



HOT TOPICS IN SPORTS MEDICINE

National Federation of State
High School Associations



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2019 National Athletic Directors Conference
Sunday – December 15, 2019 – 10:00 a.m.
National Harbor, Maryland



HOT TOPICS IN SPORTS MEDICINE

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High School Associations



DISCLAIMER

The information provided during this workshop is NOT SPORTS MEDICINE ADVICE. The discussions here are intended to be educational in a general sense. State medical laws and regulations vary, as do specific circumstances on a state-by-state basis. Before taking any action in your respective states that may impact anyone's medical and legal rights, be sure to check with your own lawyer and/or appropriate health-care professional.



NFHS SMAC OVERVIEW





NFHS SPORTS MEDICINE ADVISORY COMMITTEE (SMAC)

- 18 Member Committee
- Made up of Physicians, Certified Athletic Trainers, Researchers, Coaches, Officials, Administrators and State Association Directors
- The NFHS SMAC advises the NFHS and member associations on medical and safety issues and conditions as they relate to interscholastic sports and activities rules writing and guidelines, as well as other programs and services the NFHS administers
- Meets twice a year (October and April)
- NIAAA has representation on the NFHS SMAC





NFHS SMAC IMPACT

- 51 Member State High School Associations-
- 19,500 High Schools-
- 12 Million Participants in High School Activity Programs-
- 8 Million Participants in High School Sports-
- 16 NFHS Rules Committees-
- Other National Sports Governing Bodies-
- Other Medical Organizations and Associations-





2019 NFHS INJURY EPIDEMIOLOGY SUMMIT



2019 NFHS INJURY EPIDEMIOLOGY SUMMIT





2019 NFHS INJURY EPIDEMIOLOGY SUMMIT

- Held this past July 19-21, 2019 in Indianapolis, IN.
- 20 of the top national leaders in the areas of sports epidemiology and research from the United States were in attendance.
- **The Objectives of the Summit Included:**
 1. To develop some common approaches (essentially best practices) to injury data collection to help guide State High School Associations when they are directed to do so by state legislatures.
 2. To look at ways that the NFHS can integrate the findings of current data collection systems that are actively collecting data across the country.
 3. To establish a process of identifying individuals or groups interested in collaborating on specific sports injury surveillance and research projects.



2019 NFHS INJURY EPIDEMIOLOGY SUMMIT

- Initial Summit Outcomes:

1. The Summit participants agreed that publishing a scientific paper on the Summit proceedings would lay the groundwork for the future of sports injury surveillance in the high school population. This paper would include best practices for State High School Associations interested or required to collect sports injury data.
2. There was significant interest among the Summit participants to expand the knowledge of sports injuries to include the burden of all injuries in the age population accounting for the impacts of club, travel, and AAU type activities.



2019 NFHS INJURY EPIDEMIOLOGY SUMMIT

- Initial Summit Outcomes:

3. There was significant interest among the researcher groups to continue to collaborate on sharing data outcomes with the NFHS and State High School Associations as well as work toward common data collection practices and terminology.
4. Summit participants agreed that State High School Associations could encourage member schools to report catastrophic sport injuries especially now that each respective State High School Association has a Sports Medicine Advisory Committee. The national online reporting is available at <https://www.sportinjuryreport.org/>.





INJURY SURVEILLANCE





HIGH SCHOOL SPORTS INJURY DATA

- Many state legislatures are wanting state associations to collect “injury data”
- Ideally data are being collected with same methodology and definitions.
- High School RIO and Datalys currently collecting injury data





NATIONAL CENTER FOR CATASTROPHIC SPORT INJURY RESEARCH





NATIONAL CENTER FOR CATASTROPHIC SPORT INJURY RESEARCH

- Director: Kristen Kucera, Ph.D., ATC, LAT
- Medical Director: Robert Cantu, MD
- The University of North Carolina at Chapel Hill
- The **mission** of the **National Center for Catastrophic Sport Injury Research (NCCSIR)** is to conduct surveillance of catastrophic injuries and illnesses related to participation in organized sports in the United States at the collegiate, high school, and youth levels of play. In working through a Consortium for Catastrophic Injury Monitoring, the NCCSIR aims to track cases through a systematic data reporting system that allows for longitudinal investigation of athletes suffering from catastrophic injuries and illnesses. The goal of the Center is to improve the prevention, evaluation, management, and rehabilitation of catastrophic sports-related injuries



CONSORTIUM RESEARCH DIVISIONS



Traumatic Injuries

- Head
- Spine
- Lightning
- Other trauma



Exertional Events

- Heat stroke
- Sickling
- Asthma
- Diabetes



Cardiac Events

- Sudden cardiac arrest
- Sudden cardiac death





IMPACTS

- Sports Medicine Handbook Guidelines
- Coaching Education
- Protective Equipment
- Preseason Guidelines
- Emergency Planning
 - Sudden Cardiac Arrest
 - Exertional Heat Illness
 - Fluid Replacement
 - Sick Cell Trait
 - Asthma Management
 - Lightning Guidelines
- Spearing and Head-Down Contact
- TBI and Concussion Management





THE NATIONAL HIGH SCHOOL SPORTS- RELATED INJURY SURVEILLANCE STUDY: HIGH SCHOOL RIO™





HIGH SCHOOL RIO TRANSITION

- High School RIO is currently transitioning to Dr. Christy Collins, President of the Datalys Center for Sports Injury Research and Prevention, Inc., a non-profit organization located in Indianapolis, Indiana.
- Dr. Collins worked with Dr. Comstock on the High School RIO study during the 2004/05 through 2013/14 academic years.
- She will continue to work closely with the NFHS, NFHS SMAC and NFHS Rules Committees to help drive evidence-based decisions to keep athletes healthy.
- Dr. Collins will continue the proven successful surveillance methodology while striving to continue to improve service/responsiveness to the needs of the NFHS.





HIGH SCHOOL RIO DATA

- 2 concurrent samples
 - Original: 100 "representative" schools reporting 9 sports
 - Expanded: all willing schools (over 200) reporting any sports
- ATs asked to log on weekly throughout each academic year to provide data
 - Exposure data
 - Number of athletes practicing
 - Number of athletes competing
 - Injury data
 - Athlete: height, weight, year in school, position/event, etc.
 - Injury: body site, diagnosis, severity, etc.
 - Injury event: mechanism, specific activity, etc.



