



ST. MARY'S
UNIVERSITY

The Scholar: St. Mary's Law Review on Race
and Social Justice

Volume 18 | Number 2

Article 5

1-1-2017

The Repercussions of Concussions in Youth Football Leagues: An Analysis of Texas's Concussion Law and Why Reform is Necessary.

Taylor Adams

Follow this and additional works at: <https://commons.stmarytx.edu/thescholar>



Part of the [Law Commons](#)

Recommended Citation

Taylor Adams, *The Repercussions of Concussions in Youth Football Leagues: An Analysis of Texas's Concussion Law and Why Reform is Necessary.*, 18 THE SCHOLAR (2017).

Available at: <https://commons.stmarytx.edu/thescholar/vol18/iss2/5>

This Article is brought to you for free and open access by the St. Mary's Law Journals at Digital Commons at St. Mary's University. It has been accepted for inclusion in The Scholar: St. Mary's Law Review on Race and Social Justice by an authorized editor of Digital Commons at St. Mary's University. For more information, please contact egoode@stmarytx.edu, sfowler@stmarytx.edu.

COMMENTS

THE REPERCUSSIONS OF CONCUSSIONS IN YOUTH FOOTBALL LEAGUES: AN ANALYSIS OF TEXAS'S CONCUSSION LAW AND WHY REFORM IS NECESSARY

TAYLOR ADAMS*

*We now know that exposing a child to repeated blows to the head, with or without a helmet, with or without symptoms, has a reasonable risk of brain damage. So knowing what we know now, do we continue to intentionally expose our children to that risk? It is our moral duty, as a modern society—we are not talking about the third world here—it is our moral duty, as a society, as a civilized society, to protect the most vulnerable of us, the most precious gifts of our lives*¹

—Dr. Bennet Omalu

I. Introduction	287
II. A Medical Overview	292

* St. Mary's University School of Law, J.D., May 2016; Austin College, B.A., Political Science & Business Administration, May 2008. First and foremost, I would like to thank my wife Karen whose unwavering support, encouragement and patience has helped me persevere through this entire process. I would also like to thank my family, especially my parents, Linda and Pat. Through love, support and guidance, they have always pushed me to reach beyond what I ever thought was possible. Finally, I wish to thank *The Scholar* Volume 17 Editorial Board for choosing this piece for publication and the entire Volume 18 staff for their editing assistance. Every staff member's individual efforts, selflessness, dedication and hard work, has enabled our *Scholar* family to grow beyond measure. It has truly been an honor to work amongst such a great group of people. From the bottom of my heart, thank you to everyone who has played an invaluable role in helping make this piece possible.

1. *Full Interview: Mike Clark sits down with 'Concussion' inspiration Dr. Bennet Omalu*, WTAE.COM, <http://www.wtae.com/news/full-interview-mike-clark-sits-down-with-concussion-inspiration-dr-bennet-omalu/37068838#comments> (last updated Dec. 21, 2015, 2:25 PM) [hereinafter *Full Interview*].

A.	What Is a Concussion?	292
B.	The Subconcussive Hit	293
C.	Concussions and the Developing Brain.....	296
1.	Second Impact Syndrome	298
2.	A Potential Link Between Brain Disease and Youth Football	299
D.	Chronic Traumatic Encephalopathy	299
1.	CTE's Rise to National Attention.....	301
III.	The Rise and Potential Fall of Youth Football	306
A.	The Birth of Youth Football	306
B.	Is Youth Football Participation Declining?	307
1.	A Shift in Public Perception	307
2.	A School District's Response	310
3.	A Legal Precedent Established	310
IV.	Why Texas's Concussion Law Should Be Reformed	311
A.	The Popularity of Football in Texas	311
1.	Football as an Economic Engine	313
2.	Youth Football in Texas	314
B.	The "Professionalism" of Youth Football	315
C.	Promotional Campaigns Promoting A "Safer" Game: The Bias Factor	318
D.	Inconsistent Safety Standards Are Dangerous	321
V.	State Concussion Laws	323
A.	The First Comprehensive Concussion Law	323
B.	The First State to Expand Coverage: A Precedent Established	325
C.	Learning from Other Concussion Laws.....	326
VI.	An Assessment of How the Texas Legislature can Reform Current Law	327
A.	Texas's Current Law	327
1.	The Education Component.....	328
2.	Removal from Play	329
3.	Return to Play	329
B.	Expanding the Scope of Coverage: Amending Section 38.152.....	331
C.	Expanding the Scope of Coverage: Amending Sections 38.155, 38.156, and 38.158	333
1.	Incorporating Oregon's Senate Bill 521 into Existing Law	335
2.	Amending Section 38.156: The Removal from Play Component	338
D.	Expanding the Scope of Coverage: Amending Section 38.157.....	339

2016]	<i>THE REPERCUSSIONS OF CONCUSSIONS</i>	287
	E. “Power of the Permit”: An Alternative, Localized Approach	340
	VII. Conclusion	342

I. INTRODUCTION

Football is an inherently violent sport. I remember taking my final steps off the gridiron in 2006, my college career cut short by injuries I sustained during my sophomore season. Today, aches and pains serve as a constant reminder of the violent collisions my body endured for over a decade, all for the sport I loved to play.

Iconic Green Bay Packers coach Vince Lombardi once said, “[t]he greatest accomplishment is not in never falling, but in rising again after you fall.”² I often reflected on Coach Lombardi’s famous quote and how it applies to the many facets of life. I internalized the quote to mean that overcoming obstacles is part of life. We all inevitably fall short, both personally and professionally, but the truest character of a person is how they respond in the face of adversity. In the context of football, however, these words are oftentimes dangerously misconstrued by parents, coaches, and players to mean that if you get knocked down physically, you get up, suck it up, and you keep playing.³ From an early age, this type of mentality is encouraged and engrained in the minds of every football player.⁴ In the current age of concussion awareness, however, we need to do more as a society to heed the warnings regarding the risk of brain injury that is inherent in America’s most popular sport.

Sports-related traumatic brain injuries (TBIs) have become widely recognized as a major public health issue.⁵ Amidst the growing concerns of mental health issues, the National Football League (NFL) has been pressured to fund research to study the medical risks and examine the role of

2. *Vince Lombardi Quotes*, BRAINYQUOTE, http://www.brainyquote.com/quotes/authors/v/vince_lombardi.html (last visited Jan. 29, 2016).

3. See generally Kevin Liptak & Nadia Kounang, *Recalling own injuries, Obama calls for end to ‘suck it up’ culture in youth sports*, CNN: POL. TICKER BLOG (May 29, 2014, 12:59 PM) <http://politicalticker.blogs.cnn.com/2014/05/29/recalling-own-injuries-obama-calls-for-end-to-suck-it-up-culture-in-youth-sports> (illustrating the prevalence of the “suck it up” culture in America).

4. See Samuel D. Hodge Jr. & Shilpa Kadoo, *A Heads-Up on Traumatic Brain Injuries in Sports*, 17 J. HEALTH CARE L. & POL’Y 155, 155 (2014) (describing, briefly, Eric Dickerson’s childhood experience with football injuries).

5. See Steven P. Broglio & Kevin M. Guskiewicz, *Concussion in Sports: The Sideline Assessment*, 1 SPORTS HEALTH 361, 361 (2009) (indicating the number of brain injuries have totaled up to 3.8 million a year, including those that have gone unreported in previous studies).

head trauma as it relates to high-contact sports such as football.⁶ More and more NFL players are retiring at a younger age as statistics continue to show that many former players are being diagnosed with Chronic Traumatic Encephalopathy (CTE), a brain disease attributed to repetitive head-to-head contact.⁷ This has resulted in sizable lawsuit settlements against the NFL, and litigation involving the NCAA, high school districts, and youth football organizations.⁸ In addition, brain disease linked to football has become a hot topic of national debate.⁹ From NFL players and advocates in the NFL community, to news desks across the country, everyone is weighing in on the issue.¹⁰ The sentiment being echoed has become quite clear: football is more dangerous than once believed.¹¹ This is especially true as studies continue to suggest that repetitive head trauma—caused by routine hits once thought to be just part of the game—such as concussions, are proving to be serious, complex injuries

6. See Travis Waldron, *NFL Donates \$30 Million To Concussion Research for Players and Military Members*, THINKPROGRESS (Sept. 5, 2012, 11:04 AM), <http://thinkprogress.org/alyssa/2012/09/05/797211/nfl-donates-30-million-to-concussion-research-for-players-and-military-members> (claiming the NFL's \$30 million donation to concussion research comes at an interesting time when more than 2,000 players are suing them for covering up research that linked concussions on the football field to brain injuries). See generally Daniel J. Kain, Note, "It's Just a Concussion:" *The National Football League's Denial of a Casual Link Between Multiple Concussions and Later-Life Cognitive Decline*, 40 *RUTGERS L.J.* 697, 697 (2009) (explaining the history of the NFL's denial that playing in the league is linked to CTE).

7. See Kain, Note, *supra* note 6, at 698–99 (asserting studies conducted throughout the nation of many former NFL players indicate prior concussions attributed to CTE as a cause of death).

8. See Associated Press, *NFL, ex-players agree to \$765M settlement in concussions suit*, NFL: NEWS, <http://www.nfl.com/news/story/0ap1000000235494/article/nfl-explayers-agree-to-765m-settlement-in-concussions-suit> (last updated Aug. 29, 2013, 2:52 PM) (explaining that in 2013, the NFL and 18,000 former NFL players agreed to a \$765 million settlement for claims alleging the NFL concealed the dangers of concussions); see also *Concussion Concerns & The End of Youth Football in Texas & Arkansas*, BESTOFARKANSASSPORTS.COM (Aug. 6, 2013), <http://www.bestofarkansassports.com/concussion-concerns-are-demolishing-youth-football-in-texas-arkansas> (reporting from 2011 through 2014, sixty-one ex-collegiate athletes and nine class action lawsuits were filed against the NCAA claiming negligence in addressing and treating its student athletes' brain injuries).

9. Adam Bulkley, *For the Love of the Game: The Case for State Bans on Youth Tackle Football*, 48 *U. MICH. J.L. REFORM CAVEAT* 1, 1 (2014).

10. See *id.* (indicating President Obama, along with former and current NFL players would hesitate to allow their sons to play football due to game related injuries); see also Ryan Wallerson, *Youth Participation Weakens in Basketball, Football, Baseball, Soccer*, WALL STREET J., <http://www.wsj.com/articles/SB10001424052702303519404579350892629229918> (last updated Jan. 31, 2014, 12:44 AM).

11. See Bulkley, *supra* note 9, at 4 (finding football accounts for 96.9% of all tragic sports injuries in the United States).

that significantly contribute to an individual's long-term cognitive impairment.¹²

Currently, the promulgation of uniform concussion standards falls outside the purview of the federal government.¹³ As a result, the responsibility is left to the individual states to implement, amend, and regulate laws on youth athletic concussions.¹⁴ This state-by-state approach has led to a patchwork of inconsistent standards all varying in scope, strength, and detail.¹⁵ Since the passage of the first state concussion law in 2009, every state has enacted a similar law addressing concussion management protocol.¹⁶ However, some state laws, including Texas's, exclude youth athletes below the seventh grade, as well as all private youth organizations.¹⁷ More specifically, Texas's concussion law, H.B. No. 2038, known as Natasha's Law,¹⁸ does not extend coverage beyond the scope of interscholastic, school-sponsored activities.¹⁹ This is problematic for a number of reasons.

First, studies show athletes between the ages of five and fourteen are far more susceptible to catastrophic brain injury resulting from the exposure to repetitive head contact, than any other age group.²⁰ Moreover, this is the precise age group *excluded* from Texas's concussion law.²¹ Second, youth football leagues in Texas "lack[] a central governing body to promulgate health and safety standards that would mitigate the risks associated with concussions and ensure compliance."²² As such, the absence of a state-wide, uniform law has led to self-regulation, and the scope, strength, and detail of each concussion policy is left to the discre-

12. *Id.*

13. Erin P. Andrews, Note, *Avoiding the Technical Knockout: Tackling the Inadequacies of Youth Concussion Legislation*, 58 N.Y. L. SCH. L. REV. 417, 428 (2013–2014).

14. *Id.* at 429.

15. *Id.*

16. Associated Press, *Analysis: Youth football concussion laws lack potency*, POUGHKEEPSIE J. (Feb. 4, 2015, 11:06 PM), <http://www.poughkeepsiejournal.com/story/sports/high-school/2015/02/04/analysis-youth-football-concussion-laws-lack-potency/22869171>.

17. *See id.* (finding approximately one-third of state laws make no specific reference to which ages or grades are covered by their concussion law, and even fewer explicitly apply to both interscholastic sports and recreational leagues).

18. Natasha's Law, 82d Leg., R.S., ch. 781, 2011 Tex. Sess. Law Serv. 1815 (West) (codified at TEX. EDUC. CODE ANN. §§ 38.151–.160 (West 2012)).

19. TEX. EDUC. CODE ANN. § 38.152.

20. ROBERT CANTU & MARK HYMAN, CONCUSSIONS AND OUR KIDS: AMERICA'S LEADING EXPERT ON HOW TO PROTECT YOUNG ATHLETES AND KEEP SPORTS SAFE 11–12 (2012).

21. *See* TEX. EDUC. CODE ANN. § 38.152 ("This subchapter applies to an interscholastic activity . . . sponsored or sanctioned by the University Interscholastic League.").

22. Andrews, *supra* note 13, at 428.

tion of individual leagues.²³ As further detailed in the discussion, the lack of general oversight has unfortunately led to some league policies omitting key features regarding the current state law, thus drastically limiting the policy's effectiveness.²⁴ Third, football is a widely popular sport in Texas. More youth athletes participate in organized tackle football each year in Texas, than any other state.²⁵ It seems almost negligible for the state legislature to exclude a large, vulnerable group of youth athletes from its law. Despite these compelling reasons to justify change, the Texas state legislature has yet to amend the current law to reflect a comprehensive safety standard that affords protection to athletes of *every* age and at *every* level of play.²⁶

With a focus on the prevalence of football-related concussions in athletes, this comment examines and addresses the shortcomings of the Texas legislature's current concussion law, while providing alternative solutions to the current problem. Specifically, Part II presents a general overview of concussions, subconcussions, and CTE, while examining their effects on the developing brain. Part II also delves into the history of the "concussion crisis," by specifically examining the proliferation of medical studies giving rise to public awareness of CTE and the NFL's continual denial of the disease's existence. Part III discusses the rise of youth football in America and examines what, if any, substantive effect research has had on the declining rate of youth football participation across the country. Part IV argues why Texas's concussion law should be reformed. Many factors discussed in this section apply to states that face the similar problem of their legislatures' refusal to acknowledge youth athletes and leagues under state law. However, this section, in part, examines certain aspects, such as the characteristics that make Texas football unique, distinct, and widely popular, and also provides reasons why extending coverage to youth athletes would more closely reflect the demand the sport warrants in a football crazed state such as Texas. Part V presents an over-

23. *Id.* ("Unfortunately, youth football lacks a central governing body to promulgate health and safety standards . . .").

24. See FOOTBALL ASS'N, LFMFA RULE BOOK 36 (2014), <http://www.lewisvillepeeweefootball.com/pdfLFMFA-Rule-Book2014.pdf> (omitting key removal from play elements allowing coaches to remove children from play at their own discretion).

25. Corbett Smith, *14 days away: Texas continues to lead nation in high school athletic participation, but football numbers are decreasing*, SPORTS DAY (Aug. 13, 2015), <http://beta.sportsdaydfw.com/high-school/highschoolheadlines/2015/08/13/14-days-away-texas-continues-to-lead-nation-in-high-school-athletic-participation-but-football-numbers-are-decreasing>.

26. See Associated Press, *supra* note 16 (reporting due to concussion injuries sustained by children, the NFL lobbied to pass bills that protected children while playing sports, and even though all states implemented laws, their laws lack key principles in protecting athletes or providing consequences for violating the laws).

view of the first state concussion law and the law's model components adopted by the majority of state legislatures. It highlights the first state to extend coverage to youth athletes below the junior high level, proving that such a feat is feasible. Part VI examines the specific education, removal from play, and return-to-play provisions of Texas's current concussion law, while addressing the law's legislative shortcomings. Part VI also provides guidance on expanding coverage by analyzing specific provisions in various state concussion laws conducive to current Texas law. It uses these provisions to establish legislative framework Texas lawmakers can build upon to amend existing provisions with minimal substantive change. Part VI concludes by examining the "power of the permit" trend that *could* offer an alternative approach to legislative action.

Finally, it is necessary to mention that the study of sports-related TBIs and brain disease is a recently discovered phenomenon in the field of science.²⁷ Continual studies are being conducted to fully understand the neuropathology and prevalence of adverse long-term sequelae of degenerative brain disease and its link to football.²⁸ Current research is limited to retrospective studies that examine athlete exposure to suspected risk factors, such as subjecting the brain to repetitive head trauma.²⁹ As such, even less is known about the long-term effects of degenerative brain disease as it relates to youth sports. The studies discussed illustrate the growing trend of evidence that suggest exposing a child's brain to repetitive head contact *could* potentially lead to long-term cognitive impairment.³⁰ In addition, these studies reiterate the importance of why a uniform standard applicable to every child would ensure all youth athletes receive the same protection under the law.³¹

This comment does not definitively assert that degenerative brain disease is casually linked to youth football because the scientific community has not yet produced research to qualify that claim. Rather it advocates for giving a voice to the voiceless because "it is our moral duty, as a society, as a civilized society, to protect the most vulnerable of us"³² "[K]nowing what we know now"³³ it should not be a question of whether

27. Bennet Omalu et al., *Chronic Traumatic Encephalopathy in a National Football League Player*, 57 J. NEUROSURGERY 128 (2005).

28. *Id.*

29. *Id.*

30. See Julie Stamm et al., *Age of first exposure to football and later-life cognitive impairment in former NFL players*, 84 Neurology 1114 (2015) (reporting former NFL players who played youth football performed worse on cognitive studies than former players who did not play youth football).

31. See Andrews, *supra* note 13, at 429 (explaining how "health and safety standards [] would mitigate the risks associated with concussions and ensure compliance").

32. *Full Interview, supra* note 1.

33. *Id.*

or not coverage *should* be expanded to include youth athletes at every level of play. It is our duty to ensure that every child *is* afforded the same protection under the law. In Texas, this starts with amending the current concussion law to reflect a responsible, civilized society concerned with protecting the well-being of the most vulnerable of us.

II. A MEDICAL OVERVIEW

A. *What Is a Concussion?*

The NFL boasts some of the best conditioned athletes in the world who seem to possess inhuman talent, speed, and strength. One blow to the head, however, can render these larger than life figures unconscious, dizzy, and confused.³⁴ These are the trademark signs of a concussion.³⁵ Concussions and mild traumatic brain injuries account for nearly ninety percent of all brain injuries.³⁶ The Center for Disease Control (CDC) estimates that between 1.6 and 3.8 million athletes sustain a sports-related concussion each year in the United States.³⁷ However, these figures are vastly underestimated as many individuals do not seek medical advice after suffering from mild or moderate traumatic brain injuries (TBIs).³⁸ This is especially prevalent amongst children who do not seek medical attention because they are generally unfamiliar with the signs and symptoms of a head injury.³⁹ Football has the highest sports-related TBI rate

34. See Lauren Ezell, *Timeline: The NFL's Concussion Crisis*, PBS FRONTLINE (Oct. 8, 2013, 9:57 PM), <http://www.pbs.org/wgbh/pages/frontline/sports/league-of-denial/timeline-the-nfls-concussion-crisis> (illustrating the experiences of various NFL players with concussions received during a game). During the 1993 NFC Championship game between the San Francisco Forty-Niners and the Dallas Cowboys, a blow to the head brought down one of the greatest. *Id.* Dallas Cowboys quarterback Troy Aikman received a knee to the head and collapsed on the field, which landed him in the hospital. *Id.* Aikman said, "I didn't know what planet I was on. I still to this day have no recollection of ever having played in that game. So whenever I see footage of that game, it's like somebody else is out there doing it." *Id.*

35. See *Basic Information about Traumatic Brain Injury and Concussion*, CTR. FOR DISEASE CONTROL, <http://www.cdc.gov/traumaticbraininjury/basics.html> (last updated Feb. 24, 2015) (describing the severity of symptoms that an individual may experience from a traumatic brain injury).

