#

Cannabis Legalization in Canada

and the Clinical Laboratory

Medical laboratory professional interviews

on the workplace impact of cannabis legalization during the inaugural six months

Revision: Jun 17, 2019

**Companion Resources**

* [Hot Spot Review - What’s the Cannabis Conversation About?](https://www.csmls.org/Research/Projects%2C-Reports-Presentations/Hot-Spot-Review.aspx)
* [Cannabis in Canada: Get the facts](https://www.canada.ca/en/services/health/campaigns/cannabis.html)
* [Health Effects of Cannabis](https://www.canada.ca/content/dam/hc-sc/documents/services/campaigns/27-16-1808-Factsheet-Health-Effects-eng-web.pdf)
* [Cannabis Stats Hub](https://www150.statcan.gc.ca/n1/pub/13-610-x/13-610-x2018001-eng.htm)

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# Executive Summary

On October 17, 2018, under the royal assent of Bill C-45, the Government of Canada legalized, regulated and restricted access to cannabis for recreational use, a companion to the unchanged medicinal cannabis laws already in place. Conducted in 2017, a rapid synthesis of existing literature found mixed evidence on the impact of decriminalization and legalization, with five primary studies finding increased use of cannabis, and two systematic reviews and six primary studies finding no increases. Debate continues in these relatively new conversations, with some experts suggesting that legalization is likely to increase recreational cannabis use by citizens in the long term due to normalization. It is recognized that the magnitude and timing of any increase is uncertain. The impact of legalization on the medical laboratory system is relatively non-existent in the peer-reviewed literature and has provided an opportunity for investigation.

The purpose of the study was to determine any clinical laboratory workplace changes and expected future changes as experienced by medical laboratory professionals (MLPs) due to the legalization of cannabis in Canada. The study conducted semi-structure interviews to:[[1]](#footnote-1)

* Examine MLPs’ perceptions of recreational and medicinal cannabis use as it relates to their employment and patient interaction,
* Examine the current and expected change in testing volume, procedures and protocols related to cannabis since legalization, and
* Identify barriers and facilitators associated with adaption of required policy changes associated with cannabis.

A total of nine individuals participated in the study, of which the majority were in management or supervisory positions. Interviews and handwritten notes were recorded. All results were coded for analysis. Given the lack of increases in cannabis testing post-legalization, the study results provided several important themes for medical laboratory professionals to consider.

* **Theme** **1 – Passive Approach**: Organizations mainly took a passive approach in reacting to cannabis legalization in Canada and the impact it could have on the laboratory system, employees and patients.
	+ **Subtheme – Limited Expectations:** Expectations of interviewees on what changes would occur prior to legalization were driven by their organization’s actions (top-down knowledge transference approach) and may have contributed to their acceptance of a passive approach.
	+ **Subtheme – Generalized Classification**: Organizations treated cannabis usage in the workplace and for patient interactions in the same manner as standard alcohol and drug use policies and procedures.
	+ **Subtheme – Downgraded Classification:** Cannabis legalization is not likely considered high priority within the health system and laboratory due to the current fentanyl and opioid crises. As well, the slow roll-out of legalization likely contributed to this lowering in priority.
* **Theme 2 – Knowledge Source:** There were varying degrees of knowledge regarding cannabis (in general) and legalization, but the main source of information for interviewees was from media sources and not the workplace.
* **Theme 3 – Targeted Testing Increases**: If legalization were to impact testing, the first area it would be noticed is associated with departments or patient populations that use it medicinally rather than due to general recreational use.
* **Theme 4 – Stigma**: There is a stigma surrounding cannabis use post-legalization, both within discussions occurring in the workplace and those outside.
* **Theme 5 – Knowledge Transfer:** Opportunities were not capitalized on fully to provide information to the laboratories or their employees on cannabis legalization and its effects in the workplace.

