Dear Medical Provider

In May, 2013 the Dylan Steigers act was passed and signed into law. This law requires any child exhibiting signs, symptoms or behaviors consistent with a concussion to be removed from athletic events and prohibited from practice or play until the child has been evaluated by a licensed health care provider.

The Montana Medical Association, Brain Injury Alliance and concussion experts from around the state have put together the enclosed handouts to help you understand best practices in medicine for sports related concussion. The most recent International Consensus Conference on Concussion was utilized as the framework for best practice recommendations and we are providing these resources to help your community and practice adopt these suggested principles in clearing an athlete for return to play.

We are aware that not all communities have the same resources and adopting these best practice recommendations along with the progression to play guidelines may present unique challenges. Our hope is through education and leadership by you and your colleagues you can decrease the risk for long term sequela and death from concussion related injury.

We have enclosed with this letter an educational section for parents of concussed athletes. We have included information about symptom-free return to play and we hope these handouts will help you increase community awareness of the seriousness of returning to play while symptomatic of a concussion.

We have also provided an educational section for medical providers with best practice recommendations. We hope that you and your medical colleagues will discuss these recommendations and determine how best to utilize them in your community. Consider forming a task group and discussing these issues with your schools and other medical providers.

By informing all those involved we hope to increase awareness of concussion in sports and decrease the incidence of athletes returning to play while symptomatic. Finally, if your community needs resources please contact the Brain Injury Alliance as they can help you contact providers with expertise in concussion management.

Sincerely

Phillip M. Steele, MD
Task Group Member
To: Parent/Guardian

Student School _____________________ School Official __________________________ Date __________

(Student Name) _____________________________________________________ developed symptoms of a concussion and is being held out of sport until being evaluated by a licensed health care professional. As of May 2013, Montana State Law requires that any child exhibiting signs, symptoms, or behaviors consistent with a concussion be removed from athletic events and prohibited from practice or play until that child has been evaluated by a licensed health care professional. If diagnosed with a concussion, your child should be held out of sport until symptom free and then returned to play using the Progression to Play Protocol (see provider section).

The following information has been provided by the Montana Medical Association and was adopted from the 4th International Consensus Conference on Concussion.

What is a concussion? A concussion is a type of traumatic brain injury that is caused by a blow to the head or body that disrupts the way the brain normally works. This force may occur from contact with another player, hitting a hard surface such as the ground or floor, or being hit by a piece of equipment. Even though most concussions are mild, all concussions are potentially serious. Returning to sport while symptomatic from a concussion leaves the young athlete especially vulnerable to greater injury and may result in brain swelling, learning disabilities and permanent brain injury.

How is a concussion diagnosed? A concussion is diagnosed when a person has a history of a head injury and develops the common signs and symptoms of a concussion. No imaging study can confirm a concussion. In other words, an MRI or CT of the brain will be normal.

What are the symptoms of a concussion? The symptoms of a concussion are many times the only finding on examination. Some athletes develop the signs and symptoms of concussion right after the injury, while others may develop the symptoms of concussion hours to days later. Listed below are the most common signs and symptoms of concussion:

- Amnesia
- Confusion
- Headache
- Loss of consciousness
- Feeling sluggish
- Sleeping more or less than usual
- Nausea
- Appears dazed or stunned
- Fatigue or low energy
- Nervousness or anxiety
- Double or blurry vision
- Trouble concentrating and remembering
- Sensitivity to light or noise
- Feeling mentally foggy or groggy
- Irritable
- Slowed reaction time
- Moves clumsily
- Vomiting
- Slurred speech
- Sadness

What things should you watch out for during the first 24 hours? Listed below are the Red Flag Symptoms that suggest your child should be evaluated immediately.