36. Michael Saulle & Brian D. Greenwald, *Chronic Traumatic Encephalopathy: A Review*, REHAB. RES. & PRAC. 1, 1 (2012).

37. Daniel Daneshvar et al., *The Epidemiology of Sport-Related Concussion*, 30 CLINICAL SPORTS MED. 1, 1-3 (2011).

38. Saulle & Greenwald, *supra* note 36, at 1.

39. See *id.* at 1-2 (reporting many athletes do not seek medical attention because their symptoms are unrecognizable).

for athletes aged nineteen and under.⁴⁰ Further, children under the age of fifteen who participate in organized sports are six times more likely to sustain a severe concussion compared to other non-contact activities.⁴¹ But what exactly *is* a concussion?

In its most basic form, a concussion is a type of TBI, caused by an impact to the brain that can result in mental status changes and even a loss of consciousness.⁴² In Latin, the word “concussion,” or *concutere*, means “to shake violently.”⁴³ Cerebrospinal fluid acts as a protective buffer between the skull and the brain.⁴⁴ This fluid is a cushion that absorbs the impact from common everyday bumps and jolts.⁴⁵ When the head experiences a violent blow or a sudden acceleration or deceleration, the fluid cannot absorb the impact, which is also known as a coup-contre-coup injury.⁴⁶ As a result, the brain rattles against the inner walls of the skull, resulting in a concussion.⁴⁷ The severity and symptoms of a concussion vary depending on the force of the blow.⁴⁸ Symptoms vary from a minor headache, to a loss of consciousness, and death in the most extreme cases.⁴⁹

B. *The Subconcussive Hit*

The subconcussive blow is a mild traumatic brain injury that results from continuous small impacts to the head.⁵⁰ Derived from its very

40. See *Statistics: Concussion rate doubled in decade*, PREVACUS.COM, <http://prevacus.com/concussions-101/statistics> (last visited Feb. 3, 2016) (noting high school football is consistently shown as the sport with the greatest proportion of concussions).

41. G J Browne & L T Lam, *Concussive head injury in children and adolescents related to sports and other leisure physical activity*, 40 BRIT. J. SPORTS MED. 163, 166 (2005).

42. *Basic Information about Traumatic Brain Injury and Concussion*, *supra* note 35.

43. CANTU & HYMAN, *supra* note 20, at 2.

44. *Concussion: Causes*, MAYO CLINIC (Apr. 2, 2014), <http://www.mayoclinic.org/diseases-conditions/concussion/basics/causes/con-20019272>.

45. *Id.*

46. See Tim Luijckx et al., *Coup-contre-coup injury*, RADIOPAEDIA.ORG (2015), <http://radiopaedia.org/articles/coup-contre-coup-injury-1> (“A coup-contre-coup injury is a term applied to head injuries and most often cerebral contusions. It refers to the common pattern of injury whereby damage is located both at the site of impact (often less marked) and on the opposite side of the head to the point of maximum external trauma.”); see also *Concussion: Causes*, *supra* note 44.

47. *Concussion: Causes*, *supra* note 44.

48. See *id.* (illustrating there are a variety of symptoms a person with a brain injury may experience, such as brain bleeding, drowsiness, or confusion).

49. *Id.*; see CANTU & HYMAN, *supra* note 20, at 2 (explaining the definition of concussions is very broad and the effects can vary—from being “slightly dazed” to “falling unconscious”—depending on the severity).

50. *What Is The Sub-Concussive Blow?*, JEFFERSON: JEFFERSON COMPREHENSIVE CONCUSSION CTR. (Oct. 15, 2014), <http://blogs.jefferson.edu/concussion/2014/10/15/what-is-the-sub-concussive-blow-and-why-should-i-be-paying-attention>.

name, it means a degree of impact not severe enough to be categorized as a concussion.⁵¹ Subconcussive hits are particularly dangerous because they are “generally symptomless and go untreated, allowing the athlete to continue playing or practicing normally, taking more hits which compounds the injury.”⁵² This results in repetitive trauma to the brain, and over time, the cumulative effect can cause more harm to the brain than a single concussion.⁵³ In addition, “subconcussive hits may even predispose someone to getting a concussion later on” in life.⁵⁴

In the years following the discovery of CTE in football, the media, and most scientific literature focused on researching the effects of TBIs on the brain.⁵⁵ In recent years, however, “the role of ‘subconcussive’ impacts in contact sports is garnering interest as an additional mechanism of cumulative brain injury.”⁵⁶ Emerging studies show the cumulative impact of every major and minor hit, play a vital role in assessing the overall quality of the brain’s cognitive function.⁵⁷ As one researcher explained, “[the] brain injury is not only an all-or-nothing phenomenon (e.g., concussion) but may also result from accumulated subconcussive impacts.”⁵⁸

A 2011 study published by researchers at the University of Michigan was the first “to quantify the total number of head impacts sustained by athletes,” as well as measure the impacts’ degree of force.⁵⁹ The four-year study tracked ninety-five high school football players over the course of four football seasons.⁶⁰ The method used to obtain the evi-

51. D.C. Tong et al., *Quantification of subconcussive impact forces to the head using a forensic model*, 22 J. CLINICAL NEUROSCIENCE 747, 747 (2015).

52. Mason Briles, *Effects of Repeated Head Trauma Causing Mental Health Problems Including Chronic Traumatic Encephalopathy (CTE) in Athletes 4–5* (Feb. 19, 2014) (unpublished manuscript), <https://peerj.com/preprints/251v1.pdf>.

53. See Steven P. Broglio et al., *Cumulative Head Impact Burden in High School Football*, 28 J. NEUROTRAUMA 2069, 2069 (2011) (arguing the findings of this particular study show a link between subconcussive head impacts and late-life cerebral pathogenesis).

54. Ann McKee, *Hit Count Has Come to Fruition*, THE CONCUSSION BLOG (Jan. 27, 2014), <http://theconcussionblog.com/tag/ann-mckee/>.

55. See Michael L. Lipton et al., *Soccer Heading Is Associated with White Matter Microstructural and Cognitive Abnormalities*, 268 RADIOLOGY 850, 851 (2013) (discussing both the media’s and the scientific community’s historical tendency to study the effects of multiple concussions as opposed to “subconcussive” impacts).

56. *Id.* at 850.

57. See *id.* at 851 (asserting heading a soccer ball can cause repetitive minor head injury, but since they do not cause concussion symptoms, heading as a cause of brain injury is not heavily explored).

58. Alejandro M. Spiotta et al., *Subconcussive Impact in Sports: A New Era of Awareness*, 75 WORLD NEUROSURGERY 175 (2011).

59. Broglio et al., *supra* note 53, at 2076.

60. *Id.* at 2069. Over the course of four fourteen-week seasons, every player was equipped with a Head Impact Telemetry System (HITS). *Id.* The HITS system is designed to fit into the players’ helmet, and mounted accelerometers assess the frequency and sever-

dence provided a consistent and quantifiable basis to adequately measure the frequency of the subconcussive blows.⁶¹ Across 190 practice sessions and fifty games, 101,994 subconcussive impacts were recorded.⁶² This translates to an average of 652 subconcussive impacts sustained by each player, per season.⁶³ The accelerometer data gathered from the players' helmets showed that adolescents in the control group, "clearly sustained a large number of impacts to the head . . . as a direct result of football participation."⁶⁴ Further, adolescents sustained more severe impacts, leading researchers to conclude that "high school football players sustain an astonishingly high number of head impacts each season, with associated cumulative impact burdens that are equally staggering."⁶⁵

Similarly in 2014, the Purdue University Neurotrauma Group published a five-year study that researched the effects of repeated head impacts on high school players.⁶⁶ The startling discovery found that players sustained up to 1,800 impacts to the head in an average season, resulting in abnormal changes to brain chemistry and metabolism.⁶⁷ MRI exams also revealed that over half of those studied had never sustained a concussion, yet they still "suffer[ed] lingering cognitive disability because of repeated subconcussive blows to the head."⁶⁸ The exhaustive data accumulated from years of research led Biomedical engineering professor Tom Talavage to conclude, "the hundreds of hits these players take to the head each season has an immediate and lingering detrimental effect on how their brains function."⁶⁹

ity of every helmet impact. *Id.* at 2070. Specifically, "[t]he HITS encoder consists of six single-axis accelerometers, a wireless telemetry unit, a battery, and an onboard data storage unit arranged in a horseshoe configuration and encased within waterproof plastic. The encoder communicates with a sideline computer that downloads and stores data pertaining to all impacts in real time." *Id.*

61. *See id.* ("For an impact to be recorded a single accelerometer must exceed a 15-g threshold, although the ensuing resultant linear acceleration may be less than 15-g. After impact a total of 40msec of data are stored, including 8?msec prior to the impact and 32msec following impact.")

62. *Id.* at 2069.

63. *Id.* Per position, "[l]inemen sustained the highest number of impacts per season (868); followed by tight ends, running backs, and linebackers (619); then quarterbacks (467); and receivers, cornerbacks, and safeties (372)." *Id.*

64. *Id.*

65. *Id.* at 2076.

66. Jim Schenke, *Purdue expert at White House sports summit: Subconcussive blows damage kids' brains*, PURDUE U. (May 29, 2014), <http://www.purdue.edu/newsroom/releases/2014/Q2/purdue-expert-at-white-house-sports-summit-subconcussive-blows-damage-kids-brains.html>.

67. *Id.* To obtain this data, Purdue researchers used helmet sensors and sideline computers that processed real-time information back to the researchers. *Id.*

68. *Id.*

69. *Id.*

Research is still in the early stages regarding the determining factors that cause CTE.⁷⁰ What *is* known, is that repeated head trauma is a prerequisite to developing the disease. A single concussion alone will not trigger CTE.⁷¹ What is unknown, however, is “whether CTE is more likely to occur following a small number of severe head injuries, a large number of subconcussive injuries, or other forms of head trauma.”⁷² As mentioned, much of the scientific community’s research has focused on the long-term consequences of severe traumatic brain injuries.⁷³ As such, many questions regarding the long-term effect of repetitive mild traumatic brain injuries, such as the subconcussive hit, remain unanswered.⁷⁴

C. Concussions and the Developing Brain

Concussions are particularly concerning in children and adolescents. “Children between the ages of six and fourteen are at a higher risk of head injuries than any other age group”⁷⁵ Between 2001 and 2009, adolescent emergency room visits for concussion related symptoms increased 62%.⁷⁶ Further, studies show concussions and subconcussive hits have a substantially worse effect on the developing brain than on the fully matured brain.⁷⁷ Dr. Robert Cantu, one of the leading experts in brain trauma and senior advisor to the NFL on concussion safety, explains this reasoning:

Myelin is the fat that covers the fiber tracts in the brain. Think of a copper wire inside the wall of your house and of the plastic or rubber

70. See Broglio et al., *supra* note 53, at 2076 (stating researchers suggest concussions and head impacts may lead to CTE, although the exact mechanisms by which the head impacts lead to CTE are not yet entirely understood).

71. *Chronic traumatic encephalopathy: Causes*, MAYO CLINIC (Nov. 11, 2014), <http://www.mayoclinic.org/diseases-conditions/concussion/basics/causes/con-20019272>.

72. Brandon E. Gavett et al., *Chronic Traumatic Encephalopathy: A Potential Late Effect of Sport-Related Concussive and Subconcussive Head Trauma*, 30 *CLINICS SPORTS MED.* 179 (2011).

73. See Broglio et al., *supra* note 53, at 2069 (discussing growing concern over concussions’ long-term cognitive impact).

74. See *id.* at 2076 (concluding this particular investigation cannot establish the effects of head impacts on long-term neurological health).

75. Marie-France Wilson, *Youth Athletes at Risk: Preventing and Managing Consequences of Sports Concussions in Young Athletes and the Related Legal Issues*, 21 *MARQ. SPORTS L. REV.* 241, 247 (2010); see Allen Ropper & Kenneth Gorson, *Concussion*, 356 *NEW ENG. J. MED.* 166, 166 (2007) (emphasizing children between the ages of five and fourteen have the highest rates of concussions).

76. Ray Daniel et al., *Head Impact Exposure in Youth Football*, 40 *ANNALS BIOMEDICAL ENGINEERING* 976, 976 (2012).

77. See CANTU & HYMAN, *supra* note 20, at 11–12 (explaining the intricacies of a child’s developing brain, and how a concussion affects the young brain versus a fully developed brain).

coating around the wire. The coating insulates, protects, and strengthens that wire. The fiber tracks of adults have a coating of myelin that acts in the same way, protecting the fibers from injury or insult. Brain trauma still can occur, of course. But myelination is an excellent defense. Children's brains have less myelin, so structure in their brains are more easily damaged.⁷⁸

During the first fourteen years of life, the brain and skull develop quicker than neck muscles—the brain and skull's main support structure.⁷⁹ During these years, a child's body is in the development process and the physical size of their head is relatively disproportionate to the rest of their body.⁸⁰ This produces a “bobble-head” like appearance.⁸¹ The bobble head effect leaves younger brains more susceptible to trauma associated with concussions.⁸² Dr. Cantu contends a child's brain is too vulnerable and no piece of state-of-the-art helmet protection, or strictly enforced tackling rules can mitigate the heightened risk of injury.⁸³ His rather simple and commonsensical approach to the debate is “[n]o head trauma is good head trauma.”⁸⁴

Forensic pathologist, Dr. Bennet Omalu, reiterates Dr. Cantu's assertion providing a hypothetical situation that explains a child's risk of long-term impairment after continued participation in a high-contact sport.⁸⁵ He contends that if a child were to undergo advanced neurocognitive studies during and immediately after a football season, there would “be evidence of brain damage at the cellular level of brain functioning, even if there were no documented concussions or reported symptoms.”⁸⁶ This conclusion aligns with the aforementioned 2014 Purdue University Neurotrauma Group study. He goes on to explain “[i]f that child continues to play over many seasons, these cellular injuries accumulate to cause irreversible brain damage, which we know now by the name Chronic

78. *Id.* at 12.

79. *Id.* The development process of the brain and skull is most active and reaches 90% maturity by age fourteen. *Id.*

80. *Id.*

81. Yvonne Abraham, *Ban tackle football for players under 14*, BOS. GLOBE (Dec. 9, 2012), <https://www.bostonglobe.com/metro/2012/12/09/the-wilfully-blind-side/qdknUGIVLah2KQKmcSUQDO/story.html>.

82. *Id.*; Steve Fainaru & Mark Fainaru-Wada, *Youth football participation drops*, ESPN (Nov. 14 2013), http://espn.go.com/espn/otl/story/_/page/popwarner/pop-warner-youth-football-participation-drops-nfl-concussion-crisis-seen-causal-factor.

83. See Abraham, *supra* note 81 (reiterating Cantu's belief that “there is no way to make tackle football safe for youngsters”).

84. CANTU & HYMAN, *supra* note 20, at 12.

85. Bennet Omalu, *Don't Let Kids Play Football*, N.Y. TIMES (Dec. 7, 2015), http://www.nytimes.com/2015/12/07/opinion/dont-let-kids-play-football.html?_r=2.

86. *Id.*

Traumatic Encephalopathy”⁸⁷ Depending on the severity of a child’s condition, “the child now has a risk of manifesting symptoms of CTE like major depression, memory loss, suicidal thought and actions, loss of intelligence as well as dementia later in life. Chronic Traumatic Encephalopathy has also been linked to drug and alcohol abuse as the child enters his 20s, 30s and 40s.”⁸⁸ Dr. Omalu concludes by explaining that the child’s risk of long-term cognitive impairment increases because “the brain, unlike most other organs, does not have the capacity to cure itself following all types of injuries.”⁸⁹

1. Second Impact Syndrome

Athletes who suffer a concussion usually exhibit physical ailments “such as headache[s], visual, motor or sensory changes or mental difficulty. . . .”⁹⁰ Before these symptoms have fully subsided—which could take minutes, hours, days, weeks, or even months—sustaining a second blow,⁹¹ even a relatively minor one, can result in catastrophic consequences.⁹² This is known as Second Impact Syndrome (SIS).⁹³ The large majority of SIS’s victims are youth athletes.⁹⁴ Experts contend that youth athletes, especially adolescents who return to play before the brain is fully recovered, are more susceptible to SIS.⁹⁵ Although rare, “[a]bout 50% of athletes die after suffering SIS and the rest suffer life-long impairments.”⁹⁶ Further, one study found that an alarming 41% of youth ath-

87. *Id.*

88. *Id.*

89. *Id.*

90. Lindsey Barton Straus, *Second Impact Syndrome: A Rare But Usually Fatal Condition*, MOMSTEAM, <http://www.momsteam.com/health-safety/concussion-safety/general/second-impact-syndrome-signs-and-symptoms> (last updated May 21, 2015).

91. *Id.*

92. Terry Zeigler, *Second Impact Syndrome*, SPORTSMDCOM, <http://www.sportsmd.com/concussions-head-injuries/second-impact-syndrome> (last visited Jan. 17, 2016).

The athlete does not need to receive a strong second blow to the head to set the effects in motion. The athlete may receive only a minor blow to the head or a hit to the chest or back that snaps the head enough to have the brain rebound inside the skull.

Id.

93. See *Concussion Information: Concussion Guidelines*, ROBERTCCANTUMD.COM, <http://robertccantumd.com/educational/concussion-information> (last visited Jan. 17, 2016) (“[A] rare but catastrophic brain injury in which an athlete who has suffered a concussion incurs further brain trauma before the symptoms associated with the initial concussion have cleared.”).

94. Straus, *supra* note 90. Ninety-five percent of SIS victims are almost all males and under the age of eighteen. *Id.*

95. *Id.*

96. *Concussion Information: Concussion Guidelines*, *supra* note 93.

letes return to play before their brains are fully healed.⁹⁷ This reiterates the notion that the consequences of sustaining a concussion or suffering from second impact syndrome should be mitigated by establishing proper concussion management standards. This can be achieved if the Texas legislature extends the state's concussion law to be made applicable to every youth athlete.

2. A Potential Link Between Brain Disease and Youth Football

A January 2015 study suggests there may be a causal link between early on-set cognitive impairment and youth football.⁹⁸ The unprecedented study presented forty-two former NFL players with cognitive tests designed to target the memory, mental flexibility and verbal intelligence of the participants.⁹⁹ Using two control groups, researchers found that patients who engaged in contact football before the age of twelve performed significantly worse on all test measures compared to those who began playing football at a later age.¹⁰⁰ Although the preliminary data only focuses on a small sub-set of individuals, it nevertheless provides unique insight regarding the potential effects football can have on the developing brain. If this study represents any future indication, the state legislature must incorporate legislation that ensures the safety of every youth athlete in every youth organization.

