

Alan Schwarz of the New York Times chronicles concussions in football

In November of 2006, former NFL defensive back Andre Waters committed suicide. Barely two months later, journalist Alan Schwarz reported in *The New York Times* that Waters had suffered from severe trauma-induced brain damage from a series of concussions suffered during his 12-year career with the Philadelphia Eagles and Arizona Cardinals. In effect, Waters' brain was that of an 80-year-old suffering from dementia.



Thus began a series of groundbreaking articles about the connection between concussions and brain damage among NFL players. Schwarz' sobering, well-researched pieces led to U.S. Congressional hearings and forced the NFL to admit that concussions can lead to long-term cognitive impairment. In addition, the NFL has implemented new rules about treating concussions among its active players and heavily fined players who deliver helmet-to-helmet hits.

Schwarz soon expanded his scope beyond the NFL. Many of his stories have focused on concussions in youth sports and, in particular, youth football. Some 1.4 million high schoolers play football and, as Schwarz notes, "They either do not know what a concussion is or they simply do not care. Their code of silence, bred by football's gladiator culture, allows them to play on and sometimes be hurt much worse -- sometimes fatally ... At least 50 high school or younger football players in more than 20 states

since 1997 have been killed or have sustained serious head injuries on the field.”

In October, when Schwarz investigated the football helmet industry, he revealed that, “Helmets both new and used are not -- and have never been -- formally tested against the forces believed to cause concussions. The industry, which receives no governmental or other independent oversight, requires helmets for players of all ages to withstand only the extremely high-level force that would otherwise fracture skulls.”

“The standard has not changed meaningfully since it was written in 1973, despite rising concussion rates in youth football and the growing awareness of how the injury can cause significantly short- and long-term problems with memory, depression and other cognitive functions, especially in children.”

Before joining the New York Times, Schwarz was a staff writer at Baseball America and a columnist for ESPN.com. He is the author of “The Numbers Game: Baseball’s Lifelong Fascination with Statistics” (St. Martin’s) and “Once Upon a Game: Baseball’s Greatest Memories” (Houghton Mifflin). His writing has won numerous awards, including the prestigious George Polk Award (2009), honoring excellence in print journalism.

SportsLetter spoke to Schwarz from New York City by telephone.
--David Davis

SportsLetter: The story about Andre Waters’ suicide in 2007 was the first in what’s turned into a years-long series on the topic of concussions and brain damage in sports. How did the Andre Waters story come about?

Alan Schwarz: About 18 months before, a friend of mine who knew [former Harvard football player and pro wrestler] Chris Nowinski, and knew that Chris wanted to write a book about concussions and brain injuries in football and other sports, recommended that Chris talk to me. I had just published my first book -- maybe I could give him some advice. In the summer of 2005, Chris called me and told me about the work he had done. I said, “Send me the manuscript.” The manuscript blew me away.

It was incredibly well done and well sourced. I said, “Wow, this is really good.” I told him to come to New York and that I would introduce him to some publishing people who I knew so that they could consider it. He came down, and I did that. But it never got anywhere. That was the end of it.

In December of 2006, when Chris was discovering that Andre Waters had chronic traumatic encephalopathy (CTE), 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.” At the time, I was not on staff at The New York Times. I had done some stuff for them on a freelance basis, and the essence of the story -- “Football player kills himself; found to have brain damage associated with boxers” -- certainly sounded like a New York Times story to me. So, I set up a meeting with Tom Jolly, the sports editor at The Times, Chris and me. Tom immediately saw that this was a very important story, and then I did the story.

A few days later, I got a call from [former New England Patriots linebacker] Ted Johnson. He said he had read the Andre Waters story and that he thought it was time for him to go public with his post-concussion syndrome episode involving Bill Belichick. I did that story, coincidentally two days before the Super Bowl, and all hell broke loose. It was clearly going to be a very important topic for a pretty long time, and The Times hired me on staff within a few weeks. I’ve been doing it ever since.

SL: How did Chris Nowinski find out about Andre Waters’ brain injury?

AS: He already knew of the two previous cases of CTE in professional football players — Mike Webster and Terry Long. Because of that, when Andre Waters killed himself, Chris wondered if Andre had a history of brain trauma. He, on a hunch, called the coroner in Florida and got permission from Waters’ family to have the remnants of the brain examined for this disease. It was a combination of this hunch and then deftly handling family members, who had no idea who this former wrestler-Harvard linebacker was and what he wanted to do with their uncle’s brain. But it made enough sense to them that they agreed. It was pretty ghoulish, but it turned out that Chris was correct.

