Who are we?

We are one of the largest NHS organizations in the country catering to about 1 million people in the north west of England.

Developing a Comprehensive Prostate Imaging Service: Getting It Right & How to Achieve Quality in Public Sector DGHS Hospitals

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To Deliver a High Quality Prostate Imaging Service by Improving:

01 Quality of Imaging
02 Decreasing Turnaround Time
03 Better Quality Reports
04 Manage the Increasing Demands on Imaging

Aims & objectives
Background & Prostate Imaging Volume in Greater Manchester:

Methodology:

There has been a global increase in awareness and demand for prostate MRI imaging.

- **Imaging Improvements**
  - Our Trust has 4 hospitals with 4 scanners, from 2 vendors with varied sequences.
  - A task group was set up with all stakeholders with multiple meetings (MR radiographers, radiologists, urologists, and department managers).
  - Working with various application specialists and vendors, creating longer appointment slots, it was possible to change DWI sequences from 800 to 1400.
  - Accurate ADC sequences were computed using at least 3 b values.
  - Where patients are unable to lie still, BLADE/PROPELLAR sequences used instead of T2 high res images.

- **Scheduling Improvements**

- **Reporting Improvements**

### Imaging Improvements

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**T2 w High Res. Image:**

**BLADE Sequence image:**
Sequential improvement in image quality:
(click or click twice on the sequence label below to reveal the images)

- 2014
- 2017
- 2018

Scheduling
Improvements:

Job Plan
Optimization
Impact:

- R1-R5 are radiologists who report prostate MRIs
- B1-B5 are radiologists are Neuro & MST radiologists
- A Prostate MRI slots
- B in-patient slots
- C other body slots
- D MSK slots.
- Neuro MRI slots

This was the trickiest part of the project, with contradicting demands on radiology of reducing wasted slots and getting same/next day imaging slots.

After careful analyses of various data, eg. inpatient demands and prostate imaging needs, 12 dedicated slots were created to mirror urology prostate clinics.

A special code for consultant-only referral was created to accommodate these patients to designed slots.

Aligning reporting and Scheduling to improve productivity:

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Scan acquisition aligned to subspecialty reporting skills
Reduces reporting time by about 2-3 days

Prostate hot reporting possible (being implemented)
Eliminates wasted MR slots
Aligning reporting and Scheduling to improve productivity:
Imaging Pathway Length Comparison:

Old
- GP referral: 7-10 days
- Urologist Clinic: 3-5 days
- Imaging Request: 5-7 days
- Vetting: 1-3 days
- Scheduling: 7-10 days
- Scan performed: 2-4 days
- Reporting: 2.5 days
- Urologist review for biopsy: 2-10 days
- Biopsy: 3-5 days
- Histology Review: 2-7 days
- MDT Discussion: 1-6 days
- Treatment decision: 7-10 days

New
- GP referral: 7-10 days
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Cutting down 6 steps in the pathway has helped us reduce our turnaround time by about 15-30 days.

Structured reporting based on PIRADS 2 as opposed to descriptive reporting.

Fusion imaging using T2 and DWI images, leading to easy targeting of lesions on biopsy.

Dedicated reporting by subspecialty radiologists with Prostate interests.

Pictographic / Multimedia reporting with image hyperlinking (to be achieved with future pacs refresh.)
Improved Reporting Format

Results & Conclusions:

Reporting turnaround time before implementation was 12 step process, with median time of 30-42 days.


3) http://www.esur.org/esur-guidelines/prostate-mri


References: