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It Is a Mindboggling Dilemma: To Play or Not to Play Youth Sports Due to Concussion Risks?

Dr. Tracey B. Carter

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It Is a Mindboggling Dilemma: To Play or Not to Play Youth Sports Due to Concussion Risks?

Cover Page Footnote

Associate Professor of Law and Director of Academic Success, Belmont University College of Law; B.A., Virginia Intermont College; J.D., University of Tennessee College of Law; M.P.A. and Ed.D., Tennessee State University. The author thanks Kate Sullivan, Frank Russo, Thomas Gentry, and *The Catholic University Law Review* for their assistance. She also expresses special thanks to her Belmont University College of Law Research Assistant Stephanie Vlasits and to her friends and family for their support.

IT IS A MINDBOGGLING DILEMMA: TO PLAY OR NOT TO PLAY YOUTH SPORTS DUE TO CONCUSSION RISKS?

By Dr. Tracey B. Carter⁺

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⁺ Associate Professor of Law and Director of Academic Success, Belmont University College of Law; B.A., Virginia Intermont College; J.D., University of Tennessee College of Law; M.P.A. and Ed.D., Tennessee State University. The author thanks Kate Sullivan, Frank Russo, Thomas Gentry, and *The Catholic University Law Review* for their assistance. She also expresses special thanks to her Belmont University College of Law Research Assistant Stephanie Vlasits and to her friends and family for their support.

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With all of the media attention surrounding the April 2015 National Football League (NFL) concussion lawsuit settlement,¹ with the release of the movie *Concussion* in December 2015,² with the NFL's top health and safety officer's admission in March 2016 of a link between football-related head trauma and the devastating brain disease known as chronic traumatic encephalopathy (CTE),³ as well as the highly publicized Pop Warner concussion-related settlement in March 2016,⁴ it is no surprise that parents and guardians of youth athletes are wondering, "Should I let my child play youth sports?"

*Easterling v. National Football League*⁵ was the first federal class action lawsuit filed in the United States against the NFL in August 2011.⁶ In the Complaint, Plaintiffs alleged "that the NFL concealed the long-term effects of on-field head injury and failed to warn players of the risks of harm from repeated concussions."⁷ Plaintiff Charles "Ray" Easterling, who was a starting safety for the Atlanta Falcons in the 1970s, committed suicide in April 2012. Easterling's brain autopsy showed that "he suffered from moderately severe chronic traumatic encephalopathy [CTE]."⁸

1. See, e.g., Steve Almasy & Jill Martin, *Judge Approves NFL Concussion Lawsuit Settlement*, CNN (Apr. 22, 2015, 8:36 PM), <http://www.cnn.com/2015/04/22/us/nfl-concussion-lawsuit-settlement/index.html>.

2. See Jenny Vrentas, *The NFL's "Concussion" Problem*, SPORTS ILLUSTRATED: THE MMQB (Dec. 23, 2015), <http://mmqb.si.com/mmqb/2015/12/23/nfl-reaction-concussion-movie-will-smith-bennet-omalu>.

3. Steve Fainaru, *NFL Acknowledges, for First Time, Link Between Football, Brain Disease*, ESPN (Mar. 15, 2016, 11:35 PM), http://espn.com/espn/otl/story/_/id/14972296/top-nfl-official-acknowledges-link-football-related-head-trauma-cte-first.

4. Josh Kosman, *Youth Football May Never Be the Same After This*, N.Y. POST (Mar. 8, 2016, 11:06 AM), <http://nypost.com/2016/03/08/pop-warner-football-settles-concussion-lawsuit/>.

5. Class Action Complaint, *Easterling v. Nat'l Football League, Inc.*, No. 2:11-CV-05209-AB (E.D. Pa. Aug. 17, 2011), ECF No. 1 [hereinafter *Easterling* Complaint].

6. See Paul D. Anderson, *Court Documents*, NFL CONCUSSION LITIG., http://nflconcuSSIONlitigation.com/?page_id=18 (last visited Sept. 20, 2015); see also Tracey B. Carter, *From Youth Sports to Collegiate Athletics to Professional Leagues: Is There Really "Informed Consent" by Athletes Regarding Sports-Related Concussions?*, 84 UMKC L. REV. 331, 359 (2015); Sheila B. Scheuerman, *The NFL Concussion Litigation: A Critical Assessment of Class Certification*, 8 FLA. INT'L U. L. REV. 81, 81 (2012).

7. Scheuerman, *supra* note 6, at 81 (discussing *Easterling* Complaint, *supra* note 5).

8. *Id.* at 81 n.4.

Following the *Easterling* lawsuit and due to the high volume of lawsuits filed by other former NFL players, the lawsuits were consolidated in June 2012 in a Pennsylvania federal district court into the master class action lawsuit *In re National Football League Players' Concussion Injury Litigation*.⁹ The more than 4,500 former NFL players eventually settled their class action lawsuit against the NFL on April 22, 2015,¹⁰ with the NFL expected to pay approximately \$1 billion.¹¹ Despite filing for appeals, the U.S. Supreme Court's denial of review on December 12, 2016 effectively upheld the NFL's settlement agreement, and as a result, retired players and their families began registering for settlement proceeds on February 6, 2017.¹²

The movie *Concussion*, released on December 25, 2015, and starring actor Will Smith, helped keep sports-related concussions in the forefront as a hot-button issue during the last few years.¹³ Marketed as "a dramatic thriller based on the incredible true David vs. Goliath story of American immigrant Dr. Bennet Omalu,"¹⁴ the movie details the NFL's resistance to the findings of Dr. Bennet Omalu, the Nigerian-born forensic neuropathologist who discovered CTE while performing an autopsy on former NFL Pittsburgh Steelers player Mike Webster.¹⁵

9. *In re NFL Players' Concussion Injury Litig.*, 307 F.R.D. 351, 361 (E.D. Pa. 2015) ("Since consolidation, about 5,000 players . . . have filed over 300 substantially similar lawsuits against the NFL Parties, all of which have been transferred to this Court.").

10. Almasy & Martin, *supra* note 1 ("More than 200 former players opted out of the settlement to the lawsuit . . . They can sue the NFL separately.").

11. Associated Press, *NFL Players Win \$1bn Concussion Lawsuit that Could See Former Stars Win \$190,000 Each in Damages*, DAILYMAIL.COM (Apr. 22, 2015, 7:39 PM), <http://www.dailymail.co.uk/news/article-3051085/Judge-OKs-65-year-deal-NFL-concussions-cost-1B.html>; see Carter, *supra* note 6, at 368 ("[The NFL's] total anticipated payouts over 65 years including interest and payment of attorney's fees is approximately \$1 billion.").

12. Steven M. Sellers, *High Court Denies Review of NFL Concussion Settlement*, 84 U.S. L. WK. 804, 804 (Dec. 12, 2016) (noting that by denying review of two recent cases, the U.S. Supreme Court left "intact a . . . Third Circuit decision upholding the settlement as fair and reasonable. The settlement creates a compensation plan for more than 20,000 former National Football League players already diagnosed with chronic traumatic encephalopathy or other concussion-related brain diseases, worth up to \$4 million each."); see also Paul D. Anderson, *NFL Concussion Settlement—Registration Opens February 6*, NFL CONCUSSION LITIG. (Jan. 26, 2017), <http://nflconcuSSIONlitigation.com/?p=1940> (noting that "once registration opens," eligible beneficiaries "must register on or before August 7, 2017 to participate in the settlement and be eligible for any benefits.").

13. Vrentas, *supra* note 2; accord Doctor Behind "Concussion" Wanted to "Enhance the Lives" of Football Players, NPR (Dec. 27, 2015, 5:16 PM), <https://www.npr.org/2015/12/27/460870529/doctor-behind-concussion-wanted-to-enhance-the-lives-of-football-players> [hereinafter *Doctor Behind "Concussion"*] (advertising the interview with Dr. Bennet Omalu and stating that "[t]he new Will Smith movie *Concussion* has put the spotlight back on the dangers of football.").

14. *About Concussion*, SONY PICTURES, <http://www.sonypictures.com/movies/concussion/> (last visited Sept. 6, 2017) ("Omalu's emotional quest puts him at dangerous odds with one of the most powerful—and beloved—institutions in the world.").

15. *Doctor Behind "Concussion" Wanted to "Enhance the Lives" of Football Players*, NPR: ALL THINGS CONSIDERED (Dec. 27, 2015, 5:16 PM), <https://www.npr.org/templates/transcript/tran>

Dr. Omalu found that repetitive blows to the head over a period of time “cause permanent brain damage,” which “may take weeks, months, years, decades, sometimes up to 40 years later . . . to manifest with symptoms like mood disorders, major depression, suicidal attempts, [and] disinhibition.”¹⁶

Initially, Dr. Omalu thought his CTE research would not only be positively received, but would “enhance football and enhance the lives and the safety and health of the players.”¹⁷ However, in an interview with National Public Radio (NPR) in December of 2015, Dr. Omalu recalled:

I got a call from one of the editors of the journal. I remember that day vividly. The NFL made a very calculated, mean attempt to decapitate me professionally. If your scientific paper is retracted, you are finished in that profession. I could have as well gone back to Nigeria to become a massage therapist.¹⁸

Then, when asked if he ever considered retracting his research, Dr. Omalu responded:

No. I had spent hundreds of hours researching this subject, and I had met the families of the sufferers of this disease. They were suffering in silence. They were suffering in obscurity. And it offended my sense of America. I ran away from corruption in Nigeria because my country, Nigeria, is one of the ten most corrupt countries in the world. To come here, what I was seeing in this place, in my opinion, I thought was un-American.¹⁹

Ultimately, Dr. Omalu involved himself in the film’s production process to “ensure that it was historically accurate,” and was “happy” with *Concussion*’s portrayal of his story.²⁰

Less than three months later, on March 14, 2016, responding to questions from the U.S. House of Representatives’ Committee on Energy and Commerce, NFL Senior Vice President for Health and Safety Jeff Miller (their chief health and safety officer) acknowledged, for the first time, that a link existed between concussions and CTE.²¹ This was “the first time a senior league official has conceded football’s connection to the devastating brain disease.”²² The

script.php?storyId=460870529 [hereinafter All Thing Considered Transcript] (“[Webster] was called Iron Mike. When he died of cardiac arrest back in 2002, it made national headlines because here’s a guy who had had multiple Super Bowl rings, and then at the time of his death, he was living in his truck. He had this history of erratic behavior. He had just had a very sad end.”).

16. *Id.*

17. *Id.*

18. *Id.*

19. *Id.*

20. *Doctor Behind “Concussion”*, *supra* note 13.

21. Fainaru, *supra* note 3.

22. *Id.* (“[Mr. Miller] said he based his assessment on the work of Dr. Ann McKee, a Boston University neuropathologist who has diagnosed CTE in the brains of 176 people, including those of 90 of 94 former NFL players.”).

following day, the NFL released a statement saying that Mr. Miller's comments "accurately reflected the view of the NFL."²³

Additionally, the March 2016 settlement of Pop Warner, the largest and oldest youth football program in the United States, was highly publicized because it linked the suicide of a twenty-five-year-old former youth football player to repeated concussions and CTE.²⁴ The details surrounding that case have kept discussions about youth and sports-related traumatic brain injuries in the forefront. Such discussions are not going away anytime soon, and with all these events happening in the last few years, it is not surprising that parents and guardians of youth athletes are reevaluating their decisions and wondering, "Should I let my child play youth sports?"

This Article addresses whether parents and guardians of young children (eighteen and under) should let them play in youth sports. Part I includes different perspectives on the pros, barriers, and cons of youth participating in sports and provides statistics related to the participation rates of youth in sports. Part I also provides information regarding what impact, if any, (1) the NFL concussion lawsuits, (2) the 2015 NFL concussion lawsuit settlement, and (3) the movie *Concussion* have had on participation rates in youth sports, especially football, in recent years. Part II includes statistics regarding the prevalence of youth sports-related concussions and research on whether there are any gender differences related to sports-related concussions.

Part III discusses various lawsuits that have been filed within the past three to five years in the United States related to youth sports-related concussions. Furthermore, Part III discusses youth sports concussion laws that have been proposed and passed in the United States over the last several years and provides a comprehensive overview of state youth concussion laws in effect in 2016, highlights the successes and barriers to effectively implementing youth sports concussion laws, and analyzes whether current laws are effectively addressing youth sports-related concussions to provide prevention and increased protection for youth athletes. Part IV summarizes and provides a comprehensive analysis of the *Pop Warner* settlement in March 2016, discusses the potential impact of the settlement, and analyzes whether major youth sports organizations need to reevaluate their current concussion protocols as well as whether state legislatures need to review and update their concussion laws based upon the latest research and the legal landscape surrounding sports-related concussions. This Article concludes with recommendations for youth athletes, parents, coaches, youth leagues, medical professionals, and legislatures regarding some of the best ways

23. *Id.*

24. *Pop Warner Football Settles Wisconsin Head Injury Lawsuit*, INS. J. (Mar. 9, 2016), www.insurancejournal.com/news/midwest/2016/03/09/401427.htm [hereinafter *Insurance Journal Report*]; Kosman, *supra* note 4; accord Michael Martinez, *Pop Warner settles concussion suit filed by former player who committed suicide*, CNN (Mar. 9, 2016, 3:54 PM), www.cnn.com/2016/03/09/us/pop-warner-concussion-lawsuit-settlement-player-suicide/.

to make youth sports safer as well as assist youth athletes with successfully returning to learn and to play should they sustain a sports-related concussion.

I. DIFFERENT PERSPECTIVES ON YOUTH PARTICIPATING IN SPORTS AND PARTICIPATION RATES OF YOUTH IN SPORTS

A. *Different Perspectives on Youth Participating in Sports*

Research shows that “[p]articipation in sports by children and adolescents is associated with a range of documented physical, emotional, social, educational, and other benefits that can last into adulthood.”²⁵ In addition, “[c]ourts also consistently have expressed the public policy concern of preserving the nature and benefits of sports.”²⁶ However, recent research shows that an increasing number of “young people [are] opt[ing] out of a sustained experience, while others are locked out due to a lack of resources or access to community programs that meet their needs.”²⁷

There are different perspectives on youth participating in sports. Some people see the benefits of children and adolescents participating in sports. Yet, others cite the barriers to participating in sports that some youth face. Then, there are those who see the negative impact of youth participating in sports.²⁸ A brief summary of these varying viewpoints follows.

1. *Pros of Youth Participating in Sports*

Various benefits have been cited for youth participating in sports. These include physical/health benefits, educational and career benefits, as well as social and psychological benefits.

a. *Physical/Health Benefits*

Engaging in physical activity on a regular basis, such as by participating in youth sports, has many health benefits, “including helping build and maintain healthy bones, muscles, and joints; helping control weight and reduce fat; and preventing or delaying the development of high blood pressure.”²⁹ In addition, researchers have identified the following positive physical impacts of youth sports: physical activity is increased; fitness is enhanced; the physical, emotional, and health benefits are lifelong; the risk of obesity is decreased; the

25. *Facts: Sports Activity and Children*, THE ASPEN INST., <http://www.aspenprojectplay.org/the-facts> (last visited Sept. 3, 2017).

26. 22 RICHARD C. WEBB, *SOUTH CAROLINA JURISPRUDENCE: SPORTS LAW* § 35 (2017).

27. *Facts: Sports Activity and Children*, *supra* note 25.

28. *Id.*

29. *Id.*

development of chronic disease is reduced; and overall health and motor skills are improved.³⁰

b. Educational and Career Benefits

Childhood sports participation also has educational and career benefits. For example, a 2014 study that followed children from kindergarten through the fourth grade showed that “[o]rganized sports activity helps children develop and improve cognitive skills.”³¹ Moreover, a 2012 study from the U.S. Government Accountability Office found that physical activity was generally associated with improved academic achievement.³² Students who engaged in regular physical activity not only showed an improvement in grades and standardized test scores, but showed that the activity “affect[ed] attitudes and academic behavior, including enhanced concentration, attention, and improved classroom behavior.”³³

Moreover, research shows that girls and young women participating in sports “benefit from greater academic success, responsible social behaviors, a multitude of health benefits, and increased personal skills.”³⁴ As a result, these students “have higher grades, are less likely to drop out, and have higher graduation rates than their non-athletic peers.”³⁵ Additionally, high school athletes of both genders “are more likely than non-athletes to attend college and get degrees.”³⁶

The benefits of sports participation also extend beyond college and into the workplace. In fact, one global study found that, of the 400 female corporate executives surveyed, ninety-four percent participated in sports, either at the university level or younger, and sixty-one percent contributed their participation in athletics to their career success.³⁷

30. See Donna L. Merkel, *Youth Sport: Positive and Negative Impact on Young Athletes*, 4 J. SPORTS MED. 151, 157 tbl.3 (2013), <http://dx.doi.org/10.2147/OAJSM.S33556>.

31. *Facts: Sports Activity and Children*, *supra* note 25 (citing Geneviève Piché et al., *Associations Between Extracurricular Activity and Self-Regulation: A Longitudinal Study from 5 to 10 Years of Age*, 30 AM. J. HEALTH PROMOTION e32 (2015)).

32. *Id.* (citing U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-12-350, K-12 EDUCATION: SCHOOL-BASED PHYSICAL EDUCATION AND SPORTS PROGRAMS (2012)).

33. *Id.*

34. Marcia D. Greenberger & Neena K. Chaudhry, *Worth Fighting for: Thirty-Five Years of Title IX Advocacy in the Courts, Congress and the Federal Agencies*, 55 CLEV. ST. L. REV. 491, 492 (2007).

35. *Id.*

36. *Facts: Sports Activity and Children*, *supra* note 25 (citing U.S. DEP'T OF EDUC., NCES-2005-303, STATISTICS IN BRIEF: WHAT IS THE STATUS OF HIGH SCHOOL ATHLETES 8 YEARS AFTER THEIR SENIOR YEAR? (2005)).

37. EY WOMEN ATHLETICS BUS. NETWORK & ESPNW, WHERE WILL YOU FIND YOUR NEXT LEADER 6 (2015).

c. *Social and Psychological Benefits*

Participation in sports by children and adolescents also has social and psychological benefits. In fact, numerous studies support “the premise that physical activity, and sports in particular, can positively affect aspects of personal development among young people, such as self-esteem, goal-setting, and leadership.”³⁸ One study by the Women’s Sports Foundation found that girls who participated in high school athletics were “less likely to be sexually active, to use drugs, and to suffer from depression” than their non-athlete peers.³⁹

Moreover, there is a correlation between exercising regularly and the mental health among students in general as they become teenagers.⁴⁰ Studies show that students who exercised on a near-daily basis were significantly less likely to report feeling “sad for two weeks or more in the past 12 months,” have suicidal ideation, or attempted suicide in the past year than students who reported exercising less than once a week.⁴¹

In addition, others have also cited the positive social and psychological impacts of youth sports. The positive social effects of youth sports include that: social skills are enhanced; character is improved; life lessons are provided; positive social behaviors are improved; time management skills are enhanced; academic achievement is improved; and passion and goal setting can be developed.⁴² On the other hand, the positive psychological effects of youth sports include that: fundamental motor skills are developed; self-concept/self-worth is improved; positive behavior increases in teens; and depression, suicidal thoughts, and high-risk behaviors are all decreased.⁴³

2. *Barriers to Youth Participating in Sports*

Just like various benefits have been cited for youth participating in sports, barriers have also been cited to some youth participating in sports. Some of these barriers include costs, equity/access, the fading of casual sports, the lack

38. *Facts: Sports Activity and Children*, *supra* note 25 (citing U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-12-350, K-12 EDUCATION: SCHOOL-BASED PHYSICAL EDUCATION AND SPORTS PROGRAMS (2012)) (“However, evidence indicates that the quality of coaching is a key factor in maximizing positive effects.”).

39. *Id.* (citing WOMEN’S SPORTS FOUND., *HER LIFE DEPENDS ON IT: SPORT, PHYSICAL ACTIVITY AND THE HEALTH AND WELL-BEING OF AMERICAN GIRLS* (2004)).

40. *Id.*

41. In 2015, the Journal of American Academy of Child and Adolescent Psychiatry reported: Among students who exercised 6 to 7 days a week, 25.1% felt sad for two weeks or more in the past 12 months, compared to 35.7% of students who reported exercising on 0 to 1 day. Of students who exercised 6-7 days, 15% reported suicidal ideation, and 6.4% reported a suicide attempt in the past year, compared to 24.6% and 10.3% of students who exercised 0-1 day, respectively.

Id. (citing Jeremy Sibold et al., *Physical Activity, Sadness, and Suicidality in Bullied U.S. Adolescents*, 54 J. AM. ACAD. CHILD & ADOLESCENT PSYCHIATRY 808 (2015)).

