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Chair

Mr. Peter Fonseca

Subcommittee on Sports-Related Concussions in Canada of the Standing Committee on Health

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● (1740)

[*English*]

The Vice-Chair (Mr. Robert Kitchen (Souris—Moose Mountain, CPC)): Thank you, everybody, for coming.

I'll call the meeting to order. We are here in the meeting of the subcommittee for sports concussions. Pursuant to the motion adopted by the Standing Committee on Health on Thursday, October 4, 2018, the subcommittee is resuming its study of sports-related concussions in Canada. I appreciate everyone coming today.

We have two panel witnesses with us tonight. First, we'd like to welcome Sandhya Mylabathula and Swapna Mylabathula. Thank you very much for being here.

Both are Ph.D. candidates at the University of Toronto. Both seem to know this place, as they played an active part in Bill C-566, which was tabled in the 41st legislature.

They have a PowerPoint presentation, and I will give them the floor.

Ms. Sandhya Mylabathula (Ph.D. Candidate, University of Toronto, As an Individual): Thank you very much.

Good evening, everyone, and thanks so much for having us here today.

[*Translation*]

Good evening, everyone.

Thank you for your attention this evening.

[*English*]

We're really excited and very honoured to be here to speak with you and share our perspectives.

My name is Sandhya.

Ms. Swapna Mylabathula (MD/Ph.D. Candidate, University of Toronto, As an Individual): My name is Swapna. Don't worry, you're not seeing double. It's not an April Fool's joke. We are twins.

We'll begin with a brief introduction of ourselves just for some context. As was mentioned, we are a Ph.D. candidate and an MD/Ph.D. candidate at the University of Toronto. We've been involved in the field of concussions for just under a decade now. We have an interdisciplinary background in concussions. We are currently conducting our doctoral research, but we started out by working on proposed legislation at the federal level, starting in 2010. We've also consulted on Ontario policies, including Policy/Program Memorandum No. 158, which is currently being implemented in schools across Ontario.

We're long-time advocates for concussion issues, stemming from our passion for hockey. We are also very involved in science communication and education outreach on the topic for all ages.

Ms. Sandhya Mylabathula: What is a concussion? We know you've already heard this many times, so we're just going to do a brief recap.

This is an injury that involves a temporary functional disturbance of the brain caused by a traumatic force, which can lead to a pathophysiological process that can, in turn, manifest in debilitating physiological and psychological symptoms. It can have social consequences as well. These symptoms, as well as the injury experienced, can vary from person to person. We also know that the effects of a concussion are not always observable to an onlooker, so it's very much an invisible injury, too.

We know that our brains are quite fragile. We have a 3-D printed model of a brain just to show that. We know that the consistency of the brain, even more so than in this model, is actually quite like that of Jell-O. That just emphasizes the need to protect it.

We have an example of the mechanism of injury. Here, you're seeing a direct blow to the head. Another way to get a concussion is a blow to the body, which then results in a whiplash effect to the brain and the head.

Ms. Swapna Mylabathula: Concussions are a growing problem in Canada. This image from the Canadian Institute for Health Information shows that it's been reported to have grown most in children and youth in recent years. This represents a lot of sport concussions. This is just the tip of the iceberg. It truly is a public health problem.

It's important to note, however, that while many concussions happen in sport—and we are in the subcommittee for sport concussions—concussions do occur in other contexts, such as transportation, the workplace, the home and in other recreational activities, as well as in all ages and populations.

Ms. Sandhya Mylabathula: Our recommendations cover five key areas where our government can play an important and crucial role. These are listed on the slide here.

These recommendations are based on current research, including some of our own, as well as feedback from and discussions with a wide variety of stakeholders from across the country and beyond, and also some of our own policy work with Bill C-566, which was introduced in the 41st legislature.

The first area we're going to talk about today is prevention. Prevention is key to reducing things such as the financial burden that you would see with an injury such as this, as well as the adverse effects on the quality of life.

Our first recommendation here is to ask the government to encourage policy that's going to ensure that sport organizations and schools are contributing to a culture shift towards reducing the risk of concussion.

Ms. Swapna Mylabathula: The second recommendation on concussion prevention for you to consider is supporting the development and implementation of concussion prevention strategies. This includes things like rule changes—such as bodychecking policies—as well as changes to our built environment and promoting awareness.

Our last prevention-related recommendation is about supporting and promoting research on strategies for concussion prevention.

We have six recommendations for concussion management for you to consider, the first of which is the promotion of post-concussion psychological screening to help identify potential mental health concerns that may occur—

Mr. Darren Fisher (Dartmouth—Cole Harbour, Lib.): I have a point of order, sorry. This is brilliant. Can we have this? Have we been given this?

Mrs. Mona Fortier (Ottawa—Vanier, Lib.): We don't have it now.

● (1745)

The Vice-Chair (Mr. Robert Kitchen): We have the PDF.

Mr. Darren Fisher: That's fine. We can get it even after the meeting. I don't want to interrupt this, but this is really important, and we should have this.

The Vice-Chair (Mr. Robert Kitchen): We would ask you, then, if you wouldn't mind, to share these slides with us after the fact.

Ms. Swapna Mylabathula: Sure. We have a copy with us today.

The Vice-Chair (Mr. Robert Kitchen): Okay, we do have it. Okay, great. Thank you.

Sorry for interrupting.

Ms. Cheryl Hardcastle (Windsor—Tecumseh, NDP): We'll all get one, right?

Ms. Swapna Mylabathula: We will send one to you. We appreciate that this will be useful to you.

The second point here, the second recommendation, is to really promote educational initiatives that explicitly include mental health.

The third is to ensure concussion care for all Canadians who need it.

Ms. Sandhya Mylabathula: Next, we're recommending that the government encourage sport organizations to mandate that all athletes, as well as coaches, referees and other team staff, complete concussion management education. We also believe that it's imperative to have support for concussion management research, as knowledge in this area can help us better understand how to improve outcomes and how to reduce the recovery times, as well as improve the injury experience itself.

Finally, for management, we're recommending that the government encourage the establishment as well as the enforcement of mandatory concussion recognition and management training, particularly for professional accreditation programs.

Ms. Swapna Mylabathula: There have been a lot of emerging themes in the field of concussion in recent years. We have four recommendations based on those emerging themes for you to consider, the first of which is to support prospective and well-designed research studies on concussion and gender and sex considerations, as women and girls are often an overlooked population in research.

The second is to support and promote research on the most appropriate strategies for improving reporting intention, as well as programs that help support that behaviour change.

Ms. Sandhya Mylabathula: We also ask the government to mandate sex and gender research training for all government-funded researchers in order to facilitate this type of research, and also to support areas of research in these emerging topics—for example, sub-concussive impacts and multiple impacts to the head—because knowledge in these areas can help us to better understand how these factors might influence management needs, what role they may play in long-term effects and how these can affect Canadians.

The next area we're going to discuss with you is policy research.

Our first recommendation, of course, is to ask the government to encourage and to fund and support research on concussion policies themselves. It's also important to disseminate very consistent messaging through policies themselves and also to facilitate these conversations at and among the federal, provincial and territorial, and municipal levels of government.

Furthermore, we'd like to have the government support policy at the provincial and territorial levels of elementary, secondary and post-secondary educational institutions that will help to provide strategies for return to play, return to activity and return to learning, particularly including academic accommodations.

Ms. Swapna Mylabathula: Our next recommendation about policy research is to address any regional inequities that may exist among rural, suburban and urban areas in terms of access to resources in order to be able to even implement concussion policy.

The next recommendation is to ensure regular evaluation of concussion policy wherever it may exist.

Our final policy-related recommendation is to promote, develop and implement a national surveillance system for tracking concussions across the country to help with evaluation but also to help perhaps identify any subset of the population that might need extra help.

Ms. Sandhya Mylabathula: The final area of recommendations that we're going to discuss with you today is education.

First, we recommend that our government support national education efforts, as well as the harmonization of information between school and non-school sport activities, with a particular focus on developing and promoting a national code of conduct.

Ms. Swapna Mylabathula: We also recommend, for education, the support for research, development and implementation of effective, multimodal, stakeholder-specific and interactive education to improve knowledge outcomes for all of these stakeholders. We also recommend the support and promotion of education for clinical trainees and practising clinicians alike that is competency-based, adequate and consistent, as there is a current knowledge gap among clinicians.

Our final recommendation—in which all of the five domains that we've just discussed actually fit—is for the federal government to move ahead with the three key priorities that have also been identified in the proposed Bill C-566, as we've previously mentioned.

● (1750)

Ms. Sandhya Mylabathula: The first of these is a national concussion awareness week. This would help us improve education and awareness in the general population across the country.

Ms. Swapna Mylabathula: The second is a pan-Canadian concussion strategy, including a national centre of excellence for concussion research.

Ms. Sandhya Mylabathula: The final one is a governmental concussion board. This would be useful for evaluation and accountability, but also for continuity.

Canada has a unique position where we actually have this amazing opportunity to become leaders in the concussion policy landscape, but also to be proactive in terms of reducing the risk of concussions through prevention and promoting the well-being of our citizens, and we call upon our government to do so.

