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Chair

The Honourable Peter Kent

Standing Committee on National Defence

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● (0845)

[*English*]

The Chair (Hon. Peter Kent (Thornhill, CPC)): Good morning, colleagues. Pursuant to Standing Order 108(2) we will continue our study of the care of ill and injured Canadian Armed Forces members.

In our first hour we have three witnesses. With us are: Marc Fortin, the assistant deputy minister of science and technology with the Department of National Defence; Lieutenant-Colonel Roger Tremblay, project manager of personnel protection research with Defence Research and Development Canada; and Sanela Dursun, director of research personnel and family support with Defence Research an Development Canada .

As we transition between witnesses at the end of the first hour and in the interest of efficient use of time, we will consider Mr. Williamson's motion, a notice that you have before you.

In our second hour we will hear from, as an individual, Harvey Moldofsky, professor emeritus with the department of psychiatry, faculty of medicine, the Institute of Medical Science, the University of Toronto.

Mr. Fortin, if you please, you have 10 minutes for your opening remarks, sir.

Dr. Marc Fortin (Assistant Deputy Minister, Science and Technology, Department of National Defence): Mr. Chair, thank you for the invitation to appear in front of the committee to contribute to this important study, the study of the care of ill and injured in the military.

If you'll allow, Mr. Chair, I'll switch between French and English.

[*Translation*]

As Assistant Deputy Minister of Science and Technology, I am responsible for providing timely and relevant advice on science and technology to the Department of National Defence and the Canadian Armed Forces. In parallel, I also serve as the Chief Executive Officer of Defence Research and Development Canada (DRDC), and am responsible for managing DRDC research centres across the country.

Defence Research and Development Canada provides DND and the Canadian Armed Forces the knowledge and technological advantage needed to defend and protect Canada's interests at home and abroad. Our purpose is to provide the best advice, best knowledge and the best solutions available.

[*English*]

Dr. Marc Fortin: Defence Research and Development Canada, DRDC, leverages other organizations' expertise, knowledge, and resources so that collaborations with partners create a more networked research environment. DRDC anticipates S and T and defence security challenges, and acts as the catalyst for an innovative defence and security research sector in Canada.

In short, our purpose is to provide DND and the Canadian Armed Forces the best advice, the best knowledge, and the best solutions possible. Our staff are absolutely unique in their knowledge of the business of defence, and they have first-hand knowledge of theatres of operation and of the challenges faced by the Canadian Armed Forces.

When the war in Afghanistan became the primary effort of the Canadian Armed Forces, DRDC refocussed its program of work to help achieve operational objectives overseas and to provide science and technology expertise that would save lives. More than 25 DRDC personnel, and I might add civilians, have been deployed in Afghanistan to provide science and technology support in theatre. Some of our staff have been decorated for their service in support of Canadian Armed Forces missions. Our experience in theatres of operations has informed our work in a range of areas, including research on operational injuries.

I'd like, Mr. Chair, to briefly give a couple of examples of scientific work that has been accomplished or initiated since Afghanistan, areas where DRDC and the scientific community have contributed knowledge and solutions.

In Afghanistan we saw increased use of improvised explosive devices, IEDs, which resulted in the increase of the incidence of blast-induced injuries and associated trauma. DRDC has developed an integrated blast injury research program, which delivers operationally relevant medical information with the intent to deepen DND's and the Department of Veterans Affairs' understanding of this type of trauma. That knowledge is important for the development of diagnostics and treatments, and to support informed decision-making.

We have developed combat incident analysis expertise, which is a unique evidence-based capability for enhancing soldier survivability and minimizing life-changing injuries. These developments have had real impact and informed vehicle upgrades and the fielding of new protective systems.

We're also using state-of-the-art technologies aimed at understanding mild traumatic brain injuries that will eventually lead to the development of better diagnostics, and perhaps more effective treatment.

● (0850)

[*Translation*]

We also understand that when our personnel return home from overseas, they face many challenges. As such, DRDC works to identify the positive and negative aspects of post-deployment reintegration experienced by Canadian Armed Forces members returning from Afghanistan. The post-deployment reintegration scale that our staff has developed aims to inform the work of the Canadian Armed Forces as they help our men and women in uniform adjust to work and family life when they return home.

Much of the work we do is performed in collaboration with others. The nature and complexity of the challenges members of the Canadian Armed Forces are faced with in theatre of operations, or returning from theatre, are such that we have developed new ways of accessing knowledge and of collaborating with other organizations.

[*English*]

Domestically, we work with partners across the department, including the chief of military personnel and the surgeon general. We work across government, including Veterans Affairs Canada, and across Canada, including universities and various institutes. For example, DRDC was instrumental in the creation of the Canadian Institute for Military and Veteran Health Research, also known as CIMVHR, which I believe has appeared in front of this committee.

CIMVHR is a consortium of 26 universities across Canada. We can thus tap into the tremendous knowledge and expertise that is spread across our universities in Canada, and leverage their knowledge base. DRDC also initiated last year a collaboration with the Canadian Institutes of Health Research. CIHR is the largest funding organization for medical research in Canada. We have worked with CIHR to provide funding that will allow Canadian scientists to bring their talent and expertise to focus on military health problems.

At the international level, DRDC works with NATO member countries that have faced similar challenges, either in Afghanistan or elsewhere in the world. DRDC has many scientists who are leading groups and panels in the Five Eyes science and technology community.

One example of our work with our allies is medical countermeasures, medical measures to protect military members from harm in terms of chemical toxins, bacteriological threats. Canada has played a leading role in forming the Medical Countermeasures Consortium with the U.S., Australia, and the U.K., to optimize operational performance in health protection.

[*Translation*]

Through the advancement of medical knowledge, monitoring, and detection capabilities and treatments against chemical, biological, and radiological threats, the Canadian Armed Forces have greatly improved protective, diagnostic and therapeutic capabilities.

In closing, I would like to say that I am proud of the accomplishments of the dedicated staff in my organization and at DRDC. We will continue to work with the Canadian Armed Forces to provide them with the unique, essential and strategic science and technology expertise that has, and will continue to, save lives.

[*English*]

I thank you for inviting me. My colleagues and I will be happy to answer questions.

The Chair: Thank you, Dr. Fortin.

We'll begin our opening round of questions with Mr. Norlock, please.

Mr. Rick Norlock (Northumberland—Quinte West, CPC): Thank you very much, Mr. Chair, and through you to the witnesses, thank you for appearing today.

My first questions will go to Ms. Dursun.

At the base in my area, through the Minister of National Defence, we've really increased the functioning of the military resource family centre.

Could you talk about the programs available to serving personnel members, in particular to their spouses and families? It's kind of hard to expect top performance from somebody who has issues at home. For instance, they may require their spouse to work to supplement the family income, and then child care becomes an issue. Perhaps they just transferred to a base, and how do they make new friends? For teenage kids, we know there's an extra bit of pressure on them with regard to forming friends at a new school.

Can you talk a bit about your work and what is provided to our serving men and women, in particular to their spouses and family?

● (0855)

Dr. Marc Fortin: If I may, Mr. Chair, I'd like to reposition the role of DRDC, Defence Research and Development Canada.

DRDC is a research organization. We perform research in support of the requirements of the surgeon general and chief of military personnel of DND. Our role is to provide the evidence base, not to deliver programs per se. The delivery of programs is coordinated and led by the chief of military personnel and surgeon general, but certainly our scientists are there to support the CMP, the chief of military personnel, who I believe will be here next week, if I'm not mistaken.

I'll turn to Dr. Dursun to add to my answer.

Dr. Sanela Dursun (Director, Research Personnel and Family Support, Defence Research and Development Canada): I can talk about the research we do with military families and how that research supports the programs and services that are delivered out of military family resource centres.

We do have a comprehensive family research program in DRDC. We do surveys of military spouses, pan-CF large ones, where we survey usually 9,000 military spouses. We basically analyze the data and provide that information to the director of military family resource centres, and that informs the programs and policies. Sometimes there are differences by location in terms of what we provide to certain military family resource centres.

Every three years, for example, we have a survey of military spouses. Actually, we just completed our latest survey of military spouses; we just closed the administration of it.