HIGH SCHOOL RIO (05/06-CURRENT)

- National High School Sports-Related Injury Surveillance System (High School RIO)
 - Athletic Trainers from US high schools report injuries
 - Internet-based data collection tool (RIO): 24/7 and updatable
- Definitions
 - Injury: 1) occurred as result of organized high school practice or competition, AND 2) required medical attention by a team physician, certified athletic trainer, personal physician, or emergency department/urgent care facility, AND 3) resulted in restriction of the high school athlete's participation for ≥ 1 days beyond the day of injury OR any concussion, fracture, dental injury, or heat event
 - Athletic exposure (AE): one athlete participating in one competition or practice



SPORTS INCLUDED IN HIGH SCHOOL RIO:

2005/06 THROUGH 2018/19

+Sports no longer under surveillance

* Co-Ed sport although predominantly female participants

Boys' Sports	Years Studied	Girls' Sports	Years Studied
Baseball	14	Basketball	14
Basketball	14	Cross Country	7
Cross Country	7	Field Hockey	11
Football	14	Gymnastics ⁺	4
Ice Hockey	11	Lacrosse	11
Lacrosse	11	Softball	14
Soccer	14	Soccer	14
Swimming	11	Swimming	11
Tennis ⁺	4	Tennis ⁺	4
Track	11	Track	11
Volleyball ⁺	3	Volleyball	14
Wrestling	14	Cheerleading*	10

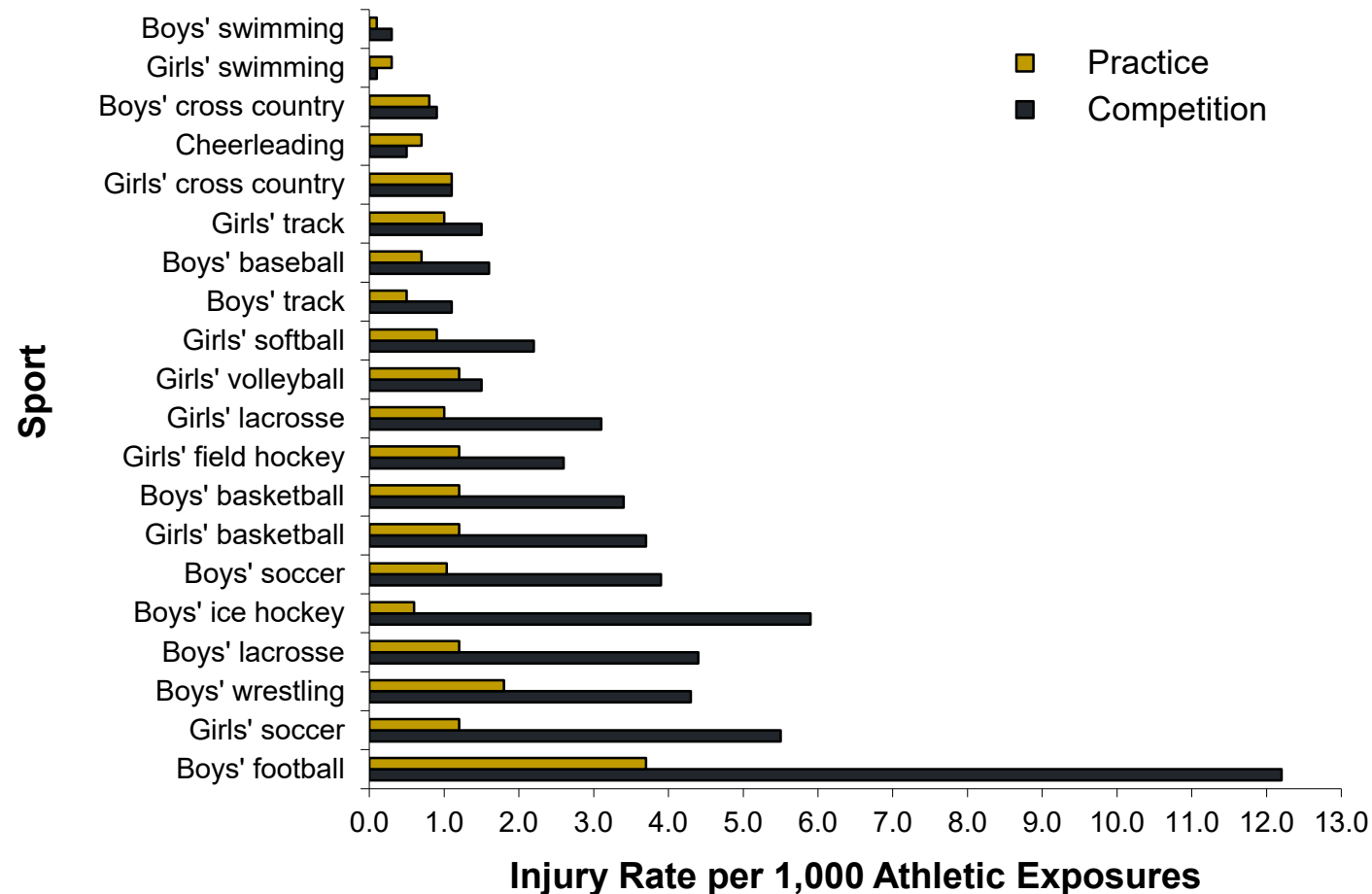




HIGH SCHOOL RIO DATASET: ALL SPORTS

- Injury data captured 2005/06 through 2018/19
 - 102,673 injuries
 - 52,649,508 AE
 - 1.95 injuries per 1,000 AE
- Injury by type of exposure
 - 52.3% competition related
 - Competition rate 4.05 per 1,000 AE
 - Practice rate 1.25 per 1,000 AE
 - RR = 3.24 (95% CI = 3.20 – 3.28)