Ms. Swapna Mylabathula: We are really encouraged by the creation of this subcommittee, as well as the discussions you've had thus far and the enthusiasm we've seen. Therefore, we're really hopeful for a near future in which we see a comprehensive concussion strategy that is implemented across the country.

[*Translation*]

Thank you for your time and attention. We greatly appreciate it.

[*English*]

Ms. Sandhya Mylabathula: Thank you.

The Vice-Chair (Mr. Robert Kitchen): Thank you very much for your presentation, and thank you for the document. As Mr. Fisher has indicated, it's going to be very helpful for us to go through this and at a more leisurely time to actually have a look and invoice what you've brought forward to us.

We're going to start with some questions now.

We'll start with Madame Fortier, for seven minutes.

[*Translation*]

Mrs. Mona Fortier: Thank you, Mr. Chair.

I'll speak in French. If you can understand me, that's fine. Otherwise, you can put on the headphones to listen to the interpretation.

What you've told us is truly fascinating and very clear. Since the start of our work, we've had the privilege of hearing from athletes, parents, coaches and representatives of associations. We now know that the federal government could take certain measures.

You spoke about prevention in terms of a culture change. I gather that, in your opinion, the culture change should take place at all levels. Based on your research, what culture change should be addressed at this time?

Ms. Sandhya Mylabathula: Thank you for the question. I'll respond in English.

[*English*]

We agree that a culture change is needed across the board. There are many ways and many areas in which to do that. For example, at the level of professional sports, we need to see a change in culture of the way sport is played, the way we look at what “sports” means, from athletes' perspectives, coaches' perspectives and the teams' perspectives, but also the perspectives of fans and how we consume sports, as well as the media.

That can also go towards the level of grassroots sports, because it's not just going to be at the professional level. Kids are watching how athletes are playing in the professional leagues, but they're also doing their own thing in their own leagues, and having some type of change in the culture at that level is very important as well.

We need to address it from all sorts of different perspectives.

Ms. Swapna Mylabathula: Yes. We recommend looking to the field of knowledge translation and behaviour change for this, because there are strategies that have research behind them in terms of what works for changing behaviour.

One of the things we would recommend is having, for example, champions for change, for knowledge translation. That would be people whom we hold in high regard, such as athletes—folks such as Eric Lindros, who was here previously, Cassie Campbell-Pascall, or Hayley Wickenheiser, who has spoken publicly about her concussions—and having them share their experience and really start normalizing the idea of talking about concussions. Because it's an invisible injury, it's difficult to talk about, but also in our experience, in playing hockey, you don't want to stop playing.

There are multiple reasons why folks don't want to stop and don't want to report. Reporting intention is a whole other question that we might get to today, but having a champion for change is something else that we do recommend, and also taking advantage of social media. In this day and age, there's a lot that can be done with communicating over social media and reaching grassroots levels of hockey and other sports, as well as all the way up to the elite level, so we need to take advantage of that.

We've seen bits and pieces of that with the conversations and discussions that have been had, but a lot more can be done in a more strategic and very consistent manner for the point of having change in our culture.

Ms. Sandhya Mylabathula: If you look at evidence-based change as well, there are theories in the literature in terms of how we can actually make this change. If we're thinking about intention or behaviour change, what are the other factors around that in terms of what we need to do? What are the norms and attitudes and all these types of factors that we need to look at before we expect change to actually happen?

In terms of having the champion, we know there are individuals out there, athletes, who are willing to speak about these types of things. For example, when we helped create a conference, the first one for women and girls and concussion in Toronto, the first one in Canada, Cassie Campbell-Pascall came and spoke. That was such a wonderful thing, because hers was a face that people recognized and they could actually say, "Okay, this is a really important issue, because I see this person that I recognize is also talking about it."

● (1755)

[*Translation*]

Mrs. Mona Fortier: I also greatly appreciate your second priority, which is the implementation of a pan-Canadian concussion strategy and the creation of a research centre.

At this committee, we met with a witness who was studying the brains of athletes. I asked him a question about his study—it concerned football or rugby. He told me that he was studying only the brains of male athletes and that, given his area of research at the time, it wasn't possible for him to study the brains of female athletes.

You addressed the gender issue. Can you elaborate on the challenges involved in obtaining data on women? Why is it important to strengthen this aspect of the research?

[*English*]

Ms. Sandhya Mylabathula: Yes, it's a challenge across a lot of health research fields not to have representation of females in the research. Females may respond differently to the injury or may have different pre-existing factors. We need to know whether there is a difference and, if so, what we need to do about that. The way we manage the injury might be different; we don't know, and we won't know until we look at those things and those factors.

Ms. Swapna Mylabathula: That's one of the reasons we need more research. We don't know for certain what's going on in terms of gender and sex considerations. We do know more than we did, say, a decade ago. It's very encouraging and it's even more motivating to do more research in that area.

Ms. Sandhya Mylabathula: At this time, for example, we know that some of the research is suggesting that maybe females do have a different experience in terms of symptoms and so on. There is research to say that we should be looking at this further, for sure. There is some research to say that females might experience more symptoms and so on, but there are other considerations that we need to take. For example, females do report more symptoms at baseline, before an injury at all. So maybe it's not that they are experiencing more symptoms after the injury; it's just the way that females are experiencing life.

Ms. Swapna Mylabathula: In addition to that, there are potentially different mechanisms of the injury. Some research has shown that males tend to have more player-to-player contact as their mechanism of injury than females do. That's because there is a lot less intentional contact in, say, women's hockey or other sports. The mechanism for how we make change and how we do those prevention strategies is something that we also need to look at.

[*Translation*]

Mrs. Mona Fortier: This past weekend, I attended a volleyball tournament involving teams composed of 17- and 18-year-old women. Three women on the teams couldn't play because they had just suffered concussions. This happens all the time. I spoke with their parents. They're also concerned that not enough research is being done to find solutions to this issue.

I don't have much time, but I just wanted to ask another question.

[*English*]

The Vice-Chair (Mr. Robert Kitchen): We would need a really quick answer.

[*Translation*]

Mrs. Mona Fortier: You spoke about what the federal government could do, but the provinces and territories could also do something. When you answer other questions, you could tell us how the federal government, as part of this study, could work with the provinces, territories and even the municipalities to address this issue.

[*English*]

The Vice-Chair (Mr. Robert Kitchen): Thank you. We need to move on.

We'll go to Ms. Hardcastle, please.

Ms. Cheryl Hardcastle: Thank you, Chair.

Thank you very much. This is really intriguing. I like seeing how you laid out that our national strategy has to address not just prevention and not just looking at this as a public health issue; there's also the issue of diagnosis. The issue of research comes in, because if you don't have enough research, you can't diagnose. It's not just about prevention; it's also about treatment, innovative forms of treatment, and being cutting edge on those innovative forms of treatment.

I read the word cloud you had at the beginning. If you listened to some of the testimony, you will know that there is a gap in availability of treatment when it comes to some of the more complex emotional trauma symptoms and the physical symptoms. I'd like to hear a little bit more from you about how you think that works in a national strategy, when we're still dealing with issues like the one you mentioned, that of harmonizing how we track concussions and exchanging information.

● (1800)

Ms. Swapna Mylabathula: One of the first steps is to create and implement a national surveillance system. I think there are multiple ways one could do that. In the States, for example, the NCAA has the largest collegiate database of injury information. A corollary of that is the High School RIO system, or reporting information online, which is relatively newer and is doing quite well in terms of being sustained since 2005, actually, so more than a decade ago. That is very consistent in that it's a national sample. It's something that, perhaps, we can take some information from in terms of how we might have that implemented here in Canada.

One thing that may be different here in Canada is that the individual who actually inputs the data in both of those is the athletic therapist, and that's not quite as prevalent here, especially in elementary and secondary schools in Ontario and beyond. We'd have to figure out how that would be implemented and who would be doing the inputting. But systems like that do exist, and we can take advantage of the experiences that have been had elsewhere and apply them here in Canada.

Ms. Sandhya Mylabathula: Also, in terms of looking at prevention but at the same time at management, we purposefully made our suggestions comprehensive and across the board, because it's important to do things like tracking, looking at prevention and doing all those things. People are still going to get concussions, and we obviously have people who have concussions already. It's important for us to learn how we can best manage this injury and treat them, and make sure their injury experience is as good as possible. It's actually a very exciting area to be in as a researcher at this point, because we're looking at, as you mentioned, the cutting edge of what we can do with individuals.

In one of the projects I'm involved in right now, we are looking at different types of exercises we can use to help people get back to normal or better than their previous functioning, which is a really exciting place to be. This is an area where we're looking at exercise, for example, rather than rest for prolonged periods of time, different types of management that are specific to the symptoms people are experiencing, which can be different, particularly after three months, four months and so on.

This is an area that's very important for us to continue to put focus on, because we are not ever going to see the end of concussions completely. It's an accidental injury, as well. We must, of course, do as much as we can to reduce the risk, but we can't completely prevent every single situation of a concussion, so we need to know how to best manage the injury.

Ms. Swapna Mylabathula: To go back to the question of conversations and communication among the federal, provincial, territorial, municipal and other levels, we do think there needs to be communication among all levels. That's because some of the things that are going to be done are going to be under the jurisdiction of education or health, and that can be quite different across the country. But it's important to have a consistent and standard way of doing things. Without consistency, we see a lot of gaps in how things are done, and that does lead to a lot of issues in terms of implementation, so having that consistency is important.

