

CONCUSSIONS IN FOOTBALL: ADDRESSING UNCERTAINTY AND ESTABLISHING INSTITUTIONAL REGULATIONS TO PROTECT ATHLETES

Concussions in sports, from youth sports up to the highest professional levels, have become a serious issue following the advancements in technology and neuroscience. As a high-contact sport, football leads other sports in sustained concussions, and has received the most attention from the neuroscience/neurolaw community in recent years. As of November 2011, all but six states have either already enacted or have filed legislation specifically targeting youth sports-related concussions. At a higher level, since 2006, the NFL has made multiple changes to its guidelines regarding the events and return-to-play timetable once a player has displayed symptoms of a concussion.

There is still much to learn about concussions, an injury that can affect a player for any duration between a day and several months. Five recent concussions display how unpredictable the injury can be at varying stages. On September 18, the quarterback for the Philadelphia Eagles, Michael Vick, left a game with a concussion after making helmet-to-helmet contact with a teammate. Vick was removed from the game, but made it back to play a week later, looking no worse for wear and missing no time. Stanford wide receiver Chris Owusu sustained his third concussion on November 5, two in the last two months, and has not returned to serious action since that game. The University of Texas has had two players in the last two years, Tre' Newton and Nolan Brewster, quit football entirely after recurring concussions have led to lingering effects and symptoms. In 2008, high school linebacker Ryne Dougherty died after returning from a concussion before he was completely healthy. In hockey, which has a similar contact level to football, the Pittsburgh Penguins' Sidney Crosby made his return from injury on November 21 after

experiencing concussion symptoms from two hits on January 1 and January 5, over ten months ago. These cases go towards proving the brain is infinitely complex, and injuries affecting it must be regulated more rigorously in order to maintain the safety and welfare of players.¹

One issue that obstructs better legislation and guidelines concerning concussions in sports is the ongoing lack of complete comprehension of the injury. Unlike a broken arm or sprained ankle, professionals in the medical field cannot make a standard blanket treatment plan for concussions because every case can be different. The brain is organ that may never be completely understood, and does not operate the same in adults as it does in children. Additionally, there are so many symptoms that a concussion can often go misdiagnosed or not diagnosed at all. Legislation already leans to the conservative side, but until more breakthroughs are made, even more rigid restrictions could lead to better care and maintenance of brain health in the event a player is concussed.

Another problem is the United States Constitution's enumeration of powers, and the states' abilities to enforce such regulation and guarantee player safety. While most states have adopted some type of sports concussion legislation, some of the statutes are minimal at best, and are either ineffectual or haphazardly monitored and enforced. A national standard would be the best option, but federal legislation in this area of public health would infringe upon police powers granted to the states by the Constitution. Even with a standardized national rule, states would still have trouble enforcing these measures, lacking the financial and personnel needs that are required to successfully police the matter. This regulation could include safety protocols for equipment (helmets),

¹ See Appendix A for links to news articles related to factual backgrounds of specific injuries or cases discussed in this paper.

and poorer school districts around the country are already lacking adequate funding, and may not be able to purchase new equipment that meets the latest safety standards.

Even with a federal standard in place, and the requisite knowledge to adequately and properly treat concussions, the burden still falls to the player, coach, and family to admit a problem. Young men playing at any level of football have the tendency to put on a certain machismo, and do not want to admit when they are hurting, especially if the obvious symptoms are limited to a headache. Regardless of wanting to admit pain or weakness, players may also unilaterally make the decision to put the needs of the team first and play through the injury, in an ever-present effort to be the hero. Without self-reporting and observation from everyone else around the concussed player, any legislation or treatment will not even come into play, increasing the chances for further injury.

The first part of this paper is designed to provide the basic information about concussions; what is a concussion, what are the symptoms, the forms of treatment that follow the injury, the imPACT test, and some general statistics concerning concussions in every level of football. The next section will look to the legal aspect of sports-related concussions, examining the efficiency of state legislation versus the Constitution and the need for a national standard. This area will also look to particular cases that have arisen out of mismanaged concussion injuries, and the varying burdens of proof at different levels of football. Section three will focus primarily on the National Football League and its self-regulation regarding the treatment of concussions. Section four will discuss the possible avenues of action that can be taken to improve the entire process of dealing with concussions, from before they occur to the ramifications of injury and liability that can

arise. Section five will wrap up the analysis by concluding with final thoughts, and reiterate the gravity of the concussion and brain injuries.

