



Baseline Survey on Understanding and Awareness of Sport-Related Concussions

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1. Executive Summary

1.1. Research Purpose and Objectives

Concussions in sport are a recognized public health issue due to the frequency of occurrence and their potential short and long-term consequences, including cognitive, emotional and physical symptoms and, when left undetected, even death. Children and youth are particularly at risk of long-term cognitive deficits following sports-related traumatic brain injury.

Presently, there is no definitive set of concussion guidelines, and there is no comprehensive pan-Canadian approach to address concussions in the sport, education and health sectors. This is a critical gap given prevention, detection and management approaches vary across the country, potentially raising the health risks to participants in sport, recreation and physical activity.

The Minister of Health has been mandated to work with the Minister of Sport and Persons with Disabilities to support a national strategy to raise awareness for Parents, Coaches and athletes on concussion treatment.

Budget 2016 provided \$1.4 million over two years to PHAC to work with provinces and territories on the harmonization of concussion management guidelines across Canada, with a focus on athlete and student return-to-play and return-to-learn protocols.

Research Objectives

This research is essential for gathering information on Canadians' current understanding of concussions (and particularly concussions in children and youth) in order to inform the development of a Pan-Canadian Concussion Strategy. This research will also help establish a baseline of information, which will be used to measure progress and report on performance, following the implementation of the Canadian Guideline on concussion in sport and protocols on return-to-learn and return-to-play.

The study will target two broad segments: healthcare professionals (HCPs); and the Canadian public (18+) further segmented into the general population, Teachers, Parents and Coaches/sports administrators.

The specific research objectives are to:

- Identify pervasive myths about concussions;
- Assess the public's knowledge, attitudes and beliefs regarding concussions;
- Assess the public's experience as it relates to concussions;
- Identify key messages which may influence the uptake of concussion prevention;

- Assess what documents, tools or other resources health care providers (HCPs) currently use for concussion diagnosis;
- Uncover if HCPs have unmet needs for addressing concussion prevention; and
- Assess uptake of the most recent findings and guideline on concussions among HCPs;

1.2. Summary of Findings

Overall Concussion Awareness

For the purposes of this research, it was assumed that all HCPs were aware of concussion. This assumption was not made for non-HCPs and as such respondents who were not aware of concussion as a health condition were screened out of the survey. In total, 15% of respondents were unaware of concussion with Teachers (9%) and Coaches (4%) less likely to be unaware of concussion.

Attitudes Towards Concussions

Among those aware of concussion, virtually all Canadians (97%) believe concussion is an important health issue however fewer know where to get information on prevention (51%), what to do if someone gets a concussion (46%) or can recognize the signs and symptoms (40%).

General Concussion Knowledge

Generally speaking self-reported concussion knowledge is low among Canadians. Half report they have little or no knowledge (55%). Basic understanding of concussion is fairly strong; with most Canadians (88%) being able to identify that a concussion is “a blow to the head that causes a variety of symptoms such as headache or blurred vision”. Fewer however, understand the more detailed or specific aspects of concussion such as being a brain injury that affects the way a person thinks (46%) or that it can’t be diagnosed with imaging tests (29%).

Canadians also have a basic understanding about what can cause a concussion. Most understand (89%) that a “hit or blow to the head” can cause a concussion but fewer understand that it can also occur from a hit anywhere that causes a sudden shock, jar or jolt to the head (79%), a hit to the face (67%) or neck (52%).

Canadians are also well equipped to identify a large number of signs that may indicate a person may have suffered a concussion as well as symptoms that a person with a concussion may experience. Cognitive or motor-related symptoms such as not thinking clearly or dizziness are more well-known than mood based symptoms such as nervousness or anxiety.

Canadians have some understanding about what actions to take if they suspect someone has suffered a concussion. Most (88%) understand that a medical professional should assess the individual, that they should check for symptoms (78%), memory (70%) or for red flags (69%). More than half however, continue to believe dated advice that sleep should be monitored (56%).

While the previous results suggest that Canadians have a moderate to high level of knowledge about concussions, one must remember that responses were provided from prompted lists. This means that many Canadians, when presented with a variety of options are able to identify the correct response. This does not mean that they have requisite knowledge required to address concussion if it should arise.

To further understand Canadians' concussion related knowledge, the survey used a number of true and false statements to better understand knowledge levels. When using true and false statements, a respondent can correctly guess the response half of the time. Thus, to be sure Canadians have correctly identified the statement as true or false we need to see results well above the 50 per cent mark.

