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Chair

Mr. Neil Ellis

Standing Committee on Veterans Affairs

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● (1540)

[*English*]

The Chair (Mr. Neil Ellis (Bay of Quinte, Lib.)): Good afternoon, everybody.

Mr. McColeman.

Mr. Phil McColeman (Brantford—Brant, CPC): As the meeting begins, Chair, I'd like to move a motion. We had invited the minister to appear today. Given his busy schedule, I'm sure the notice was too short. I had put on notice last meeting that this motion be put before the committee. The motion now reads:

> That the committee invite the Minister of Veterans Affairs, the Hon. Lawrence MacAulay, to appear on the Supplementary Estimates (B) on April 1, 2019.

That is our next scheduled meeting, when we return from a constituency week. There is an amendment to be moved, and I would ask your forbearance to allow that to be added to it. Then we can vote. Do we need to vote on both?

The Chair: What we can do is start with the amendment.

Cathay, go ahead.

Mrs. Cathay Wagantall (Yorkton—Melville, CPC): I have a friendly amendment to the motion.

The Chair: What is it?

Mrs. Cathay Wagantall: I simply wanted to add the following after "on April 1, 2019": "or April 3, 2019, and that the meeting be televised".

The Chair: Okay. It's just adding another date and "televised".

Mr. Phil McColeman: It's just giving another option for the minister.

The Chair: First, we'll vote on the amending motion.

Mr. Phil McColeman: Chair, if I might add this before we vote, I have had a conversation with Minister MacAulay to let him know. It's the second conversation I've had with him saying that we want him to come on estimates, and he said he'd be very happy to attend, as long as he can fit it into his schedule.

The Chair: Okay. That's great.

First, procedure-wise, the amendment is on the table.

Mr. Samson.

Mr. Darrell Samson (Sackville—Preston—Chezzetcook, Lib.): Are there two amendments or just one? Because initially—

The Chair: I took it as one. It's another date, for the following meeting, with it being televised.

Mr. Darrell Samson: Okay. But is it one amendment to the motion?

The Chair: Yes.

(Amendment agreed to [*See Minutes of Proceedings*])

Mr. Darrell Samson: I just want to make sure that the amendment was for April 1 or April 3.

The Chair: For the dates, it's adding April 3 and "televised". Ministers are usually televised.

The amendment was carried. We'll now vote on the motion.

(Motion as amended agreed to [*See Minutes of Proceedings*])

The Chair: Thank you.

Now we'll start with the meeting. Thank you, witnesses, for waiting for us.

Pursuant to Standing Order 108(2), on the study of medical cannabis and veterans' well-being, we have two witnesses today: Dr. Shackelford, physician, and Dr. Waisglass, medical director.

We'll start with testimony from Dr. Waisglass, who is on video conference from Toronto.

You have 10 minutes. Thank you.

Dr. Barry Waisglass (Medical Director, Canadian Cannabis Clinics): Honourable members of the House of Commons Standing Committee on Veterans Affairs, good afternoon and thank you for inviting me. It's a privilege to be invited to sit before you to share my knowledge and opinions about medical cannabis and the well-being of our veterans.

I'd like to apologize for not being there in person, which would have been better for all of us, but I had a conflict in schedules and I couldn't make it to Ottawa.

My name is Barry Waisglass. I am the medical director of Canadian Cannabis Clinics. I'll reference that as CCC, as we go forward in my introduction.

In the interest of full disclosure, I'd like the committee to know that I also serve as the medical director for Aurora Cannabis, one of Canada's largest licensed cannabis producers.

Prior to shifting my professional life to cannabis medicine five years ago, I worked for 40 years as a family doctor in a number of Ontario communities. Much of my career was focused on the successes my proffered treatments had on my patients, but the failures of conventional treatments and the harms caused by those treatments became increasingly apparent.

With my support, some patients began exploring complementary therapies, such as naturopathy and herbal medicine. For some, those included the use of cannabis to treat a variety of ailments, including chronic pain, asthma, skin conditions and insomnia. Frequently, they reported improvements in quality of life and restoration of function, with some able to reduce and even stop the use of the prescribed drugs, resulting in both cost savings and elimination of unpleasant side effects.

When Health Canada introduced a medical cannabis program, it legitimized the use of cannabis as medicine. CCC was created in 2014 to respond to the growing demand for access to medical cannabis by those with chronic health problems not responding to conventional treatments. We had two goals in mind: to provide improved access to both medical cannabis doctors and educators/counsellors, and to reduce harm from the growing use of opioids.

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. In only two years, by mid-2016, Canadian Cannabis Clinics had 17 clinics in Ontario. We now have 36 clinics operating in four provinces: British Columbia, Alberta, Ontario and Quebec. Since our inception four and a half years ago, we've treated over 65,000 patients, and we remain at this time the largest medical cannabis company in Canada.

The clinics are staffed primarily by family doctors, but also by emergency physicians, internists and psychiatrists, who work as independent health professionals responsible only to their patients and to their respective colleges. Most patients are referred by their doctor because of some form of chronic suffering that has not responded to conventional remedies. After a careful assessment, including review of medical records, medical cannabis may be prescribed if that patient has a condition likely to respond to medical cannabis and is without any contraindications. A cannabis counsellor is then assigned to provide the patient with the information needed to access the best available products for that person and to use them safely.

● (1545)

The term “medical cannabis”, as opposed to recreational cannabis, refers to a product recommended by a health care practitioner with expertise in this discipline. In Canada, that would be a doctor or a nurse practitioner. The expertise includes knowledge about jurisdictional laws and professional regulations, background science about cannabis as medicine, including benefits and risks, and the medical cannabis products available to the patient in his geographic area.

The medical cannabis patient then acquires the medicine exclusively from a Canadian licensed producer. In contrast, the recreational cannabis user receives neither prescription nor professional counselling and may acquire cannabis from any source, legal or otherwise, but, almost without exception, without the oversight of Health Canada regulating that growing operation. Experienced medical cannabis doctors will advise caution to cannabis-naive patients and will prescribe low-THC chemotypes. The recreational user is less informed and consequently at greater risk.

We have learned that response to medical cannabis treatment is variable, from little to no improvement at all to dramatic resolution of the presenting complaint. Those with a profound degree of suffering over prolonged duration often seem to respond best. I think that reflects many of our veterans. Science has helped us to understand why there is such a range of response to cannabis. All humans have a unique endocannabinoid system that is responsible for many of our body's complex regulatory functions. When the endocannabinoid receptors are exposed to the many different cannabis plant cannabinoids, it is understandable that there would be a different response in different individuals. It is important to consider that the top scientists in this field of study believe that many of our ailments are likely the result of endocannabinoid system dysfunction. It is particular to the many degenerative processes that affect us as we age.

We currently have, at CCC, 1,026 veterans on our roster and we average about 30 new vet patients each month. Almost all have chronic pain and/or PTSD. Their symptoms include anxiety, sleep impairment, depression, fatigue and headaches. Most also suffer from reductions in quality-of-life metrics, relationship dysfunction and anger issues. As a group, their positive response to medical cannabis has been significant, with reduction of symptoms, improvement in function and reduction in the use of their prescription medication. Further, many reported improvement with medical cannabis compared to illicit cannabis. Our experiential observations have been reinforced by the results of a number of papers: a study by S. Chan and her group, and a literature review by Yarnell.

● (1550)

This committee has already heard from some academics and clinicians—I'm specifically referring to the ones you heard from two days ago—who are entrenched in our health care institutions, most of whom have limited knowledge of cannabis. They have exaggerated to this panel the potential harms of this complex herb, while discounting its many benefits.