Having that as potentially the role of the federal government can be very important, but also ensuring that there is communication among organizations, such as sports organizations and universities that might be doing some of the data analysis in order to give you the answers in terms of what should be done next, how the evaluation is going and whether the policy is doing what it's intended to do.

Ms. Cheryl Hardcastle: Thank you.

Yes, I think that's a given. That's part of our role here, to make sure it is orchestrated at all levels. This leads me to the real question of.... I know you're familiar with Parachute. How can we enhance that, make it mandatory? Or maybe you think I'm misguided to be....

I'm trying to use something we already know, like Parachute, that tries to take all of the cutting-edge information and have one place that we can move out from. It's ultimately voluntary. If you are a member of an organization that requires you to do that.... It's not the same thing as what you're asking. You're saying that you expect that the federal government, in our strategy, would be pointing at certain things and making them mandatory.

I would like to hear you stress that a bit more, because we hear this in very serious areas of policy development. Even international human rights issues can be voluntary. Can you articulate that a bit more and maybe explain where you think we can springboard off Parachute?

● (1805)

Ms. Swapna Mylabathula: To go back to your point of when policy items are voluntary versus mandatory, there is some research that has shown that the voluntary components of certain policies and legislation in the United States, compared with the mandatory elements, are not implemented quite as much. That's because there is the choice. When you have the choice, you have different competing priorities for the person on the front line implementing this. Things do fall through the cracks. When it's mandatory, that's when you know something is going to be implemented.

Ms. Sandhya Mylabathula: In terms of trying to facilitate making things mandatory, tying an organization's funding to having met certain requirements is one way to do that. These things are not necessarily going to take up too much of the organization's time and effort, but they are going to have a big payoff in the end for the athletes, as well as the coaches, the team, the staff, and everyone involved in this.

This is something that needs to be everybody's responsibility. This is part of the culture shift as well.

The Vice-Chair (Mr. Robert Kitchen): That's great. Thank you very much. I appreciate your comments.

Being a subcommittee, we have a little more leeway than others, so I'm trying to allow people a little extra time when we do.

I would like to recognize that in the back of the room we have some students from the University of Ottawa and Carleton University. They are future scientists, and I appreciate their coming to learn more about this. Thank you for being here.

With that, I am going to take the opportunity as chair to take over the Conservative questioning. The clerk will cut me off at seven minutes to make sure I don't overextend where I am.

Mr. Blake Richards (Banff—Airdrie, CPC): I'll be watching.

Mrs. Mona Fortier: You'll be fine. We trust you on this.

The Vice-Chair (Mr. Robert Kitchen): Thank you very much for being here. I appreciate your presentation. It's truly fabulous, as you go through it step by step.

You talked about whiplash and the whiplash effect. When I went to school—and that's a few years ago; we won't say how many—we studied coup-contrecoup injuries, and the strength of the cervical spine.

I'm interested to hear whether you've looked at that in your research. We've heard from other organizations suggesting strengthening of the cervical spine in our young athletes, as a preventative measure to try to minimize injury.

Do you have any comments?

Ms. Sandhya Mylabathula: You mentioned a preventative measure, but my first comment is going to be about management and some of the research I'm doing right now.

I mentioned that we're doing some exercises to help people get back to their normal functioning, and one of the areas we focus on is the strengthening of the neck and neck exercises, because even if it's not part of the concussion injury itself, you often see that co-occurring with the injury of concussion, where somebody has issues around their neck, the neck muscles and something going on there. That's certainly an area that we want to look at.

In terms of prevention, this is still an area that's equivocal in the literature, but it seems that strengthening the neck to prevent concussions would be a good area to look at.

Ms. Swapna Mylabathula: With the stance of no harm done, in most cases, for neck strengthening.... While, again, it's very equivocal, some research is positing that perhaps women and girls have less musculature in the neck, and so potentially that might be an approach for that avenue.

Ms. Sandhya Mylabathula: Of course, at the same time, certain individuals, certain women and girls may not have.... One woman could have better neck musculature than a male, so it's important to look at gender and sex and all those factors as well.

The Vice-Chair (Mr. Robert Kitchen): You did mention gender research a bit, and I think it's important to see that and to talk about that. Is that something that would be recommended to the sport organizations, or particular sports? Do you see that, or do you see it in certain sports versus others?

Ms. Sandhya Mylabathula: At this point, in terms of management, I don't know that we have enough information to say that this is the way we're going to manage for females versus males, but there are particular considerations that can be applied to everybody and that might be particularly useful for one or the other.

● (1810)

Ms. Swapna Mylabathula: That includes mental health-related management strategies too.

The Vice-Chair (Mr. Robert Kitchen): You had a nice little visual display for us earlier, and I appreciate your pointing that out. I recall my days in school, and I'll go back to the coup-contrecoup injury. Some theorists would say it's a coup-contrecoup-coup injury because of the whiplash effect. Some of the research has talked about that aspect of it.

Can you tell us what you envision happening to the brain in that scenario?

Ms. Swapna Mylabathula: The key thing is that the brain is not tethered within the cerebrospinal fluid, so it does bump around and get damaged. This conversation reminds me of the conversation we were having recently about helmets. There's a conversation about whether helmets help prevent concussions and so on. It's incredibly equivocal. They are not recommended right now as a prevention strategy that has very compelling evidence to say that helmets do prevent concussions. That's because of the physics of collisions.

There are three ways in which that could happen through helmets, theoretically. One is by absorbing energy, through a viscoelastic deformation. Currently, we don't have materials for which there is compelling evidence to say they can absorb enough energy to prevent a concussion. Two is by dissipating energy over more space, which is a great thing that helmets do, transferring a potentially focal injury into a more diffuse injury, preventing fractures but not preventing concussions in more diffuse injuries such as those. Three is by dissipating energy over time. Just making that impact last longer on a helmet could theoretically be very helpful because with that you would reduce the peak force and peak acceleration. At this point, we don't have compelling evidence or knowledge of materials in the padding of the helmet that would dissipate the energy over enough time to have that effect.

Ms. Sandhya Mylabathula: There is some literature to suggest that full face protection could potentially reduce the severity of injury, but that literature is limited, so we definitely need more in that area. Also, we don't know what that threshold might actually look like—how many Gs of force we need to actually have a concussion happen and whether that changes per person.

Also, just to comment on the pathophysiology of the brain, I think we need to have a lot more research done to really understand what's going on. We still don't fully understand what's going on when we get a concussion. We know there could be shearing in terms of the axons in the brain. The white matter and grey matter are different densities, so they're moving at different rates. We also know that there are biochemical changes in the brain that can result in cell death and inflamation, as well as uncontrolled discharge in the brain that can result in seizure-like symptoms.

All these things are going on—we know this—and all these things could lead to the symptoms we've talked about. There is some amazing research being done in terms of imaging to look at what's happening.

Ms. Swapna Mylabathula: That's another reason to have a national centre of excellence in concussion research.

The Vice-Chair (Mr. Robert Kitchen): In your concluding statements, you talked about a national concussion awareness week. Tell us what you mean by that. What does it entail? Is it purely that we put that out there and then everybody forgets about it? What do you envision with that?

Ms. Sandhya Mylabathula: Putting it out there is the first step, and that alone will show Canadians that the federal government cares about this issue and recognizes it as an issue of concern.

Ms. Swapna Mylabathula: And that it is taking it seriously....

Ms. Sandhya Mylabathula: This could also mean doing coordinated activities around educating Canadians about concussions. There are already a lot of organizations that do some of this type of work. We're involved in a lot of this type of work ourselves as well. Making sure there's a coordinated effort at this particular time will actually get the attention of Canadians so that we have people focusing on it.

Yes, it would be just for that week, potentially, but then it would reoccur and keep coming back, and people would start thinking that this is an actual injury, something they need to be concerned about, or connect that to things they've experienced themselves or things their friends or family have experienced, and that will start to be a national conversation.

Ms. Swapna Mylabathula: It's an opportunity for those who maybe don't think about it on a day-to-day basis to pay attention to it and spend some time thinking about what it means to them. I kind of think of it in the same way as Earth Day, which just happened. We do lots of activities around Earth Day. It's one day dedicated to a certain concept. The national concussion awareness week could be parallel to that.

● (1815)

The Vice-Chair (Mr. Robert Kitchen): Thank you very much.

Mr. Fisher.

Mr. Darren Fisher: Thank you very much.

What an improvement tonight in chairing, an absolutely incredible job.

The Vice-Chair (Mr. Robert Kitchen): What a butter-up.

Mr. Blake Richards: That's worth a good two minutes extra.

Mr. Darren Fisher: Unfortunately he asked a lot of the questions I wanted to ask.

Thank you so much. I'll have a chance to go through the pages that you have there. On one of your early slides, I don't know if it was a typo or something we had not heard about yet, but it says “sequelae”. I don't think this committee has heard that word. I think it might be on your second slide.

Ms. Sandhya Mylabathula: It's here, under “Management”.

Mr. Darren Fisher: Maybe everyone else in the committee knows this, but can you tell me what “psychological sequelae of concussion” means?