## Significance

* There has been a lack of impact on the Canadian laboratory system of cannabis prior to and after legalization. Organizations took a passive approach to cannabis legalization when informing staff and patients of potential changes. However, some organizations have likely taken an active approach, which would be useful to identify and describe in the literature.
* There was a lack of increased clinical testing associated with cannabis legalization, which is in line with statistics that say cannabis use has not increased overall. The sensationalizing of cannabis use and expected testing increases within the media did not reflect the experience of the interviewees.
* Opportunities to provide knowledge of a federally-driven health system and population health topic was likely missed.
* Laboratories have an opportunity, in the future, to take hold of such discussions and promote the value of MLPs as advocates, knowledge agents and contributors to discussions that could impact laboratories and the Canadian health system.

Cannabis Legalization in Canada

Opportunities for the Medical Laboratory Profession

# Background

## Brief History

Cannabis, as formally referred to by the Canadian government today, is a psychoactive intoxicant that was banned from the country by Prime Minister William Lyon Mackenzie King’s *Act to Prohibit the Improper Use of Opium and other Drugs* in 1923.[[2]](#footnote-2) Although cannabis was illegal, few were using the substance; the first possession offences were not recorded until 1937. With increased access and awareness of cannabis, as well as expanding societal views due to war and oppression, cannabis use increased alongside other drugs during the 1960s. This led way to Cannabis being one of the most trafficked drugs in the world today, with the illegal drug trade in Canada alone worth approximately $7 billion annually.[[3]](#footnote-3)

The prosecution and enforcement of cannabis laws are resource intensive, with serious implications for the accused. To better control who has access, distribution and profits, a more prohibitive approach towards decriminalization or legalization started to gain favour.[[4]](#footnote-4) By 2000, in a landmark moment for the legalization of cannabis, the Ontario Court of Appeal decided that prohibition was unconstitutional for those that required its use for medicinal purposes and it became legal in 2001. Shortly after, Prime Ministers Jean Chrétien and Paul Martin tried to decriminalize recreational cannabis in 2003 and 2004 without success.

In 2015, Prime Minister Justin Trudeau’s government announced its intention to legalize and regulate the sale and recreational use of cannabis. Through formal consultation with the public and all levels of government, the Task Force on Marijuana Regulation and Legalization set out to determine the demand for and requirements needed to achieve this. As the most widely used illicit substance in Canada,[[5]](#footnote-5) it was determined that cannabis legalization was supported by a majority of Canadians despite concerns about the addictive qualities and potential negative health effects with use.[[6]](#footnote-6)

On October 17, 2018, under the royal assent of Bill C-45, the Government of Canada legalized, regulated and restricted access to cannabis for recreational use, a companion to the unchanged medicinal cannabis laws already in place.[[7]](#footnote-7),[[8]](#footnote-8)

## Population Expectations

As of 2015, a total of 22 countries had adopted some form of cannabis decriminalization. Canada's decision to legalize the substance nationally was only the second in the world, following the path of Uruguay several years earlier.[[9]](#footnote-9) This movement contributed to other countries around the globe contemplating the same action, although the controversy related to the harm and benefits of cannabis use continues.[[10]](#footnote-10) As such, there has been substantial monitoring of the Canadian experience and impact legalization has and will have on the country.

* New Zealand's justice minister has announced that a binding referendum on legalization will be held during the 2020 general election.[[11]](#footnote-11)
* Mexico is speculated to be leaning towards legalization. Possession of up to five grams of cannabis has been decriminalized since 2009, and the country's Supreme Court legalized medical marijuana in 2017.[[12]](#footnote-12)
* South Africa's Supreme Court legalized cannabis use by adults in private places, with the potential for full legalization dependent on election results.[[13]](#footnote-13)
* Belize, St. Kitts, Georgia, Jamaica, Argentina, Ecuador and Colombia are among the nations that have removed or eased prohibitions on the use of marijuana.[[14]](#footnote-14)
* Sections of the United States had previously legalized cannabis but more states are moving towards it.[[15]](#footnote-15) In Colorado state, use and sale of cannabis for recreational purposes has been legal since 2014 and legal for medicinal purposes since 2009.

Conducted in 2017, a rapid synthesis of existing literature found mixed evidence on the impact of decriminalization and legalization, with five primary studies finding increased use of cannabis, and two systematic reviews and six primary studies finding no increases. Debate continues in these relatively new conversations, with some experts suggesting that legalization is likely to increase recreational cannabis by citizens in the long term due to normalization. However, it is recognized that the magnitude and timing of any increase is uncertain.[[16]](#footnote-16) For example, in more recent data, adult cannabis use remained stable from 2014 to 2016 in Colorado, United States, but in 2017 there was a significant increase (15.5% from 13.5%). The cannabis usage for adolescents remained unchanged. [[17]](#footnote-17)

In the absence of published research, the public and organizations rely heavily on the government’s national communication tools and news media for information regarding cannabis and legalization. Research has shown that how the media frame cannabis legalization can potentially influence the public’s attitudes towards the topic.[[18]](#footnote-18) ,[[19]](#footnote-19),[[20]](#footnote-20) This is of consideration as cannabis legalization was named The Canadian Press Business News Story of the Year for 2018.[[21]](#footnote-21) It is too early to determine the effect of media at this time in the literature.

## Potential Impact on Medical Laboratory Professionals

In a scan of the peer-reviewed and grey literature, as conducted by a medical laboratory science student during a research practicum (Julia Acker, Ontario Tech University), the Canadian Society for Medical Laboratory Science (CSMLS) sought to understand the potential future impact cannabis legalization could have on medical laboratory professionals (MLPs).

Main themes emerged in this information seeking exercise:

1. **Health**: The impact of cannabis use on physical and mental health, and the measurement of this through laboratory testing.
2. **Legal Limits**: The inconclusive debate on cannabis consumption and intoxication indicators, including the laboratory testing that facilitates and limits this benchmarking.
3. **Product Compliance**: The quality assurance and control measures used to test cannabis potency and safety, from the perspective of a non-clinical setting.
4. **Workload**: The potential increase to testing demands, within clinical and non-clinical settings, due to greater availability of cannabis for consumption.
5. **Workplace Responsibilities**: The change to workplace policies and procedures, including the education of this, that clarify the responsibilities regarding cannabis use by staff and patients.

Themes 1-3 were the most predominant in the peer-reviewed literature, as the research aimed to fill existing gaps in knowledge. These topics were less focused on the impact of legalization on MLPs and health system issues, and more about the product of cannabis or molecular nature of its consumption effects.

All themes were discussed with the research team and it was determined that the most applicable ones to CSMLS and its general membership were those associated with workload (#4) and workplace responsibilities (#5). These themes became the focus on the main study discussed in this report.

# CSMLS Qualitative Study

## Purpose

The purpose of the study was to determine any clinical laboratory workplace changes and expected future change as experienced by MLPs due to the legalization of cannabis in Canada. The study conducted semi-structure interviews to:[[22]](#footnote-22)

* Examine MLPs’ perceptions of recreational and medicinal cannabis use as it relates to their employment and patient interaction,
* Examine the current and expected change in testing volume, procedures and protocols related to cannabis since legalization, and
* Identify barriers and facilitators associated with adaption of required policy changes associated with cannabis.

## Context

The CSMLS study was designed in such a way to collect a wide variety of opinions on the impact of legalization (i.e., not biased towards positive, neutral or negative changes). The interview questions were open-ended and allowed for flexibility in discussion topics, and did not focus on the interviewee’s personal opinions regarding cannabis legalization.

The current study was conducted in the first quarter of 2019 to determine the effects of legalization within the inaugural six months.

### Consumption

In 1985, 5.6% of Canadians 15 or over reported cannabis use within the past 12 months.[[23]](#footnote-23) When Canadians were surveyed again 30 years later in 2015, cannabis use had increased to 12.3%.[[24]](#footnote-24)  The year leading up to legalization had a lower percentage of cannabis users as shown in Table 1. However, the increase in usage in the fourth quarter of 2018 and first quarter of 2019 are considered a statistically significant upward trend marked exactly at the time of legalization.

