CANADIAN VETERANS' USE OF CANNABIS FOR MEDICAL PURPOSES

SENATE | SÉNAT
CANADA

SUBCOMMITTEE ON VETERANS AFFAIRS
Standing Senate Committee
on National Security and Defence

JUNE 2019

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The Sub-committee wishes to acknowledge the invaluable contribution of its former vice-chair, The Honourable Mobina S.B. Jaffer.

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* The Honourable Terry M. Mercer
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The Honourable Senators

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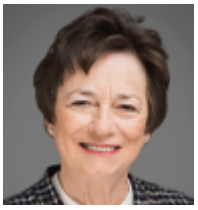

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* Members of the Subcommittee on Agenda and Procedure

The Committee wishes to acknowledge the invaluable contribution of its former vice-chair, the Honourable Mobina S.B. Jaffer.

Ex-officio members of the Committee: Joseph A. Day (or Terry M. Mercer), Peter Harder, P.C. (or Diane Bellemare) (or Grant Mitchell), Larry W. Smith (or Yonah Martin), Yuen Pau Woo (or Raymonde Saint-Germain).

Other Senators who have participated from time to time in this study: *Pamela Wallin and Diane F. Griffin.*

Parliamentary Information and Research Service, Library of Parliament: *Isabelle Lafontaine-Émond, Analyst.*

Senate Committee Directorate: *Mark Palmer, Clerk and Diane McMartin, Administrative Assistant.*

Senate Communications Directorate: *Stav Nikta, Communications Officer.*

ORDER OF REFERENCE

Extract from the *Journals of the Senate,* Thursday, December 6, 2018:

The Honourable Senator Boniface moved, seconded by the Honourable Senator Wetston:

That, notwithstanding the orders of the Senate adopted on Thursday, January 28, 2016, and Thursday, December 14, 2017, the date for the final report of the Standing Senate Committee on National Security and Defence in relation to its study on the services and benefits provided to members of the Canadian Forces; to veterans; to members and former members of the Royal Canadian Mounted Police and their families, be extended from December 31, 2018 to October 31, 2019.

The question being put on the motion, it was adopted.

Richard Denis
Clerk of the Senate

Extract from the *Journals of the Senate,* Thursday, December 14, 2017:

The Honourable Senator Boniface moved, seconded by the Honourable Senator Sinclair:

That, notwithstanding the order of the Senate adopted on Thursday, January 28, 2016, the date for the final report of the Standing Senate Committee on National Security and Defence in relation to its study on the services and benefits provided to members of the Canadian Forces; to veterans; to members and former members of the Royal Canadian Mounted Police and their families be extended from December 31, 2017, to December 31, 2018.

The question being put on the motion, it was adopted.

Richard Denis
Clerk of the Senate

Extract from the *Journals of the Senate,* Thursday, January 28, 2016:

The Honourable Senator Lang moved, seconded by the Honourable Senator Maltais:

That the Standing Senate Committee on National Security and Defence be authorized to examine and report on:

(*a*) services and benefits provided to members of the Canadian Forces; to veterans who have served honourably in Her Majesty's Canadian Armed Forces in the past; to members and former members of the Royal Canadian Mounted Police and its antecedents; and all of their families;

(*b*) commemorative activities undertaken by the Department of Veterans Affairs Canada, to keep alive for all Canadians the memory of Canadian veterans' achievements and sacrifices; and

(*c*) continuing implementation of the New Veterans' Charter;

That the papers and evidence received and taken and the work accomplished by the committee on this subject during the Fortieth Parliament and the Forty-first Parliament be referred to the committee; and

That the committee report to the Senate no later than December 31, 2017, and that the committee retain all powers necessary to publicize its findings until 180 days after the tabling of the final report.

After debate,

The question being put on the motion, it was adopted.

Charles Robert
Clerk of the Senate

Delegation to the subcommittee

Extract from the Minutes of the Standing Senate Committee on National Security and Defence of Monday, February 1, 2016.

The Honourable Senator Day moved:

That the order of reference regarding veterans affairs adopted by the Senate on Thursday, January 28, 2016, be delegated to the Subcommittee on Veterans Affairs.

The question being put on the motion, it was adopted.

Adam Thompson
Clerk of the Committee

RECOMMENDATIONS

Recommendation 1:

That Veterans Affairs Canada improve its consultation mechanisms and use them more regularly to ensure greater and more transparent consultation of veterans and the professionals who work with them at all key stages of the development of new policies that affect them and to ensure that their experiences are genuinely considered in the department's decision-making.

Recommendation 2:

That Veterans Affairs Canada periodically examine the effects of its maximum reimbursement rate of $8.50 per gram on veterans' access to the various cannabis products, including by consulting with veterans who use cannabis and experts, to fully understand the barriers this limit may create and their impact on veterans' health.

Recommendation 3:

That the Government of Canada quickly make significant investments in research on the use of cannabis for medical purposes, including:

* specific research on veterans' use of cannabis for medical purposes; and
* examining the potential issues resulting from over usage, and

that the gathered data be disseminated to the public and health professionals.

Recommendation 4:

That Veterans Affairs Canada undertake a detailed review of the potential impacts of medical cannabis use on Canadian veterans' consumption of prescription pharmaceuticals and that the department publish the findings and an analysis of the net costs of cannabis reimbursements, taking into account the potential savings in reimbursements for other drugs.

Recommendation 5:

That Veterans Affairs Canada, in collaboration with Health Canada, consider taking measures to ensure the availability of cannabis to veterans who use it for medical purposes.

Introduction

Of the Regular Force veterans released from the Canadian Armed Forces (CAF) between 1998 and 2015, 26% were released for medical reasons.[1] In addition, 41% of veterans experience chronic pain. One in five veterans has depression, 16% to 18% live with post-traumatic stress disorder and 15% deal with anxiety.[2]

Over the past decade, increasing numbers of veterans have begun using cannabis for medical purposes, either because conventional treatments fail to relieve their pain or because those treatments have side effects that are difficult to endure.

As of August 2018, Veterans Affairs Canada (VAC) was reimbursing 8,175 veterans for medical cannabis. In 2017–2018, the department paid out nearly $51 million in medical cannabis reimbursements.[3]

In the spring of 2018, the Subcommittee on Veterans Affairs of the Standing Senate Committee on National Security and Defence (the Subcommittee) began a study on Canadian veterans' use of cannabis for medical purposes. The Subcommittee devoted eight meetings to this topic and heard witnesses from a variety of backgrounds, who shared their knowledge of and experience with the issue. In addition to VAC officials, the Subcommittee heard from researchers, health professionals, cannabis producers and veterans' groups. The Subcommittee members would like to thank everyone who took the time to contribute to this important study for Canadian veterans.

This report sets out the information collected on Canadian veterans' use of cannabis for medical purposes and includes pertinent recommendations. More specifically, the report addresses VAC's medical cannabis reimbursement policy. It outlines the consensus view that more research on the use of cannabis for medical purposes is greatly needed. The report also describes certain aspects of the experiences of veterans who use medical cannabis. Finally, the report discusses some of the potential impacts of the recent legalization of recreational marijuana.

Veterans Affairs Canada's cannabis for medical purposes reimbursement policy

Since 2008, Veterans Affairs Canada has reimbursed the cost of cannabis for medical purposes when an authorization has been provided by the veteran's health care practitioner.[4] The cannabis must be purchased from a producer licensed by Health Canada.[5]

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1 This category excludes reservists.
2 L.D. Van Til et al. (Veterans Affairs Canada), *Life After Service Survey 2016,* Executive Summary, 23 June 2017.
3 Veterans Affairs Canada [VAC], "Cannabis for Medical Purposes."
4 VAC, "Reimbursement Policy on Cannabis for Medical Purposes," *Just the Facts*.
5 VAC, "Cannabis for Medical Purposes: New Reimbursement Policy," *FAQs*.

In the spring of 2016, the Office of the Auditor General of Canada (OAG) pointed out that the cost of covering marijuana for medical purposes had increased sharply between 2013 and 2015 for Veterans Affairs Canada. Costs climbed from $409,000 in 2013–2014 to more than $12 million in 2015.

