

# *Tracking Sports Concussions in MA Schools: Incidence & Management*

## **MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH: Concussions In Extracurricular Athletic Activities**

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[www.mass.gov/dph/sportsconcussion](http://www.mass.gov/dph/sportsconcussion)

# OBJECTIVE



To update schools on implementation activities of Mass. Department of Public Health (MDPH) regarding sports concussion regulations, *105 CMR 201.000 Head Injuries and Concussions in Extracurricular Activities*

# WHAT IS THE PUBLIC HEALTH ROLE?



- **The mission of the Massachusetts Department of Public Health** is to prevent illness, injury, and premature death, to assure access to high quality public health and health care services....**We provide programs to address specific diseases and conditions.** We also develop, implement, promote, and enforce policies to assure that the conditions under which people live are most conducive to health and **enable people to make healthy choices for themselves and their families.**
- Public Health looks at **prevention; ways of preventing illness and injury** (e.g., improving road safety, preventing suicide, decreasing tobacco use, providing immunizations) and
- Public health interventions are aimed at improving **the health of a group of people** where the biggest change can occur.
- In public health we **evaluate** our efforts.



## SCOPE OF REGULATIONS 105 CMR 201.000

- Chapter 166 passed in July 2010 designated MDPH to develop regulations to provide standardized procedures for persons involved in the prevention, training, and management regarding students who incur head injuries while involved in any extracurricular athletic activity.
- Apply to **public middle and high schools serving grade 6 through high school graduation and other schools subject to the official rules of the Massachusetts Interscholastic Athletic Association (MIAA).**





## **SCOPE OF MDPH REGULATIONS**

- **The regulations stress a team approach, bringing together all those in the school community responsible for the student's safety to understand the risks of concussion.**
- **The major components of these Regulations:**
  - Annual Training
  - School Policies re: prevention and management of sports concussion
  - Exclusion from Play when sustaining a head injury
  - Medical Clearance and Return to Play
  - Data Reporting

**All information about MDPH sports concussion regulations, forms and trainings can be found at**

**[www.mass.gov/dph/sportsconcussion](http://www.mass.gov/dph/sportsconcussion)**

# IMPLEMENTATION ACTIVITIES OF MDPH



- Outreach to schools and medical providers regarding requirements of regs
- Compiling/analyzing data from Year End Reports
- Reviewing applications for annual training and clinical training
- Collaborate with MDPH School Nurse's Program, Mass. Medical Society, SLI, MassPINN, Mass. General Hospital and MIAA
- Developed Model Policies for Schools, *Head Strong*  
[www.mass.gov/dph/sportsconcussion](http://www.mass.gov/dph/sportsconcussion)
- Receive and track schools/school districts who have submitted letters affirming they have developed policies.



## **DOCUMENTATION AND REVIEW OF FORMS**

- These forms are posted at [www.mass.gov/sportsconcussion](http://www.mass.gov/sportsconcussion) and are:

**(1) Pre-participation Head Injury/Concussion Reporting Form for Extracurricular Activities**

**(2) Report of a Head Injury During Sports Season Form**

**(3) Post Sports-Related Head Injury Medical Clearance and Authorization Form**

**Schools should not send these forms to DPH; they should be kept at the school in the student's health record.**





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 Executive Office of Health and Human Services  
 Department of Public Health  
 250 Washington Street, Boston, MA 02108-4619

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**PRE-PARTICIPATION HEAD  
 INJURY/CONCUSSION REPORTING FORM  
 FOR EXTRACURRICULAR ACTIVITIES**

This form should be completed by the student's parent(s) or legal guardian(s). It must be submitted to the Athletic Director, or official designated by the school, *prior* to the start of each season a student plans to participate in an extracurricular athletic activity.

