

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

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#### **EVIDENCE**

Wednesday, April 3, 2019

Chair

Mr. Peter Fonseca

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● (1700)

[English]

The Chair (Mr. Peter Fonseca (Mississauga East—Cooksville, Lib.)): Welcome, everyone.

This is the subcommittee on sport 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.

We have two panels of witnesses here tonight.

First, we welcome Commissioner Ambrosie and his counsel, Mr. Shamie. Commissioner Ambrosie is going to provide an opening statement.

Commissioner, I believe this is your second year at the helm of the CFL. I know that you're pursuing a coast-to-coast-to-coast league. We wish you well with that. Many of us are fans, and we're excited to hear from you today.

This committee, and I speak for all members, is looking to grow sport in Canada. What parents and communities are asking is that they would like to see our arenas, sports fields and all areas of play to be safe for the participants—from the amateur level, the little leagues, all the way up to the majors such as the CFL.

It's great that you are here with us today.

The members are going to have an opportunity to ask you questions. You'll have an opportunity now to make a statement. We look forward to hearing your answers.

The floor is yours, Commissioner.

Mr. Randy Ambrosie (Commissioner, Canadian Football League): Thank you very much, Mr. Chair.

Good evening. Thank you to all of you for your public service. Thank you for your focus on sport and thank you for this opportunity.

In preparation for today, I read some comments from you, Mr. Chair, suggesting that commissioners should want to "grow the grassroots of their sports and have parents feel their kids are playing in safe environments all the way through." I couldn't agree more, and I think you will see that reflected in my comments.

I want to say three things today. First, I am going to tell you just some of the steps the CFL has taken to prevent, detect, diagnose, assess and treat concussions in particular, and promote player health and safety in general. Second, I am going to challenge you—and through you, challenge the government—to expand your focus beyond concussions alone to overall mental health. We very much want to work with you on that. Finally, I am going to ask you to really broaden your horizons and work with us to address what I see as a crisis, which is declining participation rates in football and the corresponding effect on the physical, mental and emotional wellbeing of our youth. I fear we are scaring kids away from sport, and our game in particular, when we should be doing all we can to encourage them to participate.

Let me say from the outset that player health and safety is a top priority for the Canadian Football League. Mr. Chairman, this is not just a motherhood statement from me. Our focus on health and safety is not just an academic exercise for me. I played for nine years in the CFL as an offensive lineman, on top of my years in university and amateur football. I see our players in the CFL not just as employees, but as peers, even if our careers have been separated by a decade or two. I see them as partners in building a bigger, stronger and better CFL. No athletes anywhere in the world do as much work in the community as ours do on issues such as opposing bullying, promoting nutrition and combatting attitudes that lead to violence against women. I think the world of our players and I want them to be safe.

Allow me to mention just a few of the steps we have taken to make our game safer. We have lengthened our season by a week to give each team three bye weeks a year without a game, instead of two. We have eliminated contact in practices during the regular season and playoffs, which is one of the factors that has led to a 35% decrease in injuries in practice. We have added an injury spotter to our command centre, which monitors every play of every game from our Toronto headquarters, looking to identify an injury or player in distress that may not have been detected on the field or from the sideline. We put in place a comprehensive concussion protocol, which is updated annually in keeping with the best practices around the world, and which is managed exclusively by our medical staff and which, of course, removes a player from play if he has any symptoms of a concussion. It does not allow him to return to play until he is symptom free. We have introduced mandatory baseline testing at the start of every CFL season, so we can compare the brain health of our athletes, particularly if they have suffered a concussion or are recovering from one. We have put in place mandatory education on concussions for all of our players and officials, as well as information on the signs and symptoms of concussions, which are posted in every CFL locker room. We have introduced the use of player safety videos throughout the season that reinforce the need to eliminate dangerous and reckless play.

We co-hosted an international conference on collision sports from all around the world to share best practices and align on data collection and research. We participated in research projects that have, for example, examined active rehabilitation techniques for concussion recovery, measuring athletes' willingness to report concussions, and an assessment of the King-Devick test for diagnosing concussions. We have constantly updated our rules to put an emphasis on player safety. It is now illegal, for instance, to hit a quarterback from the knees down or from the shoulders up.

We work closely with our world-class medical personnel. We meet with them and learn from their counterparts in sports around the globe, and engage in ongoing education and training for our equipment manager and athletic therapists.

We are particularly proud of the fact that we have partnered with Football Canada to deliver a safe contact program. It has now trained and certified 13,000 amateur football coaches from across Canada in how to teach the safest blocking and tackling techniques.

(1705)

Football Canada is also working to ensure that kids engage in full contact at appropriate ages. By January 2022, it plans to mandate that no 12-person tackle football can be played by anyone under the age of 12. Already, it is prescribed that there should be no tackle football played by anyone under the age of eight.

While we enthusiastically support tackle football for older age groups, we are putting a huge emphasis on flag football for young girls and boys. This year, the CFL and our member clubs invested more than \$4 million in amateur football, much of it devoted to flag and touch football, as well as tackle football.

We want our youth to play the game and to play the game the right way—safely. When it comes to concussions and player safety in general, we do not pretend to have all the answers. We are always looking to do more and learn more. We work with our own doctors and other leading experts from around the world, but our commitment is clear.

I do, however, have two concerns that keep nagging at me.

The first is this. This singular focus on concussions, while addressing a valid concern, doesn't go nearly far enough. We keep focusing on one tree, albeit an important one, instead of the forest.

I personally believe we have to do much more to make the overall mental health of young people an important focus, and not just athletes but all young people. One in five teens experiences mental health challenges. Suicide is the second leading cause of death in this age group. However, we remain far more advanced in treating sprained knees than we do troubled minds.

This isn't a sports problem; it is a societal one. I believe sports can set an example by taking the mental health of our athletes as seriously as their physical condition.

Also, maybe if we can learn more about helping athletes handle the stresses of a season or a career, we can unlock better ways to help youth deal with the pressures of growing up, athletes with the pressures of juggling work and family, or our seniors with the pressures of growing older.

I would like the CFL to be the first professional sports league anywhere to start each season with a mental health assessment of our players as well as physical exams, not for evaluating an athlete but for diagnosis and treatment.

This can be an important element of concussion treatment, because there is growing scientific evidence that there is a link between concussion recovery and a patient's overall mental health, particularly depression and learning disabilities. The more we understand an athlete's mental health profile, the better we can understand his or her recovery from concussion.

This would be an expensive undertaking. The CFL is a Canadian institution. It is a major brand. It has a storied history. If we work to expand our international football footprint, as part of a strategy I call "CFL 2.0", we have a bright future. However, unlike other leagues, we do not participate in the windfalls generated by giant U.S. markets like New York and California, and we are not rolling in dough. Therefore, we look to you and to government to help work with us.

We would very much welcome an opportunity to partner with the federal government on this. We could start with a smaller pilot project. It could even be a model not only for sport but for employers everywhere.

Finally, I am worried that the ongoing and often singular focus on concussions, magnified by the media and amplified by Hollywood itself, carries with it an unintended but tragic consequence. Too many kids are not playing sports. This is certainly true in football, where participation rates are steadily declining.

A study on sport participation done by the federal government in 2010 estimated 170,000 youth played football. Research for the CFL conducted in 2015 pegged that number at 136,000. Today, Football Canada estimates the total to be about 100,000, a 40% decline from a decade ago.

I respect all sports, but I can tell you that football has had a transformational effect on my life, and it has had that effect on millions of lives.

The game is incredibly inclusive. A football team needs athletes of all sizes and shapes and with all sorts of skill sets. Boys and girls can play touch football or flag football, as well as tackle football, or even just toss the football around with their friends. Football preaches discipline, teamwork and hard work. It teaches lessons, creates friendships and produces opportunities that literally last a lifetime.

**●** (1710)

Too many kids are missing out on that because they are missing out on football, and the singular focus on concussions is one of the reasons why. It has disproportionately affected football, when the fact is that other sports have higher rates of concussion.

Also, it has created a climate of fear instead of what we want, and what I am certain you want too, which is a society that encourages physical activity and participation in sport at the same time as it ensures that sport itself fosters a culture of health and safety.

Encouraging kids to be physically active and to choose sport, including the sport of football, has to be an urgent priority. The Government of Canada reports that obesity rates amongst children and youth in Canada have nearly tripled in the last 30 years. Diabetes has become one of the most chronic diseases amongst children and youth. A report from Children First Canada and the O'Brien Institute for Public Health found that, amongst youth, the number of hospitalizations related to mental health has increased 66% in the last year. The Toronto Star reported last year that 5,800 Canadian children and youth have committed suicide in the last 13 years, some of them as young as eight years old.

Isn't it obvious that some of those overweight kids, some of those kids who develop diabetes and some of those mentally ill kids would be healthier if they were physically active, if they had a welcoming place to play, a team to be part of and a sport to call their own? Is it possible that some of those kids who took their own lives might still be with us if they'd had a teammate to talk to, a coach to count on or a game or a road trip to look forward to?