D. *Chronic Traumatic Encephalopathy*

In recent years, the prevalence of CTE in football has been the predominant topic of many societal debates as well as the topic of research studies in scientific literature.¹⁰¹ The CDC defines CTE as a progressive neurodegenerative disease (tauopathy) caused by the aggregation of tau

97. Sean Gregory, Time Mag., *Study: Kids Competing Too Soon After Concussions*, PASADENA PREP SPORTS (Jan. 28, 2009), <http://www.insidesocal.com/paspreps/2009/01/28/study-kids-competing-too-soon>. This percentage was gathered from athletes in 100 high schools across the United States. *Id.*

98. Stamm et al., *supra* note 30, at 1114.

99. *Id.* Cognitive tests are tests designed to study the decision-making, problem-solving, memory, and verbal IQ of the participants. *Id.* The caveat to the study was that it narrowly focused on former NFL players, and not on the entire NFL population as a whole. *Id.* A team of researchers at Boston University School of Medicine and specifically targeted patients who exhibited cognitive, behavioral, and mood symptoms within the prior six months before the tests were conducted. *Id.*

100. *Id.* The first control group was comprised of twenty-one patients who participated in contact football before age twelve while the second control group was comprised of the remaining twenty-one patients who started contact football at age twelve or older. *Id.*

101. Saulle & Greenwald, *supra* note 36, at 1.

protein¹⁰² in the brain,¹⁰³ resulting in loss of mass and overall deterioration of the brain.¹⁰⁴ The symptoms of CTE manifest by impairing cognitive functions such as “loss of memory, difficulty controlling impulsive or erratic behavior, impaired judgment, behavioral disturbances including aggression and depression, difficult with balance, and a gradual onset of dementia.”¹⁰⁵ Research shows that continual and repetitive blows to the head is a major risk factor that significantly contributes to the development of the disease.¹⁰⁶ Because football is a high contact sport, it naturally follows, and studies confirm, that those who participate in the sport have a greater risk of developing the disease than those who do not play the game.¹⁰⁷

The term chronic traumatic encephalopathy was largely absent from medical literature until the 1960s,¹⁰⁸ but the disease and its effects have been documented for almost ninety years.¹⁰⁹ CTE was discovered in 1928 by forensic pathologist Dr. Harrison Stanford Martland.¹¹⁰ Martland published an article, *Punch Drunk*, in the *Journal of the American Medical Association* describing an unusual cognitive condition affecting “prizefighters.”¹¹¹ The study monitored individuals who “suffered tremors, slowed movement, confusion, speech problems, [and] a general decline in their thinking and reasoning.”¹¹² Martland termed the condition “dementia pugilistica,”¹¹³ a disease that deteriorates the brain to a point where Martland advised that sufferers need to be committed to asylums

102. See *What is CTE?*, BRAIN INJ. RES. INST., <http://www.protectthebrain.org/Brain-Injury-Research/What-is-CTE-.aspx> (last visited Jan. 17, 2016) (explaining tau protein is a protective substance that stabilizes cellular structure in the neurons, but can become defective and may cause major problems with the function of neurons).

103. See *Complications of Concussion*, CTR. FOR DISEASE CONTROL, http://www.cdc.gov/concussion/HeadsUp/clinicians/resource_center/complications_of_concussion.html (last visited Feb. 5, 2016).

104. *What is CTE?*, *supra* note 102.

105. *Id.*

106. See *id.* (asserting CTE affects the brains of people who have suffered repeated concussions).

107. See *id.* (recognizing athletes who play in contact sports are examples of those who suffer from CTE due to repeated concussions and traumatic brain injuries).

108. See *id.* (“The name Chronic Traumatic Encephalopathy (CTE) was first used in the 1960’s and became the established name.”).

109. See CANTU & HYMAN, *supra* note 20, at 91 (noting although CTE is relatively new to public discourse, the disease is not relatively new).

110. *Id.*

111. Harrison Martland, *Punch Drunk*, 91 J. AM. MED. ASS’N 1103 (1928); CANTU & HYMAN, *supra* note 20, at 91; see *Prizefight*, DICTIONARY.COM, <http://dictionary.reference.com/browse/prizefighter?s=t> (last visited Jan. 23, 2016) (defining prizefight as “a contest between boxers for a prize, a sum of money, etc.; a professional boxing match”).

112. CANTU & HYMAN, *supra* note 20, at 92.

113. *Id.*

for constant care.¹¹⁴ Approximately forty years later, Dr. Martland's findings were reiterated and confirmed by Professor J.A. Corsellis, in his article *The Aftermath of Boxing*.¹¹⁵ Corsellis's retrospective study examined the brains of fifteen retired boxers and concluded that "[a] characteristic pattern of cerebral change . . ." was a direct result of boxing that was consistent with the features of Dr. Martland's "punch drunk syndrome."¹¹⁶ For thirty-five years following Dr. Martland's article *Punch Drunk*, CTE was not a well-known disease outside of the boxing community.¹¹⁷ The topic of concussions in other organized sports was largely absent from media headlines and even the NFL had never acknowledged that concussions could be a threat to its players' long-term health.¹¹⁸ In 2002, however, controversy ignited when a Pittsburg medical examiner suggested a causal link between degenerative brain disease and football.¹¹⁹ The landmark discovery was the inspiration behind a recent Hollywood film¹²⁰ and book,¹²¹ and is widely known as "The Autopsy that changed football."¹²²

1. CTE's Rise to National Attention

Despite overwhelming evidence to the contrary, prior to 2009, the NFL refused to publicly acknowledge that players could suffer long-term effects of repetitive head trauma.¹²³ In 2002, Dr. Omalu performed an au-

114. See Martland, *supra* note 111, at 1103 (arguing in severe cases mental deterioration can make it necessary for someone to seek professional help).

115. J. A. N. Corsellis et al., *The Aftermath of Boxing*, 3 PSYCHOL. MED. 270 (1973).

116. *Id.* "Punch drunk syndrome" was the term coined by Martland to describe the symptoms associated with repeated head trauma, now known as CTE. Jef Akst, *Punch Drunk*, THE SCIENTIST (Dec. 1, 2011), <http://www.the-scientist.com/?articles.view/articleNo/31435/title/Punch-Drunk/>.

117. See *What is CTE?*, *supra* note 102 (noting during the next seventy-five years after Dr. Martland's discovery, many researchers focused on and reported similar findings in boxers and victims of brain trauma).

118. *Id.*

119. See Jason M. Breslow, *The Autopsy That Changed Football*, PBS FRONTLINE (Oct. 6, 2013, 8:06 AM), <http://www.pbs.org/wgbh/pages/frontline/sports/league-of-denial/the-autopsy-that-changed-football> (explaining league doctors attacked Dr. Omalu's findings and demanded to retract his medical conclusions); see also CANTU & HYMAN, *supra* note 20, at 92 (reporting the startling deaths of football players began to make headlines and move public opinion).

120. See Helen Regan, *Will Smith's New Movie Concussion to be Released on Christmas Day*, TIME (Jan. 28 2015), <http://time.com/3685339/will-smith-concussion-christmas-day-nfl-bennet-omalu> (reporting Dr. Omalu's story and discovery will come to life in the movie *Concussion*).

121. JEANNE MARIE LASKAS, CONCUSSION (Jeanne Marie Laskas ed., 2015).

122. Breslow, *supra* note 119.

123. See e.g., Barry Petchesky, *A Timeline of Concussion Science And NFL Denial*, DEADSPIN (Aug. 30, 2013, 11:22 AM), <http://deadspin.com/a-timeline-of-concussion-sci>

topsy on Pittsburgh Steelers Hall of Fame center Mike Webster.¹²⁴ Omalu's study, published in the 2005 journal *Neurosurgery*, titled *Chronic Traumatic Encephalopathy in a National Football Player*,¹²⁵ established the first conclusive evidence of the correlation between concussions and CTE in organized sporting activities other than boxing.¹²⁶ Mike Webster officially became known as "patient zero."¹²⁷

The correlation between football and CTE prompted a 2003 study to determine if playing football predisposes a player to other cognitive diseases.¹²⁸ The study, comprised of 1,800 former NFL players, found that those who sustained three to four concussions were two times more likely to develop depression later in life.¹²⁹ In the same year, the NFL began publishing its first of sixteen scientific papers through its league-funded Mild Traumatic Brain Injury committee (MTBI).¹³⁰ Specifically, between

ence-and-nfl-denial-1222395754 (explaining in 1994, the NFL rejected a study published by the American Academy of Neurology that recommended removing players knocked unconscious from a game).

124. CANTU & HYMAN, *supra* note 20, at 89–90. Dr. Omalu found CTE was a contributing factor to Webster's death. *Id.* at 90. As an offensive lineman, Webster made a living butting heads with other players on a regular basis. *Id.* at 89. A few years before his death, tests revealed that he received damage to the frontal lobe of his brain. *Id.* See also Omalu et al., *supra* note 27, at 128 (confirming Webster had no family history of brain disease or that he had suffered any other head trauma outside of football).

125. Omalu et al., *supra* note 27, at 128.

126. See *id.* ("Chronic traumatic encephalopathy was evident with many diffuse amyloid plaques as well as sparse neurofibrillary tangles and t-positive neuritic threads in neocortical areas.").

127. Stephen Smith, *Frontline NFL Special Offers Uncompromising Portrayal of Denial*, BRAIN INJ. L. CTR. (Oct. 21, 2013) (citing *Iron Mike Webster: Patient Zero in the NFL's "League of Denial"* (PBS Frontline Sept. 29, 2014)), <http://www.brain-injury-law-center.com/latest-news/frontline-nfl-special-offers-uncompromising-portrayal-denial>.

128. Kevin M. Guskiewicz et al., *Recurrent Sport-Related Concussion Linked to Clinical Depression*, 35 MED. & SCIENCE SPORTS & EXERCISE 50 (2003); see Kevin Caruso, *Concussions Can Lead to Suicide*, SUICIDE.ORG, <http://www.suicide.org/concussions-can-lead-to-suicide.html> (last visited Jan. 25, 2016) (summarizing the Center for the Study of Retired Athletes' study conducted on NFL players). The method used in the study of retired athletes consisted of questionnaires administered to 2,488 retired football players, of which only 69% responded. Guskiewicz et al., *supra* note 128, at 50. The data was collected from former players whose average age was fifty-eight years. Caruso, *supra* note 128. The study was conducted to determine if: 1) "there was a significant relationship between concussion history and depression," and 2) "recurrent concussions predisposed a player to Alzheimer's disease." *Id.* The data indicated that 61% of the players sustained one concussion during their NFL career; 24% sustained three or more concussions; 12% sustained five or more concussions; the average number of concussions was 2.1; and 71% returned to play on the same day that they sustained a concussion. Guskiewicz et al., *supra* note 128, at 50; Caruso, *supra* note 128.

129. Guskiewicz et al., *supra* note 128, at 50.

130. Ezell, *supra* note 34.

2003 and 2005, MTBI published numerous articles claiming that the concussion problem was relatively small,¹³¹ players in the NFL were less susceptible to brain injury than the general public;¹³² and return to play in the same game did not increase injury risk.¹³³

In 2004, former Pittsburgh Steeler Justin Strzelczyk died in a car crash at the age of thirty-six.¹³⁴ Dr. Omalu performed Strzelczyk's autopsy and found advanced signs of CTE, similar to Webster's brain.¹³⁵ In June 2005, three years after Webster's death, former NFL player Terry Long committed suicide.¹³⁶ Again, Dr. Omalu conducted the autopsy and concluded that Long's brain showed signs of CTE *almost identical* to Webster's brain.¹³⁷

In January 2006, members of MTBI attempted to retract Dr. Omalu's initial CTE findings by arguing that Omalu's research was based on "fallacious reasoning."¹³⁸ Undeterred, Omalu published a second article on the prevalence of CTE in former NFL players in the November 2006 issue of *Neurosurgery* titled, *Chronic Traumatic Encephalopathy in a National Football Player: Part II*.¹³⁹ In the same month, another former

131. *Id.* ("A total of 92% of concussed players returned to practice in less than seven days More than one-half of the players returned to play within one day, and symptoms resolved in a short time in the vast majority of cases.").

132. *Id.* ("One of the other processes that may account for some of these differences between NFL players and the general population might be deemed to be a type of artificial selection. . . . [T]hose players who ultimately play in the NFL are probably less susceptible to MTBI and prolonged post-concussion syndrome than the general population.").

133. *Id.* ("Players who are concussed and return to the same game have fewer initial signs and symptoms than those removed from play. Return to play does not involve a significant risk of a second injury either in the same game or during the season.").

134. *See id.* (explaining before his death, Strzelczyk exhibited erratic behavior and complained of depression).

135. *Id.*

136. CANTU & HYMAN, *supra* note 20, at 90.

137. *Id.* Dr. Omalu examined the body of Mike Webster because it fell under his jurisdiction. *The FRONTLINE Interviews: Dr. Bennet Omalu*, PBS FRONTLINE (Mar. 25, 2013), <http://www.pbs.org/wgbh/pages/frontline/sports/league-of-denial/the-frontline-interview-dr-bennet-omalu>. Webster's treating physician listed post-concussion syndrome on his death certificate. *Id.* "Post-concussion syndrome is a traumatic disease, and . . . qualifies as a contributing factor to death, . . . categoriz[ing] the case as an accidental . . . death, therefore falling into the jurisdiction of the coroner, of the medical examiner." *Id.*

138. *See* Ezell, *supra* note 34 ("Omalu et al.s' description of chronic traumatic encephalopathy is completely wrong. The diagnosis of a chronic condition requires a medical history indicating a long-standing nature of the illness Such a history is completely lacking in Omalu et al.s' report.").

139. Omalu et al., *supra* note 27, at 1086. As with Mike Webster, in Dr. Omalu's second article, he links Long's NFL career with brain damage by stating, "[o]ur first and second cases both had long careers without multiple recorded concussions. Both manifested Major Depressive Disorder after retirement." *Id.* at 1092. Omalu emphasizes the importance of further research on the subject of CTE and football by explaining that

NFL player, Andre Waters, committed suicide; yet again, Dr. Omalu's autopsy confirmed Waters suffered from an advanced case of CTE.¹⁴⁰

In 2007, Dr. Julian Bailes and Dr. Kevin Guskiewicz proffered a study on the risk of cognitive diseases such as Alzheimer's, dementia, and depression.¹⁴¹ The survey, consisting of 2,552 former professional football players, concluded that ". . . [p]rofessional football players with a history of three or more concussions are at a significantly greater risk for having depressive episodes later in life compared with those players with no history of concussion."¹⁴² Again, the MTBI committee attempted to minimize the significance of the study by criticizing the research methods used to obtain the data.¹⁴³ Similarly, a 2008 study commissioned by the NFL showed that former players are nineteen times more likely than the general population to have dementia, Alzheimer's, or other memory-related diseases.¹⁴⁴ Once again, the MTBI committee found the study to be inconclusive.¹⁴⁵

In the midst of overwhelming evidence linking professional football to CTE, a 2009 report alleged that the NFL had actively engaged in a campaign "to deny or downplay the link and discredit the experts who detected it."¹⁴⁶ This garnered the attention of top officials, and in October 2009, NFL Commissioner Roger Goodell was summoned before the House Judiciary Committee to respond to allegations regarding the

"[f]urther studies are needed to identify and define the neuropathological cascades of chronic traumatic encephalopathy in football players . . ." *Id.*

140. CANTU & HYMAN, *supra* note 20, at 94–95.

141. Kristina M. Gerardi, *Tackles that Rattle the Brain*, 18 SPORTS L.J. 181, 197 (2011). In conducting the study, 3,683 retired professional football players were mailed a questionnaire regarding their overall health. *Id.*

142. Ezell, *supra* note 34.

143. *See id.* (MTBI committee chair, Dr. Ira Casson argued "[s]urvey studies are the weakest type of research study—they're subject to all kinds of error and misinterpretation and miscalculation.").

144. DAVID R. WEIR ET AL., UNIV. OF MICH. INST. FOR SOC. RESEARCH, NATIONAL FOOTBALL LEAGUE PLAYER CARE FOUNDATION: STUDY OF RETIRED NFL PLAYERS 32 (2009), <http://ns.umich.edu/Releases/2009/Sep09/FinalReport.pdf>; *see also* Alan Schwartz, *Dementia Risk Seen in Players in N.F.L. Study*, N.Y. TIMES (Sept. 29, 2009), http://www.nytimes.com/2009/09/30/sports/football/30dementia.html?pagewanted=all&_r=0 (reporting the findings of the NFL-sponsored study conducted by the University of Michigan); Ezell, *supra* note 34 (listing the appearance of the study linking dementia to football on the front-page of the New York Times in a chronology of the NFL's knowledge about the link between football and brain disease). Dr. David Weir, the principal investigator surveyed 1,063 retired players via phone interview and compared their answers to established national surveys taken by men with similar age and race. WEIR ET AL., *supra* note 144, at 32.

145. Petchesky, *supra* note 123.

146. Robert Lloyd, *Review: 'League of Denial' tackles NFL's concussion issue head-on*, L.A. TIMES (Oct. 8, 2013, 7:00 AM) <http://www.latimes.com/entertainment/tv/show-tracker/la-et-st-league-of-denial-review-20131008-story.html>.

league's neglectful handling of active and retired players with brain injuries.¹⁴⁷ During the hearing, Congresswoman Linda T. Sánchez criticized Commissioner Goodell's management of the concussion crisis.¹⁴⁸ Specifically, Congresswoman Sánchez stated, "[t]he N.F.L. sort of has this blanket denial or minimizing of the fact that there may be this link, and it sort of reminds me of the tobacco companies pre-'90s when they kept saying, Oh, there's no link between smoking and damage to your health."¹⁴⁹ By the end of 2009, mounting public pressure prompted the NFL to finally acknowledge the long-term effects of concussions in football.¹⁵⁰ This spurred a series of lawsuits against the NFL, resulting in 250 cases, more than 5,000 plaintiffs, and a payout of nearly \$765 million to former players and their families.¹⁵¹

Perhaps two of the most notable cases in recent years, however, involved the deaths of a collegiate athlete and an NFL superstar. In 2010, twenty-one-year-old Owen Thomas was the first confirmed collegiate athlete to suffer from CTE.¹⁵² In 2012, the football community was shocked when one of the most well-known modern day athletes, Junior Seau, committed suicide.¹⁵³ The disconcerting commonality between these two athletes is that neither player had ever been diagnosed with a concussion.¹⁵⁴ This raises fears that these cases of CTE could have been caused by subconcussive hits culminating over the course of their careers. These stories prove that CTE is not limited to professional athletes. As such, legislative action must be taken to ensure that every preventive measure is exhausted to detect and treat athletes at *every* level of play.

As of 2015, the known cases of CTE are well into the double digits.¹⁵⁵ In January 2016, the NFL released a statement revealing 182 reported

147. Alan Schwarz, *N.F.L. Scolded Over Injuries to Its Players*, N.Y. TIMES (Oct. 28, 2009), http://www.nytimes.com/2009/10/29/sports/football/29hearing.html?_r=0.

148. *Id.*

149. *Id.*

150. Ezell, *supra* note 34.

151. Petchesky, *supra* note 123.

152. Ezell, *supra* note 34.

153. See, e.g., Jim Avila et al., *Junior Seau Diagnosed With Disease Caused by Hits to Head: Exclusive*, ABC NEWS (Jan. 10, 2013), <http://abcnews.go.com/US/junior-seau-diagnosed-brain-disease-caused-hits-head/story?id=18171785> (describing Junior Seau as a household name known for his relentless hard-hitting defensive skills that earned him multiple awards, including a posthumously selection to the NFL Pro Football Hall of Fame). Prompted by developing research, Seau's family donated his brain to neuroscientists at the National Institutes for Health. *Id.* Similar to his previous examinations, Dr. Omalu's autopsy concluded that Seau's brain showed advanced signs of CTE. *Id.*

154. Ezell, *supra* note 34; David Greene, *Seau's Suicide Helped To Make Concussions In Football A National Issue*, NPR (Dec. 22, 2015) <http://www.npr.org/2015/12/22/460656805/junior-seaus-suicide-helped-to-make-concussions-in-football-a-national-issue>.

