Concussion Management of a Sport Related Injury

All athletes will be required to perform baseline concussion testing prior to the start of their respective sports season. Nativity BVM currently utilizes the Sport Concussion Assessment Tool- 3rd edition (SCAT3.) All baseline and subsequent tests will be maintained by the Athletic Trainer.

A concussion can occur from a direct blow to the head or to the body that jars or shakes the brain inside the skull. If the injury causes the athlete to lose consciousness upon impact, they should be transported to the ER by way of EMS services, immediately. If the athlete does not lose consciousness these are the steps followed by the ATC:

1. Immediate removal from play
2. Sideline Evaluation
   SCAT3
   Symptom Evaluation
3. If concussion is suspected
   -Athlete may not return to participation until clear by a physician
   -Notify parent/guardian. Provide them with a home care handout.
   -If at any point, athlete displays "danger signs" it warrants immediate transportation to hospital by EMS. These symptoms may be one or all of the following:
      Drowsiness, inability to awake, increasing headache or one that does not resolve, weakness, numbness, or lack of coordination, vomiting or nausea, and slurred speech.
   -If condition remains the same through duration of event, athlete should be referred to a physician with extensive knowledge regarding concussion management

During the recovery period, an athlete with a concussion needs to rest physically and mentally. This means limiting texting, video games, computer use, television, and potentially school and home work. No physical activity should occur while the athlete displays signs or symptoms of a concussion.

Post-concussion, the ATC should perform the same testing used to acquire a baseline. The post-concussion scores are compared to the baseline to determine severity as well as monitor the healing progression. The physician may want to look at both baseline and post-concussion scores to determine the best treatment plan.

If the athlete is still symptomatic after 7-10 days, referral to Vestibular Program/NeuroCom, Physical Therapy, Occupational Therapy, and/or Speech Therapy may also be beneficial.

In some instances, athletes may miss one or more days of school due to concussion symptoms. Upon return to school after a concussion, the athlete may need special accommodations. This should be a collaborative approach between school officials and administration, medical professionals, parents and the athlete. Accommodations may consist of rest breaks, fewer hours of work, less reading and writing, more time for tests,

less time using computers, etc. There may be cases which referral to BrainSTEPS is the best plan of action. It is important to remember that all concussions are different and each athlete will react differently to them.

Symptomatic students returning to school may require active supports and accommodations in school, which may be gradually decreased as their functioning improves. Inform the student's teacher(s), the school nurse, psychologist/counselor, and administrators of the students injury, symptoms and cognitive deficits. Students with temporary yet prolonged symptoms (i.e. longer than several weeks) or permanent disability may benefit from referral for special accommodations and services, such as those provided under a Section 504 Plan. A Section 504 Plan is implemented when students have a disability (temporary or permanent) that affects their performance in any manner. Services and accommodations for students may include environmental, curriculum, methodology, organizational, behavior, and presentation strategies. School personnel should be advised to monitor the student for the following signs:

- Increased problems paying attention/concentrating
- Increased problems remembering/learning new information
- Longer time required to complete tasks
- Increased symptoms (e.g., headache, fatigue) during schoolwork
- Greater irritability, less tolerance for stressors

Until a full recovery is achieved, students may need the following supports:

- Time off from school
- Shortened day
- Shortened classes (i.e., rest breaks during classes)
- Rest breaks during the day
- Allowances for extended time to complete coursework/assignments and test
- Reduced homework/classwork load (it is best to specify for teachers the percent of workload that the student can reasonably handle, e.g., 50% homework load)
- No significant classroom or standardized testing at this time

Physicians and school personnel should monitor the student's symptoms with cognitive exertion (mental effort such as concentration, studying) to evaluate the need and length of time supports should be provided.*

Once an athlete is asymptomatic for seven consecutive days, they should return to a physician educated in concussion management to be clear for return to participation. Once cleared by the physician, the ATC can initiate a five step gradual return to play protocol.

The five step gradual return to play protocol is as follows. Each step is the equivalent of one day. Two steps cannot be complete in less than 24 hours. If at any point during the five step protocol, the athlete displays signs or symptoms of a concussion, the ATC must discontinue progression and return to Step 1 when the athlete is again asymptomatic. This progression may take days, weeks, or months.

Step 1: Light aerobic exercise to increase heart rate.

Ex. biking, walking, static stretching, low intensity balance exercises. No resistance

Step 2: Moderate levels of physical activity with limited body and head movements.
Ex. Moderate biking, moderate weight lifting, brief running

Step 3: Non-contact training drills
Ex. Interval running, progressive weight training, agilities, complex training drills, hard balancing activities

Step 4: Full contact practice
Ex. Normal training, plyometrics, aggressive strength training

Step 5: Full return to play- No restriction

* Extracted from Centers for Disease Control and Prevention: "Heads Up: Facts for Physicians About Mild Traumatic Brain Injury (MTBI)