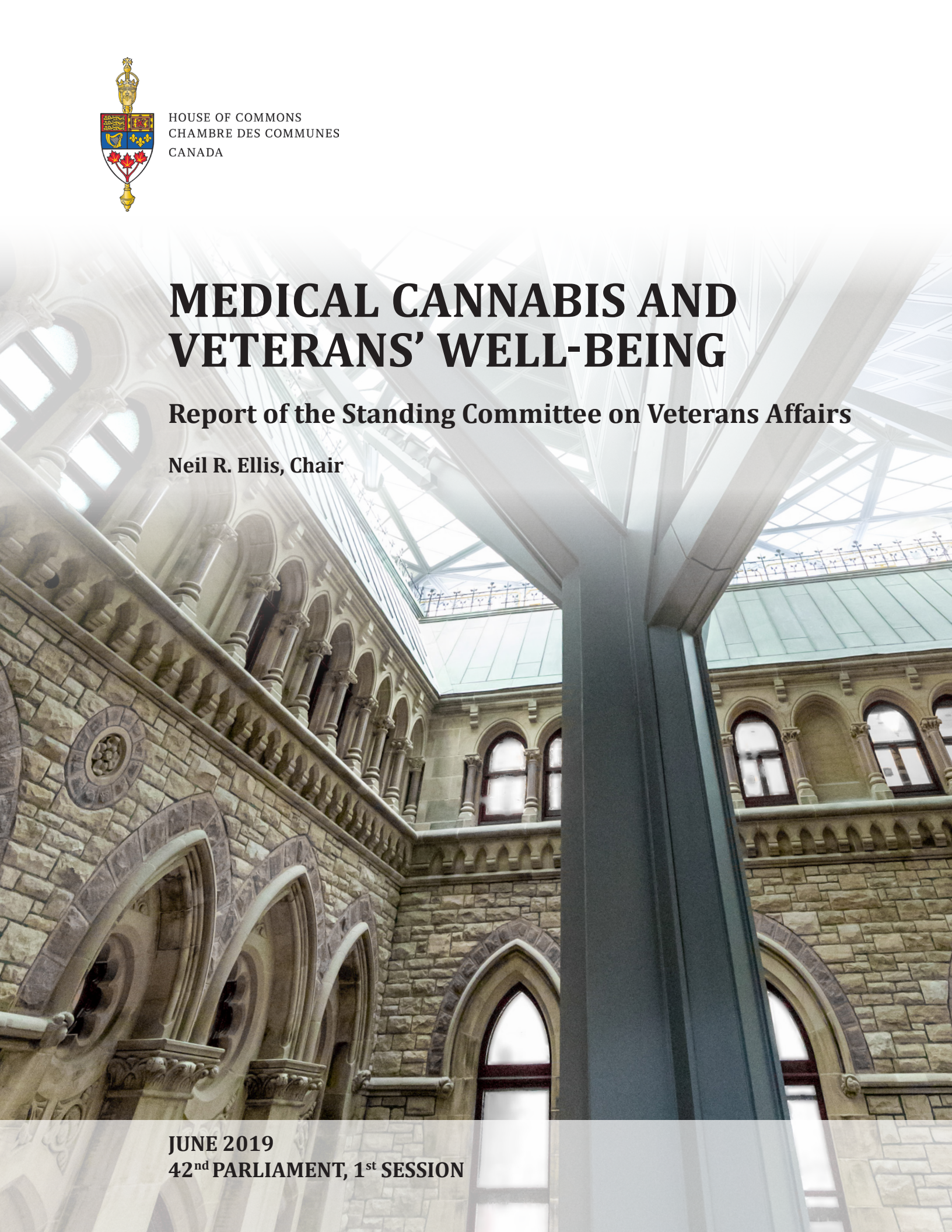

HOUSE OF COMMONS
CHAMBRE DES COMMUNES
CANADA

MEDICAL CANNABIS AND VETERANS' WELL-BEING

Report of the Standing Committee on Veterans Affairs

Neil R. Ellis, Chair

JUNE 2019
42nd PARLIAMENT, 1st SESSION

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Chair

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NOTICE TO READER

Reports from committee presented to the House of Commons

Presenting a report to the House is the way a committee makes public its findings and recommendations on a particular topic. Substantive reports on a subject-matter study usually contain a synopsis of the testimony heard, the recommendations made by the committee, as well as the reasons for those recommendations.

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THE STANDING COMMITTEE ON VETERANS AFFAIRS

has the honour to present its

THIRTEENTH REPORT

Pursuant to its mandate under Standing Order 108(2), the Committee has studied medical cannabis and veterans' well-being and has agreed to report the following:

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LIST OF RECOMMENDATIONS

As a result of their deliberations committees may make recommendations which they include in their reports for the consideration of the House of Commons or the Government. Recommendations related to this study are listed below.

MEDICAL CANNABIS AND VETERANS' WELL-BEING

INTRODUCTION

On 22 November 2016, Veterans Affairs Canada (VAC) announced a new reimbursement policy on cannabis for medical purposes that would decrease the maximum amount of cannabis eligible for reimbursement from 10 grams per day to three grams per day, or its equivalent in fresh cannabis or cannabis oil. In addition, the maximum amount per gram that will be reimbursed was set at $8.50. The policy took effect in May 2017. In the months that followed, veterans and veterans' groups expressed concerns about the impact of this reduction in the daily amount of cannabis that VAC will cover.[1]

During the Committee's 2016–2017 study on mental health, some witnesses raised similar concerns. As a result, on 9 November 2017 the Committee adopted a motion to undertake a study on VAC's cannabis for medical purposes program. The study began in November 2018 and collected evidence from 22 witnesses.

The Committee's work addressed two main issues:

- the state of research on the effectiveness of cannabis in treating certain medical conditions common among veterans and the risks associated with its use; and
- the justifications for the key elements of VAC's policy and their basis in current research on cannabis.

On the first issue, which is discussed in the first part of this report, it appears that years of further research are needed to clearly identify the constituents of cannabis that can alleviate a given medical condition and the risks associated with them. Research on cannabis use and veterans' health remains extremely limited around the world. Accordingly, it is much too soon to treat cannabis as any other medication. However, the known risks associated with its consumption do not seem very significant compared with the benefits that doctors and those who consume cannabis report anecdotally or that preliminary research theoretically reveals. Current research seems to show that the

1 See, for example, https://www.theglobeandmail.com/cannabis/article-cut-off-how-veterans-affairs-clawback-on-medical-marijuana-threw-a/.

risks are moderate, except in cases of very heavy use or where users have known mental health problems. As a result, social tolerance of cannabis consumption has grown.

Although research does not yet prove that cannabis is effective in treating most of the medical conditions for which veterans receive an authorization to use it, the few risks involved enable cannabis to be treated "as though" it were a pharmaceutical. However, the lack of hard knowledge about the benefits of cannabis does not mean it poses no risks at all. Caution is therefore in order until cannabis has gone through the long process of research and clinical trials that will determine whether it is safe and identify its side effects. This process will also enable Health Canada to assign a drug identification number (DIN) to each of the various compounds that can be extracted from the cannabis plant and synthesized.