155. Petchesky, *supra* note 123.

concussions were sustained by players in the 2015 regular-season.¹⁵⁶ This is a 58% increase from 2014, and represents the highest rate of four years of mandated record keeping.¹⁵⁷

III. THE RISE AND POTENTIAL FALL OF YOUTH FOOTBALL

A. *The Birth of Youth Football*

The oldest and largest youth football organization in America, Pop Warner Little League Scholars, has been in operation for almost one-hundred years.¹⁵⁸ Pop Warner began as a recreational league to keep inner city kids in school and out of trouble.¹⁵⁹ The league's popularity has grown since its inception,¹⁶⁰ and currently encompasses approximately 400,000 youth football players ranging from ages five to fifteen.¹⁶¹ The league incorporates a weight and age matrix that groups participants into various divisions.¹⁶² Prior to 2005, children under the age of eight were prohibited from participating in full-contact leagues, but had the option of playing in Pop Warner's flag football division.¹⁶³ In 2005, Pop Warner added the "Tiny-Mite League" which allows players as young as five years old, to participate in full contact tackling.¹⁶⁴ This has been

156. Nathaniel Vinton, *Concussions are on the rise in the NFL: League releases data that shows 58% increase in regular season concussions*, N.Y. DAILY NEWS (Jan. 30, 2016, 10:00 AM), <http://www.nydailynews.com/sports/football/concussions-rise-nfl-league-data-reveals-article-1.2513828> (explaining that, including preseason and practice, 271 total reported concussions were recorded, representing an increase).

157. *Id.*

158. *History of Pop Warner*, POP WARNER, http://www.popwarner.com/about_us/history.htm (last visited Nov. 6, 2015).

159. *Id.*

160. See CANTU & HYMAN, *supra* note 20, at 29 (claiming Pop Warner is one of the largest and widely known youth athletics organization).

161. POP WARNER LITTLE LEAGUE SCHOLARS REPORT (2012), <http://24.199.21.46/oecweb/PopWarnervsAYF.pdf>. The organization has 400,000 participants encompassing 41 states, 6 foreign countries, 121 member leagues, and 1,334 member associations across America. *Id.*

162. *Age/Weight Matrix 2014 Season*, POP WARNER (Jan. 6, 2014), http://www.popwarner.com/Assets/01-assets/admin/2014Forms/2014_age_weight_matrix.pdf. The divisions include: Tiny-Mite (35–75 lbs and ages 5–7); Mitey-Mite (45–90 lbs and ages 7–9); Jr. Pee Wee (60–105 lbs and ages 8–11); Pee Wee (75–120 lbs and ages 9–12); Jr. Midget (90–145 lbs and ages 10–13); Midget (105–170 lbs and ages 12–15); and Unlimited (105 lbs + and ages 11–14). *Id.*

163. CANTU & HYMAN, *supra* note 20, at 30. Flag football is a safer alternative to tackle football since the tackling aspect was replaced by grabbing an opposing player's flag, which represented the ball carrier was tackled. *Id.*

164. *Id.*

highly criticized even from some of the most notable proponents of the game.¹⁶⁵ Hall of Fame coach John Madden said:

I'm a firm believer that there's no way that a six-year-old should have a helmet on and learn a tackling drill There's no way. Or a seven-year-old or an eight-year-old. They're not ready for it. Take the helmets off kids. . . . [T]hey can play flag football. And with flag football you can get all the techniques. Why do we have to start with a six-year-old who was just potty trained a year ago and put a helmet on him and tackle?¹⁶⁶

Currently, USA Football estimates that three million children participate in youth football leagues annually.¹⁶⁷ This number is nearly triple the number of athletes playing in high school and collegiate football combined.¹⁶⁸ Some youth football leagues, such as Pop Warner, have established affiliates across every state, while smaller, independent leagues do not reach beyond their local community.¹⁶⁹

B. *Is Youth Football Participation Declining?*

1. A Shift in Public Perception

Prior to the concussion issue, allowing a child to play youth football was a fairly easy decision for parents.¹⁷⁰ Amidst the age of concussion awareness, more information is being made accessible to the public,¹⁷¹ and parents are much more educated and skeptical than ever before.¹⁷²

165. Mike Florio, *John Madden doesn't believe in the Heads Up Football Program*, NBC SPORTS (Aug. 5, 2014, 9:20 AM), <http://profootballtalk.nbcsports.com/2014/08/05/john-madden-doesnt-believe-in-the-heads-up-football-program>.

166. *Id.*

167. Fainaru & Fainaru-Wada, *supra* note 82.

168. See Lindsey Barton Straus, *Youth Football Concussion Study Criticizing Limits On Contact Practices As 'Shortsighted' Generates Controversy*, MOMSTEAM, <http://www.momsteam.com/health-safety/youth-football-concussion-study-generates-controversy-over-suggestion-that-limiting-contact-practices-mistake?page=0%2C1#ixzz3GQuW8jHc> (last visited Nov. 8, 2015) (finding there are 100,000 collegiate football players and 1.3 million high school participants).

169. POP WARNER LITTLE LEAGUE SCHOLARS REPORT, *supra* note 161.

170. See generally Daniel McGinn, *Should you let your child play football?: How parents and coaches are grappling with the escalating fears of concussion risks*, BOS. GLOBE (Feb. 28, 2014) <https://www.bostonglobe.com/magazine/2014/02/28/should-you-let-your-child-play-football/pNbZLTK3ubchHXptuNJoHP/story.html> (depicting how recruiting football players in this day and age has become more difficult).

171. See Jacqueline Rupp, *The Rise of the Concussion*, THIS WK. ORTHOPEDICS (Nov. 7, 2010) <https://ryortho.com/2010/11/the-rise-of-the-concussion> (describing a "surge" in concussion awareness).

172. Howard Fendrich & Eddie Pells, *States' youth concussion laws vary in strength*, ALBUQUERQUE J., <http://www.abqjournal.com/533408/sports/states-youth-concussion-laws->

This has forced the contemporary parent to answer the tougher question: “when we knowingly and willfully allow a child to play high-impact contact sports, are we endangering that child?”¹⁷³ Recent participation rates and empirical studies suggest that many parents are answering the question in the affirmative.

Between 2008 and 2014, the number of youths participating in organized leagues declined nearly 6%.¹⁷⁴ Specifically, between 2010 and 2012, participation in Pop Warner leagues dropped nearly 10%—the organizations largest decline in decades.¹⁷⁵ The decline was not limited to Pop Warner, but a nationwide trend,¹⁷⁶ with local start-up and independent leagues suffering from similar declines.¹⁷⁷ However, in March 2016, USA Football’s Annual Sports Marketing Survey revealed that youth football was the fastest growing sport in 2015.¹⁷⁸ Specifically, the 2015 season marked the first increase in participation rates in more than seven years.¹⁷⁹ But it was non-tackle flag football that accounted for the sport’s

vary-in-strength.html (last updated Jan. 30, 2015, 12:02 AM). During the 2007–2008 academic year, in a Pennsylvania school, “three years before Pennsylvania passed its [concussion] law, there were 10 concussions reported . . .” *Id.* After the law was passed, the number of concussions reported rose to 15 in 2013–2014, and 18 in 2014–2015. *Id.* This report is just one example of how concussion research has impacted state legislatures to act. As such, the education component of legislation informs parents and students about the signs and symptoms of concussions, which ultimately leads to an increase in reporting.

173. Omalu, *supra* note 85; see also Susan Perry, *As parents’ attitudes change, football’s popularity could go the way of prize fighting*, MINNPOST (Oct. 25, 2013), <https://www.minnpost.com/second-opinion/2013/10/parents-attitudes-change-footballs-popularity-could-go-way-prize-fighting> (finding most adults in the United States (86%), are aware that scientists have found a causal link between the repetitive head-to-head contact in football and cognitive impairment).

174. Neil Paine, *Fewer Kids are Playing Football, But Mark Cuban Might Be Wrong About Why*, (Mar. 25, 2014, 4:37 PM), <http://fivethirtyeight.com/datalab/fewer-kids-are-playing-football-but-mark-cuban-might-be-wrong-about-why/>; see Tom Farrey, *A permit for youth football safety?*, ESPN (Feb 9, 2014), http://espn.go.com/espn/otl/story/_/id/10420535/new-york-city-council-member-wants-law-require-doctor-every-youth-football-game-trainer-practices (claiming football participation has dropped more than half a million players since 2007).

175. Fainaru & Fainaru-Wada, *supra* note 82.

176. *Id.*

177. See Rick Maese, *Football safety concerns affect youth leagues, causing NFL to take notice*, WASH. POST (Oct. 24, 2012), https://www.washingtonpost.com/sports/redskins/football-safety-concerns-affect-youth-leagues-causing-nfl-to-take-notice/2012/10/24/b6a40dc2-1a13-11e2-ad4a-e5a958b60a1e_story.html (noting declines in football participation that spans across both small and large leagues due to concussion concerns).

178. Marcus Howard, *Football grew more than any other U.S. sport: survey*, REUTERS (Mar. 14, 2016, 10:02 PM), <http://www.reuters.com/article/us-usa-football-idUSKCN0WG2HJ>.

179. See *id.* (explaining the survey included 102 sports and 30,000 children and teenagers).

largest, most significant increase.¹⁸⁰ While flag football increased nearly 9% for children ages six to fourteen, tackle football only accounted for a 2% increase.¹⁸¹ This disparity could reflect parental and player concern about injury.¹⁸² Dr. Cantu suggests “the increase in flag football participation signaled that more parents are directing children to a safer alternative.”¹⁸³

In 2014, the Aspen Institute conducted a national survey representative of parental attitudes regarding certain youth sports issues.¹⁸⁴ The study revealed an overarching concern about the state of youth sports in America.¹⁸⁵ Specifically, more than 87% of parents cited risk of injury as a major worry, “with concussion cited as the injury of most concern.”¹⁸⁶ The survey also stated that “[b]y far, football is the sport that parents most worry about when it comes to concussion. Soccer is a distant second.”¹⁸⁷ A quarter of all parents polled seriously considered not allowing their child to participate in a sport because of the fear and risk of head injuries.¹⁸⁸ Further, a 2016 study found that a third of American adults “would not allow a young son to play competitive football, a marked shift from last year when only 22% said the same.”¹⁸⁹

In addition, the overall public perception of youth football seems to be shifting towards promoting stricter minimum age standards.¹⁹⁰ A nationwide survey found that over 40% of the population supports banning youth football below the high school level.¹⁹¹ Similarly, another survey revealed that 40% of parents “would encourage their children to play a

180. *Id.*

181. *Id.*

182. *Id.*

183. *Id.*

184. Farrey, *supra* note 174. Data for the survey was collected via the ESPN Sports Poll in September 2014. *Id.* The survey reflects the answers of parents or guardians of children who were over the age of eighteen. *Id.* Questions included: What percentage of parents let their kids play sports?; What parents have concerns about?; How big of a concern is the quality or behavior of youth coaches?; and How big of a concern is the risk of injury in youth sports?. *Id.*

185. *Id.*

186. *Id.*

187. *Id.*

188. *Id.*

189. Bob Cook, *The Number that Signals if Youth Football Participation will Fail*, FORBES (Jan. 31, 2016, 1:01 AM), <http://www.forbes.com/sites/bobcook/2016/01/31/the-number-that-signals-if-youth-football-participation-will-fall/#27ab9da54ebc>.

190. Yasmeen Abutaleb, *Protecting Their Young: Youth Football Leagues Take Steps Towards A Safer Game*, CAPITAL NEWS SERV. (May 22, 2014), <http://cnsmaryland.org/2014/05/22/protecting-their-young-youth-football-leagues-take-steps-toward-a-safer-game/>.

191. *Id.*

sport other than football because of the fear of concussions.”¹⁹² It seems that public awareness regarding the concussion issue could be resonating with parents by exposing the harsh realities echoed by the medical community.¹⁹³

2. A School District’s Response

In the spring of 2014, Marshall Independent School District captured headlines across the country by eliminating contact football at the seventh grade level.¹⁹⁴ In addition to the regulations set forth by Texas’s interscholastic governing body (University Interscholastic League (UIL)), Marshall became one of the first public schools in Texas to add to the rule by eliminating tackle football at the seventh grade level.¹⁹⁵ Today, Marshall, a town where football is hugely popular, represents “a shift in perception about football that would have been hard to imagine . . . nearly 25 years ago.”¹⁹⁶ Marshall’s Superintendent Marc Smith said, “I anticipated a little more resistance and concern. But the safety factor really resonated with our parents. They get it, and they see their little 11- or 12-year-olds getting slammed to the ground.”¹⁹⁷ The Marshall Independent School District’s decision is significant because it symbolizes a willingness to combat the concussion issue by taking proactive steps through a localized approach.¹⁹⁸

3. A Legal Precedent Established

The numerous concussion lawsuits over the past decade have been limited to professional, collegiate, and high school football as defendants.¹⁹⁹ In February 2015, however, the first ever concussion-related lawsuit was filed against the Pop Warner Youth Football League by the surviving fam-

192. *Id.*

193. Perry, *supra* note 173. Eighty-six percent of adults in the United States know that scientists have discovered a correlation between long-term brain injury and concussions sustained from playing football. *Id.*

194. Ken Belson, *Football’s Risks Sink In, Even in Heart of Texas*, N.Y. TIMES (May 11, 2014), http://www.nytimes.com/2014/05/12/sports/footballs-risks-sink-in-even-in-heart-of-texas.html?_r=1.

195. *Id.* The school district substituted tackle football with a flag football system. *Id.*

196. *Id.*

197. *Id.*

198. *Id.*

199. See generally Elise Michael, *School of Hard Knocks-The Impact of the NFL Concussion Litigation*, 33 CARDOZO ARTS & ENT. L.J. 289, 311–318 (2015) (detailing previous lawsuits by NFL players and collegiate players, predicting how previous litigation will impact the realm of youth football).

ily of former Pop Warner football player, Joseph Chernach.²⁰⁰ The representative of his estate, Chernach's mother, sought \$5 million in punitive damages claiming that years of playing youth football directly contributed to her twenty-five-year-old son's suicide.²⁰¹ She was required to satisfy the onerous burden that Pop Warner was the cause of the injury and that Pop Warner knew, or should have known the degree of danger contact football poses.²⁰² In March, 2016, Pop Warner settled with Chernach's family for "less than the \$2 million liability policy Pop Warner had for each player."²⁰³

This unprecedented settlement represents a potential litigation nightmare for Pop Warner and its youth football league cohorts. If the current trend of developing research is any future indicator, it is likely that more litigants will come forward with enough substantive evidence to substantiate a claim. This current progression is eerily similar to the years leading up to the sizable lawsuits settled between the NFL and its former players.

IV. WHY TEXAS'S CONCUSSION LAW SHOULD BE REFORMED

Every state concussion law should extend coverage to youth athletes in order to minimize the dangers of professionalizing youth football, bias advertising campaigns, and inconsistent safety standards. In addition to these factors, Texas's concussion law should particularly be reformed because the prevalence of the sports culture, popularity, and high participation rates are characteristics that make Texas football uniquely different from other states. In light of these factors, it does not make sense why the Texas legislature has not amended its concussion law to make certain provisions applicable to all youth athletes who participate in organized youth leagues.

A. *The Popularity of Football in Texas*

"As far back as the early 1900's when Thanksgiving was all about turkey, dancing, and music for the rest of America, Texans had a special

200. Ken Belson, *Family Sues Pop Warner Over Suicide of Player Who Had Brain Disease*, N.Y. TIMES (Feb. 5, 2015), http://www.nytimes.com/2015/02/06/sports/family-of-player-with-cte-who-killed-himself-sues-pop-warner.html?_r=0.

201. See *id.* (stating the Chernach's discovered post-humously that their son had CTE which likely contributed to his suicide).

202. See *id.* ("The Chernach's legal team will probably have to document that the head trauma Chernach sustained in Pop Warner led to his death . . .").

203. 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/>.

tradition; football.”²⁰⁴ Football is as American as apple pie, especially in Texas.²⁰⁵ On any given week during football season, the UIL estimates there are close to 600 high school games involving 100,000 players across the state.²⁰⁶ Nationally, football is the most popular sport amongst inter-scholastic athletes,²⁰⁷ and for over two decades, Texas has led the nation in player participation rates and in the average number of players per high school.²⁰⁸ Texas is known for its pride and love for football,²⁰⁹ and the state’s peculiar cultural obsession with the game has been documented in many movie and television storylines.²¹⁰ But what exactly drives the success and cultural sensation of the sport *in* Texas? The most straightforward answer is that Texas invests in all aspects of football. “Football isn’t just a religion in Texas, it’s economics.”²¹¹

204. Brad Radby, *How Football Became So Popular in Texas*, BRAD RADBY.COM (Mar. 2, 2016), <http://bradradby.com/how-football-became-so-popular-in-texas/>.

205. Statistical analysis of the popularity of youth sports in America shows that in the 2013–2014 school year, the participation of boys playing tackle football (1,093,234) nearly doubled the participation of the next closest sport-track and field (580,321). NAT’L FED’N OF STATE HIGH SCH. ASS’NS, 2013–14 HIGH SCHOOL ATHLETICS PARTICIPATION SURVEY 53–54 (2014), http://www.nfhs.org/ParticipationStatics/PDF/2013-14_Participation_Survey_PDF.pdf.

206. Bob Brown, *In Texas, High School Football is King*, ABCNEWS (Dec. 1 2003), [HTTP://ABCNEWS.GO.COM/PRIMETIME/STORY?ID=132425](http://abcnews.go.com/Primetime/story?id=132425).

207. NAT’L FED’N OF STATE HIGH SCH. ASS’NS, *supra* note 205, at 53; Terence P. Jeffrey, *Football Is Top Sport in U.S.: 1,088,158 High School Players*, CNSNEWS (Feb. 2, 2014, 12:35 AM), <http://www.cnsnews.com/news/article/terence-p-jeffrey/football-top-sport-us-1088158-high-school-players>. In the 2013–2014 school year, 164,554 student athletes participated in football, compared to 71,477 and 47,554 participants in basketball and baseball, respectively. NAT’L FED’N OF STATE HIGH SCH. ASS’NS, *supra* note 205, at 53. For the 2012–2013 school year, 1,088,158 students played football. Jeffrey, *supra* note 207.

208. Smith, *supra* note 25. For the 2014–2015 school year, Texas leads the nation in the number of high school athletes (804,598), with California coming in second (797,101). *Id.* Texas also continues to lead the nation in the number of high school football participants (163,998). *Id.*

209. See Jason Cohen, *Texas: It’s Where College Football Players Come From*, TEXAS MONTHLY (Jan. 15, 2013, 7:30 AM), <http://www.texasmonthly.com/its-always-football-season/texas-it%E2%80%99s-where-college-football-players-come> (explaining over the past seventy years, Texas has been the most recruited state for athletes playing football).

210. See generally FRIDAY NIGHT LIGHTS (Universal Studios 2004) (highlighting the traditions and struggles of a small town football team in Odessa, Texas); VARSITY BLUES (Paramount Pictures 1999) (illustrating the lives of high school football players in a small football town); *Friday Night Lights* (NBC television broadcast Oct. 3 2006); *Friday Night Tykes* (Esquire Network television broadcast Jan. 14, 2014) (documenting the lives of youth football players and coaches).

211. Rod Babers, *Texas Becoming the Mecca of American Football*, AM 1300 THE ZONE, (2015) <http://am1300thezone.iheart.com/articles/2015-high-school-news-494271/texas-becoming-the-mecca-of-american-13899001>.

