

**CANADIAN HERITAGE – SPORT CANADA
FEDERAL-PROVINCIAL/TERRITORIAL (F-P/T) COLLABORATIVE WORK
ON CONCUSSIONS**

**Appearance of the Co-chairs of the F-P/T Sport Committee Work Group on
Concussions in Sport on April 10, 2019**

**Before the House of Commons' Subcommittee on Sport-Related Concussions in Canada
of the Standing Committee on Health**

This brief highlights the collaborative work coordinated through the F-P/T sport, physical activity and recreation (SPAR) table, and speaks to the future course of actions in managing the issue of concussions to make participation in sport activities safer for all Canadians. The brief provides an overview on the following topics:

- F-P/T SPAR Collaborative Mechanism
- Mandate Letters for Ministers
- F-P/T Governments Commitments and Achievements
- Deliverables to Canadians
- Challenges
- Current Initiatives
- Recommendations for the Subcommittee

F-P/T SPAR COLLABORATIVE MECHANISM

- The F-P/T collaborative work on concussion is coordinated under the SPAR mechanism. The federal co-chairs of the F-P/T SPAR Ministers Committee are the President of the Public Health Agency of Canada (PHAC - Physical Activity) and the Minister of Science and Sport.
- In June 2015, the F-P/T Sport Committee Work Group on Concussions in Sport (CWG) was established to prepare recommendations to the F-P/T SPAR Ministers on the development of a harmonized approach to address the issue of concussions in sport.
- Sport Canada and the government of Manitoba are co-chairs of the CWG whose membership is comprised of P/T governments and non-government experts in the sport, health and education sectors. (See Annex 1 Membership) The CWG has tabled recommendations for actions to the F-P/T SPAR Ministers in 2016, 2017 and 2019.
- Concussions is a public health issue and each P/T government has the authority to set action plans in their respective jurisdictions. Recommendations are thus intended to provide PTs with a general direction in the development of their respective action plans with the aim of achieving a harmonized approach to address the issue of concussions.

MANDATE LETTERS

- In November 2015, the Minister of Health and the Minister of Sport and Persons with Disabilities were both mandated “*to support a national strategy to raise awareness for parents, coaches, and athletes on concussion treatment.*” This commitment remained a top priority in the updated mandate letter of October 2017 addressed to the Minister of Sport and Persons with Disabilities, calling on the Minister to “*work with the Minister of Health to implement a pan-Canadian concussion strategy and raise awareness for parents, coaches, and athletes on concussion treatment.*”

F-P/T GOVERNMENT COMMITMENTS AND ACHIEVEMENTS

- During the F-P/T SPAR Ministers Conferences in June 2016, July 2017, and February 2019, Ministers deliberated on the best course of action to tackle concussions. Highlights of governments’ commitments and subsequent actions are presented below.

2016 F-P/T SPAR Ministers Conference

Commitments: “Ministers acknowledged that concussions are an important public health issue that will benefit from effective multi-sectoral collaboration. F-P/T Ministers have a critical role to play in the sport, physical activity and recreation sectors and recognized the significant efforts already underway in many jurisdictions. Ministers directed officials to align efforts amongst F-P/T governments* and stakeholders in the sport, recreation, education and health sectors in the areas of awareness, prevention, detection, management and surveillance. A key component of this collaborative work is the development of return-to-learn and return-to-play protocols by the Public Health Agency of Canada, as was announced in the federal Budget in March 2016. Ministers asked officials to report on progress at their next conference in July 2017.”¹

*Although Quebec is not opposed to the principles underlying these frameworks, it has its own programs, action plans, objectives and targets for the promotion of physical activity and healthy lifestyle, all areas which are Quebec’s responsibility. The Government of Quebec does not participate in federal, provincial and territorial initiatives in this area, but agreed to exchange information and best practices with other governments.

Achievements: The *Harmonized Approach on Concussions (Harmonized Approach)* consists of five (5) key components: awareness, prevention, detection, management and surveillance to address the issue of concussions. It became the framework for the pan-Canadian concussion strategy and would form the basis for developing guidelines for each of the components. Its aim is to ensure that key groups of Canadians are aware of and have tools to prevent, detect and manage concussions. Key groups of Canadians are defined as: athletes/participants, coaches, parents, medical practitioners, administrators, officials, teachers and volunteers. (See Annex 2 *Harmonized Approach*)

¹ Commitments quoted from the SPAR Ministers June 9, 2016 press release.

