

A Retrospective Analysis of the Impact of the Choosing Wisely Canada Campaign on Emergency Department Imaging Utilization for Head Injuries

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Abstract : Head injuries are a commonly encountered presentation in emergency departments (ED) and the Choosing Wisely Canada (CWC) campaign was released in June 2015 in an attempt to decrease imaging utilization for patients with minor head injuries. The impact of the CWC campaign on imaging utilization for head injuries has not been explored in the ED setting. In our study, we describe the characteristics of patients with head injuries presenting to a tertiary care academic ED and the impact of the CWC campaign on CT head utilization. This retrospective cohort study used linked databases from the province of Ontario, Canada to assess emergency department visits with a primary diagnosis of head injury made between June 1, 2014 and Aug 31, 2016 at the University Health Network in Toronto, Canada. We examined the number of visits during the study period, the proportion of patients that had a CT head performed before and after the release of the CWC campaign, as well as mode of arrival, and disposition. There were 4,322 qualifying visits at our site during the study period. The median presenting age was 44.12 years (IQR 27.83,67.45), the median GCS was 15 (IQR 15,15) and the majority of patients presenting had intermediate acuity (CTAS 3). Overall, 43.17% of patients arrived via ambulance, 49.24 % of patients received a CT head and 10.46% of patients were admitted. Compared to patients presenting before the CWC campaign release, there was no significant difference in the rate of CT heads after the CWC (50.41% vs 47.68%, $P = 0.07$). There were also no significant differences between the two groups in mode of arrival (ambulance vs ambulatory) (42.94% vs 43.48%, $P = 0.72$) or admission rates (9.85% vs 11.26%, $P = 0.15$). However, more patients belonged to the high acuity groups (CTAS 1 or 2) in the post CWC campaign release group (12.98% vs 8.11% $P < 0.001$). Visits for head injuries make up a significant proportion of total ED visits and approximately half of these patients receive CT imaging in the ED. The CWC campaign did not seem to impact imaging utilization for head injuries in the 14 months following its launch. Further efforts, including local quality improvement initiatives, are likely needed to increase adherence to its recommendation and reduce imaging utilization for head injuries.

Keywords : choosing wisely, emergency department, head injury, quality improvement

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