1. Football as an Economic Engine

Football programs across the state have become economic engines that generate substantial funding for their school districts.²¹² Football programs are treated as businesses and school districts place significant value on a program's continued success.²¹³ This has led many larger school districts to redefine the traditional role of the football coach.²¹⁴ Specifically, many football programs are employing full-time coaches to manage and oversee the program on a daily basis.²¹⁵ In fact, "Texas has more full-time high school coaches than any other state. In a growing number of cases coordinators are no longer teaching . . . [instead, they are] focusing almost solely on football."²¹⁶ High school football in Texas is more than just a sport, it is a calculated business, and "[a]s long as people care about high school football, school districts will continue paying top dollars for successful coaches."²¹⁷ The fact that Texas school districts employ more full-time coaches than any other state, provides a unique example that adds to the common "oversized, mythicized, and romanticized" perception of a sport's significance in school districts across Texas.²¹⁸

In Texas, football stadiums are indicative of a city's economy.²¹⁹ Texas boasts some of the nation's most extravagant high school football facilities²²⁰ and is home to six of the ten largest high school stadiums in the country.²²¹ In 2012, Allen Independent School District became home to

212. *Id.*

213. *Id.*

214. *Id.* The "traditional" role by coaches was defined as half coach and half educator. Coaches traditionally performed the dual function of splitting time between coaching athletes and teaching in a classroom setting. *Id.*

215. *See generally id.* (explaining how more coaches are being hired for full-time coaching duties).

216. *Id.*

217. Brent Shirley, *As High School Popularity Soars, So Do Coaches' Salaries*, STAR-TELEGRAM (Aug. 18, 2011), <http://www.star-telegram.com/sports/article3828640.html>.

218. *Id.*

219. Babers, *supra* note 211.

220. *Id.* When Dallas hosted the Super Bowl in 2011, the Green Bay Packers used the \$4.5 million indoor facility owned by Highland Park High School, and "a lot of Packers players said it was better than some NFL facilities . . ." *Id.* Texas also holds the all-time national attendance record for a single game. *Id.*

221. *See* Alya Khalid, *10 Largest High School Football Stadiums*, MADEMAN.COM, (Dec. 10, 2015), <http://www.mademan.com/mm/10-largest-high-school-football-stadiums.html> (describing the six stadiums in descending order: (1) Alamo Stadium in San Antonio (23,000); (2) Memorial Stadium in Mesquite (20,000); (3) Ratcliff Stadium in Odessa (19,302); (4) Eagle Stadium in Allen (18,000); (5) San Angelo Stadium in San Angelo (17,500); (6) Stallworth Stadium in Baytown (16,500)).

the most expensive high school football stadium in the world.²²² However, the price of Katy Independent School District's 2017 stadium is scheduled to surpass the cost of Allen's stadium by \$1 million.²²³

Texas is also home to two of the top five most valuable franchises in the NFL, the Houston Texans and "America's Team," the Dallas Cowboys.²²⁴ On the collegiate level, "no other state has more FBS programs or Power 5 programs in major metropolitan areas than Texas."²²⁵ These examples illustrate why Texas has effectively distinguished itself from other football cultures across America.²²⁶ Structuring football programs as a business, coupled with a strong presence of football culture at every level of play, reiterates the notions that "the sport[] represents a way of life in this state."²²⁷

2. Youth Football in Texas

It is difficult to precisely quantify the number of youth athletes participating in youth football in any state, including Texas, because there is no obtainable data from a centralized governing body charged with preserving participant statistics.²²⁸ This oddity is explained in the article, *Hey, data data—swing!*:

The problem is that while the FDA takes responsibility for knowing everything about our food, . . . no one agency or organization monitors youth sports either as a central part of American childhood

222. Dan Solomon, *Allen's Eagle Stadium is Set to Officially Reopen on Friday*, TEXAS MONTHLY.COM (Aug. 27, 2015), <http://www.texasmonthly.com/the-daily-post/eagle-stadium-in-allen-is-set-to-officially-reopen-on-friday/>. In 2010, the Allen Independent School District broke ground on the \$60 million project—it was officially completed in 2012. *Id.* Allen Eagle Stadium has state-of-the-art amenities, including a "high definition Jumbotron, upper-deck seating, and Chick-Fil-A and BBQ vendors . . ." *Id.*

223. *See Ground broken on America's most expensive high school football stadium*, USA TODAY (Feb. 11, 2016), <http://usatodayhss.com/2016/ground-broken-on-americas-most-expensive-high-school-football-stadium> ("Some highlights: [d]esign plans show the new stadium situated on a 58-acre tract north of Rhodes; [t]wo-story press box; [s]everal training room; [j]umbotron; [f]ield house that is drawn to occupy 12,000 square feet of the complex; [t]he second floor will remain empty for future expansion and will include space for a high school football hall of fame.").

224. Babers, *supra* note 211.

225. *See id.* ("The Metroplex alone has SMU, TCU and North Texas; in Central Texas there's Texas, Baylor, UTSA and Texas State all within a short drive from each other; the same goes for Texas A&M, Rice and the University of Houston.").

226. *Id.*

227. *Id.*

228. *Cf.* Bruce Kelley & Carl Carchia, "Hey, data data—swing!," ESPN (July 16, 2013), http://espn.go.com/espn/story/_id/9469252/hidden-demographics-youth-sports-espn-magazine (criticizing the fact that not one agency in the United States is charged with the duty to monitor youth sports).

or as an industry. . . . So we are left with a Wild West of local and regional organizations in dozens of sports and no better odds of getting pinpoint data than of counting all the tumbleweeds blowing across the land.²²⁹

The absence of a centralized governing body makes the task of gathering participant data in independent leagues nearly impossible, and is another example of why a uniform law is necessary. The only obtainable data reflects two of the largest football leagues, Pop Warner (the largest youth football league in America) and the Texas Youth Football Association (the largest independent league in Texas).²³⁰

In a state where football is a hugely popular sport, a greater emphasis should be put on setting uniform standards to afford every youth athlete equal protection. This is possible if the Texas legislature reforms the current concussion law to encompass every youth athlete in every youth league across the state.

B. *The “Professionalism” of Youth Football*

In the 1920’s, youth football leagues “were created in order to foster a sense of community, allow parents to congregate in a social atmosphere, and to provide wholesome activities for children in order that they avoid troublesome behavior.”²³¹ Today, the sport has become “professionalized”²³² by exhibiting many of the same characteristics exemplified by the NFL,²³³ where the primary “focus on participation [is] a means to an end (e.g., college scholarship). . . .”²³⁴ Parents and coaches have become the

229. *Id.*

230. See, e.g., *About Us*, TEX. YOUTH FOOTBALL & CHEER ASS’N, <https://www.tyfa.com/about-us> (last visited Nov. 9, 2015) (reporting to have chapters in San Antonio, Austin, Houston, and the Rio Grande Valley); *History of Pop Warner*, *supra* note 158 (accounting for over 5,000 football teams).

231. Elisabeth Koloup, Comment, *Get Your Head in the Game: Legislation Addressing Concussions in Youth Sports and its Development in Maryland*, 42 U. BALT. L.F. 207, 215 (2012).

232. See CANTU & HYMAN, *supra* note 20, at 30 (examining how Pop Warner “professionalizes” youth football by televising and setting championship games at professional venues and how this becomes a major recruiting tool for scouts, which ultimately leads to greater competition for parents to showcase their children); see also Koloup, *supra* note 231, at 215 (highlighting “professionalization” factors which include: single sport specialization; early single sport specialization; intense year-round training; private coaching; an increased emphasis on winning; and a decrease in the importance of education”).

233. See Koloup, *supra* note 231, at 218 (“While, unlike professional athletes, money is not directly involved as a reward for competing, parents are willing to spend tens of thousands of dollars, as well as over 70 hours per week, for their children to participate in sports.”).

234. *Id.*

driving force behind the competitive, ends-driven, win-at-all-costs mentality²³⁵ that has transformed the once regarded fun pastime into a game where high levels of competition takes precedence over leisure.²³⁶ The cultural forces behind this societal phenomenon can be illustrated by the modern evolution of the adolescent football player.

In the city's youth football league, the Allen Sports Association, 1,200 boys play football. In kindergarten, they pull flags out of one another's waistbands. By second grade, they're tackling each other by the legs. By third grade, they're studying elements of the spread offense. By fourth grade, they're glancing at the play charts on their wrists, just like Tony Romo.²³⁷

The considerable amount of emphasis that society places on winning is a dangerous notion that tends to cause parents, as well as their children, "to approach competition with a more aggressive attitude and pay less attention to their own health and safety."²³⁸

The prevalence of underreporting concussions in youth organizations is a safety concern that largely stems from the competitive environment pervasive in many youth football leagues.²³⁹ Coaches and parents place a significant value on a child's talent and athletic success,²⁴⁰ causing a heightened pressure to continually perform at a high level of play.²⁴¹ As a result, children often times conceal symptoms of a concussion, or become less inclined to report an injury, because they are taught that winning and achieving athletic excellence is their number one priority.²⁴² Hall of Fame Running Back Eric Dickerson describes this "culture of resistance" mentality by explaining:

You are supposed to be tough. You are supposed to play through pain. You are not supposed to cry. We are taught that early on in

235. *See id.* (" . . . parents of youth athletes have gradually instilled in their children a win-at-all-costs mind set, where winning is often valued over sportsmanship and teamwork—qualities that youth sports were originally meant to achieve.").

236. *Id.* at 216.

237. Bryan Curtis, *Friday Night Tykes: A Season of Glory with the Best Twelve-Year-Old Football Team in Texas*, TEX. MONTHLY (Jan. 2013), <http://www.texasmonthly.com/articles/friday-night-tykes>.

238. Koloup, *supra* note 231, at 219.

239. *Id.*

240. *See* Daniel Gould, *The Professionalization of Youth Sports: It's Time to Act!*, 19 CLINICAL J. SPORTS MED. 81 (2009) ("Contemporary parents also frequently come to believe that their worth as parents is reflected in their children's athletic success. . . ."); Koloup, *supra* note 231, at 217. ("[A]thletic talent has historically been a valued quality, the prospect that a child could become a sports star is particularly appealing to parents.").

241. Koloup, *supra* note 231, at 217.

242. *See id.* at 231 (noting "fear and failure of underachievement" are main reasons why children do not report their injuries).

the game as kids [we're] like the gladiator. People want to see the big hits. They wind up on Sports Center. And as a player, you don't want to admit you are injured.²⁴³

This problem is exacerbated by the fact that underreporting is especially common with adolescent head injuries, because children are less likely to recognize the signs and symptoms of a concussion.²⁴⁴

Children, unlike adult athletes competing at a higher level, are often times driven by parental pressure to engage in a sport without understanding the inherent risks involved.²⁴⁵ On the other hand, professional and collegiate athletes are incentivized to perform, and as adults, they have the capacity to recognize, understand, and assume the risks of the playing the game.²⁴⁶ As Dr. Bennet Omalu explains:

We should at least wait for our children to grow up, be provided with the information and education on the risk of play, and let them make their own decisions. No adult, not a parent or a coach, should be allowed to make this potentially life-altering decision for a child.²⁴⁷

It is inevitable that youth football leagues will continue to professionalize the sport.²⁴⁸ Similarly, young players will continue to mimic their favorite professional athlete, and parents will continue to push their children to competitive excellence. After all, football is a sport that encourages competition, teamwork, and sportsmanship. Professionalizing the sport only becomes problematic when the positive attributes of the game are overshadowed by the win-at-all-costs mentality that jeopardizes a player's health.

Ridding the sport of this type of mentality requires a complete behavioral and attitudinal change that is unlikely to occur in the near future. In the meantime, the Texas legislature should extend coverage to youth athletes in order to address and mitigate some of the current, existing problems. Specifically, as discussed in detail below, the education component of Natasha's Law requires coaches, parents, and athletes to be educated in identifying the signs and symptoms of concussions.²⁴⁹ This

243. Hodge Jr. & Kadoo, *supra* note 4, at 155.

244. Koloup, *supra* note 231, at 221.

245. *Id.*

246. *Id.* Professional athletes earn a salary, while collegiate athletes receive monetary stipends through scholarships. *Id.*

247. Omalu, *supra* note 85.

248. *See* Koloup, *supra* note 231, at 216. Many larger youth football organizations promote televised competitions and games held in collegiate and professional stadiums as a main selling point for parents and athletes. *Id.* As such, these leagues will continue to use these promotional campaigns to increase participation rates. *Id.*

249. TEX. EDUC. CODE ANN. § 38.151 (West 2012).

would increase concussion awareness, while decreasing the prevalence of concussion underreporting. Proper education is necessary because “most of these athletes, parents, and coaches are ignorant as to whether a concussion has occurred.”²⁵⁰

C. *Promotional Campaigns Promoting A “Safer” Game: The Bias Factor*

Every fall parents contemplate the question, should my child participate in youth football?²⁵¹ “The answer, of course, is complicated, because the question is complicated. It’s hard to know where to begin. What to believe. Who to trust. How to weigh the risks against the rewards.”²⁵²

Pop Warner claims that its age/weight classification system “reduces the risk and reality of injuries” by “protect[ing] younger, lighter players,”²⁵³ and advertises that such a schematic reduces the risk of injuries because children are competing against other children relative to their size.²⁵⁴ Pop Warner’s system fails to consider, however, that *any* blow to the head can be more detrimental to a developing brain.²⁵⁵ Further, the misconception that little league football is harmless, is misconstrued because although contact between smaller children “looks like a pillow-fight, [] the brain [and body] thinks it’s in a war.”²⁵⁶ A study conducted at Virginia Tech and Wake Forest found that children competing in the age/weight system produced forces comparable to the impacts sustained by collegiate football athletes.²⁵⁷ The study concluded that the degree of severity from an impact is to size,²⁵⁸ and in some cases, the force of the

250. Koloup, *supra* note 231, at 221.

251. Patrick Hruby, *The Choice*, SPORTS ON EARTH (Nov. 14, 2013), <http://www.sportsonearth.com/article/63895452>.

252. *Id.*

253. *Id.*

254. *Id.*

255. See CANTU & HYMAN, *supra* note 20, at 12 (explaining how developing brains are more susceptible to injury than fully matured brains).

256. Sally Jenkins, *Youth football concussions can be prevented: Ask Archie Manning and Tom Brady Sr. how*, WASH. POST (Oct. 2, 2013), http://www.washingtonpost.com/sports/youth-football-concussions-can-be-prevented-ask-archie-manning-and-tom-brady-sr-how/2013/10/02/5e2820aa-2b85-11e3-8ade-a1f23cda135e_story.html.

257. See *id.* (describing sensors on the helmets of seven-year-olds measured g-forces of impacts at up to 40 g’s, equal to those measured in adult impacts).

258. *Id.*

impact was as great as or greater than the degree of impact between two adults.²⁵⁹

Pop Warner's website assures the league is safe as there is "an absence of catastrophic head and neck injuries and disruptive joint injuries found at higher levels," but fails to provide data to support this claim.²⁶⁰ Further, the website explains that "[t]he injury rate in Pop Warner Football is less than one-third the injury rate in high school football [and] less than one-fifth the injury rate in college football [and] less than one-ninth the injury rate in professional football."²⁶¹ The injury report also includes a small safety survey of "71 towns covering over 5,000 players in 1998" concluding that "[n]o catastrophic injuries occurred . . ."²⁶² Not only does this sample size vastly underrepresent the population as a whole, but as Dr. Cantu explains, "[s]tatements like these obscure a key fact: Pop Warner officials have no way to count the concussions occurring in their leagues. No one possibly could until trained medical personnel are present at youth football games."²⁶³ The data relies on self-reported concussions and does not provide any disclaimer concerning children who may not report any concussion symptoms.²⁶⁴ This type of misrepresented advertising leaves parents ill-informed and creates a false impression that children who play contact football are safer than reality suggests.

The largest campaign for youth football safety is the "Heads Up" program.²⁶⁵ Initiated by USA Football and endorsed by the NFL in 2012, the "Heads Up" program implements a standardized way of tackling that is believed to be a "safer" alternative to other tackling techniques.²⁶⁶ The

259. See CANTU & HYMAN, *supra* note 20, at 12 (concluding since a child's head is bigger in size and weight, coupled with the fact that they have weaker necks, a child cannot brace for an impact the way an adult can).

260. Allen Barra, *America's Most Dangerous Football Is in the Pee-Wee Leagues, Not the NFL*, ATLANTIC (Aug. 13, 2013), <http://www.theatlantic.com/entertainment/archive/2013/08/americas-most-dangerous-football-is-in-the-pee-wee-leagues-not-the-nfl/279229>.

261. CANTU & HYMAN, *supra* note 20, at 31 (alternation in original); *Football*, SAN ANTONIO POP WARNER, <http://www.sanantonipopwarner.com/football> (last visited Feb. 1, 2016).

262. CANTU & HYMAN, *supra* note 20, at 31; *Football*, *supra* note 261.

263. CANTU & HYMAN, *supra* note 20, at 31.

264. See *id.* at 31 (emphasizing the lack of accountability between coaches, parents, and, children since they are not trained or knowledgeable on concussion symptoms).

265. See Maese, *supra* note 177 (explaining the "Heads Up" campaign reaches almost 3,000 leagues across the country, that includes 90,000 coaches and approximately 600,000 players).

266. *Id.*; see *Limited Contact in Practice Rule*, POP WARNER, http://www.popwarner.com/safety/practice_contact.htm (last visited Feb. 1, 2016) (implementing new rules to reduce concussions that include prohibiting full speed tackling drills outside of three yards, and reducing the amount of contact allowed at practice to only one-third). See generally *Heads Up*, USA FOOTBALL, <http://usafootball.com/headsup> (last visited Feb. 1, 2016)

premise of the campaign is that football can be made safer if children tackle the proper way.²⁶⁷ Although proper technique is important, the main criticism of the “Heads Up” campaign is the techniques being taught are too complex and not practical in a real game situation.²⁶⁸ As Drew Magary notes about the intricate details of the tackling technique:

This is a sunshine daydream of how football tackling works. Watch any NFL game and you will see world-class athletes reduced to twisting and grasping for anything to bring an opponent down. Tackling is a car accident. You can't choreograph it so that every dent and every collision is perfectly placed. [Heads Up] is a somewhat noble attempt at that choreography, but it requires flawless technique that the average child will not have and will sometimes not *want* to have.²⁶⁹

The challenges of creating a safer game is that the organizations distributing data and developing innovated ways of tackling are the same organizations selling their product to parents and children. The only way to ensure proper safety is for the uninterested legislature to implement a concussion management standard consistent with peer-reviewed medical research. This would ensure parents are receiving proper tools for education awareness, while requiring youth organizations to comply with stricter return-to-play protocols. While addressing the issue of kids and sports concussions, President Obama recognized, “as parents, . . . we want to keep [our kids] safe, and that means we have to have better information.”²⁷⁰

As mentioned, the study and tracking of sports-related brain injuries in youth sports is a recent phenomenon. Although research is shedding more light on the topic, the scientific community has yet to fully understand the relationship between football and its effects on the adolescent brain;²⁷¹ as such, many contend the lack of understanding “alone is reason to keep children so young off the gridiron.”²⁷²

(campaigning to standardize tackling through seminars to educate coaches and players about the proper technique of tackling).

267. *Heads Up*, *supra* note 266.

268. Drew Magary, *I Got Certified To Coach Heads Up Football And It Was A Joke*, DEADSPIN (May 29, 2014, 1:33 PM), http://deadspin.com/i-got-certified-to-coach-heads-up-football-and-it-was-a-1583159680?trending_test_a&utm_expid=66866090-62_DVNDEZYQh2S4K00ZSnKcw.1.

269. *Id.*

270. Douglas Abrams, *Concussion Safety in Children's Sports: A Central Role for the "Power of the Permit,"* 10 J. BUS. & TECH. L. 1, 1 (2014).