<http://scics.ca/en/product-produit/news-release-sport-physical-activity-and-recreation-ministers-collaborate-to-address-concussions/>

2017 F-P/T SPAR Ministers Conference

Commitments: “Ministers recognized the need to move forward with a harmonized approach, as appropriate by jurisdiction, to concussions in sport and the importance of addressing this issue with a focus on awareness, prevention, detection, management, and surveillance. They welcomed the *Framework for Action* which sets out principles for the implementation of these components. As part of the meeting, Ministers received a presentation from Parachute Canada on its *Canadian Guideline on Concussion in Sport*, which will further inform federal, provincial and territorial approaches. Ministers also discussed the significant efforts already underway and identified opportunities to enhance collaboration across jurisdictions.”²

*Although Quebec is not opposed to the principles underlying these frameworks, it has its own programs, action plans, objectives and targets for the promotion of physical activity and healthy lifestyles, all areas which are under Quebec’s responsibility. The Government of Quebec does not participate in federal, provincial and territorial initiatives in this area, but agrees to exchange information and best practices with other governments.

Achievements: Two key documents developed by Sport Canada, Parachute Canada (with funding from the PHAC) and the CWG in collaboration with the sport, health and education sectors laid the foundation for a harmonized approach to manage the issue of concussions across Canada.

1. The *Framework for Action – Concussions in Sport (Framework for Action)* sets out principles and recommendations to implement each of the five components of the *Harmonized Approach*. It is a guidance document on minimal requirements for jurisdictions to follow when developing or refining their practices to address concussions. It’s goal is to further harmonize actions in awareness, prevention, detection, management and surveillance across multi-jurisdictions and sectors. (See Attachment 1 *Framework for Action*)
2. The *Canadian Guideline on Concussion in Sport (Canadian Guideline)* builds on a review of the current scientific evidence and expert consensus on best practices for the evaluation and management of Canadian athletes who sustain a concussion during a sport activity. It provides a foundation for a harmonized approach to prevention, detection and treatment of concussions. (See Attachment 2 *Canadian Guideline*)

Note: PHAC selected Parachute Canada (Parachute), a not-for-profit organization with expertise in injury prevention, to develop the *Canadian Guideline* and subsequent return-to-school (RTSchool) and return-to-sport (RTSport) Protocols.

² Commitments quoted from the SPAR Ministers July 28, 2017 press release. <http://scics.ca/en/product-produit/news-release-sport-physical-activity-and-recreation-ministers-receive-progress-report-on-physical-activity-and-collaborate-on-concussions-in-sport/>

A number of activities aligned with the *Harmonized Approach*, the *Framework for Action*, and the *Canadian Guideline* were undertaken. Chief among these are:

1. **P/T Initiatives** - several initiatives have taken place within jurisdictions in the implementation of their respective approaches. Notably, the government of Ontario passed Rowan's Law (Concussion Safety), 2018, a legislation to prevent and manage concussions in amateur sport. (See Annex 3 P/T Initiatives and Updates).
2. **RTSchool & RTSport Protocols** - Parachute developed generic RTSchool and RTSport Protocols, a set of guidelines to help students and athletes gradually return to school and sport activities after sustaining a concussion. The Protocols, based on the *Canadian Guidelines* have been disseminated nationally and are being used to recognize, prevent and reduce the impacts of concussion in the sport, health and education sectors.
3. **Sport-Specific RTSport Protocols** - Parachute has also been working with National Sport Organizations (NSOs) to developed sport-specific RTSport Protocols. A growing number of NSOs currently have sport concussion protocols harmonized with the *Canadian Guideline*.

2019 F-P/T SPAR Ministers Conference

Commitments: “Ministers also re-affirmed that concussions are a major public health concern. They committed to additional actions, as appropriate by jurisdiction, to mitigate against concussions and build on initiatives that increase the awareness, prevention and management of concussions. *Jurisdictions will work to implement an annual concussion awareness day (similar to Ontario’s Rowan’s Day Law held on the last Wednesday in September) in collaboration with the sport sector to support the dissemination of harmonized resources and key messages.”³

*While it shares several of the other governments’ objectives underlying the common vision for increasing physical activity and reducing sedentary living and concerning the initiatives for better prevention and management of concussions, Quebec has its own programs, action plans, objectives and targets for promoting physical activity and healthy lifestyles and for the prevention and management of concussions, all areas which are under Quebec’s jurisdiction. Quebec intends to remain solely responsible for defining the prevention and awareness measures and tools that are used and disseminated over its territory and will continue to share information with the other governments in these areas.