42. See Merkel, *supra* note 30, at 157 tbl.3.

43. *Id.*

of access to recreational spaces, sports injuries, and competition with technology.

a. Costs

Family income has been shown to affect childhood sports participation rates.⁴⁴ Today, significant resources are required to meet the needs of developing young athletes seeking to play competitive sports in America's evolving and complex youth sports system.⁴⁵ "[T]he rise of grade school travel teams and elite sport training options that are not accessible to many lower-income kids" creates immediate and significant barriers to participation.⁴⁶

Statistics related to sports participation rates and family income reveals the following information. In the United States, only twenty percent of households have annual incomes of \$100,000 or more, yet thirty-three percent of households with children participating in sports report annual incomes of \$100,000 or more.⁴⁷ Parents whose children participate in travel teams spend an annual average of \$2,266 to have their children participate, while families with children participating in sports at the elite levels may spend more than \$20,000 annually.⁴⁸ According to a 2015 survey, thirty-two percent of households earning annual incomes of less than \$50,000 reported that the cost of sports would "make it difficult for their child to continue participating."⁴⁹ In comparison, only sixteen percent of families with annual incomes of \$50,000 or more reported the same difficulty.⁵⁰

b. Equity/Access

Besides family income, equity/access also has an impact on youth participating in sports. Researchers found "a relative lack of access for minority children" to participate in sports.⁵¹ In general, the rate of participation in sports among White children "exceed[s] that of African-Americans, Hispanics, and Asian kids."⁵² It bears noting, however, that "data on other historically marginalized groups such as Native-American children are not even reported in governmentally funded studies that track physical activity in youth."⁵³

44. *Id.* at 155–56.

45. MICHAEL SAGAS & GEORGE B. CUNNINGHAM, UNIV. OF FLA. SPORT POLICY & RESEARCH COLLABORATIVE, SPORT PARTICIPATION RATES AMONG UNDERSERVED AMERICAN YOUTH 2 (2014).

46. *Facts: Sports Activity and Children*, *supra* note 25.

47. Meredith Kessler, *Physical Activity, the Lost Art?*, PLAY2HEALTH (Mar. 5, 2017), <https://www.play2health.com/physical-activity-the-lost-art/>.

48. *Id.*

49. *Facts: Sports Activity and Children*, *supra* note 25.

50. *Id.*

51. *Id.*

52. *Id.* (citing SAGAS & CUNNINGHAM, *supra* note 45.).

53. *Id.*

Geography also has an impact on access to sports. For example, one 2012 study reported that only 24.6% of eighth graders in low socio-economic schools, meaning those with the highest percentage of students eligible to receive free or reduced-price lunches, participated in sports.⁵⁴ In contrast, 36.1% of eighth graders in high socio-economic schools played sports.⁵⁵ Additionally, children residing in Northeastern and Midwestern states generally enjoy greater participation opportunities than their counterparts in Southern and Western states, with Georgia reporting the lowest in participation rates for girls and Florida the lowest for boys.⁵⁶

c. The Fading of Casual Sports

Participation in casual sports such as “sandlot or pickup ball, a form of play that organically promoted innovation and fitness among generations of Americans,” is disappearing.⁵⁷ A joint study by Harvard University, NPR, and the Robert Wood Johnson Foundation showed that of the families with children participating in an organized sport, over forty percent reported that their children participated in that sport year-round.⁵⁸ However, casual sports or “free play” often yields more physical activity than organized sports. One study, for example, showed that for forty-three percent of the time children spent in sports practice, they were inactive.⁵⁹

d. The Lack of Access to Recreational Spaces

Another barrier to some youth participating in sports is the lack of access to recreational spaces such as parks. Research shows that of the vigorous exercises performed in the United States, half of it occurs in public parks.⁶⁰ In fact, those living closer to parks reported better mental health. Specifically, studies show that spending time in green outdoor spaces enhances focus and concentration, and children diagnosed with attention deficit hyperactivity disorder (ADHD)

54. N. COLABIANCHI ET AL., ROBERT WOOD JOHNSON FOUND., SPORTS PARTICIPATION IN SECONDARY SCHOOLS: RESOURCES AVAILABLE AND INEQUALITIES IN PARTICIPATION 3 fig.1 (2012), <https://www.rwjf.org/en/library/research/2012/10/sports-participation-in-secondary-schools.html>.

55. *Id.*

56. *Facts: Sports Activity and Children*, *supra* note 25 (citing WOMEN’S SPORTS FOUND., HER LIFE DEPENDS ON IT: SPORT, PHYSICAL ACTIVITY AND THE HEALTH AND WELL-BEING OF AMERICAN GIRLS (2004)) (reporting a participation rate of 22% for girls in Georgia and 30% for boys in Florida).

57. *Id.*

58. NPR, ROBERT WOOD JOHNSON FOUND. & HARVARD T.H. CHAN SCH. OF PUB. HEALTH, SPORTS AND HEALTH IN AMERICA 15 (2015) [hereinafter SPORTS AND HEALTH IN AMERICA].

59. *Facts: Sports Activity and Children*, *supra* note 25 (citing Desiree Leek et al., *Physical Activity During Youth Sport Practices*, 165 ARCHIVES PEDIATRIC & ADOLESCENT MED. 294, 298 (2011)).

60. *Id.*

report milder symptoms when playing outside in natural settings.⁶¹ Unfortunately, however, some cities report that as many as two-thirds of children live without access to a public park, with the greatest deficits found in predominantly African American and Hispanic neighborhoods.⁶²

e. Sports Injuries

Other barriers to youth participating in sports are sports-related injuries.⁶³ Research indicates that high school athletics results in approximately two million concussions and other injuries each year; that translates into 500,000 visits to the doctor and 30,000 admissions to the hospital annually.⁶⁴ Furthermore, children under the age of fourteen receive medical treatment for sports injuries at a rate of more than 3.5 million children annually.⁶⁵ Yet, the Centers for Disease Control (CDC) reports that more than half of all sports injuries are preventable, with overuse injuries constituting nearly half of all sports injuries among middle and high school students.⁶⁶

f. Competition with Technology

In addition to the above-noted barriers, an additional barrier cited to some youth participating in sports is competition with technology.⁶⁷ It has been stated that children are spending an increasingly significant amount of time “in front of screens (mobile phones, computers, video games, TV), with products that have gotten better at getting and keeping their attention.”⁶⁸ Consequently, even for those youth who are engaged in sports-related activities, “these sedentary hobbies are competing interests in getting kids active through sports, according to parents.”⁶⁹

3. Cons of Youth Participating in Sports

Like the various benefits for youth participating in sports, the negative impacts of youth participating in sports have been cited by others.⁷⁰ Sports-related injuries, attrition rates among youth athletes, and certain programs with an overemphasis on winning, although not the only issues, are among the

61. *Id.*

62. *Id.*

63. *Id.*

64. Am. Orthopaedic Soc’y for Sports Med., *Youth Sports Injuries Statistics*, STOPSPORTSINJURIES.ORG, <http://www.stopsportsinjuries.org/STOP/Resources/Statistics/STOP/Resources/Statistics.as> (last visited Dec. 14, 2017).

65. *Id.*

66. *Id.*

67. *Facts: Sports Activity and Children*, *supra* note 25.

68. *Id.*

69. *Id.* (citing SPORTS AND HEALTH IN AMERICA, *supra* note 58, at 15).

70. *See* Merkel, *supra* note 30, at 154.

problems encountered in youth sports.⁷¹ In fact, negative physical/health, psychological, and social impacts of youth participating in sports have also been identified.

a. Physical/Health Impact

i. Sports-Related Injuries

As is common knowledge and as already stated above,⁷² one of the realities of engaging in any type of sporting activity is the risk of an injury. However, sports-related injuries have increased as youth participation in sports has grown, causing children and young adults aged 5–24 years old to make 2.6 million emergency room visits annually.⁷³ Overall, the injuries sustained by children and adolescents—depending on the stage of physical growth—are different from those injuries sustained by adults. For example, children have an increased risk of fractures throughout the bone and growth plate because their bones are weaker than their ligaments and tendons.⁷⁴

ii. Other Physical Well-Being Concerns

In addition to injuries, researchers have noted the following negative aspects of youth sports that can impact the physical well-being of young athletes: (1) coaches are often untrained; (2) safety precautions tend to be inconsistent; and (3) the policy and practices are not necessarily based on sports science.⁷⁵ In fact, studies show that of the 2–4 million individuals coaching “little league” teams, less than twenty percent have received formal training, and for individuals coaching high school sports, less than eight percent have received formal training.⁷⁶ Board certified sports clinical specialist Donna Merkel best articulated the issue by saying:

Unfortunately, the framework which provides guidelines, rules, and regulations for youth sports has been established with very little scientific evidence. Even basic commonsense parameters for sports safety are not implemented or followed. Vague descriptions of age of participants, hours and structure of practice, and rules for competition vary between sports.⁷⁷

71. *Id.* at 151, 154.

72. *See* discussion *supra* Section I.A.2.e.

73. Merkel, *supra* note 30, at 154.

74. *Id.*

75. *Id.* at 157 tbl.3.

76. *Id.* at 151.

77. *Id.* (footnotes omitted).

b. Psychological and Social Impact

Researchers have also noted the following negative effects that youth sports can have on the psychological well-being of young athletes: (1) increased stress to meet the demands of becoming an elite player; (2) high attrition rates; (3) excessive competitiveness; and (4) unrealistic expectations to achieving academic and professional aspirations in collegiate and professional sports.⁷⁸ Over the past twenty years, there has been a noticeable increase in specialization occurring in youth sports, with an increasing number of young athletes participating in a single sport at younger ages, and doing so continually throughout the year with minimal breaks or rest.⁷⁹ The sustained and continuous dedication to a single sport has been linked to a greater “risk of sport-related injuries, peer isolation, burnout, psychosocial problems, and attrition.”⁸⁰

Focusing on rates of attrition, an estimated thirty-five percent of youth athletes quit participation in sports annually, and information regarding whether these children return to sports remains unknown.⁸¹ Moreover, the highest attrition rates occur during adolescence, when kids are most susceptible to outside influences.⁸² Once children reach fifteen years of age, an estimated seventy to eighty percent of them no longer participate in sports.⁸³

In addition, the stress of trying to become an “elite player,” overbearing competitiveness, and unreasonable expectations to achieving college scholarships and eventually a career as a professional athlete can have a negative impact on youth sports.⁸⁴ Research shows that despite the challenging odds, many parents dream of their child becoming a professional athlete.⁸⁵ Specifically, a June 2015 study showed that twenty-six percent of parents with a child playing high school athletics hope that their child continues-on to play sports professionally.⁸⁶

Additionally, when very young children participate in athletics, the goals “are to be active, have fun, and to have a positive sport experience through learning and practice of fundamental skills.”⁸⁷ Indeed, in a survey of young athletes, “having fun” was the most cited reason for why they liked playing sports; the parents, on the other hand, cited wanting to “win” as the reason their children liked playing sports.⁸⁸ According to a study by the Institution for the Study of Youth Sports, the importance of winning from the child’s perspective varies with

78. *Id.* at 157 tbl.3.

79. *Id.* at 155.

80. *Id.*

81. *Id.* at 151.

82. *Id.*

83. *Id.*

84. *See Id.* at 157 tbl.3.

85. *See SPORTS AND HEALTH IN AMERICA*, *supra* note 58, at 17.

86. *Id.*

87. Merkel, *supra* note 30, at 152.

88. *Id.*

gender and age; however, most younger children rank fairness, participation, and development of skills above winning.⁸⁹ Therefore, there appears to be a difference among parent and youths' perspectives as to why youth are participating in sports.

Moreover, high expectations to receive college scholarships and unrealistic professional athletic careers may also have a negative impact on youth sports and participation rates. Indeed, "parents, coaches, neighbors, society, and colleges" create pressure for younger children to specialize in a sport so that they may "maximize athletic skills for future social, financial, and educational rewards."⁹⁰ Yet, despite these efforts to specialize early, ninety-eight percent of young athletes never reach the highest level of success in their sport.⁹¹

Nonetheless, there are families that "sacrifice vacations, savings, and normal family structure" in pursuit of their child's sporting endeavors.⁹² Even though most athletes fail to receive enough scholarship money to cover tuition, many parents still think that excellence in sports will lead to scholarships capable of paying future college expenses. The reality is, however, that in most cases, "the financial investment in private lessons or coaches, sports camps, participation in elite teams, showcase tournaments, and travel expenses over the middle and high school years exceeds the value of the college scholarship."⁹³

For those parents with ambitions beyond college scholarships, "anticipating that a young athlete who demonstrates elite skill potential will achieve professional or Olympic status" is even more unrealistic.⁹⁴ For example, only an estimated 1 in 6,000 high school football players will ever play in the National Football League; similarly regarding high school basketball players, only 2–3 in 10,000 will ever play for the National Basketball Association.⁹⁵ Moreover, the odds of achieving elite status in adulthood are even slimmer: less than 20% for junior elite athletes, and a dismal 0.2% for high school athletes.⁹⁶

In addition to psychological concerns, researchers have also noted the following negative impacts on the social aspects of youth sports: (1) proper safety equipment, venues, and equal participation is limited by inconsistent funding; (2) participation is limited by the expense of the sport; and (3)

89. *Id.*

90. *Id.* at 155.

91. *Id.*

92. *Id.*

93. *Id.* Donna Merkel noted:

Less than 4% of high school athletes who participate in boys' soccer, girls' soccer, football, and basketball play for a division I or division II school. Only one of 100 high school athletes will receive a division I athletic scholarship. The average scholarship awarded in 2003–2004 for a division I or II school was \$10,409, which covered about half the cost of a state school and 20% of the cost of private school attendance.

Id. at 155–56 (footnotes omitted).

94. *Id.* at 156.

95. *Id.*

96. *Id.*

inequality across socioeconomic, ethnic, geographic, and gender groups is pervasive.⁹⁷ These concerns are also consistent with the barriers to youth sports participation previously cited above in this Article.⁹⁸

B. Participation Rates of Youth in Sports

After considering the physical, psychological, and cognitive development of children, researchers recommend a minimum age of six years old for children participating in organized team sports like soccer or baseball.⁹⁹ Furthermore, it is also recommended that each child's sports readiness be accurately assessed to determine whether "a child is prepared to enroll and at which level of competition the child can successfully participate."¹⁰⁰ Otherwise, mismatched "sports readiness and skill development can lead to anxiety, stress, and ultimately attrition for the young athlete."¹⁰¹

In light of the varying perspectives on the pros, barriers, and cons of youth participating in sports, it is important to review the participation rates of youth in sports over the last several years. This important analysis also includes a look at what impact, if any, (1) the NFL concussion lawsuits, (2) the 2015 NFL concussion lawsuit settlement, and (3) the movie *Concussion* have had on participation rates in youth sports in recent years.

1. Past and Current Participation Rate Statistics

Past statistics show that youth sports continue to rise in popularity, with an estimated 45 million American children and adolescents participating in sports. In the United States, three in four families with school-aged children report having at least one child participating in organized sports.¹⁰² The Physical Activity Council's 2016 Participation Report found that the group of people born from 2000 to the present (the Gen Z population) had the highest participation rate in team sports, at 58.8%, when compared to other generations.¹⁰³

Moreover, a 2015 survey of parents of middle school or high school aged children revealed that most boys and most girls currently play sports.¹⁰⁴ The

97. *Id.* at 157 tbl.3.

98. *See* discussion *supra* Section I.A.2.

99. Merkel, *supra* note 30, at 151.

100. *Id.* at 151–52.

101. *Id.* at 152.

102. *Id.* at 151; accord Ted Pfister et al., *The Incidence of Concussion in Youth Sports: A Systematic Review and Meta-Analysis*, 50 BRITISH J. SPORTS MED. 292, 292 (2016) ("Participation in sports is popular among child and adolescent populations. An estimated 30–45 million children and adolescents participate in non-scholastic sports and over 7 million adolescents participate in high school sports in the USA each year." (footnotes omitted)).

103. PHYSICAL ACTIVITY COUNCIL, 2016 PARTICIPATION REPORT: THE PHYSICAL ACTIVITY COUNCIL'S ANNUAL STUDY TRACKING SPORTS, FITNESS, AND RECREATION PARTICIPATION IN THE U.S. 9 (2016), <https://assets.documentcloud.org/documents/2992593/Physical-Activity-Council-2016-Participation.pdf>.

104. SPORTS AND HEALTH IN AMERICA, *supra* note 58, at 14.

survey indicated that of the seventy-six percent of boys who reported playing sports, the most popular sports ranked as follows: basketball and soccer tied for first place each with seventeen percent; followed by football with sixteen percent; then baseball/softball with eleven percent; and swimming and running/track tied each with six percent.¹⁰⁵ Of the seventy percent of girls who reported playing sports, the most popular sports ranked as follows: basketball came in first place with fifteen percent; followed by baseball/softball and volleyball, which tied with thirteen percent each; then soccer at eleven percent; and finally, running/track at eight percent.¹⁰⁶

In contrast, other studies show a general decline in the participation rates of most youth sports in recent years.¹⁰⁷ Specifically, the Sports and Fitness Industry Association (SFIA) conducts an annual household survey that provides the most robust data regarding the sport participation patterns in America.¹⁰⁸ According to SFIA's surveys, 44.7% of children aged thirteen to seventeen years old were active three times a week in any sport activity in 2007; however, that number dropped to 39.8% by 2014. Even more pronounced was the decline among children six to twelve years of age, falling from a sport participation rate of 34.7% to 26.9%, with most sports seeing a steep decline in total participants.¹⁰⁹

During the five-year period from 2008 to 2013, 2.6 million fewer children between six and twelve years of age were playing most sports.¹¹⁰ This decline in youth sports participation is significant for this particular age group. Overall, participation rates in most youth sports are experiencing a drastic decline; however, gymnastics, lacrosse, ultimate frisbee, and some other smaller activities have seen a gain in participation rates.¹¹¹ Notably, over the past five years, hockey has managed to reverse declines in participation, partly due to policy interventions that improved safety and coach training.¹¹²

Generally, fewer kids are playing team sports, which is the most common source of physical activity among children.¹¹³ In fact, public health advocates,

105. *Id.* at 15.

106. *Id.*

107. *Facts: Sports Activity and Children*, *supra* note 25 (illustrating the downward trend in youth sports participation).

108. Shaheed Bhagat Singh Sports Soc'y, *Sport Activity*, SAFIDONSPORTS.COM, <http://safidonsports.com/sport-activity.html> (last visited Feb. 27, 2018).

109. *Id.*

110. THE ASPEN INST., *SPORT FOR ALL, PLAY FOR LIFE: A PLAYBOOK TO GET EVERY KID IN THE GAME* 6 fig.1 (2015), <https://www.aspeninstitute.org/publications/sport-all-play-life-playbook-get-every-kid-game/>.

111. *Facts: Sports Activity and Children*, *supra* note 25.

112. *Id.*

113. *See id.*; accord Michael S. Rosenwald, *Are Parents Ruining Youth Sports? Fewer Kids Play Amid Pressure*, WASH. POST (Oct. 4, 2015), https://www.washingtonpost.com/local/are-parents-ruining-youth-sports-fewer-kids-play-amid-pressure/2015/10/04/eb1460dc-686e-11e5-9ef3-fde182507eac_story.html.

league organizers, and professional sports organizations have become increasingly concerned that the number of children playing team sports is falling, with long-standing staples of American childhood like baseball, basketball, softball, soccer, and touch football all seeing declines.¹¹⁴ Studies show that more than 26 million children ages six to seventeen years old played team sports in 2014, but that number reflected a nearly four percent decline in participation over the previous five years.¹¹⁵ Ultimately, total sports played have dropped almost ten percent.¹¹⁶ Although participation in traditional team sports is declining, “niche sports” might be reaping the benefits, with lacrosse seeing a gain of nearly twelve percent and field hockey a gain of nearly eight percent.¹¹⁷

2. *Factors Impacting Youth Sports Participation Rates*

Decreases in the number of youth participating in sports can be attributed to various factors. One cited factor for declining youth sports participation rates rests in the youth sports industry’s push to have parents focus their children on a limited number of sports, which has resulted in a decline in the total number of sports that each child plays annually.¹¹⁸ Another factor cited by some experts is the parent-driven focus on the purpose behind their child’s participation in sports, which may include to gain acceptance into elite travel clubs, to specialize in one sport, or to pursue scholarships, “for hurting the country’s youth sports leagues.”¹¹⁹

Other key factors identified as contributing to the declining youth sports participation rate include issues regarding the safety of the participants and the quality of the coaching. For example, a 2014 survey on youth sports issues revealed the following factors as most concerning among parents: the risk of injury to participants at 87.9%; coaching quality or behavior at 81.5%; the cost of participation at 70.3%; the required time commitment at 67.9%; and “the emphasis on winning over having fun” at 66.1%.¹²⁰

114. Rosenwald, *supra* note 113.

115. *See id.*; accord *Facts: Sports Activity and Children*, *supra* note 25 (“In 2008, 30.2% of youth ages 6 to 12 were active to a healthy level through sports, organized or unstructured; by 2015, that number had dropped to 26.6%, according to SFIA. Among 13- to 17-year-olds, the rate fell from 42.7% to 39.3%.”).

