

Reducing Extrinsic Distractions to Radiologists Under Mounting Pressure – REDRUMP

RSNA – November 2018

J Dunbar, R Hughes, P Jarvis, G Vigneswaran, R E Zaher, H D Portess
University Hospital Southampton – Radiology Department


University Hospital Southampton
NHS Foundation Trust

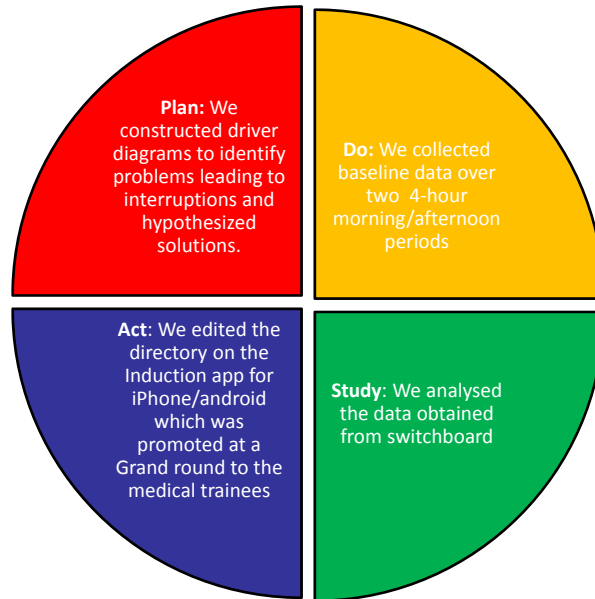
Purpose:

Distraction has been shown to lead to reporting error
and compromise patient safety

Aim: To reduce the number and duration of
phone call interruptions by 50% to radiologists
in the general and cardiothoracic reporting
room over a 6 month period.


University Hospital Southampton
NHS Foundation Trust

PDSA: Cycle 1



NHS
University Hospital Southampton
NHS Foundation Trust

We edited the directory on the freely available Induction app for iPhone/android



Southampton General Hospital

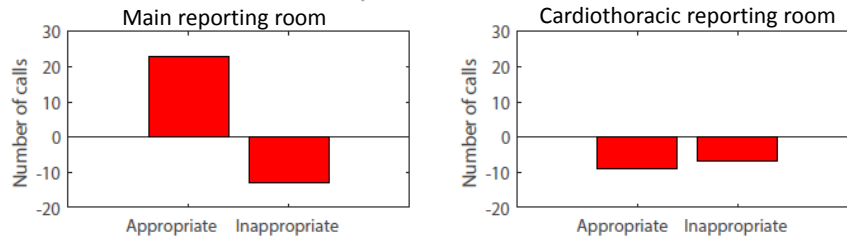
Switch hospital

- Directory
- Dialer
- Private Codes
- FAQs
- Guidelines
- Favourite Hospitals
- Settings

Directory	
Neuroradiology SpR	3657
Neuroradiology SpR (Tuesday mor...)	1890
Oncology radiology	5965
Oncology Radiology	4198
Oncology radiology reception	4198
Oncology radiology secretary	3978
Oncology radiology SpR	5965
Paediatric Radiology	3721
radiology abdo	1272

Cycle 1

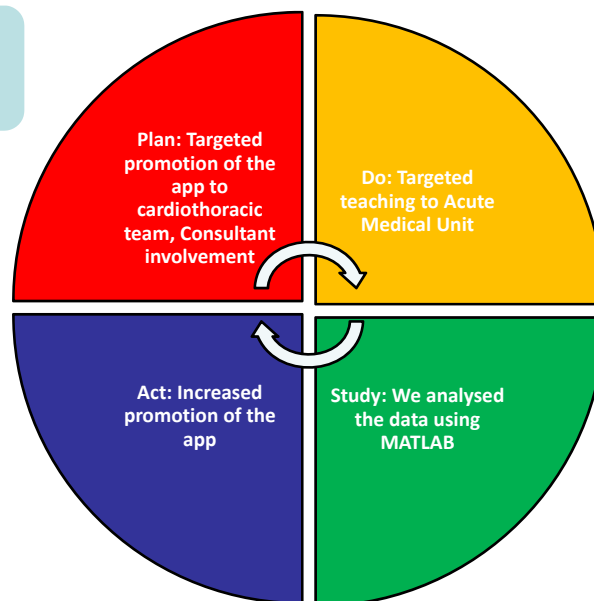
Cycle 1 - Baseline



There is a significant reduction in the number and duration of inappropriate calls to the general radiology reporting room (left)

Although there was a reduction in the number of calls to the cardiothoracic department, this was not statistically significant.