Student's Name	Sex	Date of Birth	Grade
School		Sport(s)	
Home Address			Telephone

Has student ever experienced a traumatic head injury (a blow to the head)? Yes \_\_\_\_\_ No \_\_\_\_\_

If yes, when? Dates (month/year): \_\_\_\_\_

Has student ever received medical attention for a head injury? Yes \_\_\_\_\_ No \_\_\_\_\_

If yes, when? Dates (month/year): \_\_\_\_\_

If yes, please describe the circumstances:

Was student diagnosed with a concussion? Yes \_\_\_\_\_ No \_\_\_\_\_

If yes, when? Dates (month/year): \_\_\_\_\_

Duration of Symptoms (such as headache, difficulty concentrating, fatigue) for most recent concussion: \_\_\_\_\_

Parent/Guardian:

Name: \_\_\_\_\_ Signature/Date \_\_\_\_\_  
 (Please print)

Student Athlete:

Signature/Date \_\_\_\_\_





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**REPORT OF HEAD INJURY DURING  
 SPORTS SEASON**

This form is to report head injuries (other than minor cuts or bruises) that occur during a sports season. It should be returned to the athletic director or staff member designated by the school and reviewed by the school nurse.

**For Coaches:** Please complete this form immediately after the game or practice for head injuries that result in the student being removed from play due to a *possible* concussion.

**For Parents/Guardians:** Please complete this form if your child has a head injury outside of school related extracurricular athletic activities.

Student's Name	Sex	Date of Birth	Grade
School		Sport(s)	
Home Address			Telephone

Date of injury: \_\_\_\_\_

Did the incident take place during an extracurricular activity? \_\_\_\_ Yes \_\_\_\_ No

If so, where did the incident take place? \_\_\_\_\_

Please describe nature and extent of injuries to student:

***For Parents/Guardians:***

Did the student receive medical attention? yes \_\_\_\_\_ no \_\_\_\_\_

If yes, was a concussion diagnosed? yes \_\_\_\_\_ no \_\_\_\_\_

***I HEREBY STATE THAT TO THE BEST OF MY KNOWLEDGE, MY ANSWERS TO THE ABOVE QUESTIONS ARE COMPLETE AND CORRECT.***

Please circle one: Coach or Marching Band Director

Parent/Guardian

Name of Person Completing Form (please print): \_\_\_\_\_

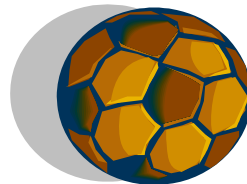
Signature \_\_\_\_\_

Date \_\_\_\_\_



## GRADUATED RE-ENTRY PLAN

- Each student who is removed from practice or competition and subsequently diagnosed with a concussion shall have a **written graduated reentry plan** for return to extracurricular athletics and academics.
- The student must be completely **symptom-free at rest in order to begin the graduated reentry plan.**
- The resource section shows some links to programs with graduated re-entry plans.



## MEDICAL CLEARANCE



- After the student has **completed the graduated re-entry plan and is symptom-free at rest and during exertion**, he or she shall obtain and present to the Athletic Director, a ***Post Sports-Related Head Injury Medical Clearance and Authorization Form (Medical Clearance and Authorization Form)***, prior to resuming the extracurricular athletic activity. This form can be found at: [www.mass.gov/dph/sportsconcussion](http://www.mass.gov/dph/sportsconcussion)
- ***Students who still have symptoms should not begin athletic activity.***





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**POST SPORTS-RELATED HEAD INJURY  
MEDICAL CLEARANCE AND  
AUTHORIZATION FORM**

This medical clearance should be only be provided *after* a graduated return to play plan has been completed and student has been symptom free at all stages. *The student must be completely symptom free at rest and during exertion prior to returning to full participation in extracurricular athletic activities.*

Student's Name	Sex	Date of Birth	Grade
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Date of injury: \_\_\_\_\_ Nature and extent of injury: \_\_\_\_\_

Symptoms (check all that apply):