Anthropological and historical evidence illustrates the long history of this venerable plant as a medicine over centuries and across much of our planet. Today, although the evidence supporting the use of cannabis as medicine is primarily limited to observational studies and testimonials, the robust clinical research that some academics insist must precede our endorsement of medical cannabis is under way. Moreover, there is evidence from thousands of pre-clinical studies that prove we are on the right track.

We can, and we must, continue to cautiously recommend medical cannabis while awaiting more clinical studies, because of the significant benefits and relatively minimal risks compared to alternative treatment options.

The Chair: Dr. Shackelford, go ahead.

Dr. Alan Shackelford (Physician, As an Individual): Mr. Chair, Madam Vice-Chair, Mr. Vice-Chair and esteemed members of the committee, it is a great privilege and honour to speak with you today about veterans and medical cannabis, veterans' well-being, and how medical cannabis might affect and influence that.

In my 35 years of medical practice, I've been privileged to care for a great many military service veterans at veterans administration hospitals in my post-graduate training in the United States and in my practice in Colorado. Although it's always been a privilege, it's also been frustrating at times, especially when the therapies at my disposal have been less effective than hoped. This is in part because military veterans present physicians with a different set of challenges from those presented by civilians. Military service itself presents unique challenges, and can result in a variety of different medical problems that conventional pharmaceuticals and pharmaceutical products are often incapable of addressing adequately.

Furthermore, veterans might present with several different medical problems simultaneously—for instance, with PTSD, anxiety, pain due to wounds and musculoskeletal injuries, and traumatic brain injury caused by explosions, all simultaneously and in the same patient. Such concomitant problems often require that several different prescription medications be provided, and each might have a side effect that, by itself, might not be of any particularly great concern, but the combination of side effects from increasing numbers of prescription drugs can create many additional problems for the patient, alongside the conditions for which they are being treated. It is now known that merely taking a number of different prescription medicines carries elevated risks. Studies have shown that as the number of prescription drugs approaches eight, the likelihood of a serious adverse event, such as hospitalization or even death, rises to nearly 100%. It's therefore essential that other therapeutic approaches be sought and provided, particularly since military veterans are among those most likely to be taking large numbers of prescription drugs.

A more urgent but related problem is that military veterans are much more likely than their civilian counterparts to commit suicide. That includes especially the Canadian veterans of the war in Afghanistan and the American veterans of the wars in Afghanistan and Iraq. One should not forget, either, those who served in Rwanda. It is almost certain that post-traumatic stress disorder, or PTSD, is the underlying cause of this epidemic, really, of suicide among military veterans, but as with so many other medical problems related to military service, identifying the problem is only the first step in developing and providing effective treatment.

Now, it's been my experience that many conditions, including PTSD, that have defied effective treatment with conventional medications will often respond remarkably well to medical cannabis. Many of my patients were able to reduce their doses of prescription drugs significantly, and many others were able to stop using them altogether, when medical cannabis was added to their treatment regimens. In the last 10 years, I myself have seen a total of about 30,000 patients and have accumulated a body of experience that is supported by the research that has been done in this arena. As Dr. Waisglass said, clearly more research is needed, but it is quite clear that cannabis is an effective treatment modality when appropriately used.

This is because each of the 110 or so different substances called “cannabinoids”, which are unique to the plant, has a different effect that is somewhat variable from the other cannabinoids. Taken as a whole, cannabinoid therapies can address a number of different medical problems with fewer side effects than single compound prescription drugs when administered in combinations. Clearly, if the need for certain drugs can be eliminated or the required doses can be significantly reduced without compromising efficacy, then such novel interventions as cannabinoid medicine should be considered. They are certainly worthy of serious consideration.

● (1555)

Now this doesn't mean that medical cannabis products are perfect. The dosing forms that are currently approved by Health Canada, such as tinctures, oils and smoked or vaporized cannabis, leave much to be desired. That is true not only in Canada but everywhere that medical cannabis has been approved and is in use.

I'm working with a retired deputy surgeon general of the Canadian Forces and a drug development expert, who established the equivalent of Health Canada and the FDA in Israel, on studies that, we are confident, will result in properly formulated, innovative, pharmaceutical-grade cannabis-derived products, which we think will be far superior to anything that's currently available.

For the veteran and also for the active service member, cannabis can offer effective treatment when conventional therapies fail or, in other cases, may provide comparable efficacy with reduced overall side effects, thereby improving the risk-benefit profile of many therapeutic regimens in military medicine.

We look forward to being able to make these advanced products available to patients in Canada and to military veterans, whose resilience in the face of physical and psychological illness is really quite remarkable, and whose willingness to embrace new and novel treatment approaches is both courageous and inspiring. I think we owe Canada's military veterans, and those everywhere, nothing less.

It has been an honour to speak with you thus far. I appreciate the opportunity and look forward to answering your questions.

● (1600)

The Chair: Mr. McColeman, you have six minutes.

Mr. Phil McColeman: Chair, just as a quick favour, can you give me a signal when I have one minute left, please?

Thank you both for being here today. It's delightful to hear your points of view. We've obviously been talking to other medical professionals about their views.

Dr. Shackelford, are you practising currently and, if so, where?

Dr. Alan Shackelford: Yes. I'm in practice in Colorado.

Mr. Phil McColeman: So you've come in from Colorado. Thank you so much for doing that.

Dr. Alan Shackelford: It's a pleasure.

Mr. Phil McColeman: When it comes to the distinction between medical cannabis and recreational product, I believe I've heard, and I'd just like to confirm it, that you both believe there is truly a category called "medical" and that everything outside of that category would be recreational product. Is that correct? I'm not talking about the product specifically, but you talk about medical cannabis, and the fact that it is a medicine. Is that your view, that it is a medicine?

Dr. Alan Shackelford: Yes. It is clearly a medicine. Cannabis itself can be used in a variety of different ways. When it is formulated as a medical product, to be used for a medical indication, it is clearly a medical product.

It does have recreational uses, historically as well as currently. I think, historically, many people who were using cannabis recreationally were actually treating some underlying medical problem that they may well not have been aware of.

Mr. Phil McColeman: Thank you for that.

Dr. Waisglass, would you confirm that it is a medicine?

Dr. Barry Waisglass: Cannabis can be used as a medicine, and it can be used for the purpose of leaving our current state of consciousness—our present mindset, if you like. It can be used as a euphoriant, to make people feel happier. So it clearly can be used for people to relax in a social setting. These are some of the ways it's used, as you and I would say, probably not as a medicine.

But Dr. Shackelford is quite correct. People will often say they are using it recreationally, but clearly they're using it for pathological conditions like anxiety disorders.

Mr. Phil McColeman: Of course, we're talking about it in the context of veterans, and I want to keep it in that context, if at all possible.

Are there any other types of medicine, other than cannabis, that people smoke?

Dr. Barry Waisglass: Are you addressing me on that one?

Mr. Phil McColeman: Yes. I'll go to you, doctor. I'd like opinions from both of you.

Dr. Barry Waisglass: Okay.

Cannabis is a botanical. It's not a single molecule, which is what we're used to. When we talk about medicine, in the context that I think you're talking about, in the medical and pharmaceutical milieu—now, for almost 100 years or thereabouts—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.

● (1605)

Mr. Phil McColeman: I have limited time, so I have to move quickly. If you could keep your answer brief, Dr. Shackelford, that would be appreciated.

Dr. Alan Shackelford: I think it has been traditional for people to smoke cannabis for recreational as well as medical purposes, but I don't think that's the only way to use it, nor do I think it's the most effective way to use it. There are ingested cannabis-derived products—pills and other forms—that are more medically appropriate and that I think should be at the forefront. I think the state of development up to this point has limited its uses to the kind of traditional inhaled methods, and there are certain indications for those, such as acute nausea in a patient undergoing chemotherapy. But there are more refined types of products available to address that specific need, such as an extracted oil that can be vaporized in a device made for that purpose.

