

Appropriate request of Abdominal Radiographs in the Emergency Department

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Background

Abdominal radiographs are a commonly requested investigation at St Peters Hospital (SPH), the majority of which come from the Emergency Department (ED). Reporting radiologists observed that many requests were not appropriate. Given that the radiation of a plain AXR can be up to 50 times greater than a CXR, there is concern that patients are being over exposed.

Descriptor

1. Identify the proportion of requests for plain abdominal radiographs from ED performed appropriately as advised by Royal College of Radiologists (RCR) iRefer guidelines.
2. Implement an action plan to improve adherence to the standard
3. Re-audit to assess any improvement

The Standard

Abdominal film requests in A&E to meet the iRefer criteria
Target: 100%

RCR iRefer guidelines: plain abdominal film¹:

- Clinical suspicion of perforation or obstruction
- Acute exacerbation of inflammatory bowel disease
- Palpable mass (specific circumstances)
- Constipation (specific circumstances)
- Acute and chronic pancreatitis
- Sharp/poisonous foreign body
- Smooth and small foreign body (specific circumstances)
- Blunt or stab abdominal injury

Method

A retrospective study of all Abdominal radiographs requested by A&E over a 10 day period in January 2018 at St Peters Hospital for Cycle 1, and over a 4 day period for Cycle 2.

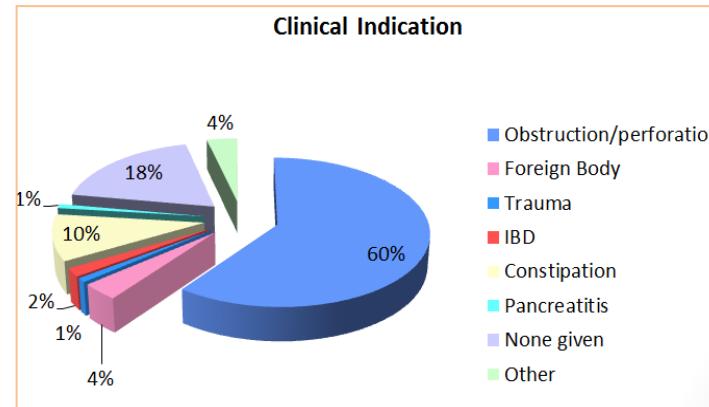
References

1. iRefer Guidelines, RCR Version 7.0.2 January 2012 adult abdomen <https://www.rcr.ac.uk/clinical-radiology/being-consultant/rcr-referral-guidelines/accessing-guidelines>

Results

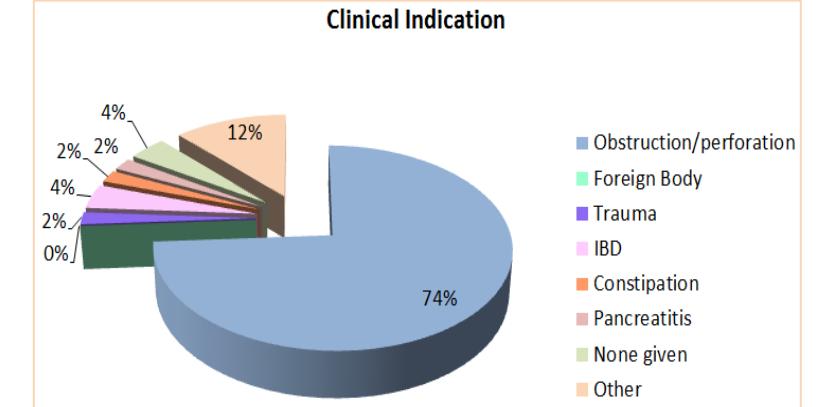
Cycle 1

- 108 requests (mean 10.8 films/day)
- 85% of films were unremarkable
- 6% showed faecal loading only
- 9% had abnormal findings

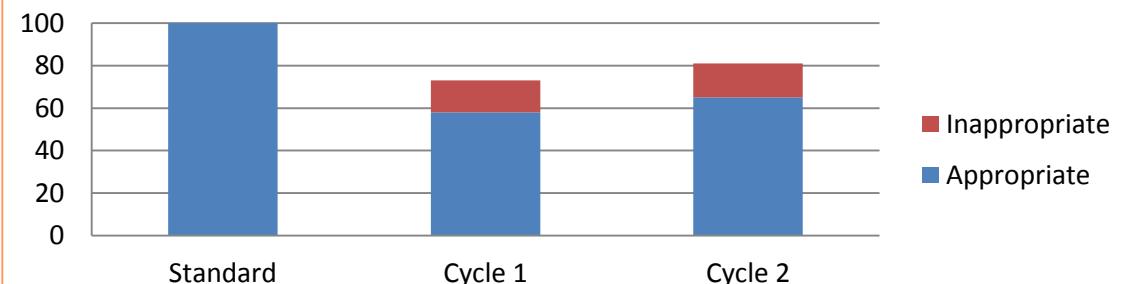


Cycle 2

- 54 requests (mean 13.5 films/day)
- 74% of films were unremarkable
- 13% showed faecal loading only
- 13% had abnormal findings



Percentage of requests meeting iRefer Criteria



Action Plan after Cycle 1:

- Present findings at departmental meeting
- Education of staff in the ED including posters
- Re-audit to assess any improvement

Action Plan after Cycle 2:

Discuss re-audit findings with both departments
Discuss iRefer guidelines at A&E junior induction, focusing on adequate clinical details especially

Discussion

Abdominal films are being inappropriately requested and SPH is not meeting the standard. However, after implementing changes after cycle 1, we have found an improvement from 74% to 81% of requests meeting the iRefer criteria.

Although the percentage of appropriate requests has improved, the proportion of those that provide adequate clinical details has remained constant. This is something that should be addressed in the second action plan as providing adequate clinical details not only leads to inappropriate protocolling but also inaccurate interpretation.