customs and tax authorities, health and drug administrators, and related authorities need to update their training and systems to accommodate international trade in medical cannabis products. Meanwhile, exporters and importers have a regulatory reporting burden.

### **Competitive rivalries are high and producers are becoming more concentrated**

The cannabis market is equally split between large, vertically integrated players and small players engaged in different parts of the value chain. SMEs can operate within the value chain, but need to be cautious about obtaining government approvals since it's a highly regulated industry. Meanwhile, there's already movement towards consolidation in the market, as shown in the recent merger between two comparatively large firms—Tilray and Aphria.

### **Supplier power is limited due to surplus output and limited exports**

Canada experienced a surge of investment shortly after cannabis was legalized for recreational use. However, this led to surplus production and inventories as other bottlenecks in the system limited the rollout of retail operations. This resulted in surplus inventories that reduce supplier power. This is an example of how Canadian producers would benefit from exports. But bottlenecks in global trade, combined with difficulties establishing market linkages, have prevented exports from increasing to alleviate challenges posed by surplus supplies.

### **The threat of product substitution and stigma in some cultures is real**

Cannabis can be substituted easily with other medication, particularly as cannabis is a relatively new product for medical uses. Since there's also a social stigma attached to the use of cannabis in many cultures, there's a risk that market penetration won't be as lucrative or substantial as forecast several years ago.

### **The threat of new entry is currently low**

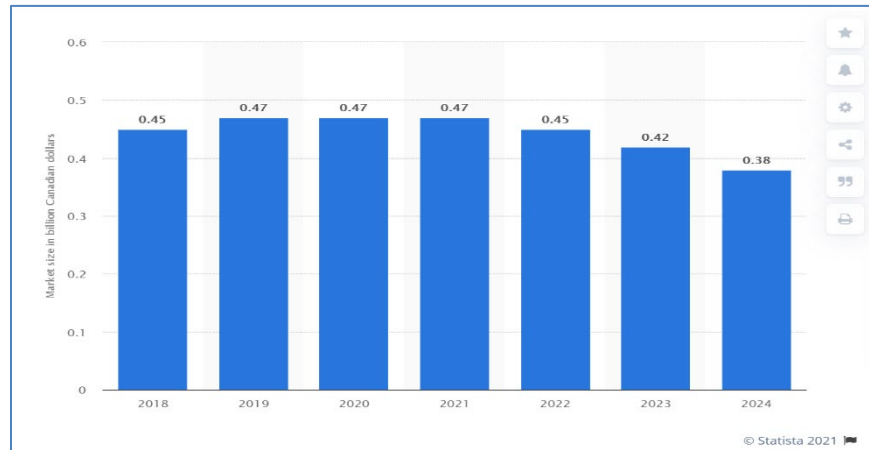
New entrants in cannabis require capital, know-how, and the ability to differentiate themselves in the new market. Coupled with regulations, this makes the threat of new entrants relatively low in current circumstances. A greater issue for the industry is the degree of consolidation that may occur following the Tilray-Aphria merger. This could involve multiple SMEs collaborating to provide a broader array of products and increased market power than smaller companies enjoy on their own.

## **Growth and the future**

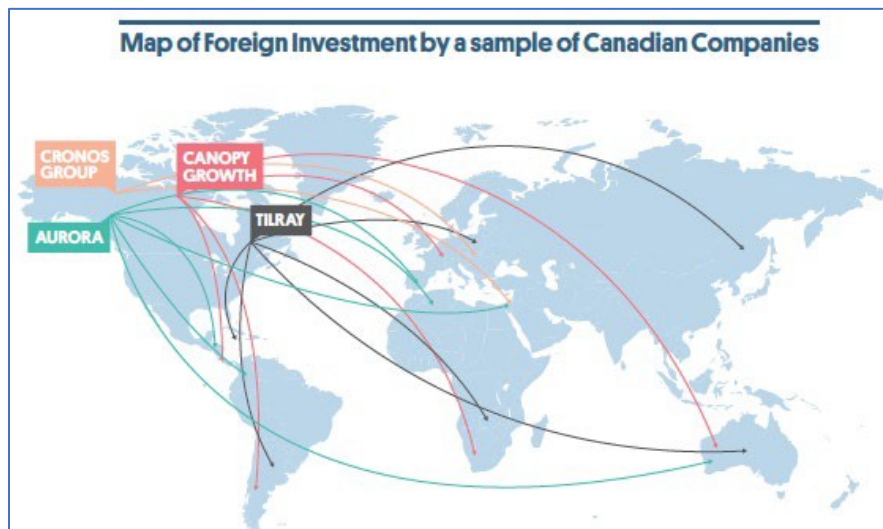
While there are reasons to be optimistic about growth prospects, there are also reasons to believe that growth may level off in the coming years if legalization slows, institutional frameworks take longer to develop, and/or investment resources are allocated in other directions in the post-COVID-19 environment (e.g., environmental, physical infrastructure, private capital to rebuild regional and national supply chains across multiple industries). These factors combined could slow growth or even supplant it with other initiatives that become higher priorities.