Mr. Phil McColeman: I have one minute left, gentlemen.

I'm going to finish up on one last question, which is this. In this country, there is no distinction between medical and recreational cannabis in terms of how the government is employing the taxation regime. All other pharmaceuticals and medicines in this country are not taxed if they are considered medicine. In this country, we are applying what's called an excise tax, which many people know as the sin tax, the same one that's on alcohol and cigarettes, tobacco products. It's added onto two other taxes, both provincial and federal taxes, plus the final tax on a tax.

Do you agree or disagree that medical cannabis should be taxed with that additional sin tax, that excise tax?

We'll go to Dr. Waisglass in Toronto.

Dr. Barry Waisglass: I couldn't be more disturbed by this government's decision to burden medical patients with this additional tax. Skirting that particular item, in my talk I pointed out that the people most in need and the people who most benefit from medical cannabis are often those who are suffering the most financially in their lives, and who are unable to work and unable to participate in society.

So, I'm with you. It sounds like your inference is that this is a horrible thing and mean-spirited as well, and they have to rescind that tax.

The Chair: Dr. Shackelford, if you want to answer, we can give you some time.

Dr. Alan Shackelford: Other jurisdictions, such as Colorado, make a very clear distinction between recreational cannabis and medical cannabis, and both products are taxed entirely differently. I think that taxing the medical applications, the medical uses of cannabis as a recreational product is incorrect.

Mr. Phil McColeman: Thank you.

The Chair: Mr. Eyolfson.

Mr. Doug Eyolfson (Charleswood—St. James—Assiniboia—Headingley, Lib.): Thank you, Mr. Chair.

Thank you both for coming.

Dr. Waisglass, I noted that in one of your comments you talked about.... I wasn't at the previous meeting, but you were referring to the previous witnesses in medical research and clinicians as being, in your words, “entrenched” in the medical system and over-exaggerating the harms and underestimating the benefit.

Full disclosure: I'm a physician. I also spent five years doing medical research before I was in medical school.

When you look at the levels of evidence that we have to have.... For instance, if there's a new blood pressure drug, you have your basic science research. You then have your animal trials. You have your human trials. You have your gold standard, the randomized clinical trials. Given the backgrounds of people, with these different methods, what evidence is there to counteract what they're saying from their knowledge and experience? What is the level of evidence to say that, no, these high doses are not harmful, or to say that these benefits are there, when others who are performing medical research in clinical medicine don't agree?

● (1610)

Dr. Barry Waisglass: If the measuring stick is going to be the same for a botanical as for a single-molecule pharmaceutical drug, we have problems. That's one of the reasons for the delay in getting the evidence we need.

There are two reasons why we do those studies. One is to convince Health Canada, or whoever's going to determine that a new product can come onto the market, that the drug is efficacious—it's going to work for that problem better than a placebo will. Two is that it's safe. Is that not correct?

Mr. Doug Eyolfson: That's correct.

Dr. Barry Waisglass: We want to know its safety. We want to know it's not going to kill people or give them cancer.

With medical cannabis, we need to be more patient, because it's very difficult to assess it in the same way. My answer to you is that there is ample preclinical science to make us believe.... There are thousands of studies on animals, and cellular and biological sciences, molecular studies and so on to tell us that cannabis is safe. We have historical evidence that tells us it's safe. It was used as a medicine for hundreds of years throughout Europe and North America and other parts of the world as a drug much as we know it, only in tincture form.

Currently, we have observational studies. We have a variety of smaller studies. New ones are under way, and you can get preliminary reports on those that tell you both that cannabis has relatively few serious side effects, which are easily managed, and that it is very efficacious, very effective, in a great number of treatments and for symptom relief.

The doctors who speak against it are entirely unfamiliar with the observational studies, or they discredit them quickly. A great deal of the negative papers published on cannabis—I know, because I've been through damn near all of them—are rife with bias. Bias permeates our society—bias around cannabis in particular—which is religious, cultural, political or social. We all know that, and you've probably heard from a number of people, officially and unofficially, who have this bias.

In the same way, there are people with biases in favour of cannabis—cannabis can do no wrong and it fixes everything. We have to discount those people too.

Mr. Doug Eyolfson: Thank you.

Dr. Shackelford, do you have anything to add to that?

Dr. Alan Shackelford: I did medical research as an undergraduate medical student at Heidelberg University, and I published five papers—both basic science or animal work and clinical investigations. I was a research fellow at Harvard Medical School in my postgraduate training, which was one of my three fellowships after an internal medicine residency at Harvard. I am extremely familiar with investigations of this nature, and I've been looking into the research evidence that supports the use of cannabis as a treatment.

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. One study by Donald Abrams, published in 2011, showed that the use of cannabis—in that particular study it was vaporized—in conjunction with prescription opioid pain medicines allowed a reduction in the dose of the narcotic pain medicines by 25%. In and of itself, that is an important way of decreasing the risk that patients are exposed to in the use of opiates, and the pain control was equally good.

There have been studies in Canada by Dr. Mark Ware, whom you may well know, who showed that inhaled cannabis—smoked, again—was efficacious for the treatment of neuropathic pain.

One of the problems, however, with being able to do these types of studies that we are all familiar with as physicians and scientists is institutional bias—particularly in the United States—against doing studies involving cannabis. There is a very clear disinterest in showing that cannabis may have any medical benefit, and that has limited our ability to carry out appropriate studies. Nonetheless, the study I cited by Dr. Abrams was done with permission by the National Institute on Drug Abuse in the U.S., and there are other studies that are equally demonstrative of benefit.

In terms of risk, other studies have shown poor evidence that using cannabis is linked to any sort of development of psychiatric or physical disease.

● (1615)

Mr. Doug Eyolfson: I'm sorry, but could I cut you off there? I think I'm just about out of time.

The Chair: Yes.

Mr. Doug Eyolfson: Sorry about that. Thank you very much.

The Chair: Ms. Blaney.

Ms. Rachel Blaney (North Island—Powell River, NDP): Thank you very much, both of you, for being here today.

I'm going to start with you, Dr. Shackelford, if that's okay. One of the things you talked about.... I think it's a complex issue. We're really looking at veterans and their need to get the medicine that's going to make their lives so much better. We know, looking at the multiple challenges—and you outlined them very clearly—that finding something that's going to make life something that they're going to stay with us here for is really important, so I appreciate the work that's been done.

You said in your statement that you saw remarkable responses to medical cannabis. You also mentioned meeting and seeing 30,000 patients. First of all, I want to know if those 30,000 patients were all veterans. Also, could you talk about what that remarkable response is?

One of the things I'm trying to get clearer about is whether it's about matching the right type of cannabis with the right patient. How much work is that? What we have right now is that you're allowed to get three grams, and that's dried. One thing that's happening when they're going out to get it, internally within the clinic they're getting it from or the place they're purchasing it from, is that if they're using something else, they're figuring out what the equivalency is. I'm concerned that this isn't really meeting the needs of our veterans.

Dr. Alan Shackelford: Those are important questions.

The 30,000 were 30,000 individual patient visits over 10 years. Many of them.... I don't have the exact numbers of how many were veterans. Of course, after increasing numbers of service members started coming back from Afghanistan and Iraq, the number of veterans I would see increased. It is probably in the neighbourhood of 10% or something of that nature, maybe fewer.

The types of problems that the service members and the veterans presented with were extraordinarily complex in almost every case. Many had PTSD. Of course, PTSD is not restricted to military service members or people who have seen combat. It also results from automobile accidents or other situations in which the individual feels that his or her life is in danger.