SL: Many of your early stories dealt with the prevalence of brain damage among former NFL players. Why do you think many players from that era have brain damage today?

AS: I can't say. I don't know how many players from that era have this damage. Nobody knows. All I and The Times have ever emphasized is that there are two things that we do know. One is that some players have it -- or had it before they died -- and the only way you can get it is through repetitive brain trauma. These guys did not get it from banging their heads on a wall. They got it from banging their heads on the football field. Maybe it was in the NFL, maybe it was in college, maybe it was in high school, maybe it was in youth football. We don't know when it happened.

The other thing we know is that the prevalence of a medical diagnosis of dementia has been made in NFL players at rates vastly higher than that of the national population by age. The rates are high enough, among a group large enough, that it is impossible for it to be a fluke. It happened because of something they did in their lives, and the common things that they share is that they're male and that they played professional and amateur football for x number of years.

Those two things, in combination, showed that football was more dangerous than many people either understood or wanted to admit.

SL: For years, the NFL downplayed the long-term dangers of concussions and repetitive head impacts. Was this ignorance on the part of the league and its medical advisors or was it a pattern of willful deception?

AS: I'm not a mind reader. I can't say. All I know is, the league and its committee of doctors claimed that this was not the issue that I and many other people believed it was. The fact that they have done a 180 in the past 14 months and now acknowledge everything leaves that question very fair but unanswerable by me.

SL: In one of your articles, Linda Sanchez, U.S. Representative from California, compared how the NFL downplayed the dangers of concussions with the tobacco industry's denial of health problems from smoking. Is that a valid comparison?

AS: That's not for me to say. I dealt with what the NFL said and what was true or extraordinarily probable given the data that was emerging. I can't speak to why they said what they said and how it may or may not compare to other industries.

SL: This season, the NFL produced a poster alerting players to the long-term effects of concussion. They're also cracking down on helmet-to-helmet hits. Are they doing enough about this issue?

AS: Again, that's not for me to say. Look: people have mistaken my role in this story. I am not an advocate for football safety. I'm really not, although I obviously don't discourage safety. I'm not an advocate for youth safety. All I am an advocate for is making sense. When the league claimed that the data did not show any heightened prevalence of diagnosed dementia among NFL retirees, that did not make sense. I systematically proved that it did not make sense.

When the NCAA claimed that it does not set medical policy for member institutions -- that it leaves those decisions up to member schools to make on their own -- I showed that that was not true, that in fact they do make policies in many situations for their member schools.

One thing you cannot do with me is say that the moon is made of green cheese and assume that I'll just accept it. The next day, I will quote you accurately saying the moon is made of green cheese, but then I will present three experts indicating their knowledge that the moon is not, in fact, made of green cheese, and I will also present corroborating evidence to that effect.

SL: There's talk of the NFL schedule expanding to 18 games. Will the added games exacerbate the rate at which players suffer concussions?

AS: Nothing in the NFL happens in a vacuum. They're not going to flip a switch and have 18 games instead of 16 with nothing else changing. Other things are going to change both because of, and in spite of, any 18-game schedule that's considered. Whether the league's efforts to minimize the extraordinarily dangerous hits, like they're done in the last

several weeks, will counteract the damage that will occur because of two games at full speed rather than half speed, we don't know yet. We don't know if the awareness of how desperately important it is to, when you sustain a concussion, to get the hell off the field, will counteract the damage of two additional games at full speed.

SL: Are there reforms and/or rule changes that you believe should be introduced to help ensure the safety of NFL players?

AS: I am not an advocate for rule changes. I am not here to recommend anything. I certainly cite some ideas that experts in the area have proposed. For instance, we know that kickoffs are disproportionately dangerous. It looks like more concussions have taken place on kickoffs, proportionately, than any other play. We've seen some efforts to make them less dangerous -- the abolishment of the three-man wedge, for example. However, some people believe that 240-pound men running 50 yards full speed into each other should be minimized, so perhaps rules on kickoffs will be adjusted. Perhaps practices will be adjusted so that there is less head contact during that time. That's something that may be considered, if not adopted. Helmet technology will undoubtedly evolve.

SL: Why do you think the long-term effects of concussions and brain damage in sports was such an under-reported story for so many years?