VAC attributes this increase to factors such as Health Canada's easing of regulations governing access to medical cannabis in 2014 and 2016. For example, the restrictions on the authorization of cannabis use for specific conditions and the obligation to consult a specialist were eliminated.[6] Nevertheless, the OAG recommended in the spring of 2016 that VAC explore various ways to contain the costs associated with marijuana for medical purposes.[7]

Further to this recommendation, in 2016 the department implemented a new reimbursement policy for cannabis for medical purposes, which established a maximum reimbursement limit of three grams per day of dried marijuana or an equivalent in fresh marijuana or cannabis oil. Prior to this policy, the reimbursement limit was 10 grams of dried marijuana per day. The new policy also established a maximum reimbursement rate of $8.50 per gram, whether taken in dried marijuana or its equivalent in fresh marijuana or cannabis oil form.[8,9]

Consultations on new reimbursement policy

A VAC official told the Subcommittee that this policy was based on consultations with health professionals, subject-matter experts, licensed producers and veterans who benefit from it. Yet multiple witnesses expressed disappointment with these consultations. Michael L. Blais, a veteran and President of Canadian Veterans Advocacy, stated that, when VAC began the review of its medical cannabis policy, the department asked him to bring together a group of 10 veterans to meet with the minister for consultation. Mr. Blais reported that the changes the department was considering were never presented to the group, so they could not offer feedback on them. He believes the collective message from these veterans who shared their experiences was simply ignored.[10] In addition, a psychiatrist who treats many veterans who take medical cannabis indicated that, to his knowledge, no treating physician was consulted about the impact on patients of an abrupt decrease in their medical cannabis dose. He added that he had repeatedly contacted the office of VAC's Chief Medical Officer to discuss the changes to the policy, but his calls were never returned.[11]

Limit of three grams of cannabis per day

VAC states that it based the maximum reimbursement limit of three grams per day on studies showing that the average Canadian who uses cannabis for medical purposes consumes less than three grams

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6 Subcommittee on Veterans Affairs of the Standing Senate Committee on National Security and Defence [VEAC], *Evidence*, Dr. Cyd Courchesne, Director General, Health Professionals, and Chief Medical Officer, Veterans Affairs Canada, 2 May 2018.

7 Office of the Auditor General of Canada [OAG], "Drug Benefits – Veterans Affairs Canada," Report 4 in *Reports of the Auditor General of Canada – Spring 2016*, 2016.

8 Licensed cannabis producers are responsible for determining the quantity of fresh marijuana or cannabis oil that would be equivalent to one gram of dried marijuana.

9 VAC, "Cannabis for Medical Purposes," *Health and well being*.

10 Canadian Veterans Advocacy (Michael L. Blais), Brief to the Subcommittee, 5 December 2018.

11 VEAC, *Evidence*, 17 October 2018, Dr. Greg Passey, Psychiatrist.

per day.[12] However, some veterans and licensed producers argue that the maximum reimbursement limit should not be based on the average medical cannabis consumption of Canadians in general, as the physical and mental injuries suffered in the army are uniquely serious.

When the department reduced the maximum reimbursement limit from 10 grams to three grams per day in 2016, several veterans' groups expressed concerns. Many veterans believed that some of them truly need up to 10 grams per day to alleviate their symptoms, particularly some of those suffering from post-traumatic stress disorder (PTSD).[13] However, other groups argued that 10 grams per day was too much and that consuming that much marijuana is harmful.[14]

The Subcommittee heard from psychologist and researcher Zachary Walsh that consumption can vary from one day to the next and that an authorization for 10 grams per day, for example, does not necessarily mean that patients will consume 10 grams every day; they may consume that much only on a "bad" day, when their symptoms are particularly severe.[15] The challenges surrounding medical cannabis dosage are examined in greater detail in the dosage subsection of the report's second section, which concerns research needs.

Some witnesses criticized the decision to change the reimbursement limit without considering the consequences of a sharp decrease in medical cannabis doses for the health and well-being of veterans.

Dr. Greg Passey, a psychiatrist who specializes in veterans with PTSD, explained that some of his patients who had been stable since 2008 suddenly became symptomatic again because of the policy change. He believes it would have been better to let those who already consume medical cannabis keep the daily dose they were prescribed before the policy was implemented and subject only new prescriptions to the new policy.[16]

> The one thing I would like to see from Veterans Affairs is, if I have prescribed somebody something — and this only seems to happen with cannabis — and the person has been stable on it and I have gotten them off all these other drugs, I would just like them to leave me alone. I'm a clinician. If my patient is getting worse, I'll deal with that. If I think they are using marijuana inappropriately, I'll deal with that.[17]

Veterans from Canadian Veterans Advocacy also objected to VAC's interference in the prescriptions doctors make for their patients. They further noted that the department is interfering only with cannabis, not with dangerous drugs such as opioids.[18]

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12 VAC, "Cannabis for Medical Purposes: New Reimbursement Policy," *FAQs*.

13 See, for example, "Marijuana thérapeutique: un vétéran de Fredericton s'indigne contre la nouvelle politique d'Ottawa," *Radio-Canada*, 7 February 2017 [Available in French only], and "Consequences of pot program cuts 'should be alarming,' says veteran with PTSD," *CBC News*, 18 May 2017.

14 See, for example, "Cannabis thérapeutique: la limite pour les vétérans est trop élevée croit un ancien député fédéral," *Radio-Canada*, 24 October 2016. [Available in French only]

15 VEAC, *Evidence*, 9 May 2018, Zachary Walsh, Associate Professor, Department of Psychology, University of British Columbia.

16 VEAC, *Evidence*, 17 October 2018, Dr. Greg Passey.

17 Ibid.

18 VEAC, *Evidence*, 5 December 2018 Sylvain Chartrand and Michael L. Blais, Brief to the Subcommittee, 5 December 2018.

Moreover, Mr. Blais argued that the cannabis reimbursement limits have the perverse effect of forcing veterans suffering intense pain to become dependent on opioids again to obtain relief, with all the attendant risks.[19]

> I would propose a simple solution. VAC must be mandated, apparently, to trust the Canadian doctors that they have downloaded responsibility of the veterans health.[20]

However, a number of witnesses contended that the reimbursement limit of three grams per day is appropriate. Dr. Édouard Auger, psychiatrist at the Operational Stress Injury Clinic in Québec city, applauded the three-gram limit because he believes it has alleviated some of the problems he sees in his patients, such as psychoses stemming from cannabis consumption. Dr. Auger also explained that, before the limit was established, he quite often had to tell patients who had access to up to 10 grams per day that they could not legally give cannabis to their family members. Dr. Auger and his colleagues also reported hearing that patients were re-selling their cannabis.[21]

The representatives of Canada House Clinics (CHC), a network of 10 clinics that provide "specialized cannabinoid therapy services," said that, in their experience, most veterans manage quite well with the three grams authorized. The average consumption of medical cannabis they observe is a little over one gram per day. However, they emphasized that the scope and severity of PTSD for some veterans who have had unimaginable experiences may require higher doses. These patients account for less than a quarter of their veteran patients, and the psychiatrists at CHC complete the assessment process the department requires for exceptional circumstances for them.[22]

Recognition process for exceptional circumstances

While the reimbursement limit is now three grams a day, the 2016 policy includes an exceptional approval process for veterans authorized by a specialist to use a higher quantity of cannabis. The department explained that the "opinion and rationale of the medical specialists will be considered in determining whether to approve amounts above three grams per day."[23] The opinion of the medical specialist, such as a psychiatrist or oncologist, must include "the rationale for the use of more than three grams, confirmation that there are no contraindications, and an indication that alternative treatments were ineffective or contraindicated."[24]

However, Dr. Passey, a psychiatrist, contended that many veterans cannot find a specialist who can provide the necessary rationale. He also expressed disappointment that specialists' rationales are often rejected by a nurse at the department who does not communicate with either the veteran or the treating physician before making a decision. Furthermore, the decision-making and appeal processes each take weeks, during which the veteran does not have access to the amount of medical cannabis needed.[25]

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19 Canadian Veterans Advocacy (Michael L. Blais), Brief to the Subcommittee, 5 December 2018.
20 Ibid.
21 VEAC, *Evidence*, 17 October 2018, Dr. Édouard Auger, Psychiatrist.
22 VEAC, *Evidence*, 31 October 2018, Alex Kroon and Riley McGee, Canada House Clinics.
23 VAC, "Cannabis for Medical Purposes: New Reimbursement Policy," *FAQs*.
24 VAC, "Cannabis for Medical Purposes: New Reimbursement Policy," Backgrounder.
25 VEAC, *Evidence*, 17 October 2018, Dr. Greg Passey.