In looking at veterans, however, the number of pharmaceuticals typically being prescribed is six to 10, and the complexity of the issue.... As I said in my statement, it can be physical pain, or it can be PTSD and a variety of other things, including traumatic brain injury, which carries another set of problems. I have seen probably the majority of service members—I'll restrict it to PTSD—being able to stop using their medicines, become productive again and engage with their families. This is not unusual.

In terms of the type of cannabis they would use, first, for three grams, it depends on what the equivalency is. If it's extracted and used in an oil, it's a different product, rather than simply smoking the three grams. I am almost 100% certain that it's an insufficient amount under any circumstances, be it extracted and orally administered or smoked.

I don't think there is any real, clear evidence that one type of cannabis or strain with a particular strain name is necessarily more beneficial. I think it is a question of what the cannabinoid content is and what chemicals are actually involved. CBD, for example, is much more effective as a treatment for anxiety than THC is. The particular diagnosis should dictate the type of treatment that's employed.

● (1620)

Ms. Rachel Blaney: You also mentioned the work that's happening in Israel, I believe, talking about cannabis pharmaceuticals, which might work better. Can you tell me what the difference is? What will work better?

Dr. Alan Shackelford: As Dr. Waisglass said, botanical cannabis is complex. It's a plant. I think it can play a role, but I also think that if we are to call it medical cannabis, it has to be medical cannabis. Now, it doesn't have to be a medical plant. It can be a medical substance, such as an extract in pill form, for example, or a liquid extract that could be used under the tongue as a sublingual. What's really important is the consistency of the extract or the product itself and the known quantity of cannabinoids, be they CBD, THC or any of the others that we know something about, which are CBN, CBC and CBG, of the 110 or so.

We do know from excellent animal work and some human work that the complexity of different cannabinoids in the whole plant extract is more effective than one single compound alone. That was demonstrated in the trials for Epidiolex, a CBD-based anti-epileptic drug recently approved in the U.S. That is what's being looked at in Israel, and hopefully in Canada. I'm very interested in the collaborations that are possible. I'm a member of the Cannabinoid Research Initiative of Saskatchewan, at the University of Saskatchewan, and there are plans to investigate this here in Canada as well.

The intention is to create cannabinoid-based or cannabinoid-derived actual medications that are consistent from dose to dose and product to product so that they can be used as pharmaceuticals. Now, we're not there yet. This doesn't mean that we shouldn't be using cannabis, because there has been demonstrated efficacy in scientific study that goes back to the early months and years of the past century and this century. There's a great deal of evidence for this, and it is safe.

Until we actually have the pharmaceuticals, it doesn't mean that we shouldn't treat people appropriately and with the products that are indicated. It just means that we have a lot of work to do to bring it up to the standards that we all expect.

The Chair: Thank you.

Mr. Bratina.

Mr. Bob Bratina (Hamilton East—Stoney Creek, Lib.): Thank you.

First of all, Dr. Waisglass, I was interested in your comment that some of the prescriptions really didn't seem to work out very well, so you brought in botanicals and other things. The question becomes, how are we medicating?

Could you give me an example of something that would have been prescribed for a situation, a health issue, that didn't work out? Should we be looking at how we're prescribing, if those problems are arising? Did I get you right on that? Some prescriptions for veterans just weren't working out at all, whereas the other modalities were working out, if you follow me.

Dr. Barry Waisglass: Just so I'm clear about that question, do you mean conventional prescription medication that failed to work well?

Mr. Bob Bratina: Yes. That's what I gathered from your statement.

Dr. Barry Waisglass: Yes, I'd be surprised if the room you're sitting in wasn't filled with people who could give me an example of being given a drug, having a side effect from it and not being able to take it. Or maybe it was partially efficacious. That runs across the full gamut of medications we have for all the common diseases, such as hypertension, diabetes, arthritis, asthma—name the disease. There are numbers of people who find the side effects intolerable. They either stop taking their medication or are back at the doctor's office and saying that it isn't working well or it doesn't agree with them because of x, y or z, so another prescription is given.

It's particularly true, as Dr. Shackelford mentioned, about vets—and many non-vets, for that matter—who are on multiple medications with a lot of drug-drug interactions. That's where I was going with this when I mentioned why so many people go to naturopathic, herbal, acupuncture and a whole bunch of other unconventional treatments, if you like—because of the relative failure in being able to fulfill the promises made by pharmaceutical companies and doctors. We're now seeing that alternatives seem to be as important to veterans as they are to the rest of us.

● (1625)

Mr. Bob Bratina: I wonder if that would be the basis of another study, but we'll leave it at that. I thank you for that answer.

On the question of PTSD, I was born during the Second World War, so I observed what we used to call shell shock. Cars in that era often backfired, and there were veterans on our street, so I get that.

My uncle was on an American aircraft carrier, the *Bunker Hill*. They took two kamikaze hits, and 600 of the crew of 2,600 were casualties. I can recall that they were trying to identify.... In an incident such as that, there were terrible fires on the hangar deck, so to identify the lost sailors, they basically had to hold up the remains of the person and try to figure out who it might have been, in order to get all of the identities. My uncle had fond memories of being a sailor—not fond memories of that, of course—life on the sea and so on. I know that it would be different for different people, but I never saw any PTSD or a cringing at the memories of his service.

I'm just wondering about it. Was there something different about the World War II experience versus the Vietnam, Afghanistan and Iraq sequence?

Dr. Alan Shackelford: Those were extremely problematic memories, I'm sure, for a great many people who served on the *Bunker Hill*. There are a lot of instances like that. It's not clear why one individual develops PTSD and another does not, nor is it completely clear exactly how many military members have PTSD. The manifestations can come quickly after a particular incident or not manifest for decades. I don't think there is a significant difference in the military experience, except that probably the likelihood of being helped or having support, or the sense that the mission was worth it, plays a role.

I spoke at some length with a Canadian Army officer who had been in Rwanda some years ago. He had very explicit PTSD. It was extraordinarily difficult for him, but buddies of his who were in the same unit, in exactly the same settings, had no such problem. I think that if we could identify what it is that makes one service member more resilient compared to another, we'd be well served.

However, I do think that pre-treatment with cannabinoids.... There is some evidence that this may be beneficial. 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. We don't really know yet.

● (1630)

Mr. Bob Bratina: Do I have any time left? No?

Thank you.

Ms. Karen Ludwig (New Brunswick Southwest, Lib.): Thanks to both of you for your presentations today. I actually had the same questions for both of you. I'll start with Dr. Shackelford.

We heard a recommendation earlier this week for a tailored educational program for military families. Can you offer some recommendations for what that might look like?

Dr. Alan Shackelford: Can you clarify just a bit, please? Is it a tailored program for military families with regard to the use of cannabis?

Ms. Karen Ludwig: Yes, that's right.

Dr. Alan Shackelford: Well, I think we have to start with the notion that cannabis, when properly used, is a medical intervention. As with every medical intervention, whatever therapeutic substance is being used should be kept isolated and away from children, for example.

I don't know that there really is a necessity to have a specific and special educational program for families that are using cannabis over families whose members are using other prescription drugs. I think all of the same cautionary measures apply, with one important distinction, and that is that if a child gets into the cannabis, that child is not going to potentially die. There is no known lethal dose of cannabis, which is not true for the prescription medications that are often in use in the treatment of PTSD or any other medical problem. All of those cautions apply. The side effects of indulgence, overindulgence or misuse can be problematic and may require medical intervention; they just don't require life-saving medical intervention.

