

CASE STUDY

Just a ding?

*The NFL responds to research on
football-related concussion*

January 12, 2011

Part 1: 2002—2007

*He gave so much for the game he loved, I only wish the game had done better for him afterward.*¹

Andre Waters, a former defensive back for the Philadelphia Eagles, was known as much for his sincerity and generosity as he was for his hard-hitting tackles.² It came as a surprise to many when the 44-year-old, 12 season veteran³ took his own life in November 2006 in his home in Tampa, Florida.⁴ While family, friends and fans mourned his death, they had no idea that the repercussions from it would have the potential to radically alter the way football, and the National Football League, are viewed.⁵

Dr. Bennet Omalu, a neuropathologist then working with the Allegheny County coroner's office, first uncovered evidence that suggested a link between a degenerative brain disease, chronic traumatic encephalopathy (CTE), and football in 2002.⁶ An autopsy of retired Pittsburgh Steelers star, Mike Webster, who had suffered from dementia for years, revealed his brain was riddled with ribbons of tau protein, a characteristic of CTE.⁷ Omalu identified a second case in 2005, another retired Steeler, Terry Long.⁸ Both cases were published in the medical journal, *Neurosurgery*.⁹

Chronic traumatic encephalopathy

Chronic traumatic encephalopathy (CTE) is a progressive, degenerative brain disease found in individuals who have been subjected to multiple concussions or other forms of head injury. It is characterized by a build-up of tau, an abnormal protein, in the brain¹⁰ and can, at present, only be diagnosed posthumously.¹¹ Symptoms include memory loss, confusion, paranoia, aggression, depression and dementia.¹²

The National Football League

Founded in 1920, the National Football League (NFL) is an association of 32 professional American football teams. Each team is considered an independent business; all are privately owned.¹³ The NFL currently has an antitrust exemption, allowing the 32 teams to negotiate contracts, such as broadcast rights or licensing agreements, as one entity.¹⁴ In 2010, the average team franchise value was \$1.02 billion.¹⁵ Broadcast television deals generated \$95.8 million for each team.¹⁶

Omalu's research attracted the attention of Chris Nowinski. A former Harvard University football player, Nowinski had gone on to a career as a professional wrestler for World Wrestling Entertainment (WWE) before a series of concussions prompted him to retire.¹⁷ His personal experiences with the devastating after-effects of multiple concussions spurred him to write a book, *Head Games*, aimed at exposing "the concussion crisis" in sports.¹⁸ Nowinski became a liaison between Omalu's research team and the families of deceased athletes, including that of Andre Waters.¹⁹

The Waters case became hugely influential for two reasons. It was Omalu's third confirmed case of CTE in a retired NFL player. Dr. Julian Bailes, a leading concussion researcher at West Virginia University, described the significance of the third case:

"You can report that. When they published the findings about Mike Webster, a skeptic could say, 'This is a chance occurrence.' Then Terry Long died and was brought, serendipitously, to the same medical examiner's office, but people could

say 'maybe that was a coincidence.' But a third case makes a series."²⁰

The Waters case lent greater significance to all of Omalu's findings, including the link to professional football.

The second reason was closely tied to Nowinski's involvement. While working on his book, Chris Nowinski met Alan Schwarz, a sports journalist then freelancing for the New York Times.²¹ In December 2006, he called Schwarz with a tip on the story. Schwarz recalled the conversation: "He called me out of the blue. He said, 'Alan, I think I have something really big here, but I'm not sure what to do with it.'"²² Agreeing with Nowinski on the potential of the story, Schwarz wrote an article for the New York Times. It was published on January 18, 2007, less than two months after Waters' death.²³ Other sources began approaching Schwarz with their stories about sports-related concussions.²⁴ He was hired by the New York Times to focus on the issue within a few weeks.²⁵

Until the Waters story broke, the NFL had mostly limited its response to the scientific and medical communities. Members of the NFL's committee on Mild Traumatic Brain Injury (MTBI), the medical term for concussion, sent letters to medical journals refuting the legitimacy of Omalu's research.²⁶ Faced with inquiries from the media, MTBI committee members continued insisting that the research was inadequate: "The picture is not really complete until we have the opportunity to look at the same group of people over time," said Dr. Andrew Tucker, team physician of the Baltimore Ravens.²⁷ Another member of the committee, Dr. Mark Lovell, stated on ESPN's Outside the Lines show: "It's a very important issue. It needs to be studied scientifically, though... It's very important to do this work. It's just we're in the middle of doing it at this time."²⁸ The implication was that non-NFL research is not legitimate.