271. CANTU & HYMAN, *supra* note 20, at 30.

272. *Id.*

D. *Inconsistent Safety Standards Are Dangerous*

“The absence of uniform guidelines is a stark testament of the failure of the applicable governments and sports associations to take concerted and consistent action to address the very real threat to young athletes posed by sports-related concussions.”²⁷³ Unlike youth football organizations, middle school, high school, collegiate, and professional organizations share one commonality: a centralized governing body.²⁷⁴ Governing entities such as the NFL, NCAA, and interscholastic leagues promulgate, regulate, and enforce safety standards tailored to their leagues in an effort to mitigate the risks of player injuries.²⁷⁵ “Professional athletes . . . are much better taken care of . . . than our young kids are—and it should be just the opposite.”²⁷⁶

The absence of a uniform safety standard is a problem that has affected other sports well before the issue began to plague youth football.²⁷⁷ Professional boxing is a sport that unquestionably heightens the risk of head trauma.²⁷⁸ In the early days of boxing, health and safety standards were regulated by state athletic commissions.²⁷⁹ This state-by-state approach led to regulatory inconsistencies that often resulted in some states having stricter safety standards than other states.²⁸⁰ Safety standards weakened over time due to the individual state’s failure to adequately protect the athlete. As a result, participation declined because the lack of a uniform safety standard made the sport more unnecessarily dangerous.²⁸¹

The inconsistent regulations in youth football leagues in Texas are akin to the inconsistent safety standards promulgated by state boxing commissions. The lack of a uniform concussion law leads to self-governance,

273. Wilson, *supra* note 75, at 257.

274. See Andrews, *supra* note 13, at 428 (emphasizing youth football does not have a central governing body).

275. *Id.*

276. James Andrews, *Why Are There So Many Injuries to Our Youth Athletes? Professionalization and Specialization in Youth Sport*, 40 *BALT. L. REV.* 575, 577 (2010).

277. See Andrews, *supra* note 13, at 435 (discussing the regulatory problems with boxing regarding health and safety).

278. *Id.*

279. *Id.*

280. *Id.* at 437–38. Two major factors contributed to the overall decline of boxing as a regulated sport. *Id.* at 437. First, private organizations deprioritized health and safety standards in order to compete against one another to win potential bids for hosting world-championship venues. *Id.* Second, a lack of uniform safety regulations “caused boxers to ‘venue shop’ for states with lax regulations” in order for the boxers to be eligible to fight, regardless of their medical condition. *Id.* at 437–38. “This, in turn, prompted grossly inadequate regulations in states that wanted to attract boxers, host fights, and generate revenue. As a result, boxing developed a reputation for being unnecessarily dangerous, and the number of participants sharply declined.” *Id.* at 438.

281. *Id.* at 437–38.

which enables individual leagues to set safety standards that may or may not be as effective or comprehensive as the state concussion law.²⁸² For example, the Texas Football Youth Association has four chapters state-wide, including a chapter in San Antonio.²⁸³ The San Antonio Chapter promotes safe play and concussion awareness by implementing a policy in its by-laws stating every coach has a “fiduciary responsibility” to ensure each practice and game is conducted in a safe manner.²⁸⁴ Such ambiguous language allows coaches wide discretion to define what constitutes a “safe manner.” Further, the by-laws do not require parents and players to sign forms acknowledging the potential risks of concussions, which is mandatory under many state laws and by other youth leagues.²⁸⁵ On the other hand, the Lewisville Football Association in Lewisville, Texas, indirectly addresses concussion management in its rulebook by stating, “coaches should err on the side of caution in permitting an injured player to return to play.”²⁸⁶ This language effectively empowers coaches to “play doctor” by making split-second medical decisions regarding the safety of a youth athlete.²⁸⁷ Furthermore, independent leagues, such as the Trinity Valley Youth Sports Association, do not state the league’s concussion policy on their website—the modern parent’s most influential source of information.²⁸⁸

These various examples illustrate the variation of safety policies and how the absence of a uniform law can lead to inconsistencies in concussion management protocol, which can make the sport unnecessarily un-

282. *Cf. id.* at 428 (stating there are no federal laws regulating youth athletic concussions, and responsibility is left to be regulated by the individual states, a situation similar to boxing).

283. *About Us, supra* note 230. TYFA also has chapters in Austin, Houston, and the Rio Grande Valley. *Id.*

284. 2012 South Texas Youth Football Association A.D. Rules, LEAGUELINEUP.COM, http://www.leaguelineup.com/southtexas/files/2012_STYFA-AD-Rules-FINAL.pdf (last visited Jan. 17, 2016).

285. *Id.*; see, e.g., FREDERICK CTY. PUB. SCH., CONCUSSION PROTOCOL AND PROCEDURES (2012), <http://www.fcps.org/athletics/documents/CONCUSSIONPROTOCOLANDPROCEDURES.pdf> (requiring that all student-athletes, and at least one parent/guardian, sign an acknowledgment statement containing detailed information about concussions).

286. FOOTBALL ASS’N, *supra* note 24, at 36. See generally Al Meyers, *About Us, LFMFA*, <http://lfmfa.com/about-us> (last visited Jan. 17, 2016) (explaining the LFMFA’s history and claiming that 1,000 children participate in its activities).

287. See *Pop Warner Concussion Policy*, POP WARNER, <http://www.popwarner.com/safety/concussionpolicy.htm> (last visited Jan. 23, 2016) (declaring a head coach may remove an athlete suspected of sustaining a concussion during practice or a game in the absence of a qualified medical professional).

288. *Trinity Valley Youth Sports Association—Crandall Pirates: Interactive Forums/ Open Discussion*, TVYSPORTS.ORG (Sept. 10, 2015, 6:41 PM), <http://www.leaguelineup.com/forumsdetail.asp?url=tvysa&sid=44172124&itemid=4181315>.

safe, much like state boxing commissions fifty years ago. Reforming the current Texas law would provide a uniform standard, effectively “filling in the gaps” of the current piecemeal policies used in the various youth football leagues across the state.

V. STATE CONCUSSION LAWS

A. *The First Comprehensive Concussion Law*

Prior to 2009, Texas was the only state in the nation to have a law addressing concussions in youth athletes.²⁸⁹ The 2007 law, known as Will’s Bill, contained many weaknesses as it lacked many of the central tenets found in Texas’s current law.²⁹⁰ In 2009, the prevalence of data stemming from the NFL concussion crises spurred a series of health initiatives across the country,²⁹¹ and as of 2014, every state has a concussion management protocol in place.²⁹² Washington State House Bill 1824, also known as the Zackery Lystedt Law, was signed into law in May 2009, becoming the first comprehensive state concussion law in the United States.²⁹³ Washington’s enactment of the Lystedt Law resulted in a proliferation of state concussions laws, and as of April 2014, every state and the District of Columbia has followed suit by incorporating a variation of the Lystedt Law’s model core education, removal from play, and return-to-play components.²⁹⁴ The education element requires educating

289. See James Smith, *Tackling the Problem: Friday Night “lights out?”*, 1 HEALTH L. & POLICY INST. 1, 5 (2010) (“In 2007, Texas became the pioneer of the return-to-play movement.”). “Known as Will’s Bill, the Texas law was passed following the unfortunate death of Will Benson. *Id.* at 2. “Will collapsed during a football game, went into a coma, and died six days later. Doctors concluded that his death was caused by a helmet-to-helmet hit suffered a few 3 weeks earlier.” *Id.* at 2–3.

290. TEX. EDUC. CODE ANN. § 33.202 (West 2009); *id.* § 33.205(b); Smith, *supra* note 289, at 1. Will’s Bill also contained many weaknesses as it did not require parental consent as a prerequisite to play, players were permitted to return to play if they were symptom-free for fifteen minutes, and medical authorization was not required for a student to return to play. *Id.* at 3.

291. Kerri M. Lowrey, *State Laws Addressing Youth Sports-Related Traumatic Brain Injury and the Future of Concussion Law and Policy*, 10 J. BUS. & TECH. 61, 63 (2014).

292. *Id.*

293. WASH. REV. CODE § 28A.600.190 (2009); see Hodge Jr. & Kadoo, *supra* note 4, at 156 (detailing how the Washington concussion law got its alternate name). The Lystedt Law was the first law to address concussions in youth sports. *Id.* The Washington State Legislature enacted the law as a response to the public’s growing demand for the state to develop a uniform concussion law specifically addressing youth athletes. *Id.* The law was named after Zackery Lystedt, a high school football player who “received a severe blow to the head and fell to the ground in pain.” *Id.* at 155. “Zackery returned to the contest and received a second hit to his cranium causing a brain hemorrhage.” *Id.* Lystedt survived the injury, but “[f]ootball took away [his] ability to live a normal life” *Id.*

294. Lowrey, *supra* note 291, at 63.

key constituents (athletes, parents, coaches, and trainers) on how to properly identify, diagnose, and treat concussions;²⁹⁵ removal from play focuses on removing an athlete from competition following a suspected TBI;²⁹⁶ and the return-to-play protocol safeguards the process by ensuring that the student athlete receives proper health care evaluation prior to returning to competition.²⁹⁷

State concussion laws have been passed at an astonishing pace.²⁹⁸ Within a five-year period, every state legislature has enacted a version of the model Lystedt Law.²⁹⁹ This has resulted in a patchwork of inconsistent concussion standards all varying in scope, strength, and detail.³⁰⁰ Specifically, fewer than half of the laws contain the core components of the Lystedt Law, and a third do not reference the age or grade level the law is intended to address.³⁰¹ Further, as mentioned, some state laws, including Texas's Natasha's Law, do not extend the law to youth athletes below the junior high level.³⁰² As Jeff Miller, the NFL Senior Vice President of Health and Safety Policy, explained, "[It is] [b]etter to get something good, and get something in place, . . . as opposed to shoot for something fantastic in all places—and fail."³⁰³

295. WASH. REV. CODE § 28A.600.190(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" *Id.*

296. *Id.* § 28A.600.190(3).

297. *Id.* § 28A.600.190(4).

298. Fendrich & Pells, *supra* note 172.

299. *Id.*

300. *See id.* (reporting the majority of state concussion laws vary wildly); *see also* Abrams, *supra* note 270, at 4 ("By addressing the youth sports concussion crises in unison with statutes whose language varies from jurisdiction to jurisdiction, the fifty states and the District of Columbia have each established a laboratory conducive to experimentation and response."). "Even fewer [state laws] explicitly apply to both interscholastic sports and rec leagues such as Pop Warner or Little League. Certain laws make clear they cover public and private schools, others refer only to public schools, while some don't say at all." Fendrich & Pells, *supra* note 172.

301. Fendrich & Pells, *supra* note 172. The Lysdet Law requires mandatory "education for coaches about concussion symptoms, removal from a game if a head injury is suspected, written clearance to return, and a concussion information form signed by parents and players." *Id.*

302. *See* TEX. EDUC. CODE ANN. § 38.152 (West 2012) (applying Natasha's Law to interscholastic activity sponsored by a school district or the University Interscholastic League).

303. Fendrich & Pells, *supra* note 172.

B. *The First State to Expand Coverage: A Precedent Established*

In March 2011, Colorado became the first state to extend coverage to youth athletes below the junior high level.³⁰⁴ The law broadened the definition of “youth athlete” to include youths between the ages of eleven and nineteen.³⁰⁵ The law closely parallels the Lystedt Law’s core components;³⁰⁶ however, the legislature expanded the education component by requiring “each athletic league that sponsors youth athletic activities shall require each volunteer coach for a youth athletic activity . . . to complete an annual concussion recognition education course.”³⁰⁷

The substantive effect of Colorado’s concussion law is that it promotes concussion awareness by requiring every little league, recreational league, and Pop Warner coach to complete an annual concussion course; it focuses on concussion prevention by forcing athletes to be removed from play if a concussion is suspected; and it mitigates future health risks such as second impact syndrome by establishing a protocol that must be followed in order for the child to safely return to play.³⁰⁸ This is significant because it proves that lawmakers have the regulatory ability to foster change by promoting a safer game for every child protected under the law. Texas lawmakers should follow this overall approach by removing

304. COLO. REV. STAT. ANN. § 25-43-102(3) (2014); *Youth Sports Concussion Safety Laws: Colorado*, MOMSTEAM (Mar. 31, 2011), <http://www.momsteam.com/health-safety/youth-sports-concussion-safety-laws-colorado>.

305. COLO. REV. STAT. ANN. § 25-43-102(3).

306. Compare WASH. REV. CODE § 28A.600.190 (2009) (outlining the key principles: education, removal from play, and return to play), with COLO. REV. STAT. ANN. § 25-43-103 (requiring coaches to educate themselves in concussions, remove an athlete from play if a concussion is suspected, and receive clearance allowing the student to return to play). Colorado’s educational provision differs from the Lystedt Law because it does not require parents to submit prior to the start of a football season a consent form acknowledging concussion education and risks. Phoebe A. Amberg, Comment, *Protecting Kids’ Melons: Potential Liability and Enforcement Issues with Youth Concussion Laws*, 23 MARQ. SPORTS L. REV. 171, 179 (2012).

307. COLO. REV. STAT. ANN. § 25-43-103(1)(b).

308. *Id.* § 25-43-103; *Youth Sports Concussion Safety Laws: Colorado*, *supra* note 304. The education course must include: (1) “information on how to recognize the signs and symptoms of a concussion”; (2) “the necessity of obtaining proper medical attention”; and (3) proper protocols to follow after an athlete has sustained a concussion. *Id.*

Youth athletes suspected by coaches to have sustained a concussion . . . must be immediately removed from the game, competition, or practice; [i]f removed, and the signs or symptoms cannot be “readily explained by a condition other than concussion,” the athlete’s parent or legal guardian shall be notified; and [n]o return to play or participate in any supervised team activities involving physical exertion until after being evaluated by and receives written clearance to play by a paid or volunteer health care provider with training in neuropsychology or concussion evaluation and management. *Id.*

the legislative barriers between school sponsored activities and private league play.

C. *Learning from Other Concussion Laws*

Every state concussion law has been in effect for at least two years.³⁰⁹ As implementation progresses, state policy makers are able to evaluate, assess, and amend their current law.³¹⁰ Twenty-two states have made substantive modifications to their law, with changes typically “fall[ing] into three main categories: (1) expanding coverage of the law; (2) tightening or clarifying existing requirements, and (3) introducing efforts at primary prevention (i.e., preventing concussions from occurring in the first place) and improved early detection.”³¹¹ The attempt made by lawmakers to improve upon existing concussion law illustrates how “states [] create ‘laboratories’ by confronting a common problem with similar, but not identical legislation.”³¹² This is significant for a number of reasons.

First, it proves that amending current law by expanding coverage to youth athletes is possible.³¹³ It also enables the Texas legislature to learn from other states’ experiences by reviewing the “[l]essons [learned] from implementation, research developments, and knowledge” provided by other state legislatures.³¹⁴ This includes obtaining valuable insight to the positive impacts of the law, and how to circumvent implementation barriers experienced by other states.³¹⁵ Perhaps the most important factor, however, is that most of the legislative framework used to develop or amend state concussion laws has, for the most part, already been established by other state legislatures.³¹⁶ Extensive debate regarding drafting language and implementation procedures can be avoided by tailoring the amended law using a “pick and choose” approach. “Any state assessing its own performance and weighing future legislative amendments can learn from other states’ experiences, enacting perceived strengths and avoiding perceived weaknesses.”³¹⁷ Lawmakers can adopt provisions

309. *See* Lowrey, *supra* note 291, at 1–19 (listing every state with laws addressing concussions in youth sports and the date they were first enacted).

310. *See id.* at 66 (recognizing as concussion laws are implemented and evidence emerges that they are effective, states will likely expand the coverage of their laws).

311. *Id.*

312. Abrams, *supra* note 270, at 4.

313. *Id.* (arguing states can learn from their own performance and other states’ experiences).

314. *See* Lowrey, *supra* note 291, at 66 (predicting states will be able to draw from the best practices reaped from the experience of other states).

315. Abrams, *supra* note 270, at 4.

316. *Id.*

317. *Id.*

provided in other concussion laws to satisfy the individual needs of the state.³¹⁸ This type of legislative history is beneficial because it provides a reference point for Texas.

VI. AN ASSESSMENT OF HOW THE TEXAS LEGISLATURE CAN REFORM CURRENT LAW

A. Texas's Current Law

In 2011, Texas improved upon the underdeveloped Will's Bill by joining the nationwide trend becoming the twenty-third state to enact a *comprehensive* state concussion law.³¹⁹ Prior to 2011, Texas's concussion management plan gave coaches the discretion to return a player to a game or practice if the player was symptom free for fifteen minutes.³²⁰ Dr. Jim Sterling, a concussion specialist who assisted in the initial bill's enactment, acknowledged that a more aggressive approach to concussion safety should have been addressed sooner stating, "[w]e've hurt a kid's brain and put him back in the game the same day We've been doing it a certain way for 30 years, but that doesn't mean that's the right way."³²¹

Texas House Bill 2038, known as Natasha's Law, was signed into law in June 2010 by Governor Rick Perry.³²² Natasha's Law identifies the UIL³²³ as the entity responsible for implementing the training and educa-

318. *Id.* (suggesting one method a legislature could use to address the specific problem its laws face is a step-by-step approach).

319. Natasha's Law, 82d Leg., R.S., ch. 781, 2011 Tex. Sess. Law Serv. 1815 (West) (codified at TEX. EDUC. CODE ANN. §§ 38.151–.160 (West 2012)).

320. Lawrence Robbins, "Natasha's Law" Aims to Protect Texas Student Athletes With Concussions, ROBBINS HEADACHE CLINIC (Oct. 9, 2012), <http://chicagoheadacheclinic.com/natashas-law-aims-to-protect-texas-student-athletes-with-concussions>.

321. *Id.*

322. TEX. EDUC. CODE ANN. §§ 38.151–.160; *Youth Sports Concussion Safety Laws: Texas*, MOMSTEAM, <http://www.momsteam.com/health-safety/youth-sport-concussion-safety-law-texas> (last updated June 24, 2011). Natasha's Law is dedicated to Natasha Helmick, a soccer player, who suffered five concussions before the age of nineteen. See Nancy Churnin, *Efforts under way to educate on dangers of concussions in young people*, DALLAS MORNING NEWS, <http://www.dallasnews.com/lifestyles/health-and-fitness/columnists/nancy-churnin/20110302-efforts-under-way-to-educate-on-dangers-of-concussions-in-young-people.ece> (last updated Mar. 2, 2011, 9:42 AM) (illustrating Natasha's experience with multiple concussions).

323. UNIV. INTERSCHOLASTIC LEAGUE, CONSTITUTION AND CONTEST RULES (106th ed. 2015). The UIL is an organization that establishes rules and policies for a wide-range of academic, musical, and athletic contests for public primary and secondary schools of Texas, and is the largest inter-school organization of its kind in the world. *Id.* The UIL only recognizes school-sponsored athletic events from the junior high seventh grade level, through the high school twelfth grade level. *Id.* at § 2(c).

tion provisions set forth by the Texas legislature.³²⁴ The law limits coverage as it only “applies to an interscholastic activity, including practice and competition, sponsored by a school district, including a home-rule school district, or public school, including any school for which a charter has been granted under chapter 12, or the University Interscholastic League.”³²⁵ The law does not address—nor does coverage extend to—recreational leagues or youth athletes below the junior high (seventh grade) level.³²⁶ As limited as the applicability provision is, however, the law expanded the Lystedt Law’s primary components (education, removal from play, and clearance) and is regarded as one of the most comprehensive and detailed middle and high school concussion laws of all fifty states.³²⁷

1. The Education Component

The education component of Natasha’s Law contains similar guidelines adopted by most states. It specifically states:

A student may not participate in an interscholastic athletic activity for a school year until both the student and the student’s parent or guardian . . . have signed a form for that school year that acknowledges receiving and reading written information that explains concussion prevention, symptoms, treatment, and oversight and that includes guidelines for safely resuming participation in an athletic activity following a concussion.³²⁸

By requiring parents and players to sign an acknowledgement form, the provision is implicitly requiring signees to acknowledge their understand-

324. *See id.* (highlighting the objective of the league is to implement rules that are consistent with the rules of the State Board of Education). The UIL is the governing body that governs every public school and two private schools in Texas. UNIV. INTERSCHOLASTIC LEAGUE, SELF-EVALUATION REPORT 38 (2013), <https://www.sunset.texas.gov/public/uploads/files/reports/UIL%20SER%202013%2084%20Leg.pdf>. The Texas Association of Private and Parochial Schools (TAPPS) governs the majority of private and parochial schools. *Id.*

325. TEX. EDUC. CODE ANN. § 38.152.

326. *Id.* § 38.152.