I think a military family should be informed to keep the medicines sequestered under lock and key and not available in any fashion to children, and to use them as prescribed or as directed, as opposed to self-medicating. That's an extraordinarily important point. The physician who is administering or authorizing the use of cannabis —because that's what we're talking about—or of any drug has the obligation of informing the patient of expected use and that there is an expectation that those parameters will not be violated.

Simply turning someone over and saying that they can have 10 grams of cannabis and go and use it in any way they want.... I don't think that's appropriate. I think the physician should instruct the patient in proper use and proper dosing and follow up with that patient regularly so that the efficacy and the proper use can be ascertained.

Ms. Karen Ludwig: Before I switch to our other witness, could I just add to that or extend that question? We've heard from a number of witnesses before this committee that the average duration of medical training regarding prescribing or approving cannabis is about an hour and a half at a medical school. There seems to be an awful lot of information to be learned.

Do you ever have an opportunity to go in as a guest speaker to medical programs, nursing programs or graduate programs for nurse practitioners?

Dr. Alan Shackelford: I do. I spoke to the medical faculty and the student body of the university of Uruguay a couple of years ago for precisely that reason. I think we do need to have coursework for undergraduate medical students—but also in postgraduate training for residencies—that involves the proper use of cannabinoid medications. I think we should look into creating a training program for physicians, both civilian and military, for the proper administration of cannabinoid treatments.

Ms. Karen Ludwig: Thank you.

Do I have any time left? Okay.

I'd like to ask Dr. Waisglass the same questions.

Dr. Barry Waisglass: I'll start with the last one first. Medical education for medical students, nursing students and anyone in the health professions is clearly important. Looking over—

Ms. Karen Ludwig: What about those who have been in the profession for 15 or 20 years? Do they continually go back for...? I would call it upgrading, but I'm sure it's just further training.

Dr. Barry Waisglass: There are many parts to your question.

All of our colleges here in Canada require doctors to keep up. Those requirements are dictated by each province or territory, as you know. Each of the colleges dictates for the specialists and for the family doctors, the non-specialists, what the requirements are for them in the way of keeping continuing medical education up to date. There are ways to skirt it. Not everybody does it, but these colleges do police it. Specifically—

● (1635)

Ms. Karen Ludwig: I'm sorry. I have one more question on that before you go any further. Is every province consistent with the others in terms of keeping doctors current on illnesses?

Dr. Barry Waisglass: [*Technical difficulty—Editor*] consistent province to province or territory about anything to do with health care. Each province tweaks it and makes it just a little bit their own. It applies to cannabis as well.

Ms. Karen Ludwig: Okay. Thank you.

Dr. Barry Waisglass: The education is hugely important, as a previous speaker suggested. What happens for anybody in this industry, the medical industry itself, is “see one, do one, teach one”. I was the founding member of Canadian Cannabis Clinics. The next doctor to come along who wanted to work with me, or in one of our adjoining clinics or nearby clinics, I trained. I made recommendations about how they could get the rest of the training they needed. The training of doctors for medical cannabis is not happening in medical schools, you're quite right. They might learn about it as a botanical for an hour, but the teaching of treatment with botanicals is not part of our curriculum anywhere that I know of, other than India.

As for your question about the cannabis education program for military families, my initial reaction was like Dr. Shackelford's: Why are we doing this? What's the purpose of it? But I had a few more seconds than he did to think about it a little bit, and perhaps one of the thoughts behind this—again, I'd just be guessing—would be the same thing that many doctors do when they treat someone with any mental health issue. That is, they get a loved one into the office with them for all visits, because for any treatment employed, cannabis or otherwise, it's important for the loved one, the person in the household, to know about it.

I hate to take more time when you're all so strapped for it, but I would add that this was a really important thing I brought into my cannabis practice too. In a first follow-up visit, let's say, I would ask the patient, “What happened when you used the cannabis? How was your pain?” They'd say, “It was the same, Doc. It didn't work.” When I'd ask them how their sleep was, or their mood, they'd tell me that it didn't do anything. Then I'd look over at the spouse, and the spouse would be smiling.

So I would address the spouse about their husband or wife, or whatever the case was, and say, “They didn't seem to have a very good response, but your face kind of belies that. What's going on?” I would hear things like, “She's now back to doing the laundry; I don't have to do it anymore” or “He's down in the workroom. He hasn't been down in the workroom in two years. He's back doing his woodworking again.” I can't tell you how many times I had something like that happen.

People are expecting from cannabis medicine something just a little bit different. If you teach the most significant other in the family about it, that is pretty important, as is telling them the facts about cannabis and rolling out the truth about its risks and benefits. For instance, people don't have to be afraid of second-hand smoke. They won't go crazy or psychotic. A lot of people have sucked in a lot of the nonsense about cannabis—the lies, the exaggerations, the hazards. It wasn't very long ago that officials were saying that if you smoked cannabis, that was a gateway drug to mainlining speed or something else.

The Chair: Thank you. We're out of time.

Mr. Kitchen.

Mr. Robert Kitchen (Souris—Moose Mountain, CPC): Thank you, Mr. Chair.

Doctors, thank you both for being here today. I greatly appreciate your testimony.

I thank my colleague Ms. Ludwig for her previous question, because she took one off my list. This was specifically the question dealing with training and how we have very limited training for our physicians in dealing with a broad subject like this.

One thing that spurred me to actually put forward the motion for this study was partly what I heard from the two of you today. It was when we were doing a study on mefloquine. We were listening to veterans, plus their family members, give testimony about how impactful it was for them and how they got their spouses back when some of them started taking marijuana and getting off their medications. It was great to hear your comments on that and on how we see that evidence.

The problem we have here as a committee is that when we look at things...and I look at it from a scientific point of view. When we look at the hierarchy of evidence, anecdotal evidence, as you're well aware, is at the bottom of that pyramid. It's a big challenge when we're sitting here looking at anecdotal evidence. In the past, when we've done studies, we have not accepted anecdotal evidence as a justification for making our recommendations. We have a history of that. So how can we turn around here at committee today, listen to what we're hearing on anecdotal evidence, and say that this is a good thing? Although what we're hearing sounds great, it would be hypocritical of us to say that we will deny anecdotal evidence on mefloquine and yet will accept it on marijuana.

I would like to hear your comments on that, please, starting with Dr. Shackelford.

● (1640)

Dr. Alan Shackelford: I think those are important considerations. I think they perhaps should serve to prompt us to do more investigations. On the other hand, as Dr. Waisglass said, a great many studies have been done on cannabis as a medical treatment option. I think we can draw on that body of objective evidence to justify, I would suggest, authorizing the use of cannabis as a treatment option for veterans. I think that body of evidence supports its use. I would be happy to provide—I'm sure Dr. Waisglass would as well—a list of scientific references to these studies. I have been reading these over at least the last 10 years. The committee and anyone else would be able to reference those studies as a basis for advancing the use of cannabis as a treatment.

I don't think there's a paucity of evidence at all. I do think that a great deal of it is anecdotal, but that doesn't mean there aren't objective, well-done studies that support its use.

Mr. Robert Kitchen: Dr. Waisglass.

Dr. Barry Waisglass: I don't think it's a case of choosing to endorse medical cannabis for veterans or not recommending it at all because all we have is anecdotal evidence. There are massive amounts of anecdotal stories out there, but that's not what your committee needs to look at. You need to look at good-quality observational studies that are quite legitimate.

As Dr. Shackelford says, you don't need to be a scientist and you don't need to go onto Medline and do your search. You can go on a simple website like projectcbd.org and probably get all the information you need about medical cannabis as a legitimate treatment for a whole number of different conditions. There are some very reasonably done observational studies that unquestionably are acceptable guidelines for physicians and for bureaucrats as well to be able to make judgments about the patients/citizens they have to look out for.