Injury Rate by Sport and Type of Activity: All Sports, 2018/19

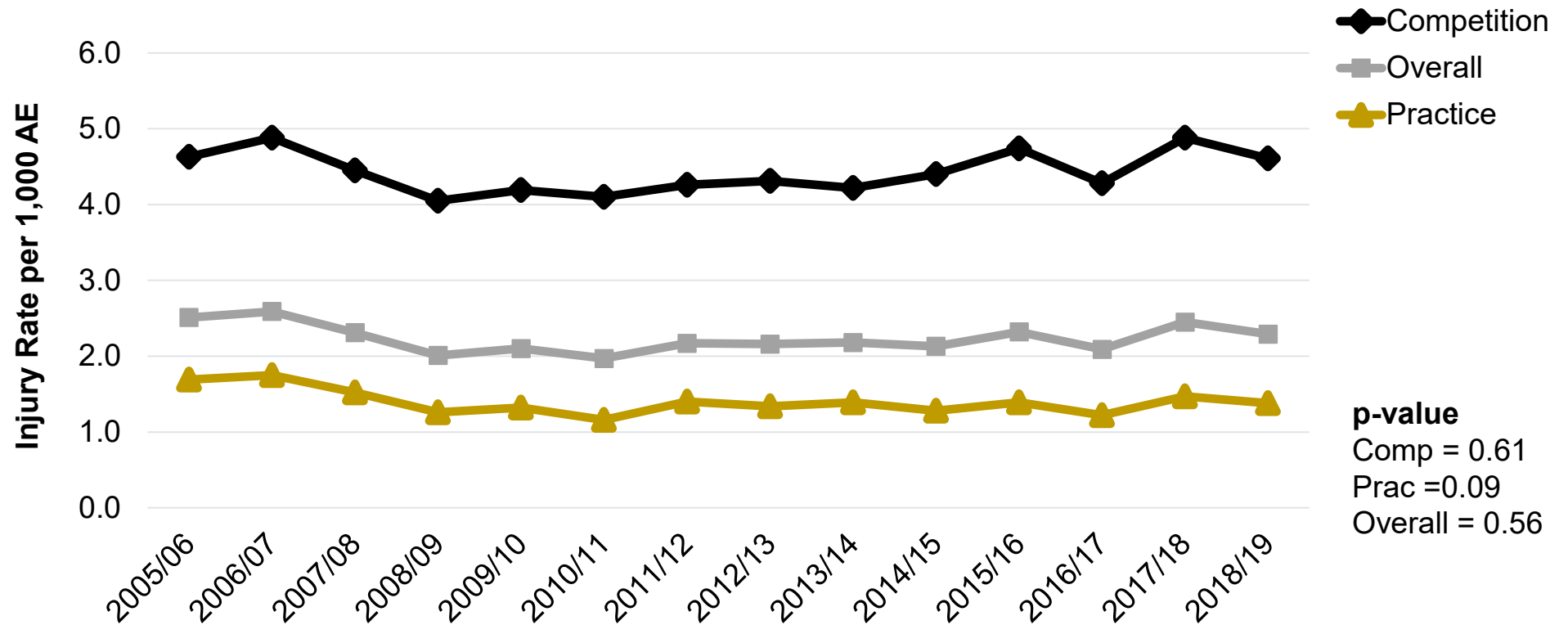




GENDER DIFFERENCES

- In gender comparable sports, injury rates are significantly higher among girls than boys overall but this varies by specific injury.
 - Girls have higher concussion rates
 - Boys have higher fracture rates
 - Girls have higher ACL rates
 - Boys have higher MCL rates

INJURY RATES OVER TIME: 9 ORIGINAL SPORTS



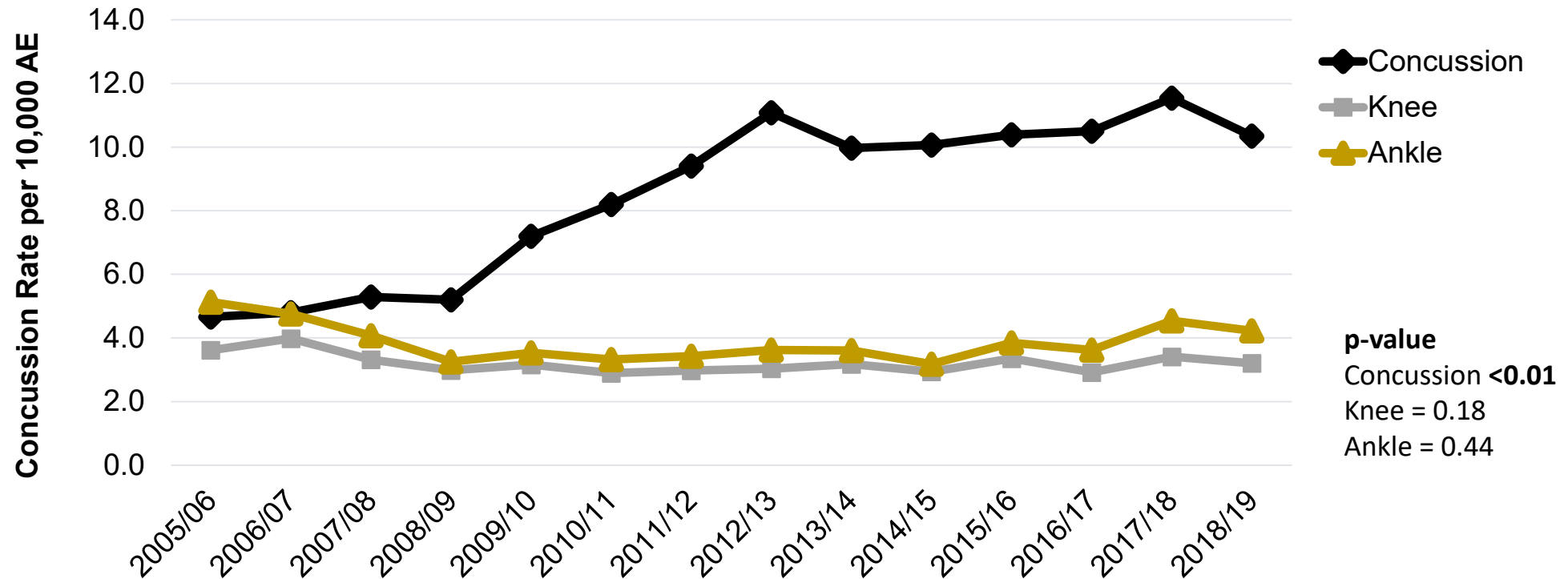
CHANGING INJURY PATTERNS: % OF ALL INJURIES

Most Common High School Sports Injuries in 9 Original Sports Under Surveillance*		2005/06	2018/19
Body Sites			
	Ankle	22.7%	18.3%
	Head/Face	12.3%	21.4%
	Knee	14.2%	13.8%
Diagnoses			
	Strain/Sprain	52.0%	44.7%
	Concussion	9.1%	18.8%
	Fracture	9.8%	8.2%

*Football, boys' and girls' soccer, girls' volleyball, boys' and girls' basketball, wrestling, baseball, and softball