Since reasonable care must be exercised given the current state of research, VAC's decision to reduce the daily amount of cannabis covered from 10 grams to three grams seems appropriate. The key aspects of this decision will be examined in more detail in the second part of this report. The scientific advice on which this decision was based, from Health Canada, the College of Family Physicians of Canada and international comparative analyses, appear sufficient to justify this reduction.[2] Granted, some veterans who had a medical authorization for more than three grams per day feel they have been hurt by this decision. To address this problem, VAC states in its policy, "In exceptional cases with the appropriate supporting medical documents, the Department will reimburse for more than three grams per day."[3]

STATE OF RESEARCH

> While cannabis products have been consumed for medical purposes for centuries, the scientific evidence base supporting its use at the same level of rigour as medicines and pharmaceutical preparations is still in relative infancy.[4]

Cannabis is a plant known to contain at least 100 active ingredients, which are called "cannabinoids." The best known cannabinoids are THC (tetrahydrocannabinol), which is responsible for the euphoric effect of cannabis, and CBD (cannabidiol), which is said to

2 Veterans Affairs Canada, *Review of Marijuana for Medical Purposes*, November 2016, Appendix B, p. 15.

3 Veterans Affairs Canada, "Just the Facts: Reimbursement Policy on Cannabis for Medical Purposes."

4 Dr. Oyedeji Ayonrinde (Associate Professor, Department of Psychiatry, Queen's University, As an individual), *Evidence*, ACVA, 18 March 2019, 1550.

deliver the main therapeutic benefits of cannabis.[5] THC has existed in synthesized form for decades under the name "Marinol," but its manufacturer has stopped marketing the product in Canada.[6] A synthetic form of CBD, called "nabilone," exists in various concentrations in pharmaceuticals that have been approved by Health Canada. Finally, "Sativex" is an approved pharmaceutical that contains both THC and CBD, but its use is authorized only for adults with multiple sclerosis.[7]

The term "cannabis" therefore covers a wide variety of substances. Many strains of cannabis exist, each containing different concentrations of 100 or so cannabinoids whose effects and interactions are poorly understood. Dr. Marcel Bonn-Miller of the University of Pennsylvania explained the issue as follows:

> cannabis is such a heterogeneous drug that it varies a lot depending on what you get in terms of what we're talking about. A lot of the research is really focused on trying to understand the individual effects of certain cannabinoids within the plant so that it can help for recommendations in certain areas. Saying that cannabis in and of itself is helpful or harmful is a kind of misnomer and is really difficult in terms of actual pragmatic medical advice.[8]

Where preliminary evidence suggests that cannabis is effective in treating a particular medical condition, it is nearly impossible to know which constituent, or which combination of constituents, is producing the successful outcome. For example, as Dr. Bonn-Miller noted, "THC and CBD are an example of complete opposite effects for anxiety."[9] The method of consumption can also significantly change the active roles of the plant's multiple ingredients. Dr. Oyedeji Ayonrinde, Associate Professor of Psychiatry at Queen's University, explained how this dynamic works with dried cannabis that is smoked:

> there can be considerable difference in the composition of a smoked joint with different joint sizes, THC potency, THC-to-CBD ratios and terpene profiles. Some early findings from research I'm doing at the moment have identified close to a 65-fold difference in the THC milligram potency of some joints compared to others.[10]

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5 Dr. Jason Busse (Associate Professor, McMaster University, As an individual), *Evidence*, ACVA, 22 November 2018, 1630.

6 Health Canada, *Health products containing cannabis or for use with cannabis: Guidance for the* Cannabis Act*, the* Food and Drugs Act*, and related regulations*.

7 Health Canada, "Fact Sheet – SATIVEX."

8 Dr. Marcel Bonn-Miller (Perelman School of Medicine, University of Pennsylvania, As an individual), *Evidence*, ACVA, 27 February 2019, 1550.

9 Dr. Marcel Bonn-Miller (Perelman School of Medicine, University of Pennsylvania, As an individual), *Evidence*, ACVA, 27 February 2019, 1550.

10 Dr. Oyedeji Ayonrinde (Associate Professor, Department of Psychiatry, Queen's University, As an individual), *Evidence*, ACVA, 18 March 2019, 1550.

This variation means that the quantity consumed – such as the three grams per day of dried cannabis that VAC will cover – provides only a vague notion of what is in fact consumed in specific cases, unlike the clear and precise concentrations set out in a medical prescription. Consequently, statements drawing a causal link between "cannabis" in general and treatments for certain medical conditions should be viewed with caution.

Furthermore, cannabis should not be discussed as though it were a pharmaceutical that has gone through the entire rigorous review process that results in a substance being given a drug identification number (DIN). Dr. Barry Waisglass, Medical Director of a network of clinics that provide authorizations for medical cannabis, delivered this message clearly:

> medicine is often thought of as a single-molecule medicine that's usually rigorously screened and checked for indications and risks and so on, and then the doctor, the medic, prescribes it to the patient.
>
> Here we have something different. It requires a bit of a paradigm shift, when traditional medical people and citizens alike look at cannabis in the context of a medicine. It's a botanical. The right person to put this question to would be, say, a naturopath—somebody who deals with botanicals—or an Ayurvedic doctor in India who deals with plants as medicines.[11]

Cannabis is not a pharmaceutical, and the authorization that doctors can give their patients to obtain it for medical purposes is not the same as a "prescription" for a pharmaceutical.

This part of the report is divided into four sections. Based on the evidence heard, the first section describes the state of research on certain medical conditions common among veterans that some claim cannabis is effective in treating: anxiety disorders, including post-traumatic stress disorder, and pain management.[12] The second section analyzes an alleged indirect effect of medical cannabis use: a reduction in consumption of opioid-based pharmaceuticals. The third section addresses the side effects and risks of using cannabis for medical purposes. Lastly, the fourth section outlines current research needs.

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11 Dr. Barry Waisglass (Medical Director, Canadian Cannabis Clinics), *Evidence*, ACVA, 20 March 2019, 1600.

12 The well-established evidence regarding the benefits of cannabinoid-based pharmaceuticals in relieving the spasticity of multiple sclerosis patients, suppressing nausea and vomiting among chemotherapy patients and reducing the number of seizures among some children with epilepsy will not be discussed. This evidence was mentioned in the testimony of Dr. Ramesh Zacharias (Medical Director, Hamilton Health Sciences, As an individual), *Evidence*, ACVA, 25 February 2019, 1705, and Dr. James MacKillop (Peter Boris Chair in Addictions Research, St. Joseph's Healthcare Hamilton, McMaster University, As an individual), *Evidence*, ACVA, 20 February 2019, 1605.

Cannabis, Pain Management and Anxiety Disorders

VAC's position on medical cannabis was clearly expressed by Dr. Alexandra Heber, Chief of Psychiatry at the department:

> most of [the research] shows the harms associated with cannabis use.
>
> There is actually very little good research showing any positive health effects for the use of cannabis, even though you will see in the popular press that people who tend to use cannabis will talk about how profoundly it has helped them. In fact, the research that is out there, including both reviews and reviews of the research out there on health effects, show overwhelmingly that there are negative effects, certainly on mental health and on physical health as well.[13]

This was the most negative position on cannabis heard during the study. In addition, it is contrary to the published findings of the National Academies of Sciences, Engineering and Medicine, the organization mandated by the United States (U.S.) Congress to provide analysis and opinions on matters that include medical and health issues. In a very extensive review of the available literature,[14] the organization found "substantial evidence" that cannabis is effective in treating chronic pain among adults (Conclusion 4-1).[15] In the case of anxiety disorders and post-traumatic stress disorder (PTSD), the evidence was deemed to be "limited" (Conclusions 4-17 and 4-20).

These findings are broadly consistent with what researchers told the Committee during this study. To summarize the various positions on the effectiveness of cannabis in treating pain and anxiety disorders, the following statements are ordered from most confident in that effectiveness to least. Only statements by researchers are included. Those from witnesses with links to private or public organizations will be examined later and compared with the researchers' statements.

Regarding pain relief:

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13 Dr. Alexandra Heber (Chief of Psychiatry, Health Professionals Division, Department of Veterans Affairs), *Evidence*, ACVA, 20 November 2018, 1655.

14 National Academies of Sciences, Engineering and Medicine, *The Health Effects of Cannabis and Cannabinoids: The Current State of Evidence and Recommendations for Research*, 2017. On this issue, see the comments of Dr. Zach Walsh (Associate Professor, University of British Columbia, As an individual), Evidence, ACVA, 27 February 2019, 1615.

15 The weight-of-evidence hierarchy is as follows, from weakest to strongest: "no or insufficient evidence," "limited evidence," "moderate evidence," "substantial evidence" and "conclusive evidence."

