Protective eyewear reduces field hockey eye injuries without increased concussion risk

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A study conducted by researchers at Hasbro Children's Hospital, Boston Children's Hospital, Fairfax (VA) County Public Schools and the University of Colorado School of Medicine has found that nationally mandated protective eyewear results in a greater than three-fold reduced risk of eye and orbital injuries in high school (HS) girls' field hockey players without increasing rates of concussion.

Each academic year, more than 64,000 girls participate in HS-sanctioned field hockey in the United States. Head, facial, and eye injuries are common among field hockey players, and, occasionally, catastrophic. In 2011, the National Federation of State High School Associations (NFHS) issued a protective eyewear mandate requiring all HS field hockey players to wear protective eyewear in NFHS-sanctioned competitions. However, protective eyewear remains voluntary in non-NFHS sanctioned competitions and other field hockey-related play.

The study, currently online and appearing in the September 2015 print issue of *Pediatrics*, examined injuries among high school field hockey players 14 to18 years of age two seasons prior (2009-10, 2010-11) and two seasons following (2011-12, 2012-13) the NFHS implementation of a national mandate requiring the use of protective eyewear for all HS field hockey players, effective during the 2011-12 season.

Researchers found that the incidence of eye and orbital injuries was significantly higher in states without mandated protective eyewear (MPE) than in states with MPE (before the 2011/12 mandate) and the

post-mandate group. There was no significant difference in concussion rates for the two groups. After the 2011/12 MPE, severe eye and orbital injuries were reduced by 67 percent and severe and/or medically disqualifying head and face injuries were reduced by 70 percent.

"The results of this study support a policy change regarding mandatory protective eyewear in field hockey at all amateur levels, both in practice and competition," said Peter Kriz, M.D., the study's principal investigator and co-author, and sports medicine physician at Hasbro Children's Hospital. "Critics of protective eyewear in field hockey have voiced concerns that the eyewear increases concussion rates due to loss of peripheral vision and increased player-to-player contact. Our study found that concussion rates did not change as a result of the national MPE."

Kriz added, "Other youth sports such as baseball and softball are gradually adopting use of protective facemasks for batters, pitchers and infielders. Just watch how many batters in this summer's Little League World Series tournament now wear a face protector."

"Professional ice hockey has made significant strides in implementing mandated visor use over the past decade," said Kriz. "In comparison, the governing organizations for amateur field hockey remain reluctant to endorse eye protection in amateur elite field hockey. Meanwhile developmental, college and national level field hockey coaches and programs have voiced concern that MPEs will jeopardize international recruitment efforts, as no other country mandates eyewear protection, and hurt the ability of the U.S. national teams to remain competitive internationally."

"We remain hopeful that our study results will persuade the National Collegiate Athletic Association (NCAA) to mandate protective eyewear use among its student athletes," said Kriz. "Additionally, we are hoping

to close some of the loopholes which permit middle- and high-school players to participate in games, practices, camps, tournaments and showcases without protective eyewear."

Provided by Lifespan

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