



# Are we still not taking kids' concussions seriously?

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JOANNE RATHE/GLOBE STAFF

**Former Revolution player Taylor Twellman helped kick off Concussion Awareness Week in September in Groton.**

By [Matt Rocheleau](#)

GLOBE STAFF DECEMBER 15, 2016

A newly released survey has found that half of Massachusetts student athletes who experienced concussion-like symptoms continued playing that day, one of a handful of studies showing spotty compliance with a five-year-old state law designed to increase awareness of head injuries.

A separate review found that more than 200 schools have violated state rules by failing to report data on head injuries students suffered during the 2015-16 academic year.

And a newly published study found some Massachusetts pediatric primary care physicians acknowledged they had not completed training on diagnosing and treating youth-sports-related concussions years after a state law mandated they do so.

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Despite the trouble spots, state health officials and medical specialists say that the law, and other efforts in recent years, have led to significant improvements in attention to concussions.

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“Are there things that are falling through the cracks? Yeah,” said Peter Greenspan, a pediatrician and

one of the founders of the Sports Concussion Clinic at Massachusetts General Hospital. “But I definitely think there’s been a huge amount of progress overall.”



## Alarming rate of concussed student athletes return to field

Research finds that 38 percent of student athletes who suffer a concussion don't come out of the game. Why?

**Mass. schools report 4,400 sports-related head injuries**

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The Massachusetts law established a host of regulations around youth concussions.

The law says that students who suffer concussion-like symptoms during extracurricular sports activities must be removed from play that day. It also said that schools must report data on head injuries students suffer each year, and that physicians who provide medical clearance for students receive special concussion-related training.

The shortcomings have raised worries among some observers.

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“I thought there was a greater public awareness” about the seriousness of head injuries, particularly for children, said Dr. Robert C. Cantu, a leading expert nationally on the traumatic brain injuries.

A [survey](#) of more than 6,000 public school students in Massachusetts asked student athletes if, at any point in the past 12 months while playing sports, they had suffered a blow or jolt to the head that caused concussion-like symptoms — including being “knocked out,” having memory problems, double or blurry vision, headaches, “pressure” in the head, nausea, or vomiting. The survey was conducted in the spring of 2015 and released this fall.

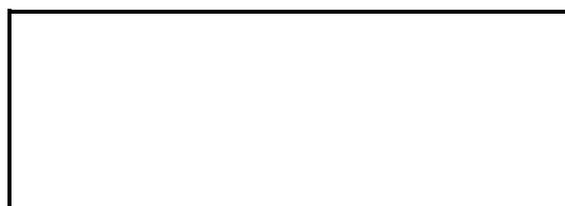
Among high school athletes, 14 percent said they had experienced such symptoms. Among middle school athletes, 19.3 percent said they had experienced concussion-like symptoms.

The survey also [found](#) that 50 percent of student athletes who experienced concussion-like symptoms kept playing afterward. Another 16 percent said they stopped playing but did not get checked out by a doctor, nurse, or other health care provider. The remaining 34 percent stopped playing and got medical help.

“It’s playing with fire to keep playing with a concussion,” said Cantu, a [professor at Boston University’s School of Medicine](#) and cofounder and medical director of the [Concussion Legacy Foundation](#).

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Concussions are serious, particularly for young developing brains. Symptoms can last weeks or months and can cause problems with long-term memory, learning, motor control, and speech.

Just a single concussion as a child or teenager could have long-lasting effects, [studies have found](#). Suffering a second concussion before symptoms of a previous concussion have subsided can even be fatal, in rare cases.

Student athletes continuing to play sports despite concussion symptoms is not a problem that is unique to Massachusetts. National [studies](#) have [found](#) high percentages of students who admit to playing through such injuries.