Please understand what I'm saying. I want your report to call for more action on concussions, for more work, more research and more funding. Of course, we would welcome all three, but let's at least match that effort and funding with programs and dollars designed to encourage kids to play sports, including football. Let's invest in making certain that sport, including football, is possible and accessible in under-resourced and remote communities.

We have taken the Grey Cup to the Far North, to remote aboriginal communities, and we have conducted flag football clinics there. These were the three things we heard most: "We can't believe you're here; we can't thank you enough; we need you to come back." Please help kids in every community, rich and poor, around the corner and in remote corners of our country, enjoy the benefits of sport in general and football in particular.

With all due respect, support for football in this country is underwhelming and disappointing. Years ago, the federal government adopted a funding model that favoured Olympic sports and international competitions. The result is that our homegrown game, Canadian football, which is part of our history, our heritage and our culture, is too often underfunded, understaffed and really underappreciated. At times, it can feel like it's under attack. Volunteers in every corner of our country do their very best, but it's a losing battle, and our kids are losing out.

In conclusion, Mr. Chair, please, we welcome meaningful recommendations on concussions. Those are very important. But we also ask that you and your colleagues in Parliament look beyond concussions alone to the mental health of not only our athletes but all youth. Please engage the CFL in that work. We want to lead the way with you, and please—this is so crucial—look at what our children and our youth are going through today, and don't make the mistake of scaring them away from sport and away from football. Encourage them to get off the couch and off the screen and out of the house. Do all you can to encourage them to play. Our kids will be healthier for it, our country will be stronger for it and our future will be brighter because of your work.

Thank you. I look forward to a conversation with you.

• (1715)

**The Chair:** Thank you, Commissioner. Thank you for your passion and your commitment to tackling concussion as well as the bigger picture of mental health.

We are going to move now into questions from our members and your answers.

Members, we may shortly hear the bells ringing. I want to ask for unanimous consent to stay here until a few minutes before we need to get up to the chamber to vote.

Some hon. members: Agreed.

**The Chair:** I see unanimous consent. Great. We are going to start with questions from the Liberal side.

Madam Fortier, you will commence. You have seven minutes.

[Translation]

Mrs. Mona Fortier (Ottawa—Vanier, Lib.): Thank you, Mr. Chair.

Thank you to the witnesses for their presentations.

I know it's important to talk about the mental health of athletes, sports participants and young people. That said, since our subcommittee's mandate is to study sports-related concussions, it would be useful to hear you talk about that.

Do you do any research on concussions sustained by athletes in the CFL? If so, could you describe what exactly you're studying and how you approach the issue?

[English]

**Mr. Randy Ambrosie:** Yes, in fact, we are involved in a number of research efforts. While we don't have a self-contained research facility within the Canadian Football League, we are working with groups around the world of sport and engaging in research on concussions specifically.

Last year, for example, we co-hosted a conference on concussion sports that brought some of the leading experts in sports from around the world together to talk about the best practices in concussion protocols and to talk about some of the research that's going on to help us all gain a better and deeper understanding. We're constantly looking to partner in the world of concussion research and brain health research, and we try to do everything possible that we can be involved in with respect of concussion and brain health.

**•** (1720)

[Translation]

**Mrs. Mona Fortier:** Has the research you've done or the stories you've heard given you ideas on how to change the culture and the way the game is played in order to protect athletes from concussions? If so, can you give us some examples?

[English]

**Mr. Randy Ambrosie:** It is a great question. I am so proud and honoured to say that the game has already changed more than you could possibly appreciate.

I'm an athlete who played in the 1980s and early 1990s, and I can tell you that this version of the game is very different. It's safer. When I first started playing football in Winnipeg, the techniques that we were taught were effectively "my nose to your nose", so it was essentially teaching effectively a collision between the athletes who faced one another. Today, the techniques they're teaching children and ultimately that we're teaching the athletes at the professional level are far different.

The game used to be played vertically, where the combatants went at one another almost in a direct pursuit of one another. Today, the game is played horizontally, which is to say, if you watch offensive linemen, who I am one of, you'll note that on almost all plays, their first step is sideways. They're trying to gain ground. The game today has a very different fundamental dynamic than it had back when I played. The game, in my view, has never been safer in its history. We continue to look for ways to improve and evolve the game, but really, it is a combination of the way the game is taught and played, and the culture of the game is also changing.

I would submit to all of you that we are living in the echo of the two most violent decades in sport, the 1970s and 1980s. Back then, if you turned your TVs on in the evening, the highlights in sports were almost always the biggest collisions and the toughest fights. That's what we watched for. During those two eras, I think athletes

were engaged in a very combative sport that was more focused on the physical combativeness than the version today. We've refocused on the beauty of their athleticism, the big catches and the big plays.

In fact, in my first season as commissioner, we called it the year of the catch, which was evidence of our own desire to reframe the narrative and the conversation around our sport, not so much for its pure physical toughness but for the beauty and the skill these athletes have.

The game has not just changed physically. I could take you through.... If we could come into the centre of this circle, I could show you just how differently the techniques are taught today than they were in my era, but the more important thing is that the culture is changing. Players are learning to take care of one another. There's a greater emphasis on respecting the fact that your competitor is an athlete who is, in our sport, making a living playing the game and needs to be respected. That's why we've been very tough on our discipline.

[Translation]

**Mrs. Mona Fortier:** I gather that you want to continue making the game of football safer. Although changes have already been made, my guess is there is still some work to do. Can you give us an example or two of how you're currently working on that front?

[English]

Mr. Randy Ambrosie: Again, thank you. That's a great question.

We just completed an exercise in reviewing what we call our rules committee process for the upcoming season. One of the changes we're making is to install an even greater penalty for making head-to-head contact with a quarterback. We're going to make that a greater point of emphasis and very punitive to the team that is engaged in that behaviour. We are going to further engage our command centre and our injury spotter to have them play a greater role in the officiating of our games. Our on-field officials will now be able to call up to the command centre and ask them for guidance and assistance in respect of what has happened on the field. Before the season begins, we're going to engage to talk to our teams and our coaches and ask them to emphasize just how severe the penalties will be for play that is dangerous and that disrespects the athletes who are wearing the other uniform.

In fact, the entire rules committee process was really centred around health and safety. How do we make the game safer? How do we play the game more safely? As much as I can tell you the game is different today than the game I played, there's always going to be work to be done. There's always going to be the next improvement to make. I think that's one of the great qualities of the human species; we're always reaching for the next improvement, and football is part of that endeavour.

• (1725)

Mrs. Mona Fortier: Thank you very much.

The Chair: We are now going to move over to the Conservatives.

Dr. Kitchen, you have seven minutes.

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

Mr. Ambrosie and Mr. Shamie, thank you very much for being here. I greatly appreciate it.

I truly believe that Canadian football is the best football in the world. I also believe the Canadian Football League is the best football league in the world. I appreciate that. It's a great game, and we need to get that out to Canadians.

I'm happy to hear you talk about youth and sport and trying to expand that down to our youth such that we continue to focus on them being active and educating them on the safety that's out there.

In your presentation that you talked about pre-season assessments and you talked about baseline testing for your athletes. I commend you for doing that. I think that will go a long way as we further research this important issue.

The Canadian Olympic and Paralympic Sport Institute Network also came out with a report recently that talked about baseline testing for athletes per se, especially in contact sports, etc.

What are your thoughts on that sort of baseline testing, not only for professional athletes but for our athletes as they develop from youth, from the playground up to that professional level?

Mr. Randy Ambrosie: We're hoping and encouraging that our best practices at the professional sport level will be adopted at the amateur sport level, but that's expensive. It's one of the reasons we're asking all of you, and asking the government, to reinstate better funding for the game of football. We are a very underfunded sport today. If you look at the overall Sports Canada funding, we are well down the list. This is one of Canada's great games, yet we struggle for funding. I visit with amateur football coaches and amateur football leaders from across the country, and they all say the same thing: They're starving for resources.

Part of the answer is to set a good example that these baseline tests are important. It's an important part of understanding where an athlete is so that in the event of an injury, they can better assess their recovery. In order to do that and in order to have that trickle-down effect, we're going to have to have the government help us with funding.

**Mr. Robert Kitchen:** I infer from that that you believe if these leagues could afford to do that, it would be worthwhile doing so they would have that baseline as they watch their athletes play.

#### Mr. Randy Ambrosie: Absolutely.

Again, I think of professional sports as a place where best practices are encouraged and developed and those best practices are shared. In fact, that has been a theme of these past two years. Stephen Shamie and I, as well as our colleagues and our board of governors, say frequently that there's room in the CFL tent for everyone. We are a community that wants to bring the rest of the football community, and frankly all Canadians, into our world and share with them the things that we know and that we're learning.