FOOTBALL CONCUSSION, KNEE AND ANKLE INJURY RATES, ORIGINAL STUDY, 2005/06-2018/19

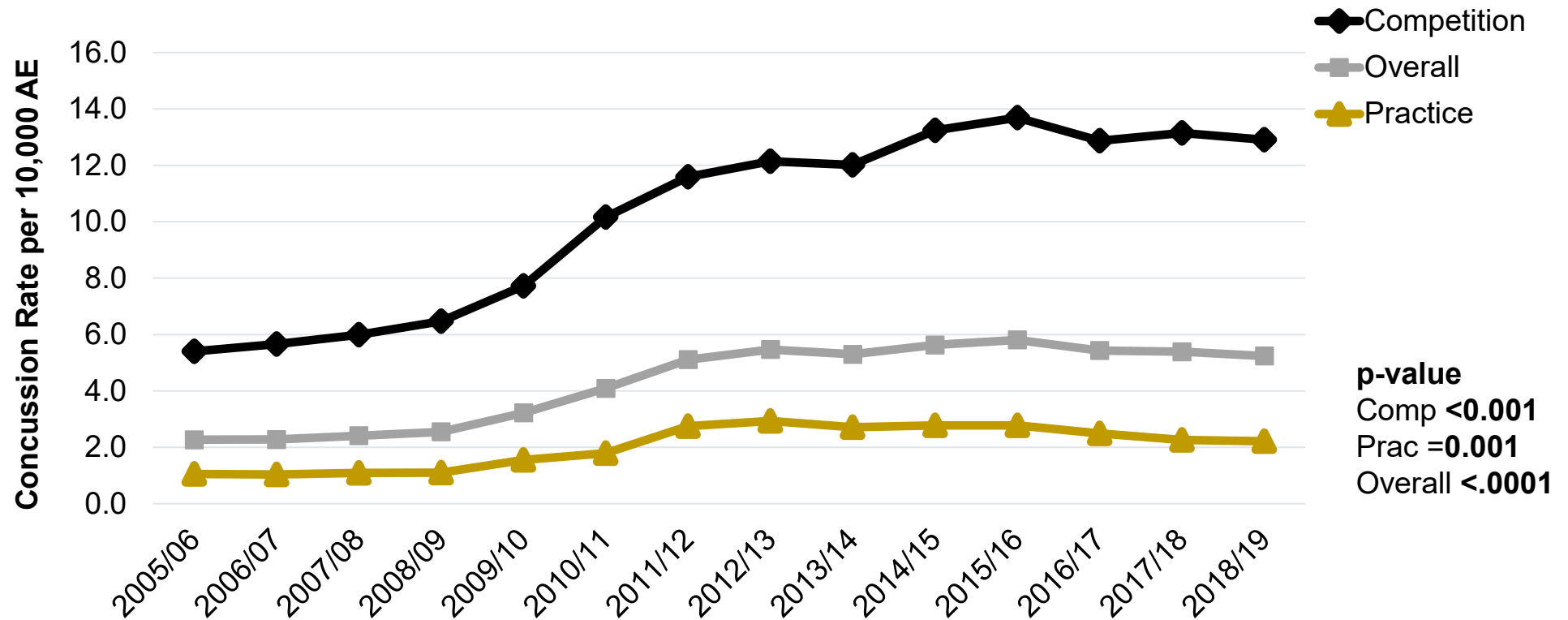




CONCUSSION SURVEILLANCE: ALL SPORTS

- Concussion data captured 2005/06 through 2018/19
 - 18,877 concussions
 - 18.3% of all injuries captured by HS RIO
 - 52,649,508 AE
 - 3.59 concussions per 10,000 AE
- Injury by type of exposure
 - 64.0% competition related
 - Competition rate 9.11 per 10,000 AE
 - Practice rate 1.73 per 10,000 AE
 - RR = 5.28 (95% CI = 5.18-5.37)

CONCUSSION RATES PER 10,000 AE: 9 ORIGINAL SPORTS



CONCUSSION RATES PER 10,000 AES: 2018/19

Sport	Competition	Rank	Practice	Rank
Football	43.4	1	5.0	1
Boys' Ice Hockey	33.2	2	0.6	12
Girls' Soccer	20.1	3	2.0	5
Boys' Lacrosse	15.1	4	1.9	6
Girls' Basketball	12.0	5	1.3	8
Girls' Lacrosse	9.6	6	1.2	9
Boys' Soccer	9.0	7	1.0	11
Boys' Wrestling	7.6	8	3.2	3
Girls' Volleyball	5.9	9	2.4	4
Girls' Softball	5.1	10	1.4	7
Girls' Field Hockey	5.1	11	0.2	14
Boys' Basketball	4.3	12	1.0	10
Cheerleading*	3.6	13	5.0	2
Boys' Baseball	2.0	14	0.5	13

*Competition includes competition and performance





MECHANISMS OF CONCUSSION BY SPORT

Sport	Player-Player	Player-Surface	Player-Apparatus
Football	86.4%	9.4%	0.7%
Boys' Soccer	61.7%	12.8%	24.1%
Girls' Soccer	43.3%	16.6%	37.9%
Boys' Baseball	35.3%	5.8%	58.5%
Girls' Softball	25.3%	7.4%	65.2%
Boys' Lacrosse	68.7%	8.9%	20.5%
Girls' Lacrosse	19.8%	8.1%	70.2%

TRENDS IN RETURN TO PLAY TIME FOLLOWING CONCUSSION: 9 ORIGINAL SPORTS

% of HS Athletes in Each Category of RTP

	07/08	09/10	11/12	13/14	15/16	16/17	17/18	18/19
<1 day	7.9	1.6	2.7	1.1	0.1	0.3	1.2	4.5
1-2 days	6.7	5.2	1.9	1.1	1.1	0.6	1.0	0.5
3-6 days	21.4	19.7	7.2	8.1	5.5	6.1	4.8	7.3
Season DQ	2.6	4.7	4.7	3.3	2.0	1.8	2.2	1.4
Career DQ	0.2	0.4	0.4	0.9	0.8	0.4	0.4	0.2
Season ended	0.8	9.4	12.4	13.7	16.2	14.6	15.5	14.9
Athlete quit sports despite no DQ	0.4	1.5	1.5	2.9	3.4	3.5	4.3	2.0



SKIN INFECTIONS AND WRESTLING HYGIENE



SKIN INFECTIONS

Example skin infection report from 2019/20

Week	Midwest	Northeast	South	West	Total
Week 1 (07/28/2019 - 08/3/2019)	0	0	0	0	0
Week 2 (08/4/2019 - 08/10/2019)	0	0	0	0	0
Week 3 (08/11/2019 - 08/17/2019)	0	0	1	0	1
Week 4 (08/18/2019 - 08/24/2019)	0	0	3	0	3
Week 5 (08/25/2019 - 08/31/2019)	0	0	5	0	5
Week 6 (09/01/2019 - 09/07/2019)	0	0	2	0	2
Week 7 (09/08/2019 - 09/14/2019)	0	1	1	0	2
Week 8 (09/15/2019 - 09/21/2019)	0	0	1	0	1
Week 9 (09/22/2019 - 09/28/2019)	0	0	0	0	0
Week 10 (09/29/2019 - 10/05/2019)	0	0	2	0	2
Week 11 (10/06/2019 - 10/12/2019)	2	0	0	0	2
Week 12 (10/13/2019 - 10/19/2019)	0	0	0	0	0
Week 13 (10/20/2019 - 10/26/2019)	0	0	3	0	3
Total	2	1	18	0	21

*Due to retrospective reporting numbers will change.