DELIVERABLES TO CANADIANS

- Extensive collaboration across multi-sectors and jurisdictions within and outside governments have produced invaluable tools and information to help Canadians deal with concussions. Highlights of these activities, and resources, are outlined below:

³ Commitments quoted from the SPAR Ministers February 15, 2019 press release.

<http://scics.ca/en/product-produit/press-release-sport-physical-activity-and-recreation-ministers-collaborate-to-make-sport-safe-and-inclusive/>

- The 2016 Governor General’s Conference on Concussions in Sport raised concussion awareness and contributed to a national approach to make sports safer (See Annex 4 Outcome Statement);
- The 2018 Concussion in Sport Workshop helped advance the implementation of the *Canadian Guideline* and sport-specific RTSport Protocols among NSOs;
- The 2018 national awareness campaign for concussion in sport “We are Headstrong” was launched to drive the importance of applying the 4Rs: Recognize, Remove, Refer & Return in concussion management;
- National online information on concussion in sports housed in Sport Information Research Centre (SIRC), Parachute and Canada.ca concussion web pages are available to all Canadians; and
- 42 of 56 Sport Canada funded NSOs have sport-specific RTSport protocols in place.

CHALLENGES

- The Government of Canada has invested primarily in the detection and management components of the *Harmonized Approach* through the development of the *Canadian Guideline*, RTSchool and RTSport Protocols, among others.
- Through the course of its deliberations, the CWG identified three (3) main challenges with respect to managing and implementing the process. These are: 1-surveillance; 2-prevention components of the *Harmonized Approach* and 3-the dissemination of harmonized tools. (See Annex 5 Dissemination and Surveillance Challenges) The CWG also presents measures to counter these issues:

1. **Surveillance** is critical in understanding the overall health burden of concussion across Canada. It informs future prevention strategies through the identification of root causes and risk factors. Further, it gives rise to evaluate prevention and management strategies.

Expertise on existing surveillance systems lies in the health sector and the CWG has agreed that there is an opportunity for the PHAC to take on a leadership role.

Considering the urgency to make advancements in this area, the CWG proposes that governments focus on two (2) key elements of surveillance which also support prevention: 1. Extent of injury (i.e. the number of concussion incidences); and 2. Risk factors (e.g. sport, age, sex, rules of the game, etc.) (See Annex 6 Comprehensive Surveillance Approach)

2. **Prevention** of concussions in sport is a key component of the *Harmonized Approach* that governments and the sport sector have yet to address. Sport Canada will play a federal leadership role and support the sport sector to bolster efforts in this area given its

responsibility and influence in preventing concussions. Key areas that can be addressed include the rules of the game, training methods and behaviour.

Since prevention and surveillance are intrinsically linked but also distinct, Sport Canada and PHAC are discussing ways to delineate the respective roles and responsibilities of the sport and health sectors such that actions led by each sector would produce the greatest impact in preventing and treating concussions. The PHAC will also explore ways to engage with the F-P/T health table to strengthen the surveillance angle.

3. **Dissemination harmonized tools** with multiple concussion stakeholders spanning multi-sectors and jurisdictions responsible for sport, health and education make coordination and communication all the more challenging. Success in disseminating harmonized tools requires multi-model approaches to optimize implementation in a variety of contexts; alignment with P/T dissemination initiatives and the *Framework for Action*; using existing sport, health, and education networks; and building on existing Canadian expertise in knowledge dissemination strategies. To this end, governments will consider success factors in preparing and promoting the dissemination of harmonized tools. (See Annex 7 Dissemination Table Proposal)

