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Canadian
Chiropractic
Association

Submission to the
**Standing Committee
on Health**

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An Act to Establish a National Strategy on Brain Injuries

Executive Summary

The Canadian Chiropractic Association (CCA) expresses its strong support for Bill C-277, *An Act to Establish a National Strategy on Brain Injuries*, which aims to establish a national strategy on brain injuries. This legislation presents a critical opportunity to address a significant health issue that affects many Canadians—specifically, traumatic brain injury (TBI) and mild traumatic brain injury (mTBI), commonly known as concussion. Despite the profound impact of these conditions, they remain under-recognized within the Canadian healthcare landscape.

The passage of Bill C-277 would mark a transformative moment in our healthcare system, bringing the issue of brain injuries to the forefront of national health priorities. This legislation promises to foster a coordinated approach to the challenges surrounding awareness, prevention, treatment, and rehabilitation of brain injuries.

To ensure that Bill C-277 achieves its full potential, the CCA recommends the following actions:

Recommendations

1. Ensure access to timely assessment and diagnosis of mild traumatic brain injuries (concussions) especially in sports related injuries for youth athletes.
2. Enhance the utilization of healthcare professionals who have the scope, competencies and training to provide concussion care.
3. Create greater alignment of Canada's concussion guidelines with internationally established guidelines on concussions.

By implementing these recommendations, the government can ensure that Bill C-277 not only raises awareness but also leads to meaningful improvements in the prevention and management of brain injuries across Canada.

Background

The Canadian Chiropractic Association (CCA) is the national association representing more than 9,000 licensed Doctors of Chiropractic across Canada. The CCA advocates on issues that impact the musculoskeletal health of Canadians.

Chiropractors are one of Canada's largest primary contact healthcare professions and experts in the assessment, diagnosis, and treatment of musculoskeletal (MSK) conditions, such as back pain, headaches, arm or neck strain and diseases of the muscle and joints, as well as the management of pain caused by these conditions.

Each year, **more than 11 million Canadians** suffer from musculoskeletal conditions and by 2031 this number is projected to **grow to an alarming 15 million**.¹ Musculoskeletal conditions are having a devastating impact on the health, quality of life, and workforce participation of Canadians, as well as on Canada's economy.

Ensure access to timely assessment and diagnosis of mild traumatic brain injuries (concussions) especially in sports related injuries for youth athletes.

Each year a significant number of youth athletes experience concussions during sport-related activities, sometimes ending in tragic circumstances. Nearly a third of concussions reported in Canada occur to children and youth from 12 to 19 years of age, with 60% these incidents being sports-related.¹

Evidence shows that early assessment, diagnosis and subsequent treatment of concussions leads to reduced post-concussion systems and faster recovery times for patients.² Timely detection and assessment is therefore extremely important, and unfortunately often delayed, in managing the long-term impact of concussions for youth athletes. According to the Ontario Neurotrauma Foundation, a concussed patient must wait a mean wait time of 18 days to see a primary care physician and in excess of 250 days to see a neurologist.³

The lengthier the wait for an athlete to be assessed for a suspected concussion, the greater the risk of re-injury and much more serious consequences.⁴ According to Public Health Canada, approximately 46,000 youth were diagnosed with a concussion by hospital emergency departments between 2016-17, and the majority of these injuries occurred during sports and recreational activities.⁵ These youth athletes may have waited hours or even days before their assessment and/or diagnosis. Furthermore, studies indicate that a large number of concussions are never reported.⁶

¹ Canadian Association of Occupational Therapy, Occupational therapy and Concussion Fact Sheet, <https://www.caot.ca/document/4049/Concussion%20-%20Fact%20Sheet.pdf>

² Nygren-de Boussard, C., Holm, L. W., Cancelliere, C., Godbolt, A. K., Boyle, E., Stålnacke, B. M., ... & Borg, J. (2014). Nonsurgical interventions after mild traumatic brain injury: a systematic review. Results of the International Collaboration on Mild Traumatic Brain Injury Prognosis. Archives of physical medicine and rehabilitation, 95(3), S257-S264.