I don't think it's an issue that you don't have enough evidence. There is enough. When looking at evidence, though, one needs to be extremely critical. Sometimes that takes some training. I looked at a PTSD and veterans study today that somebody sent me. It was just a lot of garbage. It was a highly biased mix-up of information, confusing medical cannabis with recreational cannabis, meaning high-THC cannabis—who knows what the person was getting—versus medically prescribed cannabis with CBD in it, which is so much safer. It was mixing up nabilone and other prescription pseudo-cannabis drugs or cannabinoid prescription drugs and cannabis itself.

If you look at who is writing it and who is funding the study, you can tease these things apart. That's what I did before I decided to do this full time. You could commit yourself to the same, if you wanted to.

● (1645)

Mr. Robert Kitchen: Right, and I appreciate that. I understand, as you will understand, that.... I get it that we have observational evidence. The problem we have with observational evidence, compared with randomized controlled trials, is that, number one, the risk of bias is much higher. As well, the quality of evidence is much lower. You have those challenges when you're trying to do that. I agree with you about the aspect of looking at who wrote the paper and what biases they might have. They might be affiliated with some organization.

At any rate, I want to go on a little bit, if I can. I appreciate your comments on that.

Dr. Barry Waisglass: Perhaps you will allow me to add just one more thing.

Mr. Robert Kitchen: Sure. Just make it quick.

Dr. Barry Waisglass: When you're doing this, you have to keep in mind that cannabis is a botanical. It's a herb. It's not the same. It's very difficult, when you're assessing the science on it, to consider that. If you want to look at what cannabis will do, look at the pharmaceutical products that have evolved from cannabis, or that are pure extracts, such as nabiximols, and look at the science on that. It's rock-solid.

Mr. Robert Kitchen: Aspirin came from tree bark, so it's a botanical as well.

Dr. Barry Waisglass: Yes.

The Chair: Mr. Samson, you have six minutes.

Mr. Darrell Samson: Thanks to both of you for your presentations and the information you've provided thus far.

Dr. Shackelford, you mentioned that you noticed a big difference. Once individuals, veterans or others, use cannabis, there's a drop in other medications, quite significantly with opioids and others. Is that correct?

Dr. Alan Shackelford: That's correct.

Mr. Darrell Samson: Would you agree with that, Dr. Waisglass?

Dr. Barry Waisglass: Absolutely.

Mr. Darrell Samson: We're seeing unconventional methods—you talked about being in the conventional doctor role for 30 to 40 years and now being involved in the unconventionals—things that were being used when you were practising or shortly thereafter. Are you noticing less usage of those and more movement towards medical cannabis? In other words, are they substituting this new unconventional, if you like, for other unconventionals?

Dr. Barry Waisglass: I don't have the data on that, but I can tell you that there is evidence out there—particularly from the state where Dr. Shackelford is working and some other jurisdictions—good papers reporting on the reduction of pharmaceutical sales and presumably the use of pharmaceutical products in jurisdictions where the state moved to legalizing medical cannabis. In other words, there's evidence that people, when using cannabis, will stop using their prescription hypnotics, sedatives, painkillers and the like.

Mr. Darrell Samson: Do you want to add to that, Dr. Shackelford?

Dr. Alan Shackelford: Yes, thank you. This is an extremely important point. There are two papers, specifically one from Health Affairs from 2016 and one in the Journal of the American Medical Association, also from 2016, I think, which showed a very distinct decrease in the number of prescription pills issued per physician in U.S. states that have medical cannabis programs. The number of opioid prescriptions per physician dropped by 1,800 in the states that enacted medical cannabis programs. The result of that is what was reflected in the JAMA paper, which was that there were 25% fewer unintentional opioid overdose deaths in states that had enacted medical cannabis programs, compared to the number in states that had not enacted cannabis programs.

The decrease in the number of prescriptions per physician was reflected in a significant drop in the number of unintended deaths from opioid overdose. That is a huge problem in the U.S. In 2017, I think 72,000 people died from unintended opioid overdoses and drug interactions. Something as simple as aspirin or non-steroidal drugs—indometacin of course being a prescription drug and quite an aggressive one—kill about 15,000 to 20,000 people in the U.S. We think of these things as being innocuous, and yet they are not. This is most important.

● (1650)

Mr. Darrell Samson: My colleague asked earlier about the right cannabis for the right person or the challenge they're faced with. If I were to ask each of you individually in a separate room the three main areas or causes that medical cannabis is helping with, could you zero in on those? For example, we're seeing PTSD. What are the three main areas that you feel medical cannabis is helping patients with? Think about it for a second, and hold on to those three, and we'll take a response as we move forward.

Dr. Shackelford, you can go first.

Dr. Alan Shackelford: There's PTSD, of course. I see a lot of veterans, and they refer their veteran friends to me, but 93% of the 88,000 or so patients who now have medical cannabis cards in Colorado use it for pain. One reason is that we don't have very good treatments for pain, and many of them are fraught with danger, as is the case with opioids. I've seen significant improvement in pain.

Muscle spasms are also one of the approved conditions. Interestingly, it's not an approved condition in Colorado, although it is in other states. The U.S. has a mishmash of different approved conditions. In the case of autism, there's a study from Israel that shows that cannabis is effective in assisting autistic children, some profoundly autistic. I have seen a few patients with autism who have responded extraordinarily well.

Seizure disorders are particularly responsive to cannabis. It's most interesting that Epidiolex, the most recently approved single-compound CBD drug for the treatment of seizures in Dravet syndrome specifically, was effective in fewer than about 43% of the patients and did nothing at all for nonconvulsive seizures, and yet it was approved as a pharmaceutical prescription drug in the U.S. when its efficacy is not particularly good. Whole-plant cannabis is much more effective for treatment of seizures.

Mr. Darrell Samson: Thank you. I think you added a few.

That puts a little more stress on you, Dr. Waisglass, but go for it. It's your call.

Dr. Barry Waisglass: Which responds better depends on what study you look at, and I don't think it's important. Whether it's PTSD or chronic pain or anxiety or insomnia, cannabis works for all of those different problems.

What I would like to address is the other part of your question, about the specificity or the matching. One of your colleagues asked that too but didn't get my answer. There's a great deal of scientific activity right across the planet. In Canada alone, we have over 50 different academic centres that are studying something about cannabis, from plant science right through to clinical trials on humans using cannabis products. In our company alone, we have just under 50 scientists employed by Aurora, and we're working collaboratively with scientists all over the planet.

Let me tell you, there's a tsunami of scientific activities going on, no question about it, because all the preliminary results are very exciting. What all the scientists are working on, at different levels, is which particular cannabinoids, combined with what other cannabinoids or working individually, have an effect. We know that the terpenoids and probably the flavonoids in the cannabis plant are also contributing.

This information will unfold as the decades unfold ahead of us, but there is no question that nothing will stop this scientific activity from yielding very specific information for us to zero in on some of those particular strains and at the very least be able to match them. We're doing that with observational studies, with patient data, and trying to match. Our counsellors have this information, that certain people with migraines do better with this or that strain.

● (1655)

The Chair: We're going to have to hold you there. Mr. Samson has run out of time.

Dr. Barry Waisglass: Okay.

The Chair: We'll have to switch to Mrs. Wagantall now.

Mrs. Cathay Wagantall: Thank you.

I appreciate all of your testimony. This issue is very important to me personally in working with our veterans, the question of how and when they should use this particular product.