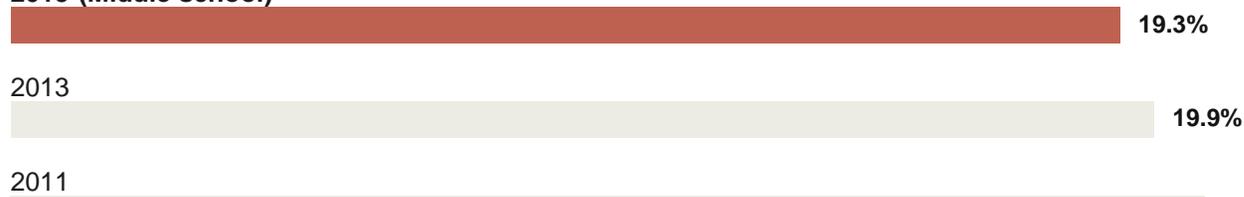
### Concussion prevalence among Mass. student athletes

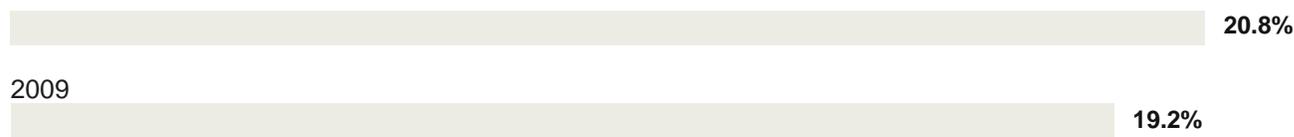
Percentage of Mass. student athletes who said they experienced symptoms of a concussion while playing sports in the past 12 months. Symptoms included being “knocked out”, memory problems, double or blurry vision, headaches, “pressure” in the head, nausea or vomiting.

#### 2015 (High school)



#### 2015 (Middle school)





**(Note: The survey said that the lower prevalence in sports-related concussions at the high school level compared with middle schools “may be due to changes in policies and practices or improved awareness at the high school level.”)**

### **What students did after suffering concussion-like symptoms while playing sports**

Hover over or click on the charts to learn more.

**SOURCE: Massachusetts Department of Public Health, 2015 Youth Health Survey**  
MATT ROCHELEAU / GLOBE STAFF

Meanwhile, a review of state records by the Globe found that more than 200 schools across Massachusetts have failed to send to state health officials statistics about the head injuries that student athletes suffered last school year, flouting [the law](#).

The data are due each year by Aug. 31, and about 770 public and private schools are supposed to report the figures, state officials said.

However, just 554 schools had submitted data to the state health department as of Dec. 5, officials

said, though they said they expected more schools to send figures soon.

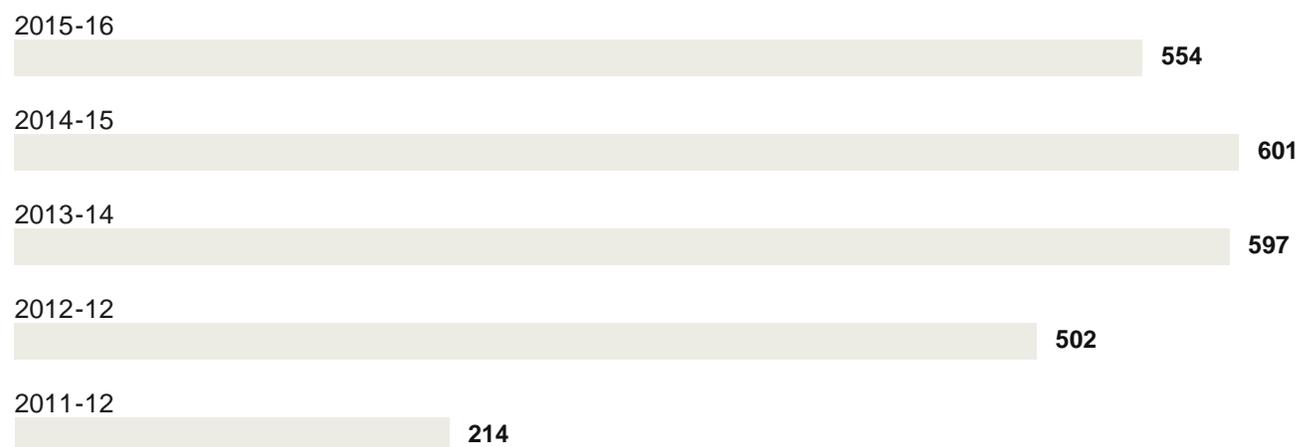
The law calls for data to be submitted by all public schools that have students playing extracurricular sports in any of the grades between 6 and 12. Private schools affiliated with the Massachusetts Interscholastic Athletic Association also must report.