CURRENT ACTIVITIES

- Considerable amount of work lies ahead given the prevalence of sport-related concussions in Canada, particularly among young athletes. The F-P/T governments and sector partners continue to forge ahead prioritising actions focused on prevention, surveillance and dissemination of harmonized tools.
- Sport Canada and the PHAC continue to collaborate by using existing resources to lead the concussion file and advance in implementing the *Harmonized Approach*. Current activities include:
 - **Sport-specific RTSport Protocol** - Parachute continues to work with the remaining 14 NSOs to increase adoption of sport-specific RTSport protocols. As a funding condition for 2019-2020, all Sport Canada funded NSOs will be required to work with Parachute to develop sport-specific RTSport protocols. Subsequently, NSOs will be well positioned to support Provincial/Territorial Sport Organizations (P/TSOs) in developing their respective protocols.
 - **2019 National Conference on the Prevention of Concussions in Sport**
In June 2019, Sport Canada in collaboration with SIRC will host a National Conference on the Prevention of Concussions in Sport to encourage the sport sector to consider ways to strengthen its prevention efforts by: changing to the rules of the game; introducing new training methods; and influencing behavioural shifts to make sport safer.
 - **Parliamentary Subcommittee's Study on Sport-Related Concussions**
Sport Canada is keeping abreast with the hearings and progress of the House of Commons' Subcommittee's study on sport-related concussions in Canada. The work of

the Subcommittee will inform the CWG's deliberations and actions. The CWG will take into consideration the report issued by the Parliamentary Subcommittee in preparing the next set of recommendations to the F-P/T SPAR Ministers Conference in 2020.

RECOMMENDATIONS FOR THE SUBCOMMITTEE*

- To mitigate the potential dangers of participating in sport and to make sport safer for all Canadians and in particular, to protect young athletes from concussion, the CWG recommends that the Parliamentary Subcommittee:

A) General Recommendations:

- Take into consideration the collective effort and actions already undertaken by F-P/T governments in concert with the sport, health and education sectors in its study on sport-related concussions to ensure continuity of recommendations, actions and initiatives;
- Send a strong message on the importance of the F-P/T governments' and sector stakeholders' continued commitment to implement the *Harmonized Approach* endorsed by all jurisdictions in 2016 in order to address concussions, in the areas of awareness, prevention, detection, management and surveillance; and
- Encourage F-P/T governments to implement the recommendations endorsed in 2016, 2017, and 2019.

B) Specific Recommendations:

- Reinforce the need to collaborate between the sport, education, and health sectors;
- Ensure that the messages of the National Campaign *We are Headstrong* are rolled-out and used across the country;
- Ensure efforts are made between the F-P/T government, the sport, health and education sectors to disseminate educational tools, including protocols to clubs, participants, and families; and
- Request that the sport sector at all levels focus its future actions on prevention, namely around the axis of: 1-the rules of the game; 2-training methods; and 3-behaviors.

* The Recommendations presented to the Subcommittee are provided by the F-P/T Sport Committee Work Group on Concussions in Sport (CWG) and should not be interpreted as recommendations tabled by the F-P/T governments.

Annex 1: F-P/T Sport Committee Work Group on Concussions in Sport - Members

A) F-P/T governments:

1. AB: Tim Bjornson
2. BC: Bryan Melnyk (Sharon White)
3. MB: Greg Guenther (co-chair)
4. NWT: Colin MacPherson
5. NB: Jamie Shanks
6. ON: Christina Seres
7. QC: Émilie Belley-Ranger
8. Sport Canada: Jocelyn East (co-chair)
9. Public Health Agency of Canada: Jennifer Harju (Daniel Riendeau)

B) The national sport sector:

10. Coaching Association of Canada: Jacqueline Tittley
11. Hockey Canada: Todd Jackson
12. Canadian Soccer Association: Kevin Gordon
13. Summer Sports Caucus: Raquel Perdicini (Handball Canada)
14. Winter Sports Caucus: Debra Armstrong (Skate Canada)

C) The health sector:

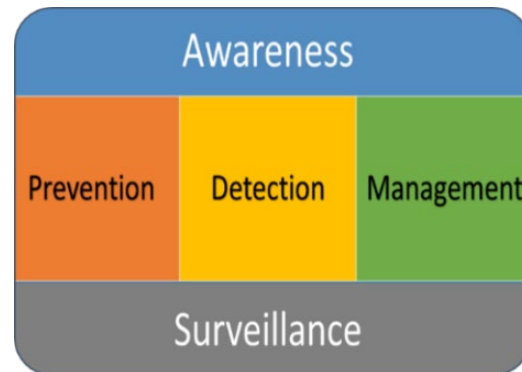
15. The Canadian Concussion Collaborative (CCC): Pierre Frémont
16. Parachute: Charles Tator / Pamela Fuselli (Stephanie Cowle)
17. Canadian Physiotherapy Association: Kathryn Schneider
18. Canadian Athletic Therapists Association: Vacant

D) The education sector:

19. The Pan-Canadian Joint Consortium for School Health: Katherine Kelly (Craig Watson)

Annex 2:

Harmonized Approach on Concussions



1. *Awareness*: This includes messaging for general and specific audiences adapted by provinces and territories, the dissemination of relevant information.
2. *Prevention*: Proper measures are promoted and implemented to reduce the number of and gravity of concussions.
3. *Detection*: The adoption of new measures to increase the recognition of potential concussions including the knowledge on observable signs and symptoms and reinforce the capacity to determine appropriate follow-up actions.
4. *Management*: Necessary treatment is accessible including the knowledge regarding which symptoms to monitor and the proper recovery protocols.
5. *Surveillance*: Use of surveillance systems for reliable, integrated data management to track the incidence of concussions.

Annex 3: Provincial and Territorial Initiatives and Updates

Several initiatives have taken place since 2015 amongst jurisdictions in the development and implementation of their respective approaches, notably:

Ontario (ON) On March 7, 2018, ON enacted Rowan's Law (Concussion Safety), 2018 as well as amendments to the Education Act (only Section 5 of the Rowan's Law has been proclaimed into force). The intent of these provisions is to protect amateur athletes, including students, by improving concussion safety on the field and at school. Rowan's Law includes:

- an annual concussion awareness day (Rowan's Law Day)
- establishes mandatory requirements for amateur competitive sport organizations:
 - annual review of concussion awareness resources by athletes, coaches, officials, and parents/guardians of athletes under 18 years of age;
 - establishment of removal-from-sport and RTSport protocols, so that athletes are immediately removed from sport if they are suspected of having sustained a concussion;
 - establishment of concussion codes of conduct that will set out rules of behavior to minimize concussions while playing sport.

A consultation draft of the potential regulation under Rowan's Law was posted on the ON Regulatory Registry for public input and closed on April 18, 2019. ON is planning a phased implementation of the Act and regulation and proposes that the parts of the Act and associated sections of the regulation related to Concussion Awareness Resources and Concussion Codes of Conduct would come into effect in spring/summer 2019 and that the parts of the Act and associated sections of the regulation related to the removal-from-sport and RTSport Protocols would come into effect in spring/summer 2020.

Manitoba: Introducing legislation has not moved forward at this time however, Sport Manitoba (Sport MB) continues to advance having PSOs adopt concussion protocols based on the *Canadian Guideline*. The concept of a mandatory concussion policy is also being explored. If a NSO has adopted the *Canadian Guideline*, Sport MB encourages the PSO to accept and fall in line with their NSO's protocol. Sport MB has developed a plan to assist each PSO with the creation of a concussions information landing page. The information is specifically focused on increased education and awareness within each sport's membership, including parents and guardians of youth athletes. All material being used is taken from the *Canadian Guideline* templates. The Sport MB Concussion Work Group which has a Department of Education representative guides and supports the work in this area and ensures that work done within the education sector is based on the *Canadian Guideline*. Further, Sport MB has entered into partnership with the Sport Medicine & Science Council of MB (SMSCM). SMSCM will oversee the delivery of Concussion Education workshops that will be made available to sport organizations including schools, teachers, coaches, athletes, parents and administrators.

Quebec's Action Plan on Concussion, published in 2015 focused on three areas: awareness, prevention and management. The Concussion Management Protocol, published in 2017 was disseminated to schools, sports and recreation sectors. The protocol also includes a tracking sheet used to collect information on the circumstances surrounding the removal from the activity, the

symptoms reported, the medical follow-up as well as the progressive return to activities. It facilitates the transmission of information among parents, educational institutions, recreation or sport organizations and health professionals. Updates to the Protocol is in progress (2018-2019) and the first phase of the awareness campaign to recognize the symptoms of a concussion launched in 2018 continues in 2019.

Alberta's minimum recognition and eligibility requirements for PSO and Multi-Sport Organization funding currently consist of a list of policies that includes a Concussion Management Policy be in place or in development. The Concussion Management Policy will become mandatory in the new funding cycle to begin in April 2020.

British Columbia (BC) has reviewed the Concussion Awareness Training Tool-CATT Online (CATT) which includes toolkits providing training in the recognition, treatment and management of concussion for: 1. medical professionals; 2. parents, players, and coaches; and 3. school professionals. CATT is free, accessible and regularly updated with evidence-based information and resources and is currently being updated to reflect the *International Consensus Statement on Concussion in Sport*. Some sports (e.g. hockey and football) use it for mandatory coach training/certification. viaSport has also established a Safe Sport Advisory Group which helps promote and disseminate concussion resources such as cattonline, *Canadian Guideline* and NSO protocols. The Ministry of Health and the Sport Division (Ministry of Tourism, Arts and Culture) are also members of the BC Concussion Advisory Network which includes more than 80 membership from various sectors.