Cycle 2



Chi-squared analysis

Baseline Vs Cycle 2

	Baseline	Cycle 2	Total
Appropriate	76 → 68		144
Inappropriate	36 → 17		53
Total	112	85	197

$X^2 = 3.6233, p=0.057$

Cycle 1 Vs Cycle 2

	Cycle 1	Cycle 2	Total
Appropriate	90 → 68		158
Inappropriate	16 → 17		33
Total	106	85	191

$X^2 = 0.7943, p=0.3728$

Cycle 2 also saw a reduction in inappropriate calls (53%) and was close to significance ($X^2 = 3.6, p=0.057$). There was no significant difference between cycle 1 and cycle 2, $p=0.37$.

>50% reduction maintained

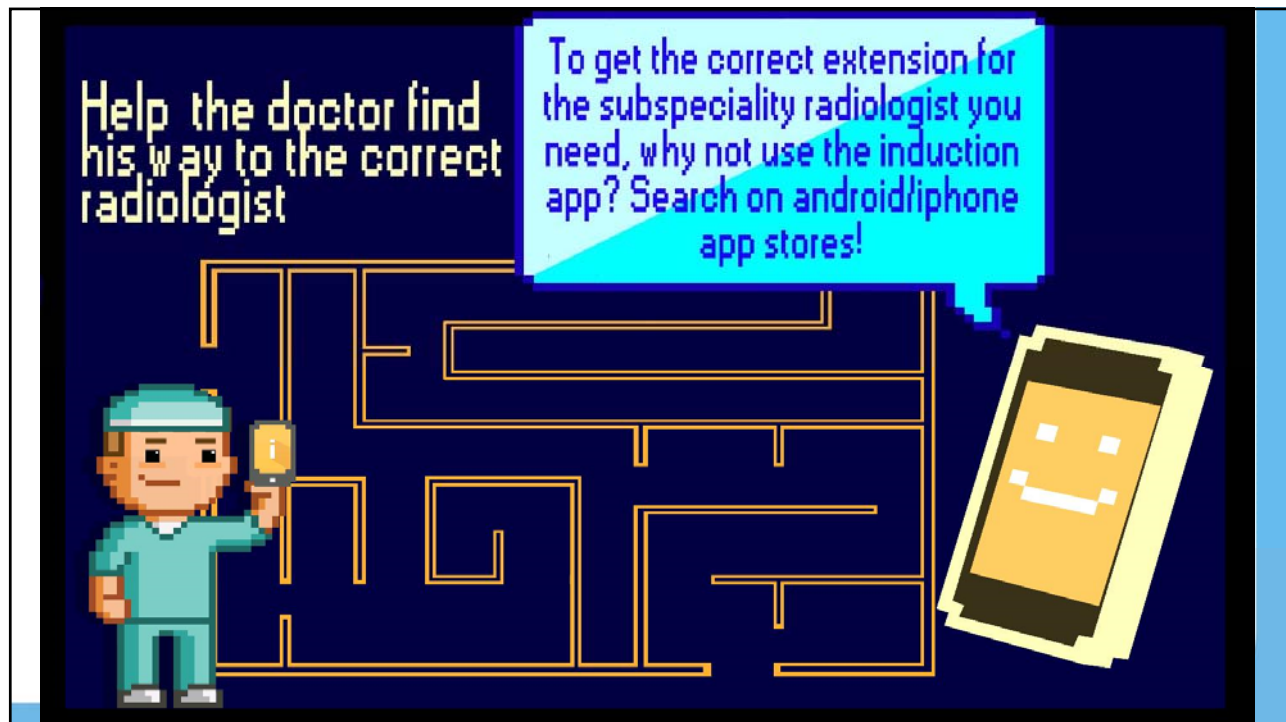
We carried out a multi-way ANOVA on call duration with appropriateness, cycle and room as input factors. Call duration was significantly shorter for appropriate vs inappropriate calls (ANOVA, $p=0.0006$). This did not change between cycles.

NHS
University Hospital Southampton
NHS Foundation Trust

Cycle 3



NHS
University Hospital Southampton
NHS Foundation Trust



Conclusion

Aim:

To reduce the **number** and **duration** of phone call interruptions by **50%** to radiologists in the general and cardiothoracic reporting room over a 6 month period.

- Introducing and updating the directory of an online Smartphone application is a simple and **sustainable** way to reduce interruptions to reporting radiologists.
- We full-filled our aim of reducing the number of inappropriate calls by >50%. This was maintained in cycle 2.
- Total duration of inappropriate calls fell by > 50%
- Average duration of inappropriate calls was already short. We did not see a significant reduction in average call duration between cycles.