Ms. Swapna Mylabathula: Those are the psychological or mental health consequences that occur after a concussive impact. We were just getting fancy there.

Ms. Sandhya Mylabathula: Essentially, the core of that is to say that some education initiatives exist—and as we mentioned, there needs to be more work on these—but the literature shows that not a lot of them include explicit mention of the mental health effects of a concussion. People don't necessarily realize that this is something that can happen, and when it does happen, you have worse effects. It's about making sure that people are aware of this, both the people who might suffer a concussion and those around them, so that we know what to do about it.

Ms. Swapna Mylabathula: And how to find it, how to notice that it's happening in your peers....

Mr. Darren Fisher: Has either of you had a concussion?

Ms. Sandhya Mylabathula: No.

Mr. Darren Fisher: It's interesting, because most of the people who have come here with a level of knowledge have gained that knowledge because of their adverse effects from concussions.

Ms. Swapna Mylabathula: It just stems from our passion for hockey.

Mr. Darren Fisher: Perfect.

Ms. Sandhya Mylabathula: We've also been lucky in the policy work that we've done previously to have had so many opportunities to talk to Canadians who have suffered from concussions, as well as their families, caregivers, health care practitioners and so on, across the country in many different provinces—

Ms. Swapna Mylabathula: In work, in sport, in recreational activity—

Ms. Sandhya Mylabathula: —and internationally, as well.

So while we haven't experienced concussion personally, we've been able to engage with people who have. There's also the research we're doing.

Mr. Darren Fisher: I'm not going in any specific order that I have planned in my head, but I think a national awareness week is a brilliant idea. I had a Senate bill through the House of Commons on sickle cell awareness day. It did just that. It had a national conversation on something that rarely ever had a national conversation. So I support that.

Do you have proposed legislation for a federal law? Is it something you can provide to the committee, besides your slides?

Ms. Swapna Mylabathula: Yes.

Ms. Sandhya Mylabathula: That was Bill C-566.

Mr. Darren Fisher: Okay.

Was that in 2010?

Ms. Sandhya Mylabathula: It was in 2014.

Ms. Swapna Mylabathula: It had its first reading.

Mr. Darren Fisher: In your remarks, one of you said—I'm getting you mixed up already—that concussions are a growing problem. I wonder whether we're getting more concussions or whether we're realizing more instances of concussion. I'm not sure. Do you want to elaborate on that? Is it a growing problem? Are there more concussions today than there were before? Would that be because of hockey gear, or because we have a guy who maybe trained playing hockey while working on a farm all summer, and now that guy is lifting 330 pounds every day and he's bigger, faster and stronger?

Ms. Swapna Mylabathula: We had an interesting choice of words there, but in our opinion, every moment that we don't do something about concussions makes it a growing problem, because there are more and more consequences of it. That was why.

When we're talking about statistics, it's an interesting question. For one thing, because it's an invisible injury and there are lots of reasons why people don't report it, it's very under-reported and under-recognized. We don't have a very solid tracking system for it, so that's another way we're losing the ability to say that the statistics out there are the true picture of what's happening.

In terms of the numbers and how things have changed over time, I agree with you that the increase we do see.... For example, in Ontario, the data from the research I am doing right now show that in 2003 we saw just over 2,000 concussions per 100,000 children and youth aged 4 to 18, and in 2017 the number that was recorded for diagnoses of concussion, using our definition—again, it depends on the definition you use—was over 4,000 per 100,000.

Mr. Darren Fisher: They didn't do baseline studies back in 2002, did they?

Ms. Swapna Mylabathula: I don't know what you mean by that.

Mr. Darren Fisher: My son plays hockey, and they didn't start doing baseline testing of an athlete's brain until he was 13 or 14.

● (1820)

Ms. Swapna Mylabathula: Oh, okay. Yes.

Mr. Darren Fisher: Now I think they start with kids much younger.

Ms. Swapna Mylabathula: Yes.

Mr. Darren Fisher: You also said that—

Ms. Swapna Mylabathula: But that's why. That change—almost more than doubling—can potentially be attributed to a heightened awareness. We're reporting more now. We're seeing a lot more reporting—

Mr. Darren Fisher: Honest reporting—

Ms. Swapna Mylabathula: This is very encouraging, but we do know there's a lot still falling through the cracks, so there's more work to be done.

Mr. Darren Fisher: How much of that falling through the cracks is a male athlete—as opposed to a female athlete—not wanting to report because he doesn't want to be benched?

Ms. Swapna Mylabathula: We don't know about male versus female.

Mr. Darren Fisher: They did say they report more honestly in baseline.

Ms. Swapna Mylabathula: Typically that is the case.

Ms. Sandhya Mylabathula: You're right.

In this picture, there are people who don't want to report, so we don't see those concussions coming up in the stats. We can kind of guess at that, and typically male athletes are going to be the ones who are not reporting as much.

At the same time, there are other factors too, as you were mentioning. If we're looking at the equipment and at the way people play the sport—there's something called the gladiator effect—if you're putting on so much equipment and it's getting harder and tougher and thicker or whatever, people—

Mr. Darren Fisher: And it's plastic as opposed to leather.

Ms. Sandhya Mylabathula: Exactly.

Ms. Swapna Mylabathula: They feel invincible.

Ms. Sandhya Mylabathula: Exactly. People will feel invincible and feel they can do anything on the ice. However, you're also forgetting that the person's head is their head, and there's a brain inside that you need to protect. Sure, they're wearing all this equipment, but you can still give them a concussion. You kind of lose that sense of the responsibility to take care of your body and other people's bodies.

That's another factor that can play into it right now, but there are lots of factors, for sure.

Ms. Swapna Mylabathula: There are other reasons that people don't report their concussions. For example, say you're talking about a student athlete—and this has been shown in some of the literature—they don't want to make their coach or their parents upset; they don't want to lose the opportunity for a scholarship.

Mr. Darren Fisher: Or the scholarship they already have....

Ms. Swapna Mylabathula: Exactly.

You don't want to lose any playing time—and I'm guilty of this for a shoulder injury—because you're doing something you enjoy. Or maybe it's the playoffs and you don't want to lose the opportunity for that and let your team down.

Knowing all of these reasons is really helpful and important, because then we can start addressing them. If, for example, a student athlete is worried that their coach is going to be upset, then we can address that with education, perhaps where both of them are sitting at the same table, making sure there's a common understanding and expectation for the reporting of concussions.

The Vice-Chair (Mr. Robert Kitchen): Thank you very much. I gave you a little extra time.

We're now going to go into five-minute questions, and we're going to start with Mr. Richards.

Mr. Blake Richards: Thank you.

Mr. Chair, I think the order worked out quite well, because Mr. Fisher asked some of the questions I was going to ask. There are also some things that lead into what I want to ask about, so it works out quite well.

The first thing I want to ask about is with regard to medical treatment and the protocols around that, and what has changed in the last number of years. Some of the members here have probably been through a number of meetings on this—I'm just subbing in today—so I may be behind in terms of my knowledge compared to some of the others on the committee.

In terms of medical treatment, I'll give you some of my history.

I played hockey as a young guy. I had concussions. I'm not sure exactly how many. Back then, it was kind of, "How many fingers am I holding up?" If you knew that—and maybe he'd give you a whiff of a smelling salt or something—you were back at it. The only time I can ever remember a teammate being sent for any kind of medical treatment—I think he'd been hurt in the first or second period—was when, after the game, he couldn't remember who won the game, what the score was or what town we were in. He was sent to be looked at, but they didn't know what to do with him. I'm pretty sure he played a game, maybe not the next day, but probably the next week.

I think back to my son. He's 23 now. He would have been probably 12 years old, so it was a little over 10 years ago. This wasn't a hockey injury, but we were at a hockey camp. We'd gone a few days early. It was on a lake. He was wakeboarding and got a concussion, and they said, "Well, you know, just be careful for the first couple of days of the hockey camp, but you should be good." That was about all the medical treatment there was.

I'll be honest. Given the experience I had previously had with that, when I had a concussion a few years ago in a car accident, I just thought, what's the point? I'm not going to bother going to the hospital. I'll just get on the bike every once in a while and see how it feels—until it feels good—because they're not going to do anything anyway.

I'm assuming that's changed.

Can you tell me a little about what that looks like now when someone goes to the hospital, goes to see a doctor about a concussion? What kind of protocols do they go through now?

● (1825)

Ms. Sandhya Mylabathula: That's a great question. In the sport context for health care practitioners there's something called the SCAT5 right now, which is the sport concussion assessment tool. There are a bunch of questions and things they can go through with the athletes to get that first impression of whether they have a concussion or not and whether they suspect an injury, and then go on from there.

If they're not a health care practitioner, there's a tool called the concussion recognition tool, which is a similar thing. Somebody who's not a health care practitioner can use that to try to see if there's a suspected injury, and then go on from there.

In terms of the actual management of the injury, you'll probably recognize the idea of rest, complete cognitive and physical rest, which used to be the cornerstone of what was done. But we're moving away from that now, because we know that having complete rest, particularly for prolonged periods of time, can be quite problematic. You're increasing isolation and frustration and so on, and there are all those mental health issues that could be cropping up. There's also deconditioning, particularly in athletes who are used to doing a lot of exercise and movement and physical activity for quite some period of time.

