



Ontario
Chiropractic
Association

Proposed Rowan's Law
c/o Sport, Recreation & Community Programs Division
Ministry of Tourism, Culture and Sport
777 Bay Street, 18th Floor,
Toronto Ontario, M7A 1S5

Dear Honorable Daiene Vernile,

The Ontario Chiropractic Association (OCA) is pleased to have the opportunity to comment on the proposed legislation, Bill 193, an Act to enact Rowan's Law (Concussion Safety). The OCA represents over 3,500 of Ontario's chiropractors by serving our members and the public through advancing the understanding and use of chiropractic care. Chiropractors are regulated health professionals that provide assessment, diagnosis and care for conditions related to the spine, joints and nervous system. Chiropractors have an active role in assessing, diagnosing and treating concussions, and co-managing return to play decisions, making a chiropractor's perspective valuable in the development of Bill 193.

After reviewing the proposed legislation, the OCA agrees with the collective requirements of coaches, athletes, parents and guardians, sports organizations, and any other parties actively involved in making amateur sports safer. Although the details of the legislation are still quite broad, as the details are fine-tuned, it is important to keep in mind the vital role allied health professionals have in reducing the impact of sports-related concussions on athletes.

ASSESSMENT AND DIAGNOSIS OF CONCUSSIONS

According to the College of Chiropractor of Ontario, while acting within the chiropractic scope of practice, chiropractors can be involved in the assessment, diagnosis and management of concussions. Like every use of a diagnostic or therapeutic procedure, chiropractors are required to achieve, maintain and be able to demonstrate clinical competency in accordance with the CCO's *Standard of Practice S-001: Chiropractic Scope of Practice*.

With no definitive tests to diagnose a concussion, the only means to currently confer a concussion diagnosis is, after an external force to the head occurs, to assess for high frequency symptoms, such as dizziness, headaches, and memory loss.³ The majority of traumatic brain injuries (75-90%) are mild in nature and occur without a loss of consciousness or obvious neurological signs – this would rule out any serious pathologies and the need for a CT scan or MRI.^{3,4}

Current guidelines, including the Parachute Guidelines, note that only physicians and nurse practitioners can diagnose a concussion, while allied health care professionals can provide initial assessment and treatment, even though it is within the scope of practice of some allied health professionals. One of the biggest challenges faced with managing the impact of concussions on athletes is timely recognition and assessment. In Ontario, approximately 653 patients with



suspected concussions (per 100,000 population) are seen by emergency room physicians and family physicians.⁵ Once a sideline assessment is conducted and an athlete is suspected to have a concussion, they may wait hours or even days to see an emergency room physician or family physician. The longer athletes are waiting to be assessed by a health care professional, the greater the risk for functional problems and potentially more serious consequences.³ Specifically, symptoms that go unmanaged can lead to physical and cognitive exertion, or as mentioned, more serious consequences including re-injury.³

Although there is no gold standard of care for management of a concussion, there is reasonably good evidence that early detection with subsequent education, reassurance, symptom management, and appropriate follow-up plans reduce post-concussion symptoms.⁶ To ensure injured athletes are assessed in a timely manner, allied health professionals with the competency, skills and judgement to assess and diagnose concussions, including chiropractors and physiotherapists, should have the ability to do so. When health professionals collaborate and take a multidisciplinary approach to concussion management, athletes can receive better care more efficiently.

Through entry to practice education, chiropractors develop the knowledge, skills and judgement to assess, diagnose and manage concussions. The topic of concussion is covered extensively in various courses throughout the four year doctor of chiropractic program, including during the courses Clinical Practice, Neurodiagnosis, Systems Pathology, Emergency Care, Clinical Psychology, and Rehabilitation in Chiropractic Practice. Specific details about how assessment, diagnosis and treatment of concussion is taught throughout the progression of the curriculum is explained in further detail in appendix one.

After completing entry to practice training, chiropractic students are required to demonstrate their competency in diagnosing and managing concussions in order to pass the licensing exam.⁷ The exam consists of multiple questions on concussion and post-concussive syndrome, as this is a condition seen by 50-79% of all chiropractors.⁷

As mentioned previously, while acting within the chiropractic scope of practice, chiropractors can be involved in the assessment, diagnosis and management of concussions, however they are obligated to ensure they have achieved, maintained and can demonstrate clinical competency that complies with CCO regulations, standards of practice, policies and guidelines. The CCO mandates that if a member of the college is providing any specific recommendations relating to concussion, the member is required to ensure they have continuously assessed and managed that patient and has enough clinical information to form a clinical opinion.

The CCO also mandates that chiropractors in Ontario are required to engage in inter-professional collaboration when appropriate and in the best interest of the patient, as well as advise the patient to consult with another regulated health professional if the assessment, diagnosis, management or treatment of the patient goes beyond the member's competency or beyond the chiropractic scope of practice. This referral may be necessary specifically if advanced diagnostic images are required.