327. *Youth Sports Concussion Safety Laws: Texas*, *supra* note 322. “The team, which will include at least one certified physician, must also establish a standard return-to-play protocol that coaches must follow. Having pre-established guidelines allows coaches to avoid outside pressure and ensures that decisions are made with the player’s best interests at heart.” Bob Deuell, *Natasha’s law saves lives*, FOCUS DAILY NEWS (Nov. 5, 2015), <http://focusdailynews.com/natashas-law-saves-lives-p5904-1.htm>.

328. TEX. EDUC. CODE ANN. § 38.155.

ing of the risks involved in the sport.³²⁹ This waiver of release form must be approved by the UIL.³³⁰

2. Removal from Play

Lystedt's second core component, removal from play, establishes guidelines that must be followed when a student athlete exhibits signs of a concussion.³³¹ Similar to other concussion laws, Natasha's Law implements an immediate removal policy from practice or a game when a student athlete exhibits signs of a concussion.³³² The law states that a student athlete shall be removed by "(1) a coach; (2) a physician; (3) a licensed health care professional; or (4) the student's parent or guardian . . ."³³³ This provision "focus[es] on secondary prevention efforts to mitigate the downstream effects of concussions, including recognition of possible head injuries . . ."³³⁴ In addition, only Texas and Arizona concussion laws gives the parent/guardian the power to remove the child from the sporting activity.³³⁵

3. Return to Play

The third component, return to play or clearance, is one of the most detailed return-to-play provisions in the country.³³⁶ Texas became the first state to expand Washington's (Lystedt Law) return-to-play protocol

329. *See generally id.* (requiring acknowledgment forms explaining symptoms associated with concussions to be given to parents and players prior to a student's involvement in athletic activities).

330. *Id.*

331. WASH. REV. CODE § 28A.600.190 (2009).

332. TEX. EDUC. CODE ANN. § 38.156.

333. *Id.*

334. Lowrey, *supra* note 291, at 64.

335. *Youth Sports Concussion Safety Laws: Texas*, *supra* note 322.

336. *See* TEX. EDUC. CODE ANN. § 38.157 (establishing various requirements that a student must fulfill before returning to compete). The return-to-play protocol requires the student to be evaluated by a physician chosen by the student or the student's parent. *Id.* The student must successfully complete the return-to-play requirements established by the COT (this varies from school district to school district). *Id.* The treating physician must provide a written statement explaining that, according to the physician's professional judgment, the athlete should be medically cleared to return to normal activities. *Id.* This written statement must be given to the school's superintendent, or person responsible for medical oversight. *Id.* The statement may not be given to the coach, as the coach has no say in when the athlete returns to play. *Id.* The student and parent/guardian must acknowledge that the student has completed the necessary requirements to return to play. *Id.* The student and parent/guardian must sign a consent form indicating: (1) that all parties have been informed and "consent[] to the student participating"; (2) all parties understand "the risks associated with the student returning to play"; and (3) all parties consent "to the disclosure to appropriate persons." *Id.*

by requiring every school district to establish a concussion oversight team (COT).³³⁷ The oversight team must include at least one physician, and is responsible for developing and implementing a return-to-play protocol for their respective school district.³³⁸ The protocol established by the COTs provides a systematic approach to ensure every player receives proper care in order to fully recover from a concussion.³³⁹ This is another preventative measure to mitigate future complications by keeping athletes who have suffered from a concussion out of practice or a game until the athlete has fully recovered.³⁴⁰

Co-author of Natasha's Law, Senator Bob Deuell said, "[Natasha's Law] will reduce long-term brain damage from concussions in school sports and improve the treatment of student-athletes."³⁴¹ It is uncontested that the law provides stakeholders such as administrators, coaches, trainers, student athletes, guardians, and other individuals with a more substantive definition of "concussion" and how to properly assess and manage the student athlete's condition.³⁴² The issue, however, lies with the law's limited applicability.³⁴³ Limiting the scope of the law exclusively to middle and high school athletes is problematic because, research *is* proving, the cognitive development of adolescent brains "do[] not align with scholastic categorization."³⁴⁴ Texas's concussion law should apply to every child participating in youth football. This is only possible

337. *Youth Sports Concussion Safety Laws: Texas*, *supra* note 322; see TEX. EDUC. CODE ANN. § 38.153 ("The governing body of each school district and open-enrollment charter school with students enrolled who participate in an interscholastic athletic activity shall appoint or approve a concussion oversight team."). "Each concussion oversight team must include at least one physician, and to the greatest extent practicable . . . must also include one or more of the following: (1) an athletic trainer; (2) an advanced practice nurse; (3) a neuropsychologist; or (4) a physician assistant." *Id.* § 38.154.

338. *Id.* "Each concussion oversight team shall establish a return-to-play protocol, based on peer-reviewed scientific evidence, for a student's return to interscholastic athletics practice or competition following the force or impact believed to have caused a concussion." *Id.* § 38.153. Members of the COT must take a concussion education course "from an authorized training provider at least once every two years," and when a member fails to comply with training requirements, the member "may not serve on the concussion oversight team in any capacity." *Id.* § 38.158.

339. *See id.* § 38.157 (requiring students to complete a multitude of prerequisites before they are cleared and allowed to play).

340. Brent Annear, *Law Aims to Lessen Harm From Student-Athlete Concussions*, TEX. MED. ASS'N (Aug. 24, 2011), <http://www.texmed.org/template.aspx?id=22270>.

341. Deuell, *supra* note 327.

342. *See id.* (explaining since concussion symptoms can take from days to weeks to appear, the additional training will allow coaches to recognize and treat a concussion from the sidelines).

343. *See generally* Andrews, *supra* note 13, at 448 (arguing there is no good reason to exclude some youth athletes from the law).

344. *Id.*

if the Texas legislature reforms Natasha's Law by expanding coverage to every youth football organization.

B. Expanding the Scope of Coverage: Amending Section 38.152

Section 38.152 refers to the "Applicability" subchapter that sets forth the provisions defining the entities and individuals covered by the law.³⁴⁵ In order to expand coverage, the subchapter must be amended to include additional provisions identifying the youths covered by the law. To provide useful legislative guidance, it is necessary to analyze additional legislative language used by other states that extend coverage to youth athletes.

Some states are amending their concussion law by expanding coverage to include a larger age demographic.³⁴⁶ "Expanding coverage," however, is not a universally applied term.³⁴⁷ Coverage standards³⁴⁸ vary from jurisdiction to jurisdiction,³⁴⁹ specifically when ascertaining the specific

345. TEX. EDUC. CODE ANN. § 38.152 (West 2012).

346. Lowrey, *supra* note 291, at 66.

347. See generally KERRI M. LOWREY, THE NETWORK FOR PUB. HEALTH LAW, SUMMARY MATRIX OF STATE LAWS ADDRESSING CONCUSSIONS IN YOUTH SPORTS (2014), https://www.networkforphl.org/_asset/x41pl/Sports-Concussion-Table.pdf (compiling into a matrix codified state statutes and administrative regulations concerning concussions in youth sports). State laws vary in scope and detail regarding specific age groups covered—some states include provisions addressing youth recreational leagues, while other states address both recreational leagues and explicitly state the ages covered by the law. See, e.g., LA. STAT. ANN. § 40:1089.2(3) (2015) (defining a "youth athletic activity" as one where the majority of participants are between seven and nineteen years of age); LOWREY, *supra* note 347, at 2 (summarizing changes to Arkansas's laws, among others, to extend to "recreational youth sports"). States that have amended laws to expand coverage include: Alabama, Arizona, Arkansas, Colorado, District of Columbia, Florida, Georgia, Indiana, Louisiana, Maryland, Michigan, Minnesota, Nebraska, Nevada, Ohio, Oregon, Tennessee, Utah, Virginia, and Wisconsin. *Id.*

348. "Coverage standards" are the specific standards used by each state to determine which youth athletes are covered by the respective state concussion law.

349. Compare GA. CODE ANN. §§ 20-2-324.1(a)(2)–(3) (2014) ("Public recreation facility' means a public facility that conducts an organized youth athletic activity . . . 'Youth athlete' means a participant in a youth athletic activity who is 7 years of age or older and under 19 years of age."), and MD. CODE ANN., EDUC. § 7-433(a)(3) (LexisNexis 2015) ("Youth sports program' means a program organized for . . . instruction for participants who are under the age of 19 years."), with S.B. 1521, 50th Leg., 1st Reg. Sess. § 1(A)(24)(b) (Ariz. 2011) (expanding the law to include "any group or organization that uses property or facilities owned or operated by the school district for athletic activities"). Georgia law specifically includes recreational facilities in the law's education component by requiring every public recreational facility to "provide an information sheet to all youth athletes' parents or legal guardians which informs them of the nature and risk of concussion and head injury . . ." GA. CODE ANN. § 20-2-324.1(c). The law also explicitly references the ages covered by the law. *Id.* Maryland law details the ages covered by the law, and also extends the law's authoritative power to include public school facilities. See MD. CODE.

ages covered by the term “youth athlete.”³⁵⁰ For example, Nebraska applies a liberal definition of “youth athlete” that includes every youth under the age of twenty who participates in an organized athletic activity.³⁵¹ Louisiana on the other hand, limits coverage to eighteen,³⁵² and states like Utah and Nevada, go even further by capping the age at seventeen.³⁵³ Other states such as Colorado and Georgia delineate coverage parameters by explicitly defining the minimum and maximum ages covered by the law.³⁵⁴ Some states like Indiana, however, use a more implicit approach to expanding coverage by making the law applicable to specific entities that use public property.³⁵⁵ The law defines an “organized entity” as any person that “operates a recreational . . . or sports program for individuals who are less than twenty . . . and uses a facility, field, park, or other property that is owned . . . [by] the state”³⁵⁶

As evidenced, states expand coverage by incorporating additional applicability provisions using explicit language that references either the age(s) covered by the law,³⁵⁷ the specific entities (e.g., recreational orga-

ANN., EDUC. §§ 7-433(a)(3), 7-433(b)(1) (including youth under age nineteen as “participants of a youth sports program” covered by the law, and authorizing the Department of Education to develop policies and implement the program). In contrast, Arizona law expands coverage to groups using school facilities, but fails to establish an age range covered by the law. S.B. 1521, 50th Leg., 1st Reg. Sess. This creates ambiguities that could potentially weaken the effectiveness of the law. *See Andrews, supra* note 13, at 429 (“The state laws are ambiguous in scope, and the state-by-state approach has created a patchwork of standards among the states.”).

350. *Andrews, supra* note 13, at 448.

351. NEB. REV. STAT. § 71-9105(1) (2011); *see Andrews, supra* note 13, at 448 (establishing Nebraska law reaches the largest population).

352. LA. STAT. ANN. § 40:1089.2(2); *see Andrews, supra* note 13, at 448 (noting nineteen-year-old high school seniors are excluded from protections of the law).

353. NEV. REV. STAT. § 455A.200(4)(b); UTAH CODE ANN. § 26-53-102(3) (2013); *see Andrews, supra* note 13, at 448 (explaining capping coverage at seventeen is problematic because it effectively excludes the “majority of high school seniors” because most are eighteen).

354. *See* COLO. REV. STAT. ANN. § 25-43-102(3) (2014) (“‘Youth athletic activity’ means an organized athletic activity where the majority of the participants are eleven years of age or older and under nineteen years of age”); GA. CODE ANN. § 20-2-324.1(a)(3) (2014) (protecting children who are from seven to nineteen years of age).

355. IND. CODE § 20-34-7-1.5 (2015).

356. *Id.*

357. *See, e.g.,* ARK. CODE ANN. § 6-18-710(a)(1) (2015) (describing coverage extends to youths participating in an organized athletic activity, “a majority of whom are under nineteen (19) years of age”); GA. CODE ANN. § 20-2-324.1(a)(3) (mandating protection for athletes from age seven to nineteen); IND. CODE § 20-34-7-1.5(1)(C) (“[O]rganizing entity’ means any person that operates . . . an . . . athletic or sports program for individuals who are less than twenty (20) years of age”); LA. STAT. ANN. § 40:1089.2(3) (2015) (implementing laws for activities in which the majority of the participants are from seven to nineteen years of age); MICH. COMP. LAWS § 333.9155(4)(f) (2015) (“‘Youth athlete’

nizations) covered by the law,³⁵⁸ or entities that use public property or school district facilities.³⁵⁹ Most states integrate at least one of these applicability provisions as a way to explicitly, or implicitly, extend coverage beyond the junior high level.³⁶⁰ The Texas legislature could extend coverage by implementing any variation of these provisions (ages covered by law, entities covered by law, or entities using public facilities) depending on the specific needs and interests of the state. Although some provisions include a broader range of coverage (compare e.g., Nebraska to Indiana), each provision provides an alternative solution to the current limitations experienced by Texas's current applicability subchapter.

C. *Expanding the Scope of Coverage: Amending Sections 38.155, 38.156, and 38.158*

Sections 38.155 and 38.158 both refer to the law's education component, while section 38.156 refers to the law's removal from play component.³⁶¹ As mentioned, Natasha's Law's education component requires: (1) every student athlete and their guardian to sign an annual concussion acknowledgment form (38.155), and (2) continuing education for coaches (38.158).³⁶² This provides key stakeholders³⁶³ with information explaining "concussion prevention, symptoms, treatment, and oversight and that includes guidelines for safely resuming participation in an athletic activity following a concussion."³⁶⁴

Currently, eighteen states and the District of Columbia have additional provisions in place that extend the education requirement to coaches in

means an individual who participates in an athletic activity and who is under 18 years of age.").

358. See IND. CODE § 20-34-7-1.5 (defining organizing entity as anyone who operates a recreational, an intramural, or an extracurricular sports program).

359. See, e.g., S.B. 1521, 50th Leg., 1st Reg. Sess. § (A)(24)(b) (Ariz. 2011) (implementing the state's concussion law on anyone who uses a school district's property for athletic activities); IND. CODE § 20-34-7-1.5 (describing coverage extending to an organizing entity who "uses a facility, field, park, or other property that is owned, leased, operated, or maintained by . . . [t]he state[,] [a] political subdivision . . . [or] [a]n agency or instrumentality of" either).

360. See generally Andrews, *supra* note 13, at 448 (illustrating the wide variety of state laws and the diverse group of athletes they cover).

361. See TEX. EDUC. CODE ANN. § 38.155 (West 2012) ("Required Annual Form Acknowledging Concussion Information."); *id.* § 38.156 ("Removal From Play In Practice or Competition Following Concussion."); *id.* § 38.158 ("Training Courses.").

362. *Id.* §§ 38.155, .158.

363. "Key stakeholders" include school administrators, coaches, trainers, athletes, guardians, and any other individual affected by the law.

364. TEX. EDUC. CODE ANN. § 38.155.

recreational youth football leagues.³⁶⁵ However, the extent to what certain states require under the training standard vary in scope and detail.³⁶⁶ In states such as Maryland, Nebraska, and Virginia, “training” merely requires youth associations to supply team coaches with concussion awareness information.³⁶⁷ On the other hand, states like Colorado, Indiana, Louisiana, and Tennessee adopt a stricter policy by mandating coaches of youth leagues to complete a concussion awareness course as a prerequisite to coaching a team.³⁶⁸ Similar to the applicability provisions, the Texas legislature can incorporate similar definitions of “training” to suit the needs of the state. However, to maximize the education component’s effectiveness, lawmakers should adopt the more stringent standards requiring coaches to complete training courses as a prerequisite to coaching a team.

Currently, the law requires school districts to enforce the education guidelines set forth by the law’s education component.³⁶⁹ Specifically, school districts are responsible for dispersing education materials, maintaining consent forms, and ensuring compliance and timely completion of

365. LOWREY, *supra* note 347, at 1-3, 5, 7-11, 13-14, 16, 18. These states include: Alabama, Arizona, Arkansas, Colorado, Florida, Georgia, Indiana, Louisiana, Maryland, Michigan, Minnesota, Nebraska, Nevada, Ohio, Oregon, Tennessee, Virginia, and Wisconsin. *Id.*

366. *See* Lowrey, *supra* note 291, at 65–66 (arguing there are many interpretations of the term education which may lead to distributing minimal information to coaches).

367. *See* MD. CODE ANN., EDUC. § 7-433 (LexisNexis 2015) (requiring a youth sports program to make sure that a coach is informed about concussions and head injuries); NEB. REV. STAT. § 71-9105 (2011) (“[N]onprofit organization[s] shall: [m]ake available training approved by the chief medical officer on how to recognize the symptoms of a concussion or brain injury and how to seek proper medical treatment for a concussion or brain injury to all coaches”); VA. CODE ANN. § 22.1-271.5(A) (2014) (“Board of Education shall develop and distribute to each local school division guidelines on policies to inform and educate coaches . . . of the nature and risk of concussions, criteria for removal from and return to play, and risks of not reporting the injury and continuing to play”); *see also* Lowrey, *supra* note 291, at 65–66 (“[A] handout or Web site screen during registration is sufficient to constitute ‘education’ of the risks of concussions under many state laws”).

368. *See* COLO. REV. STAT. ANN. § 25-43-103 (2014) (“[E]ach volunteer coach for a youth athletic activity . . . [shall] complete an annual concussion recognition education course.”); IND. CODE § 20-34-7-6 (2015) (“[P]rior to coaching football to individuals . . . each head football coach and assistant football coach shall complete a certified coaching education course”); LA. REV. STAT. ANN. § 40:1089.3(A)(2) (2015) (“[E]ach coach, whether . . . employed or a volunteer, and every official of a youth athletic activity . . . [shall] complete an annual concussion recognition education course”); TENN. CODE ANN. § 68-55-502 (2015) (“Require[s] annual completion by all coaches, whether the coach is employed or a volunteer, and by school athletic directors of a concussion recognition and head injury safety education course program approved by the department”).

369. TEX. EDUC. CODE ANN. § 38.158 (West 2012).

training courses.³⁷⁰ A recent law passed by Oregon provides an ideal way for Texas lawmakers to extend the education component to youth football leagues; with minimal substantive modification to existing law; while sustaining the law's effectiveness through structure and oversight.³⁷¹

1. Incorporating Oregon's Senate Bill 521 into Existing Law

In 2015, Oregon enacted Senate Bill 521 requiring “non-school athletic teams”³⁷² such as youth football leagues unaffiliated with school districts, to implement concussion management guidelines for all teams that include children seventeen years of age and younger.³⁷³ The bill identifies a “league governing bod[y]”³⁷⁴ as the entity responsible for oversight and implementation of the management guidelines.³⁷⁵ Specifically, governing bodies must provide acknowledgement forms to key stakeholders³⁷⁶ and

370. *Id.* (“Each person described by Subsection (c) must submit proof of timely completion of an approved course in compliance with Subsection (e) to the school district superintendent or the superintendent’s designee . . .”).

371. *See generally* OR. REV. STAT. §§ 336.485, 417.875 (2015) (permitting coaches to allow members of the school athletic team and non-school athletic team to participate in athletic events or training at any time after athletic trainer determines that an athlete has not suffered a concussion).

372. *See id.* § 417.875 (“‘Nonschool athletic team’ means an athletic team that includes members who are under 18 years of age and that is not affiliated with a public school in this state.”).

373. *See id.* §§ 336.485, 417.875 (mandating several courses of action that a coach must take when dealing with concussion education, prevention, and treatment).