AS: I don't know. I didn't work in football media before all this started -- I was exclusively a baseball writer. When I was lucky enough to bring what was pretty obviously a very important story, not only for the NFL but for every kid who plays football, to The Times, the editors could not have committed more quickly and more thoughtfully on the story. I'm impressed with how The Times had no hesitation in pursuing this. They treated it from the beginning not as an NFL story, but as a matter of public health.

SL: What about the media that glorifies violent hits -- I remember ESPN used to air a "Jacked Up!" segment that was all about big hits. What message does that send?

AS: I'm loath to judge people who enjoy really hard hits because sometimes so do I. When I was a kid, I looked forward every week to

Saturday afternoon when ABC's "Wide World of Sports" would start and Jim McKay would narrate over the "agony of defeat" ski-jumper who crashed and tumbled head over heels and looked like he was breaking 77 bones in his body. It was thrilling. You didn't think, "Gee I hope he isn't in a wheelchair for the rest of his life." I think there's something about us as a species that enjoys watching the raw physicality that many sports and, in particular, football display.

I think we also, as a species, have learned to think more long-term about these things and whether we, as a society, want to encourage them or minimize them. That is a balance that we have attempted to strike, since the beginning of time. We don't allow children to drive because we think it's too dangerous. However, there's a point after which we will let children drive, even though it's still sort of dangerous. In other words, we balance risk and reward and convenience and cost every second of every day in almost everything we do. That is how I see this issue. It is not a matter of condemning people who like watching hard hits because that's a stupid strategy.

SL: How many youth play tackle football today?

AS: The figures that I use, and these are estimates but cited by the sport's oversight bodies, are 1.4 million in high school and three million under high school, which is age 6 to age 14. That adds up to 4.4 million.

SL: How do concussions in the brains of youth differ from concussions in the brains of adults?

AS: I'm not a doctor, but from what science has determined, the brains of human beings less than 18, 19, 20 years old are not fully formed and thus are more susceptible to being damaged by certain phenomena that an adult might be able to withstand better. So, brain injuries at this stage can have a significant effect on the development of a child.

There's another danger, which is something called "second impact syndrome." When an adult sustains a concussion, and it has not fully healed, getting another concussion is really bad. It multiplies the damage, and it multiplies the effects. It can really have terrible consequences.

With kids, it can be worse. Second impact syndrome sometimes kills kids. It can literally cause a cascade of metabolic events in which the brain swells to the point that the skull cannot contain it and they die. It's an awful, awful thing that happens, at least in football, several times a year.

SL: You write about the “warrior culture of football. Do you think youth are more apt to have the “suck it up and play” attitude than NFL players?

AS: They are certainly very susceptible to it, and NFL players are very susceptible to it. I think the things that they share are, they want to play hurt for their teammates. And, they want to play hurt for themselves, for their own self-image.

However, their motivations might be different. In high school, maybe you're trying to make your father happy or keep your coach proud. Or, you want the cheerleaders to like you. In the NFL, maybe you're trying to save your contract. If you can just stay in this one game, some clause kicks in and you get a \$2 million contract for next year.

SL: How would you educate youth about the dangers of concussions in sports?

AS: Honestly, that's not my area. I don't write directly to children, to the end user here. I write to the adults who often make decisions on behalf of those children. So, how those adults take that the information we have in our articles and translate it for the kids, I'm not around to see.

I have talked to some youth groups, high school specifically. The way I do it is, I show pictures of the kids who got killed because they played through concussions. I show the quotes of the parents who had to bury their kids. I do that to show that it really does happen, that I'm not making it up.

SL: What steps can parents take to ensure that their kids know about the dangers of concussions?

AS: No parent is going to be able to impart the information to their kids until they both have and understand the information in the first place. So,

the parents have to make an investment into understanding what all this is and why it matters and how it's real. Then, the parents have to translate the information to the kids in whatever language the parents and kids speak.

SL: What is the quality of medical and diagnostic care at the high school and youth levels in identifying and treating concussions among football players?

AS: I can't judge the quality. What I can do is report the presence of it. Right now, according to the National Athletic Trainers' Association, 42 percent of high schools across the United States have access to a certified athletic trainer -- someone who is very well versed in the issues of athletic injuries and how to handle them when they occur. That means that 58 percent of high schools don't have that. Now, some of the high schools that don't have a certified athletic trainer may have a doctor on the sidelines. We don't have data on that. We don't know how many games take place without a doctor or anybody on the sideline to evaluate an injury. And, that's varsity games. What about the j.v. games? What about freshman games? What about junior high school games? What about youth games? We don't know how often there is somebody there to evaluate an injury. I've yet to find any doctor or certified athletic trainer who can evaluate a head injury if they're not in the stadium.