- "The health issues for which smoked cannabis has thoroughly demonstrated its effectiveness include chronic pain."[16]

- "There's moderate evidence" that cannabis helps treat chronic pain.[17]

- "[A]lthough there is positive evidence for pain, the evidence for side effects may suggest that the benefits are outweighed by the harms."[18]

- "[W]e have at present moderate quality evidence that suggests cannabis may reduce chronic pain, but effects are typically modest."[19]

- The evidence "is not [robust] for pain."[20]

Regarding the treatment of anxiety disorders, including post-traumatic stress disorder:

- "[C]ertain take-home cannabinoids seem to have a decent likelihood of helping individuals with PTSD."[21]

- "[A] low dose … of CBD oil can really decrease the PTSD symptoms."[22]

- "[R]etrospective studies, although methodologically limited, have found that medical cannabis patients report substantial reductions in PTSD symptoms after the uptake of medical cannabis use. Studies also highlight cannabis use helping with sleep and coping with the anxiety that is part of PTSD."[23]

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16 Dr. Didier Jutras-Aswad (Addiction Psychiatrist and Researcher, Centre hospitalier de l'Université de Montréal, As an individual), *Evidence*, ACVA, 18 March 2019, 1605.

17 Dr. Ramesh Zacharias (Medical Director, Hamilton Health Sciences, As an individual), *Evidence*, ACVA, 25 February 2019, 1705.

18 Dr. James MacKillop (Peter Boris Chair in Addictions Research, St. Joseph's Healthcare Hamilton, McMaster University, As an individual), *Evidence*, ACVA, 20 February 2019, 1605.

19 Dr. Jason Busse (Associate Professor, McMaster University, As an individual), *Evidence*, ACVA, 22 November 2018, 1630

20 Dr. James MacKillop (Peter Boris Chair in Addictions Research, St. Joseph's Healthcare Hamilton, McMaster University, As an individual), *Evidence*, ACVA, 20 February 2019, 1550.

21 Dr. Marcel Bonn-Miller (Perelman School of Medicine, University of Pennsylvania, As an individual), *Evidence*, ACVA, 27 February 2019, 1555.

22 Mr. Jacob Cohen (M.Sc. Student and Combat Veteran (Honourable discharge), Department of Pharmacology and Psychiatry, University of Saskatchewan, As an individual), *Evidence*, ACVA, 22 November 2018, 1655.

23 Dr. Zach Walsh (Associate Professor, University of British Columbia, As an individual), *Evidence*, ACVA, 27 February 2019, 1610.

- "We've definitely seen that CBD decreases craving and anxiety. But these studies are still small."[24]
- "There's weak evidence in anxiety, as well as sleep disorders."[25]
- "A few studies … with very small samples … have shown that THC or nabilone … can be helpful for nightmares for veterans with PTSD."[26]
- THC "appears to be helpful at only low doses for anxiety."[27]
- The evidence "is not [robust] for … PTSD."[28]
- "Preclinical and animal models show that … [CBD] can help with inflammation, which really ties into traumatic brain injury and other things that co-occur and may be causal for PTSD in some forms."[29]
- "Regarding … anxiety or PTSD, we have anecdotes but we have very little evidence to make conclusions either supporting a benefit or refuting a role."[30]
- "Overall, the treatment of PTSD and the outcome are not promising."[31]

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24 Dr. Yasmin Hurd (Professor, Psychiatry, Neuroscience, Icahn School of Medicine at Mount Sinai, As an individual), *Evidence*, ACVA, 18 March 2019, 1630.

25 Dr. Ramesh Zacharias (Medical Director, Hamilton Health Sciences, As an individual), *Evidence*, ACVA, 25 February 2019, 1705.

26 Dr. Marcel Bonn-Miller (Perelman School of Medicine, University of Pennsylvania, As an individual), *Evidence*, ACVA, 27 February 2019, 1550–55.

27 Dr. Marcel Bonn-Miller (Perelman School of Medicine, University of Pennsylvania, As an individual), *Evidence*, ACVA, 27 February 2019, 1550.

28 Dr. James MacKillop (Peter Boris Chair in Addictions Research, St. Joseph's Healthcare Hamilton, McMaster University, As an individual), *Evidence*, ACVA, 20 February 2019, 1550.

29 Dr. Marcel Bonn-Miller (Perelman School of Medicine, University of Pennsylvania, As an individual), *Evidence*, ACVA, 27 February 2019, 1550.

30 Dr. Jason Busse (Associate Professor, McMaster University, As an individual), *Evidence*, ACVA, 22 November 2018, 1630.

31 Dr. Yanbo Zhang (Assistant Professor, Psychiatry Department, University of Saskatchewan, As an individual), *Evidence*, ACVA, 22 November 2018, 1640.

- "Although increasing preclinical studies suggest a critical role of the endocannabinoid system in PTSD and the potential of cannabis in treating PTSD, the clinical evidence remains inconsistent."[32]

- "The systematic reviews, which are the strongest evidence that we normally use to guide treatment, cannot come with the conclusion of any definite therapeutic effects or benefits in terms of cannabis treatment for PTSD."[33]

- "[T]here's emerging evidence of benefit in some individuals," but "the evidence is inconclusive and should be considered on an individual basis for now."[34]

- "With regard to PTSD and other anxiety disorders, there are intriguing preclinical findings using animal models," but at present, "there is insufficient evidence that cannabis is effective in treating PTSD or other anxiety disorders."[35]

The expert opinions could be summarized as follows: there are promising possibilities that lead some to believe that certain cannabinoids, or cannabinoid compounds, could be effective in treating pain and anxiety disorders – including PTSD – but more extensive research must establish this effectiveness before doctors can treat cannabis the same way they do the other medications they prescribe.

This view was criticized by some representatives of cannabis businesses. For example, Dr. Barry Waisglass of Canadian Cannabis Clinics said that most of the experts the Committee heard "have limited knowledge of cannabis. They have exaggerated to this panel the potential harms of this complex herb, while discounting its many benefits."[36] However, Dr. Waisglass did confirm that, without robust clinical research, the evidence for cannabis's effectiveness "is primarily limited to observational studies and testimonials."[37]

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32 Dr. Yanbo Zhang (Assistant Professor, Psychiatry Department, University of Saskatchewan, As an individual), *Evidence*, ACVA, 22 November 2018, 1640.

33 Dr. Yanbo Zhang (Assistant Professor, Psychiatry Department, University of Saskatchewan, As an individual), *Evidence*, ACVA, 22 November 2018, 1640.

34 Dr. Oyedeji Ayonrinde (Associate Professor, Department of Psychiatry, Queen's University, As an individual), *Evidence*, ACVA, 18 March 2019, 1555.

35 Dr. James MacKillop (Peter Boris Chair in Addictions Research, St. Joseph's Healthcare Hamilton, McMaster University, As an individual), *Evidence*, ACVA, 20 February 2019, 1605.

36 Dr. Barry Waisglass (Medical Director, Canadian Cannabis Clinics), *Evidence*, ACVA, 20 March 2019, 1550.

37 Dr. Barry Waisglass (Medical Director, Canadian Cannabis Clinics), *Evidence*, ACVA, 20 March 2019, 1550.

Comparing the cautious position of the scientific community with the views of VAC officials on the one hand and those of private sector representatives on the other reveals a deeper divide. Dr. Cyd Courchesne, VAC's Chief Medical Officer, took a very clear stance on the effectiveness of cannabis in treating PTSD: "We've done all the review of literature. We've gone to the agencies that can do these reviews of literature for us, looking for evidence ... and again there has not been anything substantial."[38] Dr. Heber stated that anti-depressants treat PTSD more effectively than marijuana: "We have no evidence on marijuana except we know that it can have a lot of deleterious effects, like causing psychosis."[39]

The witnesses from the cannabis industry were less cautious. For example, Dr. Alan Shackelford said, "There are extremely well-done, randomized, placebo-controlled trials, both in Canada and the United States, and in other countries, that support the use of cannabis and its safety and efficacy."[40] He added a little later, "Pre-treatment with cannabidiol or possibly some combination of CBD and THC may be beneficial in preventing the neurological sequence of events that results in PTSD."[41] However, he did make sure to note, "We don't really know yet."[42]

The industry representatives essentially repeated the findings of existing studies, but insist on saying that cannabis is not dangerous. In other words, they said that the evidence for cannabis's effectiveness is limited, but that, since it is not dangerous, it can be authorized risk-free to veterans who claim it improves their well-being.[43]

Foreign governments have also taken a variety of positions on cannabis. The most restrictive stance is obviously that of the U.S., while Canada, the Netherlands and Israel have agreed to cover some of the costs of medical cannabis use for veterans.[44]

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38 Dr. Cyd Courchesne (Director General, Health Professionals Division, Chief Medical Officer, Department of Veterans Affairs), *Evidence*, ACVA, 20 November 2018, 1700.