- Persistent or projectile vomiting
- Unequal pupil size
- Difficulty being aroused
- Clear or bloody discharge from the ear/nose
- Increasing confusion
- Slurred speech
- Worsening headache
- Development of weakness or numbness
- Seizure activity
- Loss of consciousness

What Medications can my child take for their headache? Acetaminophen (Tylenol) dosed every 4-6 hours is considered safe. Follow dosing instruction on the bottle. They should avoid the use of ibuprofen (Motrin, Advil) or naproxen (Aleve) for the first 24-48 hours.
How do you recover from a concussion? The brain needs time to heal and rest is the key. If you have a tendon or ligament injury you need to rest the injured joint. So if you bruise your brain, physical and mental rest and sleep have a tremendous influence on recovery. Holding your child out of practice and activities that require concentration or are over-stimulation such as studying, computer games, loud music and/or TV, will help your child to recover faster.

What other restrictions should we follow? If your child is nauseated, they should drink mostly clear liquids and small portions of food until the nausea has resolved. They should have limited activity for the first 24 hours including school. Check on your child every few hours during normal awake periods. If they are improving you might only check on them once over night. If you’re unsure if they are getting worse, consider checking on them once or twice over night.

If your child is acting and behaving normally and symptom free can they start practicing? A licensed health care provider must evaluate all children suspected of having a concussion. You will need to return the attached “Concussion Return to Play Clearance Form” signed by your licensed health care provider to your child’s school. Your provider should discuss with you how to best manage your child’s symptoms, appropriate level of school work, appropriate level of activity, and when the progression to play protocol should begin.

How will my child be cleared for sport? The cornerstone for treatment of concussion related injuries is for your child to be progressed through a stepwise program before returning to play. This Progression to Play Protocol (PTPP) may begin only after your child is asymptomatic from their concussion. The PTPP greatly decreases the chance for additional concussion injury while still recovering from a concussion. The PTPP should be coordinated by your child’s medical provider and should be completed prior to returning to full sport participation. After your athlete has completed this six step program (see progression to play clearance form), clearance for full participation may be obtained from an individual authorized by your child’s health care provider such as your schools certified athletic trainer (ATC) or school nurse if available.

Why did my child’s return to play protocol take longer than another’s? Remember, each child’s return to play progression will vary as each concussion is an individual event based on the severity of the concussion and other pre-injury factors such as previous concussions. If any post concussion symptoms re-occur during the stepwise progression to play, your child should be returned to the previous asymptotic level for a 24-hour rest period. Each step of the progression should take 24 hours so that an athlete generally takes 6-7 days before full clearance after they become asymptomatic with rest. If your child continues to have symptoms at rest, 10 days after the concussion, consider having your child evaluated by a medical provider who has specialized training in concussion management.

Who needs to be notified that my child has been cleared? After completing the progression to play protocol and having been medically released to full participation by the managing health care professional, a completed Concussion Return to Play Form must be presented to your child’s school officials.

Is my child at risk for another concussion? All contact and collision type sports have an inherent risk for concussion. The progression to play protocol is meant to decrease your child’s risk for returning to play while still symptomatic from a concussion. After multiple concussions long term health risks may develop. You should speak with your medical provider about future risks for additional injury.

What other resources are available for information on Sport concussion?  
To: Health Care Provider  
Best practice recommendations from the Montana Medical Association and the 4th International Consensus Conference on Concussion.

This form was developed to provide a guideline for health care professionals in the management of student athletes suspected of a concussion. As of May 2013, Montana State Law requires that a child exhibiting signs, symptoms, or behaviors consistent with a concussion be removed from sporting events and prohibited from returning to play/practice until that child has been evaluated by a licensed health care professional familiar with sports related concussion. Listed below are suggestions for evaluation and clearance for return to play. Although each community in Montana will have different resources and expertise in concussion management, this form is a resource for medical providers on current return to play concepts.

While this form does not presume to dictate to professionals how to practice medicine, the guidelines for return to play from a concussion do represent consensus expert opinion from national and world leaders in sport concussion management. The components of this form are intended to address concerns of coaches, parents, student/athletes, administrators and healthcare professionals regarding written clearance from a health care professional for a concussed student/athlete to return to play.