Introducing exercise earlier seems to be a really good idea, and there's a lot of work that's being done on that. Some of my own research right now is in trying to get people to do exercise earlier in their recovery period. There's even some literature saying that the earlier you do this type of exercise, which is aerobic, the better your outcomes might actually be, and your recovery time might be reduced as well.

There are different types of management, therapies and so on that are being used for persistent symptoms, for example. You might have persistent symptoms in the vestibular or ocular realm of things, with balance and vision and this type of thing. There are particular therapies that are being developed for those symptoms, because you would see these symptom clusters crop up as a particular thing for individuals, but that can be different from individual to individual.

Ms. Swapna Mylabathula: Generally, what's been developed over the years, as you probably recognized, by the international sport and concussion group is the graduated return to activity. It's return to play, because it's in the context of sport, but that is the typical idea now for a graduated return to whatever it is that you were doing. In schools, you'll see the return to play and return to learn as well.

You touched on the concept or idea that sometimes clinicians may not know what to do, and that is a bit of an issue in some areas. One of the things we mentioned was the gap in knowledge for clinicians and clinical trainees alike, and that is not just a Canadian issue. There's research coming out of Singapore, Croatia and the States also saying that clinical trainees and practising clinicians may not have as much knowledge about concussions because they're not necessarily trained about it. I think U of T, the medical school that I'm going to, is perhaps one of the luckier ones, where we have Dr. Charles Tator, who is giving us some knowledge on concussion. But that's not the case across the board.

We really do need to see consistent, adequate and competency-based education for clinicians. There is research in Boston, where there is a primary care hospital. They saw a change in terms of the concussion care that was given after an in-person and online.... It was a combination, a multimodal education program, and there was an improvement in concussion care. So it's possible even in practising clinicians, whether or not they had that emphasis on concussion in their clinical training. However, in terms of continuing medical education, we do need to stay away from unregulated certification, just to make sure it is adequate, competency-based and consistent across the board. But it's possible.

The Vice-Chair (Mr. Robert Kitchen): Thank you very much. I hate to interrupt when there's such important information being put on the table.

Mr. Fergus.

Mr. Greg Fergus (Hull—Aylmer, Lib.): Thank you very much, Mr. Chair.

Thank you very much for testifying before the committee.

I am not a regular member of this committee, but I'm a person who has suffered from a concussion. I want to tell you this little story because I think it's people like me who are the problem. I had my concussion falling off a bike while riding to work. I used to think a lot of these professional athletes were exaggerating—"Gee, they got hit. That's just a problem"—until I fell off my bike. It wasn't a huge thing. I wasn't being pounded against the wall. I just fell off my bike and hit my chin on the ground. I couldn't read for a week. I just couldn't focus. It was tough. It was terrible.

I realized, aside from a lot of humility, that it's people like me who are the problem, people who don't recognize that this is a serious concern.

Mr. Fisher and Mr. Richards also pointed out that, quite often, coaches or even athletes themselves might not recognize it, or might take steps to always try to downplay the severity of what's happening. And we know now this is a brain injury.

You recommended that we work with the provinces and try to work with schools. It seems that we even have to go a bit further and get to the general population, to have them appreciate that not all injuries are things you can see. There are things that obviously you can't see but that have grave physical and mental affects.

How do we break through that ice? What's your recommendation to try to get that general knowledge out there?

● (1830)

Ms. Swapna Mylabathula: We'll start by saying that it's also people like you who are part of the solution—look at where you are now, on the subcommittee—so thank you.

To get to the general public, going through schools and sports organizations is a little more clear because there's an organization and there are standards and structure in how to communicate with them. A national concussion awareness week is one of the ways in which we want to get through to the public in general and have that conversation so that it's something that is brought up in the lives of people who maybe don't think about it on a day-to-day basis.

Mr. Greg Fergus: Would you be able to point to other physical conditions for which we've been able to go from a policy recommendation to an actual culture change on the ground in schools and among families? Are there any other examples or best practices that we can turn to?

Ms. Swapna Mylabathula: Smoking is one that comes to mind, for sure. It's not an injury, but it is related to public health. Wearing a seat belt is another one that comes to mind. There was policy on bike helmets, as well, on the east coast, if I'm correct. I'm not an expert in that area. I think there are policies, strategies and conversations that have been had in Canada previously that we can look to for motivation and hope, to see that change can be made and is possible.

Ms. Sandhya Mylabathula: I think you make a really fantastic point, because we need to reach the general population. This is something we're really interested in, as well, because it's not just elite athletes who are going to be suffering concussions. It's going to be elite athletes you see suffering concussions in the media, but of course everybody else can suffer the same injury. Some of the work we've been doing in terms of science outreach and outreach in general that reaches more of the general population can be through one place where there's some sort of structure in terms of an organization that does outreach as one of its goals in communication, but that's going toward the general public.

For example, the Royal Canadian Institute for Science and Let's Talk Science are two organizations that we've worked with, as well as Parachute Canada, but these are geared towards the general public rather than to elite athletes or specifically to schools. Let's Talk Science is for schools, as well. These are some of the ways that we can use to make sure there is a channel to get to the general public.

Again, a national concussion awareness week—making it a national conversation, making sure there's attention on this issue and making sure that Canadians know that the government sees this as an issue of concern that we need to be talking about—can be a way to do that as well.

Ms. Swapna Mylabathula: Just to reiterate, there's no need to reinvent the wheel. There are organizations that already reach the public and are already recognized. People already go there. These organizations already have an audience, so, as we were mentioning earlier, the federal government may have partnerships not just with the provincial and territorial sport organizations, but also with science communication organizations that already reach the target audiences that it is looking to reach with policy.

[*Translation*]

Mr. Greg Fergus: Thank you.

I want to turn the floor over to Ms. Hardcastle, in order to give her more time to ask any remaining questions.

The Vice-Chair (Mr. Robert Kitchen) Thank you, Mr. Fergus.

[*English*]

In conclusion, we will finish up with three minutes for Ms. Hardcastle.

Ms. Cheryl Hardcastle: Thank you very much.

I'll try to be quick. I know this is an emerging issue, and it's quickly evolving, so I don't think we have the best template for how we would roll out these protocols that you're talking about. You mentioned the governmental concussion board in your conclusion. I envision something more like a commissioner or a secretariat with an administrative body behind it. However, the point, actually, is more about....

Because it is publicly funded, I want to go back to the Canadian concussion strategy that was developed by Parachute. In Ontario, there is Rowan's Law, which has a mandatory protocol. Could Ontario's law be implemented using Parachute's Canadian concussion guidelines, or are there some gaps? Is there a contradictory area?

● (1835)

Ms. Swapna Mylabathula: Certainly.

Rowan's Law is continuing to be developed in terms of exactly how it's going to be implemented across Ontario. Its predecessor, Policy/Program Memorandum No. 158, is currently being implemented across schools. It's focused on the school setting across Ontario—public and Catholic schools, elementary and secondary schools—and through that I think we can have a very good uptake of harmonized guidelines, such as those of Parachute. I don't see any contradictions in terms of that. I think where it becomes a question is with regard to implementation and relevance to the particular target audience.

Ms. Sandhya Mylabathula: Just to add to that, we can implement the Ontario piece everywhere else in Canada, but it's important to take into consideration, for example, the particular cultural and other types of factors that are important to each province and territory, because they won't necessarily be the same as Ontario's situation in every case. It's about applying the general idea of what's going on to see how that fits within their contexts, and then sharing information as well, of course, on what works and what doesn't work and evolving from there, because this is an evolving issue.

Ms. Swapna Mylabathula: Our vision is indeed to see something like that rolled out across the country in each province and territory.

Ms. Cheryl Hardcastle: Perfect. Thanks.

The Vice-Chair (Mr. Robert Kitchen): Thank you very much.

On behalf of the committee, I would like to thank both of you for your excellent presentation today and for providing the information and disseminating so much important information to us. We greatly appreciate that.

Ms. Sandhya Mylabathula: Thank you.

Ms. Swapna Mylabathula: Thanks so much.

The Vice-Chair (Mr. Robert Kitchen): We're going to suspend the committee for five minutes while we change panels.

● (1835)

(Pause)

● (1840)

The Vice-Chair (Mr. Robert Kitchen): Okay, we're going to reconvene and start the committee again.

I'd like to welcome Mr. Gordon Stringer, who is the father of Rowan Stringer, who died in 2013 after sustaining a head injury while playing rugby. Mr. Stringer is an advocate for concussion awareness and education.

Mr. Stringer, I welcome you to our committee and look forward to your presentation. Thank you very much for coming.

● (1845)

Mr. Gordon Stringer (As an Individual): Thank you very much, Mr. Chair.

I'd also like to thank the committee, particularly Mr. Fisher, for facilitating my appearance here.

As was mentioned, my daughter Rowan passed away in May 2013 from a blow she suffered playing high school rugby. She took a hit in a game on May 8, which was a Wednesday. She lost consciousness on the field and was transported to the children's hospital here in Ottawa. In spite of all the interventions they could do—this being the world-class facility that it is, we know that she got the very best care—she succumbed to her injuries on Sunday the 12th.