Further, one of the first steps after a concussion is suspected is the 'medical assessment', conducted by only a nurse practitioner, physician and/or neuropsychologist, which is demonstrated in various clinical guidelines, including *Ontario Neurotrauma Foundation Standards for Post-Concussion Care* (see appendix two). In the initial diagnosis/assessment algorithm (see appendix three), the steps to be taken for a mild head injury, as shown on the left in green, can all be conducted by chiropractors. Chiropractors are trained to rule out serious pathology and/or disease, so if any symptoms demonstrate that the concussion is severe, the chiropractor will immediately refer the patient to a physician.

Chiropractors are avidly involved with amateur sports, whether through working with sports teams as coaches, trainers or volunteering on sports medical teams. It should be recognized that if a competent chiropractor is on the sidelines and an athlete is suspected of a concussion, the chiropractor, as a first point of contact, can conduct a proper assessment to determine if a concussion is present, and remove the need refer to a physician unless red flags are present.

MANAGING CONCUSSIONS

Athletes who have concussions may experience a range of symptoms, such as headaches, dizziness, and neck pain, which can be effectively treated by allied health professionals. Chiropractors are among the numerous allied health care professionals who can treat various post-concussion symptoms, and play a vital role in assisting with return to play decisions.¹ Since the allied health professionals play a large role in treating post-concussion symptoms, physicians and nurse practitioners can benefit from collaborating with chiropractors and other allied health professionals on return to play and learn clearance.

There are a wide range of concussion symptoms that an athlete may experience, which chiropractors can effectively treat. Chiropractors can treat specific symptoms a patient with a concussion may have, such as c-spine dysfunction and neck pain, dizziness/balance and postural issues, and persistent headaches.¹ Throughout their four years at the Canadian Memorial Chiropractic College (CMCC), chiropractic students undergo extensive training about the anatomy of the human body (including the neurological, cardiovascular, gastrointestinal, respiratory, and genitourary systems), the relationship between bodily structures, and how to examine, develop and facilitate an appropriate treatment protocol for various conditions, including those that can occur with a concussion, such as c-spine dysfunction and neck pain, dizziness/balance and postural issues, and persistent headaches.^{1,2}

CONCLUSION

Thank you for the opportunity to provide feedback on Bill 193, Rowan's Law (Concussion Safety). We believe that implementing legislation on concussion management will help make amateur sports safer for Ontarians. As the legislation moves forward, the government should recognize the role that allied health care professionals, including chiropractors, have in assessing, diagnosing and managing concussions. A multidisciplinary approach to concussion care will help ensure athletes



receive the care they need in a timely manner. We look forward to participating in future consultations. Please do not hesitate to contact us if you have any questions regarding our submission.

Sincerely,

A handwritten signature in black ink that reads "R. Haig D.C." in a cursive, flowing style.

Dr. Bob Haig, D.C.
Chief Executive Officer
Ontario Chiropractic Association



Appendix One



Dr. Scott Howitt
Associate Professor
Canadian Memorial Chiropractic College
Canadian Concussion Collaborative Representative

January 23, 2018

Dear Dr. Howitt,

The undergraduate program at CMCC is a second entry undergraduate baccalaureate honours degree program. The curriculum is a rigorous 4,200 hour program which provides the in depth knowledge required to develop competent chiropractors. The first two years of the curriculum emphasizes foundational courses in the biological sciences. Beginning Year 1, and becoming the emphasis of the program in Years III and IV, are the professional courses in chiropractic studies, psychomotor skills, clinical education and the related health professional courses. The curriculum develops the learner from a novice health care professional, to a clinician.

The topic of concussion is covered extensively in Clinical Practice, Neurodiagnosis, Systems Pathology, Emergency Care, Child Care, Clinical Psychology, and Rehabilitation in Chiropractic Practice.

CMCC's curriculum with respect to concussion 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. Finally, 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.

Curriculum pertaining to neurodiagnosis includes 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.

In special populations such as children, the curriculum covers vital sign assessment, birth injury, cerebral palsy, the child sport concussion assessment tool (SCAT 5), and related assessments such as sensory integration disorder, cognitive developmental delay, and milestones.



Appendix One (Continued)

Curriculum pertaining to rehabilitation and return to sport or function, includes operational definitions, SCAT 5, Glasgow Coma Scale, Return to Play and REHAB (Exercise, Patient Education, Activity Intolerance, Vestibular Dysfunctions and Manual Therapy).

If you have further questions please do not hesitate to contact me.