³ Ontario Neurotrauma Foundation, Survey of Ontario Clinics Providing Concussion Services, 2016, <http://concussionsontario.org/wp-content/uploads/2016/07/Survey-of-Clinics-Providing-Concussion-Services-2016.pdf>

⁴ Gioia, G. A., Collins, M., & Isquith, P. K. (2008). Improving identification and diagnosis of mild traumatic brain injury with evidence: psychometric support for the acute concussion evaluation. The Journal of head trauma rehabilitation, 23(4), 230-242.

⁵ Government of Canada, Concussion in Sport: Sport and Recreation-related Traumatic Brain Injuries among Canadian Children and Youth, Public Health Canada, Accessed April 5, 2019. <https://www.canada.ca/en/public-health/services/diseases/concussion-sign-symptoms/concussion-sport-infographic.html>

⁶ Canadian Association of Occupational Therapy, Occupational therapy and Concussion Fact Sheet, <https://www.caot.ca/document/4049/Concussion%20-%20Fact%20Sheet.pdf>

To ensure that more injured athletes are assessed in a timely manner, regulated healthcare professionals with the scope, and extensive skills to assess and diagnose concussions, such as chiropractors, should be recognized for their critical role in providing early access to concussion assessment and diagnosis. However, the Canadian government's recently released guideline on concussion in sport, created by Parachute Canada, restricts diagnosis to solely physicians and nurse practitioners. This not aligned with international guidelines and limits time and access in guiding Canadians to seek assessments and diagnosis from qualified healthcare professionals, potentially undermining the safety and protection of youth athletes.

Enhance the utilization of healthcare professionals who have the extensive scope, competencies and training to provide sport-related concussion care.

In Canada, chiropractors and other licensed, regulated healthcare professionals who possess the scope, competencies and training to provide comprehensive concussion care are being underutilized. Recognizing and fully optimizing the expertise which exists in these professions, can have a meaningful impact in responding to the alarming growth of sport-related concussion in Canada. Concussions are the most common type of head injury, with an incidence of 210,000 per year in Canada, and sport-related brain injuries have increased at the highest rate in the 0-9 age group.^{7,8}

There is an exhaustive academic and clinical process a licensed and practicing chiropractor in Canada must first undergo to achieve and maintain their ability to provide a comprehensive level of concussion care, including diagnosis. The thorough education, training, and testing involved in this process needs to be better understood and optimized in Canada's approach to improving concussion response and management for youth athletes.

Chiropractic is a rigorous academic program, encompassing both practical and theoretical education. Chiropractors are required to complete arduous training exceeding 4200 hours, which provides an in-depth knowledge of concussion care, including diagnosis. The topic of concussion is covered expansively in areas such as

⁷ Canadian Psychological Association, "Psychology Works Fact Sheet: Concussions," https://cpa.ca/docs/File/Publications/FactSheets/PsychologyWorksFactSheet_Concussions.pdf

⁸ Canadian Institute for Health Information, "Head's Up on Sport-Related Injuries", <https://www.cihi.ca/en/heads-up-on-sport-related-brain-injuries-0>

clinical practice, systems pathology, emergency care, child care, clinical psychology, and rehabilitation in chiropractic practice. With respect to concussion, curriculum typically begins with the study of normal anatomy and physiology of the central and peripheral nervous systems, then progresses to the epidemiology, pathophysiology and mechanism of brain injury and trauma. The curriculum proceeds to the assessment of brain injury related to cognitive impairment, leading to the diagnosis of concussion, and the treatment and rehabilitation of patients suffering from a concussion.

The curriculum pertaining to neurodiagnosis includes the study of cranial and tract localization, traumatic brain injury, mechanism, lobular presentations, vascular lesions, whiplash associated disorder, vertigo, disequilibrium, central pain, management, and pain medication. From a pathological perspective, the curriculum includes study of the consequences of head trauma including cerebral concussion, with specific emphasis on chronic posttraumatic encephalopathy, posttraumatic dementia, epilepsy, and mental health.