Mr. Rick Norlock: Thank you very much.

It says here that Dursun "has applied her findings in her work as a researcher for the Department of National Defence. As part of her job, she advises military officials on how to improve the quality of life for service members and their families."

What advice have you given military officials on how to improve the service?

Dr. Sanela Dursun: As a result of our research, once we compile the results, we basically go back and say, okay, these are the priority issues.

I'll give you an example. In the last survey of military spouses, we looked at the key services, the most difficult to establish once the families moved across the country. Using that information, we provided to the chief of military personnel and the director of military family services information on where the priorities are and how they can enhance the programs to address those gaps.

Mr. Rick Norlock: How has that worked?

Dr. Sanela Dursun: Absolutely, they've used the information that we...and this is an ongoing program of research. I'm familiar with research over the past 10 years. Over the past 10 years we've provided that information.

I personally had an opportunity to present at the highest level, to the Armed Forces Council, on military family research and the importance of families in the operational effectiveness of the Canadian Forces.

Absolutely, the recommendations and the gaps identified have been appreciated and have informed the decision-making at the highest levels in the military.

Mr. Rick Norlock: Thank you very much.

With regard to one of the most stressful and most common operational stress injuries, I'm referring in particular to PTSD, have you done any studies surrounding that and how families can best cope with that, and help their family member who suffers from PTSD?

Have you done these studies? Have you made recommendations, and if so, have those recommendations begun to be implemented?

● (0900)

Dr. Marc Fortin: If I may, Mr. Chair, we provide the evidence base for decisions to be made by the persons responsible, in this case the surgeon general and chief of military personnel. We do not develop policy, but we provide the evidence base that is then used—

Mr. Rick Norlock: I understand what you're saying. You do the research and provide the evidence base. That's good, and that's needed. You have to do that first, but has the rubber hit the road? In other words, have there been improvements as a result of your service in the assistance given to families? That's basically my question. I know that you don't do it, but you must be aware of whether it's being done or not.

Dr. Marc Fortin: Right. We are a provider of knowledge, not a provider of services, and the chief of military personnel—

Mr. Rick Norlock: I'm aware of that, sir. I'm asking you, to your knowledge, have some of your recommendations been implemented?

Dr. Marc Fortin: The chief of military personnel will be able to answer that next week.

Mr. Rick Norlock: Thank you very much. I've done my questioning.

The Chair: Thank you, Mr. Norlock.

Mr. Christopherson.

Mr. David Christopherson (Hamilton Centre, NDP): Thank you very much, Mr. Chair.

First off, I see that things have changed a little bit since I was last here as the critic. I welcome you in your new role, and wish you all the best. I see my friend Mr. Bezan has been promoted, and I wish you all the best in your new role.

Thank you so much for your presentation. I noted that you focused a lot on the blast-induced injuries. We've always had that, but we have a deadly new dimension to it in our time.

You mentioned that you've developed an integrated blast injury research program that delivers operationally relevant medical information, with the intent of deepening DND's and Veterans Affairs' understanding of this type of trauma. Could you expand on that for us and give me a better sense of what that program is and how it works?

Dr. Marc Fortin: The DRDC has developed unique research facilities to replicate the effect of blasts at different levels.

In the first days of Afghanistan, when everyone realized that the IEDs, the improvised explosive devices, were creating more damage than we were hoping they would create, we reallocated our workforce, reshaped our workforce, to focus on the problem of, number one, vehicle protection: can we improve the armour on those vehicles to reduce on the outside shell the damage created by IEDs?

We've also focused a good number of people on the inside of the vehicle, on the harnesses, the seats, the suspension of those seats. This was also to reduce the impact of IEDs on vehicles, thereby reducing injuries to the military members.

We've worked as well on personal protection equipment, helmets, pelvic protection, again with a view to reducing injuries to begin with.

We've also worked in Suffield at a facility where we can replicate some of the blasts, the effects of blasts. We're also looking all the way down to the cellular level and what happens when organisms and cells are exposed to blasts. We're trying to understand the basic physiological effects of a blast wave on cells, trying to understand the origins of the trauma that we see in our military members who have been exposed to blasts.

We are also working with academic organizations to better understand the linkages between blast injuries and PTSD, mental health issues. We're looking for markers for better diagnostics to begin with. If we can diagnose early the effects of blasts, we can perhaps better treat or prevent the development of deeper symptoms in members who have been affected. We're looking at, and I will brag a little bit here, cutting-edge tools to detect early signs of trauma. We're using genomic tools, looking at DNA and metabolites in cells, to see if we can identify early signs of problems developing.

I mentioned in my opening remarks the work we do with CIHR, the Canadian Institutes of Health Research. The CIHR is the largest organization that funds medical research in Canada. We're leveraging the investments made by the Canadian government through CIHR across all universities to bring the best people we can possibly find in Canada to work on military problems like these.

We're also working with NATO and what we call TTCP, The Technical Cooperation Program. The TTCP is a community made up of the U.S., U.K., Australia, New Zealand, and Canada. All are facing the same issues we are facing, or very similar issues. The U.S. investment is much larger than any of the other four partners in that consortium. We're leveraging a huge investment made in the U.S. We contribute in niche areas. We have access to knowledge that would be impossible to recreate in Canada, because of the size of the investment.

● (0905)

Mr. David Christopherson: That's actually a perfect segue to my next question.

I am impressed with the number of partnerships you're engaging in, simply because all of our partners are facing the same dilemmas, the same challenges, that we are.

Do you actually coordinate all these things, or does each nation independently look after what they deem to be their priorities and then you see if there are overlaps and synergies? Is it from the conceptual point onward looked at as, “You have expertise in this area, so you focus there. We'll take care of this piece of it and we'll bring all the pieces back”?

Which approach is it? Is it something different from that? Could you tell me how that partnership works in terms of the planning and coordination, to maximize the synergy that can come from the independent work that's being done?

Dr. Marc Fortin: It's a little bit of all of that.

Let me explain how we are focusing our investments here in Canada. We work with the surgeon general and the CMP, the chief of military personnel, to understand the requirements on their side. They are the providers of services and they are the ones who face the problems that our military members experience. We work with the surgeon general and the CMP to identify the requirements they have, as they are the service providers, and we form a plan of work on our side.

We then work in international bodies to see who's doing what. We do coordinate and not duplicate what's done elsewhere. Given the complexity of the problems, we cannot afford to duplicate what's being done elsewhere. There are enough issues and challenges that we need to, I wouldn't say divide up the pie, but we need to be coordinated across nations.

The Chair: Thank you, Dr. Fortin.

Mr. Allen.

Mr. Mike Allen (Tobique—Mactaquac, CPC): Thank you very much, Mr. Chair.

Thank you to our witnesses for being here today.

I have a couple of questions, and I'd like to start out at a fairly high level.

Mr. Fortin, you indicated that you have 25 DRDC personnel who were deployed in Afghanistan. Some were decorated, and you said there were civilians.

Can you tell me the profile of those 25 staff in terms of their skills and competencies?

Dr. Marc Fortin: There is a very broad set of skills and competencies. Again, we work with the Chief of the Defence Staff, the CDS, to understand the requirements in the theatre of operation. There are health issues, but of course there is a much broader set of issues in terms of operations.

For example, General Beare, when he was in Afghanistan, needed support from the science and technology community to help stand up the training programs for the local forces. I don't know if General Beare would appreciate my quoting him, but he said something like, the mission of setting up the training programs for the local forces would not have been possible without our scientists. In this case, the scientists had expertise in operational research, how to design a training program and make all the parts fit. They were looking at a very high throughput of trainees on the ground there.

We also send scientists who, I would say, are more technologically focused. They are looking at new technologies with new sensors to detect new threats. We have also sent scientists who are experts in counter-IED measures, ways to protect vehicles and personnel from explosive devices, detecting them early.

It's a very broad range of expertise, again, that we're called upon to send by the CDS and the deputy minister.

● (0910)

Mr. Mike Allen: Are the folks who go there involved in assessment of PTSD locally while the forces are on their mission?