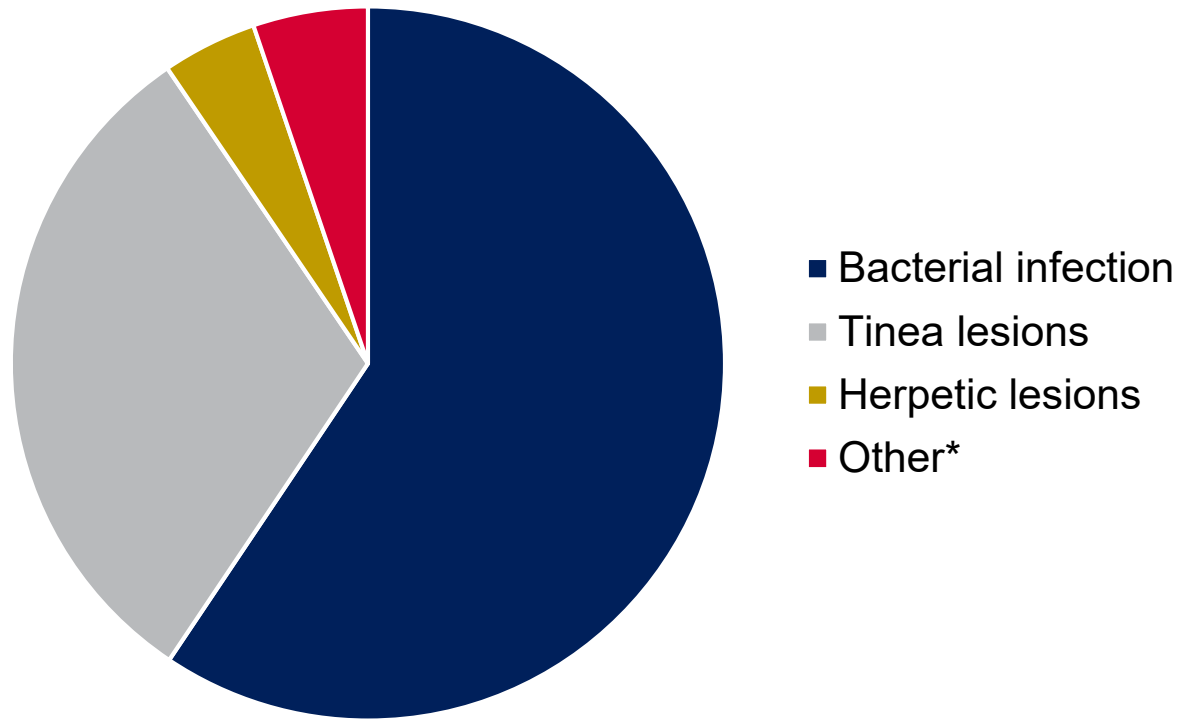
- In Fall 2019, two schools reported multiple skin infections in one boy's sport.
- When multiple skin infections are reported by an individual school, the RIO staff reaches out them to see if they need any assistance from the NFHS.
- Both schools had already begun the process to prevent additional skin infections.

SKIN INFECTION BY SPORT, 2005/06-2018/19

Sport	Frequency	%
Boys' wrestling	633	73.9%
Boys' football	167	19.5%
Boys' basketball	13	1.5%
Girls' volleyball	12	1.4%
Boys' soccer	6	0.7%
Boys' baseball	6	0.7%
Boys' lacrosse	4	0.5%
Girls' basketball	3	0.4%
Girls' field hockey	3	0.4%
Girls' soccer	2	0.2%
Boys' ice hockey	2	0.2%
Girls' swimming and diving	2	0.2%
Girls' cross country	2	0.2%
Girls' softball	1	0.1%
Boys' swimming and diving	1	0.1%

TYPE OF SKIN INFECTIONS, 2005/06-2018/19

% of All Skin Infections



A physician was involved in management of >70% of cases

*Other includes scabies, head lice, molluscum contagiosum, etc.

BEST PRACTICES FOR WRESTLING HYGIENE

- Educate coaches, athletes, referees and parents about communicable skin conditions and how they are spread.

- NWCA Online Course
- NFHS Online Course in Development!!

- Emphasize to the athletes the importance of showering immediately after each practice and competition.

- If shower facilities are unavailable, athletes should clean all exposed skin with “baby wipes” immediately after practices and competitions.



BEST PRACTICES FOR WRESTLING HYGIENE

- Coaches or athletic trainers should perform daily skin checks to ensure early recognition of potential communicable skin conditions.
 - Athletes must not be allowed to practice or compete if an active infection is suspected, even if the infection is covered.
 - Any suspicious lesions must be evaluated by an appropriate health-care provider prior to an athlete practicing or competing.





BEST PRACTICES FOR WRESTLING HYGIENE

- Athletes must not share practice gear, towels or personal hygiene products (razors) with others.
 - Avoid cosmetic body shaving
- Athletes should clean hands with an alcohol-based gel prior to every wrestling match to decrease bacterial load on the hands.
- Make certain that athletes and coaching staff are current on all required vaccinations (MMR, Hepatitis B, Chickenpox, etc) and strongly encourage yearly influenza vaccination.