One source predicts the Canadian medical cannabis market will decline in revenues in the coming years. This is partly due to the continued role of the black market in cannabis sales and slow uptake among retail customers. The graphic shows expected revenues declining from \$470 million in 2020 to \$380 million in 2024.

**Predicted expenditure of the medical marijuana market (2018-2024)**



A positive development for Canadian producers in the medical cannabis field is their ability and willingness to invest abroad as a way of establishing a stronghold in promising markets. Surplus inventories have already been described, and producers in Canada would benefit from additional market outlets. Given how regulated the sector is, outward investment (CDIA) and services exports may come to characterize international trade for Canadian producers more than traditional goods exports. The map below shows the direction of CDIA among some of Canada's largest cannabis companies.



## Challenges and risks to the industry

### **Potential threats from U.S. competitors**

The American states where recreational cannabis is legal are seeing a surge in development of production and allied services. Their entry into the Canadian market through trade or investment could potentially threaten Canadian producers. At the same time, trade opportunities would be reciprocal, which would potentially provide Canadian medical cannabis producers with a far greater market opportunity. Large-scale companies would likely be able to capitalize on these opportunities, but Canadian SMEs may be challenged.

### **Trade restrictions for exporting and importing**

As a commodity, cannabis is highly regulated. Every batch is tested, certified, and can only be exported by licensed exporters. Additionally, many countries still have negative associations with cannabis as an illegal drug, which is often accompanied by severe trade restrictions on imports. While restrictions may remain in place for recreational cannabis, many believe medical cannabis may benefit from waivers or a less restrictive trade regime.

### **Dependence on black market channels**

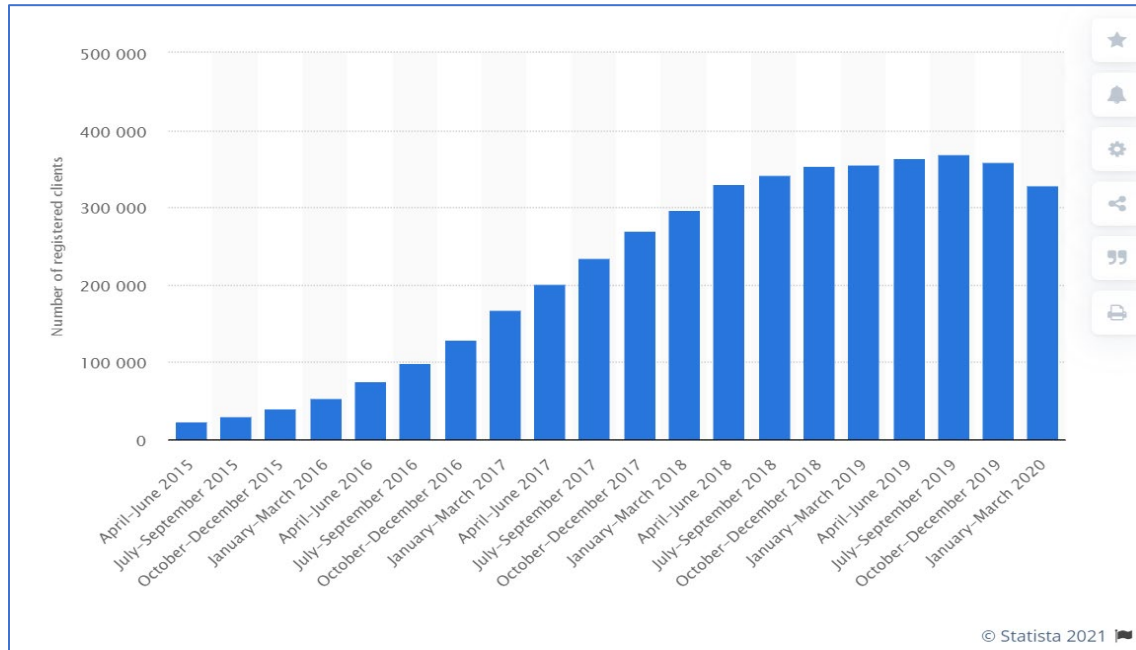
Cannabis for recreational use across the world depends on black market channels through which cannabis is most easily available. Often, obtaining cannabis for medical purposes poses hurdles that make it easier for users to simply purchase from black market channels.