116. Rosenwald, *supra* note 113.

117. For example, touch football is down more than seven percent, softball is down five percent, and baseball, basketball, and soccer are all down almost two percent. *Id.*

118. *See Facts: Sports Activity and Children*, *supra* note 25.

119. Rosenwald, *supra* note 113. To this point, Mark Hyman, an author and professor of sports management at George Washington University, remarked: “We no longer value participation. We value excellence.” *Id.*

120. ESPNW & THE ASPEN INST., PROJECT PLAY SURVEY OF PARENTS ON YOUTH SPORTS ISSUES 4 (2014), <https://static1.squarespace.com/static/595ea7d6e58c62dce01d1625/t/5a58fbf824a6942cc4f53e35/1515781124206/ESPNW-Aspen+Institute+Project+Play+Survey+of+Parents+on+youth+sports+issues.pdf>.

As noted above,¹²¹ youth sports participants face extreme pressure that stems from the fact that, over the last two decades, many parents increasingly view their child's participation in sports as an investment—"one that they believe could lead to a college scholarship, even though the odds are bleak."¹²² As *The Washington Post* reporter Michael Rosenwald explained: "Parents now start their kids in sports as toddlers, jockey to get them on elite travel teams, and spend small fortunes on private coaching, expensive equipment, swag and travel to tournaments. Youth sports is the new keeping up with the Joneses."¹²³

Regarding injuries, approximately one in four parents have considered concussion risks as a factor in determining whether their child should participate in a sport, with tackle football being the most concerning sport.¹²⁴ However, despite concussion risks, a March 2016 survey by the SFIA found that among children ages six to fourteen years old, participation in youth tackle football experienced a slight increase of 1.9%, to 2.1 million participants.¹²⁵ The SFIA partly attributed the increase to a "demographic bulge," but also noted that participation in flag football among that age group increased significantly by 8.7%. This prompted Tom Cove, CEO of SFIA, to comment, "[p]reliminary indicators suggest flag [football] for kids may be rising on a regional basis. For example, in the Pacific Northwest we're hearing growth of youth flag [football] leagues for young players, but not so much in [the] South where traditional tackle [football] remains strong."¹²⁶

Most importantly, researchers are starting to survey children regarding their perspectives about participation in youth sports, rather than only surveying parents to get their opinions about their child's participation in youth sports.¹²⁷ As one commentator noted: "Not unsurprisingly, [children] have a different idea of what youth sports should be."¹²⁸ A recent survey of approximately 150 children participating in travel and recreational sports asked participants to identify "what they found fun about sports"; of the eighty-one factors cited as contributing to their happiness, winning ranked forty-eighth on the list.¹²⁹ Other low-scoring factors included "playing in tournaments," "cool uniforms," and "expensive equipment," while high-scoring factors included "positive team

121. See discussion *supra* Section I.A.3.b.

122. Rosenwald, *supra* note 113.

123. *Id.*

124. See ESPNW & THE ASPEN INST., *supra* note 120, at 11; accord Rosenwald, *supra* note 113 ("There is little debate over the value of playing sports for children, although the risk of concussions in contact sports, particularly football, has become a concern for parents, pediatricians and coaches.").

125. Fainaru, *supra* note 3.

126. *Id.*

127. See Rosenwald, *supra* note 113.

128. *Id.*

129. *Id.* (reporting on a recent survey conducted by Professor Amanda Visek, an exercise science professor and George Washington University).

dynamics,” “trying hard,” “positive coaching,” and “learning.”¹³⁰ That study ultimately revealed that the primary reason children stop playing sports is that “it’s no longer fun.”¹³¹

3. *Impact of the NFL Concussion Lawsuits on Participation Rates in Youth Sports*

With all the notoriety and media attention surrounding the NFL concussion lawsuits, there is a question regarding what, if any, impact such lawsuits have had on participation rates in youth sports in recent years. The NFL relies upon the National Collegiate Athletic Association (NCAA) to provide players who ultimately play football at the professional level.¹³² In turn, college football looks to numerous youth football organizations to provide accomplished and talented players for the collegiate level.

Collegiate athletics recruiters primarily draw such talent from “the thousands of local school systems that fund high school and middle school football conferences.”¹³³ Similarly, middle and high schools seek promising young athletes from the thousands of little league programs, such as Pee Wee and Pop Warner, to supply their football talent.¹³⁴ Therefore, it has been noted that, regardless of the reason, any disruption in the participation of youth football will likely result in negative consequences overall for the game of football.¹³⁵

Interestingly, in November 2013, the Entertainment and Sports Programming Network (ESPN) reported a 9.5% drop in Pop Warner football participation rates from 2010 to 2012—a drop that coincided with the media frenzy reporting on the concussion lawsuit filed by the NFL Players Association.¹³⁶ Furthermore, Pop Warner’s decline in participation rates mirrored the country-wide decline in youth football participation. Indeed, like Pop Warner, USA Football, which is partially funded by the NFL, reported a 6.7% decline in participation among players six to fourteen years of age during that time.¹³⁷

Although representatives from Pop Warner and USA Football suggested that the reasons for the decline in participation “were unclear,” ESPN emphasized that those declines “coincide[d] with a series of ominous reports about football

130. *Id.*

131. *Id.*

132. See Chris D. Birkel, *Knocked Out: The Once and Future Demise of Football*, 4 BERKELEY J. ENT. & SPORTS L. 98, 101 (2015).

133. *Id.* at 102.

134. *Id.*

135. *Id.*

136. Steve Fainaru & Mark Fainaru-Wada, *Youth Football Participation Drops*, ESPN.COM: OTL (Nov. 14, 2013, 12:07 PM), http://www.espn.com/espn/otl/story/_/page/popwarner/pop-warner-youth-football-participation-drops-nfl-concussion-crisis-seen-causal-factor (“The downward trends in youth football participation coincide with a series of ominous reports about football and brain damage in the NFL.”).

137. *Id.*

and brain damage in the NFL.”¹³⁸ Tony Strickland, an associate clinical professor of neurology and member of the Medical Advisory Committee for Pop Warner, went even further by stating that, in his opinion, the decline in participation occurred “in part because of the description of individual cases and the information out there about the incidence of CTE.”¹³⁹ He added: “If I’m a parent, anybody hearing that information, in the absence of other science, would be foolish not to be cautious.”¹⁴⁰

4. *Impact the 2015 Settlement of the NFL Concussion Lawsuit Can and Has Had on Participation Rates in Youth Sports*

a. *The Negative Impact*

There are concerns that the NFL settlement “will have a devastating effect” on the future of youth and high school football.¹⁴¹ Some warn that the NFL settlement “will trigger skyrocketing insurance rates for organizations who sponsor these programs, and it will force parents who haven’t already decided that the sport is just too risky to look to other youth sport opportunities for their children.”¹⁴²

However, sports science lecturer Bill Price noted that although it may be “convenient to blame the declining participation solely on the concussion scare[,] other factors might also be involved.”¹⁴³ For example, such factors may include the fact that: (1) youth football is very expensive to parents; (2) the decline in participation rates happened during the recession; (3) more school districts are adopting pay-for-play policies; or (4) there is an emerging trend toward single-sport only participation.¹⁴⁴ Ultimately, the exact reason behind the drop in participation rates has yet to be definitively identified. In acknowledging this reality, Bill Price nonetheless contends: “The truth is we don’t really know why the numbers are dropping yet. But the dominant emerging story is that [a] concussion is serious and can have long-term devastating effects. The NFL settlement only highlights how dangerous the sport really is.”¹⁴⁵

Arising from these safety concerns, an additional consequence of the settlement is the inevitable effect it will have on insurance policies for football programs.¹⁴⁶ Indeed, in Bill Price’s view, the settlement by the NFL is

138. *Id.*

139. *Id.*

140. *Id.*

141. William J. Price, Commentary, *The NFL Settlement: Not Good for Youth and High School football*, SPORTKID PROJECT (Aug. 31, 2013), www.sportkidproject.com/article.php?art_num=28.

142. *Id.*

143. *Id.*

144. *See id.*; accord discussion *supra* Section I.B.2.

145. Price, *supra* note 141.

146. *See Id.*

practically an admission, “in an actuarial sense if not a legal one,” that the long-term effects of brain injuries are real and detrimental.¹⁴⁷ He warns, “[i]nsurance premiums will soon need to reflect this and, consequently, some organizations will decide that the cost is too high and simply drop the sport. The worst-case scenario is if insurance carriers decide the sport is an uninsurable risk.”¹⁴⁸

b. The Positive Impact

Steve Alic, spokesman for the nonprofit, youth and amateur football organization USA Football, stated that the NFL settlement, which also dedicates millions of dollars to a research and education fund, “will mean more research adding to what we’re already doing on a national level in terms of football player safety.”¹⁴⁹ Through this research fund, youth football organizations are hopeful that the settlement “will help to reassure parents that the game is getting safer.”¹⁵⁰ And noting the broad implications of such research, Mr. Alic further added, “[p]layer safety will be advanced not just in football but in every sport.”¹⁵¹

Although he acknowledged that registrations for youth football had dropped in recent years, Mr. Alic also noted a similar decline in the registration numbers for basketball, soccer, and baseball.¹⁵² Regardless, Mr. Alic remained “optimistic that programs aimed at educating families about the dangers of concussions and teaching kids safer ways to play w[ould] keep participation strong.”¹⁵³ In his view, “[p]arents are gaining the assurance that coaches are prepared to teach the game better and safer. And the additional research money coming from this [settlement] is good news for all sports.”¹⁵⁴

147. *Id.*

148. *Id.*

149. Katie Moisse, *Youth Football Leagues Hope for Boost from NFL Settlement*, ABC NEWS (Aug. 30, 2013), <http://abcnews.go.com/Health/youth-football-leagues-hope-boost-nfl-settlement/story?id=20120881>.

150. *Id.* In this article, Katie Moisse reports that the chief health and medical editor for ABC News Dr. Richard Besser previously remarked that he believed that the safety of football would remain an issue “until the game is fundamentally changed.” On the show *Good Morning America*, Dr. Besser added: “As a parent I didn’t let my kids play football. And as a pediatrician I make sure my parents know the risk. I tell them, ‘Pick another sport.’” *Id.*

151. *Id.*

152. *Id.*

153. *Id.*

154. *Id.* (alteration in original).

5. *Impact of the Movie Concussion on the Participation Rates in Youth Sports*

a. *The MMQB's Roundtable Discussion*

As previously noted, the movie *Concussion* starring actor Will Smith was released to movie theaters on December 25, 2015.¹⁵⁵ The Monday Morning Quarterback (The MMQB) in December 2015 organized a group viewing of the movie for a group of Midwest parents who are ardent Indianapolis Colts football fans. Afterward, The MMQB held a roundtable discussion regarding what they thought about the movie and whether they would allow their children to play football.¹⁵⁶

After “weighing the risks and rewards of putting on a helmet,” parents provided the following perspectives in response to the question: “*After seeing this movie, will you let your kid play football?*”¹⁵⁷ Katie White, a mother of two daughters and two young sons, answered:

I will say that before seeing this movie, I lumped concussions in with any other injury my kids could sustain from football. Knowing that a concussion is serious, but not thinking about it long term. That being said, because I am a mom and I can make choices for my kids, I will not let them play football now. . . . As a parent, I can make those choices for my kids now because I don't think they are old enough to understand a long-term consequence that could happen to their body or their mind thirty years down the road.¹⁵⁸

For Brian Sweany, his response was a mix of relief and concern:

Right now, I'm lucky because I don't have two sons that are interested in playing football. They are fourteen and ten years old and they like watching it, but they aren't interested in playing. My freshman wants to go out for the football team next year. So, my wife and I are at a crossroads right now. We had said, “Maybe we will leave it up to him, because we know they have all these protocols in place to help protect the kids.” But after seeing this movie, I am inclined to encourage him

155. Vrentas, *supra* note 2.

156. Kalyn Kahler, *The Impact of 'Concussion' on Moms and Dads*, MMQB (Dec. 31, 2015), <http://mmqb.si.com/mmqb/2015/12/31/nfl-concussion-movie-will-smith-themmqb-parents-kids-youth-football>. Regarding the participants, the following note from the editors preceded the report:

Angie Six, who has appeared on The MMQB before, is a writer, mother, blogger and Colts fan from Fishers, Indiana. She recently organized a group of parents to watch *Concussion* that included her husband, Mike, as well as Mark Srencik from Fishers, John Lear from Fortville, Brian Sweany from Fishers, Amy Magan from Carmel, Katie White from Indianapolis, and Andrea Feaster from Westfield. After the group watched the movie, Kalyn Kahler of The MMQB facilitated a roundtable conversation.

Id.

157. *Id.*

158. *Id.*

very strongly not to play football. I didn't think I would have that reaction. I love that sport, I played it, but I just keep thinking about that apple in the mason jar and shaking that apple into pulp.¹⁵⁹

John Lear, another father present at the event, offered a more tempered response:

My ten-year-old son plays football, my six-year-old daughter plays soccer. I've been around the game for twenty-two years. I played for twelve and I am entering my twelfth year as a junior high football coach. My son quit football after his first year; he just didn't like it. He sat out for two years but now he plays again because he asked me to. As far as youth leagues go, I'm more comfortable if I know the coach. I think all youth coaches should go through heavy coaches' education like what we have to do for middle school. I will let my son play, I will let him have his own choice like he did the first time when he chose to quit.¹⁶⁰

However, Mark Srcik, the father of a young son, remained deeply unsettled:

My wife and I had been thinking about getting our eight-year-old son into football and just doing some research, I didn't feel real comfortable about it. The movie for me made me feel like, I think I know too much now to send my kid out and play football. I'm the parent, why do I want them to decide when I know what actually can happen? I'm pretty close to not letting him play. The problem is he's a ninety-five-pound second grader and he is built like a football player; he's strong and athletic. Everyone tells him, "You're a football player, you're going to play for the Colts." I just worry that if I let him play football, twenty years down the road, I think I am going to feel really guilty.¹⁶¹

After hearing the responses from most of the parents at the event, Brian Sweany added:

As a former football player who had experienced concussions and experienced what football did to me, I gravitated towards rugby. I wanted to encourage my sons to explore other sports. I also love football, I am a big fan. But I know what it did to me, and I've seen it do some strange things to other people firsthand. I encouraged them to this sport that was kind of like football, except that it's illegal to leave your feet when you tackle; it's illegal to tackle above your shoulders. There are some things that rugby does to make it a little bit safer.¹⁶²

Ultimately, the discussion revealed that although some parents would no longer allow their children to play football, other parents still intended to let their

159. *Id.*

160. *Id.*

161. *Id.*

162. *Id.*

children participate in the sport.¹⁶³ Additionally, some parents stated that they wanted to show the movie *Concussion* to their children,¹⁶⁴ which suggests that the movie made an impact on them.

b. Actor Will Smith's Thoughts

Actor Will Smith has also shared his thoughts about football, the impact of the movie *Concussion* on him, and his thoughts about the impact he thought the movie would have on others.¹⁶⁵ Unquestionably, Smith “loves football.”¹⁶⁶ That is evident from the fact that he flew home every weekend from Beijing, China, to Los Angeles, California, for ten weeks straight while making the movie *The Karate Kid* to watch his oldest son Trey play high school football.¹⁶⁷ As Smith told reporters, he made those frequent trips home not because he wanted to be “a good parent,” but rather because: “Friday night lights are ecstasy for me.”¹⁶⁸

In an interview with the Cable News Network (CNN), Smith—a known Philadelphia Eagles fan and parent of a former high school football star—admitted he felt conflicted about the film.¹⁶⁹ However, any reservations about participating in the project dissipated after he met the Nigerian-born neuropathologist Dr. Omalu. Reflecting upon the magnitude of the film and its potential impact, Smith recalled: “The production was extremely heavy. You know, it’s not just a movie. It’s people’s lives that we’re trying to do justice to their suffering.”¹⁷⁰ Despite his initial trepidation, Smith ultimately decided that “fatherhood trumped fandom,” telling Entertainment Weekly reporters: “As a parent, the responsibility to bring this information to light was overwhelming. I almost couldn’t say no.”¹⁷¹

Noting the controversial nature of the film, Smith remarked in jest, “I probably won’t be getting my free Super Bowl tickets this year.”¹⁷² However, Smith was

163. *Id.* The news broadcast Frontline issued an interview series called *League of Denial: The NFL's Concussion Crisis*, in which it revealed various perspectives from former NFL players and medical experts; for that discussion, see *Would You Let Your Kids Play Football?*, FRONTLINE, <http://www.pbs.org/wgbh/pages/frontline/oral-history/league-of-denial/would-you-let-your-kids-play-football/> (last visited Aug. 15, 2017).

164. Kahler, *supra* note 156.

165. See Nicole Sperling, *Will Smith Loves Football but Concussion Was a Story He Had to Tell*, ENT. WKLY. (Oct. 30, 2015, 5:19 PM), <http://ew.com/article/2015/10/30/will-smith-loves-football-concussion>; see also Andrew Joseph, *Will Smith Was Surprised Concussion Didn't Stop People from Watching Football*, USA TODAY SPORTS: FOR THE WIN (Sept. 27, 2016, 7:52 PM), <http://ftw.usatoday.com/2016/09/will-smith-concussion-movie-nfl-impact>.

166. Sperling, *supra* note 165.

167. Motez Bishara, *Will Smith: Movie "Concussion" Touches Raw nerve for NFL*, CNN (Jan. 29, 2016, 12:15 PM), <https://www.google.com/amp/s/amp.cnn.com/cnn/2015/12/18/sport/nfl-head-injuries-will-smith-movie-concussion/index.html>; accord Sperling, *supra* note 165.

168. Sperling, *supra* note 165.

169. Bishara, *supra* note 167.

170. *Id.*

171. Sperling, *supra* note 165.

172. Bishara, *supra* note 167.

admittedly surprised that *Concussion* did not “have a bigger impact.”¹⁷³ According to media reports, he “thought the film’s focus on CTE and head trauma would drive people away from the NFL.”¹⁷⁴ It did not. In an interview with *Vanity Fair* to promote *Concussion*, Smith expressed:

I thought *Concussion* would have a bigger impact. I knew it would be hard because people love the game, but the science is so overwhelming, and it’s something that we really need to take a look at. I thought that people would get behind the mission of that. I was surprised that people were absolutely like, “Nope, I’m not stopping watching football, so I don’t want to know.”¹⁷⁵

In the wake of the film, many expected that the NFL would be faced with “a major PR crisis,” and that the success of *Concussion* would “dramatically influence the public’s view of the game and understanding of the issues surrounding player health.”¹⁷⁶ However, in the weeks immediately following its release, that did not happen.¹⁷⁷ Although the film did not trigger the sweeping change in public perception that many anticipated, it is believed that *Concussion* raised awareness of the crucial issues that plagued the game.¹⁷⁸ Indeed, film critic Sean O’Connell expressed his belief that the film would nonetheless have a long-term impact, commenting: “*Concussion* isn’t anti-football, but it is pro-awareness. . . . [It] can find new life [when it is later rented or streamed] by reintroducing the talking points raised in the film about player safety and health regulations that should be part of the game.”¹⁷⁹ Sports Business Journal reporter Abraham Madkour summed up the issue best when he wrote: “Bottom line: The film didn’t have the impact its producers were hoping. . . . But continued and thoughtful discussion on this serious issue is something all parties—Sony, Smith, Omalu, and the NFL—could agree on.”¹⁸⁰

c. High School Football Player Stopped Playing Football After Watching the Movie

Although the response to *Concussion* has varied among parents,¹⁸¹ the movie had a profound impact on one high school football player who changed his mind

173. Joseph, *supra* note 165.

174. *Id.*

175. Erika Harwood, *Will Smith Thought Concussion Was Going to “Have a Bigger Impact”*, VANITY FAIR (Sept. 27, 2016, 2:16 PM), https://www.vanityfair.com/hollywood/2016/09/will-smith-concussion-reaction?mbid=social_twitter.

176. Abraham D. Madkour, *Why Concussion Did Not Have Impact Many Expected*, SPORTS BUS. J. (Jan. 18, 2016), <http://sportsbusinessdaily.com/Journal/Issues/20/16/01/18/Opinion/From-The-Executive-Editor.aspx>.