Canadian Veterans Advocacy pointed out that requiring sick or injured veterans to travel to consult a specialist outside of their home region every two years to obtain this rationale imposes significant costs and hardships on them, with no guarantee the rationale will be accepted by VAC.[26]

Maximum reimbursement rate of $8.50 per gram

While a number of witnesses praised VAC's current coverage of cannabis for medical purposes, some noted that the reimbursement cap of $8.50 per gram could limit veterans' access to products that might benefit them.

Some licensed cannabis producers offer veterans discounts so that they can use products that cost more than $8.50 per gram. However, multiple witnesses remarked that cannabis oils, which allow for more exact dosage, are priced above $8.50 per gram.

Moreover, one veteran with a spinal injury who uses medical cannabis stated that the varieties of cannabis that relieve his severe and chronic pain cost between $12 and $14 per gram. He explained that, if the producer does not absorb the cost above the $8.50 per gram covered by the department as a courtesy to veterans, the additional cost can be a major financial burden of several thousand dollars per year.[27]

Results of the new policy

In 2016–2017, VAC spent approximately $64 million on medical cannabis reimbursements, three times more than the previous year.[28] The department reimbursed 4,474 clients that year for some 5.7 million grams of cannabis. After the new reimbursement policy was implemented, the department's spending fell to $51 million in 2017–2018. Yet the number of clients VAC reimbursed that year climbed to 7,298, and the total cannabis purchased was slightly more than 6 million grams. Imposing the limit of three grams per day and the maximum price of $8.50 therefore reduced VAC's costs, despite a significant increase in the number of users. Before the new policy came into force, 60% of beneficiaries were authorized to be reimbursed for more than three grams per day. By comparison, one year after the new policy took effect, only 12% of beneficiaries had obtained exceptional approvals for more than three grams per day.[29]

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26 Canadian Veterans Advocacy (Michael L. Blais), Brief to the Subcommittee, 5 December 2018.
27 Ibid.
28 VAC, "Cannabis for Medical Purposes."
29 VEAC, *Evidence*, Dr. Cyd Courchesne, 2 May 2018.

Figure 1: Departmental Spending and Percentage of Veterans Reimbursed for More Than Three Grams per Day, Before and After Implementation of New Reimbursement Policy

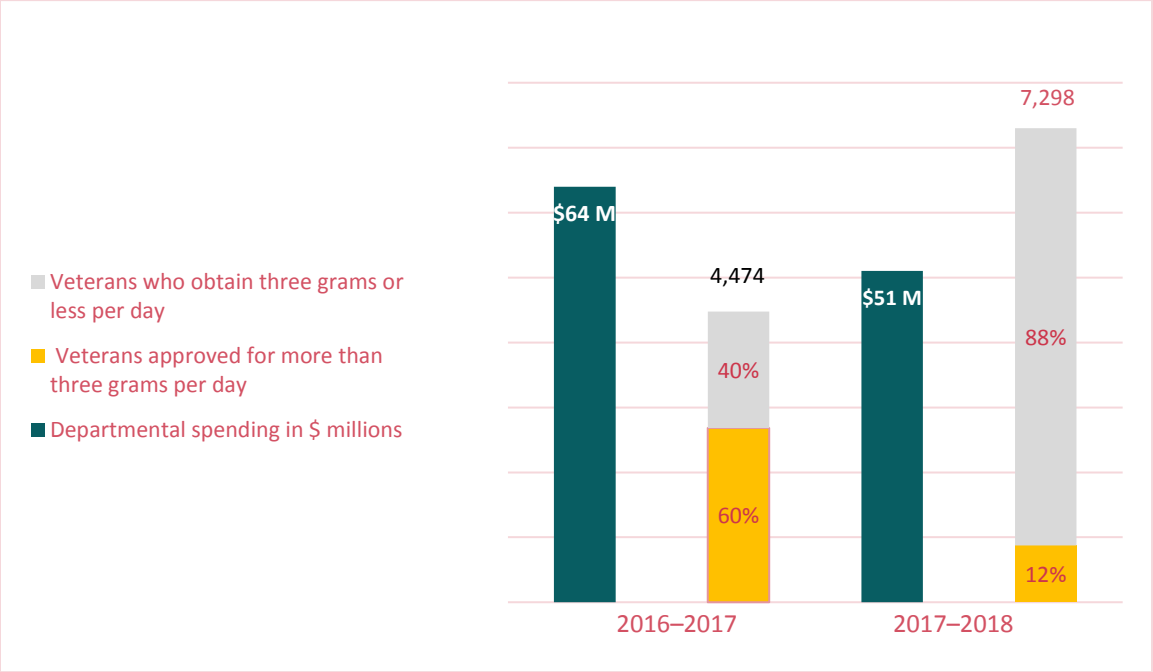

Figure prepared by the author using data from Veterans Affairs Canada.

Recommendations 1 and 2

Some witnesses raised concerns about the consultations that led to the changes to VAC's reimbursement policy for cannabis for medical purposes, calling them inadequate. The Subcommittee has heard similar comments on various occasions over the years when the department has changed policies and programs. The Subcommittee further notes that VAC's ministerial advisory groups, "created to improve transparency and seek consultation on issues of importance to Veterans and their families," do not appear to have been consulted for more than a year.[30] The Subcommittee believes it is critical that the voices of veterans, their families and the professionals who work with them be heard in the decision-making process of the department that serves them. To ensure that is the case, the Subcommittee recommends:

Recommendation 1:

That Veterans Affairs Canada improve its consultation mechanisms and use them more regularly to ensure greater and more transparent consultation of veterans and the professionals who work with them at all key stages of the development of new policies that affect them and to ensure that their experiences are genuinely considered in the department's decision-making.

30 VAC, "Ministerial advisory groups."

In addition, witnesses called on VAC to review its maximum reimbursement rate of $8.50 per gram in light of the products on the market that cost more than that. They said VAC needs to ensure that veterans can use the medical cannabis products that benefit them the most. The Subcommittee therefore recommends:

Recommendation 2:

That Veterans Affairs Canada periodically examine the effects of its maximum reimbursement rate of $8.50 per gram on veterans' access to the various cannabis products, including by consulting with veterans who use cannabis and experts, to fully understand the barriers this limit may create and their impact on veterans' health.

Major need for research into use of cannabis for medical purposes

The broadest consensus that developed during the Subcommittee's study concerned the serious lack of conclusive research findings on the use of cannabis for medical purposes.

Multiple witnesses stated that the public's use of cannabis for medical purposes has gone beyond the limits of medical knowledge. All the witnesses agreed that there appears to be some potential in using cannabis for medical purposes. Indeed, many people report that cannabis has relieved their symptoms. Not everyone agreed on how much weight should be given to this anecdotal evidence, but they did agree that deeper research into this issue is required. The witnesses emphasized that randomized controlled trials and longitudinal real-world studies are needed.

Researchers from the Canadian Institute for Military and Veteran Health Research (CIMVHR) told the Subcommittee about two priorities the institute has set. The first is funding new research into the safety, effectiveness and cost-effectiveness of medical cannabis. The second is knowledge dissemination among veterans and health professionals.[31]

The Subcommittee heard from a number of witnesses that doctors are generally reluctant to authorize their patients to use cannabis. They say they need scientific evidence of cannabis's effectiveness, particularly for psychiatric conditions. They also hope that research will provide more precise information about dosage and isolate which compounds in the plant affect which medical conditions.[32]

The representative of the licensed cannabis producer Tilray also discussed the need to better inform doctors about the use of medical cannabis. In his view, some doctors are starting to become more open to medical cannabis, and undertake to learn about it, often because of requests from their patients. In addition, he said some medical schools are including information about the endocannabinoid system in the human body and the use of cannabis and cannabinoids in their courses.[33]

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31 VEAC, *Evidence*, 9 May 2018, David Pedlar, Scientific Director, Canadian Institute for Military and Veteran Health Research.