The law requires the licensed health care professional to provide the student’s school district written clearance that the child is cleared to resume participation in the sporting event of the school district.

SUGGESTED PRINCIPLES IN CLEARING A STUDENT/ATHLETE TO RETURN TO PLAY

· Recovery from concussion and progression through the Progression to play protocol is individualized and determined on a case by case basis. Many factors influence the rate of progression and include previous concussion history, duration and types of symptoms, age and sport/activity in which the student/athlete participates. Student/athletes with a history of prior concussion, extended duration of symptoms, or participation in collision or contact sports may progress more slowly.

· The following progression to play protocol has been adapted from the 4th International Conference on Concussion in Sport and provides the framework for the return to play protocol.

· It is expected that student/athletes will start in stage 1 and remain in stage 1 until symptom free with exertion.

· The patient may, under the direction of a health care professional, progress to the next stage only when the assessment battery has normalized. The assessment battery may include any or all of the following:
  o Symptom Assessment using the Concussion Symptom Evaluation Scale or SCAT 3 which may be downloaded at http://bjsm.bmj.com/content/47/5/259.full.pdf
  o Cognitive assessment with computerized or other appropriate neuropsychological assessment.
  o Balance assessment along with general neurologic examination.

· It is anticipated that at least 24 hours will be required, at a minimum, of being asymptomatic with each stage before progressing to the next stage.

· Utilizing this framework, in a best case scenario, a athlete sustaining a concussion and being asymptomatic by the next day will start in Rehabilitation Stage 1 at post injury day 1 and progress through to stage 6, ‘Return to Play’ by post injury day 6.

· There may be circumstances, based on an individual’s concussion severity, where the return to play protocol may take longer. Under all circumstances the progression through this protocol shall be overseen by the managing health care professional.

Additional Medical Resources

· For a copy of the 4th International Consensus Conference on Concussion in Sport (Zurich 2012) go to http://bjsm.bmj.com/content/47/5/250.full.pdf.html

· The CDC has an online free continuing educational course on concussion management. Go to http://www.cdc.gov/concussion/
Concussion Progression to Play Protocol & Clearance Form

When an athlete sustains an injury that may be classified as a concussion the course of initial evaluation will be at the discretion of those supervising the sport. Not all injuries will meet the above criteria for concussion, and among those that do, not all will require immediate medical evaluation. When a medical evaluation does occur at or near the time of injury, the evaluating medical professional will not necessarily be the professional who ultimately deems the athlete safe to return to play or be involved in the Progression to Play Protocol suggested below.

The cornerstone of concussion management is physical and cognitive rest until acute concussion symptoms have resolved. Then gradual reintroduction of schoolwork should begin and if the athlete has integrated successfully into the classroom without worsening or reoccurring concussion symptoms, the progression to play protocol may then be considered. A graduated progression to play program should be completed prior to returning to full participation. Montana athletic programs should consider asking a heath care professional to examine, initiate and coordinate the progression to play protocol listed below. After the athlete has completed the five step program, clearance for full participation may be obtained from an individual authorized by the managing health care professional or by the qualified professional themselves.

Remember, each athlete’s return to play progression will vary as each concussion is an individual event based on the severity of the concussion and other pre-injury factors such as previous concussions. If any post concussion symptoms re-occur during the stepwise progression to play, the athlete should be returned to the previous asymptotic level after a 24-hour rest period. Each step of the progression should take 24 hours so that an athlete generally takes 6-7 days before full clearance after they become asymptomatic with rest during stage 1. Montana High School Association recommends the use of the Concussion Symptom Evaluation Scale or SCAT3 after completing each stage. For a copy of the SCAT3 go to http://bjsm.bmj.com/content/47/5/259.full.pdf. For stage 1 athletes still symptomatic after 10 days, consider having them evaluated by a medical provider who has specialized training in concussion management.