177. *See id.*

178. *Id.*

179. *Id.*

180. *Id.*

181. *See* discussion *supra* Section I.B.5.a.

about playing football shortly after watching the movie.¹⁸² After John Castello, a senior high school football player at Mars Area High School near Pittsburgh, watched *Concussion*, he rejected several full scholarship offers to play college football after seeing the movie.¹⁸³ In an interview with National Public Radio (NPR), Castello admitted that the film brought to light the consequences of head injuries, which he had never quite considered before. In fact, even after suffering a non-concussion head injury in his junior year, the prospect of any lasting brain damage had never concerned him.¹⁸⁴ Castello recalled: “I kind of just shrugged it off, didn’t think it was much of anything. And after I watched the movie I really thought, hey there could be some repercussions to playing football if I would get a concussion or another head injury.”¹⁸⁵

Still, it was a difficult decision for Castello to turn down full scholarship offers, particularly because he knew that paying for college would be burdensome for his family.¹⁸⁶ Upon hearing his reasons for rejecting the scholarship offers, most colleges understood Castello’s position, but some coaches resisted the rejection by downplaying the head injury risks associated with playing football. Castello added: “Some of the coaches, they kind of shrugged it off, they said, ‘We’ve only had a couple concussions with our guys over the past years, and we have new helmets and pads that prevent these injuries.’”¹⁸⁷

Instead of football, Castello chose basketball—a decision he does not regret.¹⁸⁸ In his view, pursuing football not only placed him at risk of possible brain damage, but would likely have led to mobility issues in his knees and hips later in life. Such issues could mean a future riddled with pain.¹⁸⁹ To that point, he remarked, “I’d rather be paying off student loans than having trouble getting down the stairs . . . in the morning.”¹⁹⁰

In sum, although it is rare and some people may look at it as extreme, Castello represents the fact that at least one high school player and full college football scholarship recipient completely changed course about playing college football after watching the movie *Concussion*.

182. *The Impact of “Concussion”: High School Football Player Changes Course*, NPR (Feb. 27, 2016, 7:52 AM), <http://www.npr.org/2016/02/27/468284026/the-impact-of-concussion-high-school-football-player-changes-course>.

183. *Id.*

184. *Id.*

185. *Id.*

186. *Id.*

187. *Id.*

188. *Id.*

189. *Id.*

190. *Id.* (alteration in original).

II. THE PREVALENCE OF YOUTH SPORTS-RELATED CONCUSSIONS AND GENDER DIFFERENCES RELATED TO SPORTS-RELATED CONCUSSIONS, ESPECIALLY AMONG YOUTH ATHLETES

It is important to look at statistics regarding the prevalence of youth sports-related concussions. In addition, it is beneficial to determine whether there are any gender differences related to sports-related concussions, especially among youth athletes.

A. *Statistics Regarding the Prevalence of Youth Sports-Related Concussions*

Sports-related concussions are considered a significant public health issue not only in the United States, but also worldwide.¹⁹¹ There is always the possibility of sports-related concussions while participating in youth sports. However, statistics regarding sports-related concussions vary.¹⁹² The University of Pittsburgh's Brain Trauma Research Center, for example, reports that each year, more than 300,000 sports-related concussions are reported in the United States.¹⁹³ The Brain Trauma Research Center further estimates that athletes in contact sports face as high as a nineteen percent chance per season of suffering a concussion.¹⁹⁴

Moreover, the American Association of Neurological Surgeons estimates that in high school contact sports alone, more than 62,000 concussions are sustained each year.¹⁹⁵ Yet, other studies report that the number of concussions sustained by high school athletes each year is more than 100,000.¹⁹⁶ Regrettably, this number may be underestimated due to the lack of self-reporting of injuries by athletes to sports medicine providers.¹⁹⁷ Indeed, studies reveal that, particularly in the case of adolescent athletes, concussions have been "underappreciated and mishandled."¹⁹⁸

191. Anthony P. Kontos et al., *Incidence of Concussion in Youth Ice Hockey Players*, 137 PEDIATRICS, no. 2, 2016, at 1, 2, <http://pediatrics.aappublications.org/content/pediatrics/137/2/e20151633.full.pdf>; accord Carter, *supra* note 6, at 331; Pfister et al., *supra* note 102, at 295.

192. Carter, *supra* note 6, at 341.

193. Univ. of Pittsburgh Med. Ctr., *Concussions*, CTRS. EXCELLENCE: NEUROLOGICAL SURGERY, <http://www.neurosurgery.pitt.edu/centers-excellence/brain-and-spine-injury/concussions> (last visited Mar. 6, 2018).

194. *Id.*

195. *Concussion*, AM. ASS'N NEUROLOGICAL SURGEONS, [http://www.aans.org/Patient s/Neurosurgical-Conditions-and-Treatments/Concussion](http://www.aans.org/Patient%20s/Neurosurgical-Conditions-and-Treatments/Concussion) (last visited Mar. 6, 2018).

196. Gregory B. Bonds et al., *The Impact of Litigation, Regulation, and Legislation on Sport Concussion Management*, SPORT J. (Mar. 23, 2015), <http://thesportjournal.org/article/the-impact-of-litigation-regulation-and-legislation-on-sport-concussion-management/>.

197. Luke M. Gessel et al., *Concussions Among United States High School and Collegiate Athletes*, 42 J. ATHLETIC TRAINING 495, 501-02 (2007), <https://www.ncbi.nlm.nih.gov/pmc/article/PMC2140075/pdf/i1062-6050-42-4-495.pdf> ("Underestimating the seriousness of the injury, not wanting to be withdrawn from competition, and not being aware of having suffered a concussion have been cited as reasons for underreporting concussion injury.").

198. Pfister et al., *supra* note 102, at 292.

In contrast to the findings above, the CDC found that approximately 1.6 to 3.8 million sports- and recreation-related concussions occur in the United States annually.¹⁹⁹ Additionally, in 2016, the American College of Sports Medicine reported an increase in incidences of concussions in high school athletes, with approximately 8.9% of all high school athletic injuries identified as concussions.²⁰⁰ The following statistics have also been cited regarding sports-related concussions:

- (1) 33% of all sports concussions happen at practice;
- (2) 47% of all reported sports concussions occur during high school football;
- (3) 1 in 5 high school athletes will sustain a sports concussion during the season;
- (4) 33% of high school athletes who have a sports concussion report two or more in the same year; and
- (5) 4 to 5 million concussions occur annually, with rising numbers among middle school athletes.²⁰¹

Similarly, the American Academy of Pediatrics published an article in which it reported:

Youth athletes between the ages of 5 and 18 account for 65% of all sports and recreation-related head injuries treated in U.S. emergency departments, with a 62% increase in concussion-related visits between 2001 and 2009. Concussions comprise [approximately] 13% of all sport-related injuries compared with only 5% two decades ago.²⁰²

Additionally, in 2015, the British Journal of Sports Medicine published a groundbreaking, “comprehensive systematic review and meta-analysis of studies assessing the incidence of concussion in youth athletes.”²⁰³ The specific objective of the study was to “estimate the overall risk of concussion in youth sports and compare sport-specific estimates of concussion risk.”²⁰⁴ To explain the importance of the study, Ted Pfister, lead author and researcher for Canada’s Alberta Health Services, and his co-authors noted: “Although a systematic review of concussion incidence[s] in contact sports has been completed, we are

199. *Sports Injuries*, WETA; BRAINLINE, <https://www.brainline.org/topic/sports-injuries> (last visited Mar. 6, 2018).

200. Tracey Covassin & Robert Elbin, *Sport-Related Concussions*, AM. COLL. SPORTS MED. (Oct. 7, 2016), <https://www.acsm.org/access-public-information/articles/2012/01/13/sport-related-concussions>.

201. Carter, *supra* note 6, at 342 (quoting *Sports Concussion Statistics*, HEAD CASE, http://www.headcasecompany.com/concussion_info/stats_on_concussions_sports (last visited Sept. 23, 2015)).

202. Kontos et al., *Incidence of Concussion in Youth Ice Hockey Players*, *supra* note 191, at 2 (footnotes omitted).

203. Pfister et al., *supra* note 102, at 292.

204. *Id.*

not aware of a systematic review evaluating concussion incidence that focuses on youth athletes.”²⁰⁵

Acknowledging that “the literature on concussion in the adult competitive athlete” has undergone dramatic progress in recent years, the researchers noted that “little attention ha[d] been focused on the young athlete and how this outcome varie[d] across sports.”²⁰⁶ Furthermore, although a systematic review on high school and adult competitive athletes already existed, Pfister and his team recognized that the study was more than a decade old and “given the increased risk and growing concern for youth athletes,” a new study was needed.²⁰⁷

Accordingly, the team “performed a systematic review and meta-analysis of observational cohort studies reporting on the incidence of concussion among male and female adolescent athletes aged 18 years and younger.”²⁰⁸ Their “primary aim was to estimate the overall risk of concussion in youth athletes participating in any sport and to compare sport-specific estimates of concussion risk across sports.”²⁰⁹ In the end, Pfister’s study found that the three sports with the highest concussion incidence rates were (1) rugby, (2) hockey, and (3) American football, and that the three sports with the lowest concussion incidence were (1) volleyball, (2) baseball, and (3) cheerleading.²¹⁰

Most importantly, repeated head trauma stemming from sports-related concussions can have serious long-term effects on the health of youth athletes. Indeed, “[w]hen left undetected, concussions can result in long-term brain damage and may even prove fatal.”²¹¹ Moreover, of the eight football-related concussion fatalities reported in the United States in 2013, all occurred at the high school level.²¹² In sum, due to the prevalence of sports-related injuries, including concussions and potential death, there are legitimate health and safety concerns for elementary school, middle school, and high school athletes who participate in youth sports.

205. *Id.*

206. *Id.*

207. *Id.*

208. *Id.*

209. *Id.*

210. *Id.* at 295; see also Lindsey Barton Straus, *Cheerleading Injuries in High School Sports: Less Common, but More Severe*, MOMSTEAM (Dec. 1, 2015, 9:47 PM), <http://www.momsteam.com/health-safety/cheerleading-injuries-in-high-school-sports-less-common-but-more-severe> (“High school cheerleaders don’t get injured as often as athletes in other sports, but, when they do, the injuries are more serious . . .”).

211. Carter, *supra* note 6, at 343 (quoting *Sports Concussion Statistics*, HEAD CASE, http://www.headcasecompany.com/concussion_info/stats_on_concussions_sports (last visited Sept. 23, 2015)).

212. Robert L. Conder & Alanna A. Conder, *Sports-Related Concussions*, 76 N.C. MED. J. 89, 89 (2015), <http://www.ncmedicaljournal.com/content/76/2/89.full.pdf+html>.

B. Gender Differences Related to Sports-Related Concussions, Especially Among Youth Athletes

1. Studies on Gender Differences Related to Sports-Related Concussions

There are few studies specifically devoted to gender differences in the context of youth sports-related concussions. Nonetheless, the available literature on the gender-specific impact of sports-related injuries reveals that female athletes “are at a higher risk for concussion and exhibit more prolonged neurocognitive impairment after concussive injury than do males.”²¹³ Researchers have suggested that “females have a potentially greater risk of sustaining a concussion due to possible biomechanical differences such as reduced head and neck mass compared to males and females exhibit greater angular acceleration of the head and neck.”²¹⁴

In addition, studies also show that female athletes “report higher levels of clinical depression than do males and are at a higher risk for developing post-concussion syndrome, which often includes emotional symptoms such as depression.”²¹⁵ Taking aim at gender differences in depression after a concussion,²¹⁶ a 2012 study found that “male and female athletes reported similar depression levels after [a] concussion,” which was particularly unexpected because previous studies had shown that female athletes were “more likely than males to experience symptoms of depression after an athletic injury.”²¹⁷ Moreover, these findings contrasted “with previously reported sex differences in neurocognitive performance,” because those studies revealed that female athletes “demonstrate[d] worse neurocognitive outcomes after [a] concussion.”²¹⁸ Ultimately, although the 2012 study was the first to explore gender differences in depression after a concussion, its findings suggested “that sex does not influence post-concussion depression levels.”²¹⁹

213. Anthony P. Kontos et al., *Depression and Neurocognitive Performance After Concussion Among Male and Female High School and Collegiate Athletes*, 93 ARCHIVES PHYSICAL MED. & REHABILITATION 1751, 1752 (2012) (first citing Donna K. Broshek et al., *Sex Differences in Outcome After Sports-Related Concussion*, 102 J. NEUROSURGERY 856 (2005); and Tracey Covassin et al., *Epidemiological Considerations of Concussions Among Intercollegiate Athletes*, 10 APPLIED NEUROPSYCHOLOGY 12, 21 (2003); and then citing Gessel et al., *supra* note 197, at 502).

214. Pfister et al., *supra* note 102, at 296 (citing R.W. Dick, *Is There a Gender Difference in Concussion Incidence and Outcomes?*, 43 BRITISH J. SPORTS MED. i46, i49 (2009)).

215. Kontos et al., *Depression and Neurocognitive Performance*, *supra* note 213, at 1752 (citing Jingzhen Yang et al., *Prevalence of and Risk Factors Associated with Symptoms of Depression in Competitive Collegiate Student Athletes*, 17 CLINICAL J. SPORT MED 481 (2007)).

216. *Id.* (“Given the lack of information regarding depression after concussion among male and female high school and college athletes and its potential impact on recovery outcomes, a prospective investigation of these variables is warranted.”)

217. *Id.* at 1755.

218. *Id.* (footnotes omitted).

219. *Id.*

2. *Recent Studies on Gender Differences Related to Youth Sports-Related Concussions*

Because research is limited in this particular area, Pfister's systematic review and meta-analysis study reporting on the concussion rate among male and female adolescent athletes aged eighteen years and younger is helpful.²²⁰ However, as noted by Pfister and his team, the quality of the twenty-three studies selected for systematic review varied, "with the majority of studies not reporting age and gender-specific incidence rates."²²¹ In fact, although "gender-specific incidence rates were reported for a number of sports," the only sports that provided both male and female incidence rates were soccer, basketball, and lacrosse.²²² And, among these three sports, concussion rates compared by gender were: in lacrosse, higher for males (0.29) compared to females (0.17); in soccer, higher for females (0.27) compared to males (0.19); and in basketball, higher for females (0.17) compared to males (0.10).²²³ Notably, these findings were consistent with the findings of earlier studies.²²⁴

Of the twenty-three studies included in Pfister's systematic review, one study specifically warrants mentioning because it looked at the incidence and relative risk of concussions in twelve high school boys' and girls' scholastic sports over an eleven-year period, between 1997–1998 and 2007–2008.²²⁵ Its finding revealed the following:

Boys' sports accounted for 53% of athlete-exposures and 75% of all concussions. Football accounted for more than half of all concussions, and it had the highest incidence rate (0.60). Girls' soccer had the most concussions among the girls' sports and the second-highest incidence rate of all 12 sports (0.35). Concussion rate increased 4.2-fold (95% confidence interval, 3.4-5.2) over the 11 years (15.5% annual increase). In similar boys' and girls' sports (baseball/softball,

220. See generally Pfister et al., *supra* note 102.

221. *Id.* at 292, 294 ("[O]nly 15 studies (65%) provided adequate information and stratification by important factors such as age or sex. Thus, it is difficult to assess the generalizability of the study findings or comment on differential risk by age and sex across the various sports identified.").

222. *Id.* at 295.

223. *Id.*

224. See, e.g., Andrew E. Lincoln et al., *Trends in Concussion Incidence in High School Sports: A Prospective 11-Year Study*, 39 AM. J. SPORTS MED. 958, 959 (2011) ("Football, basketball, and soccer were among the activities associated with the greatest number of sports- and recreation related traumatic brain injuries (which include but are not limited to concussion) for which children aged 5 to 18 years in 2001–2005 based on emergency department visits."); see also *Concussion Rates in High School Sports Vary by Sport and Gender*, MOMSTEAM (Feb. 2, 2011), <http://www.momsteam.com/concussion-rates-in-high-school-sports> (diagramming the results of four independent studies to show that concussion rates among thirteen high school sports varied greatly by sport and, in some instances, based upon gender).

225. Lincoln et al., *supra* note 224, at 959.

basketball, and soccer), girls had roughly twice the concussion risk of boys. Concussion rate increased over time in all 12 sports.²²⁶

Another notable study was published in the *Journal of Head Trauma Rehabilitation* in 2015, whereby researchers found that approximately 3.42 million emergency room visits were due to sports- and recreation-related-traumatic brain injuries (SRR-TBIs) from 2001–2012.²²⁷ When researchers analyzed the data by age groups, the study revealed that approximately seventy percent of all SRR-TBI emergency room visits were reported among patients aged nineteen years or younger.²²⁸ During this period of time, the rates of such injuries significantly increased in both genders regardless of age.²²⁹

In addition, each year, males were reported as having double the rate of SRR-TBIs than females.²³⁰ Furthermore, the highest incidence of SRR-TBIs reported for males occurred during bicycling, football, and basketball, and for females, the highest incidence of SRR-TBIs occurred during bicycling, playground activities, and horseback riding.²³¹ In sum, this study revealed: “Approximately 65% of all SRR-TBIs treated in [emergency departments] from 2001 to 2009 occurred among persons 19 years or younger. Most of these injuries were associated with bicycling, football, and playground activities and disproportionately affected 10- to 19-year-old males.”²³²

A separate study published in the *Journal of Athletic Training* in 2011 noted: “More than 1.6 million sport-related concussions occur every year in the United States, affecting greater than 5% of all high school athletes who participate in contact sports. As more females participate in sports, understanding possible differences in concussion symptoms between sexes becomes more

226. *Id.* at 958.

227. Victor G. Coronado et al., *Trends in Sports- and Recreation-Related Traumatic Brain Injuries Treated in US Emergency Departments: The National Electronic Injury Surveillance System-All Injury Program (NEISS-AIP) 2001–2012*, 30 J. HEAD TRAUMA REHABILITATION 185, 190 (2015).

228. *Id.* at 187.

229. *Id.* at 190 (“[I]ncreases in [SRR-TBI emergency room visit] rates were significant for all age groups and for both sexes.”).

230. However, with respect to this finding, the authors of the study noted:

Although the U.S. population-based rates we report suggest that males have higher rates of SRR-TBIs than females, studies using participation- or exposure-based rates often find the reverse, with higher rates of SRR-TBIs among females within comparable activities. This discrepancy may have occurred because our study did not take into account participation by or exposure to [sports and recreational activities (SRAs)]; therefore, comparisons across activities between this and the other studies cannot be made. Furthermore, the SRAs in this study may not have been the same as those reported in studies that used participation or exposure information.

Id. at 191 (footnotes omitted).

231. *Id.* at 190–91.

232. *Id.* at 186 (footnotes omitted).

important.”²³³ The study further noted that although neuropsychological data had previously been examined “to identify sex differences in sport-related concussions,” that analysis focused on collegiate athletes, and therefore, “whether high school athletes w[ould] behave similarly [remained] uncertain.”²³⁴

After reviewing the available literature on neuropsychological data, the authors of the study identified the issue as follows: “Sport-related concussions in male and female high school athletes have been the focus of limited research; specifically, sex differences in symptoms, symptom resolution time (SRT), and return-to-play (RTP) timelines in high school athletes have not been studied.”²³⁵ In other words, the study was designed to fill the gap in the literature by examining concussion symptoms in both male and female high school athletes using a nationwide sample.

Based upon existing research related to sports-related concussions and traumatic brain injury (TBI), the authors “hypothesized that females would report a greater number of symptoms, longer symptom duration, and later [return to play].”²³⁶ Surprisingly, however, this study revealed that high school girls and boys who suffer sports-related concussions reported: similar number of symptoms;²³⁷ the same amount of time for their symptoms to resolve and for them to return to playing sports;²³⁸ but different types of symptoms after sports-related concussions.²³⁹

Looking specifically at the types of symptoms, the data revealed that during the first year following a sports-related concussion, headaches were “the most commonly reported primary symptom (40% [n = 113] among males, 44% [n = 48] among females), although no difference was noted between sexes.”²⁴⁰ Comparing symptoms by sex, the study showed that during the first year that

233. Leah J. Frommer et al., *Sex Differences in Concussion Symptoms of High School*, 46 J. ATHLETIC TRAINING 76, 76–77 (2011) (footnotes omitted) (“Injury incidence among females has increased with increased female sport participation, and now females have a higher incidence rate of sport-related concussions than do males. However, the female response to concussion has not been well described, and similarities in male and female sport-related concussion symptoms remain largely anecdotal.” (footnotes omitted)).

234. *Id.* at 77.

235. *Id.*

236. *Id.*

237. *Id.* at 80 (“We found no difference in the number of symptoms reported between males and females, consistent with reports from other studies.”). The authors of the study also noted, “Some researchers, however, have shown that females reported more postconcussion symptoms than did males. This result may reflect differences in the populations studied, severity of injury, and mechanism of reporting, given that [those studies] studied smaller samples of collegiate athletes.” *Id.*

238. *Id.* at 82 (“The median time for [return to play] for all participants was 3 to 6 days and was not different between males and females.”).

239. *Id.* at 83 (“Males reported more cognitive symptoms, whereas females reported more symptoms in the neurobehavioral and somatic categories.”).

