

Please help us determine the current knowledge of concussion diagnosis and initial management by completing our survey. Each response is valuable to us. We thank you for your time.

1. Do you diagnose and/or manage children or youth with concussions in your work setting? [If no, the survey stops, and the responder will be thanked for their participation.]

- a. Yes
- b. No

Case Vignette #1:

A 9 year old boy, with no prior history of head injury, has an accidental collision with an opponent during a hockey game receiving a blow to his chest, but there is no direct hit to his head. He does not have a loss of consciousness. Upon returning to the bench, he states that he has a headache, he is “seeing stars”, and he is complaining of dizziness. He is also slow to answer questions. He denies amnesia, nausea or vomiting.

2. Did this boy suffer a concussion?

- a. Yes
- b. No
- c. Don't know

3. After 20 minutes, he states that he is less dizzy and his headache is not as painful. Is he able to return to the game?

- a. Yes, definitely
- b. Possibly, if his symptoms fully resolve before the end of the game
- c. No, definitely not
- d. Don't know

4. There is a provincial hockey tournament in 4 days. Is this boy able to participate in the tournament?

- a. Yes, definitely
- b. Possibly, if his symptoms improve within the next 24 hours
- c. Possibly, if his symptoms fully resolve before the tournament
- d. No, definitely not
- e. Don't know

5. Beyond return-to-sport advice, what further recommendations, if any, would you offer?
[Select all that apply.]

- Stay home from school
- Avoid computer screen
- Avoid text messaging
- Avoid video games
- Limit television
- Decrease schoolwork
- Rest in a dark, quiet environment
- None of the above
- Don't know

Case Vignette #2:

A 16 year old girl with one prior concussion slips on the stairwell at school, hitting her head against the wall. She does not have a loss of consciousness, but she cannot recall the event. She does not have a headache, but she complains of dizziness and nausea.

6. Did this girl suffer a concussion?

- a. Yes
- b. No
- c. Don't know

7. She is scheduled to have cross-country running practice after school. Is she able to participate in practice?

- a. Yes, definitely
- b. Possibly, if her symptoms fully resolve before practice
- c. No, definitely not
- d. Don't know

8. There is a 5 kilometer cross-country race in 2 days. Is this girl able to participate?

- a. Yes, definitely
- b. Possibly, if her symptoms improve within the next 24 hours
- c. Possibly, if her symptoms fully resolve before the race
- d. No, definitely not
- e. Don't know

9. Beyond return-to-sport advice, what further recommendations, if any, would you offer?
[Select all that apply.]

- Stay home from school
- Avoid computer screen
- Avoid text messaging
- Avoid video games
- Limit television
- Decrease schoolwork
- Rest in a dark, quiet environment
- None of the above
- Don't know

Case Vignette #3:

A 16 year old male football player has a helmet to helmet collision during a game. He has a 1 minute loss of consciousness. On the sideline, he has 10 minutes of amnesia, he complains of headache, vision changes, dizziness, and he has nausea.

10. Did this boy suffer a concussion?

- a. Yes
- b. No
- c. Don't know

11. There is a scheduled game in 4 days. Is this boy able to participate in the game?

- a. Yes, definitely
- b. Possibly, if his symptoms improve within the next 24 hours
- c. Possibly, if his symptoms fully resolve before the game
- d. No, definitely not
- e. Don't know

12. His parents want to reduce the risk of another concussion. They ask if there are helmets that may reduce the risk of concussion. Are there helmets that reduce the risk of concussion?

- a. Yes
- b. No
- c. Don't know

13. Beyond return-to-sport advice, what further recommendations, if any, would you offer?
[Select all that apply.]

- Stay home from school
- Avoid computer screen
- Avoid text messaging
- Avoid video games
- Limit television
- Decrease schoolwork
- Rest in a dark, quiet environment
- None of the above
- Don't know

14. How often do you utilize each of the following concussion grading scales or tools when making a concussion diagnosis?

SCORING SYSTEM	Never	Rarely	Sometimes	Frequently	Always
Standardized Assessment of Concussion (SAC)					
Sport Concussion Assessment Tool (SCAT/SCAT-2)					
Post-concussion Symptom Scale (PCS)					
Graded Symptom Checklist/ Scale (GSC/GSS)					
McGill Abbreviated Concussion Evaluation (ACE)					
Head Injury Scale (HIS)					
Post-concussion Symptom Inventory (PCSI)					
Rivermead Post-concussion Symptom Questionnaire (RPCSQ)					

BALANCE TESTING					
Balance Error Scoring System (BESS)					
Sensory Organization Test (SOT)					
Romberg					
Heel-toe walking					
NEUROPSYCHOLOGICAL TESTING					
Clinical Psychometric Testing					
Computerized Neurocognitive Testing					

15. Do you use computerized testing tools?

- a. Yes
- b. No

15a. [If yes] Which of the following computerized testing tools do you use? [Select all that apply.]

