HEALTH

Cost of Contact in Sports Is Estimated at Over 600,000 Injuries a Year

By GINA KOLATA SEPT. 29, 2017

It seems obvious that there would be more injuries, and more serious ones, among high school and college athletes in football or soccer or lacrosse than, say, in running or tennis. But, how many more, and at what economic cost?

Those figures turned out to be hard to come by, researchers at Yale discovered, but, using the best data available, they calculated that if contact sports could be made noncontact — like flag football, for example — there would be 49,600 fewer injuries among male college athletes per year and 601,900 fewer among male high school athletes.

The savings — which include estimates of medical costs and time lost could be as much as \$1.5 billion per year for colleges and \$19.2 billion per year for high schools. And that takes into account only the immediate consequences of an injury, a paper by the researchers says, not the long-term effects of concussions or repeated jarring of the brain in collisions. Or the repercussions of ligament tears, which can lead to a greater than 50 percent risk of arthritis a decade later, said Dr. Mininder Kocher, a professor of orthopedics at Harvard Medical School.

"The issue really is that contact is the driving force in all these major injuries," said Ray Fair, an economics professor at Yale and the senior author of the paper. "Any sport that does not have contact, the injuries are not that great."

Fair and his colleagues focused on four types of serious injuries — concussions and damage to the nervous system, bone injuries, torn tissue, and muscle and cartilage injuries. They are the sort that can sideline an athlete for months. And football players, who have the most injuries, can have one after the other, as happened to the son of Terry O'Neil, founder of Practice Like Pros, a group that focuses on making the sport safer for young players.

O'Neil's son had six major injuries as a quarterback in high school — two concussions, three fractures on his passing hand and a torn knee ligament.

"He missed half the games in his high school career," O'Neil said. "You sit there with your heart in your mouth as a parent watching the games."

Other athletes suffer for the rest of their lives from injuries in collegiate contact sports. Janet M. Currie, a professor of economics and public affairs at Princeton's Woodrow Wilson School of Public and International Affairs, says her father, now 80, has had a bad knee ever since he played football in college.

"That's 60 years with pain," she said.

Many more people play sports in high school than in college, so for that reason alone there are more injuries in the younger group. But high school athletes are also more prone to injuries, experts said, because they are not as skilled, they have less experienced coaches and they may not be physically mature.

More high school students play football than any other sport, in part because teams often have 30 to 40 players or even more. There are about a million football players in high school, said Dr. Robert Cantu, a founder of the Chronic Traumatic Encephalopathy Center at Boston University and the medical director of the National Center for Catastrophic Sport Injury Research at the University of North Carolina at Chapel Hill. That number dwindles to 100,000 in college, he said.

"Even if the injury rate is similar, because 10 times as many kids are playing

in high school, the total number of injuries is way higher and expensive," Cantu said. "And kids on the high school level don't have good coaching, and some of these kids should never be playing," he added.

But what is important about the Yale analysis is the focus on the economic cost of these serious injuries, experts said. Already, the cost of football is weighing on some private high schools, Cantu said.

Insurance for football players has become so expensive, he said, that "a number of schools have decided this is a sport they will not continue."

Kocher, who is also the associate director of the sports medicine division at Boston Children's Hospital, hopes that a focus on the cost of collision sports might lead to some serious funding for injury prevention.

"There is a lot of lip service about prevention, but not much money," he said.

There also is not much money for reporting injuries, Cantu said, and what data exists can be hard to collect for studies. The states mandate concussion reporting, he noted, but do not provide funds for it. The sort of data that Fair, the Yale professor, gathered is "the best that's out there, but it is not complete."

That, though, is all too typical for health data, Currie said.

"One of the reasons why health research is so backward," she said, "is that it is very hard to get the data for most health projects."

Fair said he and other faculty members at Yale would never allow their children or grandchildren to play contact sports. So, he added, "do we want our students to play?"

But O'Neil said playing football had been such a wonderful experience for his son that he had no regrets, despite his son's injuries.

And that point of view, said Roger Noll, a sports economist at Stanford, is what critics are up against. He said he admired Fair's paper and had sent it to Stanford's athletic director. But Noll is not optimistic that even a stark look at injury rates and costs will have much of an effect, especially in football, the most dangerous contact sport.

When he goes to Stanford football games, he said, one of the things he notices is the television production people on the sideline walking around with parabolic microphones.

"I've asked them why they do that," he said. "They are catering to their audience. The audience wants to hear heads crack."

"Therein lies the problem," Noll said. "The reason we are where we are is a kind of bread and circuses aspect to football."

"It's a hard row to hoe," he concluded, "but maybe, maybe, if we keep doing the research ..."

Correction: September 29, 2017

An earlier version of this article inaccurately described the number of concussions and hand fractures that the son of Terry O'Neil had as a high school quarterback. He had two concussions and three fractures of his passing hand,

not three concussions and two fractures.

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