Dr. Marc Fortin: One of the things we've done is that we've set up a comprehensive program to analyze vehicle damage from IEDs, and then to analyze the casualties. It's identifying the weaknesses, if there are any, in our vehicles, to be able to better protect the vehicles and therefore prevent injuries.

We have a comprehensive database of damage to vehicles, with meta information. We also have a comprehensive database of personnel injuries for us to better understand where we could improve protection, either through the vehicle or personal armour.

Mr. Mike Allen: Okay, let me put this a different way. You do this research and presumably you give this information to the defence folks to deploy in the field. For example, when these folks come back, anything you're doing with respect to emotional and PTSD effects, you inform that. According to Mr. Norlock's question it was up to defence, so we'll find out next week how they use that research.

Can you tell me what the loop back is from the defence folks in the field? It seems to me it would be very good if we were proactive on the front end of this as well. We have to do a good job in treating our folks who come back, because these are ill and injured and we want to treat the PTSD impacts. However, it would also seem to me that should inform our research on how we educate our forces and their families before they're even deployed.

Can you tell me how that feedback loop comes back from the field to inform your research so we better prepare our soldiers when they go?

Dr. Marc Fortin: Thank you for the clarification.

Yes, indeed we do research on...we do that loop back and look at factors of resiliency in the military. We do surveys as to what factors contribute to more resilient members from a mental health perspective. I'll let Dr. Dursun expand a little on this.

Dr. Sanela Dursun: Thank you for the question.

Indeed we have a comprehensive research program that looks at the risk factors for PTSD and other operational stress injuries. The loop back you're asking about has a number of tools. We do have a tool to survey people while they are in the theatre. It's called a human dimension of operations. We get some information while we are there on how well they are doing. We also have different kinds of linkages of studies, for example, the recruit health questionnaire. When we first recruit them and as they progress through their career, including during deployment, we look at personality dimensions, for example, that are possible risk factors under stress in the theatre that might trigger or have a higher likelihood of PTSD.

In addition to that, as Dr. Fortin mentioned, our research is client-based. The providers of the services come back to us and say they would like research on XYZ. For any gap they identify, we have an annual research cycle that lets an organization come back and say they need to understand exactly how this works. For us, in a way, it's feedback on the gaps and what else we can try to understand and study.

● (0915)

Mr. Mike Allen: Can you also give me an example of some of what the Canadian Institutes of Health Research is doing? I presume they would partner with you on some of these types of things.

The Chair: You'll have to be very brief.

Dr. Marc Fortin: The Canadian Institutes of Health Research is a new partnership that we started last year. We ran a pilot last year. We plan to expand that partnership this year and in coming years.

One of the things they are doing, for example, is the genomics work on detection of tools for early diagnosis.

The Chair: Thank you, Mr. Allen.

Ms. Duncan, please, it's your turn.

Ms. Kirsty Duncan (Etobicoke North, Lib.): Thank you, Mr. Chair, and thank you to the witnesses. I appreciate hearing your testimony.

I'm looking for a yes or no on this question. As DRDC reduces its projects, have any studies related to the care of ill and injured Canadian Armed Forces been cancelled?

Dr. Marc Fortin: Yes or no. We're in the middle of planning for 2014-15, so the work plans have not been crystallized yet for April 1, 2014. So far, we have not applied reductions to the unit called military personnel research and analysis; we have not reduced personnel in that unit.

Ms. Kirsty Duncan: Dr. Fortin, to be clear, have we lost any projects to date relating to the care of ill and injured Canadian Armed Forces?

Dr. Marc Fortin: To my knowledge, we have not lost any projects.

As Dr. Dursun mentioned, projects are reviewed every year as a normal cycle of adjusting our work plans to meet the requirements of the surgeon general and the CMP.

Ms. Kirsty Duncan: I understand that.

Dr. Marc Fortin: There's always a natural evolution of programs.

Ms. Kirsty Duncan: But so far none of them have been lost.

I'm going to ask a second question. As DRDC reduces its projects, are there any studies related to the care of ill and injured Canadian Armed Forces members that are expected to be cancelled?

Dr. Marc Fortin: To my knowledge, to this point, there are no studies expected to be cancelled because of a reduction.

Ms. Kirsty Duncan: Thank you so much.

In his testimony, Colonel Homer Tien, Canadian Armed Forces trauma surgeon and military trauma research chair at Sunnybrook, noted that one of Canada's research priorities is MTBI, mild traumatic brain injury, including chronic pain issues and rehabilitation. What are the resources that DRDC is directly funding for MTBI in terms of personnel and funding ?

Dr. Marc Fortin: The issue of MTBI, mild traumatic brain injury, is actually part of the new work we are doing with the Canadian Institutes of Health Research.

Your question is very interesting, because it makes the assessment of exactly how many resources are allocated a little bit more challenging. We fund CIHR, which in turn provides funding to university scientists across the country to focus in part on MTBIs, mild traumatic brain injuries. The salaries of university scientists are paid by Canadian universities, of course, so it's difficult to compute the contribution of universities to that effort.

Ms. Kirsty Duncan: No, and I understand that. Could you tell me what DRDC is contributing and what CIHR is contributing in terms of personnel and resources?

Dr. Marc Fortin: That's a more detailed question than I can answer today, but I'd be happy to provide numbers.

Ms. Kirsty Duncan: Could you table that?

Dr. Marc Fortin: I'd be happy to provide that information to the committee.

Ms. Kirsty Duncan: Very good. Thank you.

How many projects are looking at MTBI?

Dr. Marc Fortin: Again, we'd be happy to provide that information to the committee. I don't have a count of the number of projects.

Ms. Kirsty Duncan: When that's provided, can we get a detailed accounting of the projects and what they're doing?

Dr. Marc Fortin: It will be our pleasure.

Ms. Kirsty Duncan: Can you tell me if DRDC is exploring the links between, say, MTBI, PTSD, and dementia?

Dr. Marc Fortin: In fact, to put the last couple of questions in context, MTBI and PTSD are some of the elements of a much broader set of mental health issues in the military. They're not negligible, but they're a small set of a broader range of mental health issues. We make a fairly large investment. We can measure our investment more broadly in the health sector in the military personnel research and analysis sector. Again, we'd be happy to provide that information.

● (0920)

Ms. Kirsty Duncan: Okay, so you'll table that with the committee then.

One of the other things Colonel Tien indicated was that the focus of the Canadian Forces Health Services Group was acute trauma. Now that Canada's combat role has come to an end, he expected that this focus would shift to dealing with the aftermath of war, largely around mental health issues. Is this shift being reflected at DRDC?

Dr. Marc Fortin: Absolutely. I mentioned earlier that on an annual basis, we review our program of work. We review that program of work with all level one commanders, the surgeon general, the chief of military personnel, and of course the environments, army, air force, navy, CJOC, and so on and so forth.

Ms. Kirsty Duncan: So that's happening. Can I pick up on that?

Dr. Marc Fortin: That is on an ongoing basis.

In the post-combat mission, as the issues on what we call the client side, which is the military side of the house as well as DND, have shifted, we've shifted our research program accordingly.

Ms. Kirsty Duncan: Can I pick up on that?

Can you actually demonstrate what that shift was? What was being funded in terms of personnel and finance when it was trauma, and now what is the focus? Can you demonstrate that?

Dr. Marc Fortin: We can certainly demonstrate the evolution of the research program, the plan of work for DRDC again adjusted on an annual basis. We have to understand we're dealing with research. Research, despite all best efforts, all best expertise, sometimes will take us in a direction where perhaps the answer doesn't lie, we realize, and we have to retreat and refocus.

Ms. Kirsty Duncan: That's how research works.

Dr. Marc Fortin: That's the nature of research and development work.

Ms. Kirsty Duncan: Could you table with the committee what was personnel and finance under acute trauma and is now personnel and finance regarding in the aftermath of the war?

Dr. Marc Fortin: We'd be happy to provide the information.

The Chair: Time has expired. Thank you very much, Ms. Duncan.

Mr. Williamson, go ahead please.

Mr. John Williamson (New Brunswick Southwest, CPC): Thank you, Chair.

I'm going to split my time with Mr. Opitz and allow him to begin this session. The questioning will come back to me.