We're working hard right now with university sports and junior sports all to share what we're learning and what we know. The only thing missing with respect to being able to do that more effectively is to make sure we have the financial resources and support to do it. **●** (1730)

Mr. Robert Kitchen: Thank you.

That leads me into my next question, about the King-Devick assessment, which you mentioned in your report.

For those of you who don't know, it's a two-minute, quick assessment. It's a very high-sensitivity and high-specificity test, but it also comes with a cost.

When you're talking about that, there is the issue of cost. As we move forward, how do we further educate our trainers, our sideline coaches, and so on, on these aspects, on this one in particular, because there is a cost to it? You have an annual cost to use it.

Mr. Randy Ambrosie: Yes. The answer is that group, and as we think about the health and safety of our players, everyone is part of it. If you looked at a team, you would note that our equipment staff, trainers, athletic therapists and doctors are part of an ecosystem to help keep our players safe. Creating the resources for them to share all that they're learning and all that they know with their counterparts in amateur sport could be an important feature in making the game safer for the amateur athlete. We're happy to do that.

If you could only know, and Dr. Kitchen, I know you know and love the CFL, but if I could somehow try to share and convey with all of you just how amazing these people are that I get to work with every day, that Steve and I get to go to work with, these are some of the greatest Canadians in this country. They love not just the game of football, but they love the country, and they are willing to share. Our owners, our team leaders, our coaches and our presidents of the teams all want to share what they know and what we do with the world of sport. Our players are amongst the most selfless and most giving athletes in the world and will go anywhere you ask them to, to share the knowledge that we have and the great messages we have in our game.

We can do so much more with your help.

The Chair: You have about one minute.

**Mr. Robert Kitchen:** Okay, thank you. I still have more time. I thought I was done. I'll very quickly ask another question.

In our last committee meeting, Mr. Gordon Stringer was here. His daughter Rowan tragically passed away from a head injury. In Ontario, we have Rowan's law.

I will paraphrase something he said when he was talking about education. I believe that aspect of it is education, education, education, education, education right down to our youth not only in high school, but in elementary school where they're playing flag football, and so on, which means having that sport health attitude to teach our kids to be stronger and healthier.

Would you agree with that and would you support that?

The Chair: You have 30 seconds.

**Mr. Randy Ambrosie:** Yes, absolutely. As I said, the culture change we've been undergoing needs to be shared, teaching athletes to respect one another, to see each other not just as competitors, but essentially as allies in the game. Anywhere we can share the message of how the game should be played and respect for each other as athletes and sharing that right through the food chain is important.

Again I would emphasize that our players, athletes, coaches, presidents and administrative staff all want to do more to help the amateur sport community.

The Chair: We're going to move to Ms. Hardcastle, from the NDP.

Ms. Cheryl Hardcastle (Windsor—Tecumseh, NDP): Thank you very much, Mr. Chair.

Thank you, Mr. Ambrosie, for setting out your statement and your stance for us here.

I wonder if you can help us understand a bit better the situation with the CFL. Why has the CFL failed to acknowledge, or refrained from acknowledging, the link between concussions and brain disease?

**Mr. Randy Ambrosie:** I'd start, humbly, by saying I am not a doctor nor am I a scientist. I have a Bachelor of Commerce honours degree, and if we want to talk about dissecting a balance sheet, I'd be your guy.

I think what we're attempting to do is follow the science. We're talking to some of the leading—if not the leading—scientists in Canada. We're talking to and spending time with the leading scientists in the world. We're working hard. I say this without hesitation. I'm personally working hard to read every report I can read and to attend every conference that I can make time for to better understand this issue.

If I may, what scientists are telling us is, yes, there have been hockey players and football players who have been diagnosed with CTE. That is a fact. But there are thousands and thousands and thousands of football players and hockey players who have played the game without having CTE. In fact, Dr. Lili-Naz Hazrati, a Canadian neuroscientist, published a report on an autopsy of a woman who, to the best of her family's recollection, had never played sports in her life and had never suffered a concussion, and yet her brain was riddled with CTE.

This is all to say it is a very complicated issue. I'm really not able to be an authority on this subject, so I am just simply following the science.

• (1735)

**Ms. Cheryl Hardcastle:** If I may follow up, then, my time is more limited than that of the other members on the committee, so bear with me.

Do you feel as if that response, though, is sufficient now, given that every year that goes by we have substantive evidence and substantive science that adds to that. You mentioned the Berlin conference. It was cutting edge. We've had witnesses that tell us that Canada punches above its weight. The NFL is putting significant investments into vanguard scientists who are Canadian, out of Calgary. I'm just wondering if the CFL has committed to

contributing to advancing the science, and if so, in what way. Has it been helping with a brain registry, or has it been funding...? Perhaps you could tell us some of the ways you think you'll be able to contribute if you can't match dollar for dollar what the NFL is doing, and I understand that.

**Mr. Randy Ambrosie:** If I may, Mr. Shamie has just provided me with a list of the research projects we're currently involved in.

We're in the process of completing a two-year study with CFL players to investigate progressive active rehabilitation techniques in player recovery from concussion. This international study is being led by research from the University of North Carolina and is funded by the National Football League.

We're doing preliminary research to look into the impact of learning disabilities on the prevalence of concussions.

We participated in the King-Devick test research, where our findings were presented at the last International Conference on Concussion in Sport, which took place in Berlin in October 2016.

We're involved in a joint education research study with the CFLPA to learn more about concussions and athletes' understanding of the symptoms and their behaviours with respect to reporting concussions. That was conducted by McGill University.

We attended and presented research findings at the fifth International Conference on Concussion in Sport and made presentations to the 2018 International Collision Sports Conference in London.

Ms. Cheryl Hardcastle: Can we maybe have that list tabled for the committee, then?

Mr. Randy Ambrosie: Absolutely, yes.

Ms. Cheryl Hardcastle: It would be great if you could do that.

Do you think you might join the NFL in its research?

Mr. Randy Ambrosie: We are constantly talking with and working with the NFL on a whole number of projects.

**Ms. Cheryl Hardcastle:** Do you think there's a government role in orchestrating those kinds of joint ventures, or something, or being a part of that? Do you see potential there, or would you rather see the government involved in something separate and let the sporting community do their thing? I heard you kind of saying you want us to work together, but then I kind of hear....

Maybe you could clarify that or help us understand how you think our role can advance understanding.

**Mr. Randy Ambrosie:** I apologize if I'm sending any mixed signals. We would actively welcome the government in supporting our efforts on research. We would. Just as football is a team sport, finding a safer environment for sport is also a team effort.

(1740)

**Ms. Cheryl Hardcastle:** Absolutely. You're talking about culture. What do you believe is the role of officiating in that culture? I heard you talk about rule changes. In other sports, we hear people say, "Let them play," or, "That was an illegal hit. Why is that player not on the bench?" There are all kinds of examples.

Tell me a bit about the role of officiating in your culture change, and what you see.

**Mr. Randy Ambrosie:** It is an absolutely critical element of creating a safe environment. The game officials on the field are ultimately responsible for the enforcement of the rules. Those rules are designed in large part to keep the players safe.

We spend time every year.... We do training and development with our officials. We do ongoing training with them. They review their game films with members of our league office regularly, to show where there are areas for improvement. I think it is an absolutely critical element of the sport's ecosystem.

Sadly, we need to get more people involved in officiating. There are statistics that would suggest that 80% of everyone who starts a career in officiating leaves at the end of their first season, because they're largely abused and criticized, and it's not fun for them. We have to think about creating a culture for officiating to flourish.

The Chair: Thank you.

We're going to move back to the Liberals.

Mr. Ellis, you have seven minutes.

Mr. Neil Ellis (Bay of Quinte, Lib.): I apologize, I don't sit on this committee regularly, so you'll have to bear with some of my questions here today.

I see in your brief you're saying that you are "worried about the ongoing and often singular focus on concussions, magnified by the media and amplified by Hollywood itself." I think you said that football wasn't the number one sport for a concussion.

What is the number one sport, if it's not football? Do you partner with these other sports agencies to come up with best practices? What are you doing to combat Hollywood?

Mr. Randy Ambrosie: I was in Edmonton two weeks ago visiting with the team doctor for the Edmonton Eskimos, Dr. Dhiren Naidu. He was sharing with me a report in Alberta, for example, where the number one sport for concussions is girls' ringette. I was surprised by that statistic. What it says is that our team doctors—Dr. Naidu by the way, is a remarkable guy—are very interested and passionate in what's happening in the broader world of sports. That's an example.

I think the question was regarding what we are doing to combat Hollywood.

Mr. Neil Ellis: Yes.

It goes back to your numbers. You say your participation rates are down by 35%. That's drastic. What are you trying or going to do?