I want to talk very briefly with you about mefloquine toxicity and whether you've had any involvement with that. It's an issue for all of our allies and for us, in that veterans were given this anti-malaria drug and it has caused issues. We found with many of our veterans that they found cannabis treatment to be very effective, whereas pharmaceuticals just seemed to complicate it because it's a brain stem injury, not PTSD, which it's often considered to be. Have you worked with any veterans who are suffering from this particular condition?

Dr. Alan Shackelford: I have not. I'm not familiar with the clinical presentation of it. Perhaps Dr. Waisglass can comment more on that. I have worked with veterans from the U.S. military forces who were given anthrax vaccine and had some significant reactions to that. A lot of them involved chronic pain. I haven't seen as many of those veterans as veterans who have PTSD, but those with pain from the anthrax vaccine, which included a lot of muscle spasms, responded quite well to cannabis.

Mrs. Cathay Wagantall: Dr. Waisglass, have you worked at all with any mefloquine toxicity issues?

Dr. Barry Waisglass: I have not.

Mrs. Cathay Wagantall: Okay. I just wanted to follow that up.

When it comes to the research that's going on and the discussion around its needing to be done, I was very pleased to hear, Dr. Shackelford, that you mentioned working with the University of Saskatchewan. I'm from Saskatchewan, and I'm very proud of our university. Along with the University of Regina, they're doing a great deal of work on service dogs and on a new study that is happening right now with regard to mefloquine.

I would be curious to know exactly what your involvement is and what they are working on. How important is that collaboration around the world in coming up with some of the answers we need, without all of us trying to do it on our own?

Dr. Alan Shackelford: It's extraordinarily important. CRIS, the Cannabinoid Research Initiative of Saskatchewan, is a couple of years old now. A symposium was held in August, at which I spoke. The basic science research that's being done in Saskatchewan, specifically in this program, is really extraordinary. A group was brought in from the Max Planck Institute in Germany. A Canadian—from Saskatoon, actually—who had been working there brought his entire team of 20 different researchers to Saskatoon to work on cannabis plant research. The professors are extraordinarily well trained.

There's a spirit of collaboration in cannabinoid research that is unusual, certainly in my experience, compared to other research initiatives. If we look at the collaboration or, if nothing else, simply at the communication among research institutions all around the world, be it in Israel, the U.S. or here in Canada, or even in places as diverse as the South American countries of Colombia and Uruguay, as Dr. Waisglass said, this is an area of inquiry that is absolutely moving forward at a breakneck pace. Innovations are going to be forthcoming that will be really quite remarkable.

Mrs. Cathay Wagantall: Dr. Waisglass.

Dr. Barry Waisglass: I'm sorry, but because of volume issues I was unable to hear the first part of your question.

Mrs. Cathay Wagantall: I was asking for feedback on the involvement of other universities or organizations working on research. Specifically for me, the University of Saskatchewan in our province, a province of a million people plus a few, is doing phenomenal work in this area. I wondered if you had any collaboration or experience with studies and whatnot that those organizations have done or are working with.

● (1700)

Dr. Barry Waisglass: Aurora has several properties. One of them is CanniMed, which was the first of the licensed commercial producers. CanniMed is in our fold, so we work with the science people in that area too. Yes, we are collaborating with university centres and research centres in a number of provinces. I don't even have all of their addresses: the University of Alberta, UBC, the University of Toronto, McGill....

Mrs. Cathay Wagantall: Okay. That's great. Thank you.

Dr. Shackelford, our committee did a trip down to Washington, and we got to go to the Walter Reed hospital there. In one wing, if I remember correctly—you guys may correct me—they were working with patients who had severe trauma and were on strong pain treatment.

The goal there was to help them get to where they no longer had to have that level of pharmaceuticals, because obviously there are reactions. Are you aware whether in the States cannabis is being used in part of that process where you have those traumatic injuries and you need to get these individuals to where they can either go back and serve or join civilian life or whatever? Is it part of that process?

Dr. Alan Shackelford: It's not, in the U.S., as cannabis is considered to have no medical benefit or uses and a high abuse potential by the U.S. government. That's not to say that there's not a lot of interest, but the constraints that are placed on the veterans administration and the military establishment are so significant that nothing can be done, even though there is a great deal of interest.

Now, the veterans administration does not prohibit veterans from using cannabis medically in states where it's legal to do so, but neither the VA nor the defence department has an official program. I'll be frank. I think the United States can learn a great deal from Canada, not only in this regard, but in other ways as well, and certainly in this particular instance.

There is an opportunity here for Canada and Veterans Affairs to be pioneers, I think, in making a treatment available, as crude as it may now be, but also in investigating it and in setting up, as I've suggested, training programs for physicians, and possibly research programs that could be done in conjunction with the defence department or—

Mrs. Cathay Wagantall: Well, we're in a state of flux as well, because right now our treatment centres that veterans can go to do not allow them to come if they are using cannabis, so we have work to do there as well.

Dr. Alan Shackelford: Indeed.

The Chair: Thank you.

We'll end with Ms. Blaney.

Ms. Rachel Blaney: Thank you very much, Chair.

I want to get one thing clear. I've heard from both your testimonies that when veterans start using cannabis they are often able to go off many pharmaceuticals that have multiple impacts on their well-being. Is there research specifically on veterans moving off pharmaceuticals and moving toward cannabis and using that successfully? Also, are they tracking them over a period of time?

Could I start with you, Mr. Waisglass?

Dr. Barry Waisglass: We're not doing that. I specifically asked the people in our companies about tracking that information. It's not being done. It would be far better to construct a specific study in that regard to gather that information. I don't know of anybody who is doing that, but it has value. Everybody I've talked to has said that it would be valuable information.

I agree with you, but it's not being done.

Ms. Rachel Blaney: Thank you so much.

Dr. Shackelford.

Dr. Alan Shackelford: There is nothing in an official capacity in the U.S., but four years ago, the State of Colorado approved a bit over $2 million for a study of veterans and PTSD, using various cannabis profile plants. That study has completed most of its data-gathering.

We don't have enough information. Actually, I have very little that I can quote, but there is a study that is about to be completed on the treatment of PTSD with cannabis in the U.S. It's not official, however. This is one that we paid for from the state with state funds, but it is not a U.S. government-sanctioned study.

Israel is doing studies on the use of cannabis in veterans. One study in particular looked at therapeutic horseback riding, interestingly, with great benefit. They found that service members, veterans, who were engaged in horseback riding under a specific program and using cannabis were much more effectively combatting PTSD than those who were doing one or the other. The administrator of that program said that she had treated about 60 veterans as part of it and there had been no suicides, which is remarkable. Suicide is unfortunately the primary cause of death among Israeli soldiers.

● (1705)

Ms. Rachel Blaney: Thank you.

I believe that's my time.

The Chair: Yes.

We have a couple of housekeeping items. The analyst has asked for any scientific studies you've quoted and have. Could you send those to the clerk?

Dr. Alan Shackelford: Absolutely, yes.

The Chair: Also, if there is anything that we didn't have time to cover and that you want to offer in a brief, you could submit that to the clerk. He'll get it to us.

That ends today's testimony.

Mr. McColeman.

Mr. Phil McColeman: Mr. Chair, we have time left, and there are some follow-up questions.

The Chair: We could run some two- or three-minute rounds, if you wish.

Mr. Phil McColeman: I have just one thing on my mind that I'd like to ask while we have the witnesses.

The Chair: Anybody else? Mr. Casey, okay.

I see unanimous consent on that, so that's fine.

We'll start with Mr. McColeman. We'll give you three minutes.

Mr. Phil McColeman: I'm wondering if you could do one basic thing for us. You've obviously worked with a lot of veterans. You've seen some successes and you've seen sometimes things not working. Could you give us one of each in just a very brief case-study fashion, if it's possible to do that in the short period of time we have here? Or you can just choose to do one that you think was very interesting, which involved a veteran, and tell us what the result was.

