

Testimony of

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Investigation

“Concussions in Youth Sports: Evaluating Prevention and
Research”

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Chairman Murphy and Members of the Committee:

My name is Dr. Andrew Gregory. I am a pediatric sports medicine specialist at Vanderbilt University Medical Center. I am a fellow of both the American Academy of Pediatrics and the American College of Sports Medicine as well as a member of USA Football's Medical Advisory Committee. I have served USA Football in this capacity since 2013. I am not a USA Football employee nor do I receive compensation for being on the committee.

USA Football is the sport's national governing body and a member of the U.S. Olympic Committee. We do not operate youth football leagues nor lead high school teams. We create resources and direct programs that establish important standards using the best available science, educating coaches, parents and young athletes who play football.

Our programs are endorsed by more than 40 organizations spanning medicine and sport, including the American College of Sports Medicine, the National Athletic Trainers' Association and the American Medical Society for Sports Medicine.

USA Football is an independent nonprofit organization that works in partnership with the NCAA, NFL, National Federation of State High School Associations and Pop Warner Little Scholars, among others.

The purpose of this testimony is to outline three key elements of how USA Football advances concussion prevention and research for the good of young athletes who play our sport and gain its fitness and social benefits. These three key elements are education, research and innovation.

EDUCATION

USA Football trains more youth and high school football coaches combined than any organization in the United States.

Education has the power to change behavior for the better. This is the core of USA Football's Heads Up Football program, delivered through online courses, in-person clinics and continuing education opportunities.

Its six educational components are:

- CDC-approved concussion recognition and response
- Heat preparedness and hydration
- Sudden cardiac arrest protocols
- Proper equipment fitting
- Tackling techniques
- Blocking techniques

Heads Up Football was introduced nationally to youth football organizations in 2013 and to high schools in 2014. More than 6,300 youth leagues and 1,100 high schools spanning all

50 states and Washington, D.C., representing approximately 1 million players, enrolled in Heads Up Football in 2015.

Coaches enrolled in the program complete hands-on, in-person instruction as well as an online curriculum covering the topics bulleted above. USA Football also trains one representative from each school or youth organization to serve as its Player Safety Coach, reinforcing the program's teachings, guiding practices as needed throughout the season, seeing the skills put into action at games and serving as a resource for players, parents and coaches.

Every youth football coach within an organization enrolled in Heads Up Football is trained how to teach the game's fundamentals by completing USA Football's nationally accredited Level 1 Coaching Certification Course. High school coaches gain training through USA Football's High School Coach Certification course, developed in partnership with the National Federation of State High School Associations.

Heads Up Football is endorsed by 14 state high school associations and 11 state high school coaches associations. The Oregon State Activities Association this year is requiring all

football coaches in its 249 football-playing member high schools to participate in Heads Up Football prior to the start of the 2016 season.

Dr. Michael Koester, Chairman of the Oregon School Activities Association Sports

Medicine Advisory Committee said:

“The really exciting thing about this program is what happens at the high school level will spread throughout the youth programs in each community. This will allow kids to develop their skills in a culture that shares the same language, same techniques and same safety standards from grade school through high school. ... The committee sees this as a natural next step as we look to innovative ways to minimize the risk of all football injuries, but particularly concussions. This is an opportunity for high school coaches to set a standard for the youth leagues in their communities across the state. Ideally, we’ll have youth coaches getting certified as well, allowing for continuity of tackling techniques and safety protocols through an athlete's entire playing experience.”

More on USA Football’s Heads Up Football program may be found at

www.usafootball.com/headsup.

USA Football also has been honored nationally for its work to advance athlete safety by the National Athletic Trainers’ Association (NATA), the professional membership association for certified athletic trainers and others who support the athletic training profession. Founded in 1950, the NATA has grown to more than 43,000 members worldwide today. In March of this

year, USA Football became the first national governing body of a sport to earn the NATA's Youth Sport Safety Ambassador Award for demonstrating significant contributions to the health and welfare of secondary school student-athletes. NATA's prestigious Youth Sports Safety Award recognizes those who have advanced athlete safety by providing exemplary youth sports safety protocols and advancing the provision of medical care, research, policy change and resource allocation. Along with USA Football, Project ADAM, and U.S. Representative Bill Pascrell, Jr., also were recognized with this honor in March 2016. More details can be found about this award at <http://www.nata.org/press-release/031516/nata-presents-2016-youth-sports-safety-ambassador-awards-seventh-annual-youth>.

Due in part to USA Football's medically endorsed programs and innovations, youth and high school football is changing for the better.

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RESEARCH

USA Football advances player safety through supporting independent third-party research.

According to a 2014 Datalys Center for Sports Injury Research and Prevention study, encompassing more than 2,000 youth football players, when compared to leagues that did not employ Heads Up Football, players in leagues that did participate in the program showed:

- 76 percent reduction in all injuries during practices
- 38 percent reduction in all injuries during games
- 34 percent decline in concussions during practices
- 29 percent decline in concussions during games

The peer-reviewed study was published by *The Orthopaedic Journal of Sports Medicine* in July 2015.

A subset of this study encompassing 70 youth players showed that over the course of a season, those in leagues enrolled in Heads Up Football had 2-to-3 less head impacts of 10g or greater per practice compared to those in non-Heads Up Football leagues. This may prevent more than 100 such impacts over the course of a 12-week season.