Since then, we've been involved very heavily, particularly in learning about concussion. I could probably have written on a Post-it Note what I knew about concussions before what happened to Rowan. I'm considerably more knowledgeable now.

About two years after her death, in May 2015, a coroner's inquest was held here in Ottawa to look into all the information around what happened to her before the fatal concussive event. That inquest was called for by Dr. Charles Tator. I believe Charles has addressed you already. At the time, I didn't know Dr. Tator at all. I've learned very much since then how valuable it is that he became involved in this. He's an incredible man.

From that inquest, 49 recommendations were made by the jury—very insightful recommendations, I must say. The unfortunate thing with inquests is that things that come out of them aren't necessarily ever acted upon. I didn't know that beforehand. I naively thought, well, here we have 49 recommendations, so things are going to get done. That's not necessarily the case.

I approached my local MPP at the time and asked what we could do to get these acted upon.

A private member's bill was put through Queen's Park, co-sponsored by a member from each of the three main parties. It was unanimously passed, and we had the first concussion legislation in Canada pass through at Queen's Park. But that first piece of legislation was speaking only to the forming of a committee, which was to advise the Ontario government on how best to implement those 49 recommendations.

I served on the subsequent committee with very learned people. I felt quite humbled being around the table with these folks, many of whom have spoken here—Eric Lindros, Charles Tator, Paul Hunter, to name a few.

After one year, that committee came out with the report on the creation of Rowan's Law. It is available online. In it, there are 21 action items for the Government of Ontario. The first was creating Rowan's Law, which was passed into law last year in March. Along with the passage of the law, there was the creation of Rowan's Law Day, which will happen every year on the last Wednesday of September in Ontario.

Last September 26 was the first Rowan's Law Day in Ontario. We had incredible participation in that day from the education field, from the health care field and from the sports community.

● (1850)

I was heartened to hear, in the previous presentation, talk of a week. I think that would be incredible. If that moves forward, I think consideration should be given to making that week centred around Rowan's Law Day, which is in Ontario. The day that was picked for Rowan's Law Day was specifically because it's a day that no other kind of “Day of...” falls on.

Also, it is early enough in the school year that schools, sports teams, etc. have an opportunity to discuss Rowan's story, concussions, protocols and so on, so that kids get a start on the school year and on their sports with this base of education and knowledge, age-appropriately of course. It can't be the same across the board. You can't teach a grade 3 student at the same level you can teach a grade 9 student today. It has to be an appropriate base of knowledge.

What we have now is a working group that has been established in Ontario. I again have had the honour of being asked to serve on that working group, which is now working on helping the government implement the rest of the action items that have not yet been fully implemented in Ontario.

I was heartened to hear that last week a call for commentary went out from the Government of Ontario regarding regulations, code of conduct, etc., which will address some of the action items. Commentary is open on those aspects of the bill until April 14.

Other things I've learned over the last six years are things I'm sure you have already heard, but I will reinforce them.

There are gaps. There are voids in the treatment system, the management system, in Canada for people who suffer from concussions and post-concussion syndrome. Like a vacuum, those gaps and voids eventually get filled, but unfortunately they're not necessarily filled with the right things. I've heard it referred to as somewhat of a cottage industry that has popped up with respect to concussions, people hanging shingles out, claiming their expertise in the area of concussions. When people can't get access to the primary, secondary or tertiary care they need, they will go to whatever is available, and that's not necessarily a good thing.

There's a definite need for front-line health care providers, particularly clinicians and family physicians, to update their education in the concussion area. You've no doubt heard that 70% to 80% of concussions will generally resolve within—depending on who you talk to—four to eight weeks.

Those are the people who need to be seen by their primary care physician, and those primary care people need to be able to triage them. They need to have the education to be able to tell whether they can look after them or whether they need to be referred further on. When they get to the point of being referred, however, there is a huge gap out there in proper facilities they can go to, multi-disciplinary clinics where they can be addressed.

Another phrase I've learned over the last six years is that when you've seen one concussion, that is what you've seen—one concussion. It's a myriad of problems and combinations. It's a constellation of issues. You don't necessarily have just one or two; you may have six or seven. You may have only one or two, but all of them, at some point, need to be addressed.

● (1855)

That being said, we do have excellent examples of such facilities already in Canada, such as Concussion North, in Barrie, with Dr. Shannon Bauman. It's an excellent facility. I believe Dr. Bauman has been here. There's Dr. Michael Ellis in Winnipeg, at the Pan Am Clinic. There are people out in Calgary. There are clinics in Toronto and Montreal, at McGill and Laval.

Examples do exist, but they need to be replicated. People need to be able to have access to them when they need that beyond their primary physician care. Here in Ottawa we have a CHEO clinic run by Dr. Goulet. He desperately needs to expand his capacity there. He needs support in funding for that. He's doing the best he can for the kids, but it's not enough. He doesn't have.... That's something that also needs to be addressed, the capacity issue across Canada.

I think I'll leave my comments at that for now. I welcome any questions you have regarding what was said.

The Vice-Chair (Mr. Robert Kitchen): Thank you, Mr. Stringer, for your helpful testimony. It's very appreciated. Hopefully you can add more as the questions come. I appreciate that.

Mrs. Fortier.

Mrs. Mona Fortier: Thank you very much for being here and sharing your testimony. Honestly, I would prefer hearing you sharing with us what else the federal government should be looking at. If you have any specific recommendations that we could look at, I would appreciate hearing that from you.

Mr. Gordon Stringer: Well, I know from my career working for the federal government and 12 years at the health department that there are jurisdictional issues when it comes to health. That being said, I truly believe that the federal government, being the place where a lot of the funding, the money, originates, can have a role in influencing what happens at provincial levels.

We have Rowan's Law in Ontario now. Over the next couple of years, all of the action items are going to be implemented, things like the gaps in education for the medical areas. That was one of the recommendations, ensuring that health care practitioners have updated education, and in the curricula in universities for medical schools. This would be particularly in Ontario, but I do believe it needs to be expanded across Canada, and more education in this area needs to be provided, particularly in the ER, family practitioners and clinicians areas, those front-line people who see the kids and the people coming in the doors first.

I believe we have a template in Rowan's Law that can be replicated across Canada in each province. We've had the catastrophic event. We've had the inquest. We've had the recommendations. We've had one year of experts sitting around the table talking about how best to do this. We've had the action items presented. We have a government that is in the process of implementing all of those action items.

It doesn't necessarily have to be one-size-fits-all, as your previous witnesses said, but I think the template is there. A lot of the heavy lifting has been done. Replication of it, I believe, should be relatively straightforward, given of course the unique circumstances of each jurisdiction. That is understandable, but I think the blueprint is there, much like the blueprint is there for many of the multidisciplinary clinics that do need to be replicated across the system to improve access.

The template is there in Rowan's Law. I'm working now to try to encourage other provinces and jurisdictions to adopt something similar, be it by legislation, policy or regulation. It really doesn't matter to me, as long as the spirit of it and the force of it are there. I think the federal government can have a role in encouraging that type of adoption across the country.

● (1900)

Mrs. Mona Fortier: With the work that is being done right now in Ontario—I didn't go through all the documentation—are you aware of whether an evaluation of Rowan's Law will be done in a few years to see if something else should be addressed? As you say, it's a template. Is there an exercise for making sure that we review, or that there's a revision of, that law?

Mr. Gordon Stringer: Yes. It is mandated that there will be annual reports. The initial recommendation was for every two years, but through the public commentary process it was changed to annual reports that will be done on what has been accomplished with respect to the action items and how it is functioning. I believe it can also be an evergreening process. Some of the elements that will be required, the information portals, etc., will be evergreen. They will be updated as better information comes forward.

What we really want to do is have those portals be the ones that people go to. One thing we learned through the inquest was that Rowan did Google concussions, but the information that came up was not helpful. It wasn't the stuff she needed to see. We need to ensure that the first thing that comes up when people search for the elements of concussions are things like the government portal, where the very best, the newest, and the most up-to-date information can be found. Places like Parachute need to be the ones that pop up for people to seek out information on that. There needs to be some work there with respect to ensuring that the right and most up-to-date information gets into the hands of people. It could be combined with a public service announcement program during a concussion week. There are many ways that could be done.

It's very important that they get the right information when they search for it.

Mrs. Mona Fortier: Thank you.

The Vice-Chair (Mr. Robert Kitchen): Mr. Richards.

Mr. Blake Richards: First, I think I can speak on behalf of everybody when I say how sorry we all are for your loss. I also want to commend you for the courage you have shown in taking a horrible tragedy for you personally, and for your family, and trying to do something to help others. That takes a lot of courage, and it's something that deserves to be commended completely. Thank you for that.

Mr. Gordon Stringer: Thank you. I appreciate it.

Mr. Blake Richards: I want to start with a question that I think will be a very difficult one. It probably won't be comfortable to answer, but I'm going to ask it. If you're not comfortable, it's okay, but I think it's an important question because it really gets to the heart of everything. Is there something that, had we known—if someone had had better education, or if something didn't exist then that should have existed—your daughter's death could have been prevented?

Mr. Gordon Stringer: Absolutely.