### **Shifts toward decentralized production**

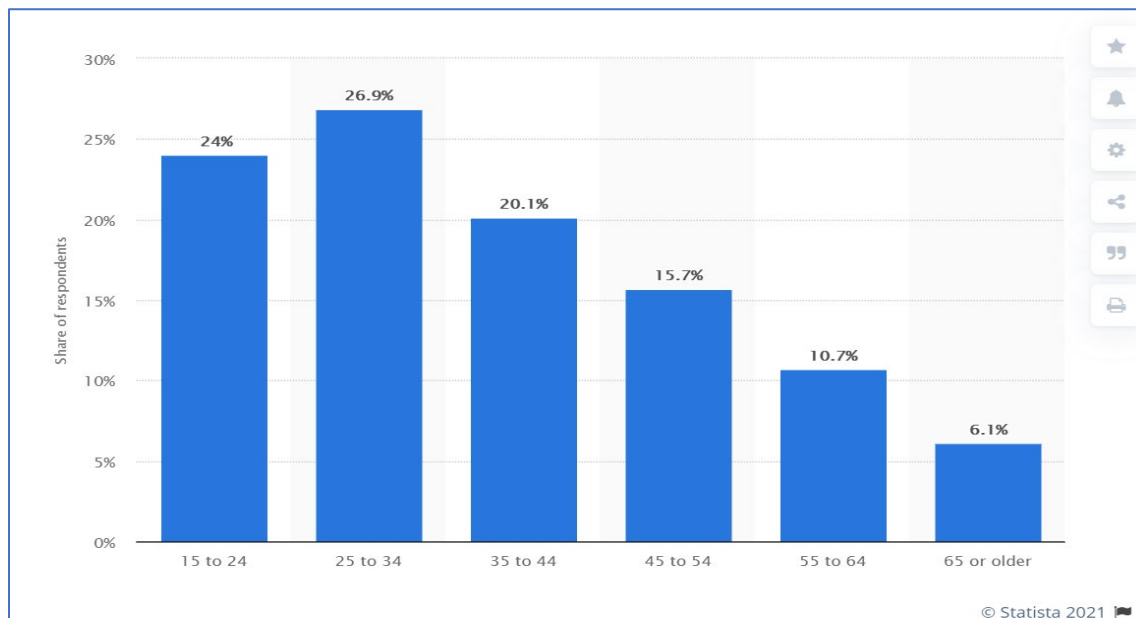
As a reflection of the need for regulatory control and maintenance of standards and testing, many countries are willing to permit production in domestic markets, but not open trade in cannabis. This is one of the reasons for Canadian outward foreign direct investment. Additional benefits of such an approach are lower costs, as in Latin America, and more diverse R&D that can potentially be scaled up over time.

## Additional graphics

## Registered medical marijuana clients in Canada



## 2019 cannabis consumption by age group in Canada



## References

Prohibition partners- *The Global Cannabis Report*, published November 2019 <https://prohibitionpartners.com/reports/>

<https://www.marketdataforecast.com/market-reports/medical-cannabis-market>

<https://mjbizdaily.com/canada-tallies-ca2-6-billion-in-cannabis-sales-for-2020-up-120-over-2019/?cn-reloaded=1>

<https://mjbizdaily.com/tilray-aphria-complete-blockbuster-marijuana-merger/>

<https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/research-data/market.html>

<https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/research-data/medical-purpose.html>

## Endnotes

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<sup>1</sup> See <https://www.marketdataforecast.com/market-reports/medical-cannabis-market>

<sup>2</sup> This is defined by Statistics Canada as the number of registrations with licensed sellers of cannabis for medical purposes that were active at the end of each month. Patients can be registered with more than one licensed seller and with Health Canada provided an original medical document was used with each registration.

<sup>3</sup> This is defined by Statistics Canada as persons actively registered at the end of each month with Health Canada to produce cannabis for their own medical purposes, or designate someone to produce it for them.

<sup>4</sup> Statistics Canada notes that under the *Cannabis Act*, it is prohibited to export or import cannabis for any purposes other than medical or scientific purposes or in respect of industrial hemp. The figures below include imports and exports for medical or scientific purposes, by permitted quantities and endorsed quantities, but do not include industrial hemp. In the figures below, “permitted quantities” refer to cannabis allowed for export or import by the export or import permits issued by Health Canada and “endorsed quantities” means that Health Canada has received confirmation that the permits were used and the amount of product that was exported or imported. Although cannabis oil ceased to be a separate class on October 17, 2019, in October 2020 Health Canada communicated a temporary adjustment to its administration and enforcement approach for inventory classified as oil due to the logistical concerns connected with COVID-19. As such, Health Canada is reporting statistic for the importation and exportation of cannabis oil.

### About this report

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This report was written by Michael Borish, reviewed by Stephen Tapp and copy edited by Karen Turner.

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