Mr. Randy Ambrosie: We will launch this spring, as part of the launch of our football season, what we'll be calling a "try football" campaign to really encourage Canadian youth to try the game of football. That could be flag football or touch football. It could be simply taking a football to the park and throwing it around with your family and friends. We think just the simple act of getting that football in your hands and throwing your very first spiral will have a powerful effect on drawing people into our sport.

The other part is that we want to start talking about the positive narrative of what the game does for people and how it changes lives. Two weeks ago I was with the Toronto Argonauts. They asked me to make a number of phone calls to amateur football volunteers. I had a chance to speak to a remarkable woman who was telling me about her involvement as a volunteer in amateur football. I said, "May I ask you what got you into football?" She said, "Well, Randy, it's not well known, but my son suffers from depression. We took him to football for the very first time a couple of seasons ago and it completely changed his life." It completely changed his life. She said, "He is stronger. He loves his teammates. The game of football helped improve the quality of our family's life. It's the happiest place for our family, because it has transformed us."

We have to start telling those stories about how our game is playing a positive role. I talk about it on a very personal level. I wasn't a very good student for most of my growing up. When I was an elementary school student and a junior high school student, my mother would come home from parent-teacher meetings crying just about every time. It was the game of football that led me to a love of learning, knowing that in order to play at the professional level I would have to become a better student. I walked around high school with one of those old orange dictionaries—some of you might remember it—because I was a terrible speller. I had neglected my studies for so long. It was football that inspired me to become a better student. I graduated with an honours degree in business. Football changed my life.

We know that tens of thousands of those stories are out there and they need to be told. People need to hear that football is a force for transformation. It teaches teamwork. It teaches hard work. It teaches the value of friendship. There are so many lessons to be learned on a football field and in a football locker room. We need to start telling those stories.

**●** (1745)

**Mr. Neil Ellis:** It was interesting to hear that you banned full-contact practices during the regular season and injuries went down 35%. Do you have any other ideas like this that you're coming up with or considering to better protect our players?

**Mr. Randy Ambrosie:** As I said earlier, this rules committee process...which we haven't completed, because those recommendations will now go to our board for approval. They're all centred on issues relating to player safety and health and how to make the game safer for players. It isn't confined to activities on a football field that would relate to concussions. Some of it is just the way and the flow of the game, making sure that the players are respecting one another and are not doing things that would unnecessarily create a hazardous situation for the players.

I'm happy to report that our players and our players association are active members in that process. Our players are represented in that process. Our coaches are represented in that process. Every year yields new insights into things that we can do to make the game safer for our players.

Mr. Neil Ellis: Thank you.

The Chair: We move over now to the Conservatives for our second round.

Mr. Nuttall, you have five minutes.

Mr. Alexander Nuttall (Barrie—Springwater—Oro-Medonte, CPC): Thank you, Peter.

Thank you for coming today.

There was something in your statement I just wanted to qualify. It was with regard to looking outside of concussions, and that basically—this is a paraphrase, because I don't have it in front of me—this is a small part of a much bigger issue with mental health, etc. Were you saying that directly in relation to concussions, or were you saying that writ large regarding young people and mental health?

Mr. Randy Ambrosie: I'm not sure I entirely understand your question.

Mr. Alexander Nuttall: Sir, I grew up playing soccer. I've probably had 10 occasions where my mom had to come and wake me up every hour in the middle of the night. I'd go into the hospital; they'd do the concussion check, which was not much back then, and I'd go through the night. It has not been football, and I have nothing against football at all. However, during your statement, it felt a bit like you were talking about the effects of the focus on concussion on football, and the effects of...maybe a feeling that perhaps it shouldn't be concussions we're focusing on but mental health writ large for young people, and football as a tool to help certain people struggling with mental health issues

Sir, I'm not grandstanding because I'm not running again. There's no grandstanding here, but I can tell you that I agree with you on the mental health subject. Our health committee is focusing on the mental health subject. I agree with you on team sports, especially for demographics that don't have access. It is incredibly important. That's actually where I come from.

There is a focus on this because it is a very serious issue. I'm glad to hear the CFL is making changes and has made changes in the past on these items. We're here because there are a lot of people in our ridings who are bringing forward these issues with their young ones, who have been going through this.

Concussion North is in my riding. It's basically a state-of-the-art facility, not because of the building it's in—it's not a very nice

building—but because of all of the different doctors they have in place who are volunteering their time to make it happen. As we go through this process, I don't want any sports organizations to feel like they are under attack, but I do want them to take this as seriously as we are.

To me, it felt a little bit like, "Hey, this issue is hurting us a little bit. Maybe we should focus on this other thing over here", and that's not what I wanted to hear today. I do like hearing some of the other stuff in terms of what you have done, and what you will continue to do, the constant audits, the looking at the research out of the CFL and working with the best Canadian minds. I'm all for that, but I had a real issue with that.

(1750)

**Mr. Randy Ambrosie:** I can promise you I wasn't trying to deflect from the importance of the subject of concussions. That was not my intention at all. In fact, I think we can stand on what is, I hope, obvious: A lot of effort is being made to make the game safer and to take the issue of concussions as seriously as any professional sports organization in the world.

What I was simply saying is that we know there is a connection between mental health and concussion recovery, and we are not doing enough in that field.

**Mr. Alexander Nuttall:** Do you mean on that portion of the concussion work?

Okay. Perfect.

**Mr. Randy Ambrosie:** That's right. It does speak to the broader opportunity, one I think we have together, and that is.... For example, we do annual medicals. Those are physical medicals. That is to make sure that knees, ankles, fingers and toes are in good working order.

We believe a focus on mental health as part of the annual physical—the annual medical checkup—would help because it could establish a better understanding of an athlete's mental state: Are there issues there that in the event of a concussion would lead us to understand that it may take them longer to recover?

Those things can have a profound effect on the overall mental health issue, because if our players, for example, are leaders in accepting a mental health assessment as part of being a good professional athlete, then perhaps we can start changing the culture on mental health. Our players who can speak to the value they get from having a mental health checkup as part of their overall health assessment can begin to enhance the narrative on mental health being as important as physical health.

That was what I was trying to say.

The Chair: That's our time.

I do want to thank the CFL, Commissioner Ambrosie and Mr. Shamie. Thank you for that introspective understanding of what is happening within the CFL. It took a lot of courage to come here to this subcommittee on sports-related concussions and to provide some information that we were all looking for at the highest professional level of sport in football.

Thank you. We wish you much success with the league.

#### Mr. Randy Ambrosie: Thank you very much.

Mr. Chair, I would just like to say thank you. We greatly respect and appreciate what you're attempting to do. We will do everything we can to support your efforts.

The Chair: Thank you, Commissioner.

We'll suspend.

• (1750) (Pause)

**●** (1815)

The Chair: Welcome back, everybody.

Before we get started with our second panel, all members should have a motion in front of them. This is to set a deadline for briefs to come to committee. The subcommittee must establish a deadline for the submission of briefs to ensure that they have all been translated and distributed to members before commencing the study of the draft report. The translation and distribution of briefs could take a total of three weeks. Therefore, the proposed submission deadline is Friday, April 12, 2019.

(Motion agreed to)

The Chair: We ask that all those come through our portal so our analysts can do their work and we can incorporate them into our report.

**Mrs. Mona Fortier:** If I may, can you give us an idea of how in the next weeks we're going to continue with the exercise we're doing, just to understand the calendar? This is for the brief submissions—

The Chair: This is for the submission of briefs, yes, so any groups that you may have, Madam Fortier, or—

Mrs. Mona Fortier: —or others.

The Chair: Yes, or others who would like to submit.

We've had a great deal of interest in the committee, and we have not been able to accommodate all witnesses; therefore, we have opened our portal to be able to make those submissions. So the translation and the analysts can incorporate those into the report, we'd need those by the 12th of April.

Mrs. Mona Fortier: Excellent.

We continue to meet with witnesses until...?

The Chair: May 1.

Mrs. Mona Fortier: We have the whole calendar already organized for that.

The Chair: Yes.

Mrs. Mona Fortier: Thank you.
The Chair: Thank you very much.

Now we'll be introducing our second panel.

We want to welcome the Canadian Olympic Committee via video conference from B.C.

Dr. McCormack, welcome.

As well, we have the Canadian Soccer Association. Mr. Kevin Gordon is with us in person.

Both will have an opening statement.

We are going to start with Dr. McCormack, since he is coming from B.C. via video conference.

Sometimes technology has let us down, but we have a clear view of you, Dr. McCormack.

You'll have an opportunity now to make your opening statement, and then we'll move to Mr. Gordon's opening statement.

**(1820)** 

**Dr. Robert McCormack (Medical Director, Canadian Olympic Committee):** Thank you for inviting me to speak before the committee today. I'm sorry I can't be there.

I represent the Canadian Olympic Committee, and I'm the chief medical officer or head physician for our Canadian Olympic team.