39 Dr. Alexandra Heber (Chief of Psychiatry, Health Professionals Division, Department of Veterans Affairs), *Evidence*, ACVA, 20 November 2018, 1700.

40 Dr. Alan Shackelford (Physician, As an individual), *Evidence*, ACVA, 20 March 2019, 1610.

41 Dr. Alan Shackelford (Physician, As an individual), *Evidence*, ACVA, 20 March 2019, 1625.

42 Dr. Alan Shackelford (Physician, As an individual), *Evidence*, ACVA, 20 March 2019, 1625.

43 Dr. Barry Waisglass (Medical Director, Canadian Cannabis Clinics), *Evidence*, ACVA, 20 March 2019, 1610. See also the comments of Dr. Alan Shackelford (Physician, As an individual), *Evidence*, ACVA, 20 March 2019, 1620.

44 Mr. Jacob Cohen (M.Sc. Student and Combat Veteran (Honourable discharge), Department of Pharmacology and Psychiatry, University of Saskatchewan, As an individual), *Evidence*, ACVA, 22 November 2018, 1655.

Cannabis and Opioid Consumption

One of the alleged benefits that some ascribe to medical cannabis is that it reduces opioid consumption. This would be an indirect benefit that is independent of cannabis's effectiveness in treating the medical condition for which it is used.

Dr. Shackelford presented the findings of a small study of 21 cancer patients who were receiving significant doses of morphine or oxycodone.[45] The patients in the study felt less pain when cannabinoids were administered in addition to their normal dose of morphine or oxycodone. Therefore, this study does not show that cannabis could replace opioids in treating pain. It revealed only that cannabis, together with opioids, could reduce the opioid dose required to provide the same relief.

Dr. Shackelford also cited studies that tend to show "a very distinct decrease in the number of prescription pills issued per physician in U.S. states that have medical cannabis programs."[46] The Vice-President of Tilray reported similar results from observational studies conducted with clients of its clinics.[47] A veteran, Max Gaboriault, confirmed these findings during his appearance.[48] This kind of correlation is important in a number of respects, but it should not be prematurely described as a cause-effect relationship. Moreover, this type of study does not demonstrate that cannabis is effective in treating medical conditions for which medications were prescribed.

VAC argued that it is too early to see an effect on the use of other substances: "We continue to look at that but in these early years, we have not seen a significant decrease in antidepressants, opioids and all those other medications."[49]

According to Dr. Ayonrinde, "The research to actually make this sufficiently robust for medical science is limited…. We can't ignore individual anecdotes and symptom relief,

45 Dr. Alan Shackelford (Physician, As an individual), *Evidence*, ACVA, 20 March 2019, 1610. See a summary of the study at https://www.ucsf.edu/news/2011/12/11077/ucsf-study-finds-medical-marijuana-could-help-patients-reduce-pain-opiates. See also the comments of Mr. Philippe Lucas (Vice-President, Global Patient Research & Access, Tilray), *Evidence*, ACVA, 25 February 2019, 1730, and Dr. Zach Walsh (Associate Professor, University of British Columbia, As an individual), *Evidence*, ACVA, 27 February 2019, 1615.

46 Dr. Alan Shackelford (Physician, As an individual), *Evidence*, ACVA, 20 March 2019, 1645.

47 Mr. Philippe Lucas (Vice-President, Global Patient Research & Access, Tilray), *Evidence*, ACVA, 25 February 2019, 1715.

48 Mr. Max Gaboriault (As an individual), *Evidence*, ACVA, 27 February 2019, 1605; see also the comments of Dr. Celeste Thirlwell (Director, Sleep Wake Awareness Program), *Evidence*, ACVA, 27 February 2019, 1620, and Mr. Andrew Baldwin-Brown (Co-Founder, Spartan Wellness), *Evidence*, ACVA, 18 March 2019, 1625.

49 Dr. Cyd Courchesne (Director General, Health Professionals Division, Chief Medical Officer, Department of Veterans Affairs), *Evidence*, ACVA, 20 November 2018, 1705.

but as a clear substitute, as we would substitute other things in medical practice, the evidence isn't sufficiently robust."[50]

Dr. Didier Jutras-Aswad explained that this contest between cannabis and opioids sidesteps the most important issue, which is choosing the appropriate treatment for a given medical condition. If, in a particular case, cannabis seems to be the most appropriate treatment based on the scientific evidence available and the guidelines set by the medical profession, the indirect benefit of limiting consumption of other medications would be a bonus. But it should not be the main motivation for a treatment decision:

> I think the question should [be] what the best interventions are that are available for different conditions, and where cannabis use may or may not be based on scientific evidence to treat that condition…. We've heard a lot of discussion around whether it is cannabis, opioids or whatnot. I think we should go back to how we usually consider treatment for different conditions, including pain.[51]

In identifying the best treatment in a particular case, a decision to use cannabis would depend on scientific evidence that currently shows promise but remains patchy. The potential benefits must be compared with the known risks of using cannabis for medical purposes.

Risks and Side Effects

Dr. Yanbo Zhang of the University of Saskatchewan reported that little evidence has been collected on the benefits of medical cannabis, but that strong evidence exists regarding the risks associated with frequent, heavy use of high-THC cannabis:

> cannabis with a high THC content is associated with increased risks of cognitive impairment, psychosis and cannabis use disorder, especially in adolescents and young adults, and also in individuals with pre-existing mental health conditions. Given the high comorbidity of depression, traumatic brain injury and substance abuse in veterans with PTSD, the potential benefit of cannabis may be shadowed by the increased risks of cognitive impairment and addiction.[52]

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50 Dr. Oyedeji Ayonrinde (Associate Professor, Department of Psychiatry, Queen's University, As an individual), *Evidence*, ACVA, 18 March 2019, 1630

51 Dr. Didier Jutras-Aswad (Addiction Psychiatrist and Researcher, Centre hospitalier de l'Université de Montréal, As an individual), *Evidence*, ACVA, 18 March 2019, 1630.

52 Dr. Yanbo Zhang (Assistant Professor, Psychiatry Department, University of Saskatchewan, As an individual), *Evidence*, ACVA, 22 November 2018, 1645. See also the comments of Dr. Tony P. George (Professor of Psychiatry, University of Toronto, As an individual), *Evidence*, ACVA, 25 February 2019, 1640, and Dr. Didier Jutras-Aswad (Addiction Psychiatrist and Researcher, Centre hospitalier de l'Université de Montréal, As an individual), *Evidence*, ACVA, 18 March 2019, 1605. The best-documented contraindications

Dr. Bonn-Miller of the University of Pennsylvania confirmed this view, stating that "THC has been associated with withdrawal, tolerance and craving. This is a substance that, particularly at high doses, can lead to addiction, and that's an important caveat when we start talking about THC."[53] Among individuals who do not have existing mental health problems, the risk of abusing or becoming addicted to cannabis seems fairly low and can be treated relatively easily.[54]

As for veterans, since those who receive an authorization for medical cannabis are more likely to have mental health problems, it is imperative to limit their consumption of cannabis strains containing high levels of THC.