32 See, for example, VEAC, *Evidence*, 17 October 2018, Dr. Édouard Auger.

33 VEAC, *Evidence*, 24 October 2018, Philippe Lucas, Vice President, Global Patient Research and Access, Tilray.

Similarly, researcher James MacKillop, Director of the Centre for Medical Cannabis Research at McMaster University, discussed the need to increase active knowledge transmission and guideline development to give clinicians clear guidance based on the best available evidence. Mr. MacKillop noted that Canada has an opportunity to be a world leader in cannabis research. The United States (U.S.) generally does most of the research on veterans' health and pharmaceutical development. Yet, because of federal legislation prohibiting cannabis in the U.S., our neighbour to the south has done little research on the use of cannabis for medical purposes. Likewise, other countries have little data to offer in this area.[34]

> [T]he current environment in Canada provides the opportunity to be a world leader in cannabis research. This would be dependent on major investments, but it's an issue of widespread relevance to Canadian society…. [F]unding is critical to high-quality research, especially clinical trials.[35]

More specifically, some witnesses said that research on the use of cannabis to treat PTSD is necessary. Two psychiatrists told the Subcommittee that soldiers and veterans with PTSD do not respond as well to current treatments as civilians with PTSD do.[36] A number of witnesses said they are hopeful that cannabis can relieve PTSD symptoms, in part because of the proven effectiveness of synthetic cannabinoids[37] in reducing the frequency and intensity of PTSD nightmares and improving patients' sleep.[38] Dr. J.D. Richardson, a psychiatrist, underscored the need for sound clinical research that involves not only veterans, but also their families, and that examines both symptom reduction and the quality of life of veterans and their family members.[39]

Current studies on cannabis use to treat post-traumatic stress disorder

Witnesses informed the Subcommittee about three studies on the use of cannabis to treat PTSD that are underway: a joint study by the CAF and VAC; a study by the University of British Columbia in co-operation with cannabis producer Tilray; and a study by the Centre for Addiction and Mental Health in co-operation with the University of Toronto.

Veterans Affairs Canada and Canadian Armed Forces study

The Chief Medical Officer of VAC told the Subcommittee that the department is working with the CAF to carry out "a clinical study examining the efficacy and safety of cannabis as a mental health or physical health intervention among CAF members and veterans."[40] During her appearance in May 2018,

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34 VEAC, *Evidence*, 23 May 2018, James MacKillop, Director, Michael G. DeGroote Centre for Medical Cannabis Research, McMaster University.
35 Ibid.
36 VEAC, *Evidence*, 9 May 2018, Dr. J.D. Richardson, Consultant Psychiatrist, Parkwood Operational Stress Injury Clinic; and *Evidence*, 6 June 2018, Col. Rakesh Jetly, Senior Psychiatrist, Canadian Armed Forces.
37 These synthetic cannabinoids are known as "Cesamet" or "nabilone."
38 VEAC, *Evidence*, 9 May 2018, Dr. J.D. Richardson; *Evidence*, 6 June 2018, Col. Rakesh Jetly; and *Evidence*, 17 October 2018, Dr. Édouard Auger.
39 VEAC, *Evidence*, 9 May 2018, Dr. J.D. Richardson.
40 VEAC, *Evidence*, 2 May 2018, Dr. Cyd Courchesne.

Dr. Courchesne said the researchers were developing the research protocol and obtaining approval from the research ethics committee. The study was to begin in the summer of 2018. She explained that this study will provide better evidence about the effects of marijuana on veterans' health and will inform VAC policies.[41]

During his appearance before the Subcommittee, Colonel Rakesh Jetly, Senior Psychiatrist at the CAF, offered his views on the study. He underlined the relevance of the study, as soldiers and veterans with PTSD do not respond as well to treatment as civilians do, which indicates that research on civilians alone is not sufficient. Dr. Jetly explained that it would be useful to administer varying levels of THC and CBD, along with a placebo, to the same person over time to observe the effects.[42] He also noted the importance of examining measurable effects, not just the impression of feeling better. For example, the study may consider indicators such as sleep quality, pain levels, inflammation and quality of life. In addition, Dr. Jetly highlighted the potential of neuroimaging as a way of demonstrating cannabis's effects on the brain, including its potential to quiet the amygdala, which is the part of the brain that is excited in people with PTSD.[43]

University of British Columbia and Tilray clinical trial on medical cannabis use and PTSD

The Subcommittee heard from Zachary Walsh, psychology researcher at the University of British Columbia (UBC), and Tilray, a cannabis producer licensed by Health Canada. UBC and Tilray are conducting a clinical study on the use of cannabis to treat PTSD. This study began several years before the VAC and CAF study was announced. The witnesses from these organizations claimed that this is the first Canadian study on the use of medical cannabis to treat mental health disorders. The study consists of randomized controlled trials involving 42 people with PTSD that are designed to test whether using cannabis to treat PTSD is effective and, if so, determine the best way to use it. The study is monitoring results such as the CAPS score, which is the main method of assessing the severity of PTSD,[44] and sleep and quality of life measures to identify any improvements.[45]

Tilray made it clear that none of its staff is directly involved in conducting the study and that its role is to produce and supply three different preparations for participants to vaporize: a cannabis preparation containing 10% THC, a cannabis preparation containing 10% THC and 10% CBD,[46] and a placebo preparation.[47]

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41 Ibid.

42 Tetrahydrocannabinol (THC) and cannabidiol (CBD) are two of the substances in cannabis. THC is associated with the euphoric effect, among others. CBD is linked to anti-inflammatory and pain relief properties, among others.

43 VEAC, *Evidence*, 6 June 2018, Col. Jetly.

44 The CAPS (clinician-administered PTSD scale) score is the preferred diagnostic tool for assessing PTSD.

45 VEAC, *Evidence*, 24 October 2018, Philippe Lucas.

46 On this point, Tilray explained that no CBD-only product is being administered in the study because none was available when the study began. If the study were launched today, it would probably include a pure CBD oil-based extract.

47 VEAC, *Evidence*, 24 October 2018, Philippe Lucas.

Centre for Addiction and Mental Health and University of Toronto study

Dr. Albert Wong, a neuroscientist and psychiatrist at the Centre for Addiction and Mental Health, told the Subcommittee about a study being done with Lakshmi Kotra, a chemist at the University of Toronto, to analyze the medical cannabis used by patients with PTSD. The study addresses the following question: "what is in cannabis that people with PTSD claim is helpful?"[48]

Patients with PTSD – mostly civilians – who contend that using cannabis helps them are recruited in Toronto and complete questionnaires characterizing their PTSD symptoms and their severity. They then submit a sample of the cannabis they are using and a blood sample. These samples are used to determine what is in the cannabis and what is in their bodies. The researchers hope to recruit 50 or 60 subjects and estimated that they were halfway there when Dr. Wong appeared before the Subcommittee in May 2018.

Dr. Wong explained that a preliminary analysis of the data collected so far had produced results that were somewhat surprising. He said that, of the two well-known cannabis constituents, THC is responsible for the euphoric effect and, in stronger doses, can produce social anxiety and sometimes paranoia, while CBD has more sedating and calming properties. Accordingly, scientists generally assume that cannabis high in CBD would be more effective in treating PTSD. Yet the preliminary data show that the patients with PTSD who took part in the study use cannabis strains with much higher levels of THC than expected.[49]

On the general issue of research on the use of cannabis to treat PTSD, Dr. Wong believes that randomized controlled trials will probably demonstrate that cannabis provides certain symptom-relieving benefits, but no curative impact. He argued that it is nonetheless worthwhile to study the use of cannabis to treat PTSD, as psychiatry still focuses on administering pharmaceuticals that alleviate symptoms or counteract whatever individuals find problematic. Moreover, he argued that the cannabinoid receptors in the human body "clearly have a powerful effect on symptoms related to PTSD."[50]

> [W]hile I think we should be exploring and considering how we use cannabis to treat PTSD, it is probably like the rest of the drugs we use in psychiatry, which is no different than alcohol or benzodiazepines. All of these drugs and medications have psychoactive compounds that change the way people feel, think and behave. In some cases, that can be therapeutic; in other cases, it can be problematic.[51]

Dr. Wong asserted that there is a lot we need to learn before we can come up with treatments that are curative, but that we must look forward to the horizon and see where we could do better by carrying out basic research.[52]

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48 VEAC, *Evidence*, 23 May 2018, Dr. Albert Wong, Neuroscientist and Psychiatrist, Centre for Addiction and Mental Health.
49 Ibid.
50 Ibid.
51 Ibid.
52 Ibid.

