

Stop the Radiation! Decreasing CT Scan Utilization in Pediatric Trauma Patients

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Published In/Presented At

Zimel, C., Crowder, C., Iobst, T., Geist, H., Thatch, K., Browne, MB. (2016, July, 29) *Stop the Radiation! Decreasing CT scan utilization in pediatric trauma patients*. Poster presented at LVHN Research Scholar Program Poster Session, Lehigh Valley Health Network, Allentown, PA.

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BACKGROUND / INTRODUCTION

- In 2013, LVH underwent a pediatric trauma site review and was found to overutilize CT scans in our pediatric trauma patients.
- A quality initiative was then developed in 2014 which included education for nurses and physicians on CT use and its appropriate indications. This reduction strategy was continued in 2015 with the addition of intense case review and discussion.
- The purpose of this project is to assess the impact of our QI initiative on CT utilization.

METHODS

- Retrospective data analysis
 - Used LVHN trauma database for June-August of the years 2013-2015.
 - H&P, radiological images, and clinical guidelines were used to assess appropriateness of scans.
- Patient selection
 - Age 15 or younger
 - Trauma Alerts & Code Reds
 - N=87 patients for cervical spine data
 - N=97 patients for chest data
- Exclusion Criteria
 - Excluded from the c-spine and chest data if they did not have an H&P on file.