New Brunswick created multi-sectoral work groups and networks to address the issue of concussions in sport and recreation. Question and tracking processes have been put in place for PSO funding around concussion protocols, policies and education/awareness.

Annex 4: Governor General’s Conference on Concussions in Sport – “We Can Do Better”

Outcome Statement

Driven by a strong desire for Canadian youth to play safe and continue to get involved in sport and physical activity, His Excellency the Right Honourable David Johnston, Governor General of Canada, hosted “We Can do Better: Governor General’s Conference on Concussions in Sport” in partnership with Sport Canada and the Sport Information Resource Centre at Rideau Hall, on December 6, 2016.

The one-day Conference had two objectives: 1. raise awareness among Canadians that concussions and head injuries in sport are an important public health issue; and 2. contribute to a national approach to make sports safer.

The Conference drew an impressive group of leaders from professional and amateur sports, education, medical experts, and governments who spoke on four themes: concussions in professional sports; concussions in olympic and paralympic sports; improving concussion management; and advancements in addressing concussions. The Conference also assembled key stakeholders from the federal, provincial and territorial governments and from the sport, recreation, health and education sectors whose work is underway to develop a harmonized approach to managing concussions. Canadians across the country also participated by watching the live proceedings of the conference and interacting with the panelist on-line. About four hundred people attended the conference, either on-site or via the webinar.

The wealth of information exchanged and experiences shared between the panelists and the audience were as diverse as they are complex. Nevertheless, there were recurring messages conveyed particularly in terms of observations, lessons learned and best practices in addressing concussions. These messages are further elaborated below.

Key Messages

Simple, Clear and Consistent Messaging The multitude and inconsistent messages from different sources has left many confused and overwhelmed as to how best to prevent, detect and manage concussions. It is therefore imperative that messages to the public at large, whether they be disseminated through education curriculum, training modules or awareness campaign be kept simple, clear, and consistent. There is a need to balance between active play and safe play messages and to adapt those to the age of the audience to increase their conceptual understanding of concussion.

Given that concussion is a public health issue that cuts across the sport, recreation, health and education sectors, it is all the more important that messages from government leaders, professionals, and researchers and those four sectors, be well coordinated and coherent particularly in developing a harmonized concussion approach that covers awareness, prevention, detection, management and surveillance. This would ensure that those who suffer from concussion are offered a consistent approach through the different stages with the correct treatment, at the right time and by the appropriate health care providers.

Education to increase Awareness and Prevention There is mounting medical evidence that concussions in sport and physical activity are a recognized public health problem due to their frequency of occurrence; potential short and long-term cognitive, emotional, physical and social repercussion, and even fatality. Every year, Canadians from all walks of life participate or are involved in sport and physical activity in one way or another. As such, everyone has a role to play and a shared responsibility in tackling this serious health matter.

Awareness and prevention through education is key to reducing the risks and occurrences of concussion. It is imperative that education start as early as possible and at the grassroots level. Children who are first introduced to sport and parents, teachers, coaches and officials who actively participate in a child's sport development could benefit from simple, specific, standardized tools to help with early recognition of suspected concussions and subsequent protocols to prevent and mitigate the consequences of concussion to the extent possible.

Many reputable organizations have already developed educational curriculum, training modules and on-line information to build awareness, prevention and early recognition. These educational materials are tangible and easily accessible to targeted individuals such as athletes, coaches, parents and volunteers. Other organizations looking to develop educational materials can build on these reliable, current and evidence-based information and adapt them to suit the needs of their target audience.

Cultural Shift to Create New Norms Given the expectation of playing through injury and the stigma attached to asking for help, there needs to be a cultural shift to allow athletes and players to change their behavior and seek help in a supportive environment. To foster a supportive environment, it is equally important for people who are directly in contact with athlete-participants to change their behavior.

Significant strides have already been made by government and the sport sector with the introduction of Rowan's Law and integrating safe intervals between practices and games to reduce the risks of head injury for contact sport. Changing competition structures, field of play and equipment would also enhance safe play. Further, changing rules of the game and codes of conduct are important shifts that could vastly improve the safety and welfare of players.