374. *See id.* § 417.875(1)(c)(A) (“‘League governing body’ means a governing body that: [o]versees an association of nonschool athletic teams that provide instruction or training for team members and that may compete with each other.”) An example of a league governing body is the Tualatin Valley Youth Football League (TVYFL) in Oregon. *General*, OR. CITY YOUTH FOOTBALL., <http://www.oregoncityyouthfootball.com/home.php?layout=607138> (last visited Jan. 31, 2016). “TVYFL is the organization that coordinates the play between the 30+ individual youth football associations in the Portland metro area. They provide the rules, the schedules and the officials for the approximately 200 teams and 6000 players.” *Id.* The TVYFL is akin to the Texas Youth Football Association, an organization that promulgates rules and regulations for more than 15,000 players in cities across Texas. *Compare About Us*, *supra* note 230 (explaining the league implements standardized football rules, has a state playoff system, and governs over the league), with *Tualatin Valley Youth Football League: The Organization*, TUALATIN VALLEY YOUTH FOOTBALL LEAGUE, <http://tvyfl.org> (last visited Feb. 16, 2016) (asserting TVYFL governs thirty-five football associations). These associations are the “National Football League” for youth football teams.

375. OR. REV. STAT. § 417.875(2)(b).

376. *See id.* § 417.875(6) (“Youth athletes may not participate in any sporting activity until at least one parent or legal guardian of the person [] acknowledge[s] the receipt of the guidelines and materials . . .”).

“ensure that the coaches receive annual training” as required by the law.³⁷⁷

Governing bodies of youth football leagues, associations, or organizations are typically comprised of a board of directors that manages and develops league rules and regulations.³⁷⁸ The board delegates oversight and implementation duties to specific entities, usually within each league division,³⁷⁹ whose responsibility is to ensure that every team is in compliance with the rules promulgated by the board.³⁸⁰ For example, in the South Texas Youth Football Association (STYFA), the Board of Directors identifies “Division Commissioners”³⁸¹ as the entity responsible for “[w]ork[ing] directly with division coaches to ensure that all rules and regulations are followed properly.”³⁸²

The Texas legislature could parallel Oregon’s provision by incorporating a similar provision into Section 38.158 (in part, defining the entities responsible for implementing the education provision).³⁸³ This would require governing bodies of youth football organizations to mandate training courses and provide educational material set forth by the current law.³⁸⁴ Specifically, team coaches would be required to submit documentation to an entity such as the STYFA Division Commissioners, proving that every coach, athlete, and parent has satisfied the state concussion law’s education provision. Violations for failure to comply would result in disciplinary action by a designated entity similar to that already set

377. *Id.* § 336.485(2)(a).

378. *See Texas Youth Football Association A.D. Rules*, STYFA (2012), http://www.leaguelineup.com/southtexas/files/2012_STYFA-AD-Rules-FINAL.pdf. (“The Governing Body of the league shall be vested in the Board of Directors. . . . The Officers of the Board shall in all cases act as a Board, and may adopt such rules and regulations for the conduct of their meeting(s) and management of the League, as they may deem proper.”).

379. *See id.* Each league is sub-divided into divisions based on age and weight. *Id.* The South Texas Youth Football Association is divided into four divisions based on age and weight: The Freshman Division (ages six to eight for players with a maximum weight of 110.9 lbs.); the Sophomore Division (age nine for players with a maximum weight of 130.9); the Junior Division (age ten for players with a maximum weight of 150.9); and the Senior Division (ages eleven to twelve for players with a maximum weight of 170.9). *Id.*

380. *Id.*

381. *See id.* (“The Division Commissioners will consist of a minimum of four (4) persons that shall perform all duties associated with the League Division under the direction of the President and Board of Directors.”).

382. *See id.*

383. TEX. EDUC. CODE ANN. § 38.158 (West 2012).

384. *See id.* § 38.155 (requiring students and guardians to sign and return the concussion acknowledgment form to the school’s licensed athletic trainer who must keep the acknowledgment form on file for the duration of the athletic year). (Every coach “must submit proof of timely completion of an approved course . . . to the school district superintendent or the superintendent’s designee . . .”). *Id.* § 38.158.

forth by the current law.³⁸⁵ Further, the fiscal implications for small and rural leagues would be minimal, as leagues could “use existing guidelines”³⁸⁶ and state-approved material currently used by Texas school districts.³⁸⁷ These resources include printable concussion acknowledgment forms, training videos, and authorized training providers, and are readily accessible on the Texas UIL website.³⁸⁸ Expenditures would include the cost of printing acknowledgment forms and fees associated with training courses, which may or may not be subsidized by associations.³⁸⁹

Expanding the coverage of Natasha’s Law’s educational provision to youth football organizations would be beneficial in many ways. The effect would not create more red tape, but rather it would promote a safer game by equipping coaches, athletes, and parents with the latest concussion information to properly and effectively recognize and respond to adolescent brain injuries. This is significant because youth athletes who play football are six times more likely to sustain a severe concussion compared to other non-contact sports.³⁹⁰ In addition, recent data indicates state legislatures that have expanded their concussion law’s education provisions to youth leagues are effective at improving concussion awareness and recognition.³⁹¹

385. Compare *Texas Youth Football Association A.D. Rules*, *supra* note 378 (“The [Rules Compliance] Committee will investigate all written allegations of By-law infractions, violations reported, complaints and any other violations or infractions as the League deems appropriate. The Committee will review Coaches’ ejections and recommend a course of action to the Board of Directors as outlined in the By-laws.”) with TEX. EDUC. CODE ANN. § 781. Every coach “must submit proof of timely completion of an approved course . . . in compliance with to the school district superintendent or the superintendent’s designee” *Id.*

386. OR. REV. STAT. § 417.875(5) (2015).

387. See generally *Concussions and Concussion Management Protocol Requirements and Information*, UIL TEX., <http://www.uiltexas.org/health/concussions> (last visited Jan. 31, 2015) (providing concussion management information to all athletes participating in activities governed by the UIL).

388. *Id.*

389. *Id.* (providing concussion acknowledgement forms that are easily accessible to associations, and providing a free course on concussion in sports along with various other courses).

390. CANTU & HYMAN, *supra* note 20, at 90–91.

391. See Lowrey, *supra* note 291, at 61 (asserting data has indicated that state laws, which implement educational provisions, “are at least increasing awareness of the problem”); see also Fendrich & Pells, *supra* note 172. During the 2007–2008 academic year at a school in Pennsylvania, three years before Pennsylvania passed its concussion law, there were ten concussions reported. After the law was passed, the number of concussions reported rose to fifteen in 2013–2014, and eighteen in 2014–2015. This report is just one example of how concussion research has impacted state legislatures to act. As such, the education component of legislation informs parents and students about the signs and symptoms of concussions, which ultimately leads to an increase in reporting. *Id.*

A study analyzing the effectiveness of expanding coverage to five to fourteen-year-olds in youth recreational leagues identified concussion education given to coaches as well as to parents and athletes was helpful in successfully implementing the law's requirements.³⁹² Incorporating certain elements of Oregon Senate Bill 521 into existing law is a practical way the Texas legislature can expand education coverage, while yielding "minimal expenditure impact on state or local government[s]."³⁹³

2. Amending Section 38.156: The Removal from Play Component

Section 38.156 of Natasha's Law sets forth the removal from play guidelines.³⁹⁴ Similar to other core components, the removal from play requirement varies from state to state.³⁹⁵ The variations are minimal, however, as an overwhelming majority of laws include a general provision stipulating that youth athletes must be removed from athletic activity if a coach, physician, licensed health care professional, or parent believes the athlete might have sustained a concussion.³⁹⁶ The Texas legislature could extend the current removal from play policy to include youth athletes with relative ease. Lawmakers could extend coverage using existing law, and would only be required to designating which youth athletes are covered.³⁹⁷ Initial implementation of such measures would not affect stake-

392. Donelle McKenna, *Experiences of Youth Recreational Sports Organizations? Administrators with Implementation of Maryland Concussion Law 81* (Sept. 2015) (unpublished Ph.D. dissertation, Walden University).

393. Oregon Legislative Fiscal Office, *Fiscal Impact on Proposed Legislation: S.B. 521* (Mar. 31, 2015), <https://olis.leg.state.or.us/liz/2015R1/Downloads/MeasureAnalysisDocument/27575>.

394. TEX. EDUC. CODE ANN. § 38.156 (West 2012).

395. See Andrews, *supra* note 13, at 433 ("Some states delegate the removal decision to specific individuals . . . [while] [o]ther states . . . have ambiguous removal-from-play requirements.").

396. See, e.g., TEX. EDUC. CODE ANN. § 38.156 (mandating a student be immediately removed if a coach, physician, licensed health care professional, or the student's parent or guardian believes the student has sustained a concussion); see also The Associated Press, *Youth sports concussion laws are found lacking in enforcement, consequences*, THE OREGONIAN (Jan. 28, 2015, 12:37 PM), http://www.oregonlive.com/kiddo/index.ssf/2015/01/youth_sports_concussion_laws_a.html (emphasizing "[a]ll but two . . . [concussion] laws call for the immediate removal of an athlete from a game or practice if a concussion is suspected").

397. See ARK. CODE ANN. § 6-18-710 (2015) (defining a "youth athletic activity" as one in which a majority of the participants are under nineteen years of age); GA. CODE ANN. § 20-2-324.1 (2014) (considering those between the ages of seven to nineteen as "youth athletes"); IND. CODE § 20-34-7-1.5 (2015) (designating twenty years of age as the cut-off); LA. REV. STAT. ANN. § 40:1089.2 (2015) (stating a "youth athletic activity" consists of an organized athletic activity in which a majority of the participants are between seven- and nineteen-years-old); MICH. COMP. LAWS § 333.9155 (2015) (specifying a "youth athlete" is someone under eighteen years of age).

holders in youth football leagues, and would require marginal, if any, modification to existing removal from play provision.

D. *Expanding the Scope of Coverage: Amending Section 38.157*

Section 38.157 establishes the return-to-play requirements that must be satisfied by the student-athlete before he or she is allowed to return to practice or a game.³⁹⁸ Natasha's Law calls on school officials to create a COT to establish return-to-play protocols; mandates that it consist of at least one physician; and, requires at least one other licensed medical professional.³⁹⁹ Prior to passage, there were concerns over the mandate compelling each school district to fund a COT.⁴⁰⁰ Texas lawmakers argued that member fees (paying a physician and either a physician assistant, nurse practitioner, or similarly qualified medical professional) imposed a significant hardship on the budgets of small school districts.⁴⁰¹ Moreover, finances played a significant role in the legislature's decision to exclude private and parochial schools from the initial law's passage.⁴⁰² Many of these same funding concerns faced by school districts apply to youth football leagues.⁴⁰³ For example, many youth organizations likely cannot afford a COT so it would be unreasonable for the legislature to extend this requirement to every youth league across Texas.

An alternative approach to expanding the return-to-play component would require the legislature to implement strict medical clearance standards already established by other state concussion laws.⁴⁰⁴ However, amongst the states "[a] key point of contention . . . has been defining the individuals qualified to evaluate and authorize a youth athlete's return to competition."⁴⁰⁵ For instance, some states allow any health care provider to authorize medical clearance,⁴⁰⁶ while other states require "written

398. TEX. EDUC. CODE ANN. § 38.157.

399. *Id.* §§ 38.153–154.

400. See House Comm. on Public Health, Bill Analysis, Tex. H.B. 2038, 82d Leg., R.S. (2011) (referring to the concussion law as an "unfunded mandate").

401. See *id.* (contending the law's requirements might place an additional economic burden on rural and small schools).

402. See *id.* (stating the law only applies to public and charter schools).

403. See generally *id.* (reporting opponents of the concussion law cited funding issues as obstacles to effectively protecting athletes).

404. See, e.g., IND. CODE § 20-34-7-5 (requiring a medical evaluation and clearance letter from a licensed medical professional, as well as a grace period, for a student athlete to return to play).

405. Andrew Breck, Note, *Keeping Your Head on Straight: Protecting Indiana Youth Athletes from Traumatic Brain Injuries Through "Return to Play" Legislation*, 9 IND. HEALTH L. REV. 215, 241–42 (2012).

406. See, e.g., MASS. GEN. LAWS ch. 111 § 222 (2016) (claiming a student may not return to play until he or she provides written authorization from a "licensed physician,

clearance from a licensed health care provider trained in the evaluation and management of concussions.”⁴⁰⁷ The Texas legislature should clearly designate the class of individuals authorized to clear a youth athlete as those who specialize in concussion evaluation and management. Generally, health care providers do not have extensive training in concussions and, even an awareness of concussion issues may not be enough.⁴⁰⁸ The only substantive modifications the Texas legislature would have to make to existing law would involve drafting additional language to incorporate the stricter medical clearance requirements. Language from Indiana’s concussion law could serve as a model drafting template.⁴⁰⁹ In part, the provision states:

- (a) A student athlete who has been removed from play under section 4 of this chapter may not return to play until:
 - (1) the student athlete:
 - (A) is evaluated by a licensed health care provider trained in the evaluation and management of concussions and head injuries; and
 - (B) receives a written clearance to return to play from the health care provider who evaluated the student athlete; and
 - (2) not less than twenty-four (24) hours have passed since the student athlete was removed from play.⁴¹⁰

In addition, the only substantive burden imposed on youth football league stakeholders would require medical fees associated with the youth athlete being assessed by a specialized health care provider.

E. “Power of the Permit”: An Alternative, Localized Approach

As mentioned, the most effective way to implement a uniform concussion standard is through the rule-making authority vested in the state legislature. However, some jurisdictions are taking proactive steps that could prove to be a possible temporary solution.⁴¹¹

In February 2016, the El Paso Parks and Recreation Department, in an unprecedented move, promulgated rules aimed to mitigate the risk of concussions in the city’s oldest and most popular youth football pro-

licensed neuropsychologist, certified athletic trainer, or other appropriately trained or licensed health care professional as determined by [public health officials]”).

407. MD. CODE ANN., EDUC. § 7-433(a)(3) (LexisNexis 2015).

408. See Breck, *supra* note 405, at 242 (internal quotations omitted).

409. See IND. CODE § 20-34-7-5 (requiring a medical evaluation and clearance letter from a licensed medical professional, as well as a grace period, for a student athlete to return to play).

410. *Id.*

411. See Abrams, *supra* note 270, at 8 (reasoning sports organizations should obtain local permits, which will be contingent on compliance with statewide concussion laws).

gram.⁴¹² The El Paso Parks and Recreation Department is charged with “promot[ing] close cooperation between the City and all private citizens, institutions and agencies”⁴¹³ More succinctly, many youth football leagues practice and play on public land—land that is regulated by the city’s parks and recreation department.⁴¹⁴ El Paso’s Parks and Recreation Department flexed its authoritative muscle by mandating, amongst other things: (1) mandatory concussion training for coaches and parents; (2) a limitation on the number of games played by six- and seven-year-olds; and (3) the elimination of contact football for five-year-olds.⁴¹⁵ Matt DeLuzio, regional manager at USA Football’s Heads Up Program, said “El Paso is setting the trend for other parks and recreation departments in the country. Some of the national league programs are looking at how to establish and set standards with regards to player safety, but parks and recs have not completely done so yet.”⁴¹⁶ The EL Paso standard is evidence that a localized approach can be effective, despite a state’s legislature unwillingness to adopt uniform laws to ensure protection for every constituent.

In 2014, New York City council member, Stephan Levin, introduced a policy yet to be enacted called the Youth Football Safety Act (YFSA).⁴¹⁷ If implemented, the YFSA guidelines would require a physician to be present at all high school and youth football games played on public fields.⁴¹⁸ In addition, the act would require every youth organization to obtain a park permit in order to host a sporting activity on public property.⁴¹⁹ The law stipulates that park permits will only be granted if a physician is present at every game.⁴²⁰ Stephen Levin explained: “As a local legislative body . . . this is one area where we, and not the state or federal government, hold sway. It’s the power of the permit. If an activity happens on parks or school property, we have jurisdiction.”⁴²¹ Some opponents of the “power of the permit” approach believe it amounts to an abuse of power because it enables local governments to exceed their

412. Victor Martinez, *New rules for youth football target concussions*, EL PASO TIMES (Feb. 25, 2016, 6:39 PM), <http://www.elpasotimes.com/story/sports/football/2016/02/25/new-rules-youth-football-target-concussions/80946364/>.

413. *Id.*

414. *Id.*

415. *Id.*

416. *Id.*

417. Farrey, *supra* note 174.

418. *Id.*

419. *Id.*

420. Abrams, *supra* note 270, at 10.

421. Farrey, *supra* note 174.

policing powers via the use of public property.⁴²² On the contrary, proponents contend that reasonable policing powers by local governments should be acceptable, granted that no constitutional right is being infringed upon.⁴²³ Although the “power of the permit” is a discretionary tool used on a city-by-city basis, and the cost of medical personnel is yet to be studied, Levin’s approach provides an avenue for local governments to take matters into their own hands.⁴²⁴ The implementation of a state-wide uniform law is the ideal course of action, but alternative approaches to the problem, specifically the El Paso standard, could serve as an effective temporary solution.

VII. CONCLUSION

Diligent research efforts have provided our society with greater access to information and knowledge regarding the complexities and impact of repetitive trauma on the brain than ever before. It is a long established societal norm, that when our society deems a once commonly acceptable practice unsafe, state and federal governments develop laws and regulations to mitigate the practice’s future effects.⁴²⁵ As Dr. Bennet Omalu explains:

We’ve known since 1964 that cigarette smoking is harmful to your health. We’ve known for more than 40 years that alcohol damages the developing brain of a child. We’ve known since the mid-70s that asbestos causes cancer and other serious diseases. Knowing what we know now, we do not smoke in enclosed public spaces like airplanes; we have passed laws to keep children from smoking or drinking alcohol; and we do not use asbestos as an industrial product.⁴²⁶

“We have given up old practices in the name of safety and progress” and the same should be reflected in every youth football league across the State of Texas.⁴²⁷ Every day, we witness football players become mere statistics in a new research study. It happens every time we watch an NFL game. However, researchers are making efforts to shed light on the

422. *See* Abrams, *supra* note 270, at 7 (examining a 2007 case in which a court struck down a claim that a New York City ordinance exercising the “power of the permit” to prohibit the use of metal bats exceeded the city’s police powers).

423. *See id.* (detailing the ruling court’s reluctance to strike down a New York City “power of the permit” ordinance as an excessive use of the city’s police power in the absence of a constitutional violation).

424. *See id.* at 6–10 (providing an overview of the breadth of local authority to use the “power of the permit”).

425. Omalu, *supra* note 85.

426. *Id.*

427. *Id.*

issue, and there *are* potential solutions to minimize the problems.⁴²⁸ It starts with amending the current Texas concussion law.

The current education, removal from play, and return-to-play guidelines should be amended to incorporate youth football leagues, which would help mitigate the current unnecessary dangers prevalent in many youth leagues across the state. Specifically, broadening coverage would promote a uniform safety standard, mandating strict compliance with the current, applicable provisions in Texas's law. The effect would increase concussion awareness by requiring every youth football organization to implement a policy addressing concussion education and proper return-to-play protocols that must be satisfied in order for every child to participate.

As CNN medical correspondent Dr. Sanjay Gupta once said regarding the potential dangers of concussions in youth leagues, "we owe it to our players, [to] our kids, . . . to make them as safe as we know how to do and we can do a lot better than we have been doing."⁴²⁹ I could not agree more.

428. See Nathan Jacobson et al., *Concussions from Youth Football: Results from NEISS Hospitals Over an 11-Year Time Frame, 2002–2012*, 1 ORTHOPEDIC J. SPORTS MED. 1 (2013) (investigating the prevalence of sports-related concussions amongst youth football players); Belson, *supra* note 194 (reporting on one city's decision to move seventh graders from full-contact football to flag football).

429. Stephanie Carey, *CNN documentary examines concussion syndrome in high school football*, L.A. DAILY NEWS (Jan. 26, 2012, 12:01 AM), <http://www.dailynews.com/article/ZZ/20120125/NEWS/120129121>.