Mr. Ted Opitz (Etobicoke Centre, CPC): Thanks, Mr. Williamson.

Thank you, Mr. Fortin. I'm delighted you're here today. That was a great overview of what DRDC does.

I'm interested in some of the specific research you do on PTSD, in particular in the Toronto area. Some of that research has to do with quantifying salivary hormones; it has to do with melatonin devices. It's developing a device that is able to monitor the hormones and the endocrines in soldiers and identify those who, because of hormonal imbalances, would be most susceptible to PTSD prior to going into combat. It would be able to determine those sorts of balances between—and I'm not a scientist—the hypothalamic-pituitary-adrenal axis in the brain that is able to regulate the production of that hormone, which would then mitigate the effects of PTSD. Then we would be able to treat these soldiers before they developed these acute symptoms.

As well, there's also research going on in melatonin rhythms, including with sleep issues, on which we're going to hear from Dr. Moldofsky later.

Are you, or maybe Dr. Tremblay, able to comment on any of that?

Dr. Marc Fortin: I'll start, and I'll be happy to bring my colleagues into that discussion.

No one around the world has found the magic solution for PTSD. It remains a challenging problem that is faced by the surgeons general of various countries. There are many lines of investigation around the world, some more specifically pursued by Canada, others pursued by other countries, and others in collaboration.

As I mentioned earlier, we're looking at any kind of indicator that will allow us to identify predisposition to trauma through stress leading to trauma. We're looking for any kind of indicators that will allow us to better diagnose and treat. The studies you are referring to are one line of investigation. That is not completed; it's still a line of investigation.

● (0925)

Mr. Ted Opitz: I have to stop you there, sir, because I don't want to take all of Mr. Williamson's time. Thank you for that. That is an important line that is being developed now, and definitely, I'd like to hear from some of your personnel in the near future on the specifics of that research.

The Chair: You have two and a half minutes.

Mr. John Williamson: Thank you very much.

It seems to me that, as we exit Afghanistan, there's going to be more and more focus on PTSD and the impact on families, but on our readiness as well. What are we doing in terms of amplifying that? Perhaps this is something that is, I don't want to say it's catching us off guard, but it seems to be in the news more and more. Is this something we can examine in a way that's going to help families? That's a bit of a simplistic way of putting it. What is being done here in conjunction with our allies, the Americans in particular, who might have more experience in this area, to ensure that resources are being adequately deployed to deal with this issue?

Dr. Marc Fortin: I'll ask Dr. Dursun to expand on this.

Dr. Sanela Dursun: Thank you, sir, for the question.

As you can appreciate, it certainly is a complex issue, mental health issues, including PTSD. It is a relatively new disease and the comorbidity rates are really high, which means that lots of people who are diagnosed with PTSD are all suffering from other mental health illnesses.

In DRDC, this also speaks to how our priorities have shifted since the changes in the priorities of the government and the organization in terms of understanding the impact of the operations for the ill and injured, what kind of research we do for the ill and injured.

We established recently a research program to understand the programs. We cannot talk about the services that we provide to the ill and injured, but we are doing the research to assess those programs and how well those programs are working in helping the ill and injured to recover and rehabilitate.

One example of that is we recently completed an assessment of the return to work program. It is one of those programs under the joint personnel support unit. It is not only limited to mental health issues, but most people there do suffer from mental health issues, including PTSD. We interviewed over 100 Canadian Forces personnel in that program from across the country, including the coordinators in that program, and absolutely, the findings that we fed back to the program providers were very valuable.

The Chair: Thank you, Dr. Dursun.

Monsieur Brahmi.

[*Translation*]

Mr. Tarik Brahmi (Saint-Jean, NDP): Thank you, Mr. Chair.

Mr. Fortin, we are asking you a lot of questions about post-traumatic stress, but I don't think that is your area of expertise. My understanding is that your primary mandate is to do research on technology.

Dr. Marc Fortin: Our mandate is to provide the Canadian Armed Forces with the best opinions, knowledge and technologies so that they can deal with all the challenges that come their way. That includes both mental health and technology, such as armoured vehicles and sensor technologies on the military side. We live in an era where technological needs are greater than ever. Platforms are more technologically complex than they have ever been. Even a relatively small calibre weapon is much more complex than it was in World War II.

Mr. Tarik Brahmi: Okay.

What percentage of your research does post-traumatic stress disorder represent?

Dr. Marc Fortin: The exact PTSD percentages in terms of personnel and investment will be included in the information we are going to send to the committee.

● (0930)

Mr. Tarik Brahmi: Very well.

I would like to talk more about the technology transfer.

I thought your mandate was centred on basic research first and on applied research second. I am guessing that you do not have the required budget to commercialize or industrialize the solutions that you find. So you have no choice but to participate in technology transfer.

To stay with the issue the committee is studying, the care of ill and injured Canadian Armed Forces members, let me ask you if you have developed or discovered technologies that you subsequently transferred to Canadian companies capable of producing systems designed to save lives and prevent the injuries of soldiers deployed to battlefields.

Dr. Marc Fortin: Mr. Chair, that is a great question.

You are absolutely right. Defence Research and Development Canada is a research, not a commercialization organization.

New technologies and inventions are commercialized through Canadian and sometimes foreign private industry. We are transferring technologies to those companies to enable them to provide equipment to the Canadian Armed Forces and to the Department of National Defence.

In health care, we are currently working on developing vaccines and antidotes for chemical and bacteriological agents. As you know, there are serious concerns that those types of weapons might exist in Syria, for instance. These are complex challenges and it is not easy to find solutions.

Canada is one of the leaders, if not the leader, in shaping the Medical Countermeasures Initiative, which has prompted four countries to work together. We have called upon the Surgeon General of the United States, the health care services of the various armed forces in the four countries and the public health care services to work together on identifying and creating antidotes and vaccines to protect our Canadian Armed Forces against viruses or toxins used as chemical weapons abroad.

Clearly, those same viruses can also spread to civilians, so we are working with public health organizations to collectively develop those antidotes and vaccines. We do not commercialize the vaccines.

Mr. Tarik Brahmi: I'm sorry to interrupt you, but I only have a few seconds left. Is this trend likely to increase? If not, do you think it will diminish in the future in relation to the budgets you receive? That is my last question.

Dr. Marc Fortin: Which increase are you talking about?

Mr. Tarik Brahmi: I am talking about the increase in the budgets that you plan to invest in future technology transfers.

Dr. Marc Fortin: The budgets will sometimes be allocated to technology transfers. There is no specific budget for the transfer itself. It depends on the case. When an opportunity arises, we are going to support the technology transfer.

The Chair: Thank you, Mr. Fortin and Mr. Brahmi.

Mr. Bezan, the floor is yours.

[*English*]

Mr. James Bezan (Selkirk—Interlake, CPC): Thank you, Mr. Chair, and welcome to our witnesses. It's good to have DRDC here.

In our last study on readiness we actually visited DRDC in Downsview. A number of us on committee got to see some of the work that you're doing first-hand, both from the standpoint on equipment and on survivability of our troops.

We had Major Ray Wiss here at committee back in the spring. A lot of us are familiar with him because of his books, *FOB Doc* and *Line in the Sand*. He was one of the first to use ultrasound equipment in theatre at a forward operating base to help improve survivability. From my understanding when we toured Downsview, there is research happening on trying to bring in more diagnostic equipment even at the level where, instead of just having it at an FOB, a medic would be able to carry it into theatre and would be able to enhance the survivability of those who are wounded in action.

Now I know, Colonel Tremblay, that your areas of expertise as the director of science and technology personnel is in medical interventions, medical countermeasures, combat casuality management, diagnostic technologies, and casualty care.

I know that often we get tied up talking about PTSD and operational stress injuries. Part of the study, though, was also looking at how we deal with traumatic injuries.

Can you talk about the research that you're doing that may have also occurred in theatre? Can you also talk about what we're doing here in Canada to ensure that our soldiers who are wounded in action are getting the best possible care because of research and breakthroughs provided through DRDC?

● (0935)

Dr. Marc Fortin: Thank you for the question.