**Table 1: Percentage of cannabis users reporting that they began using cannabis in the past three months in Canada (15 years or older)[[25]](#footnote-25)**

|  |  |  |
| --- | --- | --- |
| **Year** | **Quarter** | **Percentage of Users** |
| 2018 | First quarter  | 7.8% |
| 2018 | Second quarter  | 4.7% |
| 2018 | Third quarter  | 6.0% |
| **2018** | **Fourth quarter***\*legalization occurred* | **13.9%** |
| **2019** | **First quarter** | **12.2%** |

*Source:**National Cannabis Survey (*[*5262*](http://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=5262)*)*

Overall, the composition of cannabis and associate household expenditures has shown the same increase as demonstrated in Graph 1. However, it is possible to see the long-term variability in consumption expenditures, emphasizing that the Q1 2019 value is greater than normal trends in recent years.

Of importance to note is the lead up to legalization of recreational cannabis, wherein medicinal use increased dramatically. The number of registered medicinal cannabis users skyrocketed from 23,930 in 2015 to 330,758 in 2018.[[26]](#footnote-26)

**Graph 1: Canadian household consumption expenditure of medicinal and non-medicinal cannabis**

*Source: Table*[*36-10-0124-01*](https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3610012401)

### Public Opinion

The legalization of cannabis in Canada has had many supporters and critics, with the negative commentary focusing on the government’s process flaws, lost financial opportunities, stigma surrounding consumption, lack of research on public health and lack of societal benefit overall. For instance, complaints were made about the slow process to create and limited number of retail storefronts, while others noted a cannabis shortage.[[27]](#footnote-27) A Financial Post news article wrote, “Shortages have plagued the country since recreational marijuana was legalized in October. In response, Quebec’s government-controlled stores have closed three days a week, Alberta has temporarily stopped issuing retail licenses and Ontario has said it will initially open just 25 stores across Canada’s most populous province. As of mid-December [2018], about 50 per cent of products for sale in five provinces were out of stock, according to Cowen & Co. analyst Vivien Azer.”[[28]](#footnote-28) Supporters of legalization toted the constitutional right of Canadians to consume cannabis, the need to decrease stigmatization,[[29]](#footnote-29) potential health benefits for various diseases and disorders, amoung other considerations. Although legalization had been approved by Canadians, a great divide in opinion remained. According to a national survey, approximately half of Canadians supported legalization (46%) and about a quarter felt that they could accept legalization (24%). However, 30% opposed the change.[[30]](#footnote-30)

### Workload

Where cannabis has been legalized, as noted earlier, population consumption results have shown mixed results post-legalization. This statement recognizes that monitoring such a cultural phenomenon is in its infancy and that long-term legalization effects can’t be fully understood at this time. Nonetheless, a natural conclusion to cannabis legalization is that an increase in use would cause an increase in clinical laboratory testing. Such inferences can be drawn, at the very least, from the rise in medicinal cannabis use, industry growth predictions and increased roadside testing practices as seen in other legalized regions.

Contrary to the peer-reviewed literature, other information sources generally showcased the potential and likelihood for an increase in testing, when discussed. For example:

* The Canadian Imperial Bank of Commerce (CIBC) predicted that Canada's legal cannabis market would grow to a $6.5 billion industry by 2020.[[31]](#footnote-31)
* Alberta’s cannabis testing and research labs stated that they expect to see a boom in business once legalization occurred.[[32]](#footnote-32)
* Public Safety Canada noted that as usage increases, “samples requiring lab analysis will increase dramatically” (p.10) as police will need to conduct more testing for the presence of cannabis in a person’s system.[[33]](#footnote-33)

Published results on the experience of medical laboratories during or after legalization were not identifiable in the literature scan.

