Are NHS Junior Doctors Requesting CT Scans Appropriately?

Evaluating Compliance with Royal College Guidelines for CT Scan Requests

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Introduction

The appropriate use of CT scans is essential for patient safety, diagnostic accuracy, and efficient use of NHS resources. Incomplete or inappropriate requests can delay reporting, cause unnecessary imaging, and compromise patient care.
This audit aimed to evaluate whether NHS junior doctors (ST2 and below) were requesting CT scans in line with **Royal College of Radiologists (RCR) guidelines**, and to assess the effect of targeted educational interventions on improving compliance.

Aim

To **improve junior doctors' compliance with RCR CT request guidelines** through education, visual reminders, and structured feedback.

Objectives:
1.Measure changes in adherence to specific guidelines since the first audit cycle.
2.Identify areas of improvement and ongoing challenges in guideline compliance.
3.Use findings to refine and sustain quality improvement measures for CT scan requests.

Methods

•**Design:** Two-cycle retrospective audit using the

•**Plan-Do-Study-Act (PDSA)** model.

•**Inclusion Criteria:** Patients aged 80–120; CT requests by doctors up to ST2 level; scans performed between **August 9–31, 2024** (Cycle 1) and **October 10–28, 2024** (Cycle 2).

•**Exclusion Criteria:** Patients outside the age range, doctors ST3+, scans outside the study period.

Methods (cont.)

•**Data Source:** CHARTS, eQuest, and SECTRA PACS systems.
•**Data Collection Tool:** Excel template covering all Royal College guideline components **Assessment Format:** Yes/No compliance based on guideline criteria
Measured Parameters (Royal College components):
Scenario; Presenting Complaint; Examination Findings; Tests Done; Indication; Query; Requesting Imaging; Mode of Transport; Background Medical Information
Interventions:
Posters displayed across wards
Departmental teaching sessions (in-person and online)
Continuous reminders to use RCR-compliant request templates
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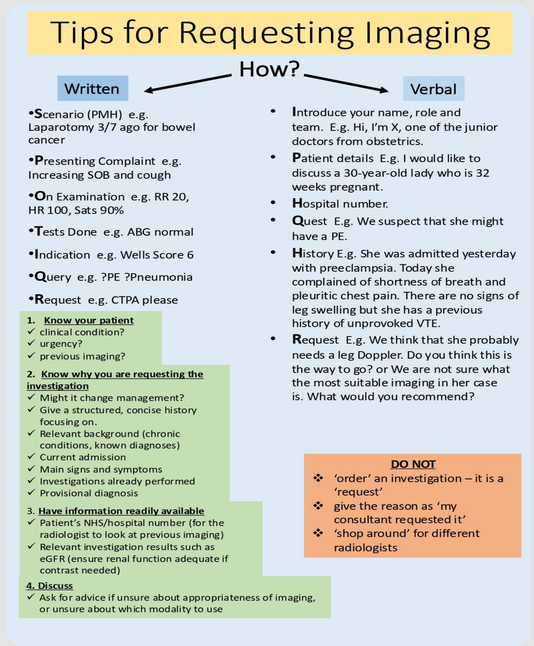
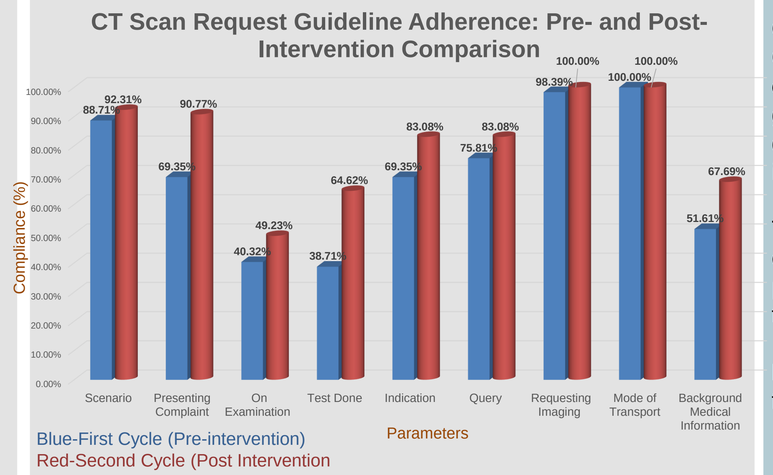
Poster used for information sharing



Results



Blue-First Cycle (Pre-intervention)
Red-Second Cycle (Post Intervention

Summary of Results

Significant Compliance Increases

•**Presenting Complaint:** Improved from 69.35% in Cycle 1 to 90.77% in Cycle 2, demonstrating a better documentation of symptoms.

•**Indication for Scan:** Increased from 69.35% to 83.08%, showing more clarity in the rationale for each CT request.

•**Test Done Prior to Request:** Rose from 38.71% to 64.62%, suggesting enhanced documentation of previous tests that inform the need for imaging.

Areas with Minimal Change

•**On Examination Findings:** Despite some improvement, compliance rose modestly from 40.32% to 49.23%, showing this as a continued area for further focus.

Maintained High Compliance

•**Mode of Transport:** Maintained consistently high.

•**Requesting Imaging:** Maintained a consistent 100% adherence in both cycles, reflecting established reliability in the request submission and imaging processes.

Conclusion

Overall, the comparison between Cycle 1 and Cycle 2 shows **clear improvements** in junior doctors' compliance with the Royal College guidelines, especially in the detailed documentation of presenting complaints and test indications.

The interventions, including posters and educational presentations, appear to have **positively influenced** the accuracy and thoroughness of CT scan requests.

However**, continued efforts are needed** to further improve specific areas.

Limitations and Considerations

-Short study duration (limited to two months of data).

-Small sample size and focused on one hospital site.

-Variation in CT request volume across departments may affect results.
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Future cycles could include other imaging modalities and departments for generalizability.

References

1. The Royal College of Radiologists. (2024). *iRefer: Making the best use of clinical radiology*. https://www.irefer.org.uk/

2. Radiology Cafe. (2024). *Requesting Imaging: How to make the perfect radiology request*. https://www.radiologycafe.com/radiology-basics/requesting-imaging