Results of this analysis found that there are a number of myths about concussion that Canadians continue to believe as well as a number of facts that people are unaware of or simply don't understand. More specifically, most Canadians understand that concussion symptoms can last for several weeks (96%) and can vary from person-to-person (95%) that a person does NOT have to lose consciousness to have a concussion (92%) and that is not necessarily safe to return-to-sport as soon as their symptoms wear off (90%). Many also understand that a direct blow to the head is not necessary for a concussion (70%) and that MRI or CT scans are not the way to diagnose a concussion (68%).

Interestingly however, there are number of myths and facts that are simply unclear to Canadians with results showing correct responses at the same rate as if they had guessed i.e., 50 per cent. The following statements were only correctly identified approximately half of the time suggesting Canadians do not have the requisite knowledge in these areas.

- Vomiting is a sure sign of concussion (54%)
- Boys get more concussions than girls (50%)
- Children are more likely to suffer concussion than adults (45%)
- The harder the blow, the more severe the concussion (44%); and
- Wearing a properly fitted helmet will prevent concussions (42%)

Sport-Related Concussion Knowledge

Many Canadians understand there are a number of ways to prevent sport-related concussion including avoiding contact with the head (85%), providing concussion training to athletes (79%), ensuring athletes follow the rules and regulations of their sport (78%) and having respect for other players (62%). There are however, some misperceptions such as believing that wearing a helmet (92%), avoiding contact sports (56%) and wearing a mouth guard (44%) are effective ways of preventing sport-related concussion.

Most Canadians understand that if a person is suspected of suffering a concussion while playing sports they should be sent to a health care provider for assessment (92%). Many also understand the person should immediately be removed from play (87%) and obtain medical clearance before returning to sport (82%). Fewer however, recognize that the person should not be allowed to return to the same game or practice (69%).

General Treatment Knowledge

Canadians' knowledge related to concussion treatment is low. One-quarter (25%) of Canadians do not know how concussion is treated and only 15 per cent can correctly identify "rest for 24-48 hours, followed by a gradual return to cognitive and physical activity under the supervision of a medical professional" as the best way to treat concussion.

Virtually all Canadians (97%) understand that light physical activity should not be introduced immediately after concussion and that there should be a rest period (24%). The anticipated rest period however varies; 13 per cent believe it should 24-48 hours while 11 per cent believe it should be 10-14 days.

Similarly, virtually all Canadians (99%) understand that a concussion impacts both schooling and work. Interestingly though, many Canadians (63%) believe a return to work should only occur after medical clearance has been provided.

Perspectives on return-to-play are slightly different for Canadians compared to return-to-work or light physical activity. Three-quarters (75%) believe athletes should not return to play until they have received clearance from a medical professional. Some believe there should be a rest period (10%) of either 24-48 hours (2%) or 10-14 days (8%) while others believe all concussion symptoms must be gone (7%) before returning to play.

Concussion Information

Few Canadians (7%) have searched for information on concussion prevention diagnosis or recovery over the past 12 months. The primary places that Canadians look for information or anticipate looking for information on concussion prevention diagnosis or recovery are online at various websites by using a search engine or by looking at specific websites such as Health Canada, Public Health Agency of Canada or other health related websites.

Furthermore, Canadians' awareness of concussion related tools or resources are somewhat limited. Four-in-ten (40%) were unaware of any of the cited tools and/or information resources available to the public. The remaining 60 per cent were aware of at least one tool however no single tool is broadly known as less than a quarter of Canadians were aware of any one of the resources cited.

Differences among Parents, Teachers and Coaches

This research explored in detail any differences that might exist between the general population and Parents of children 5-17 (hereinafter Parents), Teachers and Coaches of children 5-17 (hereinafter Coaches).

For the most part, Parents have similar attitudes and levels of knowledge compared to the general population with a few exceptions:

- Parents are more likely to know where to get concussion prevention information, know what to do if someone gets a concussion and to be able to recognize the signs and symptoms of a concussion;
- Parents put more reporting onus on the child, team mates and referees if a child suffers a concussion; and
- Parents are more likely to have searched for concussion information and not unexpectedly, more likely to be aware of resources that have been targeted to Parents.

Teachers are more knowledgeable than the general population in a few areas:

- Teachers have a better overall knowledge of concussion compared to the general population and are more able to identify concussion symptoms;
- Teachers are also likely to understand effective prevention strategies; and

- Teachers are more likely to have searched for information and are also more likely to be aware of resources that have been targeted to Teachers.