### Workplace Responsibilities

The Canadian government produced a national campaign to educate the public, in general and for targeted groups, about cannabis legalization and the impact it could have.[[34]](#footnote-34) For instance, resources were created to help better understand the legal system, what it means for individuals and the health facts.[[35]](#footnote-35) In addition, other organizations and associations created information documents that focused on the employee’s perspective (consumption during and before work) and human resource requirements of the organization.[[36]](#footnote-36)

Although the information was available, an Ipsos survey conducted one month prior to legalization found that two in three employees said management had not communicated expectations on use of recreational cannabis in the workplace. While a majority of working Canadians (70%) said they were aware of general drugs and alcohol policies in the workplace, managers were more likely than employees to be aware of these. Interestingly, 6% believed that they would be able to use cannabis before or during work hours, with more managers believing this (10%) than employees (2%). As well, only 16% of respondents said that they were “very familiar” with the changes to the laws related to the legalization of cannabis and where it will be allowed to be consumed.[[37]](#footnote-37) It was unknown at the time of the study whether MLPs faced similar knowledge gaps as the general public.

## Participants

All employed CSMLS members (medical laboratory technologists and medical laboratory assistants[[38]](#footnote-38)) who were 19 years of age or older at the time of the study were invited to participate in semi-structured interviews.

A total of nine individuals participated, of which the majority were in management or supervisory positions and did not work in clinical laboratory departments where cannabis testing was occurring frequently. However, most were able to generally discuss their understanding of cannabis testing in their organizations. The impact of this on the results are discussed in the next section.

## Interview Theme Results

Qualitative analysis was conducted using a thematic framework. The results presented highlight the themes and discussion conducted under each pre-designed interview question. Where themes arose across questions, this has been noted.

### What workplace changes did you anticipate prior to cannabis legalization?

* **Theme** **1 – Passive Approach**: Organizations mainly took a passive approach in reacting to cannabis legalization in Canada and the impact it could have on the laboratory system, employees and patients.
	+ **Subtheme – Limited Expectations:** Expectations of interviewees on what changes would occur prior to legalization were driven by their organization’s actions (top-down knowledge transference approach) and may have contributed to their acceptance of a passive approach.
	+ **Subtheme – Generalized Classification**: Organizations treated cannabis usage in the workplace and for patient interactions in the same manner as standard alcohol and drug use policies and procedures.
	+ **Subtheme – Downgraded Classification:** Cannabis legalization is not likely considered high priority within the health system and laboratory due to the current fentanyl and opioid crises. As well, the slow roll-out of legalization likely contributed to this lowering in priority.

The general expectation of interviewees was that organizations would support the knowledge transfer of cannabis information to staff, in relation to testing (within appropriate lab divisions) and human impact (employees and patients). This transfer was expected through updates and/or flagging of relevant policies and procedures to employees, creating information communications tools and/or sessions along with other such concepts. In all cases except one, the policy and procedure documents noted to staff were the same ones that referenced drug and alcohol use within the organization. These organizations did not create new documents, nor did they provide information on how to identify individuals who had been using cannabis.

The direct reference to cannabis being in the same classification as other drugs and alcohol was consistent throughout the interviews and discussion questions. The only outliers were from four interviewees’ organizations, in which the interviewees discussed the differences between cannabis usage and the fentanyl and opioid crises. In these discussions, the interviewees postulated that the lack of attention paid to the cannabis concept could have been due to the high importance paid to the noted crisis. Remarks regarding increased testing for these other drugs were noted. Additional information and specialty testing were conducted for these drugs and therefore, resource allocation was provided to the labs and staffing for knowledge transfer sessions.

The tone of discussion around the importance of opioids was directly stated by interviewees but also noted in the more excited tone while discussing the drug. As well, high priority words were used, such as crisis, deadly, death, scary, important, huge impact and on the news all the time. Action orientated language was used by interviewees when discussing organizations reactions to the opioid crisis, such as dedicated, talking about it all the time, monitoring and taking action. These words are in direct contrast to the discussion of cannabis, which had more subtle and less urgent language.

