

# Chronic illness puts pediatric trauma patients at higher risk

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In a recent study published in the *Journal of Trauma and Acute Care Surgery*, researchers from the Center for Injury Research and Policy in The Research Institute at Nationwide Children's Hospital found that pediatric trauma patients with preexisting chronic conditions have longer hospital stays, higher hospital charges and an increased mortality risk.

While similar findings have been seen in the [adult population](#), this is the first study to show that pediatric patients with preexisting chronic conditions who are hospitalized after trauma also face greater challenges in their recovery.

"This study establishes pediatric trauma patients with chronic conditions as an important high-risk group for worse outcomes," said study author, Huiyun Xiang, MD, MPH, PhD, principal investigator in the Center for Injury Research and Policy at Nationwide Children's. "Our results call for further research into treatment guidelines for pediatric trauma patients with chronic conditions and reimbursement adjustments for those providing medical care to these patients."

According to the study, approximately one-fourth of pediatric trauma patients had preexisting chronic conditions, the most common of which were mental disorders, [respiratory diseases](#) and diseases of the nervous system and sensory organs. Patients with chronic conditions had a longer average stay in the hospital of 5.2 days, versus 2.5 days for pediatric trauma patients without a preexisting chronic condition. Additionally, [hospital charges](#) were more than two-times greater for patients with

chronic conditions, and these patients also had a higher mortality rate than patients without a [preexisting condition](#) (2.6 versus 0.1 percent).

The study used data from the 2009 Kids' Inpatient Database (KID), which is part of the Healthcare Cost and Utilization Project sponsored by the Agency for Healthcare Research and Quality. The KID provides nationally representative data on the hospital use, outcomes and charges of pediatric inpatients in non-rehabilitation hospitals in the US. The 2009 KID sample includes the discharge records of more than 3.4 million children from more than 4,000 hospitals in 44 states. Data for children between one and fifteen years of age were analyzed in this study.

"Greater understanding of pediatric trauma patients is crucial because unintentional injuries remain the leading cause of pediatric mortality for children older than 12 months, according to the Centers for Disease Control," said Dr. Xiang, also a faculty member at The Ohio State University College of Medicine. "While more research is needed, a possible point of intervention is during triage, where pediatric patients with [chronic conditions](#) may be provided more timely or more advanced care."

Provided by Nationwide Children's Hospital

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