You have visited Toronto, so I speculate that you have seen first-hand the ultrasound devices that are being developed there. We're trying to adapt the technology to work in the theatre of operation, to be able to enhance the 3-D ultrasound diagnostic tools that are available to medics on site. That technology is still in development. This is work that we continue to do to make that technology portable, rugged enough to be able to deploy, and reliable enough, of course, to deploy in theatre.

Another example that comes from Toronto is the formulation of a new intravenous saline treatment that is administered. Especially when a soldier has experienced loss of blood and loss of fluids, we need to inject saline, an IV as we call it. We have modified the saline package to be able to make it more portable, and that solution is now deployed in theatre. It is a technology that was developed through DRDC and is now deployed in theatre.

As you asked about the training that we provide, we're also working to support deployment of our troops by training them to deal with live agents, with toxins and chemical and bacterial warfare agents, again, a concern in the context of Syria. This is an example of how we adjust our research program to make sure that our men and women in uniform are best equipped to deal with whatever threat they're going to be faced with. In Suffield we do work on protection against chemical and biological warfare agents. The military can be exposed to conditions simulating those agents and we train them to properly deal with those things.

Lieutenant-Colonel Tremblay, do you want to add anything?

LCol Roger Tremblay (Project Manager, Personnel Protection Research, Defence Research and Development Canada): Well, yes, maybe I can give a couple more examples.

We are doing research with stem cells in Suffield with the hope that we can improve the treatment of burn injuries.

As part of the blast injury program, we're looking at crush injuries that can happen as a result of being caught under a vehicle for a long period of time. These are happening more and more in theatre. This is another example of what we do that has a direct impact in these operations that we've recently undertaken.

The Chair: Thank you, Colonel Tremblay.

We're down to our final five-minute segment of questions in this hour.

[*Translation*]

Mr. Larose, the floor is yours.

Mr. Jean-François Larose (Repentigny, NDP): Thank you, Mr. Chair.

[*English*]

You mentioned IEDs and the impact they have on vehicles.

[*Translation*]

Mr. Fortin, you mentioned the study dealing with the troops. In addition to the physical injuries caused by an armoured vehicle going over an improvised explosive device (IED), can you tell us a little about the studies you have done on the psychological impact?

Dr. Marc Fortin: The studies on the psychological impact try to cover all the factors that increase the stress levels experienced by soldiers. An explosion under a vehicle is a source of stress, in a larger sense. Of course, just being in a theatre of operations also causes stress.

● (0940)

Mr. Jean-François Larose: It is basically a detection issue. One of the problems with IEDs is that you never know where they are.

Dr. Marc Fortin: The constant pressure and uncertainty or even constant stress can contribute to potential mental health problems.

We have worked very hard, with our allies in particular, to successfully detect and diffuse more IEDs in theatres of operations. Once again, that problem is very difficult to solve. None of the allied countries have managed to solve this problem once and for all.

Mr. Jean-François Larose: I have another question for you.

The theatre of operations in Afghanistan is being dealt with. The same goes for Iraq. Are your reports on IEDs for those two countries only? For instance, did the French have any in Mali? Are there any reports showing that, once a lethal method proves to work, it is used elsewhere?

Dr. Marc Fortin: We clearly work with intelligence services to identify new threats and new weapons deployed in various parts of the world. The co-operation between the intelligence services of the five partners is extremely positive. They share the information so that we can develop solutions before our personnel is in a theatre of operations.

Mr. Jean-François Larose: So reports actually identify IEDs outside those two theatres of operations.

Dr. Marc Fortin: Yes. There are IEDs outside those theatres of operations and they remain one of the major threats to the deployment of personnel. According to our intelligence reports and the experts we are working with, this threat will be around for many more years.

Mr. Jean-François Larose: Even in a theatre of operations with the United Nations or elsewhere, the threat is still there.

Dr. Marc Fortin: Yes, it is very present and significant. That is why we are still working on it, even though we are no longer in a combat mission in Afghanistan.

Mr. Jean-François Larose: In terms of your research and development on reducing the impact on armoured vehicles, would you say that the impact on current vehicles has been completely eliminated with the changes you have made?

Dr. Marc Fortin: No country can claim that its vehicles are fully protected.

Mr. Jean-François Larose: Vehicles have still been developed. I am thinking of South Africa; they have developed armoured vehicles. We know that a V system reduces the impact significantly, which is not the case for Canada's vehicles.

Dr. Marc Fortin: In the first days of deployment in Afghanistan, DRDC has assigned almost 80 people to work on armour, known as underbelly armour.

Mr. Jean-François Larose: That's basically the V hull.

Dr. Marc Fortin: Let's talk about the V hull, which is designed to strengthen the most vulnerable spots. That is why we have a database on the damage done to vehicles. We want to understand which spots are the weakest and take steps to strengthen those vehicles.

Mr. Jean-François Larose: However, there is a limit with the first vehicles that were built. No one expected the IEDs.

Dr. Marc Fortin: That was a significant development in the war in Afghanistan, a major lesson for all the allies. DRDC provides advice on how to select the next generation of vehicles—

Mr. Jean-François Larose: That is urgent.

Dr. Marc Fortin: —that Canada will acquire.

[*English*]

The Chair: Thank you very much, Mr. Larose.

Thank you, Dr. Fortin and Dr. Dursun, and Colonel Tremblay, for your appearance before us this morning.

This concludes the first hour. We thank you again for your attendance.

Colleagues, rather than suspending, as our first-hour witnesses depart and our second-hour witnesses settle in at the table, we have a motion before us from Mr. Williamson. Mr. Williamson, could you speak to it, please.

Mr. John Williamson: Certainly, Mr. Chair. I sent this to the clerk a couple of days ago. I believe it's in order in respect of the time requirement. I'll read it for the benefit of the members. My motion is:

> That the Chair of the Standing Committee of National Defence, on behalf of the Committee, direct the Clerk to call officials from the Department of National Defence and the Canadian Armed Forces as witnesses to appear before the Committee to provide an update on Canada's contribution to humanitarian efforts in the Philippines, for one hour on December 10th, 2013.

(Motion agreed to)

● (0945)

The Chair: Thank you very much.

Dr. Moldofsky, please approach the table.

Colleagues, we are joined for this second hour by Harvey Moldofsky, professor emeritus, department of psychiatry, faculty of medicine, Institute of Medical Science, University of Toronto.

Thank you very much, sir, for responding on relatively short notice. I hope your cold has improved. I welcome you to give us your opening remarks.

Dr. Harvey Moldofsky (Professor Emeritus, Department of Psychiatry, Faculty of Medicine, Institute of Medical Science, University of Toronto, As an Individual): Thank you very much, Mr. Chairman.

I think we're all fortunate. I'm not going to last 10 minutes. You won't have to tolerate my laryngitis.

I'm grateful to Mr. Ted Opitz for initiating this effort, because this is a matter that is of concern, I can see, to everyone here. I'd like to answer a question that you raised, which is what support we have from the universities with regard to PTSD, TBI, that sort of thing.

In my case, over the past 20 to 30 years, it's been zero. I was obliged to leave the university at age 65, and instead of getting a medal, they call me an "emeritus", which means I can do all the same things but I don't have to attend committees.

Mr. David Christopherson: It's called the Senate.

Dr. Harvey Moldofsky: Please don't put me into that.

What I'm going to be talking about...and I was reflecting back on my notes, going back almost 10 years. When I heard at that time that the Canadian government was seriously considering going into Afghanistan, I put together a grant application suggesting that we look at predictors to PTSD and its symptoms. I've never received a response.

I went ahead with the encouragement and support of colleagues at DRDC and Don Richardson at the operational stress injury clinic. Over the past decade, they have referred patients to me and I'm not a typical psychiatrist. I'm not seeing crazy people, except families and relatives—

Mr. David Christopherson: Except today.

Dr. Harvey Moldofsky: —but I'm seeing people who suffer illnesses that no one understands. That's my specialty. I've been doing this for more than 40 years. I have ventured into areas that never existed and now are quite common. That's because I was interested in how the brain works and how the brain is connected to the physical as well as the mental health of people. It's not like I'm just taking a snapshot or asking a few questions; I actually look, see, and try to understand.