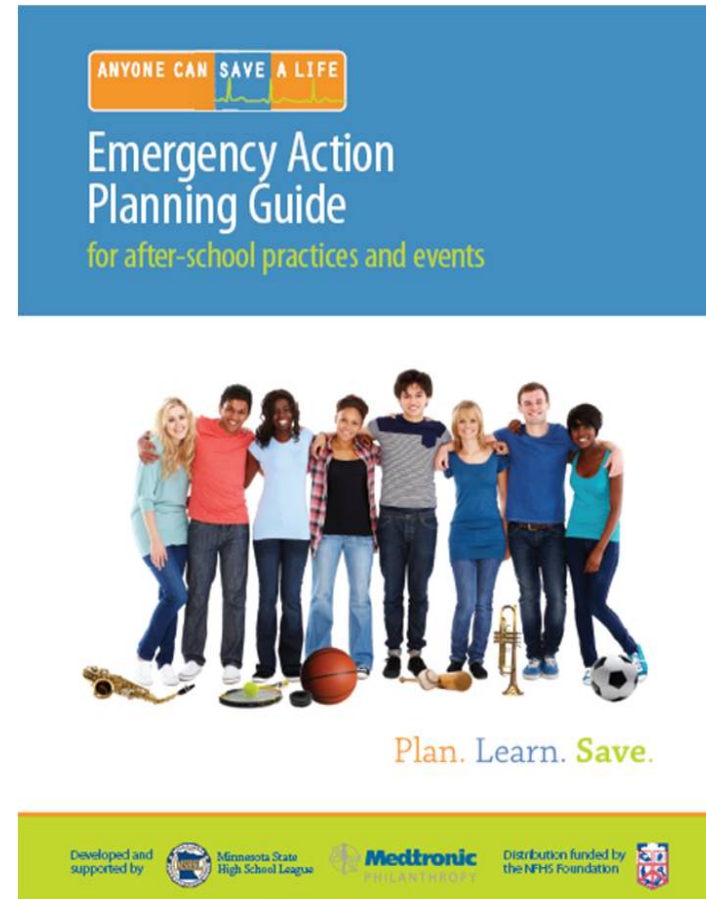
EMERGENCY ACTION PLANS

AEDS



“ANYONE CAN SAVE A LIFE” EMERGENCY ACTION PLAN

In 2015, The NFHS distributed the “Anyone Can Save a Life” emergency action plan and training program originally developed by the Minnesota State High School League and Medtronic Foundation to member state associations and their schools to assist them in the development of emergency action plans and policies.



DELINEATE ROLES

- Who knows CPR?
- Who retrieves all necessary emergency equipment?
- Who calls EMS, flags them down, and directs them to the scene?
- Who takes care of the rest of the team?
- Who dissuades “Looky Lous”?

TEAM MEMBERS





COMMUNICATION

- Effective communication will often be the difference between life and death in catastrophic events.
- Communication methods with backup plan
- Order of the chain of command
- Establish a code system for level of injury, and protocol for emergency calls
 - Triage system
 - Do not use student-athlete's name in any non-secure communication
- Provide names of roads and entrances to be used

DOCUMENTATION

- Provide documentation of actions taken during emergency and evaluation of emergency response
 - Persons responsible for documentation
- Institutional personnel training
 - Include the personnel involved, what EAP's were covered, signatures and dates
- Equipment maintenance
 - Specify who and how equipment should be maintained and include a location for documentation of equipment maintenance.
 - IE: "All AED's will be checked weekly to ensure proper functioning"

Not Documented, Not Done





BEST PRACTICES FOR AEDs

- The more, the better- one is better than none, but.....
- **MUST BE ACCESSIBLE!!!**
- A goal of less than 3–5 minutes from the time of collapse to delivery of the first shock is strongly recommended.
- Regular maintenance, which involves tracking expiration dates on supplies, including electrode pads and batteries.
- Post-event service, which includes cardiac event data download and replenishment of consumables such as gloves and electrode pads.



MENTAL HEALTH





EPIDEMIOLOGY OF MENTAL HEALTH

- Higher Education Research Institute at UCLA, asks incoming college freshman whether they “felt overwhelmed by all I had to do” during the previous year.
 - In 1985, when the institute began surveying students on the issue, 18 percent said they felt overwhelmed.
 - By 2010, 29 percent said they did. And in 2016, the number jumped to 41 percent.



SUICIDE RATES

- Suicide rates among 15- to 19-year-old girls doubled between 2007 and 2015, reaching a 40-year high.
- For every 100,000 American girls in 2015, five committed suicide.
- For teen boys, the rate rose by more than 30 percent.
- Overall, girls more likely to attempt, but boys more likely to complete a suicide

MENTAL HEALTH AWARENESS ACTION PLAN

- Leadership within the school
- Student, coach and parent education
- Emergent and Non-emergent intervention options
- Collaborate with the health-care team
 - Connect immediately with the needed resources
- Mobilize the student's support system
- Follow-up with the referrals





NATA - MENTAL HEALTH EMERGENCY ACTION PLAN

NATA Releases Consensus Statement Guidelines For Developing a Plan to Recognize and Refer Student Athletes with Psychological Concerns at the Secondary School Level

- **Know when emergency mental health referrals are necessary:** If a student athlete demonstrates violence or imminent threat to himself or herself, to others or to property; or reports feeling out of control, unable to make sound decisions or incoherent or confused, an emergency mental health referral is recommended.





FORM ALLIANCES

- Seek out partnerships with agencies with same mission and goals

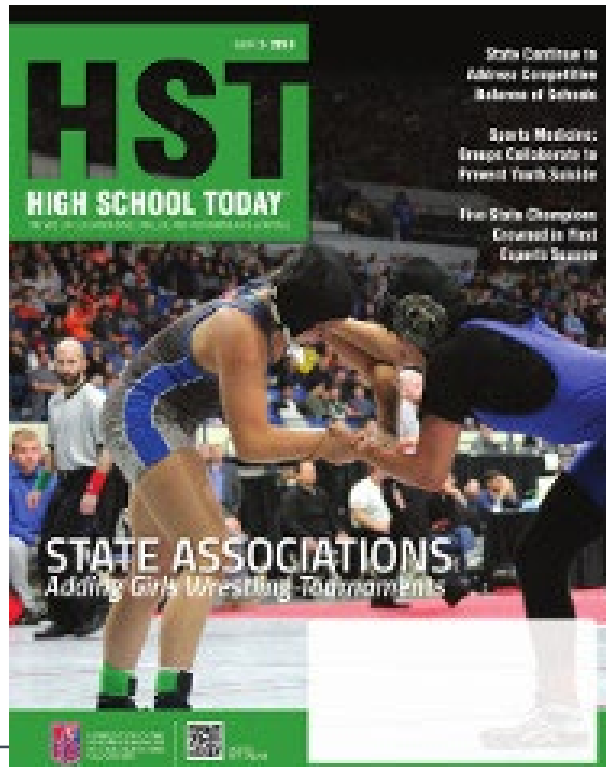
MUST FORM PARTNERSHIPS!! NOT JUST AN ATHLETICS ISSUE

- State/City/County Departments of Health
 - School Districts
 - State Coaches' Associations
 - State Athletic Trainers' Associations
- Suicide is our #1 fear, but we must also focus on depression, anxiety, and the overall mental health of the student



HIGHLIGHT ON MENTAL HEALTH

- High School Today
 - February 2019 and March 2019 issues



BENEFITS OF HIGH SCHOOL ATHLETICS

■ In this study of 9,668 individuals (ages 24-32 years) from a nationally representative database, among those with adverse childhood experiences, **team sports participation during adolescence was significantly associated with better adult mental health outcomes**, especially for males, including lower likelihood of having ever received a diagnosis of depression or anxiety and having current depressive symptoms.