In my role in high performance sport over the last three decades, I've had the privilege of working at many multi-sport events, such as the Olympics and the Pan American Games, and I've been the head physician for several of our senior national teams, many of which are at high risk for concussion. I also act as the lead physician for the B. C. Lions in the Canadian Football League and work with the Vancouver Whitecaps in the MLS. I've had exposure to this problem of sport concussion, and in addition to working in the trenches, I've also been involved in sport safety from the policy perspective. I sit on the health and safety advisory board for the CFL, and I'm on the medical commission for Panam Sports, the group that determines health policy for North America and South America at the Pan American Games.

Getting back to my role with the Canadian Olympic Committee, as the chief medical officer, I'm the lead for health policy. At the COC, the health of our athletes is our top priority, and we're proud of that.

Concussions have been a focus of ours for years, and we recently completed an extensive collaboration with the medical leagues from the Canadian Olympic and Paralympic Sport Institute, Own the Podium and the Canadian Paralympic Committee. From this we announced some sport-related concussion guidelines designed to protect our senior national team athletes and next-gen athletes in high-risk sports. Again, we focused on that high performance group that are also at high risk for concussions.

We take pride in this because this is one of the first efforts where we've been able to standardize our approach across the country. That's taken a lot of work, as you might imagine, but we think it's a positive step forward for the sport and medicine community. They're consistent with the international consensus documents from Berlin that I'm sure you've heard about, and we've coordinated with Parachute Canada.

There are some unique features of our high performance system that allow us to deliver some unique services. These include that during pre-season, prior to the first game of training camp, we recommend that all high-risk athletes complete a battery of clinical assessments and neuropsychological tests under the guidance of the team physician. This is beyond what Parachute recommends for sport-related concussion. For high-risk sports, and again, this is the high performance pool, we recommend that a certified athletic therapist, physiotherapist, chiropractor or physician be at all training sessions and competitions.

If a concussion is suspected, of course the player is immediately removed from training or competition, and they are to be assessed by a member of the health team in a distraction-free environment. Sometimes a diagnosis of a concussion can be challenging, and it needs somebody with experience and expertise to be able to make the decision whether it's safe to return to that session, whether it be competition or training.

Post-concussion, if the athlete is determined by the medical team to be free of symptoms at rest and with exertion, we suggest that the athlete be tested again with neuropsychological tests so we can compare the results to their individual baseline. We can do this because we have a network of experts who have been involved in sports medicine, and the interpretation and results of these tests takes training and experience.

The last thing is that the guidelines lay out recommendations for when the athletes can return to sport. There are four. There has to be resolution of symptoms at rest. There has to be no recurrence of symptoms when they are doing exercise at the levels required for competition and training. The athletes have to have those neuropsychological tests repeated to make sure they're back to baseline. Finally, the athletes have to have further education on the risks of premature return to sport and the risks of repeated concussion, and they have to sign a consent to that effect. These guidelines will be in place prior to the Olympic and Paralympic Games in 2020 in Tokyo, and will also be used at the Pan Am Games in Lima, Peru, this summer.

#### **●** (1825)

However, it's important to recognize that this is an evolving area with ongoing research. There's much more that needs to be done. This requires support.

I know that the committee has heard this before. I say that we wholeheartedly support funding research. Having said that, we can be proud of the fact that Canadians have been real leaders in knowledge development and in translation when it comes to sport-related concussion.

Because things are evolving rather quickly, the high performance guidelines referred to will be reviewed annually to make sure that they are kept up to date.

I've been in this for a fairly long time. This issue of sport-related concussions has actually come a long way. While there's work to do, we have made a lot of progress, including rule changes in almost all high-risk sports, enhanced equipment and better education of athletes, support staff, coaches, family and the general public. We've also worked to change the culture that has glorified the hellacious

hit. I believe all these measures have led to improved diagnosis, treatment and most importantly, prevention.

On a different note, although we as health professionals prioritize health care, we have to recognize that we'll never have risk-free sport. While we want to make it as safe as possible, we have to be careful not to magnify the problem of sport concussion to the point where we reduce the level of physical activity in Canadians. The greatest health risks we face as a society relate to obesity, type 2 diabetes, cardiovascular disease and a host of other major medical issues that are related to inactivity. Exercise is medicine. We need to promote active lifestyles with options for everyone.

In closing, thank you again for having me. The very existence of this committee speaks to the importance of this and the need for discussion and dialogue. At the COC, we're proud that we're prioritizing our athletes' health and we've taken steps to develop a consensus that can be applied across the country and when we go to games. It's a collaborative effort that will continue. It must continue.

Thanks again for your attention. I welcome any questions.

The Chair: Thank you, Dr. McCormack.

As a Canadian Olympian, I want to thank you for the service that you provided to the COC and that you continue to bring, as well as how you are able to bridge between amateur sport and your work with professional sport leagues.

Thank you.

We're going to move over to you, Mr. Gordon, for your statement, sir

### **Dr. Kevin Gordon (Sports Medicine Committee, Canadian Soccer Association):** Thank you.

Canada Soccer is the official governing body for soccer in Canada. In partnership with our members, Canada Soccer promotes the growth and development of soccer in Canada from grassroots to high performance and on a national scale. Soccer is the largest participatory sport in Canada and is considered to be the fastest-growing sport in the country.

I am an academic child neurologist with epidemiology and biostatistics training. My clinical practice of the last two decades has primarily dealt with the clinical management of complex pediatric concussion along with research and training.

In 2010, I joined Canada Soccer's sports medicine committee. Our committee comprises cardiology, rehabilitation, sports physiology, orthopaedics, physiotherapy, emergency medicine, sports medicine and child neurology. We are advisory to Soccer Canada in medical affairs as they apply to our players.

On behalf of Canada Soccer, I am also a member of the federal, provincial and territorial concussion in sport working group, which has worked effectively to get sport, health, education and governments working in concert on concussion. Our chairs, Jocelyn East and Greg Guenther, will be presenting before this committee in an upcoming meeting. However, our sports medicine committee and Canada Soccer's focus is the nearly one million registered active participants within the 1,200 clubs that operate in 13 provincial and territorial member associations. In 2017, we had 640,000 youth players under 19 years of age registered to play soccer, of whom 40% are female.

Concussion is a significant acquired brain injury, whether acquired through sport, play, mishap or other ideology. Soccer concussions occur as the result of player-to-player collisions and aerial challenges. Our female soccer players are disproportionately exposed to this injury, with injury rates as much as 50% higher when compared to male soccer players.

Prevention is the key, but preventative efforts are in their infancy. We know that by keeping our goalposts anchored to the ground, the balls light and not overly inflated and the rules of the game enforced, there will be an impact on the incidence of brain injury.

Secondary prevention of the complications of concussion through the early recognition of potential concussion, removal from play, referral for diagnosis and the subsequent confirmation that a player is clear of concussive symptoms before they return to full game play is likely to ensure that this generation of players is much safer than the previous generation of players who played sport without these directives.

The concussion landscape is changing very rapidly in Canada. Canada Soccer saw the adoption of its first global concussion policy for the broader membership, subtitled "Players' Health and Safety First", in 2016. As a team sport, Canada Soccer was excited to become compliant with the Canadian concussion guidelines in 2018, joining the nearly two dozen national sports organizations with a national standardized approach to concussion. No longer is there the variable patchwork of protocols for some sports at national levels.

Over the next year, we expect that our provincial soccer organizations will move to compliance with the Canadian concussion protocol, further expanding a consistent national approach to concussions.

Within the sports medicine committee, we continually monitor published and unpublished information about concussions in general and specifically brain injury in soccer, sharing the press and public's appetite to understand this injury. We also share the frustration that the necessary research to make the best evidence-based decisions for our sport and our players has been slow to arrive.

**●** (1830)

On behalf of Canada Soccer's sports medicine committee, I welcome your questions.

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

We are going to move right now to questions and answers.

We are going to commence with the Liberals, and Mr. Ellis, for seven minutes.

**Mr. Neil Ellis:** Mr. McCormack, you talked about a high-risk category of sports. What are considered high risk and what are considered low risk? What led to the decision not to require all sports to have a concussion protocol in place?

**Dr. Robert McCormack:** All sports do have concussion protocols in place, but the sports that we've put in these enhanced guidelines for I will read out because there are more than my simple brain can remember.

On the Olympic side, winter sports would be alpine skiing, freestyle skiing, ski jumping, snowboard, speed skating, both short track and long track, figure skating, ice hockey, bobsleigh, skeleton, and luge.

On the Paralympic side on the winter sports, we would add paraalpine skiing, para-snowboard and sledge hockey.

On the summer sports, the high-risk ones on the Olympic side would be boxing, wrestling, soccer, rugby, basketball, cycling, which would be track, road, BMX and mountain biking, equestrian, field hockey, gymnastics, trampoline, handball, judo, synchronized swimming, tae kwon do, volleyball, water polo, diving, and in athletics, pole vault.