RESULTS

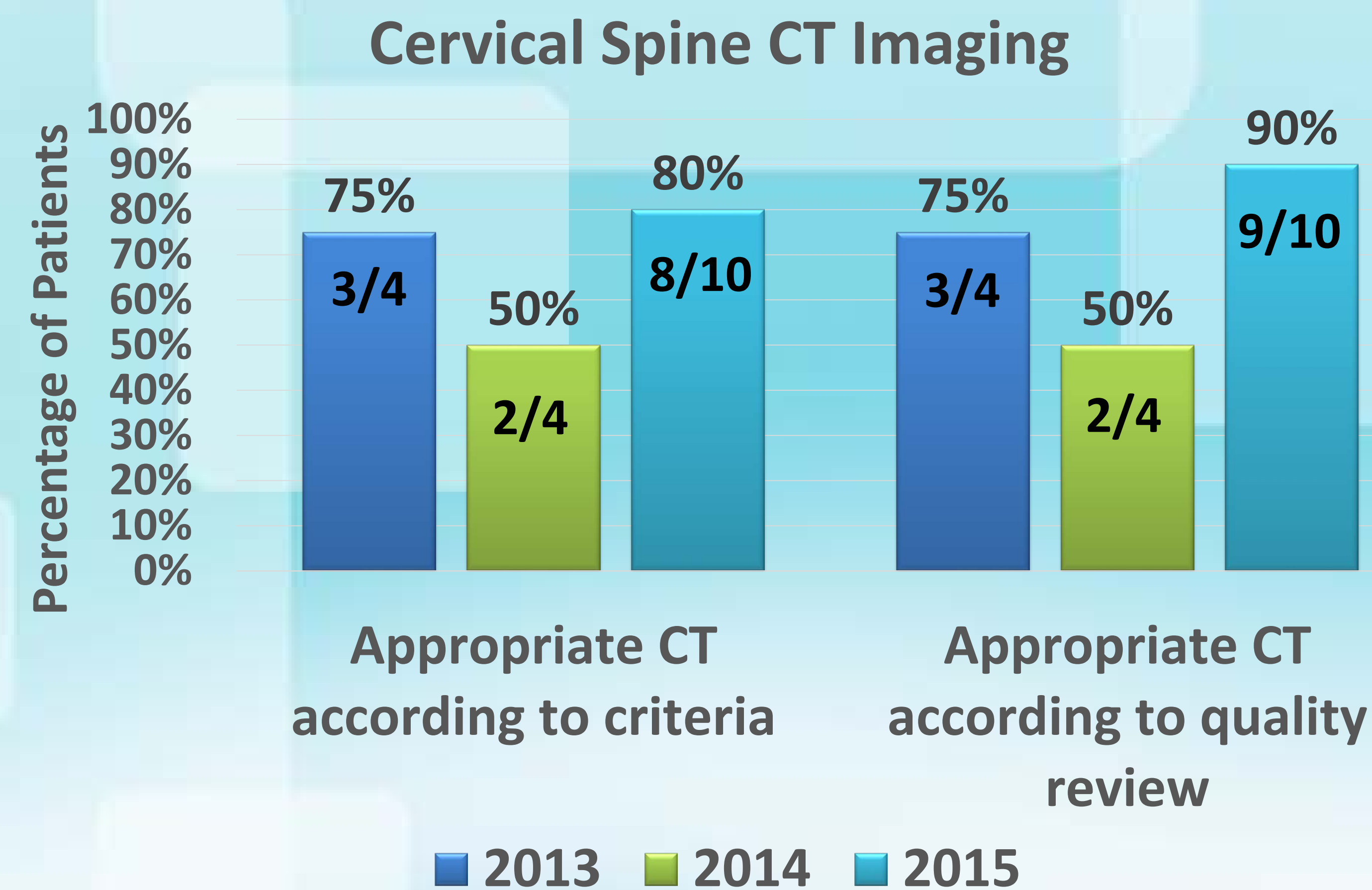


Figure 1: Analysis of Pediatric Trauma C-Spine Data

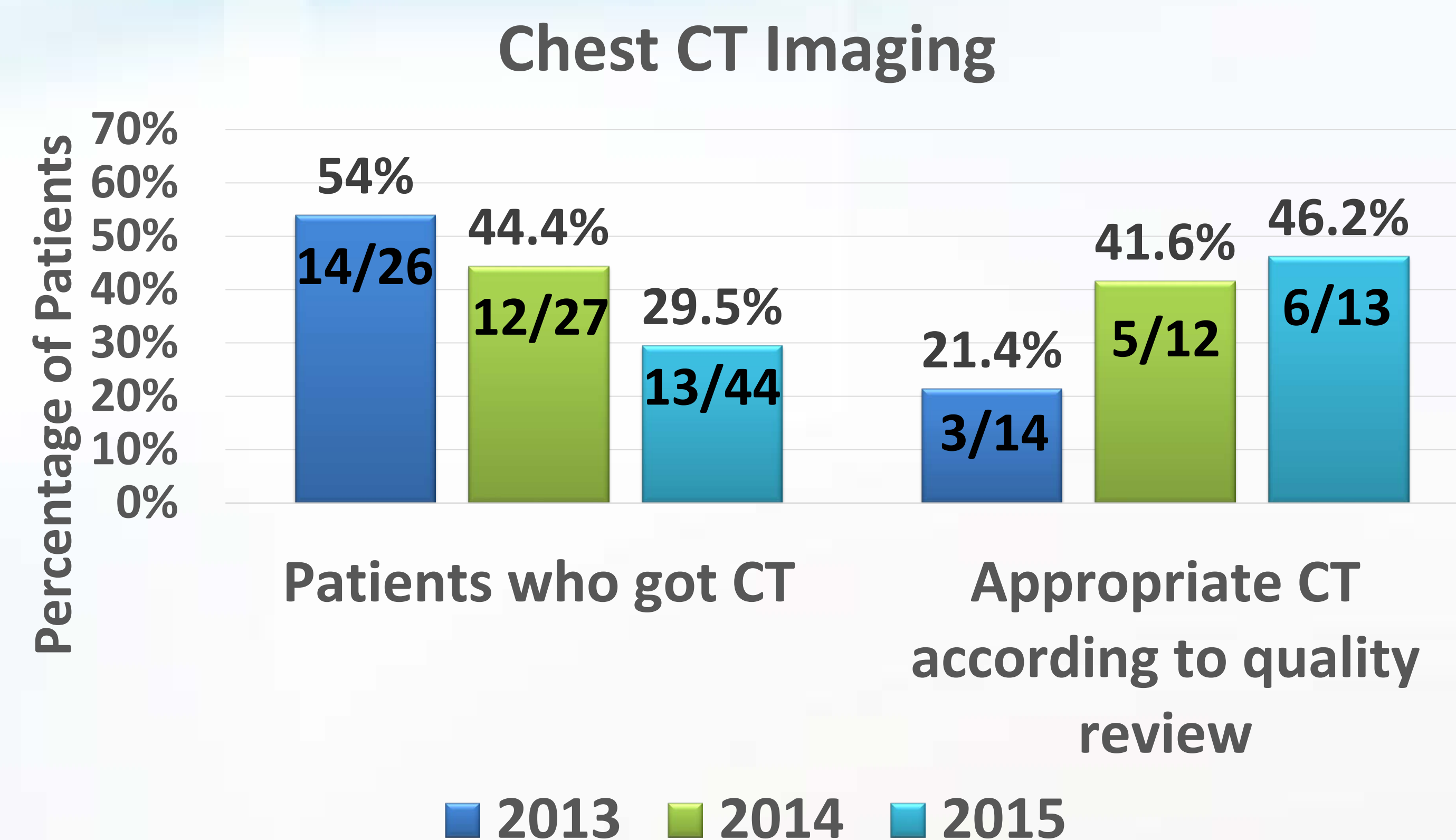


Figure 2: Analysis of Pediatric Trauma Chest Data

DISCUSSION

- We increased our level of appropriateness for c-spine and chest CT scans post-education.
- There was a dramatic decrease in patients who got chest CT scans.
- Only 1/39 patients had a possible clinically relevant injury on their chest CT after a normal chest x-ray.
- Education alone does not significantly improve quality of care— additional clinical quality review is vital to improving outcomes.

FUTURE WORK

- Expanding review to include entire year's data
- Additional review of head and abdominal CT scan utilization
- Finalizing implementation of our c-spine utilization guidelines

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