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Nausea or vomiting          | <input type="checkbox"/> Headaches                            | <input type="checkbox"/> Light/noise sensitivity |
| <input type="checkbox"/> Dizziness/balance problems  | <input type="checkbox"/> Double/blurred vision                | <input type="checkbox"/> Fatigue                 |
| <input type="checkbox"/> Feeling sluggish/"in a fog" | <input type="checkbox"/> Change in sleep patterns             | <input type="checkbox"/> Memory problems         |
| <input type="checkbox"/> Difficulty concentrating    | <input type="checkbox"/> Irritability/emotional ups and downs | <input type="checkbox"/> Sad or withdrawn        |
| <input type="checkbox"/> Other _____                 |   |  |

Duration of Symptom(s): \_\_\_\_\_ Diagnosis:  Concussion  Other: \_\_\_\_\_  
If concussion diagnosed, date student completed graduated return to play plan without recurrent symptoms: \_\_\_\_\_

Prior concussions (number, approximate dates): \_\_\_\_\_

Name of Physician or Practitioner: \_\_\_\_\_

Physician  Certified Athletic Trainer  Nurse Practitioner  Neuropsychologist

Address: \_\_\_\_\_ Phone number: \_\_\_\_\_

Physician providing consultation/coordination (if not person completing this form): \_\_\_\_\_

**I HEREBY AUTHORIZE THE ABOVE NAMED STUDENT FOR RETURN TO EXTRACURRICULAR ATHLETIC ACTIVITY AND ATTEST THAT I HAVE RECEIVED CLINICAL TRAINING IN POST-TRAUMATIC HEAD INJURY ASSESSMENT AND MANAGEMENT APPROVED BY THE DEPARTMENT OF PUBLIC HEALTH\* OR HAVE RECEIVED EQUIVALENT TRAINING AS PART OF MY LICENSURE OR CONTINUING EDUCATION.**

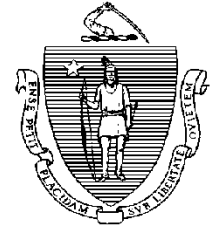
Physician or Practitioner signature: \_\_\_\_\_ Date: \_\_\_\_\_

Please indicate type of clinical training received (optional):

DPH Clinical Training  On-line Training  Other (Describe) \_\_\_\_\_

\*By September 2013, physicians, nurse practitioners, certified athletic trainers, and neuropsychologists providing medical clearance for return to play shall verify that they have received Department-approved training in post traumatic head injury assessment and management or have received equivalent training as part of their licensure or continuing education. This MDPH approved Clinical Training can be found at: [www.mass.gov/dph/sports/concussion](http://www.mass.gov/dph/sports/concussion)

# REPORTING TO MDPH



- Every academic year, schools shall be responsible for maintaining and reporting to **MDPH annual statistics** which include:
  - The total # of Department Report of Head Injury Forms (or school-based equivalents) received by the school; and
  - The total # of students who incur head injuries & suspected concussions when engaged in any extracurricular athletic activities.
  - **These forms are due to MDPH by August 30, every year.**



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**105 CMR 201.000: Head Injuries and Concussions In Extracurricular Athletic Activities  
 YEAR END REPORTING FORM FOR SCHOOLS, 2012-2013**

This is a two page form.

**Instructions** for completing this form and other frequently asked questions begin on **page 3**.

This form should be completed and returned via email to [DPH-ConcussionPolicies@MassMail.State.MA.US](mailto:DPH-ConcussionPolicies@MassMail.State.MA.US)

Or mailed in hard copy to: Olga Higuera, Division of Violence and Injury Prevention,  
 4<sup>th</sup> Floor, Massachusetts Department of Public Health; 250 Washington Street; Boston, MA 02108

**Due by August 31, 2013**

Person Completing this Form, Name:  Title:

School District:

School Name:

Grades included in the School (check all that apply): 6  7  8  9   
 10  11  12

**Required Reporting Information (All counts should be for individual schools and for school year 2012-2013 only):**

- 1) Please indicate the total number of Report of Head Injury Forms received by this school in school year 2012-2013:
  
- 2) Please indicate whether the Report of Head Injury Forms are required to be submitted to this school only for students participating in extracurricular athletics/school sports or for all students.
 