Supporting an athlete recovering from a head injury still feel valued and not sidelined from the game and encouraging teammates to watch out for each other during practice and play could remove the pressure to return to play while injured. Further, as it is often difficult for players who suffer head trauma to make the right decisions when concussed, training coaches, officials and parents to be neutral and to make objective decisions based on standard assessment tools when there's a suspected concussion would greatly reduce the risk of head injuries.

While there needs to be a balance between risk management and fear of concussion, these vital behavioral changes can be transformative in creating and adopting new social norms.

Harmonized Approach in dealing with Concussion Participants confirmed the need for a harmonized approach in dealing with concussions including tools, protocols and policies. Since concussion does not only affect athletes, policy decisions regarding concussion, approaches in dealing with concussions and protocol in managing concussions across multi-sectors must be aligned in order to be effective. A pan-Canadian, multi-sector concussion policy with practical guidelines for athletes, participants, coaches, parents, medical practitioners, educators, administrators, officials, volunteers, and teachers to follow in a consistent and coherent manner is therefore essential in reducing concussion incidences.

The sport, recreational, health and education sectors have already started to capitalize on the expertise of organizational leaders who are at the forefront of concussion management and are collaborating with each other through multi-sector work groups to ensure open dialogue and facilitate knowledge translation across multi-sectors.

Communication Infrastructure Communication with Canadians needs to continue well beyond the Governor General's Conference. It also goes hand in hand with messaging to the public at large. The public is now aware that governments and stakeholders in the sport, education and health sectors have made important strides in tackling this public health issue. However, there's still a great deal of work ahead and Canadians need to know that there is a multi-sector effort in progressing through the next steps.

A collaborative effort is underway between each sector however, there's still a need to delineate roles and responsibilities in terms of disseminating information to target groups within and across sectors. A solid communication infrastructure would ensure proper transmission of the latest evidence-based information and knowledge on concussion management.

Another vital information shared during the Conference is the need to support an athlete's well-being after sustaining a concussion. A solid communication mechanism needs to be in place to report and share concussion injuries that respect the privacy of the individual and also ensure that key information is shared and actioned quickly.

Conclusion

The Governor General's Conference garnered extensive media coverage and positive reactions from Canadians across the country. It gave the seriousness of concussion more prominence and space in the public discourse. Participants, both on site and on line appreciated the opportunity to share their views and knowledge on the topic.

The Conference drew a large group of people who are passionate about tackling this important public health issue. The athletes, medical professionals and experts who shared their stories and insights have become lifetime advocates to mitigate concussion in sport. Their messages resonated strongly with the public and we need to support them in their desire to contribute. The Governor General's Conference has set the stage for leaders, stakeholders and experts to engage with communities across Canada. We must build on this momentum and drive the dialogue towards meaningful actions. Collectively, we can do better by raising awareness to prevent concussions from occurring and mitigating the risk of concussion to the extent possible.

Annex 5: Dissemination and Surveillance Challenges

Dissemination of harmonized tools

- The reach of NSOs has limitations, especially in younger age groups and lower levels of participation (e.g.: club level).
- Some sports and activities at risk of concussion do not have an NSO (e.g.: cheerleading).
- Concussions occur in non-organized sport and recreation activities (e.g.: mountain biking, alpine skiing, skateboarding, cycling, playground, etc.)
- School environments play a central and unavoidable role in the identification and day-to-day management (RTSchool and, for school-based sport programs, RTSport) of concussions that occur in school, so it is essential that schools have the information and tools to address the prevention and management of student concussions.
- Implementation of the *Canadian Guideline* via traditional methods such as symposiums and direct support to organizations and individuals would require significant additional resources to ensure that proper consideration is given to specific contexts and target groups.
- Outdated information on concussions exists at all levels.
- There is still a risk of confusion due to the existence of multiple tools in various P/Ts.
- Health, education and sport are areas that fall under P/T jurisdiction.
- Lack of communication between the sport, health, and education sectors, which is seen as key to ensuring harmonization of work.