Some participants noted that the organization’s administration likely had committees and discussions to update policies and procedures or general cannabis legalization discussions, but only one was involved directly with this process or was able to discuss it in detail. Only one of the participants indicated education sessions for the staff, where the laboratory was invited. Legalization and cannabis use information for patients was not well understood as the majority of participants were not directly involved in these types of tasks.

Two individuals commented that they ‘didn’t know’ what to expect prior to legalization and indicated that they were ‘waiting and seeing’ what would come. One interviewee indicated that they expected to see an increase in cannabis testing, the one organization that took an active approach. The remaining interviewees were not expecting a big impact on the laboratory system, but noted that testing may increase for specific labs depending on the population served. This is in line with the fact that most participants did not conduct cannabis testing themselves.

It was by this point of the initial conversations that the majority of participants were indirectly, if not directly, noting that organizations had been taking a passive approach to preparing for legalization and transfer knowledge about it to staff and patients. It was recognized by all participants that the process to legalization, its launch and the impact to the time of interview had been much slower a process than what was originally expected. Interviewees noted the difference between the media’s representation of impact to the health system (impact would occur) and the true occurrence (minimal impact).

Several of the interviewees noted that the reason why organizations may have been slow to respond because of the slow roll-out of legalization and access to government regulated cannabis. Interviewees recognized that organizations could not provide information to their staff and patients if the information was not really available.

Only one organization took an active approach to cannabis legalization and enacted major communications. For example:

* An expectation that cannabis testing would increase and employee use in the workplace would be documented after legalization (did not occur locally during time period)
* Information sessions for staff and huddle discussions (engagement)
* Training sessions for supervisors
* Updates to policies and procedures that clearly defined information for cannabis use
* Detailed background search for information seeking
* Patient posters with cannabis information

As this study found that the majority of participant’s organizations took a passive-approach to cannabis legalization, this will be the focus of the themes and discussion going forward.

### How well do you feel you understand the legal implications of recreational and medicinal use of cannabis as it relates to the working environment?

* **Theme 2 – Knowledge Source:** There were varying degrees of knowledge regarding cannabis (in general) and legalization, but the main source for information for interviewees was from media sources and not the workplace.

Most of the interviewees paused prior to answering this question, indicating a moment of reflection. A range of responses was provided from “knowing only a little” to feeling “fully up to speed” on the topic. For those that were questioned further about their knowledge, they recognized that their knowledge was not complete as the research, politics and legalization process was still evolving. None of the interviewees provided detailed information regarding cannabis legalization or current information on testing as provided by the federal and provincial governments. Therefore, some uncertainty on what was considered “full knowledge” meant is noted. This concept wasn’t the focus of the question.

All interviewees acknowledge that the media was their number one source for information, with additional information seeking habits only occurring in a few interviewees. When compared to the information obtained from their workplace, all interviewees stated that the organization’s information provided did not showcase the full legalization concept and only focused on policies and procedures. Most interviewees felt that their organization could have provided more information and two indicated that they would have liked staff information sessions to have been conducted.

### What do you think the impact of cannabis legalization has been on your workplace so far? For your organization, yourselves and patients.

* **Theme 3 – Targeted Testing Increases**: If legalization were to impact testing, the first area it would be noticed is associated with departments or patient populations that use it medicinally rather than due to general recreational use.
* **Theme 4 – Stigma**: There is a stigma surrounding cannabis use post-legalization, both within discussions occurring in the workplace and those outside.

Because of the lack of impact and passive reaction to cannabis as noted in the previous discussion, responses to this question reiterated some of these prior points. Overall, interviewees reinforced the perspectives that legalization:

* Did not have a big impact on testing volume, complexity or procedures.
	+ Although, medicinal cannabis use had likely increased. Example: oncology, pain clinics.
* Legalization impact was within their expectations, which were set by their work, but couldn’t identify if this was consistent across regions within Canada.
* Did not have a significant impact on the patient population and cannabis testing.
	+ Interviewees were not aware of more patients being on cannabis but recognized that such patients may be more visible in high usage areas.

