

MASSACHUSETTS LED NATION IN DIAGNOSED CONCUSSIONS AMONG 10 - to 19-YEAR-OLDS IN 2015

Nationwide concussion diagnoses up dramatically from 2010 through 2015 New Blue Cross Blue Shield study shows more awareness, changing attitudes about head injuries

BOSTON — September 27, 2016 — Concussion diagnoses among young people in Massachusetts have skyrocketed over the last five years, according to a new study by the Blue Cross Blue Shield Association (BCBSA). The rise in diagnoses comes as news coverage* of football-related head injuries and state legislation aimed at preventing participants of youth sports from shaking-off such injuries and returning to the field have drawn attention to the dangers of head injuries. The study also shows that concussion diagnoses among adults rose significantly over the past six years.

In Massachusetts, concussion diagnoses for our members ages 10 through 19 increased 82%, from a rate of 15.1 per 1,000 members in 2010 to 27.5 in 2015, the highest rate in the nation. Nationally, the rate of concussion diagnoses for all Blue Cross plan members ages 10 through 19 spiked 71% from 8.9 per 1,000 members in 2010 to 15.2 in 2015.

For all Blue Cross members age 64 and younger in Massachusetts, concussion diagnosis rates increased 61%, from 4.1 per 1,000 members in 2010 to 6.6 in 2015. Concussion diagnoses for all members of Blue Cross plans age 64 and younger increased 43%, from a rate of 3.0 per 1,000 members in 2010 to 4.3 in 2015.

The report, "The Steep Rise in Concussion Diagnoses in the U.S.," is a comprehensive study of medical claims for 936,630 diagnosed concussions suffered by Blue Cross and Blue Shield (BCBS) commercially-insured members throughout the country from 2010 through 2015. The study also finds that:

- Fall is the peak concussion season for patients ages 10 through 19, with the most dramatic increases seen among males. Concussion diagnoses for young males in the fall are nearly double that of young females.
- The growth of diagnosis rates for young females increased 118% compared to an increase for young males of 48% during the study period. Young males are still being diagnosed with 49% more concussions than young females.
- BCBS data in 2015 shows that patients ages 10 through 19 in some states have nearly a three times higher rate of concussions diagnosed than in other states. The Northeast experienced higher rates of concussion diagnoses than other regions overall. Connecticut, Pennsylvania, and Massachusetts had the highest rates of concussion diagnoses for patients ages 10 through 19.
- The percentage of concussion patients nationally across all ages diagnosed with post-concussion syndrome nearly doubled between 2010 and 2015. Throughout the study, post-concussion syndrome was diagnosed equally for both males and females ages 10 through 19. Females ages 20 through 64, however, are nearly 60% more likely to receive such a diagnosis than males.

In May 2009, the state of Washington approved the Zackery Lystedt Law, named after a young football player who was disabled after he sustained a concussion and prematurely returned to a game. The law requires medical clearance of youth athletes suspected of sustaining a concussion before sending them back in the game, practice, or training. Within five years of the law's passage, all 50 states and the District of Columbia adopted much of its core principles, which were backed and promoted by the National Football League (NFL).

Massachusetts passed a similar law, Chapter 166, in 2010. It requires coaches, trainers, parent volunteers, and others who participate in extra-curricular athletic activities to undergo annual training on how to recognize the symptoms of concussion and head injuries. It also requires student athletes who have suffered a head injury to have written clearance from a doctor to return to their sport.

This is the ninth study of the Blue Cross Blue Shield: The Health of America Report series, a collaboration between BCBSA and Blue Health Intelligence, which uses a market-leading claims database to uncover key trends and insights into health care affordability and access to care.

For more information, visit www.bcbs.com/healthofamerica.

* Greater awareness is also demonstrated when using [Google Trends](https://www.google.com/trends) to measure the number of people in the U.S. who [searched](#) for, and the amount of [news coverage](#) that included the word "concussion," which increased between 2010 and 2015. The term also is used more on the Internet during fall.

About Blue Cross Blue Shield of Massachusetts

The Blue Cross Blue Shield of Massachusetts (www.bluecrossma.com) is a community-focused, tax-paying, not-for-profit health plan headquartered in Boston. We are the trusted health plan for more than 31,500 Massachusetts employers and are committed to working with others in a spirit of shared responsibility to make quality health care affordable. Consistent with our corporate promise to always put our 2.8 million members

first, we are rated among the nation's best health plans for member satisfaction and quality. Connect with us on [Facebook](#), [Twitter](#), [YouTube](#) and [LinkedIn](#).

About Blue Cross Blue Shield Association

The Blue Cross Blue Shield Association is a national federation of 36 independent, community-based and locally operated Blue Cross and Blue Shield companies that collectively provide health care coverage for more than 106 million members - one in three Americans. For more information on the Blue Cross Blue Shield Association and its member companies, please visit www.BCBS.com. We encourage you to connect with us on Facebook, check out our videos on YouTube, follow us on Twitter, and check out The BCBS Blog for up-to-date information about BCBSA.

For further information: CONTACT: Ian Meropol (617) 246-2367 ian.meropol@bcbsma.com