“This is compelling data,” Datalys Center President and Injury Epidemiologist Dr. Thomas Dompier said. “I am actually surprised by the strength of the association but

completely confident in our findings. It's logical – in the first two years of research, we found that coach and player behavior was predictive of injury even though we hypothesized differently. That led us to pursue a third year of research to examine if coach education reduced injuries and head impacts, and we found that this was the case.”

Dompier continued: “If we had found that only injury rates or only head impacts were reduced but not both, I would not have been as confident with our results. However, combined with the first two years of data that pointed at coach and player behavior, these current data indicate that coach education can have a positive impact on player safety and may serve as a model for youth sports like soccer, ice hockey, lacrosse and others concerned with concussion and head impact risk.”

On the high school level, Fairfax County Public Schools, the 10th largest school district in the country, has employed Heads Up Football since 2013. In this time, the district has reported a 43.3 percent decline in concussions among its 3,000 football-playing student-athletes. During this same time span with all 25 of its high school programs enrolled in Heads Up Football, overall football injuries have declines 23.9 percent. Data was collected by Fairfax

County Public Schools' athletic trainers. "We have one consistent match of what we're talking about, of how we're teaching our athletes to play the game. From ankle biter through 12th grade, we have one consistent curriculum," said Bill Curran, Director of Student Activities and Athletics for Fairfax County School District. "We're able to show with data that there's a difference. You know, Centreville High School played in back-to-back state championships and had the fewest injuries of our 25 high schools. That's a big deal."

Similarly, high schools within the South Bend (Ind.) Community School Corporation (SBCSC), with approximately 1,000 football-playing student-athletes, reported concussions from football to decline by 40 percent from 2014 to 2015, the first year the school system implemented Heads Up Football district-wide. Although football participation increased across the district from 1,000 student-athletes to 1,037 during this time, concussions from football decreased from 53 to 32. Concussion data was recorded by the high schools' athletic trainers. "USA Football's 'Heads Up Football' program has been invaluable to us and we are so happy to have had the opportunity to become a part of the program," SBCSC Athletic Director Kirby Whitacre said.

USA Football is committed to continue commissioning independent studies into youth and high school player health and safety.

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INNOVATION

USA Football provides practice guidelines, practice planning tools and defined Levels of Contact (www.usafootball.com/health-safety/levels-of-contact) for tackle coaches to properly teach player techniques in a progressive manner. More young football players than ever before are learning the fundamentals in a gradual and appropriate manner prior to advancing to full contact. Endorsed by the American College of Sports Medicine, the American Medical Society for Sports Medicine and the National Athletic Trainers' Association, USA Football's Youth Practice Guidelines set important standards for preseason heat acclimatization, regulating practice intensity and maintaining hydration levels to reduce the risk of injury and create the best environment for our children.

Among its pillars:

- No two-a-day practices in preseason or regular season

- Graduated equipment and contact levels in preseason to properly

acclimate players to exercise and heat

- No more than two hours of practice in any day
- No more than four football activity days per week, including practices and

games

- No more than 30 minutes of Live Action or “Thud” level contact per day

USA Football’s Levels of Contact focus on varying intensity levels throughout practices to build player confidence, ensure their safety and prevent both physical and mental exhaustion. Five intensity levels are used to introduce players to practice drills which position them to master the fundamentals and increase skill development.

- **Air** – Players run a drill unopposed and without contact
- **Bags** – Drill is run against a bag or other soft-contact surface
- **Control** – Drill is run at assigned speed with predetermined winner.

Contact remains above the waist and players stay on their feet.

- **Thud** – Drill is run at competitive speed with no predetermined winner.

Players stay on their feet and a quick whistle ends the drill. *It is important to note that USA Football considers “Thud” to be a full-contact level and limits the time that coaches can run drills at this speed and intensity. Other organizations – including the Ivy League and other college programs – do not include “Thud” as full contact.*

- **Live action** – Game-like conditions and the only time players are taken to the ground.

Through innovations such as the Youth Practice Guidelines and Levels of Contact, coaches instruct their players through a series of USA Football-developed drills to build confidence and instill the proper fundamentals. Through a player progression development model, players learn the right stage at the right age, using the same terminology as they mature mentally, physical and emotionally.

USA Football’s Heads Up Tackling technique teaches young athletes to make contact with their shoulders in an ascending strike and rip their arms up through the ball-carrier, grabbing the backside of the jersey – thus keeping the head and eyes up through the process.

Likewise, USA Football's Heads Up Blocking technique takes a player from stance to steps to contact, using their hands – not their helmets – to drive opponents out of the way. Laying the basic foundations, Heads Up Tackling and Heads Up Blocking fundamentals can be used to teach every type of tackle and block that a player needs to learn.

As Dr. Jon Devine, president of the American Medical Society for Sports Medicine, said:

“We endorsed USA Football's Heads Up Football program in 2014, and it continues to advance player safety and change behavior for the better. Young athletes are safer when their coaches are trained, proper fundamentals are taught and protocols in the best available science are put into motion. Creating a program like Heads Up Football takes leadership – leadership one would expect from a national governing body of sport.”

USA Football works every day to improve education, establish research and pave innovation toward creating a better, safer game for the young athletes who enjoy the fun, exercise and social benefits of an exceptional team sport.

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