Student Athletes Only	<input type="checkbox"/>
All Students	<input type="checkbox"/>
Unknown	<input type="checkbox"/>
  
- 3) Please indicate how many Report of Head Injury Forms this school received which indicated that the injury occurred *when engaged in school sports*:

Optional Reporting Information:

4) Total number of Medical Clearance/Return to Play Forms this school received in school year 2012-2013:

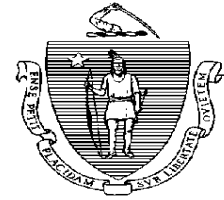
5) Total school enrollment

Middle School:

High School:

If there is any additional information collected by your school on student concussion that you wish to provide, please provide below or attach.

## REPORTING TO MDPH



- Question 1: Please indicate **the total # of Report of Head Injury forms (NOT the total # of Preparticipation Forms)** received by the school.
- School staff need to coordinate/communicate who is responsible for sending in this form to MDPH.
- Middle schools need to send in the Year End Report if the school has an extracurricular sports program.
- Return rate of data reports to DPH increased by over 75% from 2011-2012 to 2012-2013.



# SCHOOL POLICIES



- The majority of the school policies we reviewed included:
  - the required **annual training**
  - procedures for **identifying a suspected head injury** and removing the athlete from play.
  - procedures for **alerting parents/guardians** that their child had suffered a head injury
  - procedure for completing and ensuring **timely review of a Report of Head Injury form**
  - procedure for developing a **graduated re-entry plan**
  - protocol for **medical clearance**
  - policies stating that parents should fill out a report of head injury form **if the injury occurs outside of school sports.**

# SCHOOL POLICIES



Policies should be reviewed to assure that they also include these required components:

- procedure for sharing a student's medical information on a **need to know basis only**;
- procedure for **communicating with parents with limited English proficiency**, and reaching out to parents who have not filled out required forms;
- procedure for **medical/nursing reviewing of all pre-participation forms**;
- List the correct **4 medical providers** who can provide medical clearance;
- procedure for **referring the athlete for medical evaluation** after sustaining a head injury;
- Inform students/parents that if they don't fill out the proper forms the student cannot participate in extracurricular sports.
  
- In addition, some of the policies included neurocognitive testing. It is important to remember results of neurocognitive testing should be incorporated into the school's gradual return to play protocols.

## RESOURCES AND WEBLINKS



CDC information on sports concussion:

- “Heads Up” toolkits on the CDC website: [www.cdc.gov/concussion](http://www.cdc.gov/concussion) for fact sheets for parents, clinicians, and school staff.
- This toolkit includes the *Facts for Physician* booklet, information for patients in Spanish and English, and Acute Concussion Evaluation (ACE) form all available at no cost:  
[http://www.cdc.gov/concussion/HeadsUp/physicians\\_tool\\_kit.html](http://www.cdc.gov/concussion/HeadsUp/physicians_tool_kit.html)
- Know Your Concussion ABCs:  
<http://www.cdc.gov/features/ConcussionABCs/>

## RESOURCES: GRADUATED REENTRY PLANS



- The MDPH Regulations called 105 CMR 201.000 Head Injuries and Concussions in Extracurricular Athletic Activities can be found at [www.mass.gov/dph/sportsconcussion](http://www.mass.gov/dph/sportsconcussion).
- It provides standardized procedures for schools/school staff in the prevention, training management and return to activity decisions regarding students who incur head injuries while involved in extracurricular sports activities.
- 201.010(E)(2) Exclusion for play describes components of a graduated reentry plan.