Could I ask that of each of you? Dr. Shackelford, why don't you go first?

Dr. Alan Shackelford: Last week, I saw a young woman who has been a patient of mine for four years, I would say, a service veteran with severe PTSD. She was taking, I think, seven different prescription drugs at the beginning of the cannabis intervention. As of last week, she had not taken any prescription drugs for about three years and is happily employed, now married and with no symptoms of PTSD whatsoever.

A man with extremely grievous combat wounds and PTSD continued to have quite severe pain from the wounds. His PTSD symptoms improved, but I was not as successful at treating the pain with cannabis interventions alone, as I would have preferred. He's on a low dose of narcotics, which in combination with the cannabis is more effective than were the narcotics by themselves, but it was not a full success.

Mr. Phil McColeman: Okay.

Dr. Waisglass.

Dr. Barry Waisglass: I don't have on the tip of my tongue case studies that would be like a testimonial to say this one worked and this one didn't work. There was no consistency in my experience of seeing veterans or anyone else with PTSD in terms of the drugs that worked or didn't work. I'm referring to cannabis drugs. There are wonderful stories I could tell you, but I would have to prepare for them. I wasn't prepared to give you case studies. I'm not seeing patients anymore. My work involves domestic and international setting up of clinics to give access to people who want cannabis medicine and to show the models that we have that will work in their country—

● (1710)

Mr. Phil McColeman: Can I cut you off there? I have only a couple of seconds.

Dr. Barry Waisglass: Sure.

Mr. Phil McColeman: I have one last question, which is about the ratio of THC to CBD oil. Let's take an oil product. How high do you go with the THC component? Will you go as high as required, or are there limitations on the hallucinogenic component that you're prepared to go to? I know many oils are of various ratios and many people experiment with different ratios to find what works for them, particularly in the veterans community. Do you have any comments on the range of each of the two major elements that we discuss when we're discussing this topic?

The Chair: We're out of time.

Dr. Shackelford, could you answer that quickly?

Dr. Alan Shackelford: I have a child patient with a seizure disorder who takes 250 milligrams of THC a day with extraordinarily good results and no psycho-activity at all—I think "hallucinogenic" is probably an incorrect term—and others who are doing extremely well with two milligrams of THC and two milligrams of CBD. I think it depends on the individual patient: 250 milligrams of THC is a lot, but it works extremely well for this boy.

The Chair: Mr. Waisglass, I can give you 10 to 20 seconds to answer that question.

Dr. Barry Waisglass: I just want to reiterate that THC is not a hallucinogenic, and there is no absolute formula. What is interesting about cannabis is that very small doses can work. We know that the average amount, in data from Israel, the Netherlands, and Canada, is about one milligram, 1.5 milligrams, or 0.67 milligrams in the Dutch study. That's the average amount of dried cannabis per person per day, and yet veterans will often use three milligrams. There are people who use five or 10 milligrams of cannabis.

The individual variance is a very difficult thing, and nobody has ever been able to explain why this is the case. Tolerance is a bit of it. You know the word "tolerance" and what it means: If you get used to something or your system gets used to it, you sometimes need to have more of it.

The Chair: Thank you.

Mr. Casey, you have three minutes.

Mr. Sean Casey (Charlottetown, Lib.): Thank you, Mr. Chair.

I'm not a regular member of this committee. In fact, it's been about six years since I was a member. However, I'm quite interested in this discussion, particularly around how medical cannabis has succeeded in allowing patients to take themselves off some other drugs.

Dr. Waisglass, you started to answer a question and were cut off. I want to come back to it, because it's actually the exact opposite of the discussion we're having. It's on this whole idea of cannabis as a gateway drug. During debate in Parliament, we heard it described as such by no fewer than three members of Parliament—Mr. Gourde, Mr. Deltell and Mr. Dreeshen.

To Dr. Waisglass first, and then Dr. Shackelford, what does the literature say with respect to cannabis as a gateway drug? What has been your experience in that regard?

Dr. Barry Waisglass: Cannabis is not a gateway drug. Anyone who says that is spewing out a lot of nonsense. There isn't a shred of legitimate evidence on the planet to support that. It's just rhetoric left over from the old “drug war” time.

In fact, there is a good paper on that. It isn't at my fingertips right now—it's a pity I didn't have the questions in advance to prepare for that—but there is good evidence that it is not a gateway drug. We'll just leave it at that.

Dr. Alan Shackelford: That is absolutely the case. There is no scientific evidence whatsoever that it is a gateway. The gateway, actually, is the dealer who has something else in that armamentarium, that little bag he carries around, and who says, “By the way, why don't you try this?”

There is no scientific evidence whatsoever that cannabis use in any way induces a desire for, or a need for, advancing to any other drug.

Mr. Sean Casey: Thank you.

● (1715)

The Chair: Thank you.

Ms. Blaney.

Ms. Rachel Blaney: Just quickly, I'm a member of Parliament who represents a more rural and remote community. One of the challenges for the many veterans who come to our region is being able to access cannabis in the way they're hoping to.

Dr. Waisglass, with your multiple clinics across the country in the four provinces you named earlier, are you in any rural and remote communities? Do you have any information about the challenges those particular veterans face?

Dr. Barry Waisglass: That's a really good question about a really important subject. As you know, access to cannabis is all that's been on my mind for the five years I've been in this. I continue to be asked by countries all over the world about this and about how we can solve this problem.

We can't put clinics everywhere. The remote areas can't have clinics, but that doesn't mean they can't have health care. All over the planet we're using the audiovisual equipment that's available to us and very successfully managing to deliver health care to our north, to our indigenous communities where doctors can't get in, and to where nurse practitioners are scarce. This is how we are reaching those patients who can't go to a medical cannabis doctor in their community.

Ms. Rachel Blaney: Thank you.

That's all.

The Chair: We'll end with Mr. Bratina.

Mr. Bob Bratina: Thank you.

Dr. Shackelford, it's well documented that there is extensive drug use, especially from the Vietnam era, among soldiers in the field. Would a clinician be aware, let's say with someone suffering from PTSD, of previous drug use? Would you suspect that there would be any connection between the condition and the issues in the battlefield and taking all sorts of drugs, apparently, according to what I have read?

Dr. Alan Shackelford: In evaluating a new patient, it's always appropriate to find out about any history of any drug use, prescription or otherwise—

The Chair: I think we have bells.

Mr. Bob Bratina: Perhaps we could just finish this.

The Chair: I have to get unanimous consent, I believe, to keep going once the light flashes.

Do we have unanimous consent for one more minute?

Some hon. members: Agreed.

The Chair: Okay.

Please continue.

Dr. Alan Shackelford: Drug use in the field or otherwise was most likely situational, in most instances. I haven't seen too many Vietnam combat veterans who have continued to use narcotics, heroin or otherwise. It's unusual. I think once other treatments are available to them and they are using other treatments, any of that stops really quite quickly. That's certainly what I've been told. My experience is that people get off that stuff—

Mr. Bob Bratina: Very quickly, would the use of cannabis with PTSD be episodal, or would it be a regimen of daily use?

Dr. Alan Shackelford: It's a daily regimen. It's an established, consistent regimen with follow-up.

Mr. Bob Bratina: Thanks.

The Chair: Thank you.

That ends our testimony for today.

To both our witnesses, thank you again for coming today and for your expert testimony. Again, if you have any scientific evidence, you can send that to the analysts. If you want to elaborate in terms of any of the questions, you can also send that in a brief.

There is a motion to adjourn from Mr. Bratina.

(Motion agreed to)

The Chair: Thank you.

The meeting is adjourned.