240. *Id.* at 78.

males reported symptoms of amnesia and confusion/disorientation more often than females.²⁴¹ During the second year, headaches again were “the most commonly reported symptom for both sexes (95% among males [n = 311] and 97% [n = 91] among females), although no difference was found between sexes.”²⁴² Moreover, during the second year, males again reported more symptoms of amnesia and confusion/disorientation compared to females, but females reported more drowsiness and sensitivity to noise more frequently than males.²⁴³

In contrast, the study did not observe any differences between males and females for symptom resolution time or return-to-play time.²⁴⁴ In fact, a majority (n = 556, 70.8%) of both male and female student-athletes reported resolution of their symptoms within three days of injury, with 72.2% reported by males and 66.7% reported by females.²⁴⁵ Moreover, “[a]mong all student-athletes, 64% (n = 503) returned to play by 9 days postinjury (63% [n = 133] of males and 66% [n = 370]) of females.”²⁴⁶ Specifically, “[t]he greatest percentage of males returned to play between 7 and 9 days after concussion (n = 174, 29.7%), whereas the greatest percentage of females returned between 3 and 6 days after concussion (n = 59, 29.4%).”²⁴⁷

In summary, as shown above, various authors have suggested that gender differences exist in sports-related concussions.²⁴⁸ Yet, there is very limited research regarding gender differences in youth sport-related concussions, including among male and female high school athletes.²⁴⁹ Nevertheless, based upon symptom resolution time and return-to-play time, at least one unique study has shown that “little difference is evident in the severity or outcome of concussions sustained between sexes in high school athletes.”²⁵⁰ Notably, however, the study revealed that male and female high school athletes experience different types of symptoms after a sport-related concussion, as males “reported more cognitive symptoms, whereas females reported more symptoms in the neurobehavioral and somatic categories.”²⁵¹

III. RECENT YOUTH SPORTS-RELATED CONCUSSION LAWSUITS, YOUTH SPORTS CONCUSSION LAWS, SUCCESSES AND BARRIERS TO EFFECTIVELY IMPLEMENTING SPORTS CONCUSSION LAWS, AND ANALYSIS OF THE

241. *Id.*

242. *Id.*

243. *Id.*

244. *Id.* at 78–79.

245. *Id.* at 78.

246. *Id.*

247. *Id.* at 78–79.

248. *See, e.g., id.* at 83.

249. *Id.* at 77; *see also* discussion *supra* Section II.A.

250. Frommer et al., *supra* note 233, at 83.

251. *Id.*; *accord supra* notes 240–43 and accompanying text.

EFFECTIVENESS OF CURRENT LAWS TOWARD ADDRESSING YOUTH SPORTS-RELATED CONCUSSIONS

A. Recent Youth Sports-Related Concussion Lawsuits

There have been various lawsuits filed in recent years across the United States associated with youth sports-related concussions, and they are mostly lawsuits filed by high school football players. Below is a summary and comprehensive analysis of several of these lawsuits.

I. Alt v. Shirey

In *Alt v. Shirey*,²⁵² Plaintiff Zachary Alt, a former student and football player at Highlands High School, sued Defendants Principal Thomas Shirey, Assistant Principal Walt Hanslik, Head Football Coach Sam Albert, and Athletic Trainer Mike Rizzo for head injuries he sustained while playing high school football in 2007.²⁵³ He was kept in games despite experiencing “ringing” sensation in his head and a temporary loss of hearing, and he was never evaluated.²⁵⁴ The Complaint alleged that at no time during the relevant time period did Defendants Albert, Rizzo, or the Highlands School District ever “instruct their student athletes . . . on the causes, symptoms and dangers of traumatic brain injuries,”²⁵⁵ nor did they “utilize a form baseline testing to monitor the progression and/or regression of head injuries sustained by their athletes.”²⁵⁶

The lawsuit stemmed from a 2007 playoff football game in which Alt sustained significant head injuries. Specifically, on November 9, 2007, Alt played in a playoff football game wherein he was involved in two helmet-to-helmet collisions, exhibited a “disorientated and confused disposition” after each collision, and yet was subsequently “forced to reenter the game.”²⁵⁷ Defendant Head Coach Albert’s instruction “to deliver a substantial hit to the opposition’s middle linebacker,” which resulted in the second helmet-to-helmet collision, was Alt’s last memory of the game.²⁵⁸ After the game,²⁵⁹ he was transported to

252. No. 2:11-CV-0468, 2014 WL 987011, at *1 (W.D. Pa. Feb. 4, 2014).

253. *Alt v. Shirey*, No. 2:11-CV-0468, 2012 WL 726579, at *2 (W.D. Pa. Feb. 7, 2012), adopted by 2012 WL 726593 (W.D. Pa. Mar. 1, 2012).

254. Second Amended Complaint at 6, ¶¶ 29–38, *Alt v. Shirey*, No. 2:11-CV-0468 (W.D. Pa. July 15, 2011), ECF No. 18.

255. *Id.* at 7, ¶ 39.

256. *Id.* at 7, ¶ 40.

257. *Shirey*, 2012 WL 726579, at *2.

258. *Id.* (“When instructing Plaintiff to deliver the ‘substantial hit,’ ‘Defendant Albert personally observed the disorientated and confused disposition of the Plaintiff,’ yet placed Plaintiff back onto the field of play.” (citing Second Amended Complaint, *supra* note 254, ¶ 58)).

259. *Id.* at *3. The Magistrate Judge’s report and recommendation found:

At the conclusion of the game, a teammate noticed that Plaintiff’s condition was worsening and that he needed medical attention. He called Plaintiff’s mother to inform her of his condition. Defendant Rizzo, after speaking with Plaintiff’s mother, personally transported Plaintiff to Plaintiff’s home. Upon arriving at Plaintiff’s home, Defendant

the emergency room where it was determined that he “had sustained a substantial closed head injury,” and as a result, “continues to suffer numerous physical, emotional, and cognitive injuries that could continue for the rest of his life.”²⁶⁰

Additionally, Alt alleged that when he returned to school after his head injury, the Highlands School District failed, despite his mother’s request, to provide adequate accommodations to assist him academically as he recovered from his head injury.²⁶¹ In fact, despite various discussions, “accommodations were never instituted which [would have] allowed the Plaintiff to fully realize the benefits of a Brain Steps Advocate,” thereby foreclosing that assistance with his coursework.²⁶² Consequently, Alt’s symptoms progressively worsened, causing his grades to suffer so substantially that “he and his mother were concerned that he would not pass the tenth grade.”²⁶³

In response to these concerns, Principal Shirey suggested that Alt’s grades could be improved “with a ‘shake of his magic wand,’” which meant that Principal Shirey was offering to “manipulate and/or fabricate” Alt’s grades.²⁶⁴ Alt and his mother “immediately disregarded this notion,” leaving them without a solution to Alt’s “decreased attendance and declining academic performance.”²⁶⁵ As a result, Alt’s attendance continued to decrease into the Spring Semester of 2008, with Alt missing “nearly the entirety of the remainder of the school year; yet [he] concluded the school year with nearly straight As.”²⁶⁶ Interestingly, Alt ended the 2008 Spring Semester with grades that “were markedly higher than [his] typical grades before the closed head injury.”²⁶⁷ Thus, Alt concluded that those grades, and the grades of subsequent semesters, were “manipulated to allow him to graduate.”²⁶⁸

Rizzo joked about Plaintiff’s behavior and suggested to Plaintiff’s mother that she should just “put him to bed.”

Id. (internal citations omitted).

260. *Id.*

261. *Id.*

262. *Id.* (quoting Second Amended Complaint, *supra* note 254, ¶ 120). Specifically, the magistrate’s report found:

At the direction of Plaintiff’s treating physicians, Plaintiff’s mother “pled” with the School District to employ a temporary Brain Steps Advocate to assist Plaintiff with his school work. Plaintiff’s mother and a Brain Steps Advocate did meet with Defendant Hanslik, however, “accommodations were never instituted which allowed the Plaintiff to fully realize the benefits of a Brain Steps Advocate.”

Id. (internal citations omitted).

263. *Id.*

264. *Id.*

265. *Id.*

266. *Id.*

267. *Id.*

268. *Id.* (“Plaintiff avers that in actuality, he did not earn a tenth-grade education.”).

In April of 2011, Alt filed the original Complaint in this lawsuit, with an Amended Complaint filed a week later.²⁶⁹ Then, in July of 2011, he subsequently filed a twelve-count Second Amended Complaint that included: (1) Fourteenth Amendment Due Process claims; (2) claims under the Pennsylvania Constitution; (3) a claim pursuant to the Rehabilitation Act and the Americans with Disabilities Act; (4) a Fourteenth Amendment Equal Protection claim; and (5) a state law negligence claim.²⁷⁰ Defendants subsequently moved to dismiss Alt's Second Amended Complaint in its entirety for failure to state a claim upon which relief can be granted.²⁷¹ Ultimately, on February 7, 2012, U.S. Chief Magistrate Judge Lisa Pupo Lenihan recommended that the Defendants' Motion to Dismiss be granted in part and denied in part.²⁷²

In the end, the Highlands School District settled this concussion-related lawsuit in January 2014, with Alt receiving \$20,000 plus attorneys' fees.²⁷³

2. Ripple v. Marble Falls Independent School District

In *Ripple v. Marble Falls Independent School District*,²⁷⁴ student Blake Alan Ripple was cleared to fully participate in sports, including football, despite suffering from heart problems such as a high heart rate, high blood pressure, and cholesterol, as well as "a family history of heart problems and heart-related death."²⁷⁵ In September 2012, Ripple filed a lawsuit against Marble Falls Independent School District alleging that coaches allowed him to continue playing football despite having sustained concussions and other injuries.²⁷⁶ He further alleged violations of (1) Section 504 of the Rehabilitation Act of 1973²⁷⁷ for failing to identify him as a "student with a disability," failing to "keep him safe from harm," and failing "to provide him with an environment that was not injurious to his physical well-being";²⁷⁸ and (2) Title II of the Americans with Disabilities Act²⁷⁹ for failing to make reasonable accommodations for him and failing "to train and/or educate its agents on the needs of students with disabilities."²⁸⁰

269. *Id.* at *4.

270. *See generally* Second Amended Complaint, *supra* note 254.

271. *See generally* Motion to Dismiss for Failure to State a Claim Upon Which Relief Can Be Granted, No. 2:11-CV-0468 (W.D. Pa. July 29, 2011), ECF No. 19.

272. *Shirey*, 2012 WL 726579, at *1.

273. *Shirey*, 2014 WL 987011, at *1; *accord* Brian Bowling, *Highlands School District to Pay Former Student \$20K to Settle Concussion Claims*, TRIBLIVE (Jan. 27, 2014, 5:57 PM), <http://triblive.com/news/alleggheny/5487624-74/district-alt-attorney>.

274. *Ripple v. Marble Falls Indep. Sch. Dist.*, 99 F. Supp. 3d 662 (W.D. Tex. 2015).

275. *Id.* at 667–68.

276. First Original Complaint ¶ 2, *Ripple*, 99 F. Supp. 3d 662 (W.D. Tex. 2015) (No. 12-0827), ECF No. 1.

277. Rehabilitation Act of 1973 § 504, 29 U.S.C. § 794 (2012).

278. *Ripple*, 99 F. Supp. 3d at 672.

279. Americans with Disabilities Act of 1990 tit. II, 42 U.S.C. §§ 12131–65 (2012).

280. *Ripple*, 99 F. Supp. 3d at 672.

After the Marble Falls Independent School District moved for summary judgment, U.S. District Court Judge David A. Ezra held a hearing to settle the motion on January 23, 2015.²⁸¹ On March 27, 2015, Judge Ezra granted the Defendant's Motion, stating the following reasons for the holding:

Even viewing the evidence in the light most favorable to Plaintiff, there is no evidence that the District acted with bad faith or gross professional misjudgment with regard to Ripple's physical safety. According to Plaintiff, his doctors cleared him annually to play to football. The coaching staff never sent Plaintiff back onto the field during the game when he sustained the injuries he complained of. The only concussion that Plaintiff informed the athletic team about was the one he sustained after the Lampasas game; he avoided reporting and seeking treatment for his concussive symptoms thereafter in an attempt to remain competitive for college scholarships. During the incident in Plaintiff's Senior year when Plaintiff became severely dehydrated and began bleeding out of his nose and ears, Plaintiff attests that the coaching team gave the team water breaks.

Although there may be a question of fact as to whether failing to fit Ripple's helmet at the start of his Junior season or failing to affirmatively identify signs of concussions through Ripple's behavior rises to the level of negligence, the facts do not present a question of fact as to whether Defendant acted in bad faith or with gross professional misjudgment. Accordingly, the Court GRANTS Defendant's Motion regarding the [Section] 504 claims.²⁸²

3. Wellman v. Butler Area School District

In *Wellman v. Butler Area School District*,²⁸³ Plaintiff Robert Wellman, Jr., a high school student athlete, filed a Complaint in 2015 against the Butler Area School District and Dr. John Wyllie, Butler Area High School's Principal.²⁸⁴

281. *Id.* at 667.

282. *Id.* at 691; accord *Judge Dismisses Ex-Football Player's Lawsuit vs. MFISD*, DAILYTRIB.COM (Apr. 27, 2015), <http://www.dailytrib.com/2015/04/27/judge-dismisses-ex-football-players-lawsuit-vs-marble-falls-isd/> ("Ripple filed the lawsuit in September 2012 alleging [Marble Falls Independent School District] and the coaching staff didn't provide enough protection for him when he played football. In the lawsuit, Ripple claimed he suffered more than 30 concussions or sub-concussions while playing and practicing football under the supervision of then-head football coach Cord Woerner. The former [Marble Falls High School] football player claimed in the lawsuit that, as a result of those concussions, he was unable to live independently and suffered physically and mentally from his playing. The lawsuit states Ripple first suffered a concussion Oct. 23, 2009, during a goal-line defense. The lawsuit describes what Ripple alleges was a pattern of excessive drills, exercises and playing time by the coaching staff and that led to and contributed to his long-term injuries.").

283. *Wellman v. Butler Area Sch. Dist.*, No. 13-CV-0616, 2015 WL 5156920 (W.D. Pa. Sept. 2, 2015), *vacated by* 877 F.3d 125 (3d Cir. 2017).

284. *Id.* at *2. As the U.S. District Court for the Western District of Pennsylvania explained,

Wellman subsequently filed a three-count Second Amended Complaint, which alleged violations of Section 504 of the Rehabilitation Act and Title II of the Americans with Disabilities Act against the School District as well as a violation of the Fourteenth Amendment under 42 U.S.C. § 1983 against the School District and Dr. Wyllie.²⁸⁵

Wellman's lawsuit stemmed from an incident that occurred on August 31, 2009, wherein he, as a high school freshman, "suffered head injuries while playing flag football in gym class and also at football practice the same afternoon."²⁸⁶ A subsequent computerized tomography scan (CT scan) of Wellman's head confirmed that he sustained a concussion.²⁸⁷ After developing "persistent symptoms," such as "pain, staring spells, trouble sleeping and difficulty concentrating,"²⁸⁸ his mother talked to school officials about Wellman's "need for accommodations when he returned to school, but officials made his transition back to school difficult," which led to an exacerbation of Wellman's condition.²⁸⁹ In fact, even after Wellman submitted a doctor's note specifically "asking for academic accommodations" to Dr. Wyllie, officials failed to make any changes to Wellman's educational program.²⁹⁰

Additionally, although Plaintiff Wellman was not medically cleared to participate in a September 30, 2009 football game, he attended the game in support of his teammates.²⁹¹ However, Wellman alleged that, during the game, his football coach had him "work the chains and hold one of the markers on the side of the field."²⁹² Unfortunately, as Wellman was performing this function, a player ran into him, "causing him to hit his head and suffer significantly worse symptoms. [Wellman] was subsequently 'diagnosed with post-concussive syndrome with symptoms which included headaches and other cognitive issues including difficulty remembering, and processing information, difficulty

Mr. Wellman and his parents filed a Due Process Complaint on March 26, 2012 under the Individuals with Disabilities Education Act ("IDEA") against the School District, requesting a hearing, an [individualized education program (IEP)] to address his educational needs, compensatory education for two years, and payment of the Plaintiff's private school tuition. On August 26, 2013, the parties entered into a Settlement and Release Agreement. The [Second Amended Complaint (SAC)] states that "[a]s part of the settlement Wellman and his parents agreed to release the school district from any claims which were pursued in the due process case or which could have been pursued in the due process case." The SAC also requests "all other available remedies at law, including an award of compensatory damages, punitive damages, attorney fees for this action, costs and all other relief as is just and appropriate."

Id. (internal citations omitted).

285. *Id.* at *1.

286. *Id.*

287. *Id.*

288. *Id.*

289. *Id.*

290. *Id.*

291. *Id.*

292. *Id.*

sleeping and severe anxiety.”²⁹³ When Wellman returned to school, his medical condition worsened because teachers and administrators refused to accommodate his headaches, fatigue, and concentration problems. Eventually, the situation became so dire that it compelled him to switch to homebound instruction in October of 2009, then later to a private school.²⁹⁴

In response to the Plaintiff’s Second Amended Complaint, the Defendants filed a Motion to Dismiss, which the court granted in part and denied in part on June 10, 2014.²⁹⁵ On September 2, 2015, District Court Judge Mark R. Hornak dismissed the case “without prejudice as to all Counts due to lack of subject matter jurisdiction based on Mr. Wellman’s failure to exhaust his administrative remedies under the IDEA.”²⁹⁶ However, on appeal, the Third Circuit vacated the dismissal and remanded the case back to the district court, holding:

[C]onsidering Wellman’s complaint, including each count therein, and the history of the proceedings, we conclude that the gravamen of Wellman’s complaint is the denial of a [free and public education (FAPE)] and that the District Court correctly concluded that Wellman’s complaint is the type that would ordinarily require administrative exhaustion.

Here, however, Wellman’s parents signed a settlement agreement that explicitly released all claims that were or could have been pursued in the due process proceeding pursuant to the IDEA or any other federal or state statute. Wellman concedes that he released all claims within the jurisdiction of the administrative hearing officer. All of his claims for relief were based upon the denial of a FAPE. As a result, since his complaint seeks relief for the denial of a FAPE, and he has conceded that he released all claims related to the denial of a FAPE, he has no

293. *Id.* (internal citations omitted).

294. *Id.* U.S. District Judge Mark R. Hornak found:

When he returned to school, Mr. Wellman’s situation deteriorated because officials “ignore[d] his doctor’s request for accommodations,” to the point where Mr. Wellman ultimately began “homebound instruction” in October of 2009.

After several unsuccessful attempts to return to school, the School District had the Plaintiff evaluated at his mother’s request, but determined that he was ineligible for an Individualized Education Program (“IEP”). However, “[a]n independent evaluation performed that same month,” showed that Mr. Wellman “met clinically significant criteria for anxiety disorder and cognitive disorder due to a medical condition.” After two meetings held to formulate an acceptable plan, Mr. Wellman determined that he could not return to school and enrolled first in Cyber School and then in a private school.

Id. (internal citations omitted).

295. *Id.* at *2.

296. *Id.* at *7.

claims to present to an administrative hearing officer and thus no claims to exhaust.²⁹⁷

4. Pierscionek v. Illinois High School Association

In *Pierscionek v. Illinois High School Association*,²⁹⁸ a former Illinois high school football player filed a class action complaint in 2014 against the Illinois High School Association (IHSA), which was “the first [lawsuit] of its kind in the country against such a high school governing body.”²⁹⁹ In the lawsuit, Plaintiff Pierscionek:

(1) want[ed] the IHSA to mandate that schools have medical professionals with concussion expertise at all football games as well as have someone available on call for all football practices, (2) want[ed] “new guidelines to screen players for brain injuries, as well as a program to educate teachers about identifying concussions,” and (3) desire[d] “the establishment of a ‘medical monitoring’ program that would allow all ex-high school football players from 2002 forward to be tested for problems that might be related to a concussion.”³⁰⁰

By doing these things, “former athletes would then be able to seek treatment—the IHSA would not be responsible for those costs—or pursue legal action.”³⁰¹

In response, the IHSA filed a Motion to Dismiss in April 2015, calling the lawsuit “‘a misguided effort that threatens high school football’ by imposing potentially prohibitive costs and miles of red tape.”³⁰² The IHSA further stated

297. *Wellman*, 877 F.3d at 135–36 (“For the foregoing reasons, we will vacate the District Court’s order dismissing the complaint without prejudice and remand with instructions to dismiss the complaint with prejudice.”).

298. *Pierscionek v. Ill. High Sch. Ass’n*, No. 14 CH 19131, 2015 WL 6550826 (Ill. Cir. Ct. Oct. 27, 2015).

299. Carter, *supra* note 6, at 366 (citing John Keilman, *Ex-High School Football Player Suing IHSA Over Concussions Wants Safer Game*, CHI. TRIB. (Apr. 22, 2015, 7:56 PM), <http://www.chicagotribune.com/suburbs/elgin-courier-news/sports/ct-ihsa-concussion-lawsuit-plaintiff-met-20150422-story.html>).