- Easterlin et al. Association of Team Sports Participation With Long-term Mental Health Outcomes Among Individuals Exposed to Adverse Childhood Experiences. *JAMA Pediatr.* Published online May 28, 2019. doi:10.1001/jamapediatrics.2019.1212



BENEFITS OF HIGH SCHOOL ATHLETICS

- EXPAND opportunities for the kids who need it
- No cut programs
- JV and JV2 and Frosh teams
- Intramural programs??
- Emphasize lifetime fitness and mental health benefits



NOT JUST ATHLETES

- Coaches face increasing pressures from parents at a time when we are seeing younger coaches with less experience get head coaching positions
- Administration must recognize need for support in all areas of the job
- Parents fuel anxiety in kids AND coaches
- Leads to burnout and increasing turnover
 - Starts the viscous cycle
- Find opportunities for mentorship





LEGAL ISSUES

- State laws may vary in regards to reporting threats or emergencies.
- Threat assessment
 - “a significant risk” constitutes a high probability of substantial harm, not just a slight increase, speculative, or remote risk to the health or safety of the student or others
- Have policies in place in regards to release of confidential information



SPORT SPECIALIZATION



SPORT SPECIALIZATION AND LOWER EXTREMITY INJURIES IN HIGH SCHOOL ATHLETES

- 1,544 Subjects
(Female = 50%, Age = 16.0 ± 1.1)
- 2,843 Athletic Seasons
- 167,349 Athletic Exposures
- Specialization does not equal single sport participation
- **Funded in part by NFHS Foundation**



McGuine TA. A Prospective Study on the Impact of Sport Specialization on Lower Extremity Injury Rates in High School Athletes. *Am J Sports Med.* 2017;45(12):2706 - 2712.

QUICK HITS!

20% of high school athletes participated in a single sport

Females were more likely to specialize

Soccer: highest level of specialization

50% played in a league outside of school
(60% Basketball, 66% Soccer)

15% competed in a club sport and high school sport simultaneously

17% took part in 60 or more primary sport competitions (school and club) per year



DISCUSSION

The first study to prospectively document risks with sport specialization

MOD specialized > 50% incidence of lower extremity injury than LOW

HIGH specialized > 85% incidence of lower extremity injury than LOW

Risks increased after controlling for sex, grade in school, sport, competition volume, and previous history.





PREPARTICIPATION PHYSICAL EVALUATION (PPE)



2019 5TH EDITION PPE MONOGRAPH

PPE PREPARTICIPATION PHYSICAL EVALUATION

5th Edition

American Academy of Family Physicians
American Academy of Pediatrics
American College of Sports Medicine
American Medical Society for Sports Medicine
American Orthopaedic Society for Sports Medicine
American Osteopathic Academy of Sports Medicine

American Academy
of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™



The nation's leading medical experts have updated guidance for the Preparticipation Physical Evaluation (PPE), also known as the sports physical. The exam determines the medical eligibility of students to participate in an organized team sport or individual sport or attend sports camps from middle school through college years.





NFHS ESSENTIALS INITIATIVE



THE ESSENTIALS INITIATIVE (2016)

- See PDF of the 2016 NFHS Essentials Initiative for review.
- NFHS SMAC continues to work on different areas as outlined in the Essentials Initiative document.
- State associations should work with their SMAC and others to “adopt and adapt.”
- Ideal mechanisms for “spreading the message” will come through partnerships with like-minded corporate sponsors and organizations.
- Single point-person coordinating efforts should be goal to truly maximize effect.



THE ESSENTIALS INITIATIVE – Executive Summary

National Federation of State High School Associations (NFHS)
Report from the July 2016 NFHS Summit on the Essentials for Enhancing Participation,
Reducing Injury Risk and Optimizing Performance

There are recognized factors that interfere with enjoyable and sustainable sports participation for many students. Burdensome workouts and competition schedules, often coupled with specialization in a single sport, can place unsustainable demands on the scholastic athlete, leading to preventable injuries, burnout and dropout from sport.

All students, regardless of skill level or future athletic potential, should be provided the opportunity to learn fundamental skills and play sports under a system of individualized, progressive development that makes the experience enjoyable and rewarding. Continued participation at an elite level is the exception, not the rule. In reality, only about 5% of high school athletes compete at the NCAA level, with only a small portion of those athletes receiving “full-ride” scholarships.

The *Essentials* and *Key Action Measures* outlined in this document are specific to each stakeholder group (athletes, coaches, parents, athletic administrators and state associations) and built upon currently accepted best practices for setting and working toward the goals of healthy, sustainable and enjoyable sport participation. While the roles and perspectives of parents and coaches are integral to the student athletic experience, the development and participation process must always remain student-centered.

The *Essentials* format presents bullet-pointed, practical *Key Action Measures* to allow each stakeholder group to set specific goals and take part in and monitor adoption of the best practices presented. All recommended measures are centered upon optimizing the student's scholastic athletic experience. We realize that these *Key Action Measures* cannot all be achieved immediately. The hallmark of the *Essentials Initiative* is that it will evolve – change, develop and expand over time – responding to new data, new technologies, end-user feedback and measured outcomes. This document in no way represents a one-time response and approach to this vitally important and multifaceted topic.

The *Essentials Initiative* will only succeed with a concerted and widespread effort by the NFHS and its member state associations to deliver and continually reinforce all key components to athletes, coaches, parents, athletic administrators and state association personnel. The message must be consistent and distributed through a variety of media and other communication platforms, while being carefully and specifically targeted to intended audiences. Methods to convey this message and information should include, but not be limited to: educational videos, printed materials, traditional media campaigns and social media. The NFHS Sports Medicine Advisory Committee (SMAC) will also play a key role in implementation, monitoring injury data, and directing further studies and evaluations.