Research Needs

Unsurprisingly, the need to undertake further research on medical cannabis emerged as the primary consensus finding of this study. Dr. Ayonrinde explained that "the 'green rush' had it on us: We woke up and they had gone. The research that has gone into plant development and so on, it's gone way faster than the medical profession. We're playing catch-up."[55] Virtually all the witnesses called for much more research.

The lack of robust research on the effects of medical cannabis on veterans is even more striking. Dr. Bonn-Miller of the University of Pennsylvania told the Committee that the study his team is about to finish is "the first large-scale phase two randomized controlled trial of cannabinoids for veterans with PTSD."[56] The complete research agenda that Dr. Yasmin Hurd set out for the U.S. Department of Veterans Affairs could, with a few changes, be implemented in Canada:

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regarding the potentially negative effects of cannabis concern patients with schizophrenia and bipolar disorders. However, since these conditions do not particularly affect veterans, the risks associated with them are not discussed in this report. On this point, see the comments of Dr. Ramesh Zacharias (Medical Director, Hamilton Health Sciences, As an individual), *Evidence*, ACVA, 25 February 2019, 1705, and Dr. Zach Walsh (Associate Professor, University of British Columbia, As an individual), *Evidence*, ACVA, 27 February 2019, 1720.

53 Dr. Marcel Bonn-Miller (Perelman School of Medicine, University of Pennsylvania, As an individual), *Evidence*, ACVA, 27 February 2019, 1550; see also the remarks of Dr. Jason Busse (Associate Professor, McMaster University, As an individual), *Evidence*, ACVA, 22 November 2018, 1630.

54 Dr. Tony P. George (Professor of Psychiatry, University of Toronto, As an individual), *Evidence*, ACVA, 25 February 2019, 1640; see also the comments of Dr. Zach Walsh (Associate Professor, University of British Columbia, As an individual), *Evidence*, ACVA, 27 February 2019, 1645.

55 Dr. Oyedeji Ayonrinde (Associate Professor, Department of Psychiatry, Queen's University, As an individual), *Evidence*, ACVA, 18 March 2019, 1655.

56 Dr. Marcel Bonn-Miller (Perelman School of Medicine, University of Pennsylvania, As an individual), *Evidence*, ACVA, 27 February 2019, 1550.

> We must be committed to doing the necessary clinical trials and partnering with non-recreational licensed producers to develop real, safe and efficacious medicines that the veterans administration can truly support for the treatment of veterans….
>
> We must also develop formulations that are medicinal. We must know the cannabinoids, such as CBD or full-spectrum cannabis signatures, the dose and concentrations, which was spoken about before, the dosing regimen and the delivery formats, such as capsules or inhalation, that work best to maintain stable relief of pain, PTSD and addiction while minimizing the side effects.[57]

The report's key recommendation is therefore:

Recommendation 1

That Veterans Affairs Canada work with the Canadian Institutes of Health Research and all other relevant public and private partners, in Canada and abroad, to establish and fund a series of randomized clinical studies, independent from industry, on the effects of cannabis in treating veterans for the medical conditions they regularly experience and the interaction between cannabinoids and medications regularly prescribed to veterans.

VETERANS AFFAIRS CANADA'S POLICY

In Canada, the first authorization to consume cannabis for medical purposes was approved in 1999 under an exemption provided in section 56 of the *Controlled Drugs and Substances Act*. Then, in a July 2000 decision, the Court of Appeal for Ontario ruled the legislation was too restrictive and found it unconstitutional. The court authorized the appellant, Terrance Parker, to consume cannabis to treat the symptoms of his epilepsy. The judgment also gave the Parliament of Canada 12 months to amend the legislation to include exemptions for the use of medical cannabis. In 2001, this decision led Health Canada to make the *Marihuana Medical Access Regulations*, which authorized the cultivation of medical cannabis for personal use.

In 2008, Veterans Affairs Canada (VAC) became the first public institution in Canada to authorize the reimbursement of some of the costs of using medical cannabis.[58] However, these approvals were granted on an exceptional basis and required authorization from a specialist physician. Five veterans obtained this authorization in 2008–2009, and this

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57 Ms. Yasmin Hurd (Professor, Psychiatry, Neuroscience, Icahn School of Medicine at Mount Sinai, As an individual), *Evidence*, ACVA, 18 March 2019, 1600.

58 Veterans Affairs Canada, *Review of Marijuana for Medical Purposes*, November 2016, p. 1. Throughout this report, the term "cannabis" is used to refer to what the legislation and other federal government documents also call "marihuana" or "marijuana."

number grew to 112 in 2013–2014, the year before the *Marihuana for Medical Purposes Regulations* (MMPR) came into force. Under these regulations, Canadians could no longer grow their own cannabis for medical purposes, but they could obtain from any doctor or, under certain conditions, a nurse practitioner an authorization to obtain cannabis from a producer licensed by Health Canada. The authorization was valid for one year. The regulations did not specify a maximum quantity that could be reimbursed, and the price of cannabis was set by the licensed producers based on the strain of the plant.[59]

Dr. Jason Busse of McMaster University explained that the process by which cannabis became available for medical purposes was disrupted by court decisions: "Medicinal cannabis has come onto the scene through a series of legal challenges. Now it's available, and we have to look for the evidence to see what it might work for and what it might not work for. In many ways, the cart has gone in front of the horse here."[60]

In 2014–2015, the year after the MMPR came into force, the number of VAC authorizations increased from 112 to 628. They then rose to 1,762 in 2015–2016, which caused annual spending on reimbursements to jump from $409,000 in 2013–2014 to $20.5 million in 2015–2016.[61] This growth caught the attention of the Office of the Auditor General (OAG), which devoted a section of its spring 2016 report to VAC's drug benefits.[62] The OAG found that, after the MMPR came into force, VAC had not set a maximum price for medical cannabis reimbursements and had capped the amount it would reimburse to 10 grams per day, which did little to contain costs because most eligible veterans were using less than this limit.[63]

In response to the OAG's recommendations, VAC published the *Review of Marijuana for Medical Purposes* in November 2016. In that review, the department recognized that the 10-gram limit was too high given the medical advice based on the latest research. On 22 November 2016, in light of the review's findings, the Minister of Veterans Affairs,

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59 The MMPR were repealed in 2016 and replaced by the *Access to Cannabis for Medical Purposes Regulations*, which were in turn repealed in October 2018, when the *Cannabis Act* and the *Cannabis Regulations* came into force. Part 14 of the Regulations now sets out the conditions for access to cannabis for medical purposes. These changes did not have a major impact on VAC's policy.

60 Dr. Jason Busse (Associate Professor, McMaster University, As an individual), *Evidence*, ACVA, 22 November 2018, 1715; see also the comments of Mr. Andrew Freedman (Director, Freedman and Koski Inc.), *Evidence*, ACVA, 20 February 2019, 1620, and Dr. Zach Walsh (Associate Professor, University of British Columbia, As an individual), *Evidence*, ACVA, 27 February 2019, 1655.

61 Veterans Affairs Canada, "Just the Facts: Reimbursement Policy on Cannabis for Medical Purposes."

62 Office of the Auditor General of Canada, *Drug Benefits – Veterans Affairs Canada*, Report 4, Spring 2016.

63 Office of the Auditor General of Canada, *Drug Benefits – Veterans Affairs Canada*, Report 4, Spring 2016, para. 4.46.

the Honourable Kent Hehr, announced the new reimbursement policy on cannabis for medical purposes. The key component of the new policy was a reduction in the daily amount whose cost could be reimbursed from 10 grams to three grams.