On the Paralympic side, we would add para-cycling, paraequestrian, judo, sitting volleyball, soccer seven-a-side, wheelchair basketball, wheelchair rugby, goalball and wheelchair athletics.

The reason we have focused on those sports is that's where the higher incidence is, and it becomes a resource issue. These programs take resources and in a limited envelope of funding, we have to decide where to best put these enhanced services.

**●** (1835)

**Mr. Neil Ellis:** Mr. Gordon, you said, and I tried to write this down, somebody with concussion is free to come back on full return. What is full return? Is the position of the Canadian Soccer Association to require a letter from a doctor, or how do you...?

**Dr. Kevin Gordon:** That's actually part of the Canadian concussion guidelines. You have to be assessed with suspicion of a concussion and cleared before you're allowed to return. At the end of a concussion, you are to be assessed again to confirm that the concussion has resolved.

Mr. Neil Ellis: Does Canada Soccer collect data on soccer-related concussions?

Dr. Kevin Gordon: At the present time, no. In a systemic way....

Mr. Neil Ellis: Is there a plan...?

**Dr. Kevin Gordon:** It's very hard to do that. Our registration is done at the provincial level, so it would have to be somewhere further away from Canada Soccer.

**Mr. Neil Ellis:** Would it have to be with other sports organizations and such?

Dr. Kevin Gordon: Or on a global Canadian level....

Mr. Neil Ellis: Okay.

In your view, could medical assessment letters and medical clearance letters that are part of the Parachute concussion guideline be used as a means of maintaining a registry of concussions?

**Dr. Kevin Gordon:** We've certainly seen in a number of sports, with insurance, the under-reporting by way of insurance. I would suspect that this would be inadequate.

Mr. Neil Ellis: Okay, thank you.

The Chair: We'll move over to the Conservatives now for seven minutes.

Dr. Kitchen.

Mr. Robert Kitchen: Thank you, Mr. Chair.

Doctors, thank you both for being here today. I much appreciate it. Your testimony is very helpful.

Dr. McCormack, I've read the recent Canadian Olympic and Paralympic Sport Institute Network...and the paper you published. Included within that, as you indicated, you talked a lot about the issue of pretesting of athletes. I'm interested to follow up on that a bit as to whether you feel that all medical professionals should have that information prior to a season starting.

**Dr. Robert McCormack:** It's a challenge. It's fairly difficult to interpret the results of this neuropsychological testing. Really, I don't think there is a broad enough base of practitioners who have that knowledge at the moment. So really, again, the reason we focused on the high performance athletes is we're often under pressures of time and we want to make sure that we give the best care to the athletes who are representing us internationally, our national treasures. Maybe in a perfect world we'd have baseline neuropsychological testing in all sports, but right now in Canada, there is simply not the capacity for that.

**Mr. Robert Kitchen:** Right. With that said, I'm assuming you're okay with there actually being a pretesting of a number of psychomotor skills, health obviously, orthopaedic and neurologic, having that baseline to start off with, though. Am I correct?

**Dr. Robert McCormack:** A baseline is always helpful and I think can be very valuable. If you have a baseline, it's much easier to interpret injury.

**Mr. Robert Kitchen:** Would you say that would be of value not just at your level but also when we take that down from the Olympic and Paralympic level to the junior hockey level, to some of the more.... What's the word I'm looking for?

Dr. Robert McCormack: Grassroots.

**Mr. Robert Kitchen:** In soccer, for example, I mean basically in the high-level performance, whether they be tiered teams, whether they're 12 years old, going all the way up to 18 and 20.

**Dr. Robert McCormack:** The reason that Parachute Canada has not recommended baseline testing is that, done in isolation without appropriate interpretation, it is not helpful and can actually cause challenges. You need to have the whole system in place, and that was simply one part of it. The question is how we deliver that expertise across the entire sports community and grassroots level. Where do you draw the line? I think it does come back to the resources, and not only financial resources but expertise that's available to be able to interpret those tests and administer them.

**●** (1840)

**Mr. Robert Kitchen:** In a utopian world would it be of value, though, if costs were not an issue?

**Dr. Robert McCormack:** My perspective is that, yes, it would be of value. That's one of the reasons it's done in virtually all professional sports and we've taken it on for the high-risk, high performance athletes.

Mr. Robert Kitchen: That's great. Thank you.

Dr. Gordon, I have my coaching levels in soccer and I also have them in a number of other sports. I can say I don't believe I ever had a concussion playing soccer, although I did break my nose at the age of 18 from an elbow while I was going to head a ball. There may have been one then, but in those days we didn't talk about it that way. I played rugby, so there are other ways.

In soccer, obviously, putting player health and safety first is extremely important. I'm a big believer in education, continuous education, and not only from a professional point of view, but also disseminating that down to our coaches, down to our managers, down to our trainers, who are there on the field, even our soccer moms who are going there every day to watch their children play. Can you tell us some of the steps that the Canada Soccer has taken to expand that? I know in hockey we've put in requirements for trainers to be on the bench, etc. Can you explain some of that for us?

**Dr. Kevin Gordon:** Okay. I think we're going to come back to the fact that every sport in Canada is moving to a compliance—in Ontario with Rowan's law—so we all are pushing a form of education of one sort or other. I think everyone needs to be educated about this as an injury. If I could get everyone in this country to look at the concussion recognition tool before sending their kid out on a field, I think the world would be a much safer place. So I would agree with you wholeheartedly.

The other thing I think we have to do is look out for one another. Once we've been educated, we need to recognize it. Athletes need to recognize it in other athletes. Coaches need to recognize it. One of the problems is the relative scarcity of this injury in the younger age groups. A coach may spend years before he has a kid with a concussion to assess. Now if they get up into the 14- to 15-year-olds, that's a little less often, but when they're younger the coaches just don't have the experience with it. They may have a lifetime experience in some of these sports, with maybe having seen one or two children with concussion, and it becomes quite challenging for them. We can educate, but we all need to be educated.

Mr. Robert Kitchen: Is my time up?

The Chair: Yes.

We're going to be moving to the NDP and Ms. Hardcastle.

Ms. Cheryl Hardcastle: Thank you very much, doctors.

Dr. Gordon, can you tell us a little bit more about what evidence you've gathered and how responsive you've been able to be with rules so that you can reduce injury, for instance, the zero tolerance that rugby has done for the head hits, and the volley ball? What are your steps, and what was your evidence?

**Dr. Kevin Gordon:** The evidence in soccer, as I pointed out to you earlier, is very much in its infancy. In getting ready for this committee, I was stressed to find primary preventative evidence within our field, but I think we have to go back 20 years to when we started to realize there were a lot of head injuries from soccer goalposts tipping over. I'm seeing some head nodding here. This was in the era of the unanchored goalposts. Now it's a simple fact that all soccer goalposts are generally anchored, and everyone is aware that there's a tip-over risk. Those weren't just concussions; those were some pretty significant brain injuries.

The other thing I was talking about is that it was our own Rudy Gittens of Canada Soccer's precursor to our current sport medicine committee, who did work with one of the biomechanics firms here in the city and recognized that if you overinflate a soccer ball, there is far more striking force to an individual doing a header. That information has been largely transmitted across the world to make sure that balls are not overinflated. There was a huge trend at one stage to get a livelier ball by overinflating it—and again, I'm seeing some heads nodding, because everyone liked those lively balls—but they hurt when they hit you, and there was more force involved and they were dangerous. So that has been adopted across the sport.

There are two studies that are really quite interesting that we need to talk about. One is a Norwegian study that looked at just taking rules that are currently in play and enforcing them in aerial contests a lot more rigorously. They were able to show a significant reduction in injuries. A German league put that into place and found that also. Those points came up in the last Berlin conference and it was suggested that more vigorous endorsement might produce effects. We're not quite to the point of saying yes, it does, but we're getting to the point where we need to start talking about things of this nature. We have not as yet adopted it.

• (1845)

Ms. Cheryl Hardcastle: Thank you.

I have time to hear more from both of you about baseline testing recommendations. The COC has recommendations but different organizations take a different approach.

Are we ready to decisively recommend that we need baseline testing or is that also part and parcel of the research that we need to be doing, in terms of concussion in sport?

**Dr. Kevin Gordon:** One of the challenges you have when you address the issue of baseline testing is that you have to realize that the bulk of our players are youth players, and that means their baselines change at least once a year and possibly twice a year. You're going to have to put them in a testing paradigm that goes over and over to get a baseline, and that is a huge number. It will add substantially to the cost of sport, and yet many of the practitioners out there don't rely on baseline testing because it just isn't available and people have learned to work without it.

That being said, when we wrote our guidelines—because our guidelines were to be inclusive across Canada Soccer—we did include the following line, and I think it's fair to point out, because we're dealing with two things:

Professional and National players typically have access to an enhanced level of medical care, which means that their concussion and their return to play can be managed in a more closely monitored way.