Overall, future changes to the workplace due to legalization were considered unknown, due to the evolution of the legalization roll-out. Speculation included greater cannabis testing when legal limits had occurred and with increased use of medicinal cannabis. As well, three interviewees discussed the stigma that still surrounds cannabis use in detail, both when discussing it within the workplace as well as socially.

### If your organization implemented policy changes associated with cannabis legalization, what did they do well to help staff adapt to the change? What could they have done better?

* **Theme 5 – Knowledge Transfer:** Opportunities were not capitalized on fully to provide information to the laboratories or their employees on cannabis legalization and its effects in the workplace.

Given that little policy and testing change occurred, this question was not asked due to prior responses for most interviews; however, the theme is noted in this section as it represents the accumulation of information across the study.

Instead, when asked what organizations could have done better, interviewees reinforced that organizations could have provided more information (in addition to the policies and procedures) to support the general health system as well as employee and patient impact information associated with cannabis use and legalization. Interviewees represented this information as an opportunity lost for organizations to provide important information at a time when the population would have likely been most receptive to obtaining the information.

Interviewees noted areas where MLPs could have been more involved in cannabis and legalization related topics through provincial and national policy development, research on cannabis and health testing, and advocacy for patient information. A few interviewees were uncertain how MLPs could fit into the conversation more but were respectful that MLPs could have a place if desired.

# Conclusion

It was not well understood how Canadians would react to cannabis legalization as it was only the second country to legalize in the world. What was even less understood was how this change in policy would affect the laboratory system and MLPs. The results of the study show that, overall, there has been a lack of impact within the inaugural six-months of cannabis legalization, whether this be the number of cannabis tests ordered or information sharing from originations to their patients and employees. However, there were notable opportunities for information by laboratories and their organizations which were not capitalized on.

Medical laboratories and health organizations have taken a passive-approach to knowledge transfer regarding the topic, which has left doors open for more and better-quality information sharing as Canada moves through the first year of recreation cannabis legalization. This is especially true as interviewees mainly navigated to the media for information; they indicated a desire for more structured information from their organizations, which were less likely to sensationalize information as compared to the media. However, looking forward, as the consumption of cannabis over time is not well understood, it is possible that testing may still increase and that communication of cannabis-related topics to employees and patients should remain on the minds of laboratories and organizations. This is especially true as the legal sale of edible cannabis, cannabis extracts and cannabis topicals will be permitted by October 17, 2019.

Laboratories have an opportunity to take hold of such health system and public health discussions and promote the value of MLPs as advocates, knowledge agents and contributors who impact laboratories and the Canadian health system.