The work that I did showed that the key issue in our health is the operation of the brain, the sleeping and waking brain. The brain does not stop, awake or asleep. If we don't sleep properly, we become ill. If we deprive an animal of sleep, the animal dies. We haven't done it to people, and it never will be done. This has taken me into studying sleep-wake physiology, the operation of the immune and endocrine systems, and the relationship to illnesses that nobody understands but gives them a variety of names as though we do understand.

PTSD falls into that realm. We keep hearing that this is a mental health problem. No, it's a problem of the whole body. We were able to show that if you disrupt deep sleep, you can artificially induce physical symptoms, pain. In the people that I have been privileged to study in the military over more than a decade, 93% of them have pain in various parts of the body, but nobody even asks about it and no one seems to be trying to treat it.

They suffer from profound fatigue, but the focus is on the mental part of this. The way it's dealt with in the clinics is to give pills. I don't think that's the answer, because the pills, as the U.S. military and the British have found, are not working. In fact, the Americans have put in a request for applications for novel forms of treatment.

This is an area that I have been involved in. I have studied non-military people who had suffered motor vehicle accidents, industrial accidents. I've studied people who've been subject to torture. I've seen military people in other countries who have experienced torture. They all have sleep problems. In fact, a recent publication said this is the hallmark. If we don't tackle it and understand it, we're never going to get anywhere.

The work that I've done has shown that there is an alteration in the brainwave pattern over the night in these people. In people, not military, but people who have suffered from a condition called fibromyalgia, I have shown how very recently a novel medication not typically prescribed—it's available but under very tough circumstances—does improve deep sleep and magically their pain improves, their fatigue improves, and their mood improves. It's not a cure, but it's a way in. Based on the research I've done, we have shown that this is an area which we need to get into.

● (0950)

One of the fundamental problems is at an organizational level. Everybody is going to tell you that it's wonderful, we're doing the research, but then we start at looking at where they are doing it and what they are doing, and I'm not impressed.

There's a lack of coordination and integration in a key issue: early detection of what's called TBI and PTSD. It's not happening. I'm still seeing people from Rwanda and Bosnia. It tells you something. They don't appear within days or weeks; they're too ashamed. They appear later. They're not necessarily active; these are vets who are largely neglected and feel guilty and do not want to say anything.

Only when they get into trouble.... And this is something I've come up with, predictors to trouble. What are the areas of trouble? You know them; you've been reading about it in the press. Suicide is the most common cause of death in the U.S. military. We don't even know the prevalence in our Canadian vets. Why? It's very hard to even know the prevalence of suicide deaths among the active military.

Even more troublesome to me is that I found a predictor that just came out after my investigation into serial murders that were investigated by the FBI. I happened to have a self-rating test that was hidden in a larger test, where I looked at two areas, anger and hostility, and suspicion and paranoid thinking. Those with PTSD who are not responding, and this was after combat, have very high levels.

● (0955)

The Chair: Forgive me for interrupting, Dr. Moldofsky, but you have very effectively, very eloquently filled the 10 minutes for your opening remarks, and you have, I'm sure, provided members of the committee with some interesting areas of questioning.

We'll begin with Mr. Opitz, please.

Mr. Ted Opitz: Thank you, Mr. Chair.

Through you, I'm delighted that Dr. Moldofsky is here today, that he's been able to make it. I'm sorry you have such a bad cold, but I'm delighted that you fought through it to be here today.

This kind of research is clearly important to us. I saw the nodding heads of my colleagues. You've resonated on a few points, especially the predictors. We met with some of your colleagues at DRDC. This is something that interests me tremendously, in that if we can delve into these predictors, if we can use some of your research and their research in terms of.... You talked about the waking and sleeping brain, and the correlation between pain and some of those psychiatric disorders that we've all now come to understand through many of our soldiers who suffer through this.

Along with your colleagues, you're also doing some of that research based on the immune and endocrine systems of the body, for example, Dr. Paul is working on the melatonin levels to see if those could be regulated in the brain, which would assist with the production of restful, restorative sleep—not just sleep, as we discussed. You may want to delve into that. There are several forms of sleep, but only one really refreshes the body and the individual.

Doctor, if you could talk about some of the circadian rhythms, some of the chemical imbalances that might be regulated through production of a device that can measure hormones through saliva and other factors, that would be helpful.

Dr. Harvey Moldofsky: Thank you very much.

You've opened up a much larger window, and that is it was largely with the support of DCIEM and DRDC that I was privileged to get into this area in 1980. I was interested in precisely what is going on in the brain as it links to the immune system. At that time no one believed there was any linkage. We went ahead and showed that there was, and that there are hormones of the immune system that put us to sleep and wake us up. The reason we're all here today is that all these things are working automatically, and we don't have to think about them, but if we start to screw around with our sleep, they don't function.

The work that I pioneered in with colleagues in Toronto led me to work with the Canadian Space Agency and in turn with NASA and the Russian space agency because we became interested in long-term survival in the most adverse circumstances over a long period of time. We learned a lot and showed that disruption of sleep in the cosmonauts and astronauts was linked to hormones that would be associated with inflammation and infection. They didn't have it, but they were vulnerable.

Although I'm not doing that now because I'm emeritus, I've been focusing on the sleep-wake physiology aspects. I'm leaving it to my colleagues to come up with novel things, and I'm hopeful that we can collaborate.

● (1000)

Mr. Ted Opitz: Dr. Moldofsky, do you think that, as Mr. Fortin ahead of you said, there is no magic bullet for this at this point in time? I think that some of this research would be very helpful in being able to look ahead to pre-deployments, look at soldiers, do some of this testing on a hormonal basis, and be able to identify those individuals who are most susceptible to these chemical stresses within the body.

That would, I would suspect, lead to treatments. You can't do it during combat, but you can certainly do it pre-combat and then post-combat be able to begin to treat these individuals as quickly as possible for those symptoms and issues before this begins to manifest in a very negative way. Could you comment on that, sir?

Dr. Harvey Moldofsky: In 1994—I'm sorry, in 2004—that was my grant application—at that time, we had devices that would allow us to go into the field and study them before they went into combat, and to see them afterwards, and to look for precisely that.

Now I'm looking at them months or years later, and they're full of compounds and on every known medication that someone can throw at them. I don't think that's the way. I think we've got to teach early detection to physicians in the military. We have to go through a screening system and we've got to do something for them right away.

There is a lot of education that is involved in this. I think that before we venture into the practicalities of the kind of research that you have been hearing about, this is what we've got to do. We've got to know the numbers. We've got to know who these people are. Until we can properly identify them, we're cursed because this is going to go on for decades to come, and we don't know how many will survive.

I'm not just talking about the military people themselves; I'm talking about their families and their spouses. As my friends in England have shown, those with PTSD who come back from Iraq and Afghanistan show more dangerous behaviour, as identified by the police in England.

The Chair: Thank you, Dr. Moldofsky.

The seven minutes have expired.

Our second questioner is Mr. Christopherson.

Mr. David Christopherson: Thank you very much, Doctor.

I can't think of anything more important than talking about the lives of our military personnel, our fellow citizens. I think it struck us all....

I just want to be clear. There are two things. You said that the greatest cause of death in the armed forces is suicide. Did you mean that exactly the way it sounds, that in terms of all the reasons why armed forces personnel die, including in battle, suicide is the highest? Then, if I could link that sir, you mentioned that we don't have the stats. Can you tell me why you think we don't have those stats?

● (1005)

Dr. Harvey Moldofsky: That's what this committee should ask. In what I said, I'm quoting the U.S. military. I don't know about this country. What I have been fed is, “Oh, it's not much of a problem here.” I don't know what the proof is.

Mr. David Christopherson: Well, there's a start. We just lost three.

Dr. Harvey Moldofsky: That we've been told about.

Mr. David Christopherson: Can you expand on that, please?

Dr. Harvey Moldofsky: It's only what we've been told, and who's telling us? Do you know of someone you can go to and say, “Show me the work that you're doing to identify these people and how you are identifying them”?

Remember, this is shameful to families. They don't want to tell.

We should be tracking deaths of all vets.

Mr. David Christopherson: Do our allies? You just mentioned the U.S. Do our other allies do that, sir?

Dr. Harvey Moldofsky: I'm not privileged to that information, but they seem to be able to get a hold of that, and they're referring to their data.

Mr. David Christopherson: Certainly the impression is left, with me anyway, and correct me if I'm wrong, that part of your assertion is that the numbers aren't there because they wilfully don't want to know; because if they know the real issue and the real numbers, it's going to cost big money and big attention to do something about it. Is that a fair comment, sir, or am I being unfair to your comments?

Dr. Harvey Moldofsky: Thank you for that implication.

Mr. David Christopherson: In your opinion, sir, what would be the best thing that this committee could recommend? Specifically, if we could make one recommendation that you think could make a difference, what would that be?

Dr. Harvey Moldofsky: Find out what the prevalence of these problems is. Let's mark them and demand information from those responsible to give us the information about homicide, dangerous behaviour to spouses and families, and intent to self-harm and those who successfully complete it. Maybe then, once you have someone accountable for it, you'll know. Then you'll be able to make decisions.

We don't know what the difference is between TBI and PTSD. They're subjective. It's what someone comes and tells you. What I'm proposing is, look at the brain; look at what the brain is doing at a time when the person is unaware of their surroundings, when they're sleeping, because we'll see possible indicators of something going on. Compare what they're calling PTSD and TBI. That's what I want too, but I'm telling you, it's very difficult for me to get these people to come in, and I'm being fed only from one place. There are what, nine centres across the country—

Mr. David Christopherson: So far.

Dr. Harvey Moldofsky: —and I don't know how well they communicate with one another.

Mr. David Christopherson: Sir, it's been said that no war is really over until the last veteran passes. I was struck by that statement when you said that, in your opinion, we have personnel from the days of Rwanda and Bosnia who are still affected.

Can you expand on that and the commitment we have? After all the fighting is done and the flag waving and saluting is over, what are we left with as a country, vis-à-vis our fellow citizens, for the following decades?

Could you expand on that a bit, sir?

● (1010)

Dr. Harvey Moldofsky: My only experience has been the privilege of working at a veterans hospital. I graduated and I was doing a residence in internal medicine at Shaughnessy Hospital for veterans.

I've read the history of Sunnybrook Hospital, and these are people the establishment wants to push away. They occupy beds. “We need these beds for other people.” I'm not impressed.

I'm impressed with the quality of care once they're in there. There are devoted people in the hospitals who provide exemplary care, but it's not easy. A lot of these places are being closed down.

Mr. David Christopherson: Yes. They are closing them.

What are your thoughts on that? For the record, please say it, sir.

Dr. Harvey Moldofsky: For the record, we have to maintain them.

The Chair: Thank you, Dr. Moldofsky.

Mr. Norlock, please.

Mr. Rick Norlock: Thank you very much, Mr. Chair, and through you to the witnesses, thank you for attending today.

Sir, are you familiar with Dr. Anne Germaine's work?

Dr. Harvey Moldofsky: Yes.

Mr. Rick Norlock: She was telling us much the same as you are, and she showed us a deck. You talked about the brain and sleep. She gave us examples of the brain and sleep. I guess some people are doing the very thing that you're talking about.

The one thing she did say was that when treating people with PTSD—or sleep deprivation or sleep inhibitors, or however you wish to call that—they did use medicines and pharmacology to achieve some results. Although, I think if I remember her testimony correctly, the preference is to have the patient get into some kind of rhythm so they can induce the proper kind of deep sleep.

I wonder if you could make comments on her testimony.

Dr. Harvey Moldofsky: I'm delighted to hear that she came here. I tried to keep her in Canada. I offered her a position, but I couldn't compete with the University of Pittsburgh.

That's a key question: why are we losing good people? It's the money that the military in the United States is providing to support her work. I don't know that she'll ever want to come back.

Mr. Rick Norlock: Actually, she did say she would like to come back, but that the opportunities offered in Pittsburgh were more complementary to her work.

Dr. Harvey Moldofsky: You heard the answer.

Mr. Rick Norlock: I guess my question is whether she is on the right track. Do you believe her research is heading in the right direction?

Dr. Harvey Moldofsky: Yes, I think it's helpful.

She wrote a seminal article earlier this year in the *American Journal of Psychiatry*, and I quoted from her that sleep disturbances are the hallmark of PTSD.

There are very few of us who are looking at it. She is and I've been looking at it, but knowing the people in Pittsburgh, she's focusing on specific and traditional brainwave patterns. I've gone beyond that.

Mr. Rick Norlock: Okay. Thank you.

You mentioned your findings, etc. Having dealt with a different thing from a quasi-political perspective, when we have people who may not fit the norm, in other words, may not be going down the.... One of the hallmarks of acceptability for people's—I won't say "thesis"—but people's findings is that it is peer reviewed and backed up.

With regard to your assertions that you're giving us today, have some of your findings been peer reviewed, and are they complementary to your findings?

● (1015)

Dr. Harvey Moldofsky: I've published many papers, all in peer-reviewed journals. When these data became evident to me just recently, I thought I had to bring it to the attention of my colleagues in DRDC, who in turn spoke to Mr. Opitz and came here. Obviously a lot of the work is self-funded and we get stuttering funds through the goodwill and help of my colleagues.

Mr. Rick Norlock: Thank you.

I take it by your answer that it is somewhat peer-reviewed.

Dr. Harvey Moldofsky: It's peer-reviewed by my colleagues, but it has not been submitted for publication. The aim in the next phase is to complete what I'm saying, verify what I'm saying, and present it. It's been presented at meetings.

Mr. Rick Norlock: Thank you.

One of the questions I or someone asked Dr. Germaine was whether we can research through the hiring process, whether it's psychological, and whether there would be a set of questions so we could find out if a person is predisposed to PTSD. In other words, is there a percentage of people who are more prone to PTSD, and is there a way of ferreting that out before you actually hire them? Has there been any work done on that?

Dr. Harvey Moldofsky: There's been lots of work through the American military. They've been looking at personal and family history of predisposition to mental illness as one of the factors. There's an effort under way at looking at the genetic profiles of these people. This is an ongoing area. We don't have the actual predictor for PTSD at this time.

Mr. Rick Norlock: Thank you.

You talked about early detection. I gather you're not referring to pre-hiring. You're talking about being able to see PTSD affecting people before they go into obvious behaviour. I know that the previous minister of defence and the chief of the defence staff, along with people.... We're talking about operational stress injuries, OSIs. The mental health folks actually gave them a citation for their work in that your peers would be able to recognize in the individual serving member some behaviours that they would suggest to you and then work with you to identify the need for treatment. Would you say this is a step in the right direction?

Dr. Harvey Moldofsky: Thank you. Precisely.

The Chair: Thank you.

Ms. Duncan, go ahead please. You have seven minutes.

Ms. Kirsty Duncan: Thank you, Mr. Chair.

Thank you, Dr. Moldofsky. I'm sorry you're feeling so unwell.

Witnesses today spoke about funding of university partners. What is your view on resources available for studies?

Dr. Harvey Moldofsky: Resources depend upon interest. Until we can stimulate interest within the university to go in and tackle this as a significant Canadian problem, you're not going to have too many people applying. When I say people, I mean people at a senior level who are skilled in carrying out research and can be identified.

I remember that one day a gentleman knocked on my door. He turned out to be the director of the Canadian Space Agency. He came to visit me in my lab and introduced himself. He'd heard about my work and said, "Would you put a grant application in?"

● (1020)

Ms. Kirsty Duncan: What recommendation, Dr. Moldofsky, would you like to make to this committee regarding funding of university research?

Dr. Harvey Moldofsky: Put out requests for applications targeting the topics I'm talking about, and you'll get an answer.

Ms. Kirsty Duncan: Thank you.

To all my colleagues, I want to express my heartfelt condolences and I know we all do, to the families of the people we lost last week. My prayers and thoughts are with them.