Mr. Blake Richards: Can you maybe elaborate on exactly what it is we need to learn, then, to make sure we can prevent others from going through what you did? I know it's a very difficult question, but I know you appreciate its importance.

Mr. Gordon Stringer: It's not one I haven't been asked before.

The medical expert at the inquest into Rowan's death was Dr. Charles Tator. One of his conclusions—the one that rings with me and drives me every day—was "Rowan Stringer's death was preventable."

When we look back with the benefit of 20/20 hindsight, there were several indicators in the period of May 3 to May 8, when she suffered three hits to the head, where interventions could have been made had people known, or been able to recognize or see what was going on. She took a hit in a game on Friday afternoon. My wife and my daughter were at that game. It was a tournament. They had left, so they didn't see the event. They had left to—as Canadians do—go to Tim Hortons, and when they got back Rowan was off the field. They didn't think anything of it. It was the last game of the tournament. She had been playing all day. Nobody said anything to them. Rowan didn't say anything about why she was taken off the field. Right there, somebody could have said something. Nobody did.

The next day she had a headache. She was a kid who had headaches. This was not something that was ever unusual. She took medication—Advil, or whatever it was. The next day she was fine. Sunday was great. She was herself; she felt good. We never even considered that a concussion had happened.

She played another game on Monday with the school. Apparently, she got a knee to the head in that game. Again, the coaches didn't say anything to us. Rowan didn't say anything to us. We weren't at the game. She came home. She had an enormous bruise on her calf. Of course a concussion is invisible to everyone. Our focus was on the purple bruise on her leg. We were like, "Well, you know, you should look after that." I said all this kind of stuff. There was no mention of a hit to the head. Nobody said anything.

On Tuesday, she took a driver's test. She failed, which was actually shocking to me. She was a very good driver. I had full confidence that she was going to go in and pass that with flying colours without an issue, but she failed. It was a bit of a shock, but kids fail their driver's tests. It happens. It was an unhappy event for her, but nothing that really rang any bells with the knowledge that we had.

During the inquest, though, it was very interesting because they called in her driver's test examiner. He had to go back in the file and pull out her results, and he said that if he looked at that today not knowing who it was for, he would have said—with his years of experience—that it was probably an elderly person who was trying to retain their licence. There were judgmental errors that would speak more to a person who lacked the ability to make good judgments on distance, sight and making good decisions, etc. That was very telling in itself.

She was texting with her friends that she might have a concussion, or wondering if she had a concussion. She didn't know. Nobody knew. One of her friends said that she'd had concussions and that if you have a concussion, you'll know you have a concussion—there's no question about it. Well, she didn't know. She wasn't sure. Other friends just said to play the next game and if it's still bad then maybe get somebody to look at it.

The education part of it is just for people—kids, friends and coaches around her, all those people—to have more education and ability to recognize. It is speaking up to somebody and just saying that she took a hit to the head so you might want to have her looked at, or saying that they took her off because of x, y or z—whatever it happened to be.

● (1905)

Going back over that with the benefit of 20/20 hindsight, there were plenty of opportunities for intervention. One thing that happened during her final game was that the tackle was illegal by the laws of the game; it was a swing tackle. Rowan was carrying the ball. She was grabbed by her jersey and thrown, which is not allowed in the laws of the game. The girl who did the tackle did this to another player earlier in the game. The official merely gave her a warning. It should have been a penalty or possible expulsion from the game. You have rules. You need to apply the rules. You need to penalize on your rules and your laws. Had she been penalized, had she been removed from the game, there is a good chance that Rowan would not have received the same tackle that she had delivered to another player and that resulted in Rowan's demise.

Looking back, there are all kinds of areas where interventions could have been made. It doesn't lie just with other people, but ourselves. We look back at it all the time and say there were so many different times....

Excuse me.

● (1910)

The Vice-Chair (Mr. Robert Kitchen): No worries.

Mr. Gordon Stringer: Had we known, we could have done something.

My last words to Rowan on Wednesday morning when I dropped her off at school were.... We were still focused on the knee, right? I said, “You know, maybe you should think about sitting out the game today; your knee's not looking very good.” It was the typical, “Oh come on, Dad, I've played through shoulder injuries. I'm feeling all right, and my knee will be okay” and all that stuff.

There were a lot of potential interventions there. Had people had the knowledge, the insight and the education, the outcome could have definitely been different. What came out of the inquest were a lot of recommendations that deal with that. Rowan's Law speaks to a lot of those, particularly the education, awareness and prevention pieces.

There needs to be a cultural change. What I've learned over the last six years is that we're not going to get leadership from the professional levels of sport, unfortunately. Rugby has done quite a good job at the player level, and Rugby Canada in particular. The work of Paul Hunter and the folks at Rugby Canada has been extraordinary since what happened to Rowan, but they're not finished. They're constantly looking to better themselves.

I can't say that about a lot of the other sports. I think they're making small steps in the right direction, and I hope that Rowan's Law in Ontario will influence bigger steps, but it really does need to be a cultural change that comes from the ground up. This is why I have such a strong affinity towards getting it into the education system, getting it into the community sports.

The kids are going to drive this as time goes on. They're going to go through a system that says that it's important to look after your brain, that these are things you have to look out for—for yourself, for your teammates, for your family and for your friends—and to speak up if you see something happen.

It's the same way they drove programs like recycling. The kids were the ones who were coming home and saying, “What are you putting that in the garbage for? Put it over there in the recycling.”

They're going to drive it, but that's a long-term game. In the short term, we need to get everyone educated. As we said at the advisory committee, it really takes a village in this case. Everyone has to be on board: parents, administrators, officials, coaches, trainers, athletes and friends. Everyone has to be on board with this, participate actively and be forthright.

You cannot rely on the brain-injured athlete to self-declare that they have a problem. Their judgment, as was seen in Rowan's case, is not necessarily right. They're not necessarily going to have the faculties about them to make that decision for themselves. They need someone else to speak up for them.

● (1915)

Mr. Blake Richards: Thank you for sharing. I know that no matter how many times you've had to do it before, it's not easy. That means a lot, and I think it makes a difference, so thank you.

The Vice-Chair (Mr. Robert Kitchen): Ms. Hardcastle.

Ms. Cheryl Hardcastle: How much time do I have, a minute or two?

The Vice-Chair (Mr. Robert Kitchen): You have time for a couple of questions. We'll swing it with this one.

Ms. Cheryl Hardcastle: I appreciate that.

You know, Gord—if I can call you Gord—your conviction is so admirable. I don't want to get choked up, and we're going to try to keep it up here, but we get it. Also, as you know, Rowan's story and your passion for this really have motivated this a lot. It's a huge part of what we're doing here in talking about the federal role.

If we could just kind of riff on that a bit, as you did very well a minute ago, what do you think is the federal role? Should each province have its own Rowan's Law to roll something out regionally and provincially and then have a federal...? I'm just assuming, because you mentioned your professional career, that you must have some bureaucratic insights on where we should be maximizing what we do as we move forward.

Mr. Gordon Stringer: I think the steps that have been taken, particularly with the FPT work that has been ongoing on concussions, are a really good first step. Getting all those national sports organizations, the NSOs, involved in this and buying into something.... It has to happen. They have to be the drivers of this. My concern is about the trickle-down from there and how effectively and efficiently that happens. What I've noticed in Ontario, from my perspective at least, is that the provincial sports organizations seem to have a better mechanism to get things down to the community level. Relying on national sports organizations may not be the best bet at this time, but they definitely have to buy in and at least monitor what their PSOs are doing and ensure that their PSOs are getting the messages out.

As far as the federal role is concerned, because of the jurisdictional divisions, I really do feel that having something in each province and territory is probably the best way to go. Having some kind of overarching 30,000-foot view, or whatever, from the federal government as to things they would like to see happen and encourage to happen would probably be a good idea, but I think we will probably get more bang for the buck if we actually get each province and territory on board, either with some kind of replica of the existing Rowan's Law or with something similar, however they may want to implement it at their own levels.

I see a federal government role—for example, public service announcements. If you're going to have a week, or if you're going to promote sport, have that as part of the sport promotion piece; have it as part of a health promotion piece; have a federal portal where people can get the best and brightest information on this. Support from the federal level into research, I think, really needs to happen. We're fortunate that Dr. Michael Strong from Western University is now at CIHR. He was a huge and very important advocate for work in the concussion area. I hope he will carry that over into his role at CIHR and we'll see increased funding in that area or better targeted funding.

We have an embarrassment of riches in Canada when it comes to research in this area. We punch way above our weight in the world in concussion research. We have such incredible people doing work here—the folks in Calgary, Western, Toronto, McGill, Laval. It's incredible what Canada is doing in this area. If you look at the attendance and the memberships on committees that were at the Berlin consensus conference, you'll see that Canada is in there well beyond what anyone would expect from a country of our size, at least population-wise. These people are doing incredible work and they need to be supported.

● (1920)

A telling factor is that the NFL recently made a huge grant to the people in Calgary to do some work. The fact that they got the second-biggest grant out of that from the NFL speaks volumes as to the quality of work that's being done here in Canada. It really needs to be supported, because there are so many unanswered questions, but we can be the leader on that. We are leaders in a lot of the areas now, and we can continue to be.

