

Implementation of the Pediatric Emergency Care Applied Research Network Head Injury Rule

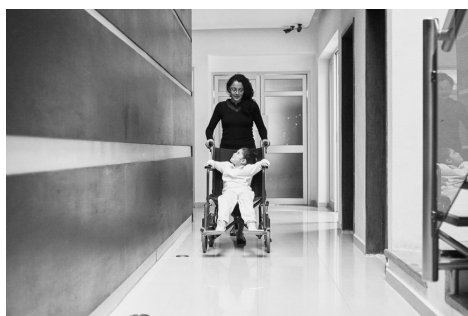
March 31, 2017

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Article type: [Pediatrics Blog](#)



Implementation science involves the incorporation of evidence-based interventions into clinical practice. Although observation studies and randomized controlled trials may demonstrate the impact of a particular treatment or care pathway, when applied to real world settings, the same results or findings are not observed. Many academicians consider the findings from implementation studies to be the best reflection of the effectiveness of a novel treatment or intervention. Although guidelines have been

developed for the management of various pediatric conditions, there has been a paucity of high-quality research evaluating how effective these guidelines are in real-world settings.

In 2009, investigators from the *Pediatric Emergency Care Applied Research Network* (PECARN) identified populations of young (<2 years) and older (2-18 years) children at very low risk of clinically important traumatic brain injury (TBI). This month, we early released a sentinel study by Dayan et al ([10.1542/peds.2016-2709](#)) which evaluates the effectiveness of the implementation of this clinical decision support tool in the emergency department setting for the management of children.

Dayan and colleagues studied the impact of the integration of a computerized clinical decision support tool on rates of CT utilization for children with minor head trauma. Investigators conducted a clinical trial enrolling children with minor blunt head trauma at 13 pediatric and general emergency departments over a 3-year study period. Study sites implemented PECARN prediction rules within their electronic health systems, and provided clinicians with risk estimates for the rate of clinically important TBI. The authors compared rates of performance of CT imaging among intervention and control sites.

I'll not reveal the results of this study in this blog, but give you a heads-up to read the study yourself to better understand the impact of this large-scale implementation study on the rates of CT performance of children

with minor head injury.

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