At its very heart, the *Essentials Initiative* enhances what is unique and special about scholastic athletics and, by design, supports the NFHS in fulfilling its Vision and Mission.



THE ESSENTIALS INITIATIVE - STATE ASSOCIATIONS

- Evaluate current sport participation levels, particularly focusing on multi-sport athletes and attrition from sports over a high school career.
 - Trends by classification, sport or region?
- Distribute and promote related information from the NFHS and other recognized sources through e-mail, annual meetings, and social media.
- Form alliances with other stakeholders at the state level to reinforce components of the Essentials Initiative.
- Open discussion with schools on expanding sub-varsity sports opportunities, “creative scheduling,” intramural sport participation, and non-traditional and emerging sports.
- Continue to educate parents about the “value-added” rewards of scholastic sport participation.



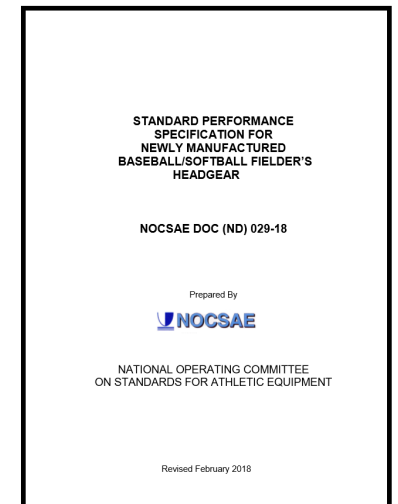
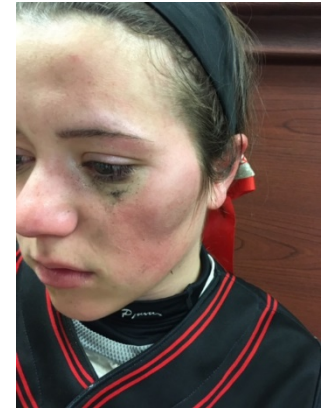


SPORTS EQUIPMENT



FIELDERS FACE MASK IN SOFTBALL

- Rare, but bad injuries with ugly pictures
- Perceived to be easily preventable- “common sense”
 - The phenomenon of “just do something” and airbags in cars
- Three state associations have already mandated it:
 - Kentucky, Missouri and Montana
- Problems
 - What is the injury that we are trying to prevent?
 - Should the NFHS require by rule a protective device without a standard?
 - NOCSAE already has a fielders headgear standard, but no one has adopted it.





OUT OF SEASON PRACTICES / CONDITIONING





OUT OF SEASON PRACTICES / CONDITIONING

- How do we keep kids “in the building” and away from club teams, all-star teams, travel teams, personal coaches, etc??
- What are the effects on participation and injuries

Huge issue with which we are just beginning to grapple

- Survey members
- Monitor changes and developments
- Look at ways to evaluate effects





LIMITING CONTACT IN FOOTBALL PRACTICE





LIMITING CONTACT IN FOOTBALL PRACTICE

National Federation of State High School Associations



Recommendations and Guidelines for Minimizing Head Impact Exposure and Concussion Risk in Football

**National Federation of State High School Associations (NFHS)
Report from the July 2014 NFHS Concussion Summit Task Force**

The National Federation of State High School Associations (NFHS) and its member associations firmly believe that athletic participation by students promotes health and fitness, academic achievement, healthy lifestyles, and good citizenship. While there will always be a risk of injury, minimizing the risk of head trauma and concussion in all sports is a priority for the NFHS. Over the past several years, the NFHS and the NFHS Sports Medicine Advisory Committee (SMAC) have:

- 1) Produced a 20-minute online educational course with the Centers for Disease Control (CDC) on "Concussion in Sports."
- 2) Specifically addressed concussion management in the rules books of all sports, including football.
- 3) Written several Points of Emphasis in the football rules book focused on limiting helmet-to-helmet contact and blows to the head with the shoulder, forearm, and hand.
- 4) Disseminated multiple publications regarding concussion management to the member state associations.

In July of 2014, at the request of the NFHS Board of Directors, a task force of medical and scientific experts, high school football coaches, state association personnel, and representatives of several stakeholder organizations met to discuss strategies to reduce head impacts and minimize concussion risk in high school football players during contests and practices, as well as during activities conducted outside of the traditional fall football season (spring and summer practices). The Fundamentals outlined below represent the task force's recommendations and guidelines developed following two days of presentations and discussion of the relevant medical literature and current expert opinion.

The members of the task force fully acknowledge the present limited – though evolving – scientific evidence available to support the Fundamentals outlined below with absolute certainty and explicit detail. Accordingly, the outcomes and clinical relevance of an increasing number of research studies may eventually alter these recommendations and guidelines. Ideally, this emerging data will clarify the potential for long-term adverse cognitive, emotional, and/or neurologic effects from concussions and repetitive blows to the head that may not result in the clinical symptoms of concussion. Based on what is currently known, the guiding principles in developing this report for young athletes and those who oversee, support and administer high school football programs were to reasonably limit overall





LIMITING CONTACT IN FOOTBALL PRACTICE

- What is **contact**?
- Thud- Drill is run at competitive speed through the moment of contact. There is no predetermined “winner.” Contact is above the waist, players stay on their feet and a quick whistle ends the drill.
- **USA Football** defines full contact as any drill conducted at **Thud** or **Live Action** within its Levels of Contact.





LIMITING CONTACT IN FOOTBALL PRACTICE

- Current NFHS recommendation is 60-90 minutes of **contact** 2-3 days per week.
- Limiting “Full Contact,” but allowing unlimited “Thud” IS NOT a step forward.
- Current NFHS recommendations are resulting in less practice-related concussions, despite not being fully adhered to.
- Increase compliance on what’s working. Don’t change the rules.





OPEN DISCUSSION





FINAL COMMENTS





AREAS OF FUTURE EMPHASIS AND CONCERN

- Changes in High School RIO (NFHS Injury Surveillance System)
- Overuse injuries- sorting out effects of club sports
- ACL injury prevention
- Continuing to monitor football-related issues
- Mental Health- including positive aspects of sports participation





FINAL TAKE-HOME POINTS

- 1. Each state has different challenges from a sports medicine perspective in caring for high school athletes and/or teams.
- 2. The NFHS and the NFHS Sports Medicine Advisory Committee (SMAC) has a great working relationship with the NIAAA and will continue to work together on different initiatives in the areas of risk minimization.



THANK YOU

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