In June 2007, Nowinski founded the Sports Legacy Institute with Dr. Robert Cantu, a medical researcher at Boston University (BU). The institute's mission is to support medical research on concussions, education and prevention programs.²⁹ Learning from his experience with the Waters case, Nowinski also started a media outreach campaign through the institute, focused on raising awareness of sports-related concussions.³⁰

Faced with mounting public scrutiny, the NFL had to take action. The MTBI committee held a special meeting on concussions on June 19, 2007.³¹ All 32 teams were required to send their doctors and athletic trainers.³² In the spring, the "88 Plan" was launched to provide financial support for retired players suffering from dementia.³³ The plan allows up to \$88,000 a year for medical care for individual players.³⁴ Officially, the league denied any connection between football and early-onset dementia, thus barring the former players from receiving disability.³⁵

In August 2007, the NFL announced new concussion care recommendations.³⁶ Despite the official stance by the MTBI committee that there was "no evidence of increased risk" from returning to play or practice on the same day after loss of consciousness, the league suggested that teams discontinue this policy.³⁷ The new guidelines were not binding and individual teams were still responsible for setting their own return-to-play policies.³⁸

Concussion management pamphlets were distributed to all teams to educate players on concussion symptoms.³⁹ These materials emphasized the stance taken by the MTBI committee:

Question: If I have had more than one concussion, am I at increased risks for another injury? Answer: Current research with professional athletes has not shown that having more than one or two concussions leads to permanent problems if each injury is managed properly. It is important to understand that there is no magic number for how many concussions is too many.⁴⁰

Following the NFL's actions in the summer of 2007, the concussion crisis appeared to have been quelled, at least for the time being.

Discussion Questions: Part 1

- 1.1 It could be argued that Chris Nowinski played a central role in the unfolding of the Waters case, the media response and the NFL's subsequent actions. Do you agree? How did Nowinski's background position him to reach out to the different publics in this case: the players' families, the media, the researchers?
- 1.2 The NFL initially chose to respond to the emerging issue of CTE through the scientific community, with members of the MTBI committee acting as its primary spokespeople. Was this a good decision?
- 1.3 When faced with attention from the mainstream media, the NFL chose to continue with a similar message—"we need additional research"—and the same spokespeople. How did this decision affect the NFL's credibility? Would you have chosen the same strategy?

Part 2: 2008—2010

The NFL's actions in 2007 appeared to have calmed concerns about the issue of football-related concussions, but research on chronic traumatic encephalopathy continued, as did the work of activists, including Chris Nowinski.

In 2008, Nowinski's Sports Legacy Institute partnered with the Boston University School of Medicine to found the Center for the Study of Chronic Encephalopathy (CSTE), an independent research center dedicated to understanding CTE, including risk factors, disease progression and prevention strategies.⁴¹ They established a brain bank to collect brain and spinal cord tissue from deceased athletes for study.⁴² Living athletes can join a brain donation registry, agreeing to donate their brains upon death and providing updated medical and trauma histories to the center while living. This program allows the center to conduct longitudinal studies of CTE.⁴³

The partnership proved fruitful; connections facilitated by the Sports Legacy Institute advanced research and understanding of CTE. One particular case proved instrumental in reshaping the debate on the issue—the discovery of the early stages of CTE in a high school football player. The deceased 18 year old, whose identity was not released, had suffered several concussions while playing football and other contact sports.⁴⁴ Researchers at CSTE found small, yet distinctive tau deposits in his brain—evidence that the disease begins even earlier than previously thought.⁴⁵ The case raised serious questions regarding the safety of young, non-professional athletes.

As the body of research grew, it became clear that CTE was far more wide-spread than originally thought. Younger professional athletes, including 36-year-old retired Pittsburgh Steeler Justin Strzelczyk, were diagnosed.⁴⁶ Dr. Ann McKee, a neuropathologist and lead researcher for the CSTE brain bank project, also identified the disease in four individuals who had played college football, but had no professional experience.⁴⁷

These startling findings drew increased media attention, especially the case of the high school athlete. CTE was no longer limited to professional athletes and the NFL was not the only organization deemed culpable; accusations were now directed at the NCAA⁴⁸ and high school athletic programs as well.^{49 50} This did not, however, lessen the focus on the professional level. U.S. Rep. Hank Johnson of Georgia took the league to task: “Walking off the pain in an N.F.L. game turns into walking it off in a Little League game — the trickle-down effects on high school and college players are very real and can be fatal.”⁵¹

