

The Role of the School Nurse in Concussion Management & Protocols



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Conflict of Interest Disclosure & Objectives

Disclosed are the absence of personal financial relationships with commercial interests relevant to the development of this educational activity.

The learner will be...

- able to identify the components of Illinois concussion laws
- able to clarify the role of the school nurse in concussion management
- equipped with tools and resources to implement & maintain a concussion protocol in the school setting

Definition of a Concussion

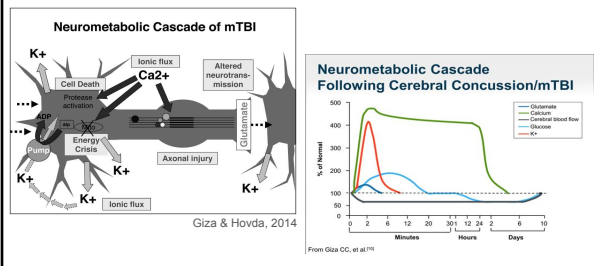
The 4th International Conference on Concussion in Sport (Zurich 2012)

defines a concussion as a complex pathophysiological process affecting the brain, induced by biomechanical forces.

- may be caused by a direct blow to the head or elsewhere on the body with an "impulsive" force transmitted to the head.
- typically results in short-lived impairment of neurological function that resolves spontaneously.
- functional not structural injury
- injury results in a "graded set" of clinical symptoms (physical, cognitive, emotional).

The Centers for Disease Control (CDC): A concussion is a type of traumatic brain injury—or TBI—caused by a bump, blow, or jolt to the head or by a hit to the body that causes the head and brain to move rapidly back and forth. This sudden movement can cause the brain to bounce around or twist in the skull, stretching and damaging the brain cells and creating chemical changes in the brain.

Pathophysiology of a Concussion



Prevalence of Concussions

Most current study on incidence: July 2016 (Seattle Sports Concussion Research Collaborative):

Annually, more than 44 million youth participate in sports. Estimated incidence is between 1.1 - 1.9 million children <= 18 years annually.



IOM Committee Report (2014):

Football is highest in reported incidence of all sports (men's and women's).
Men's sports: football, ice hockey, lacrosse, wrestling, soccer
Women's sports: soccer, lacrosse, basketball, ice hockey

Other non-sport mechanisms of injury: skate boards/long boards, skiing, MVAs, altercations, falls

Common Symptoms

- immediate or gradually evolving (McCrory, et al. 2012)
- Physical (CDC, 2016b)
- Cognitive (Baker, et al. 2015)
- Emotional/behavioral (CDC, 2016b)
- Symptoms reported by others
- Other noticeable complaints or challenges



Duration of symptoms

1-3 weeks = typical adolescent recovery (50%)
 3-6 weeks = 40%
 2-3 months = 6%
 > 3 months = 4%
 (McAvoy, 2012)



Children younger than 13 years old appear to recover more quickly than adolescents. (Purcell, et al. 2015)

Recovery of symptoms can vary at different rates. (Sady, et al. 2011)

Premorbid conditions - ADHD, mental health diagnoses, learning disabilities, hx of concussions or migraines.....
 (Sady, et al. 2011)

Illinois Laws



P.A. 097-0204 Protecting our Student Athletes Act (2011)

P.A. 098-1011 Amendment to The Interscholastic Athletic Organization Act (2014)

P.A. 099-0245 Youth Sports Concussion Safety Act (2015)

P.A. 99-0831 Amendment to The Interscholastic Athletic Organization Act (2016)

(Illinois General Assembly, 2016)

Role of the School Nurse: **Coordinator of Care**

Multidisciplinary Care Team:

School Nurse	Parent
Athletic Trainer	Student
Teachers	Primary Physician
Coaches	Physician Specialist
School Counselor	School Psychologist
School Social Worker	



(NASN, 2016a)

Role of the School Nurse: **Team Leader**

(Ladd, 2009)

Concussion Oversight Team:

School Nurse	Athletic Trainer	School Psychologist
School Counselor		Athletic Director
Physician		PE Teacher
Teachers		Coach
Administrators		School Social Worker
Parent	Special Education Representative	



Role of the School Nurse: **Team Leader**

(Denehy, 2008)

- LEADER
- Identifying the issues
- Data
- Know the laws
- Policy vs. Protocol - what's the difference?
<http://researchguides.ebling.library.wisc.edu/c.php?g=293229&p=1953402>

Protocol: An agreed framework outlining the care that will be provided to patients in a designated area of practice. They do not describe how a procedure is performed, but why, where, when and by whom the care is given. (University of Wisconsin-Madison, Health Sciences, 2016)

Policy: A formal written statement detailing the particular action to be taken in a particular situation that is contractually binding. (University of Wisconsin-Madison, Health Sciences, 2016)

General Recommendations for Accommodations

- Rest breaks during day PRN
- Reduced class schedule for a short time
- Limit "screen time"
- "Mastery of skills/concepts"
- Extra time/extend deadlines
- No assessments/limit testing/portions
- Visual: Printed notes, enlarged print, colored paper, audio books, sun glasses, hats
- Leave classes early to avoid congested halls

(Lurie Children's Hospital, 2015)

Concussion Protocol for Schools - An example

Accommodations or Modifications?

[Libertyville High School](#)



Role of the School Nurse: Advocate

When symptoms extend beyond the average 2-3 weeks.....

Concussion specialist

Accommodations at school become more complex

- Adjusting school day
- Tutoring Support
- Classwork: essential and mastery
- Changing course levels
- 504 plan



Accommodations may become modifications = IEP

Neuropsych testing

(Sady, et al. 2011)

Role of the School Nurse: Prevention

(NASN, 2016b)

Data Collection

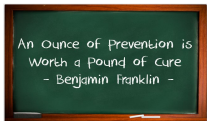
Elementary schools

High Schools

Access to healthcare

Culture change/attitude shift

(Ladd, 2009)



Role of the School Nurse: Gatekeeper / Advocate

Concussion management in a school setting is a complex issue. (Traut & Dube, 2016)

Duty of Safe Care (Schoepfer-Bohicchio & Dodds, 2015)

Examples of issues that may arise.....

- PE/recess participation without formal RTP in place in these areas.
 - Does the nurse manage RTP? Give recommendations to PE teacher? Have student report to nurse after PE every day? Send student to AT?
 - How is return to recess handled?
- Club or private sports organizations outside of school.
 - Student begins RTP with club sport while not cleared by physician for school RTL.
- Physician recommendations are not in alignment with current best practices for concussion management or school protocol.

Decision-Making Checklist (Traut & Dube, 2016)

1. Federal Laws
2. State Nurse Practice Act
3. State Board of Health
4. State Board of Education
5. Local school District Policy
6. Current nursing standards for best practice
 - a. School nursing scope and standards of practice
 - b. ANA scope and standards of nursing practice
7. Current evidence-based research
8. Professional organizations (NASN, state school nurse organizations, ASHA...)
9. Examples of litigation/liability cases



Role of the School Nurse: Evaluator

(NASN, 2016)

- Always be open to feedback from team members
- Review process within each student's experience
- Reconvene concussion oversight committee regularly (at least annually)
- Review protocol for updates and changes



Role of the School Nurse: Innovator and Resource

(NASN, 2016b)

Daily concussion assessment

Communication examples to staff

Resource in a school for concussion care and management: local hospital systems (specialists), CDC, IHSA, other state/national programs, medical links



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