That's a euphemistic way of saying that there really is a baseline that we have to get to everyone, and some of our very high-risk players need to be monitored more closely. It has come up for us that many of our national team players come to us from professional clubs, and those professional clubs have baseline testing as part of their paradigm, and therefore, when we take the players for our use, we have to adhere to their paradigms as well. From a youth perspective, really, I'm not sure that it's necessary—and I understand where Parachute Canada was coming from—so we don't have anything in our paradigm about doing baseline testing on youth and recreational players.

**Ms. Cheryl Hardcastle:** Was Canada Soccer involved directly with developing the soccer component of the guidelines? Were you involved in developing the soccer component of the—

Dr. Kevin Gordon: Yes.

**Ms.** Cheryl Hardcastle: Okay, so is there a bit of a gap in understanding? Is this just a matter of interpretation, or is it a matter of not enough knowledge, and not just enough resources? Is the issue miscommunication, or is the issue—

**Dr. Kevin Gordon:** No, I don't think it's miscommunication. I think most practitioners in the field are not relying on testing at this stage. There are further issues. We can get into this. One of the issues is what you do when you fail your baseline test.

**●** (1850)

Ms. Chervl Hardcastle: Yes.

**Dr. Kevin Gordon:** That means if we're rolling that out, the test has to be cheap and globally available. I've already heard, as Dr. McCormack has pointed out, that you need expert people to do the interpretation of those tests. You can't afford to have any significant proportion of the population failing the test, because if you fail the test, then what are you going to do with them? Do you not let them play sport?

Ms. Cheryl Hardcastle: Yes, exactly.

Dr. Kevin Gordon: That's the fundamental issue.

Ms. Cheryl Hardcastle: Thanks.

The Chair: We'll have to move over now to the Liberals.

I understand that Mr. Bossio and Mr. Saini will be splitting some time. Mr. Saini, you have a question, and then Mr. Bossio will have the rest of the time

Mr. Mike Bossio (Hastings—Lennox and Addington, Lib.): You go first.

Mr. Raj Saini (Kitchener Centre, Lib.): Thank you to both of you for coming here.

Just to frame the question a bit, I'm a pharmacist by profession, so when I was sitting here listening to you, a couple of things crossed my mind. One was that I have never been trained, as a pharmacist, outside of the basic—really basic—things, to diagnose a concussion, or something of that nature. I'm saying that because I think there might be a lot of medical professionals without that training. Yes, at the doctor level, but not at the pharmacy and nursing levels, where sometimes you see more patients than doctors do.

The main point I want to make is that soccer is a worldwide sport. There are countries that have more entrenched leagues and soccer players compared to Canada. Has there been any attempt to go to Europe or other countries to look at best practices? I don't think this is a Canadian phenomenon. I think this would be an international phenomenon with sport. With other sports, hockey generally is in Europe and North America, and football is obviously in North America, but has there been any attempt to go to other countries to learn from best practices, especially in those societies where soccer is more ingrained than in Canada?

**Dr. Kevin Gordon:** Yes, there has. Specifically, I would talk about our concern about the health and safety of players. From a head injury perspective, I think there are two components. It's frequently the issues of concussion and repetitive head trauma. I think everyone's worried about both. I don't know which one we worry about more, but from a repetitive head trauma perspective, the Football Association in the U.K. is now 18 months into something they call the FIELD study. It's headed by Dr. Stewart.

We have been in touch with the FA. We're going to follow that study with interest. It will talk about the long-term follow-up on the health benefits and harms of playing soccer.

Mr. Raj Saini: I have a quick note on that. In many cases, a parent might go to a soccer game and something happens. They don't deem the injury important enough, or maybe it's mild. They don't think they need to see a doctor, but they may go to see either a pharmacist or another health practitioner. Has there been some attempt at education outreach, to make things a little clearer to other

medical professionals as to what signs specifically to look for, outside of just the normal things?

**Dr. Kevin Gordon:** We said at the very start of this that education is foremost. I would agree with you that one in four patients with a reported concussion does not seek medical care. That group is quite interesting. Obviously, we don't know a lot about them. They would be picked up by a more global sense of concussion. I think we are educating the next generation of parents and individuals. This is an injury outside of sport that is going to affect one in 200 Canadians next year.

Mr. Raj Saini: Thank you very much.

I'm going to give my time to Mr. Bossio.

The Chair: You have about three and a half minutes.

**Mr. Mike Bossio:** A lot of it is about how we measure the data. How do we derive the data in the first place? That seems to be a great challenge, especially in amateur recreational soccer. I can understand why it's almost an impossible task.

Other than trying to educate parents and parent coaches.... I, myself, have coached basketball and other sports and really had no understanding of concussions and what kind of protocol to put in place

I know that basketball, hockey and soccer all have great organizations in place to try to disseminate and push that education out into the amateur level. What do you think it's going to take to get it out there? What different tools need to be made available so that parents...? I know we have all kinds of web tools and webinars and everything now. Are webinars being utilized in this specific area, though, to illustrate what to look for and the telltale signs?

• (1855)

**Dr. Kevin Gordon:** That's a complex question. I think the fundamental answer is yes, but I would say that.... I'm a pediatric neurologist. I started this when my own kid was concussed 20 years ago, and I was looking over my shoulder for the emergency doctor because my formal training as a neurologist who looks after children did not involve concussions. Now 20 years later, I'm here in front of you, and I know that most of the kids on my kids' teams are just as good at recognizing concussions. In fact, I'm thrown back to a national championship where I didn't recognize the concussion, but the kids told me exactly when it happened on the field. I missed it. The kids are getting better at this.

I think one of the things that came from Rowan's inquest is really the issue that this is a community injury. We are all responsible: pharmacists, parents and coaches. I think one of the problems we have is the field is moving so quickly right now that some of us who had our coaching certification a few years ago are out of date. It's time to recertify. Things are changing so very rapidly in this field that I'm amazed. As I said, it's truly amazing keeping up with the field

I have to say one thing. One month ago, the first of the trials for exercise became published, showing that exercise is actually a valid treatment for concussion. We'd been waiting for that. Now the first of the trials is out. Life is changing. I'm sitting back and changing what I'm doing clinically again.

Mr. Mike Bossio: That's a great point. Where did that clinical data come from to show that it was...? Are we seeing more and more clinical studies being done to get a better understanding of concussion all the time?

Dr. Kevin Gordon: Yes.

**Mr. Mike Bossio:** Are those just Canadian, or are we looking at American and European—

**Dr. Kevin Gordon:** Canadians are four times more likely to be the primary authors of the articles. We own this condition. I would recommend anyone to google "concussion" under Google trends. Canada is number one in this area.

Mr. Mike Bossio: Fantastic.

**The Chair:** We're going to be moving over to the Conservatives now.

Dr. Kitchen, you have five minutes. This is our second round.

Mr. Robert Kitchen: Thank you, Mr. Chair.

Thank you again. It's great information. I appreciate it.

I'll try to make sure I get both of you involved in the questioning. You talked about—and we've heard this before as well—how in soccer, women have a 50% higher proportion of concussions than men. There's been some research that talks about neck strength and the value of that, definitely at the younger age. Although one assumes that it's been looked at at the Olympic and Paralympic level, it may not be.

Quickly, from both of you, could I get a response to that?

I'll start with Dr. Gordon.

**Dr. Kevin Gordon:** The neck strength thing has.... First off, data. If you do a cross-sectional study of high school athletes, neck strength will predict the likelihood of concussion in the following year. That's an older study now, and we were all enthused when it came out because we thought the trials would be under way to prove that neck strengthening can prevent concussion. They had a lead time on the exercise trials. We have no data yet on neck strengthening having any effect for subsequent concussion. We're all still waiting.

Mr. Robert Kitchen: Dr. McCormack, do you have a response?

**Dr. Robert McCormack:** It's the same. There's lots of research here. People are doing trials looking at neck strengthening with all kinds of fancy gizmos, and the data is just not there yet.

If I may, I will come back to one other comment that was made earlier from the NDP member about baseline testing. Not only is there the changing baseline in children but I think the problem is actually much simpler at the grassroots level. We really just need to get that out, that when in doubt, sit them out.

The reason we do these enhanced things with athletes is that they're in the middle of the playoffs, or the Olympics are coming up and it's once every four years or once in a lifetime for them. We're trying to see how quickly we can get them back and when it is safe. However, when we're talking about a child's brain, we don't need neuropsychological tests to assess them, because we shouldn't be pushing the envelope to get them back to high-risk situations.

**●** (1900)

Mr. Robert Kitchen: Thank you.

One of the things we've heard throughout our study has been on data collection, how sparse it is and how hard it is to do it. We've heard from a couple of organizations that actually have apps that collect data. Some are free; some are costly.

The challenge we have is that we want to collect that data so that we can get the research, but also we want to collect that data so that it can be shared at the same time as protecting the privacy of the athlete and the family.