Research was not limited to the independent centers. The NFL, after promising studies for several years, finally released results in September 2009. The study, a survey of retired NFL players, was conducted by the University of Michigan and showed that retired NFL players suffered from dementia at higher rates than the general population.⁵² For younger retirees, ages 30–49, the rate was 19 times that of the general population.⁵³ Dr. Ira Casson, co-chair of the NFL's MTBI committee downplayed the results: “What I take from this report is there's a need for further studies to see whether or not this finding is going to pan out, if it's really there or not. I can see that the respondents believe they have been diagnosed. But the next step is to determine whether that is so.”⁵⁴

The beginning of the 2009 football season brought additional attention to the issue of football-related head injuries, both in the media and by the public. The *New York Times* ran 18 separate articles on the subject during the month of October alone. Many in-depth stories were run in high profile media outlets, including the *New Yorker*,⁵⁵ *GQ*⁵⁶ and an episode of *60 Minutes*.⁵⁷ Public interest increased as well. Appendix A shows that Google searches for “football concussions,” “concussions in NFL” and “NFL concussions” all show a similar increase during this time period. Interest in those terms was much higher than in previous years.

The increased coverage, particularly of the potential health consequences to young players, captured the attention of Congress. The House Judiciary committee, responsible for overseeing the NFL's anti-trust exemption, announced they would hold hearings on the long-term effects of football-related head injuries.⁵⁸

Congressional Hearings

The House Judiciary Committee held the first of two hearings on legal issues relating to football head injuries on October 28, 2009. Rep. Linda Sánchez confronted NFL Commissioner Roger Goodell about the league's apparent dismissal of the scientific evidence linking football-related injuries to cognitive impairments:

I hear the concern expressed by some of the witnesses on the panel today, that the NFL sort of has this kind of blanket denial or minimizing of the fact that there may be this, you know, link. And it sort of reminds me of the tobacco companies pre-1990s when they kept saying no, there is no link between smoking and damage to your health or ill health effects. And they were forced to admit that that was incorrect through a spate of litigation in the 1990s. And my question to you is wouldn't the league be better off legally, and wouldn't high school and college football players be better off, if instead of trying to minimize this issue, the league took the opposite perspective and said, look, even if there is a risk, however minuscule, that there may be this link, so we really need to jump on top of it and make kids and parents aware of this so that there isn't this sort of sense that the NFL is really just slow walking the issue to death by saying, well, we have been studying the issue for 15 years, we are going to maybe study it another 15 more years, when there is already non-NFL paid for research that suggests that there is this very high correlation with cognitive impairment? Don't you think the league, you know, would be better off legally, and that our youth might be a little bit better off in terms of knowledge, if you guys just embraced that there is research that suggests this and admitted to it?⁵⁹

Rep. Maxine Waters, wife of retired NFL player Sid Williams, threatened to revoke the NFL's antitrust exemption:

I believe you are an \$8 billion organization that has failed in your responsibility to the players. We all know it's a dangerous sport. Players are always going to get injured. The only question is, are you going to pay for it? I know that you dearly want to hold on to your profits. I think it's the responsibility of Congress to look at your antitrust exemption and take it away.⁶⁰

A repeal of the NFL's antitrust exemption, codified in the Sports Broadcasting Act of 1961,⁶¹ would take away its ability to negotiate broadcast contracts for all 32 teams as one unit, potentially affecting billions of dollars of revenue.

The NFL's Response

The Judiciary Committee's concerns were taken very seriously by the NFL. Goodell quickly instituted a series of policy changes. Most dramatically, the League reversed its previous stance, openly acknowledging that concussions can have long-term detrimental effects.⁶² "It's quite obvious from the medical research that's been done that concussions can lead to long-term problems," stated league spokesman Greg Aiello.⁶³ This marked a sharp contrast to previous positions espoused by the MTBI committee members and distributed to players in the NFL's educational materials.

Other changes included the institution of a new leaguewide return-to-play rule and removal of the MTBI committee chairs.⁶⁴ The new rule barred players who exhibited any

symptoms of concussion, not just loss of consciousness as the previous rule stated, from continuing to play or practice on the same day.⁶⁵ Clearance must be obtained from both the team physician and an independent neurologist before a concussed player can return.⁶⁶

The NFL also pledged its support for ongoing research at BU's Center for the Study of Traumatic Encephalopathy and encouraged all current and former players to consider donating their brains to the center's research.⁶⁷ In April 2010, the NFL made a \$1 million "no strings attached" donation to the center.⁶⁸

In March 2010, Goodell announced that two neurological surgeons, Dr. H. Hunt Batjer and Dr. Richard G. Ellenbogen, would lead the reformed MTBI committee, now called the Head, Neck and Spine Medical Committee.⁶⁹ The new name reflects an expanded focus, acknowledging the interrelated nature of neck, spine and brain injuries.⁷⁰ The new chairmen faced criticism from the Congressional panel early; they were accused of sounding "like the old NFL" by Representative Sánchez.⁷¹ Ellenbogen responded that he "took it [the criticisms] to heart."⁷²

In a move that signaled a clear break from past committee actions, the revamped group financed a conference on concussions and brain injuries focused on the work of independent physicians and researchers.⁷³ Not only were presenters selected from non-NFL-affiliated institutions, but the former MTBI chairmen were asked not to attend.⁷⁴

The NFL also turned its attention to youth football. Goodell wrote letters to the governors of 44 states encouraging them to pass laws, similar to Washington state's Lystedt law, to protect young athletes from concussions.⁷⁵ The law institutes strict return-to-play guidelines for young players who show symptoms and includes education for coaches and parents on how to recognize concussions.⁷⁶ Goodell also expressed support for a similar bill in Congress that would, if passed, result in national return-to-play guidelines.⁷⁷ The league hosted a conference on high school return-to-play laws in October 2010.⁷⁸ Other events included educational seminars, in partnership with Chris Nowinski and the Sports Legacy Institute, to inform coaches, parents and younger players about the dangers of concussions and ways to reduce risk.⁷⁹

In another youth-focused effort, the NFL partnered with the Centers for Disease Control and Prevention (CDC), the NFL Players Association, the Professional Football Athletic Trainers Society, and the NFL Physicians Society to create and promote a concussion education poster for young athletes.⁸⁰ The poster includes symptoms of concussion and encourages players to "get checked out" if they experience any (see appendix B).⁸¹ The poster was modeled after the concussion education poster created for NFL locker rooms for the 2010 season to encourage professional players to "get checked out" as well.⁸² A public service announcement was also created, directing viewers to the CDC's webpage for more information about concussion safety.⁸³

The start of the 2010 NFL season saw other changes implemented, including a shift in rules to protect players from certain types of hits while in a vulnerable position on the field.⁸⁴ Members of the revamped Head, Neck and Spine Medical Committee have been involving the league in research on new technologies, including helmets with built-in accelerometers to measure the force of hits that a player experiences.⁸⁵ This will help advance concussion research by providing a steady stream of data.⁸⁶

Current Challenges

Despite, or perhaps because of, the changes the NFL has made within the last year, the incidence of concussion diagnosis for players has increased by 20% from the 2009 to the 2010 season and by 30% when compared to the 2008 season.⁸⁷ This increase could be the result of players feeling more confident in reporting symptoms: exactly the culture change

that the NFL would like to encourage.⁸⁸

Media coverage has focused on illegal helmet-to-helmet hits, after 10 players were diagnosed with concussions on the same day in October.⁸⁹ A series of especially egregious plays caused the NFL to increase fines mid-season in an effort to curtail the illegal hits.⁹⁰ The controversial strategy sparked even more discussion about the league's response to head injuries, with some players⁹¹ and commentators⁹² saying that the NFL has gone too far while others think they have not done enough.⁹³

The issue of football-related head injuries is not going away any time soon. Public interest remains high. Google searches on the topic remained higher than previous years through the spring of 2010 and spiked again, to their highest levels, with the beginning of the 2010 football season (see appendix A).

The recent diagnoses of CTE in younger players including Owen Thomas, a 21-year-old college football player,⁹⁴ and Chris Henry, a 26-year-old receiver with the Cincinnati Bengals,⁹⁵ both players with no history of diagnosed concussion, raise more questions about how early the disease starts.⁹⁶ Studies currently being conducted by researchers at Purdue University suggest that sub-concussive hits—ones that occur during routine plays that never draw attention—could, over time, be as damaging as a full-blown concussions.⁹⁷ High school football players who have received a high volume of smaller hits saw decreases in scores on cognitive ability tests in comparison to baseline ability tests given before the beginning of the season.⁹⁸

The biggest test for the NFL, and the game of football, may still be coming. Chris Collinsworth, commentator on NBC's Sunday Night Football, has expressed doubt about the safety of the game itself: "We're talking about the very essence of the game. I'd be less than honest if I said I didn't have my doubts as to whether my children should be playing football."⁹⁹

Michael Wilbon, noted sports columnist for the Washington Post and host of ESPN's Pardon the Interruption, agrees. He wrote in an August 8, 2010 column that he would not allow his son, now 2, to play football.¹⁰⁰ He asked his colleague, former Cincinnati Bengals player and current sports radio host, David Pollack if he would encourage his son, also 2, to play. Pollack hesitated.

I struggle to answer that... My goal? For him to hold a golf club in his hand. I don't know if I can stop him, and I won't push him to play football. Funny thing is, here I am doing college football games for ESPN. I loved the camaraderie, the friendships. But I'd definitely be okay if he doesn't play.¹⁰¹

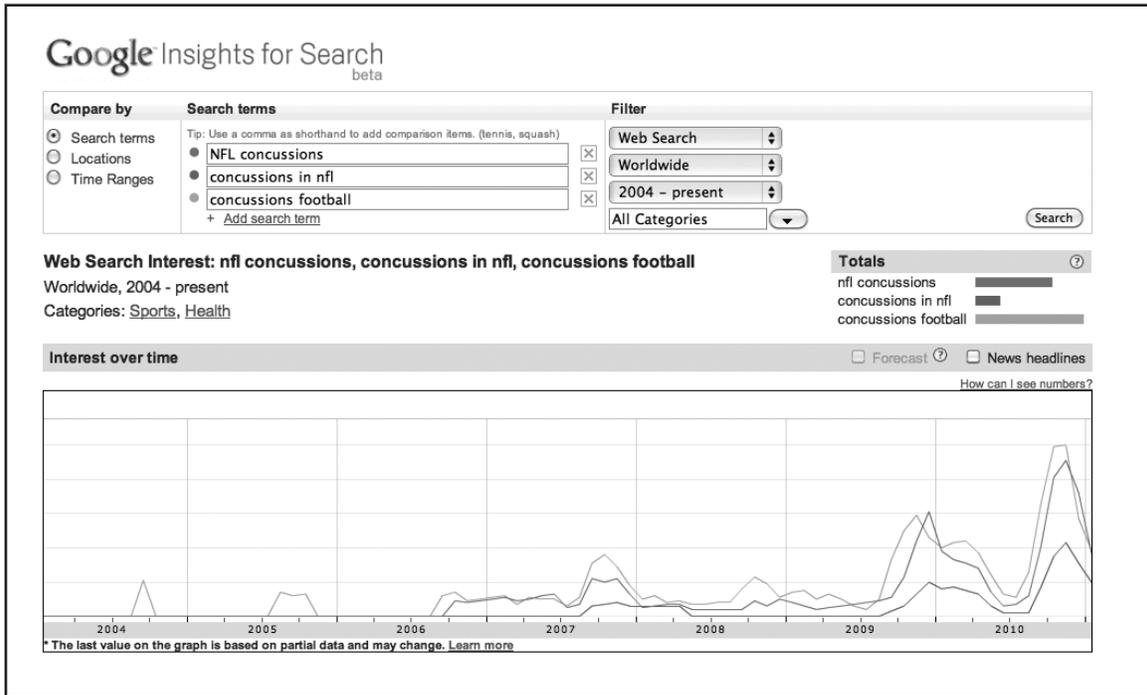
Wilbon summarized the challenge facing football as a sport:

So even though nobody believes for one second, today, that football in America could be in any kind of jeopardy, we have to wonder what could happen in 10 years when parents have an additional decade of research detailing the effects of cognitive issues confronting another generation of former football players. If a sportswriter and former NFL player steer their sons clear of organized football, what might that say long-range about the game's viability? What happens in 20, 25 years when the research on brain injuries at the youth football level piles so high parents simply can't ignore it?¹⁰²

Discussion Questions: Part 2

- 2.1 Map the progression of the issue according to the 5 stages of the issues life cycle. What events prompted escalation of the issue? How would you classify the issue currently?
- 2.2 Research on the effects of sub-concussive hits is growing. What can the NFL do to stay in front of this new development?
- 2.3 One key strategy for the NFL in 2010 is to position itself as a leader/resource in the area of concussions in young athletes. Have they succeeded in positioning themselves this way? Is this an effective strategy?
- 2.4 How did the NFL's relationship to the federal government influence their actions? If you were directing public relations for the NFL what would be your governmental relations goals? If you were directing public relations for the Sports Legacy Institute what would be your governmental relations goals?

Appendix A: Google Search Trends



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