300. Carter, *supra* note 6, at 366 (discussing *Pierscionek*, 2015 WL 6550826, at *1, and quoting Keilman, *supra* note 299). Illinois Circuit Judge Leroy Martin summed up the case as follows:

Plaintiff’s First Amended Class Action Complaint alleges failures on the part of the Illinois High School Association to act in a way that would minimize the risk of concussion for student athletes in Illinois. It seeks two forms of remedies on behalf of the Class: 1) Injunctive relief intended to correct the deficiencies with IHSA’s current policies and procedures and bring those practices in line with the current research and best practices for handling concussions in youth athletes, and 2) Medical Monitoring by way of establishment of a fund to pay for the medical monitoring of Class members and to provide notice to Class members that they may require Medical Monitoring.

Pierscionek, 2015 WL 6550826, at *1.

301. Keilman, *supra* note 299.

302. *Id.*

in its dismissal motion that “Pierscionek accepted the risks of the game before getting on the field; the filing included a ‘concussion information sheet,’ signed by Pierscionek and his father in 2011, listing the injury’s symptoms and potential repercussions.”³⁰³

On October 27, 2015, Cook County Circuit Court Judge Leroy K. Martin, Jr. granted the Defendant’s Motion, thereby dismissing the lawsuit with prejudice.³⁰⁴ In his order, Judge Martin made clear that “it’s up to the legislature—not the judiciary—to make laws.”³⁰⁵ In fact, in August 2015, “the governor [of Illinois] signed a new law requiring schools have plans to deal with concussions, and that athletes must get a doctor’s okay before they can play again.”³⁰⁶ Coincidentally, Judge Martin’s order dismissing the lawsuit came only days after Andre Smith, a high school senior from Chicago, became the seventh football player to die from football injuries in the United States that season.³⁰⁷

5. Victory v. Rutherford County Board of Education

In August 2016, Lovetta Victory filed a lawsuit in the U.S. District Court in Nashville, Tennessee, after her son Caleb Victory, a Rutherford County middle school football player, sustained a traumatic brain injury during a football game at Siegel Middle School in Murfreesboro, Tennessee, on September 1, 2015.³⁰⁸ The lawsuit alleged that Caleb sustained a “significant blow to his head during a play,” after which he collapsed on the sideline and experienced a seizure, and he “remained in a seizure state for over twenty minutes,” resulting in “significant and permanent brain damage.”³⁰⁹ The lawsuit further alleged that Rutherford County Schools failed to provide an ambulance or have a properly equipped

303. *Id.* (quoting Defendant’s Section 2-619 Motion to Dismiss, *Pierscionek*, No. 2014 CH 19131, 2015 WL 2185904 (Ill. Cir. Ct. Apr. 10, 2015)); *accord Pierscionek*, 2015 WL 6550826, at *4 (“Both plaintiff and his parent signed an Athletic Permit which contained language expressly assuming the risk. The actual language is: ‘I am also aware of certain risks of physical injury and I agree to assume the full risk of any injuries that may occur.’ In conjunction with the Athletic Permit, a Concussion Information Sheet was also provided to plaintiff and signed by plaintiff and his parent.”).

304. *Pierscionek*, 2015 WL 6550826, at *1–*4.

305. Amanda Vinicky, *First-In-The-Nation Concussion Lawsuit vs. IHSA Dismissed*, WILL (Oct. 29, 2015), <https://will.illinois.edu/news/story/first-in-the-nation-concussion-lawsuit-vs.-ihsa-dismissed> (citing *Pierscionek*, 2015 WL 6550826, at *1 (“[E]nacting legislation lies within the distinct province of the legislature.”)).

306. *Id.*

307. *Id.* (“The Cook County Medical Examiner found he died of ‘blunt force head injuries.’”).

308. See Tom Kreager, *Injured Football Player’s Parent Sues Rutherford County*, TENNESSEAN (Aug. 30, 2016, 7:47 PM), <http://www.tennessean.com/story/news/education/2016/08/30/injured-football-players-parent-sues-rutherford-ounty/89607594/>.

309. *Victory v. Rutherford Cty. Bd. of Educ.*, No. 3:16-CV-2295, 2017 WL 1164604, at *1 (M.D. Tenn. Mar. 29, 2017).

paramedic present during junior varsity games, like the one in which Caleb was injured.³¹⁰

Consequently, Caleb's seizure did not stop until the paramedics arrived and administered aid to stop it.³¹¹ This led Lovetta and Caleb to believe that "had an ambulance been at the game, the seizure would have been stopped before permanent brain damage could be done."³¹² Caleb was later life-flighted to Vanderbilt's Monroe Carell Jr. Children's Hospital.³¹³

In sum, the lawsuit alleged that "Rutherford County Schools was aware of the risk of traumatic brain injuries to students participating in the school's football programs and was responsible for providing adequate emergency medical assistance for students who become injured during participation."³¹⁴ Ultimately, the lawsuit raised "a due process claim and an equal protection claim, which both turned on the same issue—whether the county's failure to provide on-site paramedics to its junior varsity football program violated the Fourteenth Amendment."³¹⁵

Although the federal District Court dismissed the lawsuit on March 29, 2017, Victory filed a separate lawsuit based on questions of state law,³¹⁶ which is still pending against the Rutherford County Board of Education.³¹⁷ Speaking to the press about the dismissal of the federal lawsuit, Victory's attorney James Bryan Moseley acknowledged:

The argument that we had made, in essence, was that having ambulances for varsity football players but not having ambulances for the younger kids amounted to a violation. Admittedly, [that argument] was plowing new ground. I don't think there has been any case that has decided that in the entire country.

The federal judge in our case (Kevin H. Sharp) decided not to be the one to recognize that as a right, and that's why he dismissed it.³¹⁸

Indeed, in his ruling, Judge Sharp stated: "While harm to Caleb as a football player may have been foreseeable as [the] Plaintiff argues, mere negligence does not meet the deliberate indifference requirement. Moreover, even if a sports injury was foreseeable, a resulting constitutional violation was not."³¹⁹

310. *Id.*

311. Kreager, *supra* note 308 (discussing *Victory*, 2017 WL 1164604, at *1).

312. *Id.*

313. *Id.*

314. *Id.*

315. Michael Murphy, *Judge Dismisses Federal Lawsuit Against Rutherford County Schools*, TENNESSEAN (Apr. 3, 2017, 3:27 PM), <http://www.tennessean.com/story/sports/high-school/2017/04/03/judge-dismisses-federal-lawsuit-against-rutherford-county-schools/99984458/> (discussing *Victory*, 2017 WL 1164604, at *2).

316. *Victory*, 2017 WL 1164604, at *5.

317. Murphy, *supra* note 315.

318. *Id.*

319. *Victory*, 2017 WL 1164604, at *2.

B. Overview of Youth Sports Concussion Laws

Over the years, the U.S. Congress and various states have enacted “concussion management guidelines for children enrolled in elementary and secondary schools.”³²⁰ Information pertaining to both federal initiatives and state laws follows.

1. U.S. Congress and Youth Sports Concussion Laws

For more than twenty years, the U.S. Congress has been enacting laws to address traumatic brain injury (TBI), beginning with the Traumatic Brain Injury Act of 1996.³²¹ Beginning in 1996, “federal funds have been granted to states ‘for the purposes of developing, expanding and improving access to service delivery for individuals with TBI and their families.’” Furthermore, Congress has appropriated funds to the CDC “for the purposes of injury surveillance, TBI prevention, and public education programs.”³²² In 2000, the Traumatic Brain Injury Act of 1996 was amended to encompass children’s health,³²³ with such amendments designed to increase traumatic brain injury awareness among children.³²⁴ In 2008, the Traumatic Brain Injury Act was reauthorized “along with continued federal appropriations through the end of fiscal year 2012.”³²⁵

In addition, New Jersey Representative William Pascrell proposed the Concussion Treatment and Care Tools Act of 2010 (ConTACT Act) to “provide for the establishment and implementation of concussion management guidelines with respect to school-aged children.”³²⁶ By design, the guidelines would have addressed the “prevention, identification, treatment, and management of concussions . . . including standards for such children to return to play after experiencing such a concussion.”³²⁷ However, the ConTACT Act never made “it through the committee process before the end of the 111th Congress and has not yet been enacted into law.”³²⁸

320. Elizabeth Etherton, *Systematic Negligence: The NCAA Concussion Management Plan and Its Limitations*, 21 SPORTS L.J. 1, 21 (2014) (citing the Children’s Health Act of 2000, Pub. L. No. 106-310, 114 Stat. 1101 (2000)). In this article, Etherton provides a good, comprehensive overview of concussion laws and protocols instituted, and it shows a linear progression of how the laws have developed over the last several years.

321. *Id.* at 22 (citing Traumatic Brain Injury Act of 1996, Pub. L. No. 104-166, 110, Stat. 1445 (1996)).

322. *Id.* (citing Susan L. Vaughn, *Traumatic Brain Injury Act of 2008: Overview*, NAT’L ASS’N ST. HEAD INJ. ADMINS., http://www.nashia.org/pdf/tbiactof_2008_history_08.pdf (last visited Oct. 7, 2017)).

323. *Id.* (citing the Children’s Health Act of 2000, Pub. L. No. 106-310, 114 Stat. 1101 (2000)).

324. *Id.*

325. *Id.*

326. *Id.* at 22–23 (quoting Concussion Treatment and Care Tools Act of 2010, H.R. 1347, 111th Cong. (2010)).

327. *Id.* at 23.

328. *Id.* (“The Congressional Budget Office estimated that implementation of the ConTACT Act would cost less than \$30 million, or less than \$1 per tax-paying American.”).

In sum, “[t]o date, there is no federal law that enacts a firm plan for concussion management, nor is there one that offers any sort of penalty. Rather, Congress has decided to study TBI and reward states through grant money for their participation in these studies.”³²⁹ In fact, Representative Pascrell of New Jersey, who originally proposed the ConTACT Act of 2010, also introduced the ConTACT Act of 2015 on January 28, 2015, but the bill again failed to be enacted into law before the end of the 114th Congressional Session in January 2017.³³⁰ His bill was significant because it proposed on the federal level “[t]o amend [T]itle III of the Public Health Service Act to provide for the establishment and implementation of guidelines on best practices for diagnosis, treatment, and management of mild traumatic brain injuries (MTBIs) in school-aged children, and for other purposes.”³³¹

2. State Laws

Due to “the lack of federal legislation for concussions in elementary- and secondary-school-aged athletes, many states have enacted their own regulatory schemes.”³³² In fact, states have been trying to address the major public health issue of youth sports-related concussions for many years now, including through the passage of various state laws.³³³ Below is a summary of various state laws in effect in 2016 that address concussions in youth sports.³³⁴

329. *Id.*

330. *H.R. 582—114th Congress: ConTACT Act of 2015*, GOVTRACK, <https://www.govtrack.us/congress/bills/114/hr582> (last visited Oct. 7, 2017). According to the website, “[t]his bill was introduced in the 114 Congress, which met from Jan 6, 2015 to Jan 3, 2017. Legislation not enacted by the end of a Congress is cleared from the books.” *Id.* The website further noted the bill’s status as “[d]ied in a previous Congress.” *Id.*

331. *Id.* For information on other youth sports concussion laws being introduced at the federal level, see Lydia Townsend, Comment, *The Youth Sports Concussion Act and Why Congress Needs to Get Its Head in the Game*, 84 UMKC L. REV. 575, 579–81 (2015) (examining The Youth Sports Concussion Act of 2013 and why failing to pass the Act is detrimental to the future of false advertising claims regarding youth sporting equipment).

332. Etherton, *supra* note 320, at 23.

333. See Carter, *supra* note 6, at 366; see also Kerri McGowan Lowrey, *State Laws Addressing Youth Sports-Related Traumatic Brain Injury and the Future of Concussion Law and Policy*, 10 J. BUS. & TECH. L. 61, 63 (2015).

334. For an invaluable tool to review and compare major similarities between the most current state youth concussion laws, see NETWORK FOR PUB. HEALTH LAW, YOUTH SPORT CONCUSSION LAWS FACT SHEET: SUMMARY MATRIX OF STATE LAWS ADDRESSING CONCUSSIONS IN YOUTH SPORTS (June 30, 2017), https://www.networkforphl.org/_asset/7xwh09/Sports-Concussion-Table.pdf. It is extremely helpful because it provides a state-by-state summary in a table format of each state’s current youth concussion law in effect as of June 30, 2017, including the codified state statutes and any administrative regulation citations for each state’s concussion law. For other useful resources, see also Lindsey Barton Straus, *Concussion Safety Laws in Place in Every State*, MOMSTEAM, <http://www.momsteam.com/health-safety/every-state-has-youth-sports-concussion-safety-law> (last updated Apr. 3, 2015); *Traumatic Brain Injury Legislation*, NAT’L CONF. ST. LEGISLATURES (Nov. 18, 2015), <http://www.ncsl.org/research/health/traumatic-brain-injury-legislation.aspx> (dedicating an entire page to “Traumatic Brain Injury Legislation” and offering a

a. Washington: Zackery Lystedt Law—Model Youth Sports Concussion Law

In May of 2009, Washington State enacted the Zackery Lystedt Law (Lystedt Law)³³⁵ “to address concussion management in youth athletics.”³³⁶ It was the first state law to mandate a “removal and clearance for Return to Play” for child athletes.³³⁷ With the support of the NFL “and other influential stakeholders, the Lystedt Law became a model for other state legislative activity, resulting in rapid and widespread passage of public health legislation across the nation.”³³⁸

In fact, in the wake of its passage, “at least 42 additional states and the District of Columbia passed similar laws,” in the years between 2009 and 2012.³³⁹ Moreover, since April 2014, “every state and the District of Columbia, has enacted a law that addresses youth sports concussion.”³⁴⁰ Thus, all fifty states currently “have a Return to Play law.”³⁴¹

The three key components of the Zackery Lystedt Law rest in subsections 2, 3, and 4, and read as follows:

(2) Each school district’s board of directors shall work in concert with the Washington interscholastic activities association to develop the guidelines and other pertinent information and forms to inform and educate coaches, youth athletes, and their parents and/or guardians of the nature and risk of concussion and head injury including continuing to play after concussion or head injury. On a yearly basis, a concussion and head injury information sheet shall be signed and returned by the youth athlete and the athlete’s parent and/or guardian prior to the young athlete’s initiating practice or competition.

(3) A youth athlete who is suspected of sustaining a concussion or head injury in a practice or game shall be removed from competition at that time.

“search” feature on the website where one can review each state’s current concussion law individually).

335. 2009 Wash. Legis. Serv. ch. 475 (West).

336. CTNS FOR DISEASE CONTROL & PREVENTION, NAT’L CTR. FOR INJURY PREVENTION & CONTROL, IMPLEMENTING RETURN TO PLAY: LEARNING FROM THE EXPERIENCES OF EARLY IMPLEMENTERS 2 (Mar. 12, 2013), https://www.cdc.gov/headsup/pdfs/policy/rtp_implementation-a.pdf [hereinafter IMPLEMENTING RETURN TO PLAY] (“The requirements of Return to Play laws vary but typically include some combination of the following: Mandatory removal from play; Mandatory bench times; Required medical clearance; Required training/education for coaches, parents, and athletes; [and] Informed consent of parents and athletes.”); accord Lowrey, *State Laws*, *supra* note 333, at 63 (noting that the law was “named for Zachary Lystedt, a middle school football player who suffered a severe brain injury after returning to a game in which he had sustained an earlier concussion.”).

337. IMPLEMENTING RETURN TO PLAY, *supra* note 336, at 2.

338. Lowrey, *State Laws*, *supra* note 333, at 63.

339. IMPLEMENTING RETURN TO PLAY, *supra* note 336, at 2.

340. Carter, *supra* note 6, at 366; accord Lowrey, *State Laws*, *supra* note 333, at 63.

341. Carter, *supra* note 6, at 366.

(4) A youth athlete who has been removed from play may not return to play until the athlete is evaluated by a licensed health care provider trained in the evaluation and management of concussion and receives written clearance to return to play from that health care provider.³⁴²

b. Categories of State Youth Sports Concussion Laws

As noted above, the 2009 Lystedt Law is considered “the model” state youth sports concussion law that caused many other states to quickly enact similar laws in their respective states.³⁴³ In 2016, the Network for Public Health Law published a comprehensive summary of state youth sports concussions laws.³⁴⁴ Some state youth sports concussion laws are more comprehensive than others. They vary greatly based upon whether the state law (1) requires training for coaches; (2) requires education for parents; (3) requires education for youth athletes; (4) has Return-to-Play (RTP) restrictions; (5) requires medical clearance prior to RTP; (6) has designated the types of providers who can issue RTP clearance; and (7) applies to recreational sports.³⁴⁵ Therefore, based upon a review and analysis of state youth sports concussion laws in effect in 2016,³⁴⁶ these state laws are categorized below as (1) state laws similar to the Lystedt Law; (2) weakest state laws; and (3) the most comprehensive and expansive state laws based solely upon which of the seven components listed above are contained in each state’s youth sports concussion law.

i. State Laws Similar to the Lystedt Law

The Lystedt Law in Washington includes five of the seven above-listed components, which include: (1) requiring education for parents; (2) requiring education for youth athletes; (3) having Return-to-Play (RTP) restrictions; (4) requiring medical clearance before RTP; and (5) having designated the types of providers who can issue RTP clearance.³⁴⁷ The specific type of provider mentioned in the law is a “licensed health care provider trained in the evaluation and management of concussion.”³⁴⁸ Therefore, the Lystedt Law does not have two of the seven components because the law currently does not apply to recreational sports, and it does not require training for coaches.³⁴⁹ As noted above, in terms of educating parents and youth athletes, the Lystedt Law only

342. WASH. REV. CODE ANN. § 28A.600.190(2)–(4) (West 2018).

343. Lowrey, *State Laws*, *supra* note 333, at 63.

344. *See* NETWORK FOR PUB. HEALTH LAW, *supra* note 334 (updated June 30, 2017).

345. *See id.* at 1 (listing these seven components as the table headings of the Summary Matrix).

346. Note from the Editors: This analysis is based on the most current information available at the time this Article was written. THE NETWORK FOR PUBLIC HEALTH LAW updated the list on June 30, 2017.

347. *See* NETWORK FOR PUB. HEALTH LAW, *supra* note 334, at 26.

348. WASH. REV. CODE ANN. § 28A.600.190(4).

349. *See* NETWORK FOR PUB. HEALTH LAW, *supra* note 334, at 26.

requires both the athlete and a parent/legal guardian to sign a concussion and head injury information sheet on an annual basis.³⁵⁰

Several other states have current laws that are similar to Washington's Lystedt Law in that each state's youth sports concussions law contains the five above-mentioned components, but the state laws do not apply to recreational sports nor do they require training for coaches. Besides Washington, five other states fit into this category: Alaska, California, Iowa, Kansas, and Oklahoma.³⁵¹

ii. Weakest State Laws

The "weakest state laws" label refers to state youth sports concussion laws that meet less than three of the components listed above. Only one state fits into this category, and that state is Wyoming.³⁵² Wyoming's law is considered one of the weakest state youth sports concussion laws.³⁵³ Its law only contains two of the seven components listed above and in terms of parental and youth athlete education, it does not require their acknowledgment of receipt of educational information or informed consent prior to a youth athlete participating in sports; this is the only law that does not require medical clearance; it does not designate the types of providers who can issue RTP clearance; and it does not apply to recreational sports.³⁵⁴

iii. Most Comprehensive and Expansive State Laws

The "most comprehensive and expansive state laws" label refers to those state youth sports concussion laws that contain all seven components: (1) requires training for coaches; (2) requires education for parents; (3) requires education for youth athletes; (4) has Return-to-Play (RTP) restrictions; (5) requires

350. *See id.*

351. *See id.* at 1, 2, 10, 19 (comparing ALASKA STAT. ANN. §§ 14.30.142, 14.30.143 (West 2016); CAL. EDUC. CODE §§ 49475, 35179.5 (West 2016); CAL. HEALTH & SAFETY CODE § 124235 (West 2016); IOWA CODE ANN. § 280.13C (West 2016); KAN. STAT. ANN. § 72-135 (West 2016); OKLA. STAT. ANN. tit. 70 § 24-155 (West 2016)). Contrast those statutes with North Carolina's, which "requires coaches, among others, to receive an annual concussion and head injury information sheet and participate in rehearsing a venue-specific emergency action plan, [but] it does not require coaches to complete concussion education or training." N.C. GEN. STAT. ANN. § 115C-12(23) (West 2016).

352. *See* NETWORK FOR PUB. HEALTH LAW, *supra* note 334, at 27 (citing WYO. STAT. ANN. §§ 21-2-202(a)(xxxiii), 21-3-110(a)(xxxii) (West 2016)).