Like all of you, I've had the privilege of working with service people and veterans across our country. I've heard their stories: a veteran living for 10 years in the bush; receiving a suicide note from a veteran on Sunday afternoon and having to find help; having to find a veteran lost in a snowstorm because no psychiatrist appointment was coming for three months despite a diagnosis of PTSD for years and years; not hearing from a veteran for weeks and waiting for him to re-emerge from the darkness of his basement; receiving a note from a veteran distraught because a young friend was found dead on the roadside and another dead in the basement, both of whom had simply stopped living, had given up eating and taking their medication. I will share these comments and again, my condolences to the families.

This is what I hear from our country's extraordinary heroes in their desperation: “We are all suffering and we need help. It's not only guys we lose overseas, it's the guys we lose here to suicide. They may as well have died overseas. We have all contemplated it, the thoughts are relentless. When I contemplate suicide, it is a relief. It means stopping the pain, no more fights with that. The question we ask ourselves is how can we leave and leave our family in a better position. Everyone else is better without us.” This is from a physician who veterans call the “Guardian Angel”, “They are hurting, their families are hurting. Many wives have contacted me. They are afraid to stay with them. They are afraid of them and for them.”

I'm wondering if you can share in a broad sense, the symptoms that the people you treat are suffering from. What does their life look like and what should we be doing?

Dr. Harvey Moldofsky: I'm deeply grateful to you for those comments. I've heard these stories. I've seen them.

Do you know what it takes for someone to see a psychiatrist in the province of Ontario? They have to wait.

I don't understand that. I've been a teacher and received awards for many years.

Let the stats speak for themselves. The average psychiatrist in Ontario sees two new people a week. There will never be enough at that rate. We need to have identified clinics where these people can be rapidly identified and assessed.

Ms. Kirsty Duncan: That's a recommendation, rapidly identified and assessed.

How were patients referred to you?

Dr. Harvey Moldofsky: I'm what's called—I don't even know if I'm tertiary; I'm way down the line. They've seen many physicians. They've even been seen at other centres across the country. I'm grateful to Don Richardson for identifying these people and trying to get them in, but do you know what it takes to get them in? I would see them the next day. “I'm busy”: it's not just physicians not being available; patients need to be strongly encouraged that they have to be seen.

Ms. Kirsty Duncan: What level of care did they receive before coming to see you?

Dr. Harvey Moldofsky: I don't understand it. I ask them who they have seen, and what they have done. They tell me, “Oh, I saw somebody, a psychiatrist, and they said I'm nervous and they gave me a tranquilizer.” They didn't even think they had PTSD. So they took the pills, got hooked, got into drugs or alcohol, and got into trouble. Then they get identified.

● (1025)

Ms. Kirsty Duncan: I had U.S. military doctors up here last spring to talk about brain injury, to talk about PTSD. They were very concerned about suicide. I mean, some numbers, Veterans Affairs reports—

The Chair: Very briefly, Ms. Duncan. I'm sorry, but your time is almost up.

Ms. Kirsty Duncan: Can you talk, very briefly, about the rising number of suicides in the U.S. and what this might mean here?

Dr. Harvey Moldofsky: I think the best-kept secret is that this will have a phenomenal financial impact on our health care system. The U.S. government isn't telling, and I don't know where that information is. I certainly haven't read anything.

The Chair: Thank you, Dr. Moldofsky.

We have time for two final five-minute segments: first Mr. Williamson, and then Mr. Boulerice.

Mr. John Williamson: Thank you, Chair.

It's good to see you, Doctor.

You've sent a bit of a chill through the room with respect to some of your comments. I want to read you something from the surgeon general's mental health strategy and ask you to comment on it:

> Due to the relatively small number of suicides among CAF members each year, it is not possible to identify statistically significant changes from year to year. Rates must therefore be assessed over five-year periods.
>
> The United States Army’s suicide rate has doubled over the past decade and there has been considerable attention to the rate of suicide in the CAF. Suicide rates have, in contrast, remained stable in the CAF over the last 10 years. Suicide rates in the CAF are no higher, and are in fact lower, than those in the general population of the same age and sex. There is no increased rate of suicide among those who have deployed versus those who have not.

What do you make of that in terms of some of your comments?

Dr. Harvey Moldofsky: Briefly, it speaks to itself.

Did anybody ask him where he got the data? Did anybody ask him, “What do you know about vets”?

Mr. John Williamson: Are you suggesting that the surgeon general is not looking, or not doing his job, or...? Do you think there's an attempt to hide this data, or that it's just not being collected? What are you suggesting, exactly?

Dr. Harvey Moldofsky: No, I'm not saying that.

You know, if you ask a question, someone will give you an answer.

Mr. John Williamson: Well, when I go around my riding, I get a lot of questions and a lot of answers. I've got to dig through them myself and find out what's true and what's not.

Sitting there saying, “Ask a question, you'll get an answer”, we want the right answer. I just don't want an answer based on speculation. I'd like an answer based on what you think is going on.

Dr. Harvey Moldofsky: I don't know what's going on.

You're politicians. You've expressed it.

I don't know. I want to know.

Mr. John Williamson: Okay.

I have no further questions. Thank you.

The Chair: Thank you, Mr. Williamson.

[*Translation*]

Mr. Boulerice, you have the floor for five minutes.

Mr. Alexandre Boulerice (Rosemont—La Petite-Patrie, NDP): Thank you very much, Mr. Chair.

Professor Moldofsky, thank you for being here this morning and for your excellent presentation, which was quite moving at times. You talked about the tragedies experienced by some of our veterans. You said that, because of lack of resources, it is difficult to take care of all those who have suffered and served their country. I am a bit disturbed by the conditions these people can sometimes find themselves in. There is no documentation or follow-up to enable us to make good decisions. If I understood you correctly, it is as if we are in the dark about mental health care for our veterans. Is that the case?

● (1030)

Dr. Harvey Moldofsky: Yes.

Mr. Alexandre Boulerice: Hoping that I understood you correctly, I would like to know whether you think it is worth setting up screening clinics to determine, prior to deployment, which men and women are more prone to developing post-traumatic stress disorder. The idea would also be to do a routine follow-up once they are back.

[*English*]

Dr. Harvey Moldofsky: This is what I submitted in 2004.

[*Translation*]

Mr. Alexandre Boulerice: But it has not been done.

[*English*]

Dr. Harvey Moldofsky: I never got an answer.

[*Translation*]

Mr. Alexandre Boulerice: The current system leaves it up to the families to convince veterans to ask for help. If the veterans realize by themselves that they need help, they must overcome the shame they sometimes feel to go and knock on a doctor's door, but that can take months, even years.

Dr. Harvey Moldofsky: Yes.

[*English*]

The major problem is that we have only you as advocates.

People with what are perceived to be mental illness problems, nobody pays attention to them, because they are mentally ill. If they have a heart problem, or if they have a stroke, or they have cancer, everybody can relate to that. But they can't relate to these people.

[*Translation*]

Mr. Alexandre Boulerice: Mental health issues are still taboo in our society and this is part of it.

In your view, what measures should the department, the federal government or the armed forces take to better support the families of our veterans who are suffering from mental health issues and lack of sleep?

[*English*]

Dr. Harvey Moldofsky: I think every major university across the country should have a special unit dealing with these issues, and it shouldn't be sitting in just one department. It has to be multi-disciplinary.

In the Second World War, the most common problem in the U.S. military was pain, and they called it psychogenic pain. In the U.K., it was called fibrositis. Going back to the turn of the century, it was thought to be a heart problem, and it was called neurasthenia or something wrong with the heart.

Everybody has a label but no one has understanding. We have to have a multidisciplinary medical as well as psychiatric group to look at these people.

My plan is to meet with the chairman of the department of psychiatry in Toronto and demand that something be done. I haven't seen anything being done and it's the biggest department in the country.

The Chair: Dr. Moldofsky, thank you very much.

[*Translation*]

Your time is up.

[*English*]

Thank you very much, Doctor, for appearing before us today, particularly as your battling laryngitis, which I hope is improving. We appreciate your attendance and what you have shared with us today.

Yes, Mr. Bezan.

● (1035)

Mr. James Bezan: Mr. Chair, I'd like to move a motion that we go in camera to discuss our future business.

The Chair: As we turn to committee business, the motion is to go in camera.

We'll suspend and go in camera as soon as the room is cleared.

Thank you very much.

[*Proceedings continue in camera*]