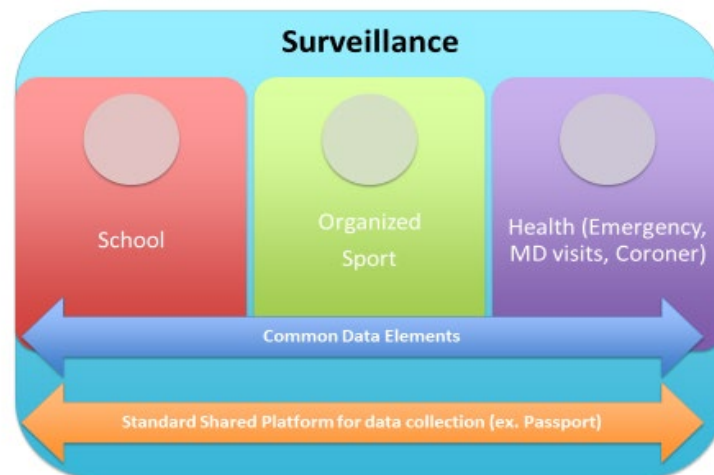
Surveillance

- Surveillance strategies should take into account the potential for under-reporting of concussion and take measures to optimize reporting.
- Lack of a common platform for surveillance and a mechanism to capture and evaluate the burden of concussions across multiple sports and levels of practice.
- Source of reporting vary as many concussions are not seen at the emergency room but rather at family physicians' offices, sport medicine clinics or other local health care clinics. Thus, surveillance captured at an emergency room provides a small portion of actual concussions.
- No denominator data/lack of a good understanding of overall numerator (i.e. we do not have a good understanding of the total number of youth participating in each sport (denominator) or the total number of concussions that occur in each sport (numerator) and the risk factors for those concussions). Some data currently exist from emergency room and physician visits but they only capture a portion of the concussions that occur.
- Privacy of personal health information and records.
- Cost of databases and human resources needed to collect information and enter data.
- No existing requirements to share sport data (e.g. in leagues) or to use existing databases.
- Data is also collected by the private sector (e.g. concussion clinics).
- Validity of the data depending on who is entering them, what International Statistical Classification of Diseases and Related Health Problems codes are used, whether they have been coded properly, whether details of the incident have been recorded and entered into a database.

Annex 6: Comprehensive Surveillance Approach

A comprehensive surveillance approach will allow for the harmonization and understanding of:

- 1) The extent of injury (i.e. the number of concussion incidences).
- 2) Risk factors (i.e. concussion factors and/or causes such as sport type, age group, sex, mechanism of injury, rules of the game, equipment, playing surface, type of game, etc.).
- 3) Development of strategies with the highest impact to decrease the risks of concussion.
- 4) Introduction of intervention and re-evaluation of the extent of the injury to best understand the impact that strategies implemented have had on decreasing the risks to injuries.



Annex 7: Dissemination Table Proposal

The proposed tools have been recommended as they meet all of the four criteria listed in the *Framework for Action* endorsed by the SPAR Ministers in 2017 (1-based on the *Canadian Guideline*; 2-has a review and evaluation plan; 3-are accessible for all; and 4-have a sustainable plan). The recommended dissemination table below is based on the assumption that both CATT and the Massive Open Online Courses (MOOC) would be available in both French and English in 2018-19.

Levels of dissemination:

Concussion resources/tools have been classified into the following 3 tiers, depending on the purpose and level of detail required:

- a) Awareness (concussions need to be taken seriously, what is a concussion, what are the signs and symptoms, who to consult, etc.).
- b) Directives (to understand and apply the basic principles of a concussion management protocol).
- c) Training (to properly manage the recovery of an individual who has suffered a concussion).

Note: P/T organizations may also decide to use locally available tools or means (such as workshops).

Target Groups	Purpose	Suggested Tools	Lead for implementation
Individuals/participants	Awareness	CATT, MOOC	NSOs/PTSOs
Coaches (including in school and non-school settings)	Awareness Directives Training	Making Headway, CATT	Sport (CAC) in partnerships with NSOs/PTSOs
Sport Officials	Awareness Directives	Making Headway, CATT	Sport
Parents	Awareness Directives	CATT, MOOC	NSOs/PTSOs Health Education
Sport Trainers	Training Directives	CATT MOOC	NSOs/PTSOs
Sport Administrators	Awareness Directives	MOOC	NSOs/PTSOs
Health Practitioner	Training	CATT (module for health practitioner) MOOC	Health Sector
Health Clinics	Training	CATT (module for health practitioner) MOOC	Health Sector
Teachers	Awareness Directives	CATT, MOOC	Education Sector
Education Administrators	Awareness Directives	MOOC	Education Sector