The Vice-Chair (Mr. Robert Kitchen): Mr. Fisher.

Mr. Darren Fisher: Thank you, Mr. Chair.

Thank you, Mr. Stringer. I couldn't do what you did.

The template is there. You say you're working with other provinces. What's your success rate? Have you talked to Nova Scotia?

Mr. Gordon Stringer: No, I have not talked to Nova Scotia, although I know there is interest there.

Mr. Darren Fisher: I'd be happy to help.

Mr. Gordon Stringer: I've been working—I can't say closely—with people in Manitoba. Dr. Michael Ellis is driving a lot of the stuff there. They did have legislation tabled; I don't believe it has moved beyond first reading. My understanding was that they were waiting to see how Ontario did with Rowan's Law. I'm hoping there's going to be new impetus now for them to move forward.

I've started with some folks in Alberta. I know there's grassroots interest in B.C., but the government doesn't seem to be receptive to it.

Mr. Darren Fisher: Are you happy with Rowan's Law as it is written? Are you happy with the recommendations and the 21 action items? Are you happy with the way it's rolled out, notwithstanding the fact that the government has changed from when it started to when it's in the process of implementation? Are you happy with the progress that's been made to this day?

Mr. Gordon Stringer: Yes, on all counts.

Mr. Darren Fisher: So that's a template that we want to send across the country.

Mr. Gordon Stringer: I believe it's worth a lot of consideration. I was gobsmacked at the recommendations that came out of the inquest. These five people on the jury were just people from Ottawa. What they produced was so insightful that you could tell they were really engaged and paying attention. The support at the provincial level from the legislature, again, was incredible. I would love things to move faster than they do all the time.

● (1925)

Mr. Darren Fisher: You know government, though.

Mr. Gordon Stringer: Having my history in government, I know that things take time. The unanimous support in the legislature was huge, and it carried over from the change in government. The first Rowan's Law Day fell under the first year of the new government there. From all indications that I've had so far, they are moving on this file. Last Rowan's Law Day, I had the opportunity at Queen's Park to meet with the premier. He gave me his word that this would be acted upon, and from what I can see it is being delivered. Not as quickly as I would like, of course, but it's happening.

I believe the action items address a lot, if not all, of the issues that need to be addressed with respect to legislation, awareness, education, prevention, management, treatment and surveillance. All those pieces are there. It's going to take time to implement all of them. That's fully understandable; it couldn't be rolled out overnight. But I believe that if you look at the report, much of what needs to be addressed outside the research piece is spoken to here, and it's spoken to in a way that will really get to the crux of the issues that are there.

Mr. Darren Fisher: Do I still have a bit of time?

The Vice-Chair (Mr. Robert Kitchen): You have 15 seconds.

Mr. Darren Fisher: I couldn't even touch on this in 15 seconds.

Thank you, sir.

The Vice-Chair (Mr. Robert Kitchen): Thank you.

I'm next in the rotation to ask a question. I'll ask a very quick one, and then we'll move on. Thank you for your testimony.

You talked about Rowan and about people missing steps during those four or five days. One thing we heard from a lot of people at the committee was about data collection and an app that might collect that data. The challenge with that, just going by my own old age, is that the computer is only as smart as the person who puts the information in the computer. An organization called Complete Concussion Management has an app that allows for that input of information right away and allows for trying to protect privacy issues. For example, if someone has a concussion in rugby, it's entered. The privacy is protected, but the coach for the hockey team now can access that program and find out that this person had that concussion in the rugby season as they now enter into the hockey season.

To me, that's a valuable piece, but how do we protect privacy to make certain that we don't get someone's private information being pushed and stepped on when that happens?

Mr. Gordon Stringer: I can't comment on the particular app you're referring to.

The Vice-Chair (Mr. Robert Kitchen): I just used that as an example. We've heard of other apps that are out there as well.

Mr. Gordon Stringer: I know there are software companies out there that have experience in this area. I don't know if I'm allowed to mention any of them in particular.

The Vice-Chair (Mr. Robert Kitchen): I think so, yes.

Mr. Gordon Stringer: One that came and gave a presentation to the advisory committee was called PRIVIT. They operate now in many jurisdictions in the United States. The idea is that it keeps things confidential and it can go across sports. To me, the key with this is not necessarily the app or the program; it has to be consistent across the board. If you adopt something, then it has to be readable across platforms, or everyone has to buy into a particular mode. Otherwise, the system will break down. There are checks and balances you can put into these things where somebody has to give consent in order to share with another sport organization or whatever. I think those can be built into a system like that.

One of the recommendations that actually came up here is that the government look into something like this—i.e., how to enhance surveillance and data tracking and all of that stuff. One study that I assume will be done as they go through these action items will be to look into something like this, see what they feel might be the best solution to that, and of course take into account the privacy concerns.

● (1930)

The Vice-Chair (Mr. Robert Kitchen): Thank you very much.

Mr. Longfield.

Mr. Lloyd Longfield (Guelph, Lib.): Thanks, Mr. Chair.

Thank you for your compelling testimony. I'm just subbing on this committee, but I'm thinking of other studies I've been involved with. I've also been involved in mental health studies. The developing brain is one thing that has been looked at in different ways. The brains of under-25-year-olds are still developing. Young people are more susceptible to different things relating to the brain, whether it be drugs, addictions or the impacts we're talking about.

Stem cell research is something that Canada is leading in. I'm very interested in the role that the Canadian government can play in facilitating conversations or setting frameworks or setting funding for CIHR or others. This has been asked in other ways today, but I'm thinking of, for instance, the cannabis legislation that we've introduced. We know that the developing brain is still not matching our legislation 100%, but we're trying to get to the 18-year-olds and younger at least with our legislation. That's an example. As well, in our most recent budget we introduced suicide prevention hotlines across Canada. So the federal government gets into those cross-jurisdictional areas where we put a framework together.

It sounds like you have a very solid framework within Ontario. This has been asked in other ways, but is it the framework that we need to look at, first of all? Is it stem cell research opportunities? Is it funding? Is it regulations on the sports equipment that has to be worn under a certain age, such as the head protection gear in boxing or in other areas where you have impacts?

Mr. Gordon Stringer: That's a wide-ranging question.

Mr. Lloyd Longfield: I know. I'm sorry, and we don't have a lot of time. I apologize.

Mr. Gordon Stringer: I think the framework, the template here, is important because it speaks to so many areas that need to be addressed. If Rowan's Law could be implemented at the federal level and apply to every province and territory, that would be great.

Mr. Lloyd Longfield: Do you mean in terms of regulations?

Mr. Gordon Stringer: I mean in terms of regulations, in terms of policy, in terms of whatever needs to be put in place to address the issues that are there. When you get into the health issues, the education issues, I don't know if the federal reach can go down to the level that it goes to provincially, other than in terms of influence, and not “This is the way it will be done.”

As far as equipment goes, I hesitate to talk about any kind of equipment with respect to concussion, because of the type of injury that a concussion is. There is nothing out there now, despite the quackery that comes up regarding mouthguards and all this. The other day there was somebody promoting an anti-concussion headband. If you look at the mechanics of this injury, these things are not going to prevent concussion. There isn't a helmet that exists now that's going to prevent concussion. It's going to prevent skull fractures maybe, but there's nothing there, no piece of equipment.... There was a great outcry after Rowan's death: Why wouldn't they wear helmets? It wouldn't have made any difference. There's no point in wearing a helmet. It's not going to stop a concussion. Getting into talking about specific pieces of equipment, to me, is a non-starter; it's a red herring.

What needs to be done is to educate people on “recognize and remove”, to ensure that when an athlete takes a hit, you don't even have to do the medical assessment. If you have a feeling that the person might have a concussion, they're off the field; they're off the ice; they're out of the game until a doctor says they're okay to come back.

● (1935)

Mr. Darren Fisher: They just got hit.

Mr. Gordon Stringer: If you have an athletic trainer on the sideline or somebody.... That's another area that I think needs to be pursued, having athletic trainers at events, at games. These people are trained to make that recognition and those decisions and to ensure that athletes are taken care of properly.

To me, the key is to have all the people in the area—the coaches, trainers, parents, athletes and officials—being able to say that it might be a concussion and that the person has to go off and get taken care of. If it's not a concussion, that's wonderful, but if it is.... Second impact syndrome is what happened to Rowan. She had a third hit before her first two hits had time to heal, and she had the catastrophic event as a result of it. There don't necessarily have to be two hits; it can be one hit beforehand and the next hit is the one that does them in.

To me, really, the keys are education and having the wherewithal and the buy-in from everyone involved so that if any person takes a hit that looks like a concussion event may have happened, they're out until they're cleared.

The Vice-Chair (Mr. Robert Kitchen): Thank you very much.

Thank you for your statements and for your courage to pursue this and educate. You are doing that as well, because you're educating Canadians on this very aspect. Education, education, education is an important thing, especially in this area, so thank you for that.

I know I speak on behalf of my colleagues here today when I thank you for coming to committee, for your presentation and for answering our questions. It's greatly appreciated. Thank you very much.

Mr. Gordon Stringer: Thank you very much.

The Vice-Chair (Mr. Robert Kitchen): The meeting is adjourned.