There is no penalty if schools do not report data back to the state, or if they submit it late.

State health officials declined to provide any of the school-by-school data they have received so far covering the 2015-16 school year, saying they are still compiling the figures and verifying their accuracy. They said the data will not be ready until February.

### Number of Mass. schools reporting data on head injuries

About 770 public and private schools are supposed to report the figures by Aug. 31 each year, state officials said. The figures below may count schools that reported figures but were not required to do so. For example, 97 schools reported data for 2014-15 that did not have to, officials said. The 2015-16 figures were as of Dec. 5. State officials said they expected more schools to send figures soon.



**SOURCE:** Massachusetts Department of Public Health

**(Note: State officials and medical experts urged against analyzing or publishing raw data schools reported, saying it might contain errors and the data-collection effort was never designed to measure the prevalence of student head injuries.)**

Data for previous years show another area of potential concern. Some 142 schools reported no head injuries whatsoever during 2014-15, suggesting they may not be doing enough to encourage reporting by students, families, coaches, and school staff.

Nonetheless, state officials say they're encouraged by areas where the 2011 concussion law has led to improvements. For example, there was a significant drop in the percentage of high school students who said they experienced concussion-like symptoms in a 2015 survey compared with one in 2011.

The law requires coaches to teach athletes safer techniques and promote equipment use to reduce the likelihood of head injuries. Schools also must have policies governing concussion treatment and management and must offer annual concussion training to their nurses, athletic staff, students, parents, and school physicians.

“We believe the regulations have made student athletes in Massachusetts healthier and safer,” department spokesman Tom Lyons said in an e-mail statement. “DPH will continue to work with schools to comply and report concussion information as required.”

Yet another unsettling set of results come from a [study](#) published in the November issue of the Journal of Pediatrics that found that some pediatric physicians in Massachusetts had not completed state-required training.

The study surveyed 146 pediatric physicians within the Partners Community Healthcare network in Dec. 2014, three years after state law required pediatricians to complete concussion-related training.

About one in five of the doctors surveyed said they had not completed the [mandated training](#), which can be done online for free.

The study found that physicians who said they had taken state-required training were significantly more likely to say they develop individualized treatment plans for when patients should return to school and sports activities.

The training required by the state highlights how individualized treatment plans are helpful and have been shown to reduce instances of patients returning to school or play too early, the study said.

The study also found that some doctors said they were not communicating with school officials about when it is safe for their patients to return to school and play sports, even though the law requires them to do so.

The study’s lead author said the findings were concerning.

In some respects, the study shows physicians “are doing a great job and we’re making improvements,” when it comes to concussions, said Michael Flaherty, a pediatric critical care physician and injury prevention researcher at the Partners-owned Massachusetts General Hospital in Boston.

“But we can do better,” he said.

Officials from the state health department said that they have offered training and technical assistance to medical providers, including running training sessions at conferences and in hospitals. They said that they also have sent letters to more than 4,000 physicians reminding them of obligations spelled out by the 2011 law for doctors who provide medical clearance and how to access the training.

As part of a new initiative, the state health department said it will host a webinar in early 2017 for medical professionals, in partnership with the Massachusetts Medical Society and the Brain Injury Association, to provide updated information on the treatment and management of sports-related concussions.

“Equally important, the department will continue to work in partnership to change how the concussion symptoms are dealt with by athletes, schools, families and health care providers,” a statement from the Department of Public Health said.

But Cantu and other experts said the law hasn’t been more effective in part because it was passed without funding for schools to implement the changes or for the health department to monitor compliance.

“It takes time and money to do this,” said Cantu.

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