Use of technology: A software data collection platform

The witnesses representing Canada House Clinics described the potential of a software platform to collect and analyze data on medical cannabis use.

They are working on a software platform that would use two sources of information: the profiles of patients who consume medical cannabis (their medical history, their personal characteristics, the symptoms they are treating) and the cannabinoid profile of the cannabis they are using that brings them relief, as well as their dosage and consumption method.

The products of licensed cannabis producers are tested in a laboratory and given a certificate of analysis. This certificate would provide the system with detailed information on the constituents of the cannabis that a given patient is using. Treating physicians would enter information about their patient and their cannabis use into the software, and patients would be able to enter further details.

Cross-referencing these data would reveal trends that could serve as starting points for doctors who authorize their patients to take cannabis. For example, the database could show that a certain type of cannabis, consumed at a certain dose and by a certain method, tends to relieve the symptoms of individuals with a certain medical condition. It could also show whether men and women respond differently. These witnesses argued that this database could help doctors navigate the millions of possible permutations of strains of cannabis, their active ingredients, dosage levels and methods of use. They believe that the data from their software platform could help identify appropriate treatment protocols for various conditions and therefore reduce any negative effects of cannabis. Their network of clinics already uses an initial version of the software, and they are working on version 2.0, which could be deployed across the country.[53]

Major topics for study

During the witness testimonies, the Subcommittee heard about a number of topics that would benefit from closer study as part of the research agenda on the use of cannabis for medical purposes. First, witnesses pointed out that more knowledge is needed regarding the complicated issue of cannabis dosage. In addition, the potential substitution of cannabis for certain pharmaceuticals or substances should be examined in greater depth. Finally, the side effects of cannabis and the risks it poses, including overdose, dependence and impairment, as well as their impacts on patients' participation in psychotherapy, must be studied.

Dosage

The issues surrounding cannabis dosage were raised many times during the hearings. Determining the appropriate dose is a challenge because cannabis is a complex plant that contains dozens of substances, which vary from one plant to another. Cannabis is not like a conventional pharmaceutical, which is made to a very precise formula. Moreover, the way cannabis is used (for example, by smoking it, vaporizing it, ingesting edible products that contain it or consuming it as an oil) affects the amount

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53 VEAC, *Evidence*, 31 October 2018, Alex Kroon and Riley McGee.

consumed. The witnesses agreed that exact dosages are currently impossible given shortcomings in scientific knowledge of cannabis. However, a number of witnesses remarked that, the higher the dose, the higher the risks, including the risk of dependence.

Zachary Walsh, a psychologist and researcher who investigates the health effects of cannabis use, believes that cannabis is used in widely differing ways, even among individuals with the same medical condition. He also discussed the tolerance effect, which he said usually develops quickly. Once patients find a strain of cannabis that suits them and an effective dose, they can stay at that dosage.[54]

The Tilray representative agreed: a longitudinal study of 1,900 medical cannabis patients that assessed their first six months of use found that the average amount consumed did not increase over time.[55] Furthermore, Tilray presented the Subcommittee with the results of a 2017 survey of over 2,000 of its patients. The responses revealed that these patients were consuming cannabis primarily to address pain and mental health conditions. About three-quarters of the patients reported using cannabis daily, and this figure rose to 85% for those with PTSD. The average amount of cannabis used per day was 1.5 grams among patients overall and 2.1 grams among those with PTSD.[56]

A number of witnesses stated that many patients who use large quantities of cannabis every day suffer from chronic pain and/or other compounded conditions, such as PTSD, which require relief throughout the day.[57]

Some witnesses also explained the medical cannabis authorizations for large quantities by pointing out that certain patients convert dried cannabis into cannabis oil or butter for consumption. The conversion process results in some product being lost, which means these patients are not in fact consuming the amount of cannabis prescribed.[58]

The reasons patients decide to convert cannabis into oil themselves include financial challenges. The cannabis oils that producers sell can be quite expensive, exceeding the $8.50 per gram that VAC will reimburse.[59] However, Dr. Passey, a psychiatrist, told the Subcommittee that he recommends his patients use oils, because they can be taken in slightly more exact doses, in part because their THC and CBD content is known.[60]

Finally, the Subcommittee learned that authorizations for medical cannabis currently vary significantly: some doctors authorize a certain quantity of cannabis in a general way, letting patients choose their

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54 VEAC, *Evidence*, 9 May 2018, Zachary Walsh.
55 VEAC, *Evidence*, 24 October 2018, Philippe Lucas.
56 Ibid.
57 See, for example, VEAC, *Evidence*, 9 May 2018, Zachary Walsh, and *Evidence*, 31 October 2018, Riley McGee.
58 See VEAC, *Evidence*, Dr. Greg Passey, Alex Kroon and Sylvain Chartrand.
59 VEAC, *Evidence*, 31 October 2018, Alex Kroon; and *Evidence*, 24 October 2018, Gregg Battersby, Vice President, Commercial Strategy, Aphria.
60 VEAC, *Evidence*, 17 October 2018, Dr. Greg Passey.

preferred product,[61] while other doctors make the authorization more specific, such as by stipulating a maximum percentage of THC content.[62]

Potential substitution of cannabis for pharmaceuticals and other substances

The Subcommittee wanted to know whether veterans' medical cannabis consumption could decrease their consumption of other substances, including pharmaceuticals such as tranquilizers and pain relievers.

Some witnesses said there is a need for in-depth research to determine whether the use of cannabis for medical purposes could reduce or replace the use of other potentially more dangerous drugs.[63]

In her testimony to the Subcommittee on 2 May 2018, VAC's Chief Medical Officer stated that the department had reviewed the situation but had not found "any decrease in the utilization of other classes of drugs, such as benzodiazepines that would be used for sleep aids or anxiety, or in the opioids" owing to veterans' increasing use of cannabis for medical purposes. She added that it "might be too early to see a change in that because trends like that can take some years before we see an effect."[64]

Yet, a few days later, *The Globe and Mail* newspaper reported that data it had obtained from VAC showed a marked decline in the number of veterans using benzodiazepines 43% fewer and opioids 31% fewer since 2012, as medical cannabis prescriptions skyrocketed.[65] Experts cautioned that this is a correlation and that the cause-effect relationship has not been studied. One explanation is that doctors may have prescribed opioids less often because of the dangers associated with them, which became apparent in recent years.[66]

However, a number of witnesses claimed to have observed a substitution effect among patients who use medical cannabis.

The representatives of Canada House Clinics reported that the data they keep on their patients who use medical cannabis show that the vast majority of them are reducing their consumption of pharmaceuticals, including opioids. In their view, cannabis is particularly effective for people with multiple conditions, as it can prevent the harmful effects of polypharmacy by replacing several different pharmaceuticals.[67]

Cannabis producer Tilray also stated that its 2017 survey of over 2,000 of its patients revealed that 69% of them said they substitute cannabis for prescription drugs, 44% said cannabis reduces their alcohol consumption and 31% said it diminishes their tobacco consumption. The pharmaceuticals that cannabis

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61 VEAC, *Evidence*, 17 October 2018, Dr. Édouard Auger.
62 VEAC, *Evidence*, 24 October 2018, Sarah Dobbin, Director, Medical Division, Aphria.
63 Ibid. and VEAC, *Evidence*, 2 May 2018, Dr. Cyd Courchesne.
64 VEAC, *Evidence*, 2 May 2018, Dr. Cyd Courchesne.
65 Mike Hager (*The Globe and Mail*), "Cannabis use among veterans soars as Ottawa caps paybacks," 7 May 2018.
66 VEAC, *Evidence*, 23 May 2018, James MacKillop.
67 VEAC, *Evidence*, 31 October 2018, Alex Kroon.

users most often replace include opioids and anti-depressants. Many patients said they have stopped using these drugs completely, while others are using them less. The survey also found that patients with PTSD were more likely than other patients to report substituting cannabis for other drugs and substances.[68]

Psychologist Greg Passey also testified that his patients have considerably reduced their use of other drugs, including pain relievers, by consuming medical cannabis.