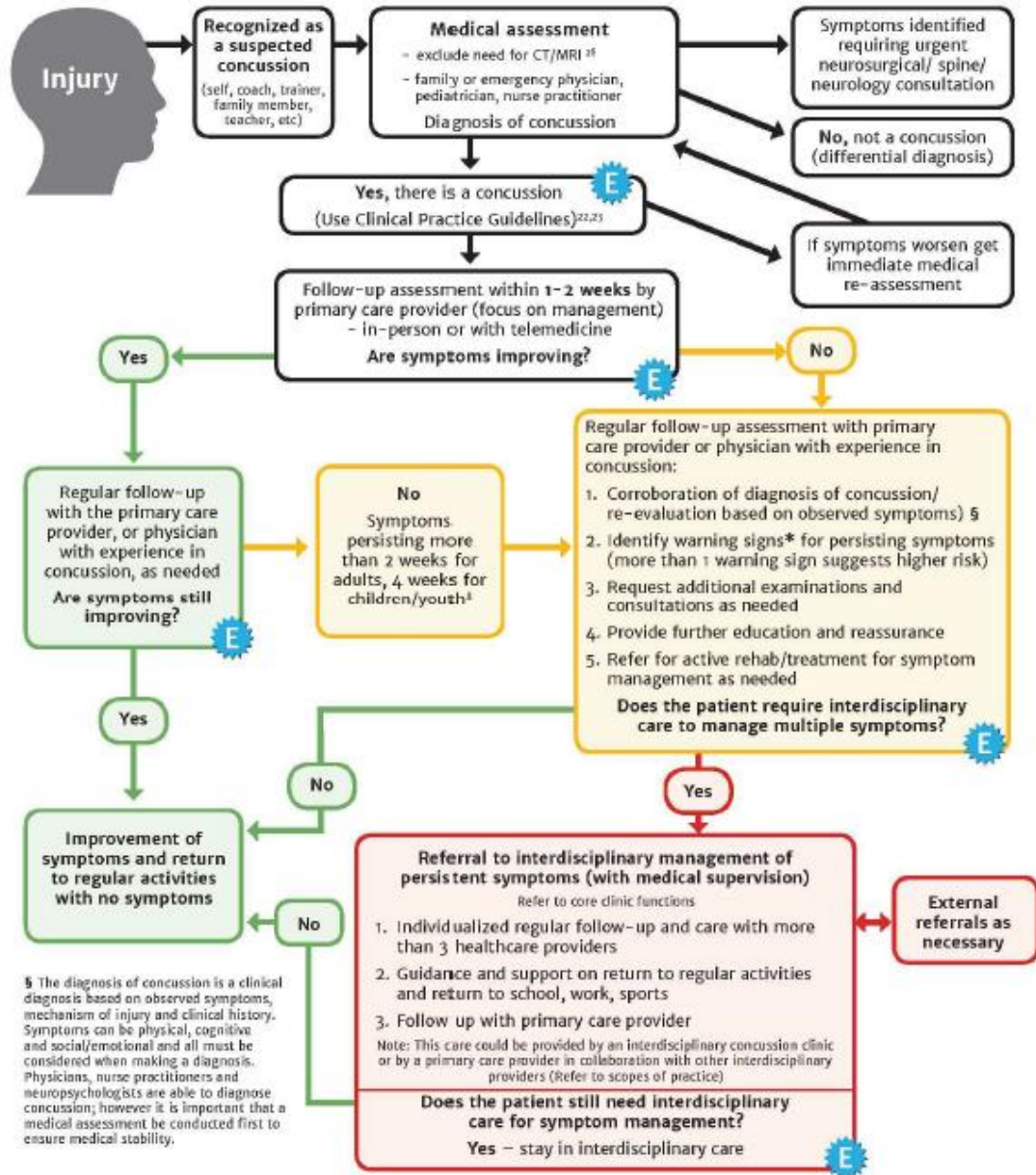
Yours Sincerely,

A handwritten signature in black ink, appearing to read 'C. Baus', with a long horizontal flourish extending to the right.