Reduction in Daily Amount Eligible for Reimbursement

Dr. Cyd Courchesne, Chief Medical Officer at VAC, stated that this decision was based on broad consultations:

> Veterans Affairs Canada brought together a panel of Canadian medical experts, who recommended a very cautious approach to the use of cannabis for medical purposes, with some indicating one to two grams per day was a reasonable amount for the vast majority of cases.
>
> Veterans Affairs Canada also reviewed current scientific evidence and consulted with veterans, stakeholders and licensed producers. The decision is also consistent with Health Canada data, which indicate that the average Canadian is authorized less than three grams per day.[64]

In addition, comparisons were made with the two other countries that allow reimbursements for medical cannabis, Israel and the Netherlands. In Israel, the daily reimbursement limit is 1.5 grams, while the Netherlands permits only 0.68 grams per day.[65] Dr. Busse reported that, in Canada, individuals authorized to consume medical cannabis use an average of 0.75 grams per day.[66]

According to Dr. Jutras-Aswad, it is important to administer cannabis at the lowest effective dose in order to minimize the risk of side effects: "Clinical attention must be paid to the concentrations and the frequency of administration, as is the case for any medical treatment. I'd like to mention here that the scientific data is weak and often non-existent for doses above one or two grams a day."[67]

64 Dr. Cyd Courchesne (Director General, Health Professionals Division, Chief Medical Officer, Department of Veterans Affairs), *Evidence*, ACVA, 20 November 2018, 1640.

65 Dr. Jason Busse (Associate Professor, McMaster University, As an individual), *Evidence*, ACVA, 22 November 2018, 1635.

66 Dr. Jason Busse (Associate Professor, McMaster University, As an individual), *Evidence*, ACVA, 22 November 2018, 1635.

67 Dr. Didier Jutras-Aswad (Addiction Psychiatrist and Researcher, Centre hospitalier de l'Université de Montréal, As an individual), *Evidence*, ACVA, 18 March 2019, 1610.

The variability of cannabinoid concentrations and consumption methods also clouds understanding of the true consequences of the three-gram limit.[68] If THC levels are very high, consuming three grams per day is a significant dose and entails greater risks than high levels of CBD and low levels of THC. Dr. Bonn-Miller gave the following explanation:

> All of the data right now are speaking to doses that are even lower than three grams a day being addictive. In our clinical trials, we're actually limiting it to 1.8 grams a day and seeing clinical benefit…. That is not to say there's not individual viability [to administer high doses] but that's an extreme amount of cannabis, honestly. It's much higher than what we're looking at in clinical trials in any of these studies.[69]

For example, Dr. MacKillop noted the following:

> To put this in context, for non-medical users three grams daily would be considered a very high level of use, and 10 grams daily would be considered an extremely high level of use. In research, we standardize a gram as being equivalent to about four cannabis cigarettes, or joints. These numbers equate to 12 and 40 joints per day, which would be a large amount of cannabis.[70]

Dr. Yasmin Hurd described the risks associated with consuming 10 grams of cannabis per day even more starkly:

> It's crazy that someone could be ingesting 10 grams a day and saying that this is alleviating anything, because at that amount, the intoxication, the toxicity….
>
> If we continue with smoking, we'll cause health risks in our veterans. We need to develop medications to help people, not to continue to contribute to just masking something in the short term and producing huge problems in the future.[71]

Exceptions to the three-gram-per-day rule are subject to a separate VAC process. They must be based on additional documentation from a physician who specializes in the medical problem for which the cannabis is authorized, or a psychiatrist in the case of mental health problems, or an oncologist for chronic pain resulting from cancer, and so on. About 12% of veterans who already had an authorization obtained an exceptional approval in 2017.[72]

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68 On this point, see the comments of Dr. Oyedeji Ayonrinde (Associate Professor, Department of Psychiatry, Queen's University, As an individual), *Evidence*, ACVA, 18 March 2019, 1555.

69 Dr. Marcel Bonn-Miller (Perelman School of Medicine, University of Pennsylvania, As an individual), *Evidence*, ACVA, 27 February 2019, 1640.

70 Dr. James MacKillop (Peter Boris Chair in Addictions Research, St. Joseph's Healthcare Hamilton, McMaster University, As an individual), *Evidence*, ACVA, 20 February 2019, 1600.

71 Ms. Yasmin Hurd (Professor, Psychiatry, Neuroscience, Icahn School of Medicine at Mount Sinai, As an individual), *Evidence*, ACVA, 18 March 2019, 1655.

72 Dr. Cyd Courchesne (Director General, Health Professionals Division, Chief Medical Officer, Department of Veterans Affairs), *Evidence*, ACVA, 20 November 2018, 1640.

While the number of veterans who were reimbursed for medical cannabis was 1,762 in 2015–2016 and the total reimbursed was $20.5 million, the number of recipients increased to 7,298 veterans in 2017–2018, but total spending was only $51 million – a net decrease in the cost per veteran.[73]

Considering the evidence heard, it is reasonable for the Committee to adopt the view expressed by Dr. George that, because of the risks of elevated consumption, "the reduction in the compensable grams per day of medicinal cannabis from 10 to three grams was a step in the right direction by Veterans Affairs Canada."[74]

The other key aspect of VAC's policy is the price limit per gram of cannabis. Dr. Courchesne reported that the $8.50 per gram maximum was set after consultations with licensed producers.[75] The price cap does not seem to have caused problems for producers. In fact, Mr. Lucas of Tilray said that it led to collaboration that helped the business tailor its services to VAC's policies.[76]

Doctors Who Authorize Cannabis Consumption

Because of the small amount of research clearly demonstrating that cannabis is effective in treating the primary medical problems for which veterans can be authorized to use it, very few doctors agree to provide these authorizations. Dr. Zhang clearly explained the dilemma faced by doctors who are asked to grant a medical cannabis authorization:

> many psychiatrists, including myself, are really hesitant to authorize cannabis for treating any psychiatric disorders because we do not know the long-term outcome and we do not know whether the benefit will trump the risk…. Before obtaining further evidence, the low-risk cannabis use recommendations made by medical professionals should be applied, such as using a high CBD content oil versus using or smoking products with a high content of THC.[77]

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73 Dr. Cyd Courchesne (Director General, Health Professionals Division, Chief Medical Officer, Department of Veterans Affairs), *Evidence*, ACVA, 20 November 2018, 1645.

74 Dr. Tony P. George (Professor of Psychiatry, University of Toronto, As an individual), *Evidence*, ACVA, 25 February 2019, 1640.

75 Dr. Cyd Courchesne (Director General, Health Professionals Division, Chief Medical Officer, Department of Veterans Affairs), *Evidence*, ACVA, 20 November 2018, 1705.

76 Mr. Philippe Lucas (Vice-President, Global Patient Research & Access, Tilray), *Evidence*, ACVA, 25 February 2019, 1635.

77 Dr. Yanbo Zhang (Assistant Professor, Psychiatry Department, University of Saskatchewan, As an individual), *Evidence*, ACVA, 22 November 2018, 1640.

Dr. Heber, Chief of Psychiatry at VAC, said that "a small number of physicians … are authorizing a great amount of cannabis for veterans…. This is a problem. I don't think it was a problem anybody could have anticipated, but unfortunately, there's a lot of profit to be made in cannabis."[78]

The Office of the Auditor General also raised this issue in its spring 2016 audit: "From 1 April to 31 December 2015, we found that 53 percent of the approximately 1,400 veterans authorized to utilize marijuana for medical purposes had obtained this authorization from four physicians."[79]

This shortage of doctors willing to sign authorizations to use medical cannabis, along with the decision in 2016 to allow non-specialists to sign them, spawned an entire network of medical clinics that have doctors willing to sign these authorizations. Dr. Waisglass of Canadian Cannabis Clinics explained one aspect of this development:

> Prior to that time, medical cannabis doctors typically charged $300 to $500 and the patients who most needed the service could not afford it. Our clinic model offered all doctor and counselling services free to anyone with valid health insurance, but the demand for our services increased and development of new clinics was rapid.[80]

Given that the doctor who provides an authorization is not required to specify any limits on THC levels, veterans could be deprived of the information needed to choose the safest strain of cannabis. This lack of specificity also means that, once veterans have obtained an authorization, they can ask for any cannabis strain they wish, regardless of its THC concentration. For example, veteran Max Gaboriault told the Committee that he tried "12 to 15 different strains over the last three years" so that he could "have complete control over [his] medication."[81] This situation amounts to a reversal of responsibility that is rarely seen with medical prescriptions in general.

According to Dr. Jutras-Aswad, "the assessment conducted before the prescription or authorization of medical cannabis often lacks rigour."[82] Dr. Zacharias argued that the way some doctors authorize cannabis for medical purposes is not up to par: "a number

78 Dr. Alexandra Heber (Chief of Psychiatry, Health Professionals Division, Department of Veterans Affairs), *Evidence*, ACVA, 20 November 2018, 1710.

79 Office of the Auditor General of Canada, *Drug Benefits – Veterans Affairs Canada*, Report 4, Spring 2016, para. 4.63

80 Dr. Barry Waisglass (Medical Director, Canadian Cannabis Clinics), *Evidence*, ACVA, 20 March 2019, 1540.

81 Mr. Max Gaboriault (As an individual), *Evidence*, ACVA, 27 February 2019, 1650.

82 Dr. Didier Jutras-Aswad (Addiction Psychiatrist and Researcher, Centre hospitalier de l'Université de Montréal, As an individual), *Evidence*, ACVA, 18 March 2019, 1610.

of our veterans have received their medical documentation over Skype without actually being seen by a health practitioner in the office. Once the medical documentation was completed and submitted, they were then scheduled for a follow-up appointment in one year."[83] He believes it is vital to develop more specific guidelines for doctors who authorize medical cannabis.

In light of the significant risks associated with using high-THC cannabis for individuals with mental health problems, the Committee recommends:

Recommendation 2

That Veterans Affairs Canada, in consultation with Health Canada, consider whether it is appropriate to amend its reimbursement policy on cannabis for medical purposes in order to limit the use of high THC-content cannabis.

Recommendation 3

That Health Canada work with the Canadian Institutes of Health Research, and experts on cannabis from all fields of science, to establish specific guidelines to support physicians who authorize cannabis for medical purposes.

Recommendation 4

That Veterans Affairs Canada implement specific communications for veterans living in rural and remote communities to ensure they have the same access to information about medical cannabis and authorizations for medical cannabis as the rest of the veteran population.

Several witnesses worried that the coming into force of the *Cannabis Act* could cause a shortage of low-THC cannabis strains. As Dr. MacKillop pointed out, "given that the market for recreational cannabis will necessarily be much larger than the medical cannabis market, it's possible that the products used primarily for medical purposes will become increasingly unavailable."[84] The Committee therefore recommends:

83 Dr. Ramesh Zacharias (Medical Director, Hamilton Health Sciences, As an individual), *Evidence*, ACVA, 25 February 2019, 1650.

84 Dr. James MacKillop (Peter Boris Chair in Addictions Research, St. Joseph's Healthcare Hamilton, McMaster University, As an individual), *Evidence*, ACVA, 20 February 2019, 1605.

Recommendation 5

That Veterans Affairs Canada work with Health Canada, experts on cannabis from all fields of science, as well as licensed producers, to ensure that the types of cannabis products most likely to be used for medical purposes, including those with high levels of CBD, remain accessible and affordable.

Taxation Regime for Cannabis for Medical Purposes

All cannabis products in Canada are treated the same way from a tax standpoint, whether they are used for medical purposes or not. The Goods and Services Tax (GST) or Harmonized Sales Tax (HST) therefore applies to all cannabis products, as does an excise duty that varies by product and, for dried cannabis, is equivalent to about $1.00 per gram purchased at the maximum reimbursable price of $8.50 per gram.[85]

In this matter, the government followed the advice of the Canadian Medical Association (CMA), which supports a single tax treatment until research enables doctors "to better understand potential therapeutic indications of cannabis, as well as its risks."[86] In its brief, the CMA also cited the situation in Colorado, where two separate tax regimes have led people to seek medical authorizations in order to take advantage of the lower tax rate.

Mr. Freedman, who advised the governor of Colorado as it legalized cannabis, explained that the state imposed a sales tax of 2.9% on cannabis, along with a 10% excise tax and an additional 10% sales tax. Only the 2.9% sales tax applies to cannabis for medical purposes.[87] He said that this structure enabled people who were using medical cannabis to stay in the medical authorization system rather than supply themselves. However, he did confirm some of the CMA's fears and expressed regret that "those who were likely to become more addicted to the substance often went and got medical cards in order to buy it at a lower price."[88]

85 Mr. Andrew Baldwin-Brown (Co-Founder, Spartan Wellness), *Evidence*, ACVA, 18 March 2019, 1625.

86 Canadian Medical Association, "Submission to the Government of Canada consultation on the proposed excise duty framework for cannabis products," 7 December 2017, p. 3.

87 Mr. Andrew Freedman (Director, Freedman and Koski Inc.), *Evidence*, ACVA, 20 February 2019, 1625.

88 Mr. Andrew Freedman (Director, Freedman and Koski Inc.), *Evidence*, ACVA, 20 February 2019, 1630.

Some witnesses lamented that medical cannabis is subject to both sales tax and an excise duty.[89] As regards the GST/HST, it is reasonable to assume that, until Health Canada approves the use of cannabis for the purpose authorized, the plant must be considered a natural product for tax purposes.

As for imposing an excise duty under a framework similar to that for tobacco and alcohol, this regime would be defensible if the harmful health effects of cannabis were clear. But these effects are still subject to debate. Given the uncertainty surrounding research on this topic, there may be room for a compromise. The starting point for this compromise could be the federal government's decision in Budget 2019 to implement tax rules for edible cannabis products that take their THC concentrations into account. Chapter 4 of the Budget Plan states the following: "Certain low-THC products (e.g., cannabis oils) will … generally be subject to lower excise duties than before, providing further tax relief for cannabis products typically used by individuals for medical purposes."

In other words, the federal government has already chosen to adjust the excise duty framework, as of 1 April 2019, to limit the duty on the cannabis products most likely to be used for medical purposes. The budget also notes the following: "For most products, namely fresh and dried cannabis, and seeds and seedlings, there will be no changes to the current excise duty framework." The government did not provide a justification for reducing the excise duty's impact on edible products but not on fresh and dried cannabis. The Committee therefore recommends:

Recommendation 6

That Veterans Affairs Canada work with Health Canada and the Canada Revenue Agency to examine the most appropriate ways of exempting low THC-content products from the excise duty when they are used by veterans for medical purposes.

CONCLUSION

The most important finding to emerge from all the evidence before the Committee is that no one knows enough about cannabis today to draw definitive conclusions about both the benefits and the risks of using it. Therefore, the need for further research is imperative before it is possible to identify, among the dozens of active agents of the plant, those that can be isolated and combined to become drugs and be used for medical purposes on a solid basis. While there is little research on cannabis in general,

89 See, for example, the comments of Mr. Philippe Lucas (Vice-President, Global Patient Research & Access, Tilray), *Evidence*, ACVA, 25 February 2019, 1635.

research on cannabis use among veterans is simply non-existent. Therefore, research support is the main recommendation of this report.

It is also important to remember that cannabis is not a drug. It is a plant, and as such, to consume it for medical purposes, doctors do not provide a "prescription" as they do for drugs. What physicians provide is an authorization for their patients to obtain cannabis from a supplier authorized by Health Canada. This allows them to be reimbursed for some or all of the costs of purchasing cannabis by their provincial health insurance plan, private insurance plan or by any other institution, such as Veterans Affairs Canada, that authorizes the reimbursement of such expenses. This does not make cannabis a "drug", but it is easy to succumb to this shift in meaning since, in many ways, cannabis is treated "as if" it were a drug. Under VAC's policy in this regard, all physicians can provide such authorization to veterans, but very few agree to do so, given the lack of clear conclusions about the benefits of the plant in the treatment of certain medical conditions of higher prevalence among veterans, such as chronic pain and certain mental health disorders.