353. *See* Straus, *supra* note 334 ("One state (Wyoming) has enacted a weak sports concussion safety law that does not [meet] the requirement of the model Zackery Lystedt law in that parents and guardians are not required [sic] to sign a concussion information form as a condition of participation. Indeed, a provision hidden in a bill approved by the Wyoming governor on January 29, 2013 appears to dilute the 2011 law by making adoption of model protocols for [sic] addressing concussions and head injuries by school district optional." (internal citations omitted)).

354. *See* NETWORK FOR PUB. HEALTH LAW, *supra* note 334, at 27 (citing WYO. STAT. ANN. §§ 21-2-202(a)(xxxiii), 21-3-110(a)(xxxii) (West 2016)).

medical clearance prior to RTP; (6) has designated the types of providers who can issue RTP clearance; and (7) applies to recreational sports.³⁵⁵

There are eleven states that have youth sports concussion laws containing all seven components:³⁵⁶ Alabama,³⁵⁷ Arkansas,³⁵⁸ Illinois,³⁵⁹ Indiana,³⁶⁰ Louisiana,³⁶¹ Maryland,³⁶² Michigan,³⁶³ Nevada,³⁶⁴ Ohio,³⁶⁵ Oregon,³⁶⁶ and Tennessee.³⁶⁷ Because the youth sports concussion laws in these states contain all seven components, including the application of their laws to recreational sports, the laws in these states are more comprehensive and provide broader coverage than laws in other states.

355. See *supra* notes 343–45 and accompanying text.

356. See generally NETWORK FOR PUB. HEALTH LAW, *supra* note 334. The following sixteen states have state youth sports concussion laws that contain six of the seven components, including required training for coaches, but none of their laws apply to recreational sports: Connecticut, Delaware, Hawaii, Kentucky, Maine, Massachusetts, Montana, New Jersey, New Mexico, North Dakota, Pennsylvania, Rhode Island, South Dakota, Texas, Vermont, and West Virginia. Although the Lystedt Law does not include this particular provision, the laws in these states could be made more expansive by adding the recreational sports component. See *id.* (comparing CONN. GEN. STAT. ANN. §§ 10-149(b)-(c) (West 2017); DEL. CODE ANN. tit. 14, § 303 (West 2017); 14 DEL. ADMIN. CODE §§ 1008-1009 (2017); 2012 HAW. SESS. LAWS 717-19; KY. REV. STAT. ANN. § 160.445 (West 2017); 702 KY. ADMIN. REG. 7:065 (West 2017); ME. REV. STAT. ANN. tit. 20-A, § 254(17) (2017); ME. REV. STAT. ANN. tit. 20-A, § 1001(19) (2017); MASS. GEN. LAWS ANN. ch. 111, § 222 (West 2017); 105 MASS. CODE REGS. § 201.001 et seq. (LexisNexis 2010); MONT. CODE ANN. § 20-7-1301 - 20-7-1304 (West 2017); N.J. STAT. ANN. §§ 18A:40-41.1 - 41.7; N.J. ADMIN. CODE § 6A:16-2.2 (2010); N.M. STAT. ANN. § 22-13-31 (West 2017); N.D. CENT. CODE ANN. § 15.1-18.2-04 (West 2017); 24 PA. STAT. AND CONS. STAT. ANN. §§ 5322-5323 (LexisNexis 2017); 1956 R.I. GEN. LAWS § 16-91-1 et seq. (West 2017); 31-1 R.I. CODE R. § 37-18.18 (West 2017); S.D. CODIFIED LAWS § 13-36-9 et seq. (2017); TEX. EDUC. CODE ANN. § 33.202 (West 2017); TEX. EDUC. CODE ANN. § 38.151 et seq. (West 2017); VT. STAT. ANN. tit. 16, § 1431 (West 2017); W. VA. CODE ANN. § 18-2-25a (West 2017); W. VA. CODE R. § 18-2-25a (2017)).

357. ALA. CODE § 22-11E-2 (LexisNexis 2017).

358. ARK. CODE ANN. §§ 6-18-708 to 6-18-710 (West 2017); ARK. ADMIN. CODE § 005.22.7-7.0 (West 2017).

359. 105 ILL. COMP. STAT. ANN. §§ 5/22-80, 25/1.15, 1205/8-24 (West 2017).

360. IND. CODE ANN. §§ 20-34-7-1, 20-34-7-1.5, 20-34-7-6 (West 2017).

361. LA. REV. STAT. ANN. §§ 40:1089.1–1089.5 (West 2017).

362. MD. CODE ANN., EDUC. § 7-433 (LexisNexis 2017); MD. CODE ANN., HEALTH-GEN. § 14-501 (West 2017); MD. CODE REGS. 13A.06.08.01 (2017).

363. MICH. COMP. LAWS ANN. §§ 333.9155–333.9156 (West 2017).

364. NEV. REV. STAT. ANN. §§ 385B.080, 392.452, 455A.200 (West 2017); NEV. ADMIN. CODE § 386.832 (2017).

365. OHIO REV. CODE ANN. §§ 3313.303, 3319.539, 3707.511, 3707.521 (West 2017); OHIO REV. CODE ANN. tit. 47 § 4755.61 (West 2017) (relating to health care licensing).

366. OR. REV. STAT. ANN. §§ 336.485, 417.875 (West 2017); OR. ADMIN. R. 581-022-0421 (2017)

367. TENN. CODE ANN. §§ 68-55-501 to 68-55-503 (West 2017).

C. Successes and Barriers to Effectively Implementing Youth Sports Concussion Laws

Following the passage of the Lystedt Law in 2009, much has been done across the country to combat the serious public health issue of youth sports-related concussions. Specifically, as noted above, all fifty states and the District of Columbia have youth sports concussion laws.³⁶⁸ Such laws are “designed to educate and ensure that athletes do not return to play before a concussion has healed properly.”³⁶⁹ Although “the widespread and rapid adoption of such laws” are viewed “as a major victory for public health” by many, “the question now becomes: *Will they ‘work’?*”³⁷⁰ Thus, despite the fact that all states have youth sports concussion laws on the books, the laws are useless if they are not—or cannot be—successfully implemented.

The CDC’s National Center for Injury Prevention and Control (NCIPC) “conducted a case study evaluation on the Return to Play implementation efforts in two states: Washington and Massachusetts.”³⁷¹ The study selected those states “because they were both early adopters of Return to Play and because their laws varied on several important dimensions, including the role of the health department and other stakeholder groups.”³⁷² The study sought “to assess implementation efforts, including related challenges and successes in implementation.”³⁷³ The NCIPC’s stated purpose of their 2013 report was “to present the lessons learned and suggestions regarding the implementation of Return to Play. . . . By presenting the experiences of these early implementers, other states can improve the implementation of their Return to Play laws.”³⁷⁴

Overall, the NCIPC study found some important considerations for the implementation of Return to Play laws: (1) stakeholder roles and responsibilities; (2) implementation requirements; (3) knowledge and awareness; (4) medical clearance; (5) supporting and monitoring implementation; and (6) planning ahead to evaluate the impact of Return to Play laws.³⁷⁵ Moreover, some lessons learned from state stakeholders in the study in order to successfully implement Return to Play laws included the following: (1)

368. See Carter, *supra* note 6, at 366; accord Lowrey, *State Laws*, *supra* note 333, at 63.

369. Kerri Lowrey, *The Value of States Sharing Their Experiences with Implementing Youth Sports Concussion Laws*, NETWORK PUB. HEALTH L. (Feb. 15, 2013, 3:10 PM), https://www.networkforphl.org/the_network_blog/2013/02/15/162/the_value_of_states_sharing_their_experiences_with_implementing_youth_sports_concussion_laws.

370. *Id.*; accord Phoebe Anne Amberg, Comment, *Protecting Kids’ Melons: Potential Liability and Enforcement Issues with Youth Concussion Laws*, 23 MARQ. SPORTS L. REV. 171, 182 (2012) (“The passage of youth concussion statutes in almost all the states in America is a success in and of itself . . .”).

371. IMPLEMENTING RETURN TO PLAY, *supra* note 336, at 3.

372. *Id.*

373. *Id.*

374. *Id.*

375. *Id.* at 4.

“[v]alue stakeholder input”; (2) “[b]uild in time for planning”; (3) “[c]onsider a comprehensive approach to preventing injury”; (4) “[b]e specific about details of implementation”; (5) “[p]rovide access to resources regarding return to play strategies to recreational leagues”; (6) “[k]eep up with the science”; and (7) “[c]onsider the importance of ‘Return to Academics.’”³⁷⁶

Conversely, some potential barriers to implementation cited in the NCIPC study were as follows: (1) “[a]wareness about Return to Play laws”; (2) “[s]tudent resistance to reporting symptoms”; (3) “[a]ccess to adequate healthcare services”; and (4) “[r]esources for implementation, monitoring, [and] evaluation.”³⁷⁷ In sum, the overall purpose for Return to Play laws is that they “will successfully reduce the impact of youth sports and recreation-related concussions. However, further research is needed to expand the evidence base around the impact of these types of laws, identify best practices for implementation, and identify any unintended consequences of Return to Play laws.”³⁷⁸

Besides the NCIPC’s study, the Network for Public Health Law has also conducted a groundbreaking study focused on the implementation of state youth sports concussion laws.³⁷⁹ In fact, although “it [wa]s too early to evaluate the impact of the laws on long-term health outcomes, such as second impact syndrome, early-onset dementia, or suicide—or even on more immediate outcomes like incidence of post-concussive syndrome due to policy lag time,” the Network for Public Health Law in 2013 began to “lay the groundwork for [such] studies by describing how the laws are being implemented in each state.”³⁸⁰ Conducting such studies and providing this type of information is “critical to understanding nuanced differences in outcomes that may not be due to actual statutory provisions, but to differences in how the law was put into practice.”³⁸¹ To achieve this end, the Network for Public Health Law conducted “an interview study to explore states’ experiences with implementing youth sports concussion law. [They] interviewed state officials and organizational leaders charged with implementing their states’ law.”³⁸² The “preliminary findings suggest[ed] that states share many of the same factors that either promote or impede implementation.”³⁸³

376. *Id.* at 5–10.

377. *Id.* at 7–9, 11.

378. *Id.* at 2.

379. Lowrey, *The Value of States Sharing Their Experiences*, *supra* note 369 (discussing the study) (“[T]he Network is close to completing an interview study to explore states’ experiences with implementing youth sports concussion laws. We interviewed state officials and organizational leaders charged with implementing their states’ law.”).

380. *Id.*

381. *Id.*

382. *Id.*

383. *Id.*

Moreover, although youth sports concussion laws “contain very similar provisions, little is known as to how they are being implemented, what factors promote or constrain implementation, or the level of compliance in each jurisdiction.”³⁸⁴ Therefore, “[u]nderstanding implementation of these laws is a vital step in evaluating their ultimate effectiveness. The extent to which a law is fully implemented is a critical factor in the ultimate ability of a law to impact health outcomes.”³⁸⁵ Indeed, numerous factors can impact “th[e] implementation process, including the capacities of implementing agencies, the relationship between the law and existing community norms, and the mechanisms for ensuring compliance.”³⁸⁶

Furthermore, persons responsible for enforcing laws are “uniquely situated to inform the study of implementation processes, identifying where ‘law on the streets’ may diverge from ‘law on the books.’”³⁸⁷ This is why the Network for Public Health Law’s 2013 interview study mentioned above strategically targeted key individuals in thirty-five states with recently enacted concussion legislation. The Network for Public Health Law specifically

aimed to describe state experiences in the implementation of youth concussion laws in order to guide ongoing efforts to reduce the incidence and severity of sports-based traumatic brain injuries, identify considerations for future evaluations of the laws’ impacts, and to inform the development and implementation of future public health policies.³⁸⁸

In fact, Network for Public Health Law’s study provided “the first national, empirical evaluation of state-level experiences with the implementation of sports-based concussion laws.”³⁸⁹ The findings of the study were as follows:

(1) *Implementation Progress*

“States varied considerably in the time required for implementation,” but five factors that helped with speed and ease of implementation included: (1) “prior state-level activity on concussion awareness and management”; (2) “the preexistence of training requirements,” along with the “availability of preexisting training courses, such as that offered by the National Federation of State High School

384. Kerri McGowan Lowrey & Stephanie R. Morain, *State Experiences Implementing Youth Sports Concussion Laws: Challenges, Successes, and Lessons for Evaluating Impact*, 42 J.L. MED. & ETHICS 290, 291 (2014).

385. *Id.*

386. *Id.*

387. *Id.*

388. *Id.* (“[The researchers] conducted 36 interviews with key informants in . . . states that had enacted laws addressing concussions in youth sports that were effective as of December 31, 2012 (83% response rate) All interviews were conducted by telephone from October 2012 through March 2013”).

389. *Id.* at 294. Notably, Kerri McGowan Lowrey, a co-author for the article, serves as the Deputy Director for the Eastern Region of the Network for Public Health Law. *Id.* at 290.

Associations”; (3) “vesting authority for implementation with central organizing bodies that have prior familiarity with the target population and on-hand infrastructure and protocols—such as interscholastic athletic associations, athletic trainers’ associations, and boards of education—streamlined implementation by providing standardized policies and technical assistance”; (4) “the key role played by partnerships during both the legislative process and implementation,” including “the role of NFL teams, state brain injury associations, and medical or research centers in advocating for the laws, providing free or reduced-cost training materials, and offering start-up funding for new concussion programs,” and the few states that “are collecting data related to implementation of the law or outcomes,” which have “identified medical and research centers as playing a vital role in establishing data collection systems, which are integral to future policy evaluation efforts”; and (5) there was “a smoother path to implementation if the agencies responsible for implementation were involved in the legislative process. Such involvement enabled agencies to advise on existing state-level procedures and capabilities.”³⁹⁰

(2) *Coverage of the Law and Statutory Language*

“In all states studied, legislative requirements applied to youth participating in high school athletic activities. In many states, the law relied upon preexisting governance structures for implementation, particularly state level high school athletic associations.” A smaller number “of states extended the requirements to cover recreational or community leagues, such as YMCA programs, church leagues, and similar programs.” Some other “states reported exploring similar expansions, but declined to do so, citing jurisdictional issues as a barrier for extending coverage, including the absence of existing regulatory structure for overseeing community-level athletics.”³⁹¹

“Some states experienced uncertainty in determining to which individuals and activities the law should apply. This was attributed to two factors: ambiguous [statutory] language and unclear delegation of authority.” Examples included having “undefined terms within the legislation,” or a “lack of legislative consideration as to which authority held responsibility for implementation” of concussion requirements in other settings such as recreational or private leagues when, typically, “the implementing agency is a department of education or interscholastic athletic association that typically only oversees interscholastic activities.” In those instances, “it was unclear

390. *Id.* at 292.

391. *Id.* at 292–93.

whether and how the implementing agency should expand its reach to implement the concussion requirements in these other settings.”³⁹²

There were “several areas where implementation might not mirror the law as written,” because either “the law’s reach was narrower in practice than it appeared from the legislative text due to uneven implementation of the law’s requirements” or “the law’s reach [was] broader than suggested by the law’s text.”³⁹³

(3) *Return-to-Play Assessments*

“Determining which providers are capable of making RTP assessments remains an ongoing concern for many states. Several states reported that determining which provider groups would be considered qualified to make RTP assessments was among the most contentious battles encountered during the legislative process.”³⁹⁴

(4) *Enforcement and Compliance*

“The laws established little to no formal enforcement mechanisms to ensure compliance.” As a result, “Respondents identified three obstacles to compliance: provider access, parent cooperation, and awareness” of the law.³⁹⁵

D. Effectiveness of Current Laws Toward Addressing Youth Sports-Related Concussions

Although every state and the District of Columbia have youth sports concussion laws, “the true success comes when a youth concussion statute is actually effective at accomplishing what it was set out to do: prevent student-athletes from returning to play before being fully recovered from their concussions, thereby reducing the incidence of second-impact syndrome.”³⁹⁶ Therefore, a question that has been raised regarding these laws’ impact after their implementation is: “*Do the laws work?*”³⁹⁷

A majority of people would “agree that return-to-play legislation is not likely to change sports culture on its own.”³⁹⁸ However, “state youth concussion laws may play an important role in promoting a culture change in youth and professional sports away from a ‘culture of resistance’ in self-reporting injuries

392. *Id.* at 293.

393. *Id.*

394. *Id.*

395. *Id.* at 294.

396. Amberg, *supra* note 370, at 182.

397. See Lowrey, *State Laws*, *supra* note 333, at 64 (emphasis added) (Section III of the article is titled “Do the Laws Work?”).

398. *Id.* (citing Fredrick P. Rivara, *The Effect of Coach Education on Reporting of Concussions Among High School Athletes After Passage of a Concussion Law*, 42 AM. J. SPORTS MED. 1197, 1202 (2014) (“[A]ttitudes of athletes regarding the reporting of concussive symptoms are a major barrier to the proper care of players with concussions, and a change in these attitudes will not be accomplished through legislation alone.”)).

. . . and toward one centered on player safety.”³⁹⁹ In fact, “[e]valuation of these laws is in its infancy, but preliminary data indicate that the laws are at least increasing awareness of the problem.”⁴⁰⁰ Indeed, as Dr. Stanley Herring, a sports medicine expert, noted, “the great news is that it’s working. Before the Lystedt Law, at least one youth athlete had a subdural hematoma requiring surgery in Washington state each of the last eight years. Since the law went into effect, there have been none.”⁴⁰¹

Conversely, despite several components of the laws being “fairly uniform across states, uniformity ‘on the books’ obscures a tremendous amount of variation of the laws in practice.”⁴⁰² In fact, “[s]ome provisions, or at least how the provisions are implemented, may not line up with prevailing science.”⁴⁰³ For example, “research suggests that, in general, passive risk communication may not be sufficient to encourage behavior change.”⁴⁰⁴ Thus, although “a handout or Web site screen during registration is sufficient to constitute ‘education’ of the risks of concussion under many state laws, as implemented,” these methods are tremendously passive, and the effectiveness of “communicating risk information in this setting is unknown.”⁴⁰⁵

Additionally, other problems related to the effectiveness of youth sports concussion laws focus on the potential liability of coaches and medical personnel under such laws.⁴⁰⁶ Indeed, as one commentator noted: “The main issue regarding effectiveness of the concussion statutes is the lack of enforcement. Other issues relating to effectiveness include: lack of ability to implement the statute in rural areas, lack of baseline neuropsychological testing, and lack of medical personnel on sidelines.”⁴⁰⁷

399. *Id.* at 64–65.

400. *Id.* at 65.

401. Joe Frollo, *Three Years Later, Lystedt Law Protects Young Athletes in 34 States and D.C.*, USA FOOTBALL (May 10, 2012, 9:36 AM), <http://usafootball.com/news/featured-articles/three-years-later-lystedt-law-protectsyoun-g-athletes-34-states-and-dc> (reporting the statements of Dr. Stanley Herring, “team physician for the Seattle Seahawks, a member of the NFL Head, Neck and Spine Committee and a member of the USA Football’s Football and Wellness Committee”).

402. Lowrey, *State Laws*, *supra* note 333, at 65 (citing Lowrey & Morain, *State Experiences*, *supra* note 384, at 296).

403. *Id.*

404. *Id.* at 66.

405. *Id.* at 65–66 & n.29 (citing Sara P. Chrisman et al., *Implementation of Concussion and Extent of Concussion Education for Athletes, Parents, and Coaches in Washington State*, 42 AM. J. SPORTS MED. 1190, 1191 (2014) (“These laws allow for the significant interpretation of ‘concussion education,’ particularly with regard to modality (e.g., written, video, slide presentation, online, in person).”).

406. See, e.g., Amberg, *supra* note 370, at 183.

407. *Id.* at 182–83.

E. Current “Model” State Youth Sports Concussion Laws

Because the State of Washington was the trailblazer in passing youth sports concussion legislation in 2009, it was inevitably a “model” state at that time. Today, Washington’s Lystedt Law is still considered a “model” law.⁴⁰⁸ Besides the Lystedt Law, certain important provisions contained in other state youth sports concussion laws have been noticed, which can also become models for other states to consider implementing. These states include New Jersey,⁴⁰⁹ New Mexico,⁴¹⁰ New York,⁴¹¹ and Texas.⁴¹²

For example, the New Jersey Department of Education “adopted a model concussion policy which includes first-in-the-nation recommendations that concussed student-athletes be provided academic accommodations when returning to the classroom.”⁴¹³ In addition, New Mexico has “the toughest of the new youth sports concussion safety laws enacted by states.”⁴¹⁴ Some of the key reasons why New Mexico’s law is labeled as “the toughest” is because it: (1) bans same day return to play entirely; (2) imposes a waiting period of seven days before return to play; (3) uses the language “brain injury” rather than “concussion”; and (4) addresses the “code of silence” culture, wherein injured athletes and their teammates are encouraged to report anyone experiencing symptoms of a suspected brain injury to the coach, athletic trainer, or team doctor.⁴¹⁵

In addition, New York’s concussion safety law was the “first in the nation” to have certain provisions that were considered “more comprehensive and specific than any other in the country” by requiring the following:

- a parent’s acknowledgment of having received, read, and understood the concussion pamphlet be included in their child’s permanent health record;

408. See Frolo, *supra* note 401 (discussing NFL Commissioner Roger Goodell’s support for the widespread enactment of state concussion laws modeled on Washington’s Lystedt Law).

