



Concussion Schooling for Students

An Ontario school district adds mandatory instruction to change the culture over an emerging public health concern

By Rebecca Richardson/*School Administrator, August 2015*

For far too long, we have been focused on the treatment and glorification of concussions in sport. Professional athletes are seen as heroes, fighters and “tough guys” when they play through injury, especially a brain injury.

The time has come to flip the switch on this growing public health epidemic. What about the prevention of injuries and the promotion of healthy, active living? What messages are we sending to our children about the need to be happy, healthy and physically active for life when the images they see and the stories they hear are in contradiction to that?



The 60,000-student Halton District School Board in Ontario, Canada, working with a noted sports medicine physician, set out to change this picture and the unfortunate message that students receive about minimizing the potential severity of injury. A 9th-grader sized up the current situation this way: “Outside of school there aren’t people who will go out of their way to make sure you know about this information. This is mandatory for people to know about it, so it falls into things we need to know and things in general for our safety. It is kinda their responsibility to teach us this stuff and to learn it from teachers who do research and are specialized in it.”

Practical Know-how

The best place for messages about student health to be shared and to create a culture of change is through education. This was the topic of discussion at the first International Concussion Summit in Niagara Falls, Ontario, in 2012, between Dr. Paul Echlin, primary care sport medicine specialist who practices at the Elliott Sports Medicine Clinic in Burlington, Ontario, and Joanne Walsh, instructional program leader for health and physical education with the Halton schools. While they may have been focused on Canadian affairs, they could just as well have been discussing the state of scholastic athletics across the national border. Recent U.S. data, reported in 2014 by the American Association of Neurological Surgeons, showed “a 100 percent increase among 8- to 13-year-olds and a 200 percent increase among 14- to 19-year-olds in sports-related emergency room visits for concussion.” Of course, concussions can and do occur outside of competitive sports, be it through recreation, play or normal daily tasks.

Walsh and Echlin recognized the impact educators have on providing students with practical knowledge and how to use it to solve problems related to healthy living, such as recognizing signs and symptoms and assessing and advocating for protection against potential brain injuries.

The Ontario Health and Physical Education curriculum lends itself to these important lessons relating to personal safety and living skills. Content areas include self-awareness and monitoring, communicating the risk of injury and potential death, and assessing situations for potential danger overall.

Instructional Goals

Originally titled the Halton Student Concussion Education Project, the resource was piloted in five 9th-grade classrooms in various schools. Teachers facilitated discussions, using 12 online modules, to engage students in conversations about the seriousness, signs and symptoms, and actions to take when they or a teammate or friend has a suspected concussion. The resource has been updated to include the internationally recognized 6-Step Return to Learn/Return to Physical Activity Plan.

Haltons’ original two goals were these:

- First, provide teachers and students with the tools and skills necessary to advocate for the personal safety of themselves and others, thus enabling students to become agents of change in society to deliver important messages; and
- Second, change the culture’s perceptions that a concussion in athletics is a badge of honor. Suffering a concussion is a serious medical condition.

The format of the e-modules contained in this educational resource starts with an activity-related scenario and includes a set of multiple-choice questions. Upon answering the questions, the software program provides the user with two additional options: (1) to examine discussion points and learn more in depth and (2) to link to related videos and articles collected in the sport concussion library.

9th-Grade Mandate

To address concussions among youth, the Halton District School Board started its concussion education program in September 2014. The 9th-grade module became a mandatory part of the Healthy Active Living course, which is taken by every high school freshman.

The Ontario government mandated all school boards in the province offer a concussion education program beginning in January 2015. Because we had much of the programming and expertise in place, we started our program earlier. It has gained much attention outside of Ontario through extensive media coverage, resulting in information sharing and educator visits to Halton. In April, two students from Miami, Fla., brothers Billy and Jake Reis, visited one of our schools in Burlington and witnessed firsthand the e-modules and student learning in action. They are the co-founders of an organization called Play Smart Stay Smart whose aim is to raise awareness and protect fellow high school athletes from injuries. They recognize the need to build knowledge and understanding among peers, coaches and parents around the prevention, identification and proper management of sport-related concussions. The stated purpose of their nonprofit organization (<http://playsmartstaysmart.org>) is “The student who plays smart would stay smart.” Since the inception of our concussion education program just a year ago, it has expanded to include students in grades 3 and 6, as well as being translated into French for immersion and French-speaking school districts. Both elementary school e-modules connect to curriculum expectations and have gone through pilot programming with teachers. Elementary teachers have found numerous ways of embedding the learning into their literacy and healthy living classes. Students have opportunities to demonstrate their understanding, for instance, by creating public service announcements or collaborating with others on performing original songs and raps.

An Evidence Base

The sport concussion library is maintained by Echlin, a widely quoted expert on concussions whose principal research has focused on youth ice hockey players. The education tools, with medical advice and current research findings, enable teachers to expand their learning and address the questions students raise during the lessons. This summer, additional instructional materials, including teacher-created lesson plans, learning activities and student exemplars, were uploaded to the site to be ready for the 2015-16 school year.

The library is an excellent resource, a collection point for evidence-based research for students and teachers. A research paper, “The Sport Concussion Education Project: A Brief Report on an Educational Initiative From Concept to Curriculum,” published last October by Echlin and fellow researchers on traumatic brain injuries in youth sports in the *Journal of Neurosurgery*, supports the districtwide approach we have undertaken.

Rebecca Richardson is instructional program leader for health and physical education with the Halton District School Board in Burlington, Ontario. E-mail: richardsonr@hdsb.ca

Additional Resources

The Halton Student Concussion Education Program has been accessible to other educators. The e-modules and other information about the program can be found at www.sportconcussionlibrary.com.

The e-modules were designed by a learning specialist to be interactive, thus improving understanding of concussion as a serious brain injury. The information on which these e-modules is based is derived from the latest published content on the topic.

Publicly accessible without cost through the Sport Concussion Library website, the materials are protected by copyright. The e-modules are designed to serve solely as education tools. They are not intended to resemble or serve as certification courses.

The sport concussion library's wealth of noncommercial, peer-reviewed information is suitable for researchers, athletes, parents, coaches and therapists/trainers, school district staff and physicians. The holdings include recently published journal articles, book chapters, thesis dissertations, relevant legislative initiatives, documentary films, testimonials for athletes and parents and online SCAT3 testing (along with archived SCAT2 testing) for physicians and teams with associated physicians.

The site also contains links to selected noncommercial educational sites (e.g., U.S. Centers for Disease Control and Prevention and ThinkFirst, an injury prevention foundation), as well as basic concussion information and select literature summaries.

— **Rebecca Richardson**