I. CONCUSSIONS: THE BASICS

A concussion, or a mild traumatic brain injury (MTBI), is an injury to the brain that results in a temporary loss of normal brain activity.² It changes how the brain normally functions, but will not necessarily cause structural damage that can be seen with standard imaging techniques. Since there is no biological marker or foolproof test for an accurate diagnosis, identifying sports-related concussions is a daunting task that medical professionals face. Concussions are caused by a traumatic blow to the head, neck, or body that cause the brain to move rapidly inside the skull.³ It is quite literally the brain slapping into the inside of the cranium, thus its classification as a closed head injury. Once a player sustains a concussion, he becomes more susceptible to future concussions, and the post-concussion brain may never fully heal.

A concussion can be difficult to diagnose quickly on the field of play due to the fact that there are so many possible symptoms that develop. Symptoms may include:

headache, nausea and vomiting, amnesia, balance problems, dizziness, fatigue, irregular sleeping patterns (i.e. trouble falling asleep, sleeping more than usual, sleeping less than usual, drowsiness), irritability, losing consciousness, sensitivity to light, sensitivity to noise, increased sadness, nervousness, feeling more emotional, numbness or tingling, slower reaction times, sensation of being “in a fog,” difficulty with concentration (i.e. difficulty reversing a series of digits and serial subtractions), difficulty with memory, visual problems, a detached or vacant facial expression; inappropriate responses and irrelevant statements, and

² Lovell, Mark, and Jamie Pardini. "New Developments in Sports Concussion Management." *Foundations of Sport-related Brain Injuries*. Ed. Semyon Slobounov and Wayne Sebastianelli. New York, NY: Springer, 2006. 111-36, 112.

³ “Concussions.” *American Association of Neurological Surgeons*.
<http://www.aans.org/Patient%20Information/Conditions%20and%20Treatments/Concussion.aspx>.

the repeating of statements and questions.⁴

With so many possible symptoms, the chance of a coach or trainer missing something increases, making the injury that much more difficult to diagnose and treat in a timely fashion.

One concussion can be severe enough, but a second impact while someone has a concussion can be disastrous. A second impact that registers on someone with a preexisting concussion can exponentially exacerbate the situation and has a significant likelihood of fatality.⁵ This is called second impact syndrome, and the subsequent blow can lead to cerebral edema and brainstem herniation, causing collapse and death within minutes.⁶ The second impact that registers before the brain is completely healed clogs blood vessels and increases pressure in the brain, and has a 50% mortality rate. Second impact syndrome is an affliction predominately in youths, causing some experts to believe that “second impact syndrome” is not in itself a different event, but instead merely a different way that a first trauma affects the adolescent brain.⁷ Regardless of what experts call it, anyone receiving a second impact while experiencing the aftereffects of a concussion is in serious danger of permanent injury or death.

Similar to second impacts, repeat concussions represent just as serious of a problem in all levels of football. Concussion symptoms can last months, and players who sustain multiple concussions, even a year apart, face an increased likelihood of permanent

⁴ Diehl, Erika. “WHAT’S ALL THE HEADACHE?: REFORM NEEDED TO COPE WITH THE EFFECTS OF CONCUSSIONS IN FOOTBALL.” *Journal of Law and Health Vol. 23 Issue 1*. 2010. 83-124, 89.

⁵ Id. at 92.

⁶ Id.

⁷ Id.

neurological impairment, increased risk of serious head injury, depression, and general impairment of brain functions.⁸ Former NFL player Dave Duerson, who committed suicide, asked that his brain be studied for chronic traumatic encephalopathy, “a degenerative disease caused by repeated blows to the head that is tied to depression, dementia and suicide.”⁹ Players who received potentially hundreds of blows to the head during football careers are experiencing complications later in life that could have been avoided given better knowledge and more conservative treatment regimens.

Treatment for concussions has evolved into immediate removal from the game and resting from further play to avoid repeat brain trauma. An athlete should avoid participation while symptoms still exist, and even after the symptoms dissipate, standard operating procedure calls for a gradual return to full activity. Adolescent brains are less developed, so youths up to age 18 should be treated particularly conservatively in their recuperation and recovery.¹⁰ In one study, high school athletes showed continued memory impairment for one week, while college athletes only experienced memory deficiencies for twenty-four hours.¹¹ In a similar study recording the recovery times of high school athletes who had been concussed, only 40% of the athletes (134 total players in the study) had recovered after one week, and 20% had still not completely recovered

⁸ *Id.* at 93.

⁹ “NFL urging states to pass youth football concussion laws.” *NFL*. February 23, 2011. <http://www.nfl.com/news/story/09000d5d81e710d9/article/nfl-urging-states-to-pass-youth-football-concussion-laws>.