Dr. Passey illustrated this shift by telling the Subcommittee the story of one his patients, a veteran diagnosed with major depression, PTSD and severe pain. Dr. Passey said this patient initially had mobility issues and took 10,000 prescription pills per year. But once he started using medical cannabis, he gradually began taking fewer other drugs while adjusting his dose of medical cannabis. Within a few years, he had stopped taking pain medication. This patient takes 10 grams of high-CBD, low-THC cannabis each day in suppository form. Dr. Passey said he can now walk without a cane, he participates in recreational activities and "his cognition is clear."[69]

A veteran with a spinal injury also told the Subcommittee that cannabis released him from the "downward cycle" of his dependence on opioids. He asserted that medical cannabis saved his life and that using it for the last three years has improved his quality of life "by exponential dimensions". He reported no longer taking Oxycontin at night or for acute pain and that the maximum daily doses of Percocet, 6-10 times per day, which he was taking are now virtually replaced by strong THC cannabis "that mitigates the debilitating pulses of excruciating neuropathic pain". He says he has experienced no adverse side effects; "there is no cycle of despair as I experienced with opiates".[70]

In addition, in recent years the media have reported numerous similar stories of veterans claiming to have stopped taking pharmaceuticals with harsh side effects and achieved a better quality of life thanks to medical cannabis.

Side effects of cannabis and risks of dependence and overdose

As noted above, the side effects and risks associated with cannabis vary with the type of cannabis used, the consumption method and the amount consumed, among other factors.

The Government of Canada nonetheless states that the potential negative side effects of cannabis consumption are generally as follows:

Short-term health effects:

- confusion;
- sleepiness;
- impaired ability to remember, concentrate and pay attention;
- slower reaction times;
- anxiety, fear or panic;

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68 VEAC, *Evidence*, 24 October 2018, Philippe Lucas.
69 VEAC, *Evidence*, 17 October 2018, Dr. Greg Passey.
70 Michael L. Blais, Brief to the Subcommittee, 5 December 2018.

- damaged blood vessels caused by smoke;
- decreased blood pressure, which can cause fainting;
- increased heart rate, which can be dangerous to people with heart conditions; and
- psychotic episodes characterized by paranoia, delusions and hallucinations.

Negative long-term health effects:

- risk of dependence or addiction;
- memory and concentration problems;
- reduced ability to think and make decisions; and
- mental health impacts: using cannabis regularly over a long period of time increases the likelihood of experiencing anxiety, depression, psychosis and schizophrenia.[71]

The government warns people under age 25 that they are especially vulnerable to the effects of cannabis, as their brains are not yet fully developed and THC affects the biological mechanisms that direct brain development. In addition, pregnant and breastfeeding women who use cannabis may pass the substances it contains to their children.[72]

The witnesses had diverse views on the side effects and risks of cannabis use but did concur that further research on these topics is needed.

The Subcommittee heard that most of the negative side effects are linked to the THC in cannabis. Accordingly, it appears that patients who consume cannabis containing higher levels of CBD avoid most of the negative effects. The method of consumption also changes the side effects. For example, smoking cannabis entails risks to pulmonary health.

Researcher James MacKillop explained that, the more cannabis is consumed, the higher the risk of side effects: "As a result, withdrawal symptoms would be more likely in high-dose patients, as would other side effects, such as motor impairment, cognitive difficulties and risk for developing addicted use." Mr. MacKillop also pointed out that studies have found a link between cannabis use and self-harm and suicide among veterans in the U.S.[73]

However, Dr. Wong qualified that statement, noting that it is difficult to establish causation: did the treatment lead to suicide, or was it the psychiatric condition? He made a comparison with patients who take heart medications and are more likely than the general population to have heart attacks – not because of their medication, but because of their heart problems. He also explained that, as a psychiatrist, he sometimes sees patients go through a phase where their anti-depressants are starting to boost their motivation and energy, but they remain depressed, leading them to carry out the suicide attempts they had been planning previously.[74]

Researcher David Pedlar pointed out that cannabis can be addictive and that overdose is possible.[75]

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71 Government of Canada, "Cannabis health effects" and "Health effects of cannabis."
72 Ibid.
73 VEAC, *Evidence*, 23 May 2018, James MacKillop.
74 VEAC, *Evidence*, 23 May 2018, Dr. Albert Wong.
75 VEAC, *Evidence*, 9 May 2018, David Pedlar.

Mr. Walsh clarified that a cannabis overdose consists of a period of several hours during which the user experiences anxiety and nausea, but no long-term negative effects. He noted that prescription drugs, such as opioids, commonly cause fatal overdoses. As for the possibility of dependence, Mr. Walsh said that "the cannabis withdrawal symptom is short-lived and relatively mild compared to those of some other widely used prescription medications."[76]

The argument that cannabis does have side effects, but that they are generally less serious than those of other drugs prescribed to veterans, was made repeatedly during the study.[77]

> For many users, the side effects of cannabis are more easily tolerated than those of anti-depressants, sedatives and other medications with side effects such as weight gain, sexual dysfunction and lethargy, which significantly impair quality of life. By contrast, even at high doses, cannabis can be a relatively mild drug with little toxicity.[78]

Some witnesses also explained that, contrary to popular belief, medical cannabis enables many patients to lead a more active life than they did while they were suffering from the symptoms of their medical conditions or the uncomfortable side effects of some pharmaceuticals, especially when these patients take several at a time.[79] As one witness pointed out, "Given the negative effects of the isolation that plagues too many veterans with chronic pain and PTSD, the potential of cannabis to facilitate activity and social integration is important."[80] Tilray stated that 60% of its patients who take medical cannabis report being able to work.[81]

However, Dr. Auger, a psychiatrist, reported that, at the operational stress injury clinic in Québec city where he works, doctors notice that veterans with PTSD who take high doses of cannabis become apathetic or less functional over time. These effects can hurt their long-term rehabilitation. He has also seen patients hospitalized for psychoses associated with excessive cannabis use. Dr. Auger believes that many patients in his area have turned to physicians who issue a cannabis prescription within minutes, without studying their history or providing follow-up care.[82]

Dr. Auger and Dr. Passey agreed that follow-up is an essential part of medical treatment, including treatments involving cannabis. Dr. Passey said he does not see these kinds of problems among his patients who use medical cannabis because he monitors them quite closely and continually in order to detect the signs of possible side effects.[83]

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76 VEAC, *Evidence*, 9 May 2018, Zachary Walsh.
77 See, for example, VEAC, *Evidence*, 9 May 2018, Zachary Walsh; *Evidence*, 17 October 2018, Dr. Greg Passey; and Michael L. Blais, Brief to the Subcommittee, 5 December 2018.
78 VEAC, *Evidence*, 9 May 2018, Zachary Walsh.
79 See, for example, VEAC, *Evidence*, 9 May 2018, Zachary Walsh; *Evidence*, 17 October 2018, Dr. Greg Passey; and *Evidence*, 24 October 2018, Philippe Lucas.
80 VEAC, *Evidence*, 9 May 2018, Zachary Walsh.
81 VEAC, *Evidence*, 24 October 2018, Philippe Lucas.
82 VEAC, *Evidence*, 17 October 2018, Dr. Édouard Auger.
83 VEAC, *Evidence*, 17 October 2018, Dr. Greg Passey.

A number of witnesses agreed that a personalized treatment plan, extensive education and rigorous follow-up care are the keys to effectively managing side effects and mitigating the risks associated with impairment so that a treatment regimen that includes medical cannabis can be beneficial.

> In our view, the key is that you have a patient-specific cannabinoid treatment plan which looks at medical history, condition, diagnosis, usage in the past, what they are doing day and evening, need to drive, need to work, and all those different elements. I think the most important element is this idea that it has to be a patient-specific treatment plan.[84]

Impairment

The issue of impairment caused by cannabis was raised multiple times during the study. The witnesses agreed that patients must not drive if they are impaired. A number of experts explained that they advised using low-THC cannabis during the day and, if necessary, taking cannabis with higher amounts of THC in the evening, when patients no longer have to leave home.[85] They also remarked that patients need to be properly educated about issues such as the way different consumption methods result in shorter or longer impairment effects. For example, the effects of vaporized cannabis do not last nearly as long as those of edible cannabis products.[86]

Some witnesses stated that the impairment effects of cannabis are much more similar to those of certain prescription drugs than those of alcohol. "The best evidence suggests that cannabis impairment behind the wheel is more similar to things like antihistamines, benzodiazepines and opioids … than it is like alcohol."[87]

In addition, Mr. Walsh said that "research has shown that medical cannabis users perform better on tasks that require complex mental functioning when properly medicated rather than when they are suffering from their symptoms." He also believes that, when cannabis is used instead of alcohol, its calming effects can reduce domestic violence.[88]

Riley McGee, a veteran who suffered from PTSD and now works for Canada House Clinics, summarized the risks of impairment among medical cannabis users as follows:

> The opportunity for impairment is always there, just like it is with any prescribed medication. People need to be educated if they are new to it, or if they are intoxicated they shouldn't be behind the wheel. I would say that most medical users who have been using medically for a while and understand their dosages… they're not using cannabis to become impaired. They're using cannabis to feel normal…I don't think that impairment in medical patients is something that's rampant or common.[89]

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84 VEAC, *Evidence*, 31 October 2018, Alex Kroon.
85 Ibid. and VEAC, *Evidence*, 17 October 2018, Dr. Greg Passey.
86 VEAC, *Evidence*, 31 October 2018, Alex Kroon.
87 VEAC, *Evidence*, 9 May 2018, Zachary Walsh.
88 Ibid.
89 VEAC, *Evidence*, 31 October 2018, Riley McGee.

In short, the testimonies revealed that more research is needed to investigate impairment caused by cannabis, particularly the means of detecting it, where scientific knowledge is very limited.

Cannabis and psychotherapy

The witnesses all agreed that, if cannabis has some potential to treat mental health disorders such as PTSD, it would very likely be as a substance that relieves the symptoms rather than as a cure.

In addition, they all acknowledged that the treatment that can "cure" PTSD is psychotherapy, but that it is very challenging and demands a great deal of effort and motivation. Moreover, it does not always work, especially in the case of soldiers and veterans who respond less well to current treatments.

The witnesses differed about whether medical cannabis can help patients achieve a state of mind that enables them to undertake psychotherapy, or whether it prevents them from doing so.

Dr. Auger asserted that a patient who uses 10 grams of cannabis per day "is completely incapable of undertaking or continuing psychotherapy of any value at all." He said that the operational stress injury clinic in Québec city has developed an in-house policy to assess on a case-by-case basis whether cannabis-using patients can continue to be treated. Dr. Auger believes that some patients who normally use less than one gram per day seem to benefit the most from the partial effects on sleep and anxiety while continuing to take their other mediations. The clinic will continue to treat these patients, but those who use more than that may be denied treatment.[90]

However, other witnesses argued that cannabis can help relieve debilitating symptoms such as hypervigilance, insomnia, recurring nightmares and chronic pain that make self-reflection difficult and hamper psychotherapy. They believe the goal of using cannabis to treat PTSD is to help patients feel able to pursue therapies that could in turn deliver a lasting cure.[91] Once again, more research is needed to validate the potential benefits of cannabis in enabling treatments such as psychotherapy.

Recommendations 3 and 4

The Subcommittee believes the federal government should support research into the use of cannabis for medical purposes, particularly for Canadian veterans. While much uncertainty surrounds this issue, anecdotal data suggest a potential that should be examined, so that all possible avenues are explored for improving the quality of life of veterans, who have made incredible sacrifices for Canada. The research agenda should include the potential applications of cannabis, dosage considerations, the side effects and risks of cannabis, its use in relation to psychotherapy and the potential to substitute it for other drugs and substances. Furthermore, the Subcommittee believes this research must consider the differences between men and women as regards the use of medical cannabis. The witnesses told the Subcommittee that very little is known about this issue, but that it is worth studying, because sex and gender considerations are undoubtedly relevant to the consumption of cannabis for medical purposes.

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90 VEAC, *Evidence*, 17 October 2018, Dr. Édouard Auger.

91 VEAC, *Evidence*, 31 October 2018, Alex Kroon; *Evidence*, 24 October 2018, Philippe Lucas; and *Evidence*, 9 May 2018, Zachary Walsh.

Some witnesses suggested that the government could provide funding to independent and impartial research institutes, as well as to research projects that involve commercial interests.

Given that scientific knowledge has fallen far behind the public's use of cannabis, that many veterans are not being relieved of their suffering by conventional treatments and that little research on medical cannabis is currently being conducted internationally, the Subcommittee recommends:

Recommendation 3:

That the Government of Canada quickly make significant investments in research on the use of cannabis for medical purposes, including:

* specific research on veterans' use of cannabis for medical purposes; and
* examining the potential issues resulting from over usage, and

that the gathered data be disseminated to the public and health professionals.

In addition, many witnesses described a substitution effect, where medical cannabis replaces prescription pharmaceuticals. VAC claimed not to have observed a change in consumption of other drugs owing to medical cannabis use. However, the media reported obtaining data from VAC that showed a marked decline in the number of veterans using benzodiazepines and opioids since 2012, as authorizations for medical cannabis proliferated. The Subcommittee believes that VAC should undertake a thorough review of this issue and report its findings to the public. The Subcommittee therefore recommends:

Recommendation 4:

That Veterans Affairs Canada undertake a detailed review of the potential impacts of medical cannabis use on Canadian veterans' consumption of prescription pharmaceuticals and that the department publish the findings and an analysis of the net costs of cannabis reimbursements, taking into account the potential savings in reimbursements for other drugs.

Potential impact of recreational marijuana legalization on veterans' use of cannabis for medical purposes

Recreational marijuana use became legal in Canada on 17 October 2018, during the Subcommittee's study. As a result, witnesses expressed their views on the effects this legislative change could have on the use of cannabis for medical purposes. They raised possible benefits regarding the stigmatization of medical cannabis users and the advancement of knowledge about the drug. However, witnesses also mentioned negative impacts such as the government excise duty imposed on all cannabis products and the shortages that affected inventories of medical cannabis.

Impact on stigmatization

Several witnesses discussed the issue of the stigmatization of medical cannabis use.

Some witnesses said that, until now, many patients had not been comfortable discussing cannabis use with their doctor for fear of being judged. If the legalization of recreational cannabis lessens the stigma

surrounding cannabis, patients could have a more open communication with their doctors, which could reduce self-medication with cannabis and foster appropriate medical care.[92]

One witness said that U.S. states where medical and recreational cannabis are legal, such as Colorado, Washington state and Oregon, reported an initial decline in consumption of medical cannabis which lasted a few months, as people explored the legal access to recreational cannabis. After that, a significant increase in the number of registrations for medical cannabis programs occurred. This jump was attributed to the destigmatization of cannabis once it was fully legalized. The witness argued that the legalization of recreational use in Canada will make doctors more confident that their patients are genuinely seeking cannabis authorizations for medical purposes, as they can now easily and legally purchase cannabis on the recreational market.[93]

The witnesses from Canada House Clinics also reported that the health professionals to whom physicians refer their patients for medical cannabis authorizations and follow-up sometimes have trouble working with the treating physicians to improve patients' well-being.

> Frankly, we would love — and hopefully legalization begins to change the attitude of more and more doctors — to be part of a health team working on a patient and share information with their referring physician in terms of what we are seeing and what we are recommending so that we can work on it together.[94]

In addition, Mr. Walsh emphasized that the legalization of recreational marijuana could enable adults who use medical cannabis to communicate more honestly with their children about this topic. In his view, children can understand that cannabis is for adults only, like alcohol and other medications. Mr. Walsh suggested it would be a good idea to keep developing materials that promote family discussions about cannabis.[95] Witnesses also pointed out that women can face a particular stigma for using cannabis, partly in connexion with their parental role.

Impact on knowledge advancement

Many witnesses contended that the legalization of recreational cannabis will facilitate the development of scientific knowledge about cannabis. Research projects involving cannabis may be viewed more favourably. Moreover, some researchers perceive the legalization of cannabis as a sort of national natural experiment that will enable Canadian researchers to ask users questions that researchers in many other countries have not been able to ask.[96]

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92 VEAC, *Evidence*, 9 May 2018, Zachary Walsh.
93 VEAC, *Evidence*, 24 October 2018, Philippe Lucas.
94 VEAC, *Evidence*, 31 October 2018, Alex Kroon.
95 VEAC, *Evidence*, 9 May 2018, Zachary Walsh.
96 VEAC, *Evidence*, 23 May 2018, James MacKillop and Dr. Albert Wong; and *Evidence*, 9 May 2018, Zachary Walsh.

Impact of excise duty on cannabis

While the legalization of recreational cannabis may have benefits for medical cannabis users, it also has downsides. The witnesses identified one such downside: since recreational cannabis was legalized on 17 October 2018, the government has imposed an excise duty on all cannabis products, including those purchased by patients for medical purposes.

When VAC officials appeared before the Subcommittee in May 2018, they stated that the department did not know how much the excise duty would be or what form it would take for cannabis, but they said they "certainly anticipate it will make [the price] higher, and at that point in time we will have to operationally look at what we're reimbursing on a per-gram amount."[97]

Yet, once recreational cannabis was legalized, VAC decided instead to maintain its maximum reimbursement rate of $8.50 per gram. It offered the following rationale:

> This excise duty will be paid by the federal licensed sellers and will not be visible on your invoices or receipts.… Numerous Licensed Producers offer all of their strains at this price point [$8.50], meaning that Veterans are able to access a wide variety of products within the reimbursement amount. No Veteran will be out of pocket as a result of these changes.[98]

Some cannabis producers did decide to absorb the cost of the excise tax on their medical products in the medium run.[99] It is also true that some producers offer veterans a discount on certain products priced above $8.50 per gram.

However, as one witness from Canada House Clinics said, "Some of the licensed producers are covering the cost of that excise duty tax stamp and not flowing that through to veterans; other licensed producers are." He added that "it has raised the cost of the cannabis for veterans above and beyond the $8.50 per gram covered by Veterans Affairs Canada and they have to top that up personally."[100]

This witness explained that the excise duty applies to all cannabis products to prevent recreational cannabis users from turning to the medical market to avoid paying the tax.[101] Some witnesses argued that a process to validate patients to ensure they take cannabis for medical purposes would enable a separate medical cannabis market that is exempt from the excise duty to be created.[102]

In Budget 2019, which was tabled on 19 March 2019, the government introduced changes on cannabis taxation that will come into effect on 1 May 2019. For certain cannabis products, such as extracts (which will include cannabis oils), cannabis edibles, and cannabis topicals, excise duties will be imposed on the quantity of THC contained in the final product. Therefore, certain low-THC products (e.g., cannabis oils), typically used by individuals for medical purposes, will generally be subject to lower excise duties than

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97 VEAC, *Evidence*, 2 May 2018, Faith McIntyre, Director General, Policy and Research Division, Strategic Policy and Commemoration, Veterans Affairs Canada.
98 VAC, *Cannabis for Medical Purposes – Revised Reimbursement Policy*, "Questions and Answers."
99 VEAC, *Evidence*, 24 October 2018, Gregg Battersby.
100 VEAC, *Evidence*, 31 October 2018, Riley McGee.
101 Ibid.
102 Ibid. and 24 October 2018, Gregg Battersby.

before. However, there will be no changes to the current excise duty framework for fresh and dried cannabis, seeds and seedlings.[103]

Shortages of cannabis stemming from recreational market

A number of witnesses were disappointed that the legalization of the recreational market created shortages of cannabis affecting the products veterans usually use for medical purposes. One witness said the shortages in the fall of 2018 partly stemmed from cannabis producers being forced to repackage their products and apply excise stamps to them. These stamps were not always available, and this led to delays and shortages.[104] However, his colleague stated that supply problems existed prior to 17 October 2018 and that, to address them, patients using cannabis for medical purposes were encouraged to deal with multiple licensed producers in order to mitigate the risk.[105]

Some witnesses thought that the government should consider ways of guaranteeing that the medical cannabis market is always supplied. They believe licensed producers who decide to supply individuals who consume cannabis for medical purposes must commit to keeping products suitable for these patients in stock.[106] One witness noted that patients whose products are not available may turn to the black market and buy impure cannabis that puts their health at risk.[107]

However, another witness pointed out that licensed cannabis producers deal with problems such as crop losses that traditional pharmaceutical makers do not, which could make required inventory levels difficult for them to achieve.[108]

Recommendation 5

The Subcommittee is aware of the significant impacts that shortages can have on patients – including veterans – who treat their symptoms with medical cannabis, and therefore recommends:

Recommendation 5:

That Veterans Affairs Canada, in collaboration with Health Canada, consider taking measures to ensure the availability of cannabis to veterans who use it for medical purposes.

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103 Government of Canada, Budget 2019, Chapter 4, Part 7, Adjusting the Rules for Cannabis Taxation.
104 VEAC, *Evidence*, 31 October 2018, Riley McGee.
105 VEAC, *Evidence*, 31 October 2018, Alex Kroon.
106 VEAC, *Evidence*, 31 October 2018, Riley McGee; and *Evidence*, 5 December 2018, Sylvain Chartrand.
107 VEAC, *Evidence*, 5 December 2018, Sylvain Chartrand.
108 VEAC, *Evidence*, 31 October 2018, Riley McGee.

Conclusion

Based on the evidence heard, the Subcommittee concludes that Veterans Affairs Canada's cannabis for medical purposes reimbursement policy is very important for many veterans. The members of the Subcommittee continue to have many questions that only research will be able to answer. The Subcommittee eagerly awaits the findings of the studies currently underway. It hopes to see many other studies undertaken soon in order to learn more about the use of cannabis for medical purposes, particularly by veterans. Medical cannabis use is clearly a rapidly evolving issue, and the Subcommittee will follow developments with interest. As always, it will keep watch on Veterans Affairs Canada policies to ensure that they remain the most beneficial for the health and well-being of veterans. The Subcommittee members hope the recommendations in this report will contribute to the ongoing improvements to the government's policies for veterans.

APPENDIX A – List of Witnesses

Decembre 5, 2018	
Canadian Veterans Advocacy	Sylvain Chartrand, Director, Information Management and Information Technology
Royal Canadian Legion	Raymond McInnis, Director, Veterans' Services
October 31 2018	
Canada House Clinics	Alex Kroon, President Riley McGee, President, Abba Medix
Octobre 24, 2018	
Aphria	Gregg Battersby, Vice President, Commercial Strategy Sarah Dobbin, Director, Medical Division
Tilray	Philippe Lucas, Vice President, Global Patient Research and Access
Octobre 17, 2018	
As individuals	Dr. Greg Passey, Psychiatrist Dr Edouard Auger, Psychiatrist (by vidéoconférence)
June 6, 2018	
Department of National Defence and the Canadian Armed Forces	Colonel Rakesh Jetly, Senior Psychiatrist and Mental Health Advisor, Canadian Forces Health Services Group
May 23, 2018	
As individuals	James MacKillop, Director, Michael G. DeGroote Centre for Medical Cannabis Research, McMaster University Dr Albert Wong, Neuroscientist and Psychiatrist, Centre for Addiction and Mental Health
May 9, 2018	
As an individual	Zachary Walsh, Associate Professor, Department of Psychology, University of British Columbia
Canadian Institute for Military and Veteran Health Research	David Pedlar, Scientific Director Dr J.D. Richardson, Consultant Psychiatrist, Physician Clinical Lead, Parkwood Operational Stress Injury Clinic
May 2, 2018	
Veterans Affairs Canada	Faith McIntyre, Director General, Policy and Research Division, Strategic Policy and Commemoration (by video conference) Cyd Courchesne, Director General, Health Professionals and Chief Medical Officer

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