

# **The School Nurse's Role in the Prevention, Care and Management of Students with Concussions**

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## **Summary**

It is the position of the New Jersey State School Nurses Association (NJSSNA) that school nurses play an essential role in the prevention, care and management of students with concussions. School nurses function as an important part of the school health team, ensuring that students with concussions return safely to both the classroom and the athletic field.

A concussion is a "complex pathophysiological process affecting the brain, induced by traumatic biomechanical forces" (McCroory et al., 2009). Students are at risk for concussion at home and school. While at school, students may be injured in physical education class or during recess. Students ride buses to school and athletic events. Some students may be exposed to physical violence while at school. Some students participate in interscholastic or recreational sport programs. The potential for injury exists during all of these activities.

Concussions present a risk for students when they are returned prematurely to full physical and/or cognitive activity. The school nurse serves as an active participant in preventing further injury and promoting student health. The current literature addresses the needs of the student athlete but these same recommendations can be applied to any student who has sustained a concussion.

"Education about sport-related concussion is integral to helping improve awareness, recognition and management" (Halstead and Walter, 2010). The school nurse educates students, parents and school personnel about prevention, early identification, appropriate medical follow-up and injury management to promote healing and prevent complications. Through education, the school nurse advocates for the student's health and wellness at school and school-sponsored activities while serving as the liaison between the student, parents, health care providers and school personnel.

## **Description of the Issue**

According to the Centers for Disease Control and Prevention (2009):

- Each year, United States emergency departments treat an estimated 135,000 sports and recreation-related traumatic brain injuries (TBIs), including concussions, among children ages 5 to 18 (*Morbidity and Mortality Weekly Review, 2007*).
- Athletes who have ever had a concussion are at increased risk for another concussion.
- Children and teens are more likely to get a concussion and take longer to recover than adults.

## **History**

In 2005, the NJSSNA supported the Brain Injury Association of New Jersey's Concussion in Sports Consensus Statement. Since that time, the management of concussion has continued to evolve and a current discussion of the issues can be found in Halstead and Walter (2010). In April 2010, the New Jersey State Interscholastic Athletic Association (NJSIAA) concluded "that a viable public education program focused on concussion education, prevention and a uniform return-to-play policy is in the best interest of student-athletes throughout the State of New Jersey." New Jersey Public Law 2010, Chapter 94 was approved on December 7, 2010 and requires the development of an interscholastic athletic head injury safety training program along with certain measures to protect student athletes with concussions. It also requires continuing education for athletic trainers. (New Jersey Statutes, Legislative notes to 2010 N.J. ALS 94, amending N.J. Stat. § 18A:40-41.1, et seq.; N.J. Stat. § 45:9-37.48a, December 2010).

The American Academy of Neurology Position Statement dated October 2010 also addresses the need for education to improve the understanding of concussion by athletes, parents and coaches. It advocates that an athletic trainer be present at all athletic events and practices where there is a risk for concussion. In addition, the National Athletic Trainers' Association (2003) consensus statement for appropriate medical management of school-aged athletes identifies the school nurse as an appropriate member of the athletic healthcare team. School nurse collaboration with athletic trainers, athletes, parents and coaches improves the consistency and overall quality of healthcare for student athletes.

The impetus for education stems from the difficulty in diagnosing concussions and the reliance on the student-athlete to self-report injury and symptoms. For example, a study conducted by McCrea et al. (2004) found that less than 50 percent of 1,532 high school football athletes reported symptoms to their coach, trainer or parent.

Education and collaboration are important interventions that can improve recognition, change the cycle of prematurely returning students to full activity, and limit the risk of Second Impact Syndrome and other complications. The school nurse is in a unique position to identify students presenting initial or ongoing symptoms after a traumatic incident and to work with the student, his/her family, the student's healthcare providers, and school personnel to provide support during recovery and ensure a safe return to full activity.

## **Rationale**

The certified school nurse is uniquely placed within the school community to identify students with symptoms of concussion. The certified school nurse should include in his/her practice the following roles to improve outcomes and prevent complications associated with concussions:

- Educate students, parents, school personnel and coaches about the signs and symptoms of concussion and the need for medical management to prevent premature return to full activities;
- Assess students with the potential for concussion and refer for medical evaluation, as appropriate;

- Require medical clearance to return to full activities and instruct students, parents, school personnel and coaches about the need to monitor students upon return to prevent complications and re-injury;
- Review all athletic preparticipation history and physical forms (as required by N.J.A.C. 6A:16-2.2(h)) and school health records for evidence of concussion and ensure that the primary care provider and the school physician are aware of relevant medical history;
- Advocate for additional medical follow-up, as needed;
- Communicate to the student, parents, and school officials the need for accommodations to provide for cognitive rest (e.g. limiting activities such as computer use, television viewing, playing video games, reading) as well as physical rest;
- Collaborate with coaches, school personnel, parents and athletic trainers to identify concussed students and facilitate medical evaluation and follow-up to enable a safe return to full activities;
- Function as an advocate and educator to ensure safe conditions for all students in school, including the provision of safe play areas and equipment and appropriate supervision of students to prevent size and age mismatches;
- Serve as an essential link between the medical and educational professionals, with insight into the management of students needs within the school setting, including but not limited to securing medical information, providing medical expertise to the educational team responsible for classroom and instructional accommodations and providing guidance to the student to ensure a safe return to full activities;
- Assist district boards of education to develop policies to address the prevention and management of concussion in interscholastic sports as mandated by law and promote standards for concussion prevention and management for all students not just student athletes;
- Collaborate with other professionals, including the school physician, to develop educational programs about concussion prevention, emergency management, and the prevention of complications; and,
- Provide emotional support to students and their families experiencing concussions and associated complications.

The certified school nurse plays a critical role in the prevention and management of concussions in school-aged children. Certified school nurses must take an active role in education, healthcare and support to ensure that students with concussions safely return to school and play.

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