As a result of this rigorous education and training, chiropractors are prepared to recognize red flags, CT head and C-spine rules, provide emergency care, and complete field and sideline assessments. Chiropractors are trained in using standardized assessment scales (i.e. Rivermead Postconcussion Symptom scale, PCSS, SCAT5) to document and monitor somatic, cognitive and emotional symptoms post-injury and can provide a return-to-sport strategy.⁹

In addition, the Canadian Chiropractic Association, the Canadian Chiropractic Guideline Initiative, and the Royal College of Chiropractic Sports Sciences – Canada issued a position statement on concussions. The statement reads, “chiropractors have the clinical training to assess, diagnose, and manage mild traumatic brain injury/concussion...chiropractors are well-positioned to manage or co-manage patients, such as those presenting with the common complaints of headache, neck and back pain, upper extremity pain, and vestibulo-ocular symptoms.

This statement is supported by the 2022 concussion consensus in sport where it states that “referral to clinicians with specialized knowledge and skills in concussion management should be considered for the targeted treatment of persisting symptoms. This may include the management of cervicogenic symptoms, migraine and headache, cognitive and psychological difficulties, balance disturbances,

⁹ Canadian Memorial Chiropractic College (CMCC) Doctor of Chiropractic Program Curriculum: <https://www.cmcc.ca/academic-programs/doctor-of-chiropractic-program>

vestibular signs and oculomotor manifestations.”¹⁰ Within the consensus, chiropractors are specifically named as recommended practitioners within the sports-related concussion clinical network, amongst others.

Create greater alignment of Canada’s concussion guidelines with internationally established guidelines on concussions.

To allow young athletes to fully benefit from the important role healthcare professionals, such as chiropractors, play in providing concussion care, we recommend creating greater alignment of Canada’s current concussion guidelines with internationally established guidelines on concussion.

On March 14, 2024, the updated Canadian Guideline on Concussion in Sport, developed by Parachute Canada, was released by the Government of Canada. These guidelines restrict the signing of the medical assessment (diagnosis) and medical clearance letters to physicians and nurse practitioners. Despite being experts in neuromusculoskeletal conditions, chiropractors, with the license, training, and scope to assess and diagnose concussions, were not a part of their consultation. Restricting diagnosis to MDs or NPs limits the assessment and care Canadians could receive from a chiropractor who have the skills and expertise to assess, diagnose and treat. The exclusion of chiropractors from conducting a diagnosis can lead to delays in care and underutilization of skilled practitioners who can manage concussed patients. A recent study highlighted the importance of integrating qualified healthcare professionals, including chiropractors, in concussion management and diagnosis. The authors urged policymakers and healthcare leaders to reassess guidelines to facilitate this integration for effective assessment and treatment for improved patient care and outcomes.¹¹

¹⁰ Jon S Patricios , Kathryn J Schneider. et., al. Consensus statement on concussion in sport: the 6th International Conference on Concussion in Sport–Amsterdam, October 2022, Br J Sports Med 2023;57:695–711. <https://bjsm.bmj.com/content/bjsports/57/11/695.full.pdf>.

¹¹ Carol Cancelliere, Scott Howitt, et. al., Expanding Concussion Care in Canada: The Role of Chiropractors and Policy Implications, Journal of the Canadian Chiropractic Association, 2024; 68(2).

Conclusion

Thank you for the opportunity to provide feedback and contribute our perspective to the draft legislation. The proposed legislation is in line with the CCA's strategic goal to improve Canadians health by bringing the issue of brain injuries to the forefront of national health priorities and utilizing the skills and expertise of Doctors of Chiropractic. We believe by ensuring timely access to assessment and diagnosis, enhancing the utilization of healthcare professionals like chiropractors who possess expertise in this area, and embracing a more multidisciplinary and internationally aligned approach in providing sport-related concussion care, Canada can greatly reduce the impact of sports-related concussions on athletes. We look forward to continuing to engage with you on this critical topic and welcome the opportunity to answer any questions you may have regarding our submission.