¹⁰ Lloyd, Janice. “High School Athletes Face Serious Concussion Risks.” *USA Today*. May 4, 2009. http://www.usatoday.com/news/health/2009-05-04-concussions_N.htm.

¹¹ Lovell and Pardini, 128.

after three weeks.¹² This demonstrates the fact that concussions must be managed on a case-by-case basis until more concrete advancements are made to improve understanding and management of the injury.

In 2000, a test was devised specifically for the athletic community, in an attempt to standardize and facilitate the diagnosis of concussions. The ImPACT Test (Immediate Postconcussion Assessment and Cognitive Testing) was designed to assess and record “multiple aspects of brain function, including impulse control, sustained attention, visual-motor processing speed, visual and verbal memory, working memory, selective attention, reaction time, and response variability.”¹³ It is a twenty-minute test that should be administered at the beginning of the season to determine a baseline of cognitive abilities and processes in the non-concussed brain. This baseline can then be compared to the results of another ImPACT Test taken by an athlete after he has sustained a concussion to display the reduced cognitive function of the brain. Once a player reaches his baseline scores following the concussion, his brain should be healed, and the athlete is then ready for a gradual return to full participation.

One problem with this testing at a youth level is that the ImPACT Test software ranges from \$500-\$1,000, and not all schools or athletic organizations have that money to spend.¹⁴ \$500 gets a school or organization 300 baseline tests and 30 post-concussion tests, with another 150 baseline tests and 30 post-concussion tests added the following year.¹⁵ For small, poor school systems, this amount may be prohibitive in the face of a

¹² Id.

¹³ Diehl at 95.

¹⁴ Id. at 96.

¹⁵ Id.

cost-benefit analysis, especially if in any given year, athletes at the school do not sustain concussions. Should a school look back on their last five years of athletics, and not have a single reported concussion or head injury, that school would have no reason to want to spend money on a test that they reasonably foresee not being utilized. Another problem is that the test can be manipulated by intentionally scoring low on the original baseline test, so that a concussed player's ImPACT Test will not register lower than the baseline, and he will be cleared to play.

In the United States, there are more than 1,700 NFL players, 60,000 college football players, 1.2 million high school football players, and even more that play at a youth level before high school.¹⁶ A study in 2000 of 1,090 former NFL players showed 60% to have experienced a concussion during their career, and 26% that had suffered at least three concussions.¹⁷ Furthermore, a 2007 study showed that out of nearly 600 former players that sustained at least three concussions, 20% were diagnosed with depression, which was triple the rate of players that had depression without any concussions.¹⁸ Annually, approximately 5% of athletes in each level of football are treated with concussions, a number figuring to be around 130 NFL players, 3,800 college athletes, and 50,000 high school athletes.¹⁹ Athletes in high school or younger who sustain a concussion are then three times as likely to experience a second concussion in

¹⁶ Broglio, Steven, Jacob Sosnoff, SungHoon Shin, and Jerrad Zimmerman. "Head Impacts During High School Football: A Biomechanical Assessment." *Journal of Athletic Training* Vol. 44 Issue 4. July 2009. 342-349.

¹⁷ "Head Injuries in Football." *New York Times*. October 21, 2010. http://topics.nytimes.com/top/reference/timestopics/subjects/f/football/head_injuries/index.html.

¹⁸ Id.

¹⁹ Id.

life.²⁰ These numbers are likely on the lower end of the spectrum, as many players either do not know they have a concussion or don't report the injury. The sheer volume of concussions that athletes face in football alone demand for a more stringent standard of regulation and treatment, that has only started coming into existence in the last five years.

II. FROM A LEGAL POINT OF VIEW: LEGISLATION AND CASES

CONCERNING CONCUSSIONS

A. Youth sports-related concussion legislation should be uniform in all 50 states in order to adequately protect young athletes.

Since 2009, nearly every state has made an attempt to promote public safety and welfare in the athletic sector by enacting legislation concerning youth sports-related concussions. In 2009, the state of Washington passed the Zackery Lystedt Law, the first state law in the United States requiring young athletes that play or practice on public property to be removed from practice or competition if they are suspected of sustaining a concussion or head injury.²¹ The law further states that an athlete is not allowed to return to play until he or she has been evaluated and cleared by a licensed health care provider trained to evaluate head injuries (a distinction that includes certified athletic trainers).²² Additionally, the law requires coaches, athletes, and their guardians to be educated about head injuries, whether this involves coaches taking courses or flyers being distributed to parents and students.²³ Athletes and their parents must also sign a concussion and head

²⁰ “Heads Up: Concussion in Youth Sports.” *Centers for Disease Control and Prevention*. December 8, 2009. <http://www.cdc.gov/concussion/HeadsUp/youth.html>.

