

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

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

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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, case review, and clinical guidelines were used to assess appropriateness of scans.
- Patient selection
  - Age 14 and 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

### Cervical Spine CT Imaging

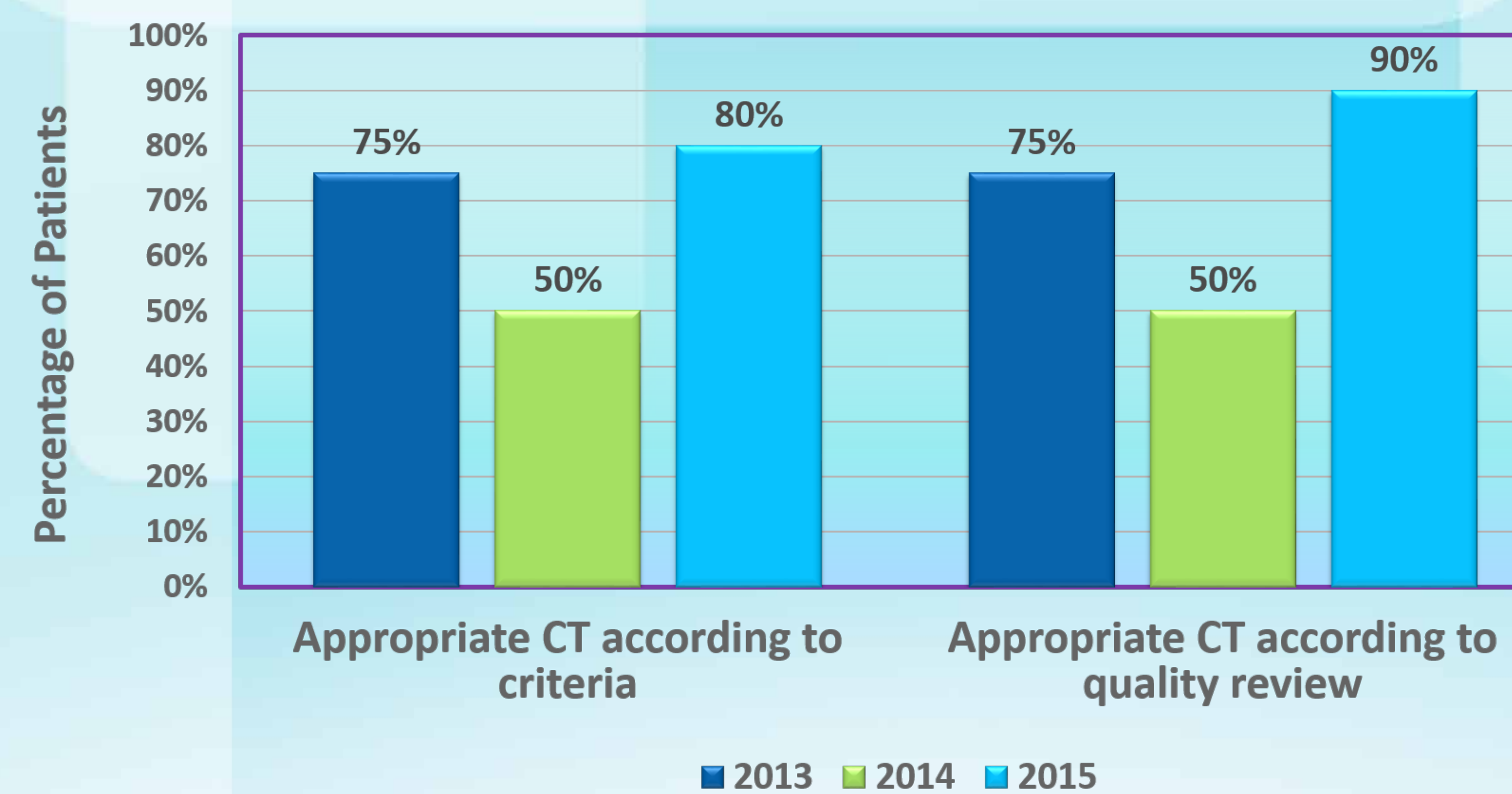