Christine Bradaric-Baus, BSc, PhD
Vice President, Academic

Appendix Two

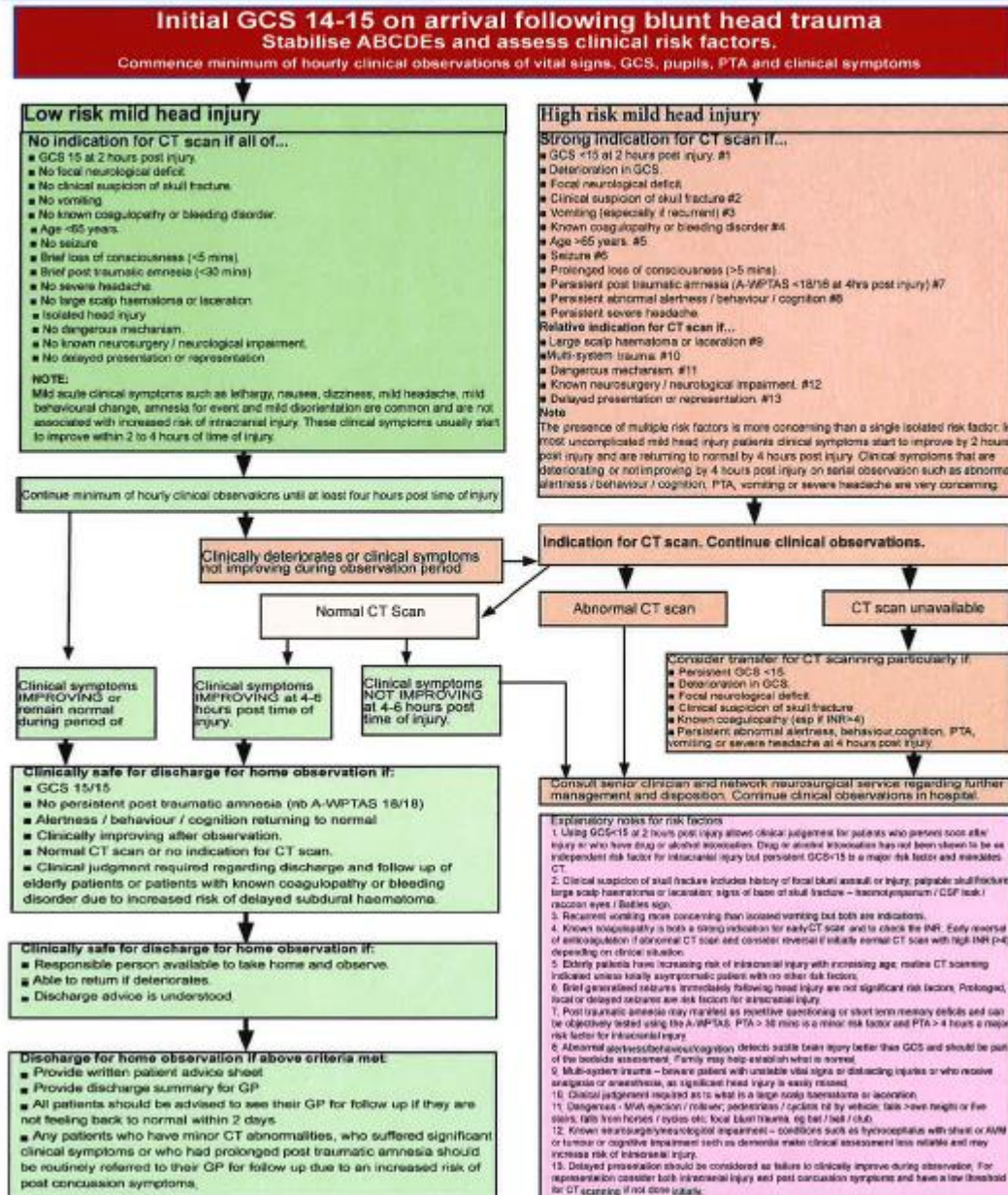
Post-Concussion Care Pathway †



Appendix Three

Algorithm 1.1

Initial Diagnosis/Assessment of mTBI*



For a narrative description and recommendations related to this algorithm, please refer to Section 1.



References

- ¹ Ontario Neurotrauma Foundation. (2017). *Standards for post-concussion care from diagnosis to interdisciplinary concussion clinic*. Retrieved from <http://Web address>
<http://concussionsontario.org/wp-content/uploads/2017/06/ONF-Standards-for-Post-Concussion-Care-June-8-2017.pdf>
- ² Canadian Chiropractic Memorial College. (2018). *Curriculum*. Retrieved from <https://www.cmcc.ca/admissions/curriculum-by-year>
- ³ 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.
- ⁴ McCrory, P., Meeuwisse, W. H., Echemendia, R. J., Iverson, G. L., Dvořák, J., & Kutcher, J. S. (2013). What is the lowest threshold to make a diagnosis of concussion?. *Br J Sports Med, 47*(5), 268-271.
- ⁵ Côté, P., Shearer, H., Ameis, A., Carroll, L., Mior, M., Nordin, M., & OPTIMa Collaboration. (2015). Enabling recovery from common traffic injuries: A focus on the injured person. UOIT-CMCC Centre for the Study of Disability Prevention and Rehabilitation. January 31, 2015. *ENABLING RECOVERY FROM COMMON TRAFFIC INJURIES: A FOCUS ON THE INJURED PERSON, 5, 5*.
- ⁶ 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.
- ⁷ Canadian Chiropractic Examining Board. (2016). *Exam Content*. Retrieved from <http://www.cceb.ca/docs/Exam-Content-CCEB.pdf>