SL: What is the coach's responsibility in this?

AS: I think that it varies, frankly, in different communities. There is a balance in succeeding -- i.e., wins and losses -- and paying for that success -- i.e., injuries. We all wouldn't mind winning the state championship if three of the kids got sprained ankles that resolved in two weeks. No one would worry about that. Is it worth winning the championship if two kids break their legs and one of them has post-concussion syndrome for six weeks and has a terrible time in school? Some communities might say that's worth it. Some communities would say that it's not worth it. The coach will understand, either explicitly or implicitly, from their employer and community what their responsibilities are.

What I can say is, for those coaches who want to minimize injuries,

playing without a doctor or a certified athletic trainer on the sidelines is really stupid. Because if something bad happens, you're screwed. Many communities have taken the step of requiring an EMT official nearby; some require a certified athletic trainer. Some require an MD. Some require nothing. Some say we don't have the money. But it's funny. I've never, ever heard of a community say, "We can't afford helmets, so we're going to play without helmets this year." That would be preposterous.

So, they do understand that some things are too unsafe. We're getting to the point now, thanks to the work we've done in *The Times* and work by other journalists, that people are now starting to figure out where brain injuries fall on the spectrum of what is worth it and what is not.

SL: How about tackling technique -- should that be taught differently?

AS: We know what tackling is supposed to be: wrapping the player up and getting his knee to touch the ground. What it has evolved into, in some cases, is to just ram into the guy as hard you can and leave him no choice but to topple over in a heap. When it's done with the head or to the head -- and, worse still, head to head -- it can be incredibly dangerous. It happens in every game, at every level, at all levels. It's not just an NFL thing.

The way that I look at this is: Football, or "football" in quotes, itself does not exist. It's not like a tree or a building. It is what emerges from rules of strategy and behavior that human beings allow or construct. It can be whatever people chose for it to be. You know, 100-110 years ago, it was something different. There was no forward pass. There were like 100 deaths a year. People decided they did not want football to be that. They wanted it to be something else, and they changed the rules.

Now, today, some people feel that knocking people senseless with their helmet is football. I'm not saying they're wrong. But, ultimately, you might want to teach players not to do that, because it is bad for you and also bad for your opponent and, in some cases, bad for the kids who are watching you and doing it themselves.

So, I think that you have two options: you can either teach not to do that or, when it does happen, penalize the heck out of it. Make it so that

people don't want to do that ever again. I'll tell you one way that I've heard, which is pretty intriguing. The first offense is a 15-yard penalty. The second offense is 40 yards. On the first one, the coach yells at the referee. The second one, the coach yells at the player. End of problem.

What's going to happen is, they're going to have to hold up a little bit and won't run headlong into defenseless receivers anymore. Maybe scores will get too high that way, and a different rule will have to be changed to bring scoring back to historical levels. That happens all the time in every sport. It's not that big a deal.

The biggest problem in this area, ironically, is that football is not dangerous enough. If football were only slightly more dangerous, people would see and understand exactly what's going on. But it's found this very sweet spot. The cost of not doing anything is not perceived to be high enough. It's dangerous, but it's not dangerous enough to have people think more clearly about how they want to handle it.

SL: You write that the National Operating Committee on Standards for Athletic Equipment, or NOCSAE, "is largely financed by the helmet makers themselves." Doesn't this constitute a conflict of interest? Should NOCSAE be in charge of helmet safety?

AS: It's not for me to say. But to pretend as if that helmet article was a glowing representation of what is happening in the world of head protection would be disingenuous. What I hope it was was merely a depiction of the way that things are and why they are that way, and then people's reactions to that, both from people who knew about it already and from people who had just found out about it and thought it was different. It's up to them to decide whether they want to change it or not.

Many high school and youth football teams have pretty crappy helmets. Whether that changes or not is a pretty complicated issue because helmets cost a lot of money. A lot of places say they don't have the money for better helmets. That's a choice that they have to make. But they have to own up to the fact that they're choosing to keep their kids less safe than they might otherwise be. And, my guess is that plaintiff's attorneys will have plenty to say about that. So, maybe they'll require helmets to be

reconditioned every year. Maybe they'll require new helmets every five years.

SL: Can helmet technology be improved to make playing football safer?