Figure 1: Analysis of Pediatric Trauma C-Spine Data

### Chest CT Imaging

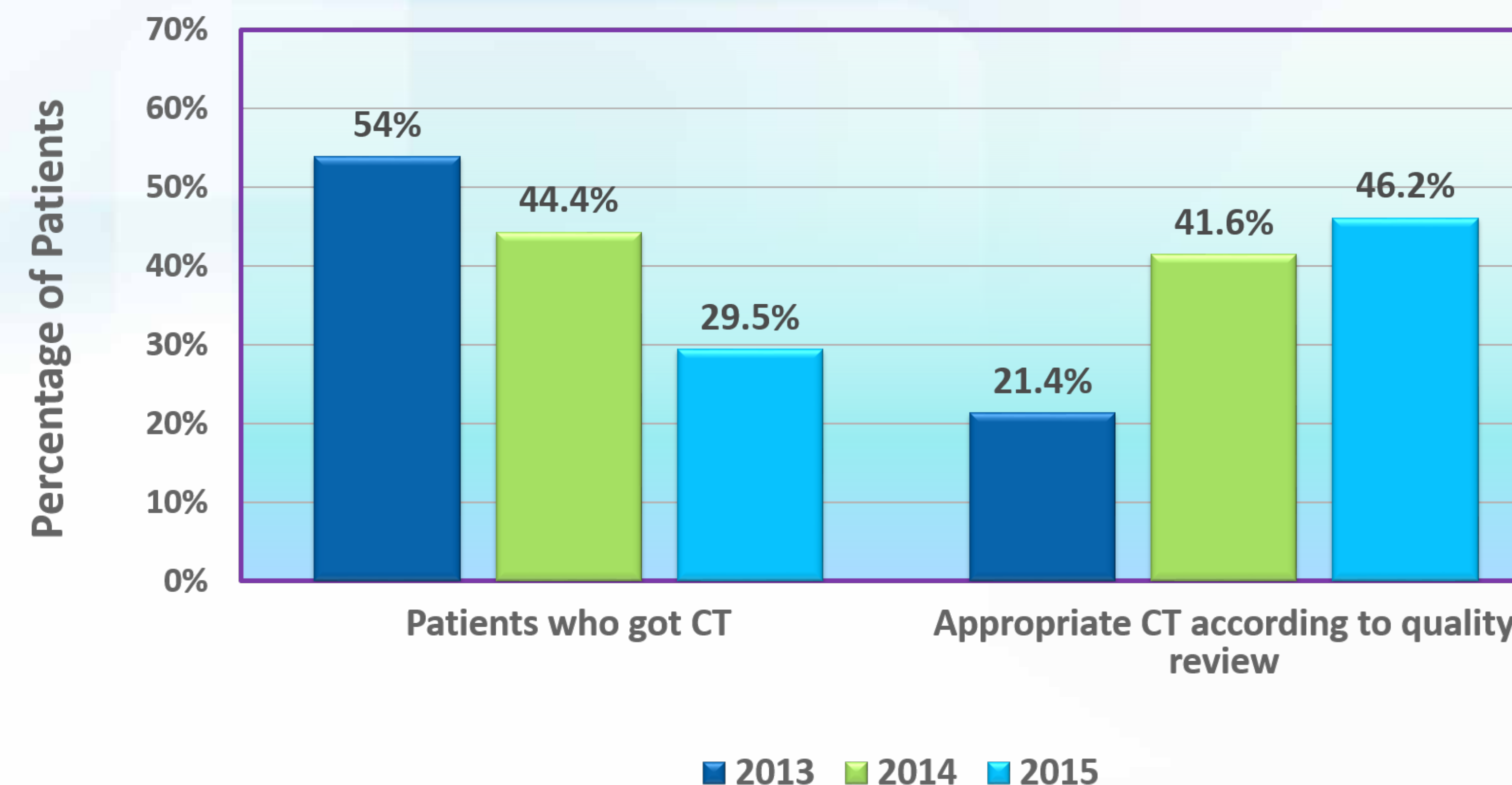


Figure 2: Analysis of Pediatric Trauma Chest Data

## RESULTS (continued)

- 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.

## CONCLUSIONS

- Appropriateness of scan is better than strict utilization for a measure of quality.
- Education alone may 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 and Chest CT utilization guidelines

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