## RESOURCES: GRADUATED REENTRY PLANS

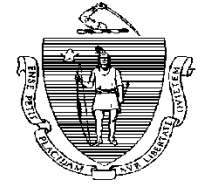
- Colorado's Rocky Mountain Hospital for Children has a program developed by Karen McAvoy, Psy.D. called REAP (Reduce, Educate, Accommodate, PACE). It is a concussion management program that helps families, schools and medical professionals.

The REAP booklet can be found at:

<http://bianys.org/Default.aspx?SiteSearchID=1183&ID=/search.htm>

- MDPH's model policies, *Head Strong: Guidance for Implementing the Massachusetts Regulations on Head Injuries in School Athletics* (found at [www.mass.gov/dph/sportsconcussion](http://www.mass.gov/dph/sportsconcussion)) has examples of Graduated Re-Entry Plans for schools.





## GRADUATED RE-ENTRY PLAN

- The South Shore Hospital has a recovery protocol called *HeadSmart™, A Healthy Transition After Concussion* and is a recovery protocol developed by physicians and school nurses to facilitate a student's healthy return to school and sports following a concussion. *HeadSmart* outlines the four color-coded stages of recovery. It can be found at:

<http://www.southshorehospital.org/head-smart>



## **BEST PRACTICES**

Needham Public Schools

Micah Hauben, CAA

Athletic Director

Maryalice Stamer, BSN, MSN, PNP- BC

Director of School Health Services

Medway Public Schools

Robert Pearl, CAA

Athletic Director

Christine Babicz, RN, MSN

Nurse Leader Medway Public Schools

School Nurse Medway High School

## **BEST PRACTICES**

### Pre-Participation

#### Needham

- Pre-participation form prior to each season
- Nurse signs off on physical date, enters dates in database
- Inserted DPH head injury concussion questions into NPS form
- School nurse signs off on every form for every season
- School nurse - extra hours in supporting athletic dept. (32 hours summer; winter and spring two days)
- ATC (Athletic Trainer Certified) - concussion training night presentation for parents, take attendance



## **BEST PRACTICES**

### Pre-Participation

#### Medway

- FamilyID – aware of signs and symptoms; family “are aware of concussion rules/regs” by submission (each season)
- Submission actually confirms watching of the video
- Within FamilyID they will report previous head injury
- Nurse does not signoff, however AD does inform nurse of health concerns and head injuries reported on registration
- ATC follows up on those with concussion histories
- Nurse provides a report of physical exams dated within past 13 months to AD

## **BEST PRACTICES**

### Recording/monitoring of Concussion

#### Needham

- Head Injury report form from school event – ATC initiate, given to nurse & AD
- Out-of-school - through the nurse
- Student will need to get a diagnosis from a physician, to start the “return” process
- Return to school protocol (six stage); consultations with health services to integrate return to play within return to school protocol
- Return to play (six step system)

## **BEST PRACTICES**

### Recording/monitoring of Concussion

#### Needham

- IMPACT priority list contact/impact sports (baseline); grade 9 and 11 every year
- Final full return-ATC makes the call in consultation with the physician, ATC can signoff

## **BEST PRACTICES**

### Recording/monitoring of Concussion

#### Medway

- Concussion at school event - Trainer initiates medical evaluation
- Out-of-school – Student reports to nurse with medical documentation, nurse informs AD, AD will check if student is an athlete
- Nurse will initiate Gradual Return to Academic Protocol - Five steps / Red, Orange, Yellow, Green, Blue

## **BEST PRACTICES**

### Recording/monitoring of Concussion

#### Medway

- Return to play (six step process) can be simultaneous with return to school, when student is in Green; nurse updates AD and trainer with student's progress
- ATC using "common sense approach for gradual return to play in consultation with ..."
- Trainer has final say (full return to play) in consultation with physician
- IMPACT for all contact sports (baseline); grade 9 and 11