According to a very extensive review of the scientific literature, conducted by the body mandated by the US Congress to provide it with scientific analysis and advice, the National Academies of Sciences, Engineering and Medicine concluded that there was "substantial evidence" of the efficacy of cannabis in the treatment of chronic pain in adults. In the case of anxiety disorders and post-traumatic stress disorder, the organization considered the evidence to be "limited". For all these two conditions, however, the dosage and proportion of active agents that are responsible for the benefits, when they exist, are largely unknown.

As for the risks, we know that they are important for people with mental health problems, especially when the variety of cannabis consumed contains a high level of THC. The risk of addiction also increases with THC content and quantity consumed, but seems low when CBD content is high.

Even at this level of uncertainty, the likely benefits of using cannabis with a high CBD content, particularly for the treatment of chronic pain, appear to outweigh the risks. Therefore, there is no reason to question the appropriateness of VAC reimbursing a reasonable amount. However, in the absence of conclusive scientific data, the definition of this reasonable quantity should be based on prudence. Based on current knowledge, VAC's decision to decrease the maximum amount of refundable cannabis from 10 to 3 grams per day therefore appears reasonable. For veterans who, with the advice of their doctor, could be affected by this decision, the Department has put in place an exception procedure that allows them to exceed the daily limit of 3 grams on the recommendation of a specialist doctor.

Following the advice of the Canadian Medical Association, the Government of Canada has chosen not to create two separate tax regimes for cannabis used for recreational purposes and cannabis used for medical purposes. As long as scientific research does not identify cannabinoids that are active in the treatment of specific medical conditions, and therefore make them a drug in the strict sense of the term, cannabis must continue to be treated as a natural product, and be subject to the GST/HST. In the case of excise duties, the issue is more nuanced because, as the government has recognized in its application of the excise tax to edible cannabis products, some tax relief could be provided for cannabis varieties that are most recognized for their effectiveness for medical purposes, i.e., cannabis with a high CBD content. The Committee therefore recommends that the Government extend this excise tax relief to all cannabis products with a high CBD content used for medical purposes.

Canadians have been able to use cannabis for medical purposes for 20 years, and since 2008, veterans can be reimbursed a portion of the expenses related to this use with a medical authorization. This approach, which is both open to the needs expressed by veterans and responsible in view of the existing most reliable scientific research, has enabled Canada to be at the forefront of veterans' care. In the Committee's view, this balanced, prudent and generous approach must continue to guide the Government of Canada's decisions regarding the medical use of cannabis by veterans.

APPENDIX A
LIST OF WITNESSES

The following table lists the witnesses who appeared before the Committee at its meetings related to this report. Transcripts of all public meetings related to this report are available on the Committee's webpage for this study.

Organizations and Individuals	Date	Meeting
Department of Veterans Affairs	2018/11/20	99
Cyd Courchesne, Director General Health Professionals Division, Chief Medical Officer		
Alexandra Heber, Chief of Psychiatry Health Professionals Division		
As an individual	2018/11/22	100
Dr. Jason Busse, Associate Professor McMaster University		
Jacob Cohen, M.Sc. Student and Combat Veteran (Honourable discharge) Department of Pharmacology and Psychiatry, University of Saskatchewan		
Dr. Yanbo Zhang, Assistant Professor Psychiatry Department, University of Saskatchewan		
As an individual	2019/02/20	108
Kyle Atkinson		
James MacKillop, Peter Boris Chair in Addictions Research St. Joseph's Healthcare Hamilton, McMaster University		
Freedman and Koski Inc.	2019/02/20	108
Andrew Freedman, Director		
As an individual	2019/02/25	109
Tony P. George, Professor of Psychiatry University of Toronto		
Ramesh Zacharias, Medical Director Hamilton Health Sciences		
GenCanBio Inc.	2019/02/25	109
Mark James, Vice-President		

Organizations and Individuals	Date	Meeting
Tilray	2019/02/25	109
Philippe Lucas, Vice-President Global Patient Research & Access		
As an individual	2019/02/27	110
Marcel Bonn-Miller, Perelman School of Medicine, University of Pennsylvania		
Max Gaboriault		
Zach Walsh, Associate Professor University of British Columbia		
Sleep Wake Awareness Program	2019/02/27	110
Celeste Thirlwell, Director		
As an individual	2019/03/18	111
Dr. Oyedeji Ayonrinde, Associate Professor Department of Psychiatry, Queen's University		
Dr. Yasmin Hurd, Professor Psychiatry, Neuroscience, Icahn School of Medicine at Mount Sinai		
Dr. Didier Jutras-Aswad, Addiction Psychiatrist and Researcher Centre hospitalier de l'Université de Montréal		
Spartan Wellness	2019/03/18	111
Andrew Baldwin-Brown, Co-Founder		
As an individual	2019/03/20	112
Dr. Alan Shackelford, Physician		
Canadian Cannabis Clinics	2019/03/20	112
Dr. Barry Waisglass, Medical Director		

APPENDIX B
LIST OF BRIEFS

The following is an alphabetical list of organizations and individuals who submitted briefs to the Committee related to this report. For more information, please consult the Committee's webpage for this study.

Aphria

Robert Laprairie

REQUEST FOR GOVERNMENT RESPONSE

Pursuant to Standing Order 109, the Committee requests that the government table a comprehensive response to this Report.

A copy of the relevant *Minutes of Proceedings* (Meetings Nos. 99, 100, 108 to 112 and 120) is tabled.

Respectfully submitted,

Neil R. Ellis
Chair

Medical Cannabis and Veterans' Well-Being

Supplementary Report of the New Democratic Party (NDP)

The NDP agrees with the recommendations in this report, but there is a key point missing. The NDP strongly believes that neither politicians nor government bureaucrats are in any position to decide how much of any one treatment a veteran should be receiving. These decisions should be science-based, not political.

The second recommendation in this report recommends that Veterans Affairs Canada amend its policies to limit the use of high-THC cannabis.

While the NDP respects the need to limit the use of high-THC cannabis which the committee heard can negatively affect people living with a debilitating mental illness, this recommendation does nothing to address the arbitrary limit of 3g imposed by Veterans Affairs Canada. The committee heard that this change was based on the College of Family Physicians of Canada's guidelines for the general population, not specifically on veterans with service-related illnesses and injuries. When asked about the dosage that veterans need, Dr. Celeste Thirlwell stated:

We're talking about grams of dry flower. What I am referring to is what I was trying to make a point about at the beginning of my talk. A civilian brain runs at most at 400 or 500 kilometres an hour, let's say.

Three grams a day is fine for that, but not a military service brain or a traumatized brain. They need between five grams to eight grams at least, once they've been stabilized. The same way you have a lot of morphine post-surgery and then you wean down, in the initial stabilization phase, they need to be able to access eight grams to 10 grams regularly so they don't go into PTSD or anxiety about running out of medication and treatment.[1]

The NDP disagree with the statement in this report that the change to 3g per day was justified.

The NDP strongly believe that most committee members, politicians, and government bureaucrats do not have the experience or education to make decisions limiting the treatment options available to veterans. These decisions should be exclusively in the hands of veterans' healthcare providers. Therefore, the NDP recommends:

That Veterans Affairs Canada amend its Cannabis for Medical Purposes – Reimbursement Policy to fund the full costs of medical cannabis recommended by veterans' healthcare providers.

The call for further research was echoed by nearly every witness. This is reflected in Recommendation 1 of the report. This research is direly needed so that veterans can receive the best treatment possible. For that research to affect the lives of veterans, the NDP recommends:

That Veterans Affairs Canada Review all policies related to medical cannabis whenever substantial, peer-reviewed research on the topic becomes available, and amend those policies as necessary based on the most up-to-date evidence.

[1] Dr. Celeste Thirlwell (Director, Sleep Wake Awareness Program), Evidence, ACVA, 27 February 2019, 1640.