- ImPACT
- CogState (Axon Sports)
- HeadMinder
- Automated Neuropsychological Assessment Metrics (US Army Medical Department)
- Other, please specify _____

16. How often do you rely on published guidelines to direct your clinical decisions?

- a. Never
- b. Rarely
- c. Sometimes
- d. Frequently
- e. Always

16a. [If anything other than never] Which of the following published guidelines do you rely on to direct your clinical decisions? [Select all that apply.]

- Hospital/Practice policy
- American Academy of Neurology
- Cantu
- Center for Disease Control
- Colorado Medical Society
- 3rd International Conference on Concussion in Sport (Zurich)
- 2nd International Conference on Concussion in Sport (Prague)
- 1st International Symposium on Concussion in Sport (Vienna)
- Roberts
- ThinkFirst Canada
- Ontario Neurotrauma Foundation mTBI guidelines
- Canadian Academy of Sports Medicine
- Other, please specify _____

16b. [If never] For what reason(s) do you choose not to use published guidelines to direct your clinical decisions? [Select all that apply.]

- I was unaware that guidelines exist
- I don't know which guideline is the best
- I feel that the current guidelines are out of date
- I do not like to use guidelines in general
- Other, please specify _____

17. How often do you refer patients to concussion specialists?

- a. Never
- b. Rarely
- c. Sometimes
- d. Frequently
- e. Always

17a. [If anything other than never] To which of the following concussion specialists do you refer patients? [Select all that apply.]

- Neurologist
- Physiatrist/Rehabilitation Medicine
- Neuropsychologist
- Sports Medicine
- Neurosurgeon
- Other, please specify _____

17b. [If never] For what reason(s) do you choose not to refer to concussion specialists? [Select all that apply.]

- There are no concussion specialists in my region
- I am comfortable managing these patients without consultation
- Other, please specify _____

18. How valuable would a Clinical Prediction Rule, that accurately predicted prolonged concussion symptoms lasting one month or greater, be to you and your patients and their families?

- a. Not at all valuable
- b. Somewhat valuable
- c. Valuable
- d. Very valuable
- e. Don't know

19. In your opinion, what would be an acceptable level of sensitivity for a Clinical Prediction Rule to accurately predict prolonged concussion symptoms lasting one month or greater?

- a. 80%
- b. 85%
- c. 90%
- d. 95%
- e. > 95%
- f. Don't know

20. What has been your best source for learning about concussions? [Select all that apply.]

- Consulting with colleagues
- Consulting with specialists
- Journal publications
- CME Course
- Websites (ThinkFirst, Center for Disease Control, etc.)
- Conferences
- Training (Medical School/Residency/Nursing/Physician Assistant)
- Other, please specify _____

21. Approximately how many patients do you see with a concussion per year?

- a. <5
- b. 5 - 10
- c. 11 - 15
- d. 16 - 20
- e. >20

22. How many years have you been practicing independently?

- a. <5
- b. 5 - 10
- c. 11 - 15
- d. 16 - 20
- e. >20

23. What is your training? [Select all that apply.]

- Emergency Medicine (FRCPC)
- Emergency Medicine (CCFP-EM)
- Family Medicine
- Pediatrics
- Pediatric Emergency Medicine
- Sports Medicine
- Nurse Practitioner
- Physician Assistant
- Other, please specify _____

24. What is the population of the catchment area in which you work?

- a. <50 000
- b. 50 000 – 100 000
- c. 100 001 – 500 000
- d. 500 001 – 1 000 000
- e. >1 000 000

25. What is your primary work setting?

- a. Solo practice
- b. Group practice
- c. Academic practice (educational institution)
- d. Private practice
- e. Hospital setting
- f. Walk-in or Acute Care Clinic
- g. Emergency Department
- h. Other, please specify _____

25a. [If selected Emergency Department] Are you the Chair/Chief of an Emergency division?

- a. Yes
- b. No

25a.1. [If yes] Do you have a concussion handout for patients in your Emergency Department?

- a. Yes
- b. No
- c. Don't know

25a.2. Has your division held any educational sessions on concussion management in the past 3 years?

- a. Yes
- b. No
- c. Don't know

25a.3. Are there concussion specialists in your region available for patient referrals?

- a. Yes
- b. No
- c. Don't know

Thank you for taking the time to complete this survey.