²¹ Wash. Rev. Code Ann. § 28A.600.190 (West).

²² Id.

²³ Foreman, Megan. “New laws keep student athletes with concussions benched.” *National Conference of State Legislatures*. June 2010. <http://www.ncsl.org/?tabid=20377>.

injury information sheet in addition to the before beginning practice each season.²⁴ This form is a great improvement on the generic consent form that goes out with any athletic activity that usually delineates risk of injury in one or two brief sentences, and does not discuss lasting effects or common injuries to keep in mind.²⁵

This law came into existence after Zackery Lystedt, a thirteen year-old high school football player, sustained a head injury after making a tackle in the first half of a game, but did not lose consciousness, and was able to walk off the field on his own accord.²⁶ Zackery returned in the second half and finished the game, only to collapse afterwards, experiencing the inability to see and intense pain.²⁷ This injury led to two major surgeries, a coma that persisted for over a month, nine months of only yes and no communication via blinks, and being on a feeding tube for nearly two years.²⁸ Now in a wheelchair with slight speech impairment, a high likelihood exists that had Zackery not returned to the game and been allowed to heal properly, he would be no worse for wear today.

The District of Columbia passed a similar law, the Athletic Concussion Protection Act, on July 27. This law may be the most wide-ranging to date, applying to both in-school and extracurricular athletics.²⁹ This law had significant backing that was key in its

²⁴ See Appendix B. Separate Document attached in email. Concussion/Head Injury information form that must be signed and returned before participation in youth sports in Washington.

²⁵ See Appendix C. Separate Document attached in email. General Consent form required to participate in sports.

²⁶ Foreman.

²⁷ Id.

²⁸ Id.

²⁹ 2011 District of Columbia Legislative Bill No. 7, Washington DC Council Period Nineteen.

adoption from the Brain Injury Association of D.C., the Children’s National Medical Center, the NFL, and the Washington Redskins.³⁰ Like to the Washington law, the D.C. law calls for the dissemination of educational materials, the immediate removal of an athlete suspected of being concussed, and the athlete’s return only upon clearance from a licensed or certified healthcare provider.³¹

Unfortunately, not all of the states’ regulations are this thorough, and a few states still do not have any legislation in place concerning youth athletic concussions. California legislation on the matter does not require any additional education for coaches, who assume the primary caretaker role over youth athletes during a game. “Kort’s Law,” in Idaho, was comprised of three parts, similar to the laws in Washington and the District of Columbia, in its introduction to the Idaho legislature: (1) mandated concussion training for all youth coaches and required concussion information to be available for all players and parents; (2) instant removal from competition and practice for any symptomatic player; and (3) clearance from a medical professional for the player to return. Lawmakers only passed the first part of the bill, claiming the bill was overly regulatory and the issue needed to be researched more.³² Based on these statutes, a coach in California doesn’t even need to know what a concussion is or how to spot the symptoms; Idaho coaches do not have to remove a symptomatic player or have that player obtain medical clearance to return to play. These deficiencies in the law are being slowly

³⁰ “Athletic Concussion Protection Act.” *Brain Injury Association of Washington, D.C.*
<http://www.biadc.org/athletic-concussion-protection-act.html>.

³¹ 2011 District of Columbia Legislative Bill No. 7, Washington DC Council Period Nineteen.

³² “Crane strips concussion bill on House floor.” *Idaho Reporter*. March 23, 2010.
<http://www.idahoreporter.com/2010/crane-strips-concussion-bill-on-house-floor/>.

overcome by common sense and standards; however, the injuries continue to occur and plague young athletes.

The absence of uniform guidelines is a testament of the failure of the state governments and sporting associations to take action to address the very real threat to young athletes posed by sports-related concussions. One significant problem facing the uniformity of state laws in order to adequately protect youth athletes is the 10th Amendment of the United States Constitution, which delegates the regulation of public health and welfare to the states. In spite of the Tenth Amendment, the federal government's authority does carry moderate weight in public health laws regarding quarantine, but the Commerce Clause becomes involved.³³ In that instance, the Commerce Clause only comes into effect so that diseases/epidemics are not spread across state lines in the event the United States becomes exposed. In youth sports, state lines are rarely crossed, and concussions are not precisely in the same realm as contagious disease, so the Commerce Clause cannot come into play and give authority to the federal government to make a blanket legislation.

Without the possibility for a federal sports-related concussion statute, the best attempt to get a uniform regulation on concussions across all fifty states would have to involve significant backing from the NFL and/or the NCAA. As the NFL did with its backing of the D.C. law, an active approach from the league would be a vital factor in convincing states to adopt more stringent rules regarding concussions. Barring NFL backing, high school athletic associations could play a pivotal part in creating viable concussion rules to determine if and when a player can return to competition.