1. The study intended to hold focus groups as well but these were not successful, as participants preferred one-on-one interviews. The researchers hypothesize that the lack of active engagement by organization (as defined in the study results), lack of increased testing in cannabis and the stigma surrounding cannabis use may have inhibited participation in a group setting. [↑](#footnote-ref-1)
2. For a detailed history of cannabis legalization, see <https://www.leafly.com/news/canada/history-cannabis-canada> [↑](#footnote-ref-2)
3. <https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/laws-regulations/task-force-cannabis-legalization-regulation/framework-legalization-regulation-cannabis-in-canada.html> [↑](#footnote-ref-3)
4. <https://www.mcmasterforum.org/docs/default-source/product-documents/rapid-responses/examining-the-impact-of-decriminalizing-or-legalizing-cannabis-for-recreational-use.pdf?sfvrsn=8> [↑](#footnote-ref-4)
5. <https://www150.statcan.gc.ca/n1/daily-quotidien/181030/dq181030b-eng.htm> [↑](#footnote-ref-5)
6. <https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/laws-regulations/task-force-cannabis-legalization-regulation.html> [↑](#footnote-ref-6)
7. <https://www.sencanada.ca/en/sencaplus/news/cannabis-act/> [↑](#footnote-ref-7)
8. <https://www.justice.gc.ca/eng/cj-jp/cannabis/> [↑](#footnote-ref-8)
9. <https://www.mcmasterforum.org/docs/default-source/product-documents/rapid-responses/examining-the-impact-of-decriminalizing-or-legalizing-cannabis-for-recreational-use.pdf?sfvrsn=8> [↑](#footnote-ref-9)
10. Budney AJ, Sofis MJ, & Borodovsky JT. (2019). An update on cannabis use disorder with comment on the impact of policy related to therapeutic and recreational cannabis use. Eur Arch Psychiatry Clin Neurosci. <https://doi.org/10.1007/s00406-018-0976-1> [↑](#footnote-ref-10)
11. <https://www.dw.com/en/new-zealand-to-vote-on-cannabis-legalization/a-48631917> [↑](#footnote-ref-11)
12. <https://www.leafly.com/news/politics/is-marijuana-legal-in-mexico-after-supreme-court-ruling> [↑](#footnote-ref-12)
13. <https://www.bbc.com/news/world-africa-45559954> [↑](#footnote-ref-13)
14. <https://www.cbc.ca/news/thenational/national-today-newsletter-legalized-cannabis-green-party-1.5125889> [↑](#footnote-ref-14)
15. <https://www.governing.com/gov-data/safety-justice/state-marijuana-laws-map-medical-recreational.html> [↑](#footnote-ref-15)
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17. <http://cdpsdocs.state.co.us/ors/docs/reports/2018-SB13-283_Rpt.pdf> [↑](#footnote-ref-17)
18. <https://www.tandfonline.com/doi/full/10.1080/09581596.2013.771812> [↑](#footnote-ref-18)
19. <https://scholarcommons.sc.edu/cgi/viewcontent.cgi?article=5343&context=etd> [↑](#footnote-ref-19)
20. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6037643/> [↑](#footnote-ref-20)
21. <https://globalnews.ca/news/4767649/cannabis-legalization-business-canadian-press/> [↑](#footnote-ref-21)
22. The study intended to hold focus groups as well but these were not successful, as participants preferred one-on-one interviews. The researchers hypothesize that the lack of active engagement by organization (as defined in the study results), lack of increased testing in cannabis and the stigma surrounding cannabis use may have inhibited participation in a group setting. [↑](#footnote-ref-22)
23. <https://www150.statcan.gc.ca/n1/pub/82-003-x/2018002/article/54908/c-g/c-g01-eng.htm> [↑](#footnote-ref-23)
24. <https://www150.statcan.gc.ca/n1/pub/82-003-x/2018002/article/54908/tbl/tbl01-eng.htm> [↑](#footnote-ref-24)
25. <https://www150.statcan.gc.ca/n1/daily-quotidien/190502/dq190502a-eng.htm> [↑](#footnote-ref-25)
26. 7. Statista. (2019). *Estimated Total Market size of Medical Marijuana in Canada from 2014 to 2025*. Retrieved from https://www.statista.com/statistics/587568/estimated-medical-marijuana-market-size-canada/) [↑](#footnote-ref-26)
27. <https://globalnews.ca/news/5240487/ontario-cannabis-retailers-more-penalties/>

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28. <https://business.financialpost.com/cannabis/pot-shortage-could-last-up-to-3-years-in-canada-executives-say> [↑](#footnote-ref-28)
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34. <https://www.canada.ca/en/services/health/campaigns/cannabis/education-resources.html> [↑](#footnote-ref-34)
35. <https://www.canada.ca/en/employment-social-development/services/health-safety/cannabis-workplace.html> [↑](#footnote-ref-35)
36. Examples: <https://www.ccohs.ca/products/publications/cannabis_whitepaper.pdf>

<https://www.hrpa.ca/Documents/Public/HRPA-Clearing-The-Haze.pdf> [↑](#footnote-ref-36)
37. <https://www.ipsos.com/en-ca/news-polls/use-of-recreational-cannabis-in-workplace> [↑](#footnote-ref-37)
38. MLTs and MLAs respectively [↑](#footnote-ref-38)