

# Kaiser Permanente emergency department intervention for adult head trauma reduces CT use

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Implementing a decision support tool for the use of computed tomography for adult head injuries resulted in reduced CT use and allowed for better identification of injuries, according to a new Kaiser Permanente study published today in the *Annals of Emergency Medicine*.

This study examined the use of the Canadian CT Head Rule (known as CCHR) in U.S. emergency departments. CCHR was developed to help physicians determine which minor head [injury](#) patients needed head CT imaging. According to the study's authors, this tool has the potential to be replicated in other health systems.

"Our aim with this study was twofold: to decrease unnecessary CT scans that may harm patients and increase costs, while ensuring patients receive the highest quality, recommended care," said lead author and emergency department physician Adam L. Sharp MD, MS, Kaiser Permanente Southern California Department of Research & Evaluation. "This effort also demonstrates the feasibility and positive impact the implementation of a clinical decision rule has on CT use in community emergency departments."

The intervention included clinical leadership endorsement of CCHR; physician education through an e-learning module; and a clinical decision support tool embedded into the electronic health record, which prompted [emergency department](#) physicians to avoid CT imaging based

on the CCHR recommendations.

The study included 43,053 adult trauma patients from January 2014 to December 2015 in 13 Kaiser Permanente community emergency departments in Southern California. Patients had a mean age of 59, were 53.6 percent female and racially diverse. Overall, 14,018 (31.1 percent) of all adult trauma [patients](#) received a head CT. Researchers noted a 5.3 percent reduction in CT use and an increase in CT-identified injuries. Nearly all (12 of 13) of the emergency departments reduced head CT following the implementation of the intervention.

This analysis reflects real-world examination of a simple intervention that many [emergency](#) departments should be able to replicate. It also adds to previous Kaiser Permanente research published earlier this year by Dr. Sharp, which found approximately 33 percent of CT scans performed for [head](#) injury could be avoided.

Provided by Kaiser Permanente

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