³³ Swendiman, Kathleen, and Jennifer Elsea. "Federal and State Quarantine and Isolation Authority." *Congressional Research Service*. January 23, 2007. 1-18, 4. <http://www.fas.org/sgp/crs/misc/RL33201.pdf>.

One piece of legislation that has been introduced in the Senate is the Children's Sports Athletic Equipment Safety Act, which seeks to regulate football helmet safety standards.³⁴ Included in the proposed legislation is language that will deter false or misleading claims with respect to sporting goods, which would allow for claims to be brought against manufacturers for any breach of implied or explicit warranty. At minimum this law would cause manufacturers to take care as to what they are saying in order to avoid affirmative guarantees that may just puffery. This bill has met with hostility, because while it would help make helmets safer and reduce concussions, it would give the Federal Trade Commission more regulatory power, and allow the federal government to assert some authority over people's recreational activities.

B. Football-related concussions have led to lawsuits at every level of the game that come down to negligence, assumption of risk, or breach of warranty.

Several suits have arisen that point to some sort of fault to an institution that inevitably led to a player's serious injury or death. In 2009, La Salle settled a case with Preston Plevretes for \$7.5 million, avoiding accusations that the school mishandled a prior trauma that the player sustained. The school claimed that only one injury occurred during a game in 2005, and denied the player was concussed in an earlier practice, despite the knowledge that Preston took himself out of a game citing a headache as the reason.

Another incident occurred in New Jersey in 2008; Ryne Dougherty, a high school linebacker, died after returning to play too soon and receiving a fatal second trauma to the

³⁴ 112th CONGRESS, 1st Session.

head, three weeks after sustaining a concussion. Ryne's parents sued the school and the doctor, alleging that doctor cleared their son to play before he was ready and that a certified athletic trainer at the school dismissed the results of Ryne's failed ImPACT Test, citing disruptions in the room.

In September, Adrian Arrington filed a class-action lawsuit against the NCAA, citing the NCAA's negligence with respect to the outstanding number of student-athletes who have sustained concussions.³⁵ In the complaint, the class has argued that the NCAA has continued to ignore studies and injuries within the sporting realm that has led to chronic illnesses in former athletes, and that inadequate rules allow for these injuries to persist.³⁶

Many of the lawsuits that exist predominately deal with the proper time to return-to-play (RTP), and the associated duty of care that goes hand in hand with determining that length of time. Return-to-play guidelines have been set forth by multiple institutions, and vary from twenty minutes to one week at minimum.³⁷ Amid efforts to standardize RTP guidelines, the 2008 Zurich Consensus Statement on Concussion in Sport recommends:

“an individually determined and graduated RTP protocol under which an athlete who has suffered a concussion not begin any activity until the athlete is asymptomatic, at which time the athlete starts with light aerobic exercise, gradually progressing to participation in full contact play as long as no symptoms arise.”³⁸

³⁵ Adrian ARRINGTON, on behalf of himself and all others similarly situated, Plaintiff, v. NATIONAL COLLEGIATE ATHLETIC ASSOCIATION, and Ncaa Football, Defendants., 2011 WL 4374451 (N.D.Ill.).

³⁶ Id.

³⁷ 21 Marq. Sports L. Rev. 241, 258 (2010).

³⁸ Id.

This statement in essence says that each case must be analyzed on a case-by-case basis, with a conservative reintegration into full sporting activity. This theory once again depends on the fact that concussions are properly identified. Even in schools, the school itself is not necessarily required to have RTP guidelines, leaving medical professionals in charge of that determination.³⁹ At lower levels (high school and youth football) athletes are more susceptible to debilitating injury, yet there is a scarcity of suitable that are attending to the needs of these players. Negligence can be harder to prove at these levels since coaches are generally far from experts, and do not have the same knowledge that college and professional coaches or trainers have.

Some coaches or agents of a public (state) institution are granted protection under the doctrine of qualified immunity. This doctrine shields state agents, such as coaches, school trainers, or school boards, from liability in the execution of discretionary functions.⁴⁰ Yanero v. Davis, held that a coach could be held liable after a baseball player was hit by a pitch when the player wasn't wearing a helmet, because the coach was executing a ministerial function as opposed to a discretionary function.⁴¹ Because the coach failed to uphold a set rule, wearing a helmet while at bat, instead of making a judgment call, the doctrine of qualified immunity does not apply. Without a standard return-to-play rule, a coach or trainer can say that ordering a player back from potential concussion was a discretionary decision, and that may be sufficient to protect him under the doctrine.