After completing the progression to play protocol and having been medically released to full participation by the managing health care professional, a completed Concussion Return to Play Form must be presented to the student’s school officials.
Concussion Return to Play Clearance Form

€ After reviewing the available facts, it is my opinion the above named athlete did NOT sustain a concussion on the date of injury noted and is released to return to play in the above sport.

€ The above named athlete did sustain a concussion on the date of injury noted, has recovered but has not progressed through the return to play protocol. The athlete is therefore medically released to continue to advance activities per the graduated return to play protocol (see table on page 3). Ideally, a licensed athletic trainer will monitor the student athlete’s progression through the stages. When a licensed athletic trainer is not available the athlete is to be monitored in their progress through each stage by a responsible adult who at a minimum:

   a. Has been trained in the recognition of signs and symptoms of concussion.
   b. Will have consistent contact with the student/athlete.
   c. Has a familiar with the Return to Play Protocol and stages.

<table>
<thead>
<tr>
<th>Student/Athlete Name</th>
<th>School</th>
<th>Date of Birth</th>
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<th>Date of Initial Exam</th>
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<tr>
<th>Name of School Representative*</th>
<th>Position of School Representative*</th>
<th>Phone Number of School Rep*</th>
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*The school representative is the individual from the school who provided this form to the student athlete and is familiar with the student/athlete and this incidence of injury.
# Progression to Play Protocol

<table>
<thead>
<tr>
<th>Stage</th>
<th>Functional Exercise or Activity</th>
<th>Objective of Stage</th>
<th>Examined by:</th>
<th>Date Cleared:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Rest and Recovery</td>
<td>Period of limited physical and cognitive rest. Gradual reintroduction of school work.</td>
<td>Goal of asymptomatic recovery</td>
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<td>2. Light aerobic exercise</td>
<td>Walking, stationary bike, or elliptical with HR &lt;70% of max</td>
<td>Asymptomatic aerobic exertion</td>
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<td>3. Sports-specific drills with</td>
<td>Non-contact drills at reduced speed, aerobic with HR 70-80% of max. Light resistance training at</td>
<td>Moderate asymptomatic exertion with sport specific movements, introduction of</td>
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<td>moderate aerobic physical activity</td>
<td>50% of previous max</td>
<td>running &amp; cutting motion without contact</td>
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<td>4. Non-contact training drills</td>
<td>Introduction of complex drills, i.e. passing, catching, shooting &amp; coordination drills. Sprinting</td>
<td>Determine neuromuscular coordination for complex task that are sport specific.</td>
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<td></td>
<td>and speed drills with elevated HR</td>
<td>Athlete should remain asymptomatic</td>
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<td>5. Full-contact or participation</td>
<td>Participation in normal training and scrimmage type activities, full contact practice</td>
<td>Determine functional skill level and ability to participate without concussion</td>
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<td>symptoms</td>
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<tr>
<td>6. Return to Play</td>
<td>Game ready</td>
<td>Safely returned to competition</td>
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</tbody>
</table>

The individual responsible for monitoring the progress of the student-athlete through the stages of the Return to Play Protocol should consult with the managing health care professional when necessary and shall consult (may be in person, by phone or e-mail) with the managing health care professional prior to the release of the student/athlete to return to play.

I certify that I have consulted with the managing health care professional named on this form and have received a medical release from the managing health care professional for the athlete named herein to return to play in the sport indicated.

By signing this form the licensed health care professional is certifying that, per Montana code, they have evaluated the youth athlete, and that in the licensed health care professional's opinion the youth athlete is capable of safely resuming participating in organized youth activities.

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Person responsible for monitoring progress Date of injury Date graduated return to play may begin

Signature of person responsible for monitoring progress Date step 5 completed asymptotically

Health Care Professional Signature Date of medical clearance Date signed

Health Care Professional Name (printed or typed) Office phone

Health Care Professional Office Address