

Amid growth of lacrosse, experts take on health and medical issues

US Lacrosse, MedStar Sports Medicine lead initiative to research injuries and promote safer play

By Dr. Richard Hinton, Special to The Baltimore Sun

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Lacrosse is the fastest-growing team sport in America. Its combination of speed, sticks, a ball and physical contact make for a unique set of injury types, mechanisms and priorities.

Growing nearly as fast as the game itself are the efforts of a group of health care professionals and lacrosse experts working in the area of lacrosse-specific sports medicine. This includes not only developing best treatments for lacrosse-related injuries but also the broader areas of preventing injuries, promoting safety and enhancing participation at all levels of play. Though national in scope, these efforts are being led from right here in Baltimore by US Lacrosse, the sport's national governing body, and its medical research partner MedStar Sports Medicine.

When US Lacrosse convened its first Sports Science and Safety Committee 12 years ago, there were six of us around the table. The organization's CEO, Steve Stenersen, charged the group with determining the medical priorities facing the game, developing appropriate research infrastructure and providing education and unbiased advice to the lacrosse community concerning health and safety issues.

Today there are more than 25 active members on the committee, each a national expert in areas ranging from neuropsychology to risk management, pediatric sports medicine to injury epidemiology. In addition to its relationships with MedStar Sports Medicine, the committee also has working partnerships with the NCAA, the National Federation of State High School Associations, the American Orthopedic Society for Sports Medicine, the American College of Sports Medicine and many other national sports organizations.

Research is being pursued on a number of fronts and is having a tangible impact on the game. Computerized injury surveillance programs are gathering data in scholastic and college lacrosse. High-speed video analysis is being used to determine the mechanisms of head and knee injuries in both the men's and women's games. Sensors embedded in mouthpieces, similar to those used in football helmets, are shedding light on the mechanisms of lacrosse-specific head injuries.

Information from such studies has been integral in safety-related rules and equipment changes, such as the mandate in 2004 for women's eyewear and more-recent decisions to curb body checking in both the youth and men's games.

Other initiatives are resulting in better direct medical care of lacrosse players. White papers from the Sports Science and Safety Committee have helped administrators develop better emergency medical plans; uniform standards for helmet and stick biomechanics; and better guides for youth participation.

Partnership with the Louis J. Acompora Memorial Foundation on cardiac issues and the effective on-field use of automated external defibrillators has saved several young lacrosse players' lives the past couple of years. As Stenersen points out, "US Lacrosse is regarded nationally as a best-practices organization with regard to sports, science and safety."

Important issues facing the game are numerous, yet on some fronts very basic.

"I think the most fundamental issue that impacts player safety is the quality of coaching a young player receives," Stenersen said. "Nothing is more important to player safety and a consistently positive lacrosse experience than a coach who knows how to teach the game correctly and reinforces a positive culture of play. Properly educated officials are also a necessity. We should never assume that individuals are qualified to coach or officiate the game just because they have played. Since its inception in 1998, US Lacrosse has prioritized the development and delivery of national standards of education for these important members of lacrosse community."

There are growing pains related to the sport's exploding popularity. Ann Kitt Carpenetti, managing director of games administration at US Lacrosse, stresses the organization's efforts in educating newcomers to the inherent differences among men's, women's and youth lacrosse, particularly how these differences affect the culture of the game, the necessity for protective equipment and the relative injury risk. Creeping into the youth game are issues such as the impact of earlier specialization in the sport and potential burnout. The emphasis in youth play must continue to be fun, teamwork and learning life's lessons.

Priority injuries for the game are concussions, knee injuries, ankle sprains and hand trauma. Concussions because of their high visibility, potential long-term consequences and myriad possible preventive strategies. Knee injuries because they result in the greatest loss of game and practice time. Ankle sprains because they are the most frequent injuries in lacrosse, and hand trauma because stick-and ball-contact mechanisms are somewhat unique to the game.

In this weekly column we will address a wide range of lacrosse medical, health and safety issues. Our goals are to provide perspective on hot-button issues, share the latest findings in lacrosse medical research, raise awareness of available educational resources and stimulate discussion. We welcome your comments and questions and will address these in future columns.

Dr. Richard Hinton is director of the Sports Medicine Fellowship at Union Memorial Hospital, a member of the US Lacrosse Sports Science and Safety Committee, and a team physician for the Towson men's and women's teams as well as the U.S. women's national team. If you have questions for Dr. Hinton, please send them to sports@baltsun.com.