There is such a program that will collect that data without sharing the personal information. For example, if a soccer player gets a concussion during the soccer season and goes into hockey, the data that there's a concussion can be accessed by the coach or the organization the person is moving into without sacrificing that.... How valuable is that, and what steps have you seen going forward on this?

Dr. McCormack.

**Dr. Robert McCormack:** Always more data is useful. It's the question really of the quality of the data. You really have to make sure the numerator and denominator actually are valid to be able to make some judgment off of it. That's sometimes a challenge.

What I think I heard you say was that we need something with which, when athletes change sports, we can pick up their previous history, which can be relevant. That may actually be different from a database of all concussions.

That may be a questionnaire when the people start a new sport that asks if they have had a previous concussion. At the professional level that's what we do. We ask: Have you ever had a previous concussion? How many? When was the last one? How much time did you miss? That's useful information for us to assess and manage the risks.

I think there are two separate issues there. One is a research tool to look at incidents and the effect of treatment. Registries like that aren't always perfect data. Then the second question is how we protect athletes who go between sports.

The Chair: We're moving over to the Liberals now.

Mr. Bossio, you have five minutes.

Mr. Mike Bossio: This question is for Mr. McCormack.

You have a ton of experience both on the Olympic side and with a number of other professional sports. What rule changes do you see should be implemented that would lead to fewer concussions in the first place? Once again, prevention is, I think, the number one goal we all have to look towards.

Also, are you finding there's a lot of push-back from professional sports whereby, if it weren't there, you could see that change would occur to the rules?

**Dr. Robert McCormack:** I would agree with the comments Dr. Gordon made earlier that rules are in place and virtually every sport has had changes in rules. The automatic red card for an elbow in soccer is one that comes to mind with me. That changed the incidence of concussions in that sport.

Every sport has rules. It's a question of enforcement. That is a challenge. Referees are under a lot of stress.

We still have *Hockey Night in Canada* and the NFL opening up with these massive hits. I can say sitting on the sidelines that there still is the culture in a collision sport that when a player makes a significant hit, there is enthusiasm and almost pride in it on the sidelines, which is going to take time to change.

Also, one of the challenges is the glorifying of these hits in the media all the time and personalities putting out tapes that just are a collection of these hellacious hits. When the pros actually take pride in it, there's a trickle-down effect to the grassroots.

Part of it is going to be changing the culture.

**Mr. Mike Bossio:** You know that a lot of that culture.... We've evolved a long way. It was 45 years ago when I had my first concussion. I had multiple concussions playing multiple different sports because I loved to play sports. I'm so grateful that things have changed since that time because there was virtually no protocol. You sat out a couple of games, and then you were right back in there. It has evolved quite a bit.

What changes do you think could be made? As far as the culture goes, of course, we have to continue, but it's through those rule changes that we actually see an improvement in the sport that is then making the cultural changes occur as a result of the rule changes. I think most people now would agree that in hockey the fact that we have far less fighting, far less of those big hits, has actually improved the game tremendously in terms of speed and agility and the free movement that happens in the game now.

Are there any rules though that you could see...? Once again, yes, I know that change is different for every single sport, but is there anything that you know would make a difference in sport if you had it?

• (1905)

**Dr. Robert McCormack:** It does vary from sport to sport, but a few things come to mind. I think there is a move away from having full contact at the minor levels for collision sports, whether it be football or rugby. Part of the challenge is the traditions of the sport. I remember all the challenges we had, despite having solid data, to convince Hockey Canada to remove body checking at the younger ages. Eventually, through a lot of pressure, they came around.

The most vulnerable group are those who are young. I'm of course speaking more at the high performance level, but I see in my clinical practice that it's the young athletes who are the ones we are most worried about. It's about avoiding unnecessary exposures for them, and with rule changes.... Perhaps the type of sport they are in.... If they play flag football instead of tackle football, they can learn the skills. They can be active, and then later, when they have better neck strength, better balance, better proprioception and a more developed brain, they can decide on their own if they want to add higher-risk things like the collision sports.

I think that every sport is looking at what they are doing. Again, working in the CFL, every year there are rule changes, and the majority of them are actually based on how we can make the game safer. Every sport is doing that and trying to determine what they need to do to address this epidemic of sport concussion.

Then you have to overcome the traditions of the sport. Sometimes, it's a little tough to sell. Once it's in place, you have to get the referees that are going to enforce it, and you have to have the public that is going to accept it. All those are barriers, I would suggest.

The Chair: Thank you, Dr. McCormack. Thank you, Mr. Bossio.

Before we move over to the NDP, I have one quick question, if you would give me the liberty.

Dr. Gordon, you brought up that female soccer players are disproportionately exposed to this injury, with injury rates as much as 50% higher when compared to male soccer players. What is the root cause? Have you found the root cause of that?

Dr. Kevin Gordon: We all wish we knew. We don't.

Certainly, concussion within females is one of the hottest subgenres of concussion research at the present time. We are all looking for answers to that question. We certainly know that females, across many athletic injuries, are at higher risk. This is distressing in terms of what the issue is for females in particular, because the rates in soccer approach those in hockey. I'm sorry, I'm not supposed to complain about the other guy's sport, but our female soccer players have pretty high rates of concussion. Why is that? I think other researchers are working in this field. Certainly my Twitter feed blows up regularly on females and concussions.

The Chair: Thank you.

I want to impress on both of you, as leaders and influencers, that as this committee looks into sport-related concussion, we are looking to expand the number of participants in sport in Canada. We believe and we know—the numbers show us—that in sports that have high concussion rates, the numbers are dropping, and dropping significantly in some sports. For the viability of those sports, for them to continue to be able to change direction and grow, this is very important, and your advocacy can help that happen, so I thank you.

We're going to move over now to the NDP and Ms. Hardcastle.

**●** (1910)

Ms. Cheryl Hardcastle: Thank you, Mr. Chair.

I agree, and your comments are really intriguing. That's part of what we're doing here. Some of it seems almost like a culture change and a little more of a philosophical approach to sport, like not glorifying certain things.

Other aspects of the study are more logistical, like about data collection. Who should be doing data collection? Is it something that should be done by team and sport organizations, or do you think that's something that should be for the doctor, the medical professional who is issuing the clearance, or both? How do you do it right now? How about you both tell me how you do it right now? How does it work?

**Dr. Kevin Gordon:** I think Bob really hit the nail on the head. Take the history at the beginning of the season. I was struck when he was talking about that patient, one of mine, a girl who came in with a history of two superimposed concussions who had actually had four of them superimposed. When she was told she could no longer play hockey, she said, "That's okay; it's rugby season next week." I throw that back, because that was 15 years ago. I have not heard anything that egregious in my clinic in the past five years.

The kids are aware of this injury. I think everyone is aware of this injury. In fact, from the comments earlier today, we may be a bit too aware of this injury, because we're fearing this injury and maybe fearing it more than it needs to be feared. I think kids are safer now than they've ever been because of some of the changes that have been put in place over the last couple of decades.

The concussion of our kids today is not the concussion of 20 years ago. Those were largely ignored, and you would get up, dust yourself off and use smelling salts. My word. Now, you're out of the game, you're under an observation period, and do you know what? You're a kid. This is not professional sport. We don't need you back in the game today. We're going to assess you, and we're going to watch you for the next 24 to 48 hours if we need to, and we're only going to allow you to go back in when it's absolutely safe for you to do that.

That alone makes the injury much different from what it used to be. Sometimes you get caught up in the entire field, but that is the fundamental truth. These are different injuries now than they were before, and we have to watch that we don't apply what we're finding about yesterday's concussions to today's concussions. They're being reported at rates that are up to 250 times what they were 20 years ago. We're not having more concussions; we're just reporting concussions, and they're being reported at subtler concussions than they were previously. It's crazy thinking that, at one stage, one of the definitions was that you had to be knocked unconscious before people would agree you had a concussion. That's outrageous today, so things are changing.

As for the medical record, this is a tricky one, because we do want people to go from sport to sport, so we really need almost a passport system to keep people safe. However, on the receiving end, it's the culture. If we have a culture of disclosure, everyone knows that hiding concussions is dangerous. I think that, increasingly, the message for our kids is not to hide the concussion. Declare the concussion. Get better from the concussion and play your sport.

The Chair: Thank you, Dr. Gordon.

Thank you, Dr. McCormack.

It's been a pleasure having you here and hearing from you. We want to thank you for your commitment to sport as well as to health.

If there is something that we didn't ask you, you have an opportunity to present any report or any submission that you would like to our analyst before April 12 so that we can get it into our report, as we would like to get a report and recommendations together to be tabled in the House of Commons by the late spring.

We thank you again on behalf of all the committee members as well as the Canadian Olympic Committee and the Canadian Soccer Association. Thank you.

That concludes our meeting.

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