³⁹ Id. at 261.

⁴⁰ Yanero v. Davis, 65 S.W.3d 510, 522 (Ky. 2002).

⁴¹ Id.

To prove negligence, a plaintiff must prove the basic elements of negligence: that the defendant owed the plaintiff a duty of care, that the defendant breached that duty and exposed the plaintiff to the risk of a substantial injury, that the defendant's action was the reason the plaintiff was injured, and that the plaintiff suffered an injury as a consequence.⁴² In sports, coaches and other participants are generally excluded from liability because of an implied or explicit assumption of risk; if a player or parent sued every time there was an injury, competitive contact sports would become nonexistent. Both injuries and rule violations (penalties) are common enough occurrences that there is a reasonable risk that one could occur.

In Karas v. Strevell, a suit involving an illegal hockey hit that the plaintiff lost, the court noted, "full-contact sports such as ice hockey and tackle football where physical contact between players is not simply an unavoidable by product of vigorous play, but is a fundamental part of the way the game is played."⁴³ With concussions, this interpretation can be applied to mean that a player who is merely concussed during a game will not have a claim based on negligence, and only if the player is forced back into a game too early or misdiagnosed/mistreated by a doctor could a negligence claim possibly arise.

Knight v. Jewett discusses the assumption of risk factor, where a player who suffered a broken finger had no cause of action following "ordinary careless conduct" during play.⁴⁴ While a participant's consent to play is not a waiver of all infractions, a

⁴² 57 Am. Jur. 2d Negligence § 71 (2010).

⁴³ Karas v. Strevell, 227 Ill. 2d 440, 884 N.E.2d 122, 132 (2008).

⁴⁴ Knight v. Jewett, 3 Cal. 4th 296, 834 P.2d 696, 712 (1992).

reasonable person understands and accepts the typical incidents of play resulting from carelessness, especially those resulting from the customarily accepted method of playing the sport.⁴⁵ These incidents are a known and apparent danger involved in competing, and rarely will they lead to a plaintiff recovering from such an injury.

These ideas regarding negligence and assumption of risk usually extend to the school or organization as well, with a few exceptions. Previously, plaintiffs have successfully recovered from school districts or organizations if the institution allowed an injured/unfit players to compete, provided unsafe facilities or equipment, offered negligent medical care, or failed to provide adequate supervision or training.⁴⁶ In the Dougherty case, the parents of Ryne likely have a solid claim against Montclair High School based on the fact that the school offered negligent medical care and allowed an unfit player to return too soon. Even if there was a distraction in the room during the ImPACT Test, another test should have been administered to guarantee Ryne was actually healthy.

In addition to schools, the high school athletic associations can also be held liable for certain injuries. In Wissel, a claimant lost a negligence claim after alleging the association did not properly instruct him on how to tackle, nor did the association guarantee that he was wearing a serviceable helmet.⁴⁷ The court did not accept those claims, but accepted the thought that the athletic associations owed a duty of care to players because they created the rules to govern the sport.⁴⁸

⁴⁵ Id.

⁴⁶ Diehl 99.

⁴⁷ Wissel v. Ohio High Sch. Athletic Assn., 605 N.E.2d 458, 461 (Ohio Ct. App. 1992).

⁴⁸ Id.

In addition to breach of warranty claims that may be brought against manufacturers, they can also face strict liability claims for defective products (helmets and pads). In Rawlings Sporting Goods Co. v. Daniels, a high school quarterback was left permanently brain damaged after a helmet-to-helmet impact with a teammate in practice.⁴⁹ The court held that a manufacturer must warn consumers of the dangers of using the product, after the helmet made a two-inch indentation into the player's skull.⁵⁰ With the implementation of more stringent product testing since this case (1981), these situations can now be avoided, but the courts opened the door then for manufacturers to be held liable with respect to football injuries.

III. THE NATIONAL FOOTBALL LEAGUE AND SELF-REGULATION CONCERNING CONCUSSIONS

The NFL faces additional problems when it comes to concussions. These are individuals who are undertaking a paid career, and may be reticent to miss time or show a proclivity of sustaining debilitating injuries. The more games a professional player misses, the more likely he is to be traded or receive a reduction in pay after a current contract expires. Twenty percent of 160 NFL players surveyed in 2009 admit to hiding or downplaying the symptoms of a possible concussion in order to stay in the game or continue playing throughout a season.⁵¹ Since football is their occupation, not simply a

⁴⁹ Rawlings Sporting Goods Co. v. Daniels, 619 S.W.2d 435, 439 (Tex. App. 1981).

⁵⁰ Id.

