

NEWS RELEASE

Embargoed for Release: July 22, 2014 12:01 A.M.

CONTACT: Media Relations Nationwide Children's Hospital Marketing and Public Relations (614) 355-0495

New Study Finds High School Lacrosse Players at Risk for Concussions, Other Injuries Researchers say statistics may further debate over protective equipment for girls

(COLUMBUS, Ohio) – Lacrosse is one of the fastest-growing high school sports in the United States, with more than 170,000 students now playing the sometimes hard-hitting game. The growing participation numbers, however, mean that more young people than ever are at risk of injury in lacrosse practice and competition.

In a study published online today by *The American Journal of Sports Medicine* and available in an upcoming print issue, researchers from the Center for Injury Research and Policy at Nationwide Children's Hospital and the Colorado School of Public Health found that high school players experienced 1,406 injuries over the 4 academic years from 2008 through 2012. The overall injury rate was 20 per 10,000 lacrosse competitions and practices.

More than 22 percent of those injuries were concussions, making that the second most common injury diagnosis behind sprains and strains (38 percent).

Researchers also found that while the rules for girls' lacrosse largely prohibit person-to-person contact, almost 25 percent of concussions in girls' lacrosse were a result of that kind of contact. Another 63 percent of concussions resulted from being struck by lacrosse sticks or balls. Most high school girls' lacrosse players are only required to use protective eyewear and mouth guards, and not the helmets and additional padding required for boys' lacrosse.

"Lacrosse is becoming more and more popular across the United States, and it's a great way for high school students to be active," said Lara B. McKenzie, PhD, an author of the study, principal investigator in the Center for Injury Research and Policy at Nationwide Children's and associate professor at the Ohio State University College of Medicine. "Still, we see injuries in the sport every day during the season. Our research shows that we need to do more and can do more to prevent those injuries."

Boys' and girls' high school lacrosse have different rules regarding person-to-person contact, and the study found that the number and kinds of injuries differed between the genders. Boys sustained 67 percent of the total injuries, and boys had a higher overall injury rate than girls. About 36 percent of boys' injuries were sprains and strains, and about 22 percent were concussions. Person-to-person contact, which is allowed in boys' lacrosse, caused 74 percent of concussions and 41 percent of boys' lacrosse injuries overall.

Almost 44 percent of injuries to girls were sprains and strains, and concussions made up another 23 percent. The most common causes of injuries were no contact – for example, a foot pivot leading to a pulled muscle -- and contact with playing equipment. For both boys and girls, injury rates were higher during competition than practice.

Dawn Comstock, PhD, an author of the study and an associate professor of Epidemiology for the Pediatric Injury Prevention, Education, and Research (PIPER) program at the Colorado School of Public Health, said that the study's findings will contribute to evidence-based discussions of ways to prevent injury – including the current debate over whether girls' lacrosse players should wear helmets as boys are required to do.

"Concern over concussions in both boys' and girls' lacrosse underscores the need to learn more about these injuries," Comstock said. "Further study will help those working to develop and implement effective injury prevention programs."

Players, coaches, officials, athletic trainers and parents can help make lacrosse a safer game by following these tips from researchers and lacrosse organizations:

Strictly enforce all rules, especially those limiting player-to-player contact in both boys' and
girls' lacrosse.
Learn the symptoms of concussion. Any athlete suspected of having a concussion should
stop play immediately and be evaluated by a certified athletic trainer or other medical
professional.
Warm up properly, drink plenty of water, and rest after practice or competition.
Wear well-fitting protective equipment.
Be prepared for injuries before they happen by making sure procedures, such as emergency
action plans, are in place to handle them.

The study is the first to use a large national sample of United States high schools to compare lacrosse injuries by type of athletic activity and gender. Data was collected from the National High School Sports-Related Injury Surveillance System, High School RIO (Reporting Information Online), which uses reports from certified athletic trainers throughout the country.

The Center for Injury Research and Policy (CIRP) of The Research Institute at Nationwide Children's Hospital works globally to reduce injury-related pediatric death and disabilities. With innovative research at its core, CIRP works to continually improve the scientific understanding of the epidemiology, biomechanics, prevention, acute treatment and rehabilitation of injuries. CIRP serves as a pioneer by translating cutting edge injury research into education, policy, and advances in clinical care. For related injury prevention materials or to learn more about CIRP, visit www.injurycenter.org.

The Colorado School of Public Health is the first and only accredited school of public health in the Rocky Mountain Region, attracting top tier faculty and students from across the country, and providing a vital contribution towards ensuring our region's health and well-being. Collaboratively formed in 2008 by the University of Colorado, Colorado State University, and the University of Northern Colorado, the Colorado School of Public Health provides training, innovative research

and community service to actively address public health issues including chronic disease, access to healthcare, environmental threats, emerging infectious diseases, and costly injuries.