409. See *Youth Sports Concussion Safety Laws: New Jersey*, MOMSTEAM, <http://www.momsteam.com/health-safety/concussion-signs-and-symptoms-physical-cognitive-emotional-sleep-related> (last updated Feb. 17, 2012).

410. See *Youth Sports Concussion Safety Laws: New Mexico*, MOMSTEAM, <http://www.momsteam.com/health-safety/youth-sports-concussion-safety-law-new-mexico> (last updated Mar. 31, 2011).

411. See *Youth Sports Concussion Safety Laws: New York*, MOMSTEAM, <http://www.momsteam.com/8-10/youth-sports-concussion-safety-laws-new-york> (last updated Nov. 14, 2011).

412. See *Youth Sports Concussion Safety Laws: Texas*, MOMSTEAM, <http://www.momsteam.com/health-safety/youth-sport-concussion-safety-law-texas> (last updated June 24, 2011).

413. *Youth Sports Concussion Safety Laws: New Jersey*, *supra* note 409 (citing N.J. STAT. ANN. § 18A:40-41.3 (West 2012)).

414. *Youth Sports Concussion Safety Laws: New Mexico*, *supra* note 410 (discussing N.M. STAT. ANN. 1978, § 22-13-31 (West 2011)).

415. *Id.*

- the written authorization of the health care provider that a student-athlete be allowed to return to play be included in the child's permanent health record;
- guidelines be promulgated by the concussion management team on restrictions on school attendance and activities [Texas is the only other state to require the establishment of concussion management teams];
- a “when in doubt, sit them out” approach be taken when there is any question as to whether an athlete has suffered a concussion or mTBI; [and]
- insulating school boards from liability for bodily injury or death of athletes using school facilities during the course of events run by not-for-profit youth sports programs only where the program has provided proof of insurance and compliance with the district's concussion rules and regulation.⁴¹⁶

Moreover, Texas' law is also considered “one of the most comprehensive and detailed” youth sports concussions laws in the country.⁴¹⁷ It “includes a first-in-the-nation provision for the creation of concussion oversight teams by each school district or charter school participating in interscholastic sports,” as well as provisions related to: (1) parent and athlete education, which includes a signed consent form acknowledging receipt of written concussion materials on an annual basis; (2) a statutory right to removal from play, meaning that it “give[s] an athlete's parent the right to remove him or her from a game if they suspect a concussion”;⁴¹⁸ (3) return to play that were more detailed “than any of the other youth sports concussion safety laws enacted thus far”; and (4) an immunity and liability provision, wherein Texas' law would not:

- waive any immunity from liability of a school district or charter school or its officers or employees;
- create any liability for a cause of action against a school district or charter school;
- waive any immunity from liability under existing law; or
- create any cause of action or liability for a member of the concussion oversight team arising from the injury or death of a student participating in sports based on the service or participation on the concussion oversight team.⁴¹⁹

416. *Youth Sports Concussion Safety Laws: New York*, *supra* note 411 (discussing N.Y. EDUC. § 305 (McKinney 2011) (alteration in original)).

417. *Youth Sports Concussion Safety Laws: Texas*, *supra* note 412 (discussing TEX. EDUC. CODE ANN. §§ 33.202, 38.151 (West 2011)).

418. Texas and Arizona were the only two states with such provisions in their concussion laws at that time. *Id.*

419. *Id.*

IV. POP WARNER CONCUSSION LAWSUIT AND RECENT SETTLEMENT, MAJOR YOUTH SPORTS ORGANIZATION REEVALUATES ITS CURRENT CONCUSSION PROTOCOLS, AND STATE LEGISLATURES UPDATE THEIR YOUTH SPORTS CONCUSSION LAWS

A. *Overview of the Pyka v. Pop Warner Little Scholars, Inc. Lawsuit and Settlement*

In *Pyka v. Pop Warner Little Scholars, Inc.*, a Wisconsin mother Debra Pyka sued Pop Warner due to her son's CTE-related suicide.⁴²⁰ In the lawsuit filed in February 2015, Pyka alleged that her twenty-five-year-old son Joseph Chernach died after hanging himself in her shed on June 7, 2012, and that his positively diagnosed CTE was a "substantial factor contributing to this hanging death."⁴²¹ Pyka specifically alleged that Chernach's CTE stemmed from playing tackle football with a helmet in the Pop Warner league, beginning at the age of eleven, from 1997–2000.⁴²² The Complaint further alleged that in addition to CTE, Chernach also suffered from Post-Concussion Syndrome when he died, which resulted from the numerous concussions he sustained while playing Pop Warner football, notwithstanding the fact they were never diagnosed.⁴²³

In the Complaint, Pyka contended that because "it was a known risk [by 1997] that children playing tackle football with helmets could suffer brain damage," "Pop Warner knew or should have known that tackle football was dangerous for children and exposed children to head injuries," by the time Chernach played in the league.⁴²⁴ According to the Complaint, Pop Warner was liable because it failed to train coaches properly, did not use the safest helmets, did not teach players how to wear their helmets properly, and did not limit the amount of hitting in practice.⁴²⁵ The Complaint also argued that the organization failed to follow concussion protocols published by medical professionals as early as 1997.⁴²⁶

Pyka sought \$5 million in damages.⁴²⁷ In March 2016, Pop Warner, as the nation's largest youth football program, settled this case as "its first and only concussion-related lawsuit."⁴²⁸ It is believed that the settlement in this case was for less than \$2 million.⁴²⁹

420. Complaint ¶¶ 26–35, *Pyka v. Pop Warner Little Scholars, Inc.*, No. 3:15-CV-0057 (W.D. Wis. Feb. 5, 2015).

421. *Id.* ¶ 27.

422. *Id.* ¶ 29.

423. *Id.* ¶ 30.

424. *Id.* ¶ 38.

425. *Id.* ¶ 44.

426. *Id.* ¶ 38.

427. *Id.* at 26.

428. Kosman, *supra* note 4.

429. *Id.*

B. Potential Impact of the Pop Warner Settlement

After the federal judge approved the approximately \$1 billion NFL concussion lawsuit settlement in 2015, it was noted that the “NFL’s concussion crisis ha[d] trickled down to the high school level, sparking complaints.”⁴³⁰ In fact, the March 2016 *Pop Warner* “settlement demonstrates how concerns about concussion-related brain damage have grown from the NFL to the youngest levels of football.”⁴³¹ Therefore, with Pop Warner settling a youth sports concussion-related lawsuit like the one in *Pyka*, there are questions surrounding the potential impact of the settlement. For example, when the *Pyka* lawsuit was filed, Pop Warner carried “\$2 million in liability insurance on players in Wisconsin through the Lexington Insurance Company, a subsidiary of AIG. Today, Pop Warner carries \$1 million in liability insurance per player through K&K Insurance Group.”⁴³²

However, “[i]ndividual chapters have the option to carry an additional \$1 million policy per player. That could prompt other parents to sue the program over concussion-related injuries.”⁴³³ In fact, at the time of the *Pyka* settlement, Pop Warner “face[d] numerous other similar legal challenges.”⁴³⁴ Indeed, some observers at the time expected that it, “along with increased awareness of head injury risk in contact sports, [would] encourage more parents to file suit against the organization.”⁴³⁵ It has also been asserted that with Pop Warner settling recent cases,⁴³⁶ it “may affect its ability to obtain future liability insurance, and may also affect the cost of insurance obtained.”⁴³⁷ Although each lawsuit offers its own unique dynamics, at least some “future plaintiffs may reject Pop Warner’s settlement offers and may opt to go to trial, perhaps recovering damages . . . large enough to bankrupt the organization.”⁴³⁸

430. *Id.*

431. Martinez, *supra* note 24.

432. Kosman, *supra* note 4.

433. *Id.*

434. Insurance Journal Report, *supra* note 24.

435. *Id.*

436. See, e.g., Lindsey Barton Straus, *Pop Warner Settlement: Seismic Shift in Legal Landscape or Just a Warning Shot?*, MOMSTEAM (Feb. 12, 2016, 6:18 PM), <http://www.momsteam.com/health-safety/sports-related-concussions-subconcussive-injuries/news-studies/pop-warner-ettlement-Donnovan-Hill> (“In January 2016, Pop Warner reached a confidential settlement with Donovan Hill, a Los Angeles-area football player who was rendered a quadriplegic at age 13 as a result of a helmet-to-helmet collision with an opposing player which snapped his neck. Hill’s mother alleged in her lawsuit that his coaches encouraged head-first tackling, that her son was punished when he objected to using the technique in practice, and that he used it in games without repercussions.”).

437. *Id.*

438. *Id.*

C. Major Youth Sports Organization Reevaluates Its Concussion Protocols

It is argued that recent Pop Warner settlements due to head injuries “should lead Pop Warner (and other youth sports governing bodies) to closely reexamine local safety practices and protocols.”⁴³⁹ Previously, in response to concerns about concussion-related brain injuries, “Pop Warner established protocols and changed rules ‘aimed at improving coaching education, limiting contact and requiring any player who suffers a potential head injury to be examined by a medical professional trained in concussions before returning to play.’”⁴⁴⁰

More recently, in May 2016, responding to concussion concerns, Pop Warner announced that it would “become the first national football organization to eliminate kickoffs” in its three youngest divisions, which would begin with the Fall 2016 football season.⁴⁴¹ In doing so, it hoped to drastically reduce “the number of full-speed, head-on impacts in games,” and planned to “evaluate the results [once the season ended] and consider implementing the kickoff ban in older divisions as well.”⁴⁴² Also, Pop Warner has also reduced contact from thirty-three percent to approximately twenty-five percent of practice time across all divisions.⁴⁴³

D. State Legislatures Should Continuously Review and Update Their Youth Sports Concussion Laws When Necessary

Based upon the latest research and given the current legal landscape surrounding sports-related concussions, there is no question that state legislatures should continuously review and update their youth sports concussion laws. Over the past several years, many states have made changes and amendments to their original youth sports concussion laws, whereas others have not.⁴⁴⁴ In fact, twenty-nine concussion-related bills were introduced in twenty states in 2016, with some states enacting new laws.⁴⁴⁵

439. *Id.*

440. Martinez, *supra* note 24.

441. Jill Martin, *Pop Warner Eliminates Kickoffs*, CNN (May 12, 2016, 6:44 PM), <http://edition.cnn.com/2016/05/12/sport/pop-warner-football-eliminates-kickoffs/>.

442. *Id.*

443. *Id.*

444. See discussion *supra* Section III.B.2. For example, Arkansas changed its original 2011 law in 2013 by adding “concussion education, guideline development, and RTP requirements and extended [its law’s] applicability to recreational youth sports.” NETWORK FOR PUB. HEALTH LAW, *supra* note 334, at 2 (discussing ARK. CODE ANN. §§ 6-18-708, 6-18-710 (West 2017)). However, Mississippi has not changed its law since its original enactment in 2014. See *id.* at 11 (discussing MISS. CODE ANN. § 37-24-1 (West 2017)).

445. See *Injury Prevention Legislation Database: Opioid Abuse Prevention*, NAT’L CONF. ST. LEGISLATURES (May 15, 2017), <http://www.ncsl.org/research/health/injury-prevention-legislation-database.aspx>. A search was conducted based on the following filters: Topics: Traumatic Brain Injury, States: All States, Keyword: concussion, and Year: 2016. The search revealed, for example, that the State of Delaware enacted one such measure for “Concussion Protection Standards” on September 6, 2016, which: “Relates to concussion protection in youth athletic activities, provides

Additionally, twenty-two concussion-related bills were introduced in fourteen states as of March 2017.⁴⁴⁶ For example, a bill was introduced in Minnesota requiring “the commissioner of health to establish a working group and pilot programs to improve the implementation of youth sports concussion protocols and identify best practices for preventing and treating concussions.”⁴⁴⁷ Thus, this shows that state legislatures are continuing to review their current youth sports concussions laws in order to try to better protect youth athletes from concussions.

IV. CONCLUSION

In recent years, “a flurry of media stories devoted to sports-related concussions have drawn attention to the previously ‘silent epidemic’ of traumatic brain injury (TBI) in athletes.”⁴⁴⁸ Moreover, it is concerning that “[f]rom 2001 to 2009, the annual number of sports-related TBI emergency department visits in individuals age 19 and under climbed from 153,375 to 248,414, an increase of 62 percent.”⁴⁴⁹ Research shows that “children and teens—and girls, in particular—are more likely to sustain a concussion and have a longer recovery time than adults.”⁴⁵⁰ Worse yet, “even subconcussive hits in children and adolescents may result in longer-term health effects such as decreased cognitive functioning, increased rates of depression, memory problems, and mild cognitive impairment (a pre-Alzheimer’s condition).”⁴⁵¹

Currently, “more adults and children are coming to respect concussions for what they are—traumatic brain injuries that can leave their young victims less able to learn in school, perform functions of everyday life, and perhaps enjoy adulthood free from chronic pain, cognitive dysfunction and possible mental deterioration.”⁴⁵² Acknowledging the unique and delicate nature of the human brain, experts have emphasized: “Unlike other anatomical areas such as our bones, muscles, ligaments, and tendons, our brain tissue has relatively little ability to heal and repair itself.”⁴⁵³ Also, in the words of another commentator, “[w]hile today many parts of the body can be replaced either by artificial

procedures to be followed to protect minors participating in athletic activities who manifest symptoms of concussion, increases recognition of the symptoms of concussion through training and education, establishes standards for return to play.” *Id.*

446. *Id.*

447. *Id.*

448. Lowrey & Morain, *State Experiences*, *supra* note 384, at 290 (quoting LINDA CARROLL & DAVID ROSNER, *THE CONCUSSION CRISIS: ANATOMY OF A SILENT EPIDEMIC* 10 (2011)).

449. *Id.*

450. *Id.*

451. *Id.*

452. Douglas E. Abrams, *Confronting the Youth Sports Concussion Crisis: A Central Role for Responsible Local Enforcement of Playing Rules*, 2 *MISS. SPORTS L. REV.* 75, 111 (2013) (footnotes omitted).

453. *Id.* (quoting Lyle J. Micheli, *Foreward to the First Edition* of WILLIAM PAUL MEEHAN III, *KIDS, SPORTS, AND CONCUSSION: A GUIDE FOR COACHES AND PARENTS* xi (2011)).

hardware or transplantation, the brain cannot be replaced.”⁴⁵⁴ Therefore, portrayals of youth football on television shows like *Friday Night Tykes* has sparked debates, with some reviews of the show as follows:

[T]his is so shocking I had to say something. This is nothing but child abuse. These children are too young for this kind of treatment. Given what is known about the dangers of concussions and how even more serious it is children, and they are playing tackle football at the age of 8, this league should be outlawed. I wish a professional NFL player who is suffering from the effects of concussions would do something to help protect these kids from ignorant and abusive parents and coaches.⁴⁵⁵

[The show] has been highly entertaining, and yes, provocative. . . . [I]t indeed sparks worthwhile conversation and debate.⁴⁵⁶

This show is pretty disgusting showing the truth of Texas youth football. . . . I played youth football [and] what they do is ridiculous. Straight helmet to helmet contact. Coaches swear and tell their kids to hurt other player and cheat to get an advantage. . . . Despite all that the show is entertaining in showing the true craziness that is Texas football. And these 8 year olds are aweso[sic] athletes they hit hard, run fast, they look like high school players out there. Good football games and intense match ups. Overall entertaining to watch but also disgusting.⁴⁵⁷

Ultimately, some people question whether the show is simply entertaining or child abuse. Therefore, some of the best ways to make youth sports safer and reduce the number of sports-related concussions is to continue to focus on concussion education to increase awareness and knowledge about concussions.⁴⁵⁸ In doing so, the primary focus should be “on prevention, which begins with parents, medical professionals, journalists, and legislators who influence national youth sports governing bodies and state high school activities associations to continue evaluating playing rules to maintain the essence of particular sports while also making play as safe as possible.”⁴⁵⁹

454. *Id.* (quoting Robert C. Cantu, *Foreward to the First Edition* of CHRISTOPHER NOWINSKI, HEAD GAMES: FOOTBALL’S CONCUSSION CRISIS FROM THE NFL TO YOUTH LEAGUES vii (2007)).

455. NicoleAnjolie-1, Comment to *Reviews & Ratings for “Friday Night Tykes”*, IMDB (Jan. 27, 2016), <http://www.imdb.com/title/tt3467018/reviews?filter=chrono>.

456. Ramair350, Comment to *Reviews & Ratings for “Friday Night Tykes”*, IMDB (Feb. 3, 2014), <http://www.imdb.com/title/tt3467018/reviews?filter=chrono>.

457. John Smith, Comment to *Reviews & Ratings for “Friday Night Tykes”*, IMDB (Jan. 23, 2016), <http://www.imdb.com/title/tt3467018/reviews?filter=chrono>.

458. See Douglas Abrams, *Prevention, Not Litigation, Should Be Primary Strategy for Youth Sports Concussion*, MOMSTEAM (Nov. 30, 2015, 4:58 PM), <http://www.momsteam.com/health-safety/prevention-not-litigation-should-be-primary-strategy-youth-sports-concussion>.

459. Abrams, *Confronting the Youth Sports Concussion Crisis*, *supra* note 452, at 111.

In addition, enforcement is a key factor. Just as youth sport's playing rules, which are essentially the "statutes of the game," "achieve their protective purpose only with responsible local enforcement by coaches, league administrators, game officials and parents," concussion laws "similarly are merely words on paper," without active enforcement.⁴⁶⁰ Still, enforcement alone is not enough; those laws are more accurately regarded as "works in progress" because they often "regulate only interscholastic sports, and not private youth sports organizations that use public fields and other public facilities."⁴⁶¹

To remedy this issue, private individuals have turned to the courts in recent years, filing various lawsuits associated with youth sports-related concussions. However, litigation is not the most effective remedy to address the concussion issue. Although compensation "is no small matter to players and their families facing daunting medical expenses and potential lifelong distress for injuries that evade prevention efforts," it "does nothing to reverse the injury's immediate and sometimes permanent [and/or deadly] consequences."⁴⁶²

In fact, some of the best ways to assist youth athletes with successfully returning to learn and to play should they sustain a sports-related concussion is to have clear provisions and guidance in each state's youth sports concussion law related to these two areas.⁴⁶³ We want children to be able to participate in sports. However, when a young athlete suffers from a concussion, there should be a clear understanding on return-to-play and return-to-learn protocols so as not to exacerbate an injured young athlete's health situation.⁴⁶⁴ States should consider adopting a model concussion policy like New Jersey wherein concussed student-athletes are provided with reasonable academic accommodations when returning to the classroom.⁴⁶⁵

Moreover, partnerships with national sports organizations such as the NFL that include training as well as continuing education credits for athletic trainers and physical therapy personnel can also be beneficial. In fact, the Pittsburgh Steelers recently did that by hosting a "Concussion Symposium" on April 6, 2017, which targeted "coaches, athletic trainers, and athletic directors in middle schools and high schools" to raise awareness on how concussions relate to player safety.⁴⁶⁶ A spokesperson for the Steelers highlighted the significance of the

460. *Id.* at 99.

461. Abrams, *supra* note 458.

462. *Id.*

463. For a clinical commentary designed to "eliminate ambiguity and help further promote adherence to the RTP guidelines," with several sports-specific RTP guidelines provided, see Keith H. May et al., *Pediatric Sports Specific Return to Play Guidelines Following Concussion*, 9 INT. J. SPORTS PHYS. THERAPY 242 (2014).

464. See James D Carson et al., *Premature Return to Play and Return to Learn After a Sport-Related Concussion*, 60 CANADIAN FAM. PHYSICIAN e310 (2014).

465. See N.J. STAT. ANN. § 18A:40-41.3 (West 2017).

466. Curt Popejoy, *Steelers to Host Concussion Symposium at Heinz Field*, STEELERS WIRE (Apr. 5, 2017, 8:05 PM), <http://steelerswire.usatoday.com/2017/04/05/steelers-to-host-concussion-symposium-at-heinz-field/>.

event by saying, “[s]uccess in dealing with concussions has to start with the very lowest levels of these sports and work its way up.”⁴⁶⁷

In sum, youth sports can be made safer with fewer athletes suffering from sports-related concussions, not through litigation, but through the following: (1) primary prevention efforts; (2) education and training; (3) continuous research, study, and dissemination of up-to-date reports related to concussions; (4) development of better protective equipment; and (5) youth athletes, parents, coaches, youth leagues, medical professionals, legislatures, and leading youth sports safety advocate groups like MomsTeam diligently advocating for greater safety across the board for all youth sports.

467. *Id.*