⁵¹ "Concussions reported in NFL up 21 percent from last season." *NFL*. December 13, 2010. <http://www.nfl.com/news/story/09000d5d81cdf2d6/article/concussions-reported-in-nfl-up-21-percent-from-last-season>.

hobby as it is to recreational or amateur players, losing game time means losing money. An average NFL career lasts just three years, and in that limited amount of time, players will obviously attempt to maximize their play in order to earn more.

Currently, the NFL currently players who show concussion symptoms to sit out the rest of a game or practice and be analyzed by a neurologist before returning. The first NFL RTP guidelines came out in 2007. That policy was based on the findings of a medical conference, and stated that a player could not return to a game or practice in which he lost consciousness, and that a player must be completely asymptomatic and pass his neurological tests normally before returning to play.⁵² The problem with this policy is that losing consciousness is not always an experienced symptom of a concussion, so players could have still been left undiagnosed and in position to be injured further.

In 2009, the NFL created more rigid RTP standards, which called for a player to leave a game should he display any symptoms of a concussion, not merely being knocked unconscious.⁵³ The league implemented a new standardized test that is administered to players who are suspected of being concussed. The new regulation assesses the player's ability to remember assignments or plays and analyzes complex situations or problems. If the player is confirmed to have a concussion, he may not return to play on the same day. In order to return to play, a player must be full asymptomatic at rest and after exertion and pass a normal neurological examination. Players also had to be examined and cleared to play by an independent neuro-psychologist, not just the team doctor.⁵⁴

⁵² "Concussions in Sports." *ESPN*. November 21, 2011. http://espn.go.com/nfl/topics/_/page/concussions.

⁵³ Id.

⁵⁴ Id.

This additional requirement ensured that an overzealous physician would not rush a player back to his team simply because they are struggling.

Additionally, the NFL has expanded neurological testing in recent years; while every player undergoes testing, any player who sustained a concussion in the previous season would have to undergo extra tests.⁵⁵ Again, the problem comes down to self-reporting, and that these tests can be lowballed in order to not register a difference in the event that a player sustains a concussion. Peyton Manning, who just recently broke his streak of over two hundred consecutive games started, has openly admitted to scoring poorly on the baseline concussion tests so that he is not declared medically unable to play. One example includes measurement of reaction time, which is much slower immediately after the injury and up to days after. Reaction time has been recorded through player testing, as up to 15% slower than at the initial physical exam all players must undergo pre-season. A player can still decide to hesitate slightly longer in order to fake slower reaction times, so that he may continue to play despite experiencing a concussed state.

Most recently, the NFL has enacted harsh penalties for illegal helmet-to-helmet hits, or hits against a defenseless target. Regardless of a player's intention, if he is determined to have made an illegal hit that could endanger a player or cause a head injury, the new rules can now levy a fine in the range of five figures.⁵⁶ In one week, three players that were found guilty of such hits were fined \$175,000, with two of the penalties

⁵⁵ Id.

⁵⁶ Kaplan, Adam. "NFL levies huge fines for hits to head." *Fox Sports*. October 20, 2010. <http://msn.foxsports.com/nfl/story/helmet-fines-James-Harrison-Dunta-Robinson-Brandon-Meriweather-101910>.

equating to nearly two weeks of wages for the players.⁵⁷ These fines make players take care to avoid helmet-to-helmet hits, or hits on defenseless players, but still do nothing to help convince players that they need to take baseline tests seriously or report concussions as they happen.

IV. LOOKING TO THE FUTURE: CHANGES TO BE MADE

Obviously, there need to be changes to the rules and guidelines of sports involving young athletes, in order to minimize the number of sports-related concussions that occur. The NFL, and to a lesser extent the NCAA, have expressed interest in getting more involved in the protection of youth football players, and they must be active in order to achieve this goal. The league's function will be as a lobbyist to federal and state legislatures, to pass adequate and lasting regulation of concussion treatment and return-to-play guidelines that look to neuroscience to determine to proper amount of time. The NFL must also act as a financial sponsor to youth leagues around the country to make sure young players have adequate equipment to physically protect them, and to make sure that the proper testing measures, such as ImpACT Tests, can be put in place to accurately diagnose concussions. This fiscal assistance will also lead to the edification of coaches, parents, players, and healthcare providers, to guarantee everyone involved in youth sports has a working knowledge of brain injuries, and can identify symptoms that concussed athletes may display. With NFL sponsorship, lower levels of play would also be able to keep some sort of medical personality on field at any game or competition. The process of diagnosing and treating a possible concussion can start

⁵⁷ Id.

almost immediately, as opposed to waiting a day or week, or finding out about the first trauma too late.

