

Youth TBI laws promote head injury evaluation in emergency department

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Millions of children and teens are affected by sports and recreation-related traumatic brain injuries (TBI) annually. To help reduce the effects of TBIs in youth sports, all 50 states and the District of Columbia

enacted state youth TBI laws between 2009 and 2014. A new study from researchers in the Center for Injury Research and Policy at Nationwide Children's Hospital examined the effectiveness of these laws by looking at sports and recreation mild TBI (mTBI)-related emergency department (ED) visits for children ages 5 to 18 years before and after TBI legislation was enacted in each state. Specifically, researchers looked at ED visits from 2006 through 2014 for diagnosis of mTBI and compared them with diagnoses of moderate to severe TBI, minor head injury, and long bone fracture.

The study, published online today in *Journal of Head Trauma and Rehabilitation*, found that when youth TBI legislation is enacted, utilization of the ED for youth sports and recreation-related mTBI evaluations increase. "This is what we want to see," said Ginger Yang, Ph.D., MPH, senior author of the study and principal investigator in the Center for Injury Research and Policy at Nationwide Children's. "An increase in ED visits for [youth sports](#) TBIs shows the laws are working—more children are getting evaluated by a healthcare professional, which is one of the key tenets of youth TBI laws." The laws also contribute to an increased awareness of youth TBIs, which may prompt many athletes, parents, trainers, and coaches to seek out evaluation for a suspected or actual TBI.

ED visits for mTBIs were more common among boys (67.5%), children ages 10-14 years (42.1%), and the privately insured (50.6%). The proportion of mTBI ED visits increased significantly, particularly from 5 years pre-legislation to immediately post-legislation (57.8 to 94.8 mTBI visits per 10,000 ED visits). A similar trend was observed for minor head injuries; however, no significant changes were observed for moderate to severe TBIs and long bone fractures.

"Due to the unprecedented, rapid passing of [youth](#) state TBI legislations, EDs may not have received the necessary information, time, and

resources to prepare for the large influx of mTBI visits during and/or after legislation," said Julie Leonard, MD, MPH, associate director of the Center for Pediatric Trauma Research, principal investigator in the Center for Injury Research and Policy, and co-author of this study. "EDs can help remedy this by allocating appropriate time and resources for mTBIs."

For example, specific materials can be developed as resources for families, and efforts can be made to educate staff about mTBI. Further, communication channels can be established between the ED and other providers (e.g., sports medicine, primary care) to more easily facilitate follow-up care for patients. All healthcare providers should develop a proactive plan when public health mandates result in increased utilization, and policy makers should consider the potential impact of hospitals and patients when developing and enacting future legislation. For assistance with these activities, please see the Centers for Disease Control and Prevention (CDC)'s recently-published guidelines on the diagnosis and management of mTBI among children:

<https://www.cdc.gov/traumaticbraininjury/PediatricmTBIGuideline.html>

More information: Bonnie Swaine et al, Why Do We Need a New Clinical Practice Guideline for Moderate to Severe Traumatic Brain Injury?, *Journal of Head Trauma Rehabilitation* (2018). [DOI: 10.1097/HTR.0000000000000427](https://doi.org/10.1097/HTR.0000000000000427)

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