When it comes to concussion awareness and knowledge, Coaches tend to have a higher awareness and self-reported level of knowledge in most areas. Coaches report not only have the basic level of awareness and knowledge but also are more likely to understand the more detailed or specific aspects of concussion. More specifically Coaches:

- Report having a more detailed knowledge of the various causes of concussion;
- Can identify more signs of concussion;
- Are more likely to correctly identify actions that should be taken for suspected concussion;
- Are more likely to identify the correct approach to treatment;
- Are more likely to believe medical clearance is required for returning to sport; and
- Are more likely to have searched for information and more likely to be aware of resources that have been targeted to Coaches.

Processes and Procedures in Place to Deal with Concussion

Many schools and leagues have processes and procedures in place to deal with concussion. More than half (56%) of all Teachers reported that their school does have processes and procedures in place while three-quarters (73%) of Coaches indicated that their team or league has processes or procedures in place to deal with concussion.

Concussion Training Among Teachers and Coaches

Training on concussion is somewhat limited among Teachers and Coaches. Only half (48%) of Teachers have received any training or education from their school or board about concussion. Training among Coaches is somewhat higher with 62% having received some training or education from their organization or league on concussion.

Health Care Providers (HCPs)

Virtually all HCPs (97%) believe concussion is an important health issue however; not all HCPs know where to go for reliable information on concussion diagnosis (85%) or on concussion treatment and recovery (82%). Not unexpectedly, concussion knowledge is quite strong among HCPs. Only ten per cent believe they have little (9%) or no knowledge (1%) about concussion.

The large majority of HCPs (84%) have diagnosed a concussion and patient symptoms are used to diagnose concussion by almost all (98%) HCPs followed by patient history (95%), a neurological exam (86%), observation (79%), cognitive testing (63%) or other (17%). Interestingly, a small proportion of HCPs use imaging tests to diagnose concussion even though concussion cannot typically be diagnosed this way. For diagnosing and assessing the severity of a concussion, HCPs are most likely to use:

- The Sport Concussion Assessment Tool 5 (SCAT5) (51%);

- The Child Sport Concussion Assessment Tool 5 (Child SCAT5) (34%); or
- The Canadian Guideline on Concussion in Sport (31%).

HCPs have varied awareness of concussion tools or resources and many are aware of the following tools or resources:

- Sport Concussion Assessment Tool 5 (SCAT5) (60%)
- Canadian Guideline on Concussion in Sport (57%)
- Child Sport Concussion Assessment Tool 5 (Child SCAT5) (49%)
- Concussion Baseline Testing (44%)

Among HCPs who have used the Guideline on Concussion in Sport, they have very positive perceptions of it. In fact the large majority believes (strongly agree or agree) the guideline:

- Is a useful tool for health care providers (94%);
- Will improve concussion management in Canada (87%);
- Has made it easier to diagnose concussions (86%);
- Will improve concussion diagnosis in Canada(85%); and
- Has made it easier to manage concussions (82%).

1.3. Methodology

An online survey was conducted among 1,895 Canadians age 18 years and older and 391 Health Care Providers. A pre-test consisting of 10 completed English interviews and 10 completed French interviews, was completed before fielding the survey on November 20th, 2017. The survey was in field from November 20th to December 19th, 2017. Respondents for this survey were primarily selected from the Kantar TNS online panel and supplemented by members of the Canadian Coaches Association and partners of Parachute. The results of panel and membership surveys cannot be described as statistically projectable to the Canadian population. Where national data was available, the data have been weighted to reflect the demographic composition of the Canadian population. As this was a non-probability sample, margin of error does not apply and conclusions from these results cannot be generalized to any population. Surveying was conducted in the respondent's official language of choice and took an average of 15 minutes to complete. A detailed methodology can be found in Chapter 4.

1.4. Contract Value

The total contract value for this project was **\$94,920.00** including HST.

1.5. Statement of Political Neutrality

I hereby certify as Senior Research Director & Public Sector Practice Lead of Kantar TNS that the deliverables fully comply with the Government of Canada political neutrality requirements outlined in the Communications Policy of the Government of Canada and Procedures for Planning and Contracting Public Opinion Research. Specifically, the deliverables do not include information on electoral voting intentions, political party preferences and standings with the electorate or ratings of the performance of a political party or its leaders.



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