The next step that must be taken is to change the attitudes and behaviors of all players, from the youth level up through the professionals, so athletes at each level understands the seriousness of concussions, and will take care to report injuries as they happen. Youth players need to give up the machismo and hero complex and be open about any symptoms that arise after tackles or intense contact. Professional football players must be shown a cost-benefit analysis that encourages them to embrace post-concussion treatment instead of hiding or downplaying symptoms. This can be achieved by facilitating the workers' compensation process when head injuries are involved so the players feel slightly more at ease missing a game or two. Non-monetary incentives from either the team or the league would encourage and increase "whistle-blowing," and could be anything from a paid vacation in the offseason to additional tickets or perks for friends and family.

The NFL has already started the next prong of the attack: promoting fair play in an attempt to lessen the number of concussion incidents throughout football. With harsh penalties punishing illegal hits, players are already on the lookout to avoid what could constitute "dirty" play, and are setting an example for younger players to follow. The NCAA should institute small (one game) suspensions for similar hits to further promote the message.

Regardless of what legislation does, the medical field needs to discuss the possibilities of a uniform RTP guideline that all medical professionals in the country—whether they are doctors, trainers, or other licensed healthcare

professionals—can follow and advice athletes to follow. If every doctor and professional in the country is prescribing the same RTP regimen, the onus will be taken off of legislation, and a potential Constitutional battle between federal and state governments can be avoided. Any RTP regulation that is decided upon needs to emphasize the need for individual treatment based on the evidence of symptoms or result of any testing that is undertaken. If this standard is adopted, most doctors should eliminate any liability they may have in the face of negligence claims; a doctor doing what any reasonable doctor in his position would do will likely not be found guilty of negligence. The Zurich Consensus Statement appears to have started this process already, with implementation of the policy being the next clear stepping stone.

The court systems do not require significant changes, if any, to improve the situation. According to the current status quo, the principles of negligence and assumption of risk are fairly extensive, and cover most of the cases that will arise. The power of the doctrine of qualified immunity should be minimized in these cases because it just allows for public schools and their agents (coaches or trainers) to hide behind a protective veil, which can have the affect of reducing the level of care they may offer. With standard RTP guidelines provided by medical professional, and state laws that mandated the clearance of that medical professional, this is another issue that could be eliminated from the process.

Many states' youth sports-concussion laws already include the necessary parts, but a mandatory removal from play, education protocols, and clearance from a medical professional specially trained in brain injury or concussion is the absolute

minimum of what the standard law should look like. With NFL supervision and backing, such a template can be disseminated and enforced in every state.

The largest problem that these ideas face is that actual policing and enforcement of the policies. Government and regulatory bodies are too few and far between to fully cover every region or corner of the country. That is where school boards and athletic associations can be useful by micromanaging the effected concussion procedures at a local level. With everyone “lending a hand,” enforcing any regulations is not as daunting of a task, and can be handled thoroughly.

V. CONCLUSION

At every level of competitive football, from Pop Warner to the NFL, concussions have become a significant problem in need of a answer. Between the costs of testing before and after the injury, the difficulty of getting athletes to be candid and report an actual trauma, and the question of how to deal with an injury that is unique to each individual, an uphill battle is underway in an attempt to find an elusive perfect solution that may not exist. Constitutional issues of the separation of power between state and federal governments provide a formidable barrier to any uniform legislation or regulation that may improve the status quo. Currently, states like Idaho or California can provide less inclusive rules that are inadequate, and fail to fully and completely address the situation. Another difficulty is the complication of trying to educate coaches, parents, athletes, and other involved individuals on an injury that is still relatively unknown. As little as specialists know about brain function, concussions do not automatically trigger visible anomalies in imaging technologies, and can range in severity anywhere from a light headache to death.

Regardless of the lack of information, ample studies have shown that concussions can lead to serious complications with lasting effect. Even the slightest brain injury can lead to Alzheimer's, depression, or any number of other debilitating diseases and physical ailments. Law and regulation of sports-related concussion treatments must observe advancements in neuroscience and neuropsychology, because the greatest advancements in regulation will only come from a more complete knowledge of the injury. With the sheer number of athletes that participate in contact sports, concussion and baseline testing should become as common and regular as a flu shot, so that any incidental head injuries can be discovered to avoid the ramifications of second impact syndrome. Youths may be more susceptible to concussions at their age with the development of the brain still in progress, but multiple impacts at any age is just as damaging and must be avoided. Law must use neuroscience findings as a tool to develop better sports-related concussion regulations. These changes may come at the state or federal government level, or at an administrative level of local sports organizations and institutions.

APPENDIX A

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