AS: I'm not a physicist. However, I have yet to see any realm of science that, in pursuit of improvement, has entirely failed. Human beings are a pretty smart bunch of folks. We not only know that the moon isn't made of green cheese, we've actually sent a man to the moon to make sure. I think that any honest efforts to pursue helmets that make the way the people play less dangerous than it might otherwise be will be successful.

SL: Several states have passed bills requiring schools to train coaching and medical personnel about concussions and to have emergency personnel at games. In Texas (Will's Bill), Oregon (Max's Law) and Washington (the Lystedt Law), the bills are named after boys who were killed or seriously hurt by football brain injuries. Is legislation the answer?

AS: One's answer to that question undoubtedly derives more from one's feelings about the role of state or federal government in individuals' lives than it does from how to handle football's head injury issues. Not being a political scientist, I think I'll stay away from that one.

SL: Football has the highest rate of concussions among high school athletes, with girls soccer ranking second. Did that surprise you?

AS: I didn't have any preconceptions because I hadn't thought about it. There's all sorts of explanations for why girls' soccer, and also girls' basketball, show the high rates that they do. One, it's quite possible that girls are more honest about reporting the fact that they are injured than boys are. It doesn't mean that, physiologically, they're more susceptible to it. It just means that they're less stupid about it. Then again, there also might be physiological reasons: the fact that their necks are less thick and strong and sturdy would suggest that their heads snap back and forth more easily than a similarly impacted boy. There may be hormonal issues or other metabolic type things involved. We don't know for sure because there's so many variables.

What the statistics have done is shown people who think that concussions are just a boys' football thing that it isn't. It happens less often in some girls' sports, but while it may happen less often, when it does happen it has to be handled with the exact same respect and protocol.

SL: Have you gotten pushback from your articles?

AS: Have I gotten pushback? Yes, I have. The unreasonable pushback I don't care about. The reasonable pushback I do, and I incorporate it as we continue to write about this issue. Some pushback comes in the form of threats. That's no fun. But it's just noise. I find that, when I'm confident in the numbers, I feel very emboldened. I find numbers to be very empowering. People can make all sorts of arguments hither and thither. But when I had the numbers, I knew ultimately that this issue would become understood by a wider audience.

SL: What has most surprised you about all this?

AS: The most surprising thing to me is that my wife has not divorced me. No, really, I'm not supposed to be surprised by anything. My job is to stay as dispassionate as possible. But am I surprised that meaningful change happened so fast? Yes, I am. I didn't think it would happen this fast. I mean, look at the National Football League. It's this monstrous aircraft carrier of an organization. It's a behemoth. It does not change course very easily, particularly from outside forces. But in the span of 14 months, ever since late September last year when we were writing about the dementia rate, the National Football League changed direction. That was the end of it. There was no place to go. One can argue about their motivations. I have no interest in doing that. What I think it shows is the power of numbers.

SL: You have a mathematics degree. How has that helped you in reporting this story?

AS: I love numbers. Numbers are a great source of joy and have been for me since I was four years old. I do find numbers to be a lot less fun when you're counting dead children. But they can still be just numbers. What they don't have in emotion they more than make up for in clarity. I find that

to be very comforting and empowering, and it's the way my head works. I don't bother with "shoulds." I work with what is.

SL: Did you think that you would be writing about brain damage and concussions in sports more than three years after the Andre Waters story?

AS: Honestly, I didn't really think about it. There's a part of me that can't believe that this is still front and center. But there are still many stories on this that I'm working on that are coming and that are as important as anything I've done. It's not going to stop because, again, The Times has made the investment to consider this issue as an ongoing matter of public health. There are a lot of matters for people to learn about so they can make their decisions.

SL: What other angles to this story do you believe need to be explored?

AS: I'm working on a lot of things, but I'm not going to discuss that because lots of media outlets are now covering this. Some better than others, some well behind The Times. It's funny because we almost never get credited anymore. We almost never see, "Because of a series of stories in the New York Times ..." Some people are very gracious about crediting us: Malcolm Gladwell [in The New Yorker], Bob Costas. But we're at the point where this is not our story anymore. We've gone generic. Concussions are now the Xerox or Kleenex of journalism because people don't remember that it was ours anymore. There's an odd sense of satisfaction with that.

Disclaimer: The opinions and beliefs expressed by interviewees in SL Interviews are theirs alone and do not necessarily represent the